

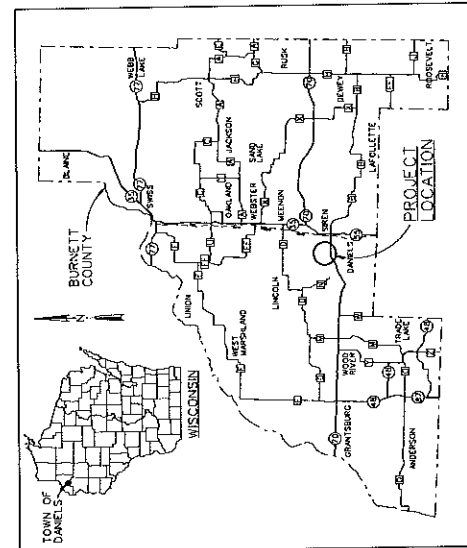
Appendix B
Drawings

DRILLING/WELL INSTALLATION - PACKAGE 1

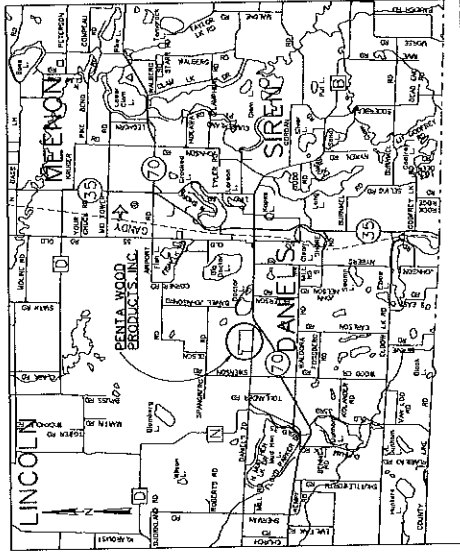
PENTA WOOD PRODUCTS SITE LTRA

USEPA

TOWN OF DANIELS, WISCONSIN



SHEET NO.	DRAWING NO.	TITLE
GENERAL	0-1	TITLE SHEET, VICINITY AND LOCATION MAPS, AND DRAWING INDEX
1	C-1	SITE PLAN
2	C-2	EXTRACTION WELL NEST DETAILS
3	C-3	EXTRACTION WELL NEST TABLES
4	C-4	MONITORING WELL DETAILS
5		



CH2MHILL.

GENERAL
TITLE SHEET, VICINITY AND
LOCATION MAPS AND DRAWING INDEX

DRILLING/WELL INSTALLATION - PACKAGE 1
PENTA WOOD PRODUCTS SITE LTRA
USEPA
TOWN OF DANIELS, WISCONSIN

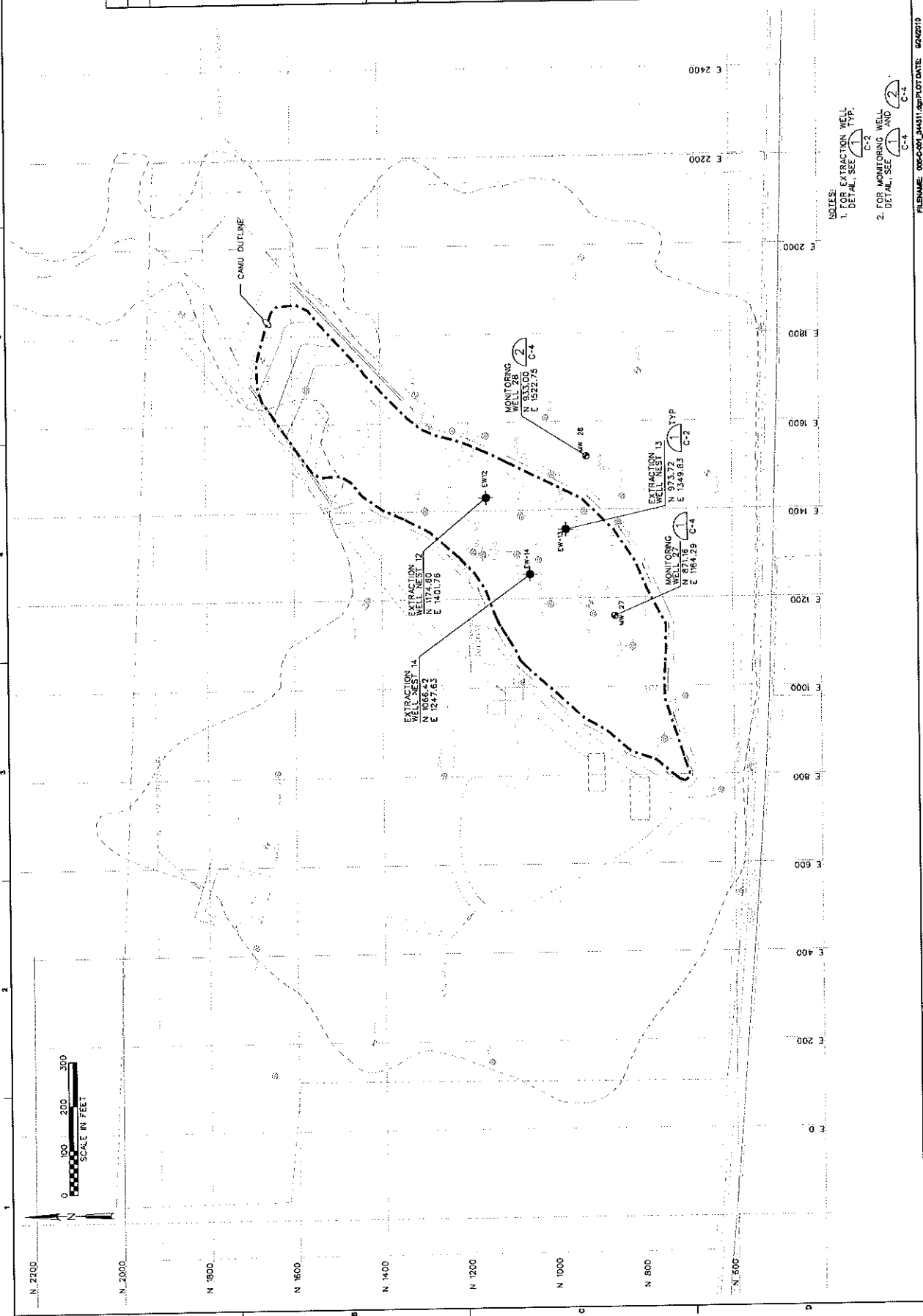
NO.	DATE	REVISION

DR
C.D. MACDONALD
 GRK
K. MACKENZIE
 APVD
BY
APVD

VERIFY SCALE
DATE: SEPTEMBER 2010
PROJ: 344871
SHEET: 0-1

FILENAME: 001-001_344871.dwg
DATE: 9/20/10
TIME: 4:25:26 PM

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0 100 200 300
SCALE IN FEET

N 2200
N 2000
N 1800
N 1600
N 1400
N 1200
N 1000
N 800
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E 2200
E 2400

1 2 3 4 5 6

CH2MHILL
CML
SITE PLAN

ORILLINGWELL RESTATION - PACKAGE 1
US EPA
TOWN OF DANIELS, WISCONSIN

NO. DATE
DESIGN
M P NEUBAUER
C D MCCOY
K MACKENZIE

REVISION
BY
DATE

APPROVED
DATE

VERIFY SCALE
DATE OF REVISION
DATE OF PLOTTING

NOTES:
1. EXTRACTOR WELLS
2. MONITORING WELLS

FILENAME: 006-C-001_34611.PLOT DATE: 9/26/2010 PLOT TIME: 4:14:37 PM

NO.	DATE	REVISION	BY	APPD.

DRILLING WELL INSTALLATION - PACKAGE 1
 PEVTA WOOD PRODUCT RELETTA
 US EPA
 TOWN OF DANIELS, WISCONSIN

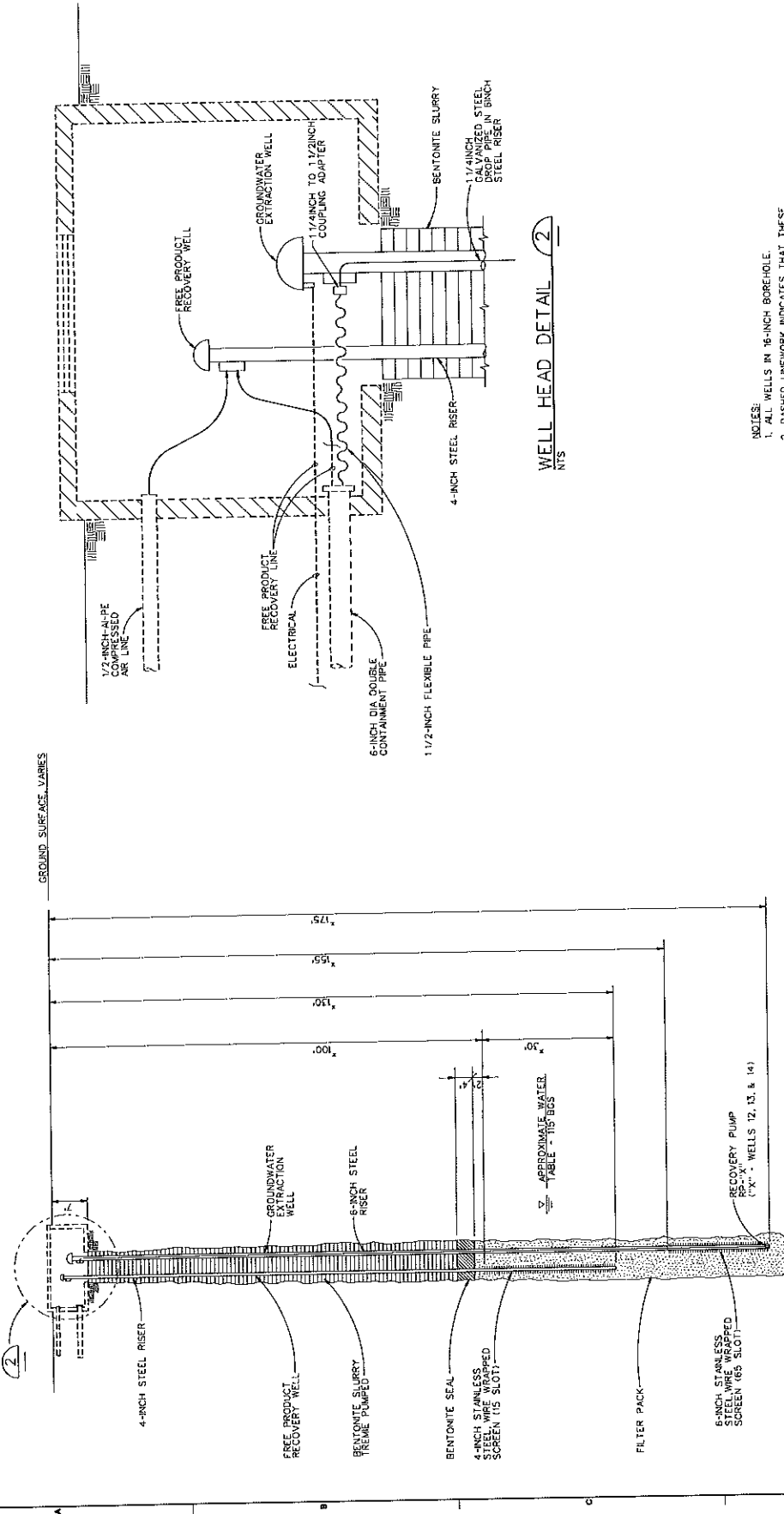
EXTRACTION WELL NEST DETAILS

CVE

VERIFY SCALE
 BAR 10' = 1" (AS SHOWN)
 DATE: SEPTEMBER 22/10
 PROJ: 94491
 DWD: CS
 SHEET: 3

FILE NAME: 955-002_34481-03/PAD/DATE: 9/24/2010
 PLOT TIME: 4:11:32 PM

1 2 3 4 5 6



- NOTES:**
1. ALL WELLS IN 16-INCH BOREHOLE.
 2. DASHED LINEWORK INDICATES THAT THESE ITEMS ARE TO BE DONE BY OTHERS.
 3. * INDICATES VALUES WHICH MAY CHANGE DUE TO DIFFERING WATER TABLE ELEVATIONS.
 4. SEE DRAWING C-3 FOR WELL TABLE INFORMATION.
 5. COMPRESSED AIR ELECTRICAL FREE PRODUCT RECOVERY LINE AND PUMP WILL BE CONNECTED BY OTHERS.
 6. CENTRALIZERS TO BE INSTALLED AS SPECIFIED.

WELL HEAD DETAIL 2
 NTS

EXTRACTION WELL NEST DETAIL
 NTS

C-1

WELL TYPES INCLUDED IN EXTRACTION WELL NESTS

	EXTRACTION WELL NEST			
	12	13	14	14
1. GROUNDWATER EXTRACTION WELL	X	X	X	X
2. FREE PRODUCT RECOVERY WELL	X	X	X	X

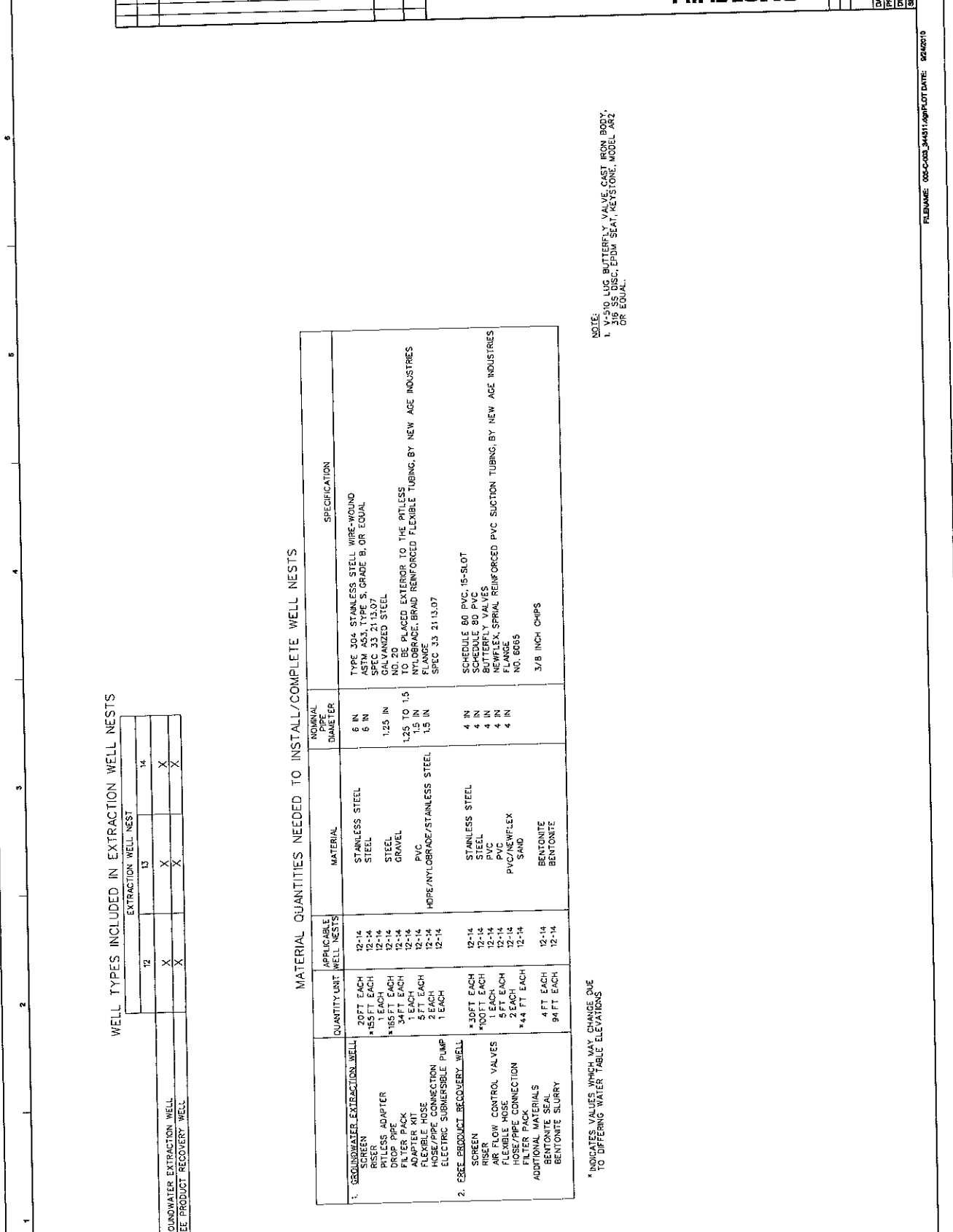
MATERIAL QUANTITIES NEEDED TO INSTALL/COMPLETE WELL NESTS

	QUANTITY UNIT	APPLICABLE WELL NESTS	MATERIAL	NOMINAL PIPE DIAMETER	SPECIFICATION
1. GROUNDWATER EXTRACTION WELL	SCREEN	12-14	STAINLESS STEEL	6 IN	TYPE 304 STAINLESS STEEL WIRE-WOUND
	RISER	12-14	STEEL	6 IN	ASTM A53, TYPE S, GRADE B, OR EQUAL
	FLANGE ADAPTER	*15 FT EACH	STEEL	1.25 IN	SPEC 3.5 2113.07
	DROP PIPE	1 EACH	STEEL	1.25 IN	UNFINISHED STEEL
	FILTER PACK	*34 FT EACH	GRAVEL	1.25 TO 1.5	TO BE PLACED EXTERIOR TO THE PITLESS
	ADAPTER KIT	1 EACH	PVC	1.5 IN	NYLON/BRASS BRAID REINFORCED FLEXIBLE TUBING BY NEW AGE INDUSTRIES
	FLEXIBLE HOSE	5 FT EACH	HOPE/NYLOBRACE/STAINLESS STEEL	1.5 IN	FLANGE
	HOSE/PIPE CONNECTION	2 EACH			FLANGE
	ELECTRIC SUBMERSIBLE PUMP	1 EACH			FLANGE
					FLANGE
2. FREE PRODUCT RECOVERY WELL	SCREEN	12-14	STAINLESS STEEL	4 IN	SCHEDULE 80 PVC, 15-SLOT
	RISER	12-14	STEEL	4 IN	SCHEDULE 80 PVC
	AIR FLOW CONTROL VALVES	*100 FT EACH	PVC	4 IN	BUTTERFLY VALVES
	FLEXIBLE HOSE	1 EACH	PVC	4 IN	NEWFLEX, SPIRAL REINFORCED PVC SUCTION TUBING, BY NEW AGE INDUSTRIES
	HOSE/PIPE CONNECTION	5 FT EACH	PVC/NEWFLEX	4 IN	FLANGE
	FILTER PACK	*2 FT EACH	SAND	4 IN	NO. 6665
	ADDITIONAL MATERIALS	*44 FT EACH			3/8 INCH CHIPS
	BENTONITE SEAL	4 FT EACH	BENTONITE		
	BENTONITE SLURRY	94 FT EACH	BENTONITE		

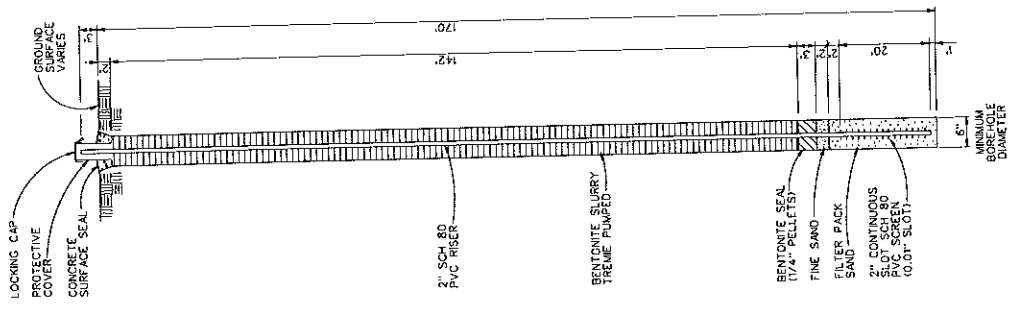
* INDICATES VALUES WHICH MAY CHANGE DUE TO DIFFERING WATER TABLE ELEVATIONS

NOTE:
 1. USE 1/2" LUG BUTTERFLY VALVE CAST IRON BODY, 1/2" UP SS DISC, EPDM SEAT, KEYSTONE, MODEL AR2 OR EQUAL.

CH2MHILL		EXTRACTION WELL NEST TABLES	
CML		PENTA WOOD PRODUCTS SITE/LTRA	
TOWN OF DANIELA, WISCONSIN		USERRA	
DRILLING / WELL INSTALLATION - PACKAGE 1		NO. DATE	
DESIGN		REVISION	
DATE		BY	
APPROVED		APPROVED	
KIMBERLY		KIMBERLY	
CD MACDONALD		CD MACDONALD	
DATE		DATE	
PROJ		PROJ	
SHEET		SHEET	
PLOT TIME		PLOT TIME	
FILE NAME		FILE NAME	



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UNCONFINED MONITORING WELL MW-27 DETAIL 1
NTS



SEMICONFINED MONITORING WELL MW-28 DETAIL 2
NTS

- NOTES:
1. FINE SAND SEAL IS DEFINED AS NO. 20 SAND.
 2. FILTER PACK MATERIAL IS BB NO. 2 SAND.
 3. DEPTHS MAY VARY DUE TO FIELD CONDITIONS.

CH2MHILL

BRUNING WELL INSTALLATION - PACKAGE 1

USER: PENNY WOOD PRODUCTION SHELTER A

TOWN OF DANIELA, WISCONSIN

NO.	DATE	BY	APP'D

CD: MACKAY
CHK: MACKAY
APP'D: MACKAY

VERIFY SCALE: 1" = 20'

DATE: SEPTEMBER 2010

PROJ: 085-C001_34811_001.PLOT DATE: 04/20/10

SHEET: 4 OF 8

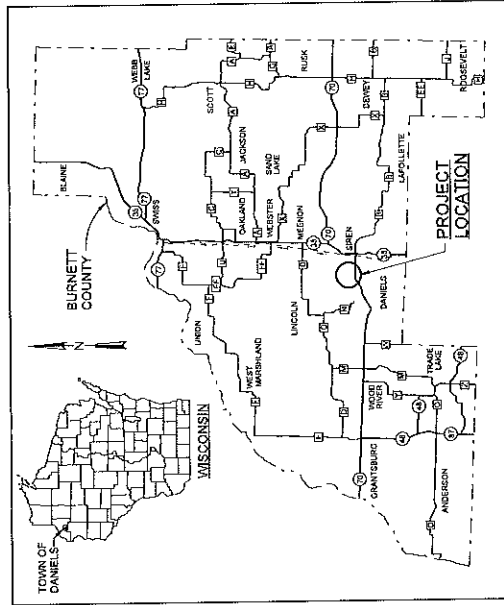
DRAWING MADE BY: J. K. HARRIS, P.E. FOR CH2MHILL. THIS DOCUMENT IS THE PROPERTY OF CH2MHILL. IT IS TO BE USED ONLY FOR THE PROJECT AND LOCATION SPECIFICALLY IDENTIFIED HEREIN. ANY REUSE OR MODIFICATION OF THIS DOCUMENT WITHOUT THE WRITTEN AUTHORIZATION OF CH2MHILL IS STRICTLY PROHIBITED.

WELL CONNECTIONS/EARTHWORKS - PACKAGE 2

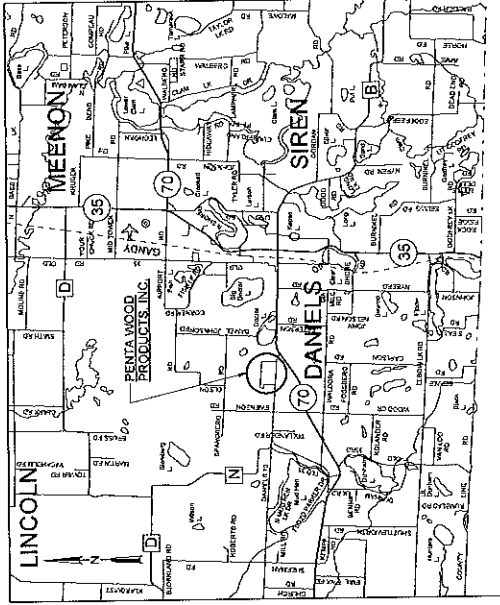
PENTA WOOD PRODUCTS SITE LTRA

USEPA

TOWN OF DANIELS, WISCONSIN



VICINITY MAP



LOCATION MAP

CH2MHILL

GENERAL

TITLE SHEET

VICINITY AND LOCATION MAPS

WELL CONNECTIONS/EARTHWORKS - PACKAGE 2

PENTA WOOD PRODUCTS SITE LTRA

USEPA

TOWN OF DANIELS, WISCONSIN

NO.	DATE	REVISION

DESIGN: []
 CHECK: []
 IN CHARGE: []
 PROJECT MANAGER: []
 CLIENT: []
 BY: []
 APPROVED: []

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DRAWN BY: []

DATE: SEPTEMBER 2010

PROJECT: 344511

DWG: []

SHEET: []

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INDEX TO DRAWINGS

SHEET NO.	DRAWING NO.	TITLE
GENERAL		
1	G-1	TITLE SHEET, VICINITY AND LOCATION MAPS
2	G-2	INDEX TO DRAWINGS
3	G-3	ABBREVIATIONS, DESIGNATION LEGENDS AND FLOW STREAM IDENTIFICATION
4	G-4	INSTRUMENTATION AND CONTROL LEGEND
5	G-5	SITEWORK LEGEND
6	G-6	MECHANICAL, HVAC AND PLUMBING LEGEND
7	G-7	ELECTRICAL LEGEND AND ABBREVIATIONS
8	G-8	ELECTRICAL LEGEND AND ABBREVIATIONS
INSTRUMENTATION AND CONTROL		
9	I-1	PRODUCTION EXTRACTION AND REAGENTING PAID
10	I-2	GROUNDWATER EXTRACTION AND COAGULATION AND FLOCCULATION PAID
SITEWORK		
11	C-1	TRENCHING PLAN
12	C-2	TRENCHING DETAILS
MECHANICAL		
13	M-1	SYSTEMS TREATMENT FACILITY PLAN
14	M-2	PROCESS SYSTEMS ISOMETRIC DETAIL
ELECTRICAL		
15	E-1	SITE PLAN
16	E-2	PROGRAM AND PANEL SCHEDULE
17	E-3	ELEMENTARY AND CONTROL DIAGRAM
18	E-4	DETAILS

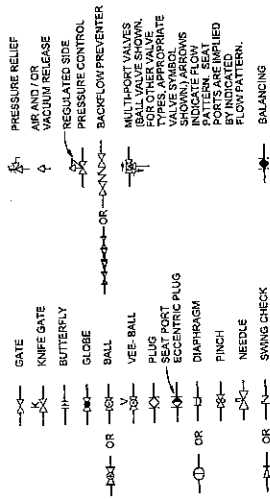
CH2MHILL		GENERAL		INDEX TO DRAWINGS	
WELL CONNECTIONS/EARTHWORKS - PACKAGE Z PENTA WOOD PRODUCTS SITE/LTA USEPA TOWN OF DANIELS, WISCONSIN					
DESIGN	NO.	DATE	BY	APPD	CHKD
C. C. JOHNSON					
CO. MAGDONALD					
K. KICKERVA					
APVD					
CHKD					
REVISED					
BY					
APPD					
DATE					
PROJ					
DWG					
SHEET					

VERIFY SCALE
DATE: SEPTEMBER 2010

FILENAME: 001-0-012_344811.dgn PLOT DATE: 9/13/2013 PLOT TIME: 8:13:07 AM

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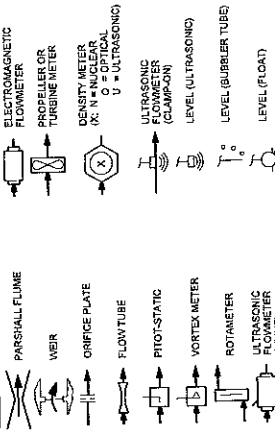
VALVE SYMBOLS



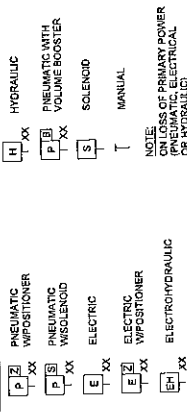
GATE SYMBOLS



PRIMARY ELEMENT SYMBOLS

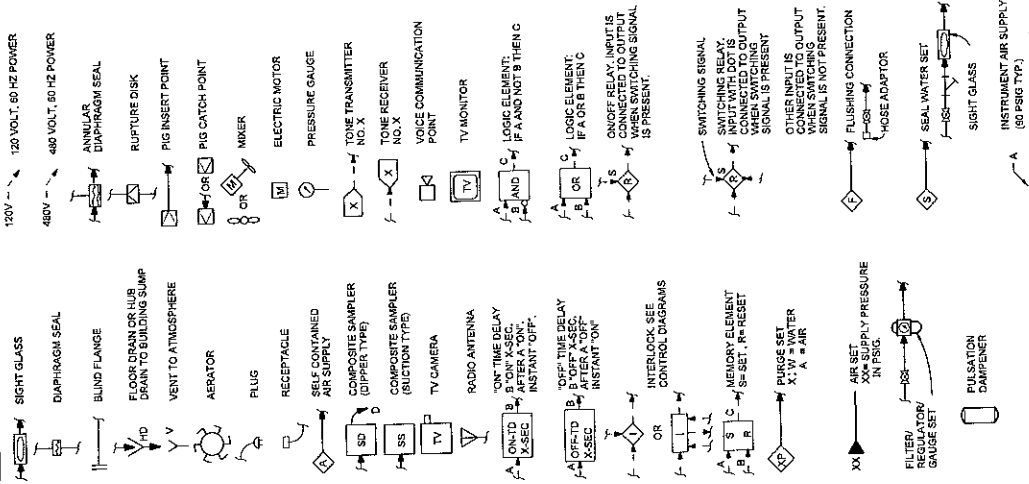


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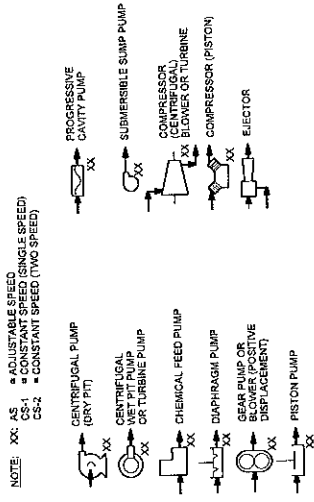


NOTE:
 ON LOSS OF PRIMARY POWER
 ELECTRICAL
 OR HYDRAULIC
 PS = FAIL OPEN
 FF = FAIL CLOSED
 FL = FAIL TO LAST POSITION

MISCELLANEOUS SYMBOLS



PUMP AND COMPRESSOR SYMBOLS



NOTE: XX =
 CS-1 = VARIABLE SPEED
 CS-2 = CONSTANT SPEED (SINGLE SPEED)
 CS-3 = CONSTANT SPEED (TWO SPEED)

CH2MHILL

GENERAL

INSTRUMENTATION AND CONTROL

LEGEND

WELL CONNECTIONS/EARTHWORKS - PACKAGE 2

PERTRA WOOD PRODUCTS SITE/LTRA

USERS

TOWN OF GARFIELD, WISCONSIN

DESIGN

NO.	DATE	REVISION

DR

CD (MACHINING)

CK (MACHINING)

APVD

RY

APVD

VERIFY SCALE

DATE: SEPTEMBER 2011

NO. 1

SHEET 4

PROJECT

STREET

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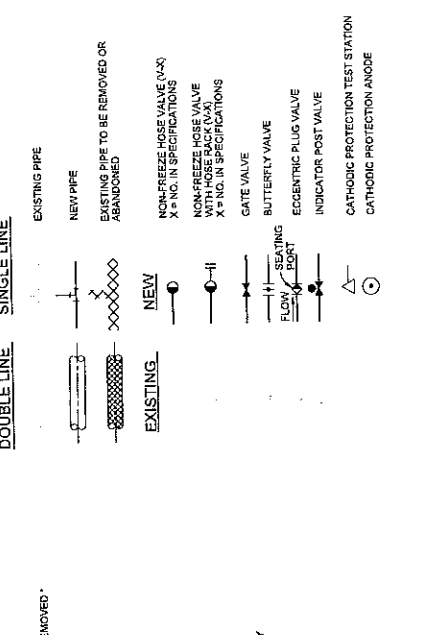
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GENERAL
 CH2MHILL
 WELLS CONNECTORSEVENTHYRDS - PACKAGE 2
 USA
 TOWN OF DARBERS, WISCONSIN
 C. JOHNSON
 DIR
 K. JOHNSON
 APPR
 BY
 DATE

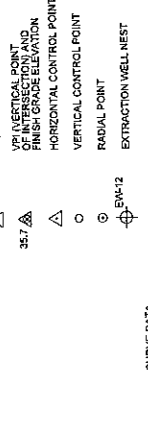
YARD PIPING

DOUBLE LINE

SINGLE LINE



EXISTING

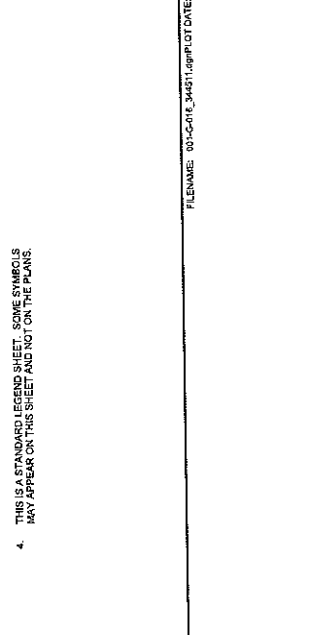


THIS CONTRACT



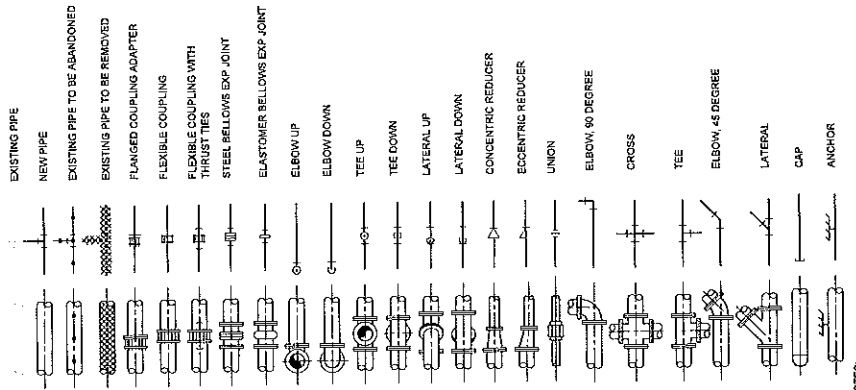
GENERAL NOTES:

- * SYMBOL - ONLY WHERE REQUIRED FOR CLARITY.
- EXISTING STRUCTURES AND FACILITIES ARE SHOWN AS SCREENED. NEW STRUCTURES ARE SHOWN IN HEAVY LINE WEIGHTS.
- EXISTING PIPING AND EQUIPMENT IS SHOWN SCREENED. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINED.
- THIS IS A STANDARD LEGEND SHEET. SOME SYMBOLS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.



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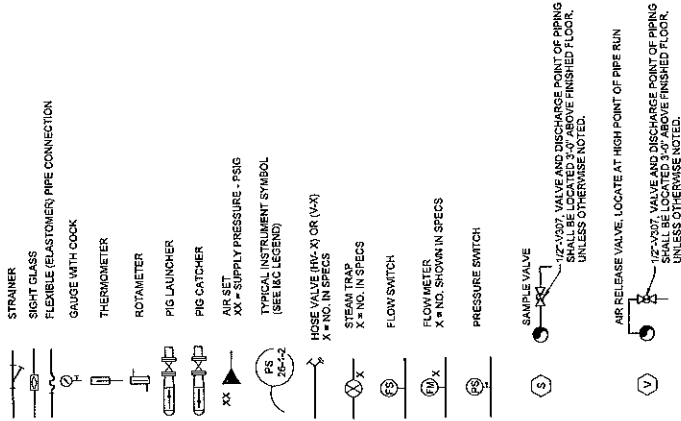
PIPE AND FITTING SYMBOLS
DOUBLE LINE SINGLE LINE



NOTES:

- ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. ALL OTHER CONNECTIONS SHOULD BE SHOWN AS INDICATED, TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
- LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHALL BE AS REQUIRED IN THE SPECIFICATIONS.
- ALL JOINTS SHALL BE WATERTIGHT. WELD JOINTS SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
- ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THE APPROPRIATE IDENTIFICATION TAGS. IDENTIFICATION TAGS SHALL BE SPECIFIED FOR ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS. IDENTIFICATION TAGS SHALL BE PROVIDED THROUGHOUT THE PLANS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
- ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED SHALL BE PROVIDED WITH COMBUSTIBLE TRUST BLOCKS AT ALL DIRECTION CHANGES, UNLESS OTHERWISE NOTED.

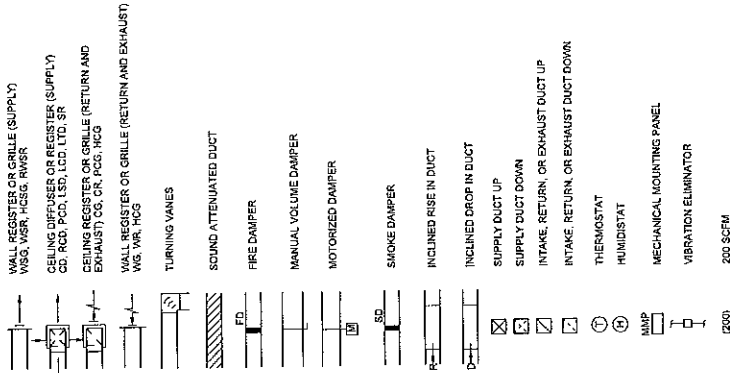
MISCELLANEOUS PIPING SYMBOLS



GENERAL NOTES

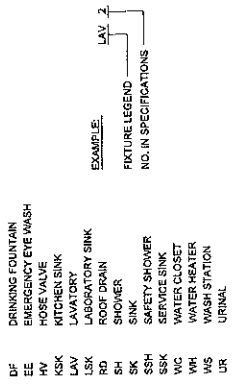
- LAV PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
- SIZE OF FITTINGS SHOWN ON PLANS SHALL CORRESPOND TO SIZE OF FITTING STRAIGHT RUN OF PIPE UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
- LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHALL BE AS REQUIRED IN THE SPECIFICATIONS.
- ALL JOINTS SHALL BE WATERTIGHT. WELD JOINTS SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
- ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THE APPROPRIATE IDENTIFICATION TAGS. IDENTIFICATION TAGS SHALL BE SPECIFIED FOR ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS. IDENTIFICATION TAGS SHALL BE PROVIDED THROUGHOUT THE PLANS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
- ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED SHALL BE PROVIDED WITH COMBUSTIBLE TRUST BLOCKS AT ALL DIRECTION CHANGES, UNLESS OTHERWISE NOTED.

HEATING, VENTILATING, AND AIR CONDITIONING SYMBOLS

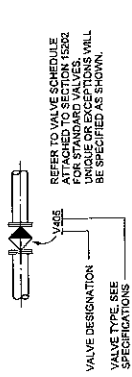


- NUMBER AND LOCATION OF UNIONS SHOWN ON PLANS IS ONLY FOR INFORMATION. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
- WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, UNLESS OTHERWISE SPECIFIED. WHERE A GROOVED END COUPLING IS SHOWN WITH AN END FLANGE, IT SHALL BE JOINED TO THE COUPLING ADAPTER.
- FOR FLOW STREAM IDENTIFICATION, SEE DRAWING G-4.
- SEE INSTRUMENTATION AND CONTROLS LEGEND FOR VALVE SYMBOLS.
- SUPPORT PIPING AND DUCTWORK FROM STRUCTURAL TEES SHALL BE PROVIDED THROUGHOUT THE PLANS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
- ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED SHALL BE PROVIDED WITH COMBUSTIBLE TRUST BLOCKS AT ALL DIRECTION CHANGES, UNLESS OTHERWISE NOTED.

PLUMBING FIXTURE IDENTIFICATION



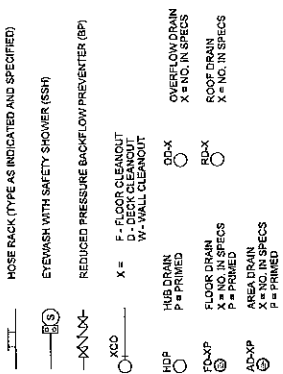
VALVE DESIGNATIONS



PIPING DESIGNATION



BUILDING SERVICES SYMBOLS



GENERAL NOTE

- THIS IS A STANDARD LEGEND SHEET, THEREFORE SOME SYMBOLS AND IDENTIFICATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.

CH2MHILL
GENERAL
MECHANICAL, HVAC AND PLUMBING LEGEND

WELL CHECK/ELECTRICAL/MECHANICAL WORKS - PACKAGE 2
PENTA WOOD PRODUCTS SITE LTR#A
USPS#A

NO.	DATE	REVISION

K. CERENA
C. J. JOHNSON
C. J. MACDONALD
K. MCKENNA

DATE: SEPTEMBER 2010
PROJ: 344571
DWG: 07
SHEET: 07

VERIFY SCALE: 1"=10'-0"
DATE: 9/13/2010
PLOT TIME: 8:15:02 AM

CH2MHILL
INSTRUMENTATION AND CONTROL
PRODUCTION EXTRACTION
AND BLOWING P&ID

TOWN OF DANIELS, WISCONSIN
US EPA
PENTAWOOD PRODUCTS SHELFRA
WELL CONNECTIONS/EARTHWORKS - PACKAGE 2

NO. DATE
REV. DATE
NO. DATE
NO. DATE

DESIGNED BY: K. MACKENZIE
CHECKED BY: J. MACKENZIE
APPROVED BY: J. MACKENZIE

CD MACDONALD
K MACKENZIE

REVISION

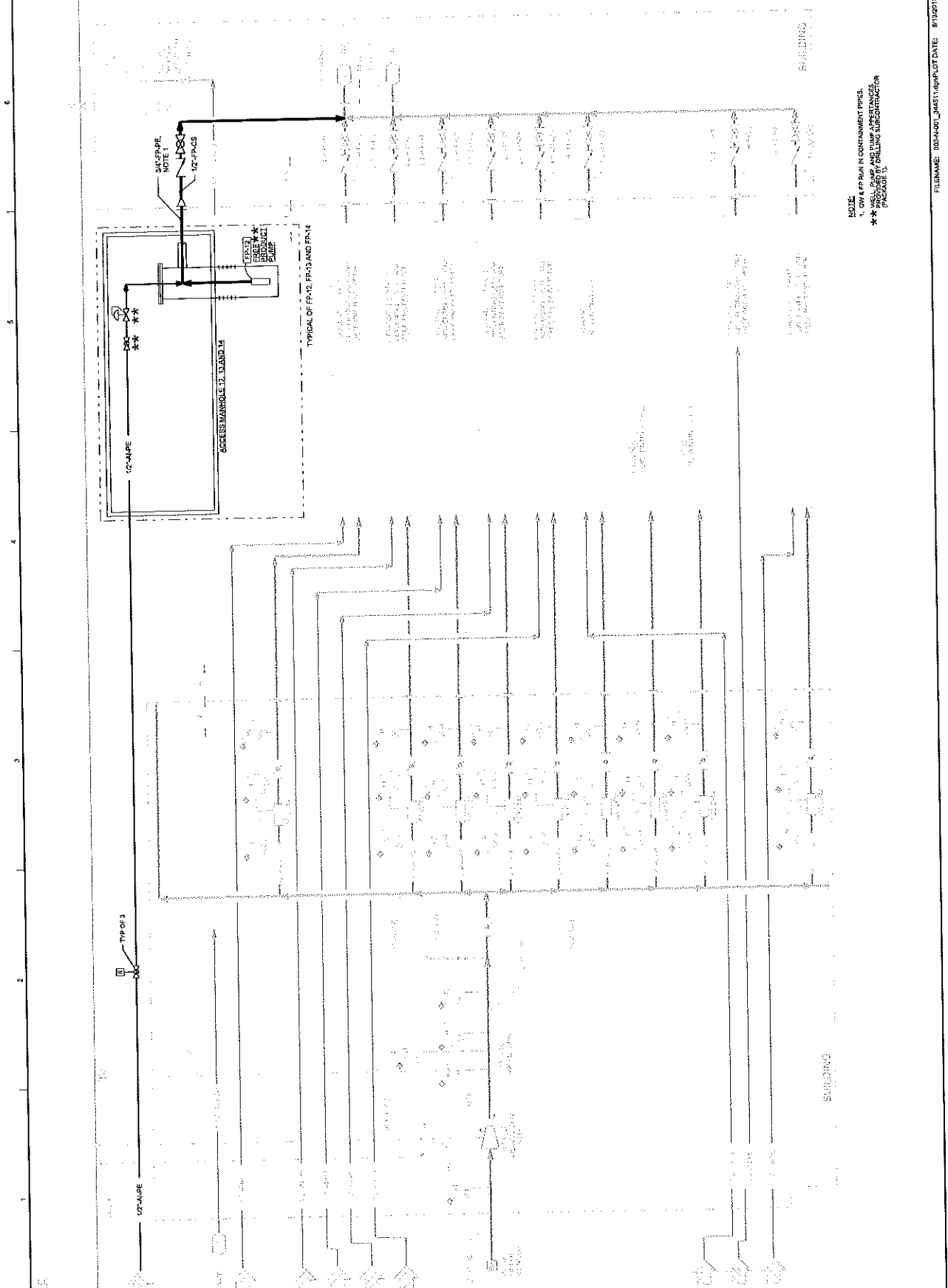
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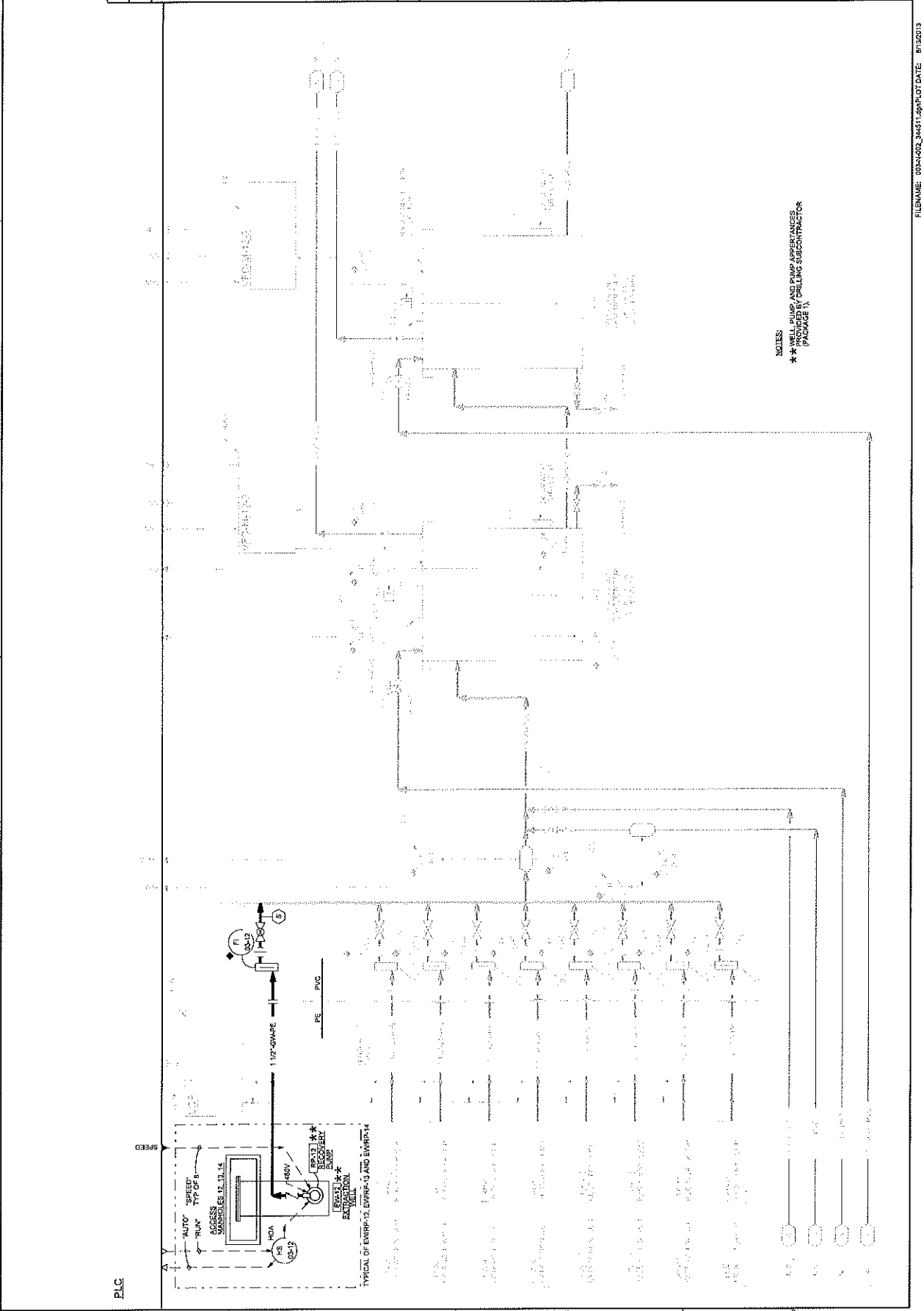
VERIFY SCALE
DATE OF ISSUE
DRAWN BY
DATE
PROJ
DWG
SHEET

SEPTEMBER 2010
34551
4
3

FILENAME: 000-000_34451.dwg PLOT DATE: 9/19/2015 PLOT TIME: 8:18:43 AM



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PLOT TIME: 8:19:07 AM
SHEET: 1 OF 1
DATE: SEPTEMBER 2011
PROJ: 344511
DWG: 344511-1

CH2MHILL
SITework

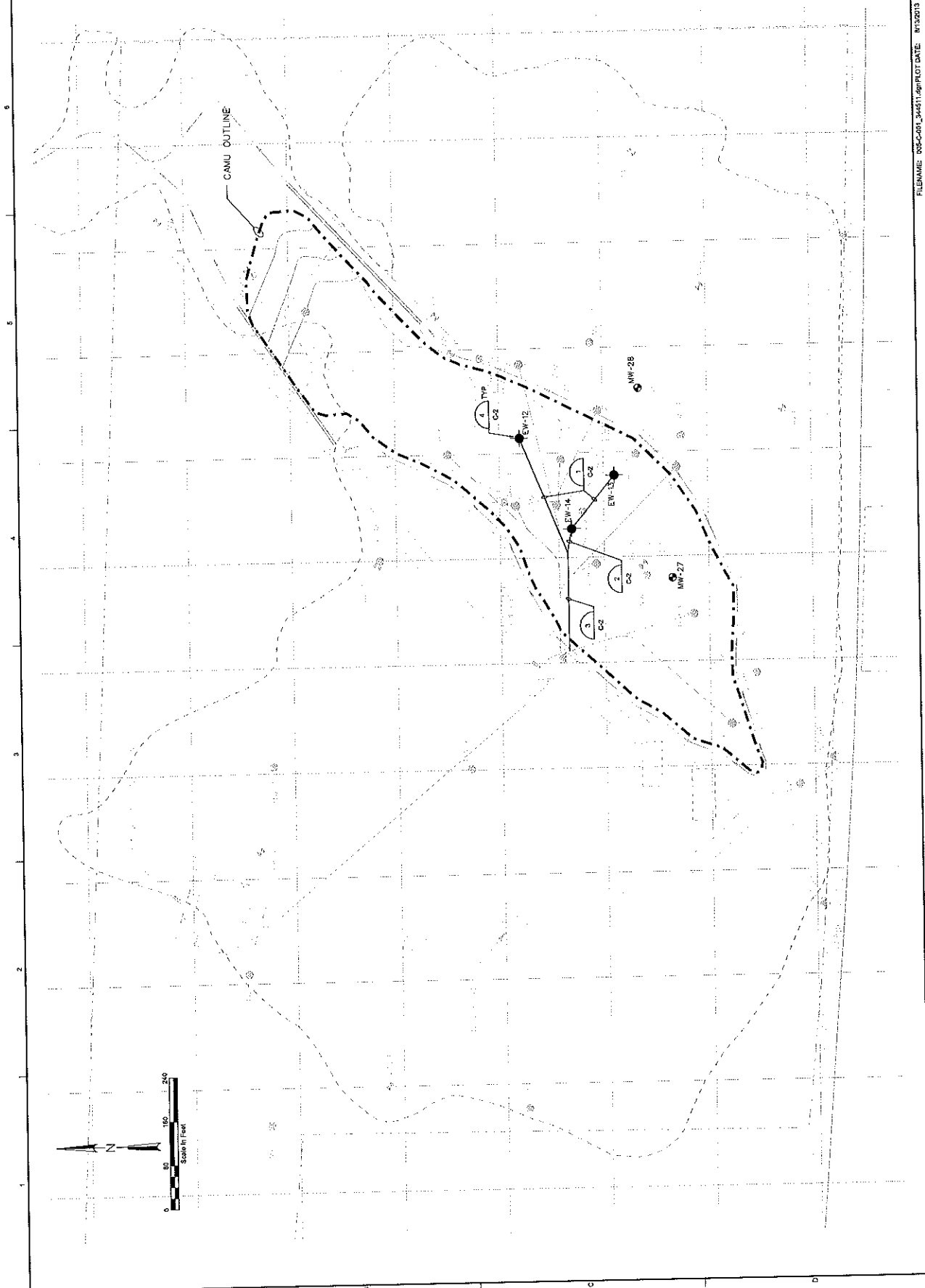
TRENCHING PLAN

WELL CONNECTIONS/FAIRWAYS - PACKAGE 2
PENTA WOOD PRODUCTS SITE/TRA
USER: A
TOWN OF DANIEL S. WISCONSIN

NO.	DATE	DESCRIPTION	BY	APP'D

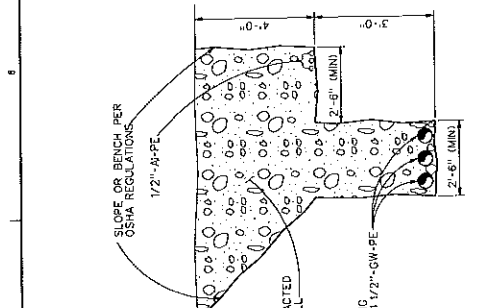
DESIGN: C.C. JOHNSON
DIR: G. MCCOY
CHECK: K. KEMMENA
APP'D: K. KEMMENA

I hereby certify that the information furnished on this drawing is true and correct to the best of my knowledge and belief, and that I am a duly licensed professional engineer in the State of Wisconsin. I am the author of, or under the direct supervision and control of, the preparation of this drawing. I am not providing my professional services in violation of any law or rule of the State of Wisconsin. I am not providing my professional services in violation of any law or rule of the State of Wisconsin. I am not providing my professional services in violation of any law or rule of the State of Wisconsin.

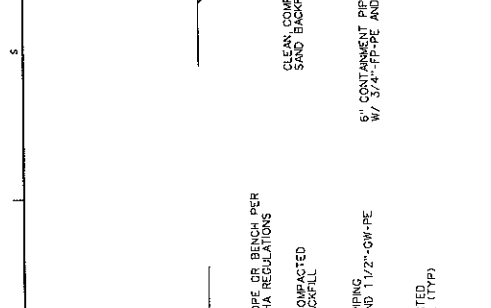


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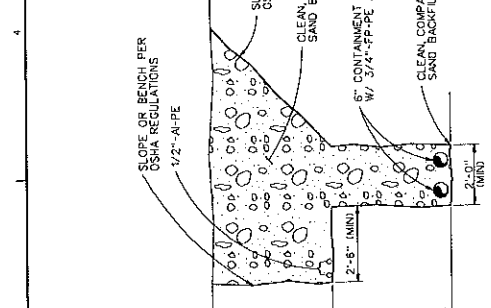
REVISIONS
 NO. DATE BY
 1 10/10/10 K.MCKENNA
 2 10/10/10 R.MCKENNA
 3 10/10/10 R.MCKENNA



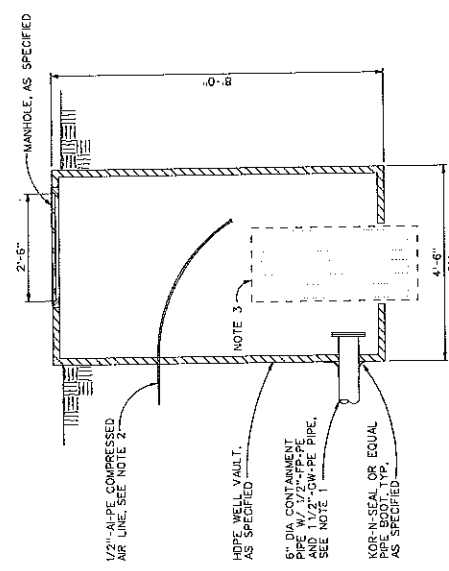
TRENCH DETAIL 1
 1/2" A1-PE
 C-1



TRENCH DETAIL 2
 1/2" A1-PE
 C-1



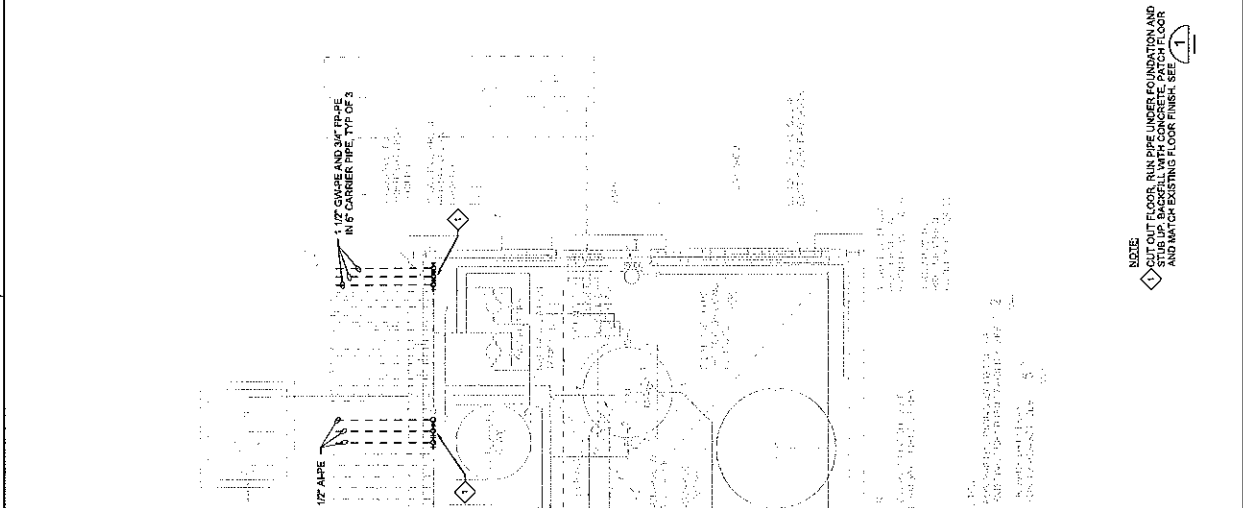
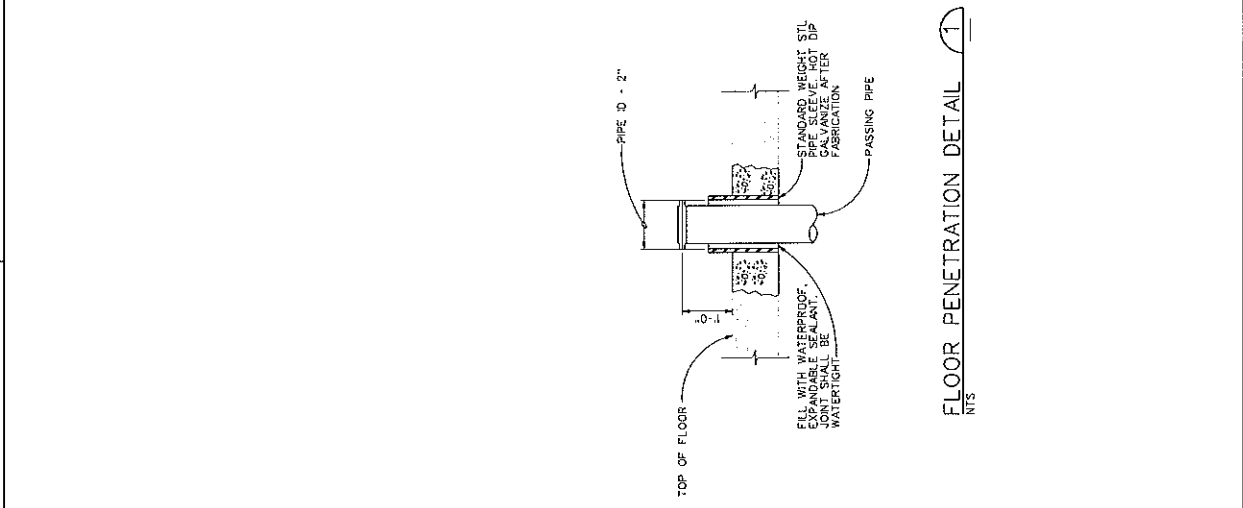
TRENCH DETAIL 3
 1/2" A1-PE
 C-1



- NOTES:
1. EXTEND PIPE 6" INSIDE VAULT, WELD FLANGE, AND BOLY CAP TO FLANGE. SEAL PIPE AT VAULT WALL WITH BOOT.
 2. EXTEND LINE TO 4" INSIDE VAULT, CAP LINE, AND SEAL AT VAULT WALL.
 3. WORK WITHIN DASHED LINE TO BE PROVIDED BY DRILLING CONTRACTOR.

WELL VAULT DETAIL
 3/8" A1-PE
 C-1

NOTE:
 1. SUBCONTRACTOR SHALL REVISE TRENCH DIMENSIONS AND SHAPE AS NECESSARY TO MEET ALL PERMITS AND TO ASSURE CONSTRUCTABILITY AS NECESSARY. EXCAVATION LIMITS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY.



NOTE
 CUT OUT FLOOR, RUN PIPE UNDER FOUNDATION AND
 REINSTATE FLOOR WITH CONCRETE TO MATCH FLOOR
 FINISH OF EXISTING FLOOR FINISH SEE 1

1/2" AHP
 1/2" CW-PIPE AND 3/4" FR-PIPE
 IN 6" CARRIER PIPE, TYP OF 3

EXISTING AND
 ENCLOSURE

NEW AND
 ENCLOSURE

1
 E-4

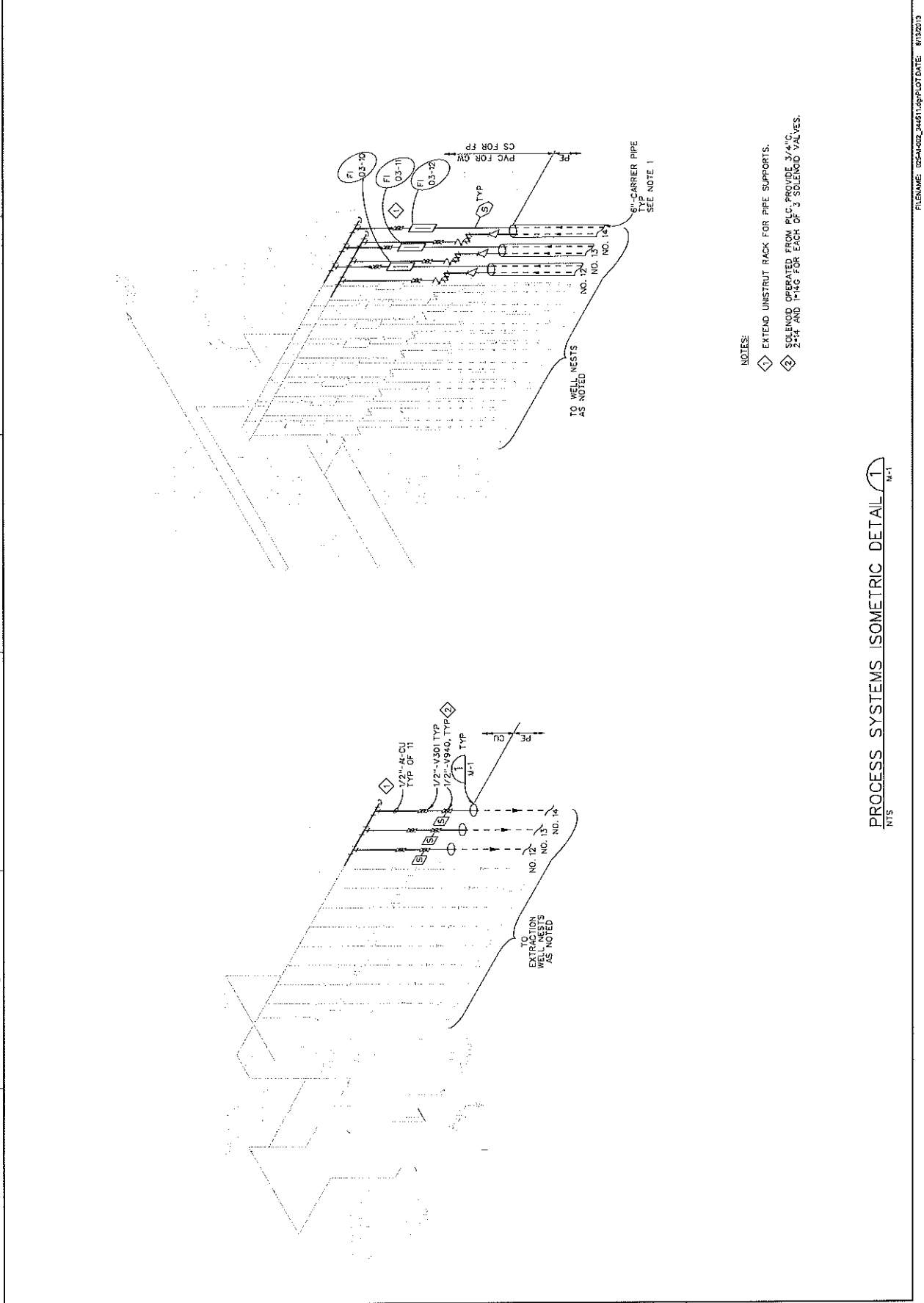
3
 E-4

PLAN
 1/4" = 1'-0"

CH2MHILL		MECHANICAL	
PROCESS SYSTEMS ISOMETRIC DETAIL			
WELL CORRECTIONS/PARTITIONERS - PACKAGE 2 PENTA WOOD PRODUCTS SITE/LTRA USEPA TOWN OF DANIELS, WISCONSIN			
R. A. YOLO DR		D. A. MACDONALD CHK	
L. A. ANDERSON REVISED		MVD BY	
K. MCKENNA DATE		DATE 2003	
NO.		SHEET 14	
DATE 03-11-03		DATE 09-11-03	
NO.		DATE 03-11-03	
NO.		DATE 03-11-03	

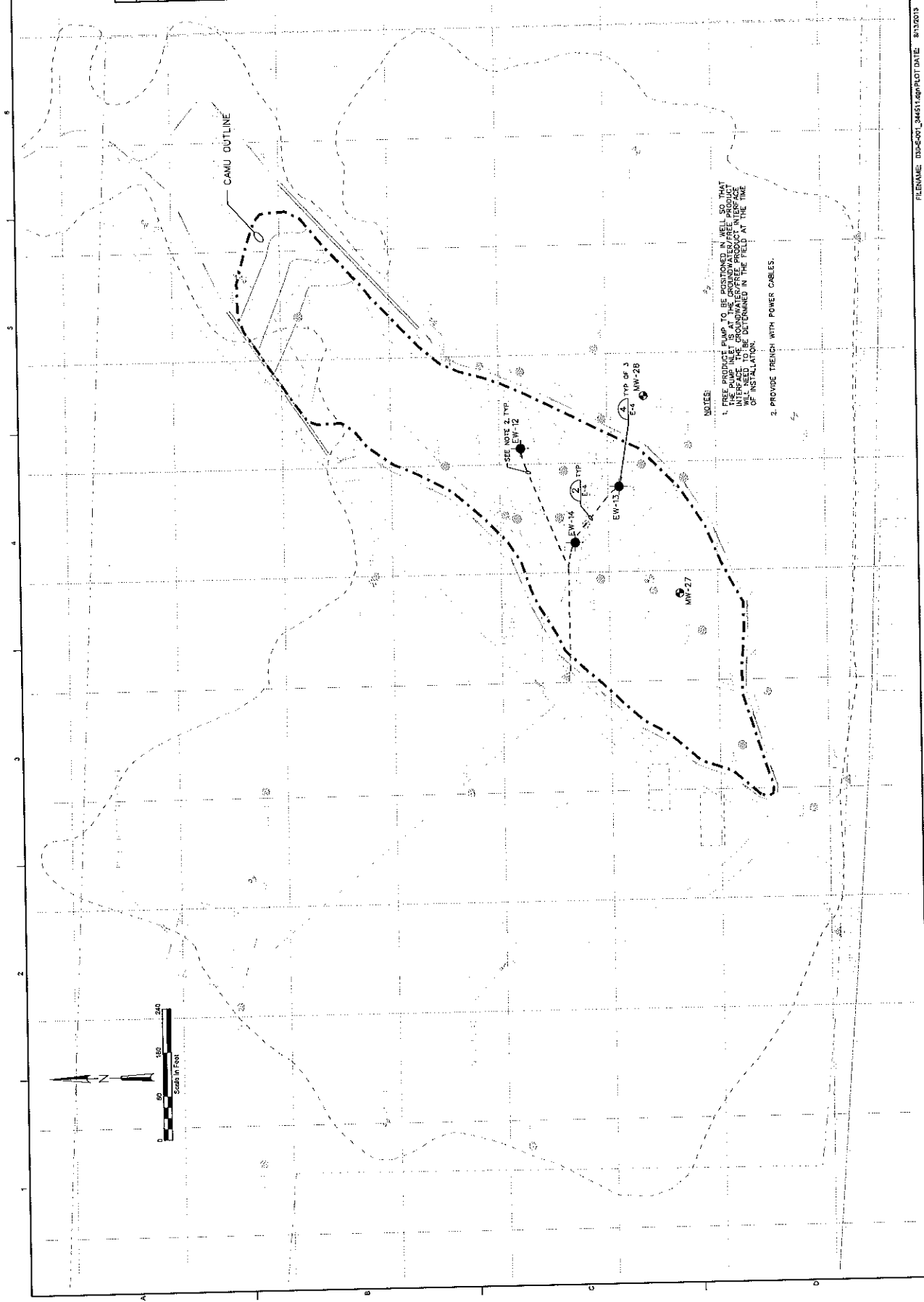
VERIFY SCALE
 PROJECT NUMBER
 DATE
 09-11-03
 DRAWN
 MVD
 SHEET
 14

FILENAME: 025-0002-24611.dwg; LOT DATE: 8/12/03
 PLOT TIME: 8:19:50 AM



- NOTES:
- ① EXTEND UNSTRUT RACK FOR PIPE SUPPORTS.
 - ② SOLENOID OPERATED FROM PLC. PROVIDE 3/4" C, 2*#4 AND 1*#6 FOR EACH OF 3 SOLENOID VALVES.

PROCESS SYSTEMS ISOMETRIC DETAIL
 NTS M-1



NOTICE:
1. FREE PRODUCT PUMP TO BE POSITIONED IN WELL SO THAT INTERFERENCE WITH THE GROUNDWATER/PRODUCT INTERFACE WILL NEED TO BE DETERMINED IN THE FIELD AT THE TIME OF INSTALLATION.
2. PROVIDE TRENCH WITH POWER CABLES.

SEE NOTE 2, TYP.
SEE NOTE 2, TYP.

NO.	DATE	BY	APP'D

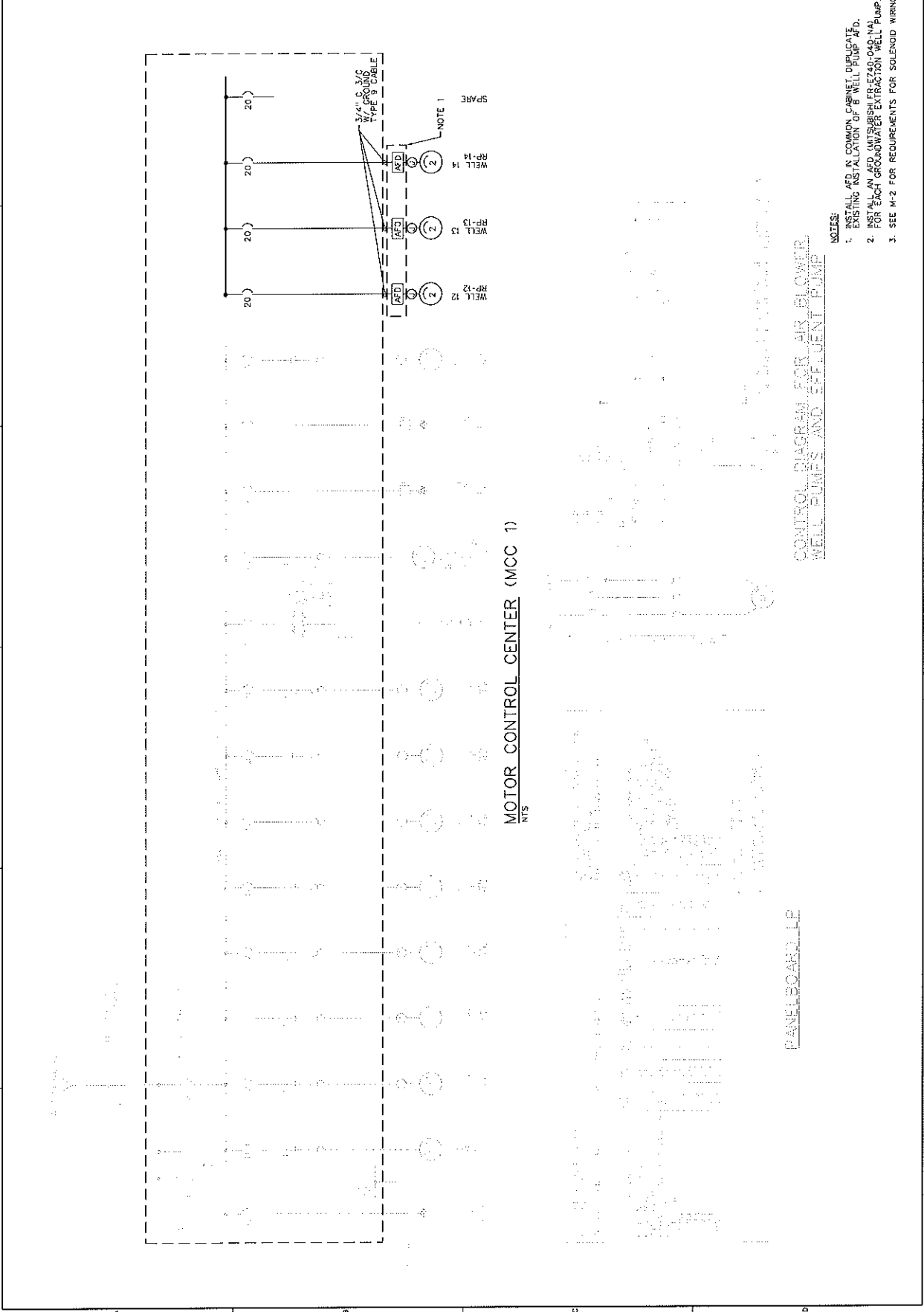
DESIGN	J. MCKINNEY
CHECK	G. MCCOY
REVISION	A.P.D.

TOWN OF DANIELS, WISCONSIN
 USPA
 PERVA WOOD PRODUCTS SITE LTR
 WELL CONNECTIONS/GEARBOXES - PACKAGE 2

CH2MHILL
 ELECTRICAL
 ON-LINE DIAGRAM AND
 PANEL SCHEDULE

VERIFY SCALE	
DATE	SEPTEMBER 2010
DRG	24421

PLANT TIME: 8:56:21 AM
 SHEET: 15



MOTOR CONTROL CENTER (MCC 1)
 NTS

PANELBOARD LP

CONTROL DIAGRAM FOR AIR BLOWER
 WELL PUMPS AND EFFLUENT PUMP

- NOTES:
1. INSTALL AFD IN COMMON CABINET, DUPLICATE EXISTING INSTALLATION OF 'B' WELL PUMP AFD.
 2. INSTALL AN AFD (MITSUBISHI FR-E740-040-NA) FOR EACH GROUNDWATER EXTRACTION WELL PUMP.
 3. SEE M-2 FOR REQUIREMENTS FOR SOLENOID WIRING.

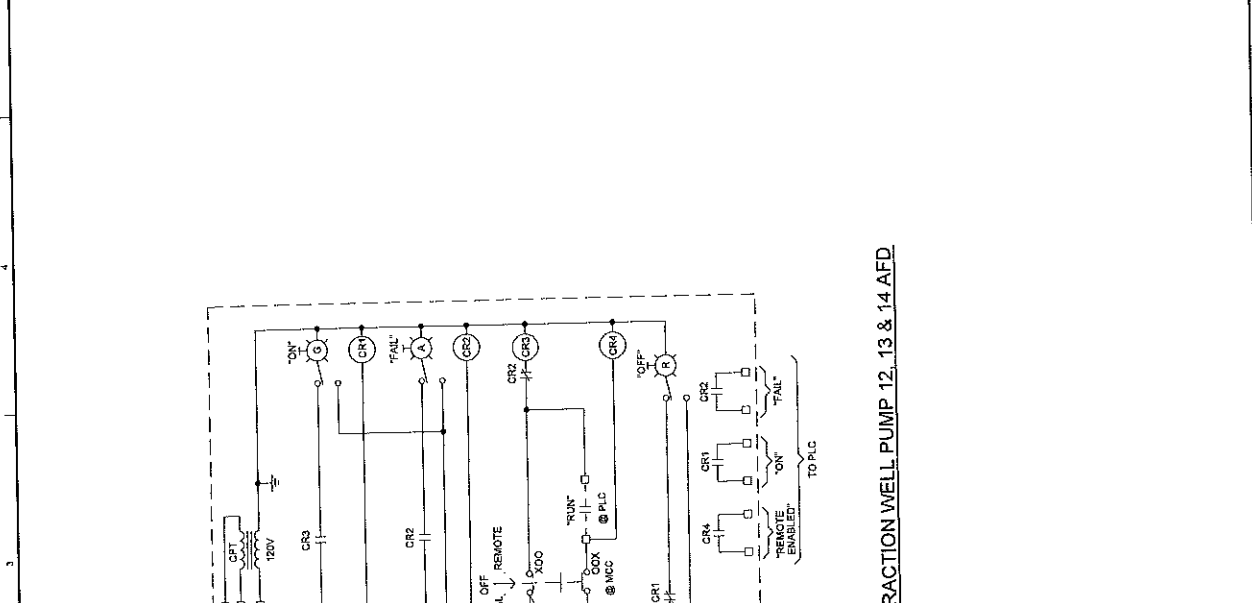
NO.	DATE	REVISION	BY	APVD

WELL CONNECTIONS/FAR/RYNDRS - PACKAGE 2
 USERA
 PENTA WOOD PRODUCTS SITE/LTRA
 TOWN OF DANIEL S. WISCONSIN
 J.A. MCKINNEY
 C. MCCOY
 G. J. PERNGER
 J.A. MCKINNEY

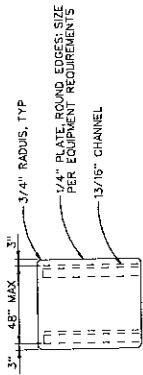
VERIFY SCALE
 PROJECT NUMBER
 DRAWING NUMBER
 SHEET NUMBER

DATE: SEPTEMBER 2010
 PROJ: 346533
 DWG: 220
 SHEET: 02
 PLOT TIME: 4200:52 AM

REVIEW OF DOCUMENTS: THIS DOCUMENT AND THE EDCS AND DESIGN REQUIREMENTS HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE IS THE PROPERTY OF CH2MHILL. NO. 44 RIGHTS RESERVED.

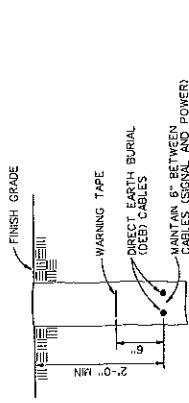


GROUNDWATER EXTRACTION WELL PUMP 12, 13 & 14 AFD

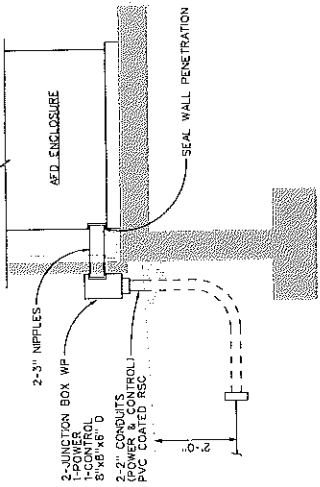


NOTE:
 1. USE STAINLESS STEEL MOUNTING HARDWARE USE WASHER AND SPLIT LOCKWASHER UNDER ALL NUTS.

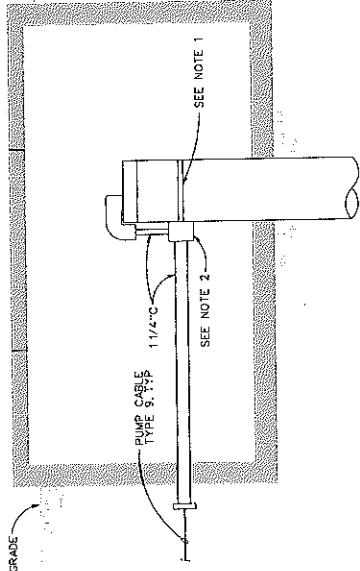
WALL MOUNTED ELECTRICAL EQUIPMENT SUPPORT DETAIL 1
 NTS



DIRECT BURIAL CABLE PLACEMENT DETAIL 2
 NTS



DIRECT BURIED CABLE EXIT DETAIL 3
 NTS



NOTES:
 1. STRAP NEVA 4X JUNCTION BOX TO WELL PIPE.
 2. SPLICE TO PUMP CABLES.

WELL HEAD DETAIL 4
 NTS

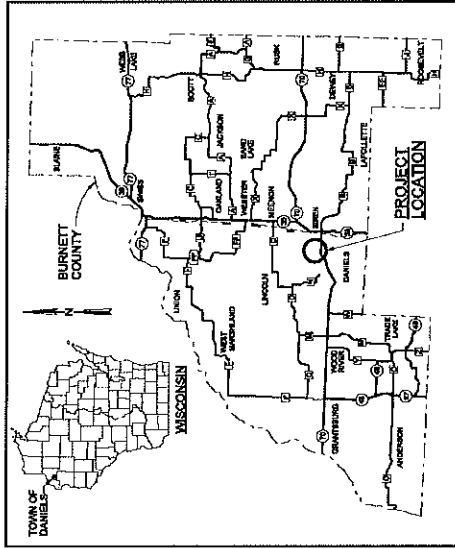
CH2MHILL		ELECTRICAL		DETAILS	
WELL CONNECTIONS/EARTHINGS - PACKAGE 2					
PENTA WOOD PRODUCTS SHELTRA					
USEFA					
TOWN OF DANIELS, WISCONSIN					
NO. DATE					
G. J. PREHGER					
C. MCGOY					
BY					
APPROV					

VERIFY SCALE	DATE
DATE	SEPTEMBER 2010
PROJ	34451
DWG	E-1
SHEET	4

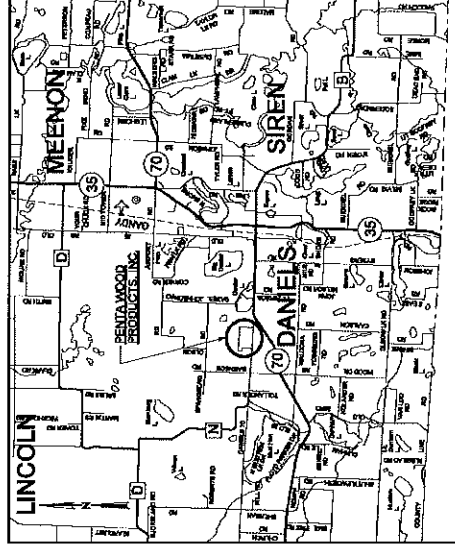
FILENAME: 000-C004_34451.dgn PLOT DATE: 8/12/2013 PLOT TIME: 12:03:40 AM

BIOVENTING/GROUNDWATER TREATMENT FACILITY MODIFICATIONS

PENTA WOOD PRODUCTS SITE LTRA ENGINEERING SUPPORT TOWN OF DANIELS, WISCONSIN



VICINITY MAP



LOCATION MAP

DESIGN BY: B. LUDWIG
 CHECKED BY: W. ANDERSON
 DATE: 03/15/03

NO. 1 DATE: 03/15/03

BY: J. RAY
 REVISION: 03/15/03

VERTICAL SCALE: 1" = 100'
 HORIZONTAL SCALE: 1" = 1000'
 ORIGINAL DRAWING: 03/15/03
 IF NOT ONE INCH ON ORIGINAL DRAWING, SCALE WILL BE AS SHOWN ON ORIGINAL DRAWING.

CH2MHILL

BIOVENTING/GROUNDWATER
 TREATMENT FACILITY MODIFICATIONS
 PENTA WOOD PRODUCTS SITE LTRA
 TOWN OF DANIELS, WISCONSIN

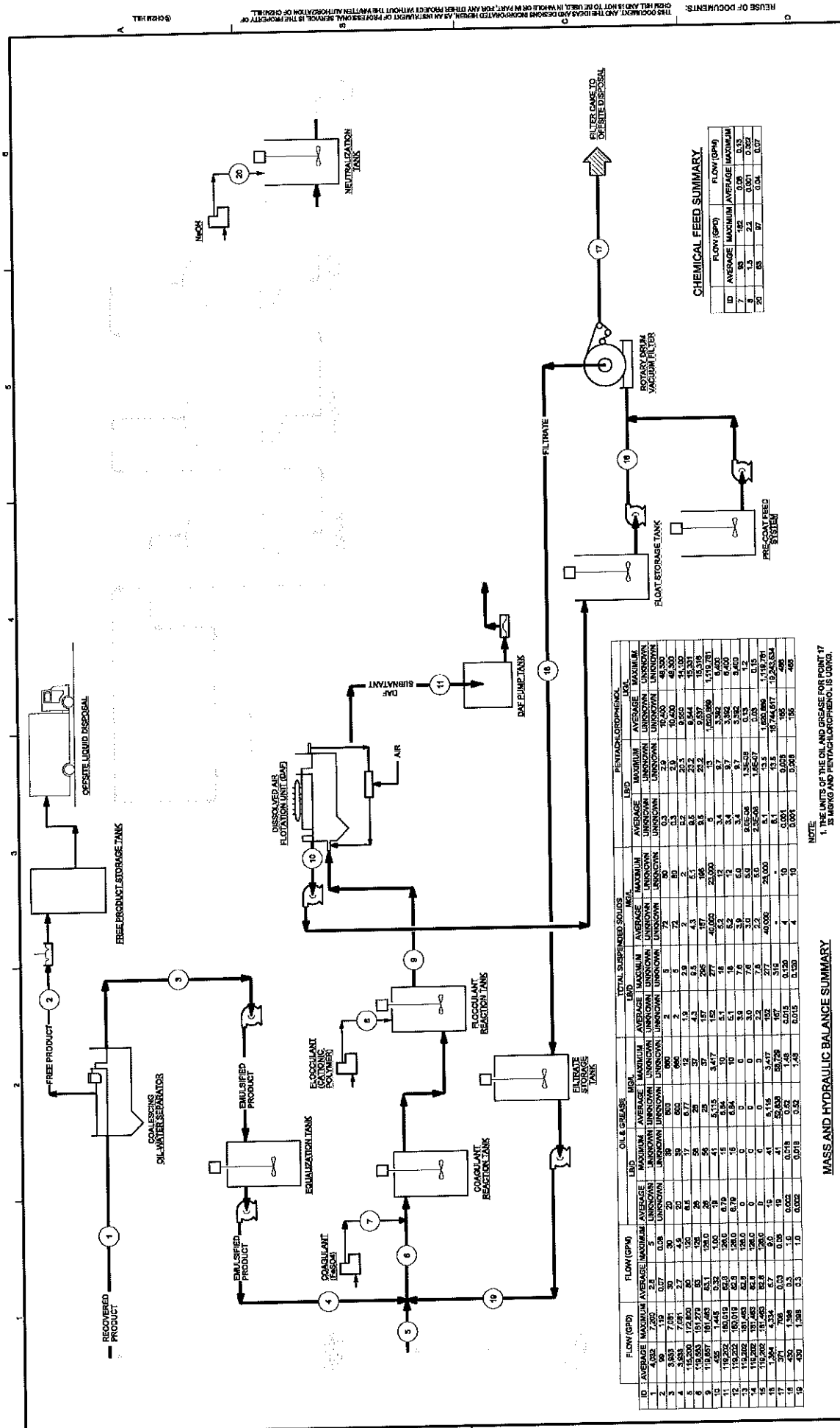
PACKAGE: GENERAL
 SHEET: G-1
 DATE: MARCH 2003
 PROJ.: 030415

FILENAME: p40214_030415.dgn
 MODIFY DATE: 28-MAR-2003
 PROJECT TIME: 10:00:02

INDEX TO DRAWINGS

SHEET NO.	DRAWING NO.	TITLE	SHEET NO.	DRAWING NO.	TITLE
GENERAL					
1	G-1	TITLE SHEET, VICINITY AND LOCATION MAPS	26	M-1	EXISTING TREATMENT FACILITY DEPOLYMERIZATION PLAN AND PLAN
2	G-2	PRODUCTION EXTRACTION & BIOVENTING PAID	27	M-2	PRETREATMENT FACILITY PLAN
3	G-3	FREE PRODUCT RECOVERY SYSTEM PAID	28	M-3	PRETREATMENT FACILITY DRAIN PLAN
4	G-4	GRANULAR ACTIVATED CARBON TREATMENT SYSTEM PAID	29	M-4	PRETREATMENT FACILITY SECTION AND DETAIL
5	G-5	ROTARY DRUM VACUUM FILTER SYSTEM PAID	30	M-5	PRETREATMENT FACILITY SECTION AND DETAIL
6	G-6	POLYMER MAKE-UP SYSTEM PAID	31	M-6	ODOROUS AIR VENT SYSTEM AND PLANT AIR ISOMETRIC DETAILS
7	G-7	VENTILATION PAID			
8	G-8	AIR WATER AND PLANT DRAINS PAID			
9	G-9	ARCHITECTURAL SYMBOLS AND LEGEND			
10	G-10	ELECTRICAL LEGEND	32	H-1	PRETREATMENT FACILITY PLAN
INSTRUMENTATION AND CONTROL					
11	N-1	PRODUCTION EXTRACTION & BIOVENTING PAID			
12	N-2	FREE PRODUCT RECOVERY SYSTEM PAID			
13	N-3	GRANULAR ACTIVATED CARBON TREATMENT SYSTEM PAID			
14	N-4	ROTARY DRUM VACUUM FILTER SYSTEM PAID			
15	N-5	POLYMER MAKE-UP SYSTEM PAID			
16	N-6	VENTILATION PAID			
17	N-7	AIR WATER AND PLANT DRAINS PAID			
18	N-8	ARCHITECTURAL SYMBOLS AND LEGEND			
19	N-9	ELECTRICAL LEGEND			
20	N-10				
PLUMBING					
33	P-1	PRETREATMENT FACILITY SECTION AND DETAIL			
34	P-2				
ELECTRICAL					
35	E-1	ONE-LINE DIAGRAM AND MCC-3 ELEVATION			
36	E-2	SCHEDULES AND CONTROL DIAGRAMS			
37	E-3	EXISTING TREATMENT FACILITY AND OUTSIDE TANKS PROCESS PLANS			
38	E-4	PRETREATMENT FACILITY SECTION AND DETAIL			
39	E-5	PRETREATMENT FACILITY PLAN			
40	E-6				
STANDARD DETAILS					
41	D-1	STANDARD DETAILS			
42	D-2				
43	D-3				
44	D-4				
45	D-5				
46	D-6				
47	D-7				
REFERENCE LISTS					
		ASBESTOS			
		400112			
		13381-201			
		4510337A			

CH2MHILL	INDEX TO DRAWINGS	SHEET 2 DWG O-2	PACKAGE 2 GENERAL
VERIFY SCALE 1" = 8' OR 1" = 10' ORIGINAL DRAWING IF NOT ONE INCH ON SCALE, REVISIONS ONLY	SOVENTING/GROUNDWATER TREATMENT FACILITY MODIFICATIONS PENTAWOOD PRODUCTS SITE LTRA ENGINEERING SUPPORT TOWN OF DANIELS, WISCONSIN	DATE MARCH 2003 PLOT: 156915	MODIFY DATE 26-MAR-2003 MODIFY TIME: 10:52:42
NO. 1 DATE NO. 2 DATE NO. 3 DATE	REVISION		



CHEMICAL FEED SUMMARY

ID	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
FLOW (GPM)	FLOW (GPM)	FLOW (GPM)	FLOW (GPM)	FLOW (GPM)
1	0.05	0.08	0.05	0.08
2	0.05	0.08	0.05	0.08
3	0.05	0.08	0.05	0.08
4	0.05	0.08	0.05	0.08
5	0.05	0.08	0.05	0.08
6	0.05	0.08	0.05	0.08
7	0.05	0.08	0.05	0.08
8	0.05	0.08	0.05	0.08
9	0.05	0.08	0.05	0.08
10	0.05	0.08	0.05	0.08
11	0.05	0.08	0.05	0.08
12	0.05	0.08	0.05	0.08
13	0.05	0.08	0.05	0.08
14	0.05	0.08	0.05	0.08
15	0.05	0.08	0.05	0.08
16	0.05	0.08	0.05	0.08
17	0.05	0.08	0.05	0.08
18	0.05	0.08	0.05	0.08
19	0.05	0.08	0.05	0.08
20	0.05	0.08	0.05	0.08

ID	FLOW (GPM)			TOTAL SUSPENDED SOLIDS			OIL & GREASE			PENTACHLOROPHENOL		
	AVERAGE	MAXIMUM	UNKNOWN	AVERAGE	MAXIMUM	UNKNOWN	AVERAGE	MAXIMUM	UNKNOWN	AVERAGE	MAXIMUM	UNKNOWN
1	7.250	139	0.07	5	17	0.17	5	17	0.17	5	17	0.17
2	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
3	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
4	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
5	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
6	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
7	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
8	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
9	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
10	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
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12	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
13	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
14	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
15	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
16	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
17	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
18	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
19	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17
20	7.091	131	0.07	5	17	0.17	5	17	0.17	5	17	0.17

NOTE
 1. ALL UNITS OF OIL AND GREASE FOR POINT 17 IS BARREL AND PENTACHLOROPHENOL IS LB/DAY.

MASS AND HYDRAULIC BALANCE SUMMARY

REVISION	DATE	BY	DESCRIPTION

VERIFY SCALE
 ORIGINAL DRAWING
 DATE ONE MONTH
 BEFORE FIRST ADJUST
 SCALE INDICATED

PACKAGE 2
 GENERAL
 REV 0-3
 DATE MARCH 2003
 PROJ 158815

INDUSTRIAL WASTEWATER
 TREATMENT FACILITY MODIFICATIONS
 PENTA MICRO PRODUCTS SITE, LTRA
 ENGINEERING SUPPORT
 TOWN OF DANIELS, WISCONSIN
 FILENAME: P242P02_158815.dwg MODIFY DATE: 25-04-2003

CH2MHILL

PROCESS FLOW DIAGRAM,
 CHEMICAL FEED, MASS AND
 HYDRAULIC BALANCE SUMMARIES
 SHEET 3

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ABBREVIATIONS

AB	ANCHOR BOLT	DNR	DRAWER	MAI	MADE UP AIR UNIT	S A	SOUTH AIR	SA	SCHEDULED ACOUSTICAL TILE	SA	SCHEDULED ACOUSTICAL TILE
ABN	ABANDONED	DND	DRAWING	MB	MACHINABLE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE
AC	ACCESS	DMW	DRAWING	MX	MACHINE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE
ACB	ARCHIBUTED CONDENSING UNIT	DND	DRAWING	MX	MACHINE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE
ACD	ACOUSTICAL DAMPING UNIT	E	EXTERNAL	MZ	MOTORIZED ZUMPER	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE
AD	ADDITIONAL	EL	ELECTRIC	MZ	MOTORIZED ZUMPER	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE
AD	ADDITIONAL	ELN	ELECTRIC	MZ	MOTORIZED ZUMPER	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE
ADN	ADDITIVE	ELD	ELECTRIC	MZ	MOTORIZED ZUMPER	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE
ADN	ADDITIVE	ELD	ELECTRIC	MZ	MOTORIZED ZUMPER	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE
ADN	ADDITIVE	ELD	ELECTRIC	MZ	MOTORIZED ZUMPER	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE
ADN	ADDITIVE	ELD	ELECTRIC	MZ	MOTORIZED ZUMPER	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE	SAT	SCHEDULED ACOUSTICAL TILE

AVG	AVERAGE	BOA	BOILER HEATING COOL	AVG	AVERAGE	BOA	BOILER HEATING COOL
BE	BOTTOM BEARING	BOP	BOTTOM PANEL	BOA	BOILER HEATING COOL	BOA	BOILER HEATING COOL
BE	BOTTOM BEARING	BOP	BOTTOM PANEL	BOA	BOILER HEATING COOL	BOA	BOILER HEATING COOL
BE	BOTTOM BEARING	BOP	BOTTOM PANEL	BOA	BOILER HEATING COOL	BOA	BOILER HEATING COOL
BE	BOTTOM BEARING	BOP	BOTTOM PANEL	BOA	BOILER HEATING COOL	BOA	BOILER HEATING COOL
BE	BOTTOM BEARING	BOP	BOTTOM PANEL	BOA	BOILER HEATING COOL	BOA	BOILER HEATING COOL
BE	BOTTOM BEARING	BOP	BOTTOM PANEL	BOA	BOILER HEATING COOL	BOA	BOILER HEATING COOL
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BE	BOTTOM BEARING	BOP	BOTTOM PANEL	BOA	BOILER HEATING COOL	BOA	BOILER HEATING COOL
BE	BOTTOM BEARING	BOP	BOTTOM PANEL	BOA	BOILER HEATING COOL	BOA	BOILER HEATING COOL

CA	CABINET	CEILING	CEILING	CA	CABINET	CEILING	CEILING
CA	CABINET	CEILING	CEILING	CA	CABINET	CEILING	CEILING
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CA	CABINET	CEILING	CEILING	CA	CABINET	CEILING	CEILING
CA	CABINET	CEILING	CEILING	CA	CABINET	CEILING	CEILING

DR	DRIVER	DR	DRIVER	DR	DRIVER	DR	DRIVER
DR	DRIVER	DR	DRIVER	DR	DRIVER	DR	DRIVER
DR	DRIVER	DR	DRIVER	DR	DRIVER	DR	DRIVER
DR	DRIVER	DR	DRIVER	DR	DRIVER	DR	DRIVER
DR	DRIVER	DR	DRIVER	DR	DRIVER	DR	DRIVER
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DR	DRIVER	DR	DRIVER	DR	DRIVER	DR	DRIVER

AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE
AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE
AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE
AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE
AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE
AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE
AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE
AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE
AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE
AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE	AD	APPROXIMATE

ABBREVIATIONS

GENERAL NOTE

1. THIS IS A STANDARD LEGEND SHEET. SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.

FLOW STREAM IDENTIFICATION

CS	CAUSTIC
DF	DAF-FLOAT
DR	DRAIN (SANITARY)
EP	EMULSIFIED PRODUCT
FE	FERRIC SULFATE
FR	FRESH PRODUCT
GW	GROUND WATER
HV	HOT WATER
HA	DOMESTIC HOT WATER
OD	ODOROUS AIR
PA	PROCESS AIR
PD	PLANT DRAIN
PP	PROPANE
POL	POLYMER
PW	POTABLE WATER
SW	SERVICE WATER
TW	TEMPERED WATER
V	VENT

DETAIL, SECTION AND VIEW DESIGNATION

SECTION LETTER OR DETAIL (NUMERAL) DESIGNATION

ON DRAWING WHERE SECTION OR DETAIL IS TAKEN

DRAWING NUMBER WHERE SHOWN

DRAWING NUMBER (RESHARED) WITH ALIAS IF TAKEN AND SHOWN ON SAME SHEET

ABBREVIATIONS

INDICATES DRAWING NUMBER

INDICATES DISCIPLINES:

A	ARCHITECTURAL
B	MECHANICAL
C	ELECTRICAL
D	CIVIL
E	GENERAL
F	MECHANICAL AND CONTROL
G	STRUCTURAL

GENERAL NOTE

1. CONTACT THE ENGINEER FOR ABBREVIATIONS NOT LISTED.

PROJECT		NO. DATE	
PK-04	BAVCO	10	
PROJECT		NO. DATE	
PK-04	BAVCO	10	
PROJECT		NO. DATE	
PK-04	BAVCO	10	

PACKAGE 2
GENERAL
SHEET 4
DWG 0-4
DATE MARCH 2003
REV. 18915

ABBREVIATIONS, DESIGNATION LEGENDS AND FLOW STREAM IDENTIFICATION

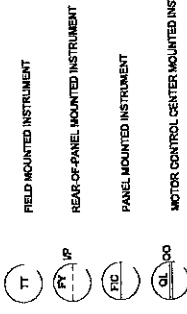
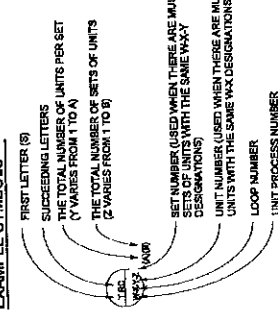
BARRETT & ASSOCIATES
TREATMENT FACILITY MODIFICATIONS
PORTLAND PROJECT SITE LTPA
TOWN OF DANIELS, WISCONSIN

CH2MHILL

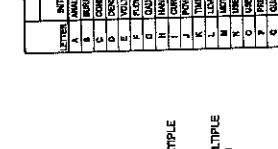
VERIFY SCALE	SCALE: AS SHOWN
SCALE: AS SHOWN	
SCALE: AS SHOWN	
SCALE: AS SHOWN	
SCALE: AS SHOWN	

PROJECT TIME: 10:55:12
FILENAME: PK-04_18915.dwg
MODIFY DATE: 28-MAR-2003

INSTRUMENT IDENTIFICATION



EXAMPLE SYMBOLS

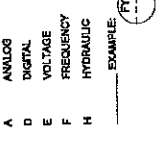


INSTRUMENT SOCIETY OF AMERICA TABLE

LETTER	FUNCTION	LETTER	FUNCTION
A	ANALOG	Q	QUANTITY
B	BINARY	R	RESISTANCE
C	CONDUCTIVITY	S	SIGNAL
D	DIGITAL	T	TEMPERATURE
E	VOLTAGE	V	VIBRATION
F	FREQUENCY	W	WEIGHT
G	TEMPERATURE	X	EXHAUST
H	HYDRAULIC	Y	UNIT NUMBER
I	CURRENT	Z	POSITION
J	PNEUMATIC		
K	PULSE FREQUENCY		
L	PULSE DURATION		
M	RESISTANCE		
N	NEUTRALIZATION		
O	ON-OFF		
P	PNEUMATIC		
Q	QUANTITY		
R	RESISTANCE		
S	SIGNAL		
T	TEMPERATURE		
V	VIBRATION		
W	WEIGHT		
X	EXHAUST		
Y	UNIT NUMBER		
Z	POSITION		

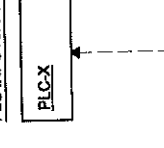
(*) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.

TRANSDUCCERS

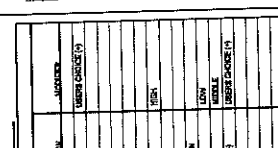


EXAMPLE: (A) (I) (P) (S) (X) (Y) (Z)

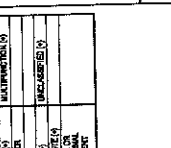
PLC INPUTS/OUTPUTS



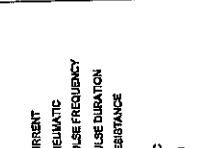
LINE LEGEND



INTERFACE SYMBOLS



SELF CONTAINED VALVE & EQUIPMENT TAG NUMBERS



ABBREVIATIONS & LETTER SYMBOLS

AC	ALTERNATING CURRENT
AKM	ALUMINUM
AM	AUTO-MANUAL
CA	COMPUTER-AUTO-MANUAL
CC	CENTRAL CONTROL (USE STANDARD CHEMICAL ELEMENT ABBREVIATION)
CM	COMPUTER-MANUAL
CO	CHEMICAL OXYGEN DEMAND
CP-X	CONTROL PANEL NO. X
DC	DISSOLVED OXYGEN
FC	FREE CHLORINE RESIDUAL
FCL-2	FAST-OFF-SLOW-AUTO
FCS	FAST-OFF-SLOW-AUTO
FS	FIELD PANEL NO. WS (W = UNIT PROCESS NUMBER)
FSR	FIELD PANEL NO. WS (W = UNIT PROCESS NUMBER)
FR	FORWARD-REVERSE
FRS	FORWARD-REVERSE
HOA	HAND-OFF-AUTO
HO	HAND-OFF
LE	LOWER EXHAUST LIMIT
LOS	LOCKOUT STOP
LR	LOCAL-REMOTE
MA	MANUAL-AUTO
MAA	MANUAL-AUTO-ACTIVE SUBSTANCES
MCA	MULTI-CONTROL CENTER NO. X
MCC-X	MULTI-CONTROL CENTER NO. X
OC	OPEN-CLOSE (ID)
OCR	OPEN-CLOSE-REMOTE
OCC	OPEN-CLOSE-AUTO
OCX	ON-OFF-AUTO
OD	ON-OFF-REMOTE
OP	ORTHOPHOSPHORUS
ORP	ORTHOPHOSPHORUS POTENTIAL
OS	ON-SIGNAL
OSD	ON-SIGNAL-DESTROY
PH	POTENTIAL
RA	REMOTE TELEMETRY UNIT NO. X
RAA	REMOTE TELEMETRY UNIT NO. X
RTUX	REMOTE TELEMETRY UNIT NO. X
SF	SCHEMATIC SYMBOL
SP	SET POINT
SSC	SET POINT CONTROL
TCL-2	TOTAL CHLORINE RESIDUAL
TOC	TOTAL ORGANIC CARBON
TOD	TOTAL OXYGEN DEMAND
UV	ULTRAVIOLET
VIB	VIBRATION
VS	VOLATILE HYDROCARBONS
W	WEIGHT
X	EXHAUST
Y	UNIT NUMBER
Z	POSITION

GENERAL NOTES

- COMPONENTS AND PANELS SHOWN WITH A (*) ARE TO BE PROVIDED UNDER SECTION INSTRUMENTATION AND CONTROLS.
- COMPONENTS AND PANELS SHOWN WITH A DOUBLE ASTERISK (**) ARE TO BE PROVIDED AS PART OF A PACKAGE SYSTEM.
- THIS IS A STANDARD LEGEND. THEREFORE, NOT ALL OF THIS INFORMATION MAY BE USED ON THIS PROJECT.
- FOR FLOW STREAM IDENTIFICATION, SEE DRAWING G-4.
- PIPS SHOWN ON THE PIPES ARE SHOWN FOR REFERENCE ONLY. PIPES SHOWN ON MECHANICAL DRAWINGS TAKE PRECEDENCE OVER THE PIPES UNLESS OTHERWISE NOTED.

INSTRUMENTATION AND CONTROL LEGEND

PACKAGE 2	GENERAL
SHEET 5	OF 5
DATE	MARCH 2003
PROJECT	158416

FILENAME: pm2508_158416.dwg MODIFY DATE: 24-MAR-2003 MODIFY TIME: 10:40:18

VERIFICATION

VERIFICATION UNIT NUMBER
TREATMENT FACILITY MODIFICATIONS
PERMITS/WORK PERMITS/STATE SITE LTRAs
DESIGN/CONSTRUCTION/OPERATIONS SUPPORT
TOWN OF DANIELS, WISCONSIN

CH2MHILL

CH2MHILL
158416

PLC INPUTS/OUTPUTS

PLC-X
ANALOG INPUT
ANALOG OUTPUT
DISCRETE INPUT
DISCRETE OUTPUT

INSTRUMENT IDENTIFICATION

INSTRUMENT IDENTIFICATION
FIRST LETTER (S)
SUCCEEDING LETTERS
TOTAL NUMBER OF UNITS PER SET
TOTAL NUMBER OF SETS OF UNITS
SET NUMBER
UNIT NUMBER
LOOP NUMBER

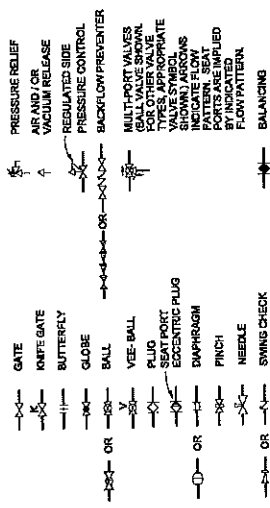
ABBREVIATIONS & LETTER SYMBOLS

ABBREVIATIONS & LETTER SYMBOLS
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AKM ALUMINUM
AM AUTO-MANUAL
CA COMPUTER-AUTO-MANUAL
CC CENTRAL CONTROL (USE STANDARD CHEMICAL ELEMENT ABBREVIATION)
CM COMPUTER-MANUAL
CO CHEMICAL OXYGEN DEMAND
CP-X CONTROL PANEL NO. X
DC DISSOLVED OXYGEN
FC FREE CHLORINE RESIDUAL
FCL-2 FAST-OFF-SLOW-AUTO
FCS FAST-OFF-SLOW-AUTO
FS FIELD PANEL NO. WS (W = UNIT PROCESS NUMBER)
FSR FIELD PANEL NO. WS (W = UNIT PROCESS NUMBER)
FR FORWARD-REVERSE
FRS FORWARD-REVERSE
HOA HAND-OFF-AUTO
HO HAND-OFF
LE LOWER EXHAUST LIMIT
LOS LOCKOUT STOP
LR LOCAL-REMOTE
MA MANUAL-AUTO
MAA MANUAL-AUTO-ACTIVE SUBSTANCES
MCA MULTI-CONTROL CENTER NO. X
MCC-X MULTI-CONTROL CENTER NO. X
OC OPEN-CLOSE (ID)
OCR OPEN-CLOSE-REMOTE
OCC OPEN-CLOSE-AUTO
OCX ON-OFF-AUTO
OD ON-OFF-REMOTE
OP ORTHOPHOSPHORUS
ORP ORTHOPHOSPHORUS POTENTIAL
OS ON-SIGNAL
OSD ON-SIGNAL-DESTROY
PH POTENTIAL
RA REMOTE TELEMETRY UNIT NO. X
RAA REMOTE TELEMETRY UNIT NO. X
RTUX REMOTE TELEMETRY UNIT NO. X
SF SCHEMATIC SYMBOL
SP SET POINT
SSC SET POINT CONTROL
TCL-2 TOTAL CHLORINE RESIDUAL
TOC TOTAL ORGANIC CARBON
TOD TOTAL OXYGEN DEMAND
UV ULTRAVIOLET
VIB VIBRATION
VS VOLATILE HYDROCARBONS
W WEIGHT
X EXHAUST
Y UNIT NUMBER
Z POSITION

GENERAL NOTES

- COMPONENTS AND PANELS SHOWN WITH A (*) ARE TO BE PROVIDED UNDER SECTION INSTRUMENTATION AND CONTROLS.
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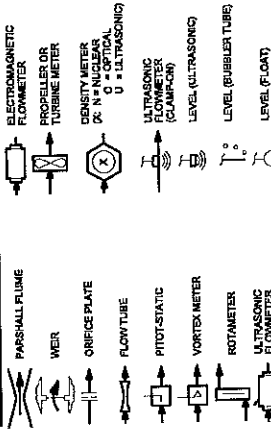
VALVE SYMBOLS



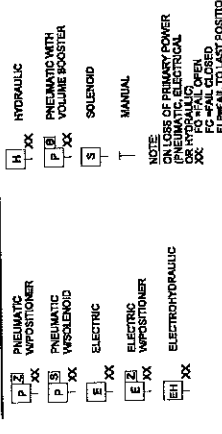
GATE SYMBOLS



PRIMARY ELEMENT SYMBOLS

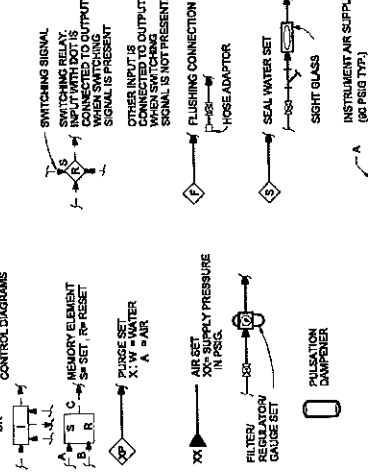
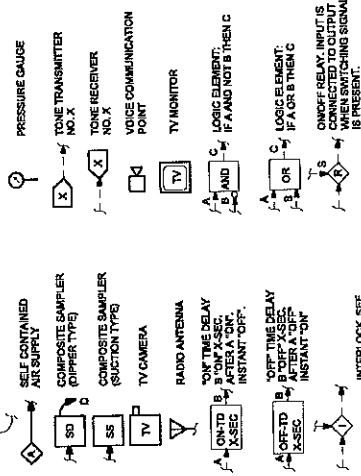
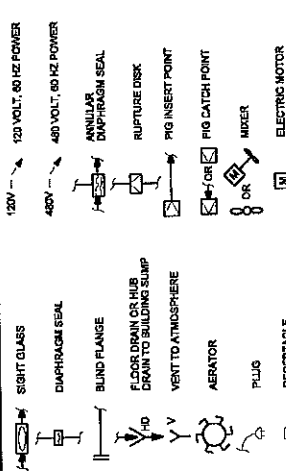


ACTUATOR SYMBOLS

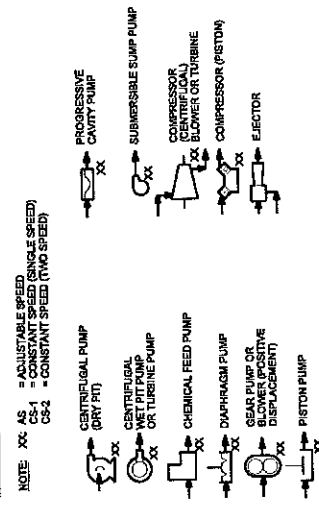


NOTE:
 ON LINE OF PRESSURE/POWER
 ON LINE OF ELECTRICAL
 OR HYDRAULIC SIGNAL
 FC = FAIL CLOSED
 FL = FAIL TO LAST POSITION

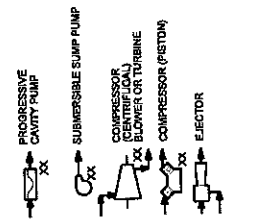
MISCELLANEOUS SYMBOLS



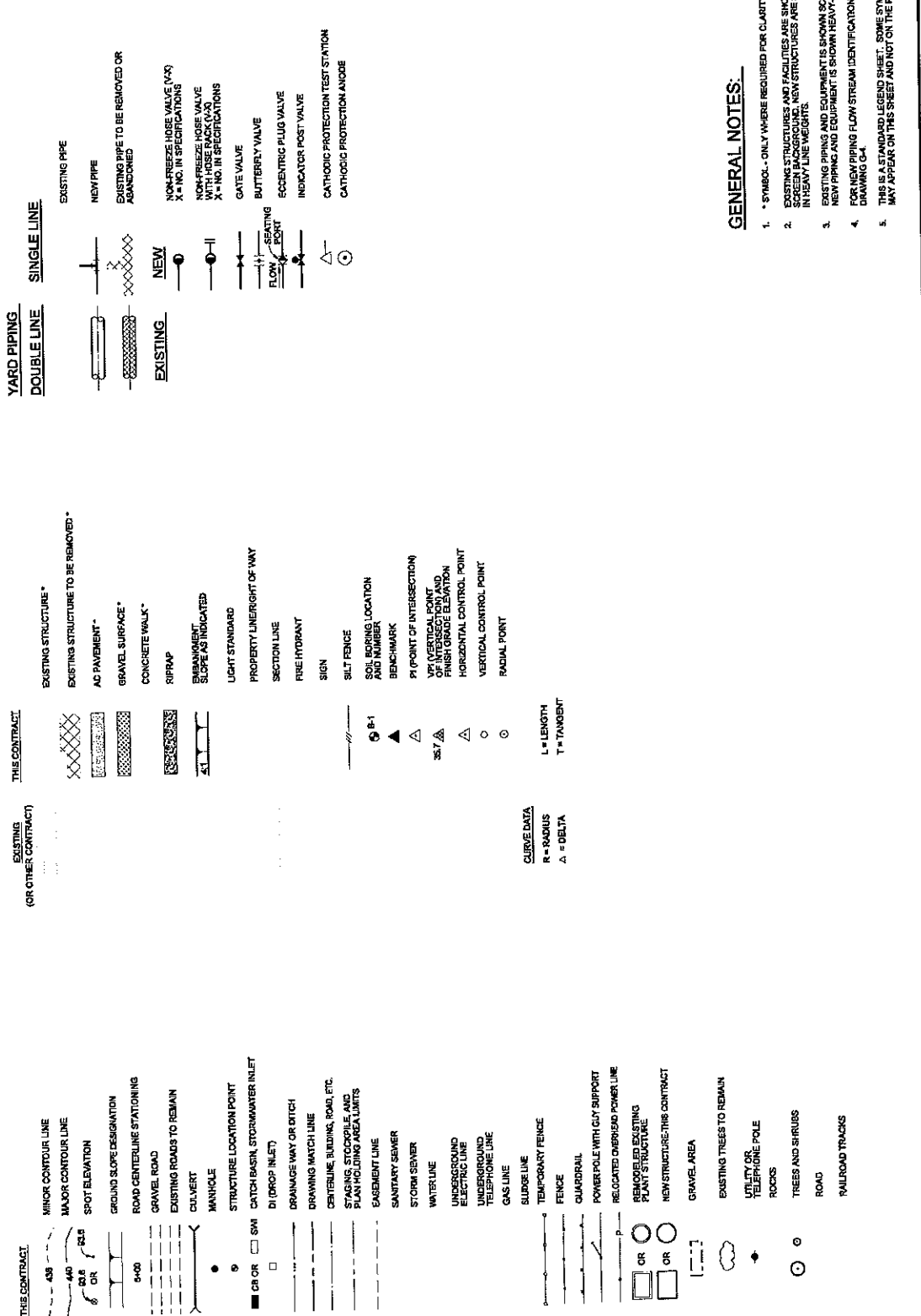
PUMP AND COMPRESSOR SYMBOLS



NOTE: XC = ADJUSTABLE SPEED
 CS-1 = CONSTANT SPEED (SINGLE SPEED)
 CS-2 = CONSTANT SPEED (TWO SPEED)



DRAWN: J. W. HARRIS CHECKED: M. A. HARRIS DATE: 1/10/83 PROJECT: 104140	REVISION:	NO. 5472	DATE:	SHEET 5
VERIFY SCALE: ORIGINAL DRAWING REVISIONS THIS IS NOT A SCALE COPY		PACKAGE 2 GENERAL		
800 ULTRACONDUIMENTS TREATMENT FACILITY MODIFICATIONS PENTA USDO PRODUCTS SITE UTRA ENGINEERING SUPPORT TOWN OF DANIELS, WISCONSIN		INSTRUMENTATION AND CONTROL LEGEND		
FILENAME: P42200C-18815.GP		MODIFY DATE: 24-MAR-2003		
CH2MHILL		DATE: MARCH 2003 PROJ: 104140		



YARD PIPING
DOUBLE LINE
SINGLE LINE

- EXISTING PIPE
- NEW PIPE
- EXISTING PIPE TO BE REMOVED OR ABANDONED
- NON-FREEZE HOSE VALVE (NFV) X = NO. IN SPECIFICATIONS
- NON-FREEZE HOSE VALVE WITH HOSE CONNECTION X = NO. IN SPECIFICATIONS
- GATE VALVE
- BUTTERFLY VALVE
- ECCENTRIC PLUG VALVE
- INDICATOR POST VALVE
- CATHODIC PROTECTION TEST STATION
- CATHODIC PROTECTION ANODE

- EXISTING**
- EXISTING STRUCTURE TO BE REMOVED *
 - AC PAVEMENT *
 - GRAVEL SURFACE *
 - CONCRETE WALK *
 - RIPRAP
 - EMBANKMENT SUPERAS INDICATED
 - LIGHT STANDARD
 - PROPERTY LINERIGHT OF WAY
 - SECTION LINE
 - FIRE HYDRANT
 - SIGN
 - SILT FENCE
 - SOIL BERING LOCATION AND NUMBER
 - BENCHMARK
 - PI (POINT OF INTERSECTION)
 - VP (VERTICAL POINT OF INTERSECTION) AND FINISH POINT ELEVATION
 - HORIZONTAL CONTROL POINT
 - VERTICAL CONTROL POINT
 - RADIAL POINT

- THIS CONTRACT**
- MINOR CONTOUR LINE
 - MAJOR CONTOUR LINE
 - SPOT ELEVATION
 - GROUND SLOPE DESIGNATION
 - ROAD CENTERLINE STATIONING
 - GRAVEL ROAD
 - EXISTING ROADS TO REMAIN
 - CULVERT
 - MANHOLE
 - STRUCTURE LOCATION POINT
 - CB OR SWI
 - CATCH BASIN, STORMWATER INLET
 - DI (DROPP INLET)
 - DRAINAGE WAY OR DITCH
 - DRAWING MATCH LINE
 - CENTERLINE, BUILDING, ROAD, ETC.
 - STAGING STOCKPILE AND PLAYHOLDING AREA LIMITS
 - EASEMENT LINE
 - SANITARY SEWER
 - STORM SEWER
 - WATERLINE
 - UNDERGROUND ELECTRIC LINE
 - UNDERGROUND TELEPHONE LINE
 - GAS LINE
 - TEMPORARY FENCE
 - FENCE
 - QUADRORAIL
 - POWERPOLE WITH GUY SUPPORT
 - RELOCATED OVERHEAD POWER LINE
 - REMOVED EXISTING PLANT STRUCTURE
 - NEW STRUCTURE THIS CONTRACT
 - GRAVEL AREA
 - EXISTING TREES TO REMAIN
 - UTILITY OR TELEPHONE POLE
 - ROCKS
 - TREES AND SHRUBS
 - ROAD
 - RAILROAD TRACKS

- EXISTING (OR OTHER CONTRACT)**
- EXISTING STRUCTURE TO BE REMOVED *
 - AC PAVEMENT *
 - GRAVEL SURFACE *
 - CONCRETE WALK *
 - RIPRAP
 - EMBANKMENT SUPERAS INDICATED
 - LIGHT STANDARD
 - PROPERTY LINERIGHT OF WAY
 - SECTION LINE
 - FIRE HYDRANT
 - SIGN
 - SILT FENCE
 - SOIL BERING LOCATION AND NUMBER
 - BENCHMARK
 - PI (POINT OF INTERSECTION)
 - VP (VERTICAL POINT OF INTERSECTION) AND FINISH POINT ELEVATION
 - HORIZONTAL CONTROL POINT
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- MINOR CONTOUR LINE
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 - SPOT ELEVATION
 - GROUND SLOPE DESIGNATION
 - ROAD CENTERLINE STATIONING
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- EXISTING STRUCTURE TO BE REMOVED *
 - AC PAVEMENT *
 - GRAVEL SURFACE *
 - CONCRETE WALK *
 - RIPRAP
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- EXISTING (OR OTHER CONTRACT)**
- EXISTING STRUCTURE TO BE REMOVED *
 - AC PAVEMENT *
 - GRAVEL SURFACE *
 - CONCRETE WALK *
 - RIPRAP
 - EMBANKMENT SUPERAS INDICATED
 - LIGHT STANDARD
 - PROPERTY LINERIGHT OF WAY
 - SECTION LINE
 - FIRE HYDRANT
 - SIGN
 - SILT FENCE
 - SOIL BERING LOCATION AND NUMBER
 - BENCHMARK
 - PI (POINT OF INTERSECTION)
 - VP (VERTICAL POINT OF INTERSECTION) AND FINISH POINT ELEVATION
 - HORIZONTAL CONTROL POINT
 - VERTICAL CONTROL POINT
 - RADIAL POINT

GENERAL NOTES:

- * SYMBOL - ONLY WHERE REQUIRED FOR CLARITY.
- EXISTING STRUCTURES AND FACILITIES ARE SHOWN AS SCREEN BACKGROUND. NEW STRUCTURES ARE SHOWN IN HEAVY LINE WEIGHTS.
- EXISTING PIPING AND EQUIPMENT IS SHOWN SCREENED. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINED.
- FOR NEW PIPING FLOW STREAM IDENTIFICATION, SEE DRAWING C-4.
- THIS IS STANDARD LEGEND SHEET. SOME SYMBOLS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.

DATE	3/28/2008
BY	JANUZZI
CHK	D.J.D.B.M.
APP	SCHROEDER
NO.	DATE
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

PACKAGE 2	SHEET 7
GENERAL	DWG G-7
SITENWORK LEGEND	DATE MARCH 2008
	PROJ. 158215

SUB CONTRACTOR UNDERWATER
 TREATMENT FACILITY MODIFICATIONS
 PENNA. MISC. PRODUCTS SITE LTRA
 ENGINEERING SUPPORT
 TOWN OF DANIELS, WISCONSIN

CH2MHILL

VERIFY SCALE	AS SHOWN
ORIGINAL DIMENSIONS	AS SHOWN
THIS SHEET, ADJUST	AS SHOWN
SCALES ACCORDINGLY.	

DATE	3/28/2008
BY	JANUZZI
CHK	D.J.D.B.M.
APP	SCHROEDER
NO.	DATE
1	
2	
3	
4	
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7	
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10	

FILENAME: P:\2497C_158215.dwg MODIFY DATE: 24-MAR-2008

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GENERAL ARCHITECTURAL NOTES

- UNLESS OTHERWISE INDICATED, PLAN DIMENSIONS ARE TO COLUMN GRID OR CONCRETE WALL. FINISH FLOORING IS INSTALLED ABOVE THE FLOOR LINE. FOR DERESSED FLOORS AND CURBS, SEE STRUCTURAL DRAWINGS.
- FLOOR LINE: REFERS TO TOP OF CONCRETE SLAB. FINISH FLOORING IS INSTALLED ABOVE THE FLOOR LINE. FOR DERESSED FLOORS AND CURBS, SEE STRUCTURAL DRAWINGS.
- REPEATITE FEATURES ARE NOT DRAWN IN THEIR ENTIRETY AND SHALL BE REPEATED AS NECESSARY.
- WHERE LOCK IS LOCATED AT CORNER OF ROOM AND IS NOT LOCATED BY DIMENSION ON PLAN OR DETAILS, DIMENSION SHALL BE AT FROM FACE OF STUD WALL TO FACE OF ROUGH OPENING. DIMENSION SHALL BE AT FROM FACE OF WALL TO EDGE OF ROUGH OPENING AT CONCRETE WALLS. AT CMU WALLS, SUBSIDED INSULATED WALLS, FULL HEIGHT WINDOWS SHALL BE SEATED BOTH TO INSIDE AND OUTSIDE OF ROOM. FULL HEIGHT WINDOWS SHALL BE SEATED TO GLAZED OPENING FRAMES, AND OTHER PENETRATIONS.
- LINE OF EXISTING GRADES, AS SHOWN ON THE BUILDING ELEVATIONS AND SECTIONS ARE APPROXIMATE. THEY ARE AT THE BUILDING FACE OR ON THE SECTION END EXCEPT AS NOTED.
- OR BY OTHER DIMENSIONS FOR EQUIPMENT PROVIDED IN THIS CONTRACT.
- REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER CATEGORIES OR DRAWINGS FOR ADDITIONAL NOTES.
- VERIFY SIZE AND LOCATION OF, AND PROVIDE, REQUIRED OPENINGS THROUGH FLOORS AND WALLS. ACCESS DOORS, FURRING, CURBS, ANCHORS AND INSERTS, ELECTRICAL AND OTHER EQUIPMENT.

ARCHITECTURAL/STRUCTURAL MATERIAL SYMBOLS

SYMBOL	LEGEND
	GRATING, SPAN DIRECTION INDICATED
	CHECKERED PLATE
	GROUT
	GRANULAR FILL
	EARTH OR FINISH GRADE
	ROCK
	CONCRETE
	CMU WALL (PLAN)
	CMU WALL (SECTION)
	MASONRY WALL
	METAL STUD WALL (PLAN)
	WOOD STUD WALL (PLAN)
	RIGID INSULATION
	BATT INSULATION
	STEEL
	ALUMINUM
	PLYWOOD
	GYPSUM WALLBOARD
	ACOUSTICAL TILE
	WOOD, ROUGH CONTINUOUS
	WOOD, ROUGH NON-CONTINUOUS
	WOOD, FINISHED

ARCHITECTURAL/STRUCTURAL LEGEND

SYMBOL	LEGEND
	ROOM NAME
	ROOM NUMBER
	DOOR NUMBER
	WINDOW NUMBER
	RELIGHT NUMBER
	LOUVER NUMBER
	INTERIOR ELEVATION
	WALL TYPE
	PRECAST PANEL NUMBER
	SIGN NUMBER
	SPOT ELEVATION
	DIRECTION OF SLOPE DOWN
	DOOR/HATCH SWING
	INDICATES PAIR OF DOORS
	FIRE EXTINGUISHER "X" = NUMBER IN SPECIFICATIONS
	CONTROL JOINT
	EXPANSION JOINT
	RAILINGS

DESIGN SCALE	AS SHOWN
BAR SCALE	AS SHOWN
DATE	MARCH 2003
PROJECT	106215
DATE	MARCH 2003
PROJECT	106215

CH2MHILL

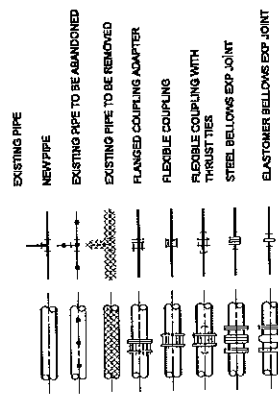
BACKSTREET WASTEWATER TREATMENT FACILITY MODIFICATIONS
PENTACORP PRODUCTS SITE LTRP
TOWN OF DANIELS, WISCONSIN

ARCHITECTURAL/STRUCTURAL LEGEND
PACKAGE 2
GENERAL

SHEET 8
DIV 0-8
DATE MARCH 2003
PROJ 106215
MODIFY TIME: 10:45:12

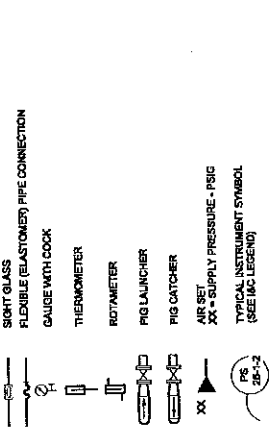
GENERAL NOTE
1. THIS IS A STANDARD LEGEND SHEET. SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.

PIPE AND FITTING SYMBOLS



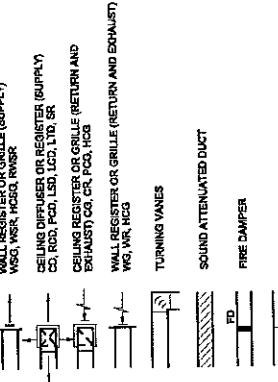
NOTES:
 1. ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN AS SHOWN IN THE CONSTRUCTION DIMENSIONS. ALSO SEE PIPING SPECIFICATIONS.
 2. SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS.
 3. EXISTING PIPE AND EQUIPMENT IS SHOWN WITH NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINE.

MISCELLANEOUS PIPING SYMBOLS



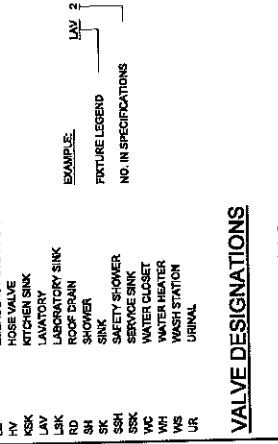
GENERAL NOTES:
 1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
 2. SIZE OF FITTINGS SHOWN ON PLANS SHALL CORRESPOND TO SIZE OF FITTINGS SHOWN IN THE SCHEDULE UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
 3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHALL BE SHOWN AS REQUIRED IN THE SPECIFICATIONS.
 4. ALL UNITS SHALL BE METRIC. WALL PIPES SHALL BE USED UNLESS PIPING PASSES FROM A STRUCTURE TO BACKFILL.
 5. ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THE NECESSARY GASKETS, WASHERS, AND NUTS. THE SPECIFICATIONS SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
 6. SYMBOLS FOR PIPING AND PIPE USE IDENTIFICATIONS BEYOND THIS SHEET SHALL BE IDENTIFIED ON THE PLANS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
 7. ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, BE EXCEPT FLANGED, CONCRETE THREST BLOCKS AT ALL DIRECTION CHANGES, UNLESS OTHERWISE NOTED.

HEATING, VENTILATING, AND AIR CONDITIONING SYMBOLS



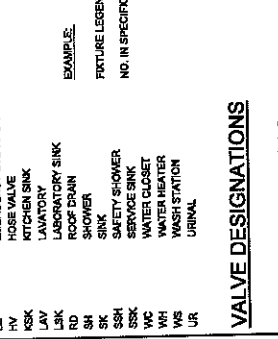
8. NUMBER AND LOCATION OF UNIONS SHOWN ON PLANS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
 9. WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE UNLESS OTHERWISE SPECIFIED. THE GROOVED END SHALL BE JOINED TO THE COUPLING ADAPTER.
 10. FOR FLOW STREAM IDENTIFICATION, SEE DRAWING G-4.
 11. SEE INSTRUMENTATION AND CONTROL LEGEND FOR VALVE SYMBOLS.
 12. SUPPORT PIPING AND DUCTWORK FROM STRUCTURAL. TEST ON BASIS OF STRUCTURAL. TEST 12 INCHES OR HIGHER FROM BOTTOM.

PLUMBING FIXTURE IDENTIFICATION



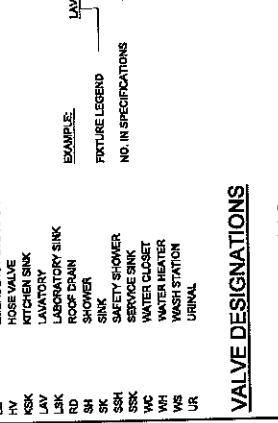
EXAMPLE:
 NO. IN SPECIFICATIONS
 FUTURE LEGEND
 VALVE DESIGNATION
 VALVE TYPE SEE SPECIFICATIONS
 PIPING DESIGNATION
 EXAMPLE: 1" GALV. PIPING
 PIPE MATERIAL - SEE PIPING SPECIFICATIONS
 SEE FLOW STREAM IDENTIFICATION, DRAWING G-4
 NOMINAL PIPE DIAMETER
 REFER TO VALVE SCHEDULE ATTACHED TO SECTION 152022 FOR STANDARD VALVES. UNLESS OTHERWISE NOTED, ALL VALVES SHALL BE SPECIFIED AS SHOWN.

VALVE DESIGNATIONS



VALVE DESIGNATION
 VALVE TYPE SEE SPECIFICATIONS
 PIPING DESIGNATION
 EXAMPLE: 1" GALV. PIPING
 PIPE MATERIAL - SEE PIPING SPECIFICATIONS
 SEE FLOW STREAM IDENTIFICATION, DRAWING G-4
 NOMINAL PIPE DIAMETER

BUILDING SERVICES SYMBOLS



HOSE RACK (TYPE AS INDICATED AND SPECIFIED)
 EYEWASH WITH SAFETY SHOWER (SSH)
 REDUCED PRESSURE BACKFLOW PREVENTER (RBP)
 FLOOR DRAIN
 ROOF DRAIN
 AREA DRAIN
 MECHANICAL MOUNTING PANEL
 VIBRATION ELIMINATOR

GENERAL NOTE

1. THIS IS A FORWARD LEGEND SHEET. THEREFORE SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.

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CH2MHILL PROJECT: MECHANICAL, HVAC AND PLUMBING LEGEND SHEET: 9 DATE: MARCH 2023 PROJECT NO.: 15815		PROJECT NO.: 15815 SHEET: 9 DATE: MARCH 2023 PROJECT NO.: 15815
REVIEWED BY: [Signature] PROJECT MANAGER: [Signature] PROJECT ENGINEER: [Signature]		PROJECT NO.: 15815 SHEET: 9 DATE: MARCH 2023 PROJECT NO.: 15815
PROJECT NO.: 15815 SHEET: 9 DATE: MARCH 2023 PROJECT NO.: 15815		PROJECT NO.: 15815 SHEET: 9 DATE: MARCH 2023 PROJECT NO.: 15815

PROJECT NO.: 15815
 SHEET: 9
 DATE: MARCH 2023
 PROJECT NO.: 15815

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CONNECTION POINT TO EQUIPMENT SPECIFIED, FURNISHED BY CONTRACTOR AND CONNECTION SPECIFIED IN DIVISION 18, COORDINATE FINAL CONNECTION WITH EQUIPMENT SUPPLIER.		RECEPTACLE - 2W, 1P, AMPERAGE INDICATED
	MAJOR ELECTRICAL COMPONENT OR DEVICE - NAME OR IDENTIFYING SYMBOL, AS SHOWN.		DUPLEX CONVENIENCE RECEPTACLE - FLUSH IN FLOOR
	BRANCH CIRCUIT PANELBOARD		MULTI-OUTLET ASSEMBLY
	UNIT HEATER		CLOCK HANGER CONVENIENCE RECEPTACLE
	TELEPHONE TERMINAL CABINET		TELEPHONE RECEPTACLE (OUTLET BOX ONLY) FLUSH IN FLOOR
	COMPUTER TERMINAL CABINET		TELEPHONE RECEPTACLE (OUTLET BOX ONLY)
	TERMINAL JUNCTION BOX		DATA RECEPTACLE
	MOTOR, SOLENOID, CAGE INDUCTION, HORSEPOWER INDICATED ON ONE-LINE DIAGRAM, (W) SHOWN ON PLANS		GENERAL CONTROL OR WARNING DEVICE - LETTER SYMBOLS ON ABBREVIATIONS INDICATE TYPE OF DEVICE
	LUMINAIRE, SEE SCHEDULE		CONTROL STATION, SEE CONTROL DIAGRAMS FOR TYPE
	LUMINAIRE AND POLE, SEE SCHEDULE		CONDUIT FITTING OR JUNCTION BOX
	WALL MOUNTED LUMINAIRE, SEE SCHEDULE		NON-FUSED DISCONNECT SWITCH, SIZE INDICATED, 3 POLE UNLESS INDICATED OTHERWISE
	EMERGENCY LIGHTING UNIT		FUSED DISCONNECT SWITCH, SIZE INDICATED, (DAVA), (D) = SWITCH RATING, (A) = FUSE RATING, 3 POLE UNLESS INDICATED OTHERWISE
	EXIT LIGHTS, SEE SCHEDULE		CONTACTOR, MAGNETIC, NEMA SIZE INDICATED
	SIGNAL LANTERNS, SEE SCHEDULE		LIGHTING CONTACTOR, CURRENT RATING INDICATED, FOR NUMBER OF POLES, SEE CONTROL DIAGRAM, SIZE INDICATED
	HOME RUN - DESTINATION SHOWN		STARTER, MAGNETIC, NEMA SIZE INDICATED, SEE CONTROL DIAGRAM
	CONCEALED CONDUIT AND CONDUCTORS*		COMBINATION FUSE OR CIRCUIT BREAKER, AS INDICATED, MAGNETIC SWITCH, NEMA SIZE INDICATED, SEE CONTROL DIAGRAM
	CONDUIT DOWN		METERING FACILITIES
	CONDUIT UP		TELEVISION CAMERA
	CONDUIT, STUBBED AND CAPPED AS SHOWN		GROUND ROD
	BUS DUCT, SEE SPECIFICATIONS		MULTI-PARTY DESK TOP COMMUNICATIONS SYSTEM STATION WITH REMOTE AMPLIFIER
	CONCRETE ENCASED CONDUIT		MULTI-PARTY WALL MOUNTED COMMUNICATIONS SYSTEM STATION WITH INTEGRAL AMPLIFIER
	DIRECT BURIED CONDUIT		CONE TYPE PAGING SPEAKER, CEILING MOUNTED
	GROUND		INTERCOM PAGING TRUMPET SOUND REPRODUCER, WITH REMOTE AMP/LINE, SURFACE MOUNTED
	TRENCHING FOR UTILITY COMPANY POWER CORKS		OUTDOOR PAGING TRUMPET SOUND REPRODUCER, WITH REMOTE AMPLIFIER, SURFACE MOUNTED
	SWITCH:		TERMINAL CABINET FOR COMMUNICATIONS SYSTEM
	WALL SWITCH		FIRE ALARM STATION, MANUAL
	MOTOR SWITCH		FIRE ALARM BELL
	DOUBLE POLE		FIRE ALARM HORN
	FIRE ALARM BELL		FIRE ALARM COMBINATION STROBE/SIREN
	FIRE ALARM COMBINATION DETECTOR		FIRE ALARM COMBINATION STROBE/SIREN, WALL MOUNT
	AIR DUCT IONIZATION DETECTOR		FIRE ALARM STATION, AUTOMATIC, HEAT DETECTOR

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CONTACT - NORMALLY OPEN WITH NEMA SIZE INDICATED AS APPLICABLE		CONTACT - NORMALLY CLOSED
	OVERLOAD RELAY HEATER		MAGNETIC STARTER WITH NEMA SIZE INDICATED
	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, FRAME SIZE SHOWN, 3 POLE UNLESS INDICATED OTHERWISE		SWITCH, CURRENT RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE
	FUSE - RATING INDICATED		DRAWOUT CIRCUIT BREAKER, LOW-VOLTAGE
	DRAWOUT CIRCUIT BREAKER, MEDIUM VOLTAGE		DRAWOUT FUSED SWITCH, MEDIUM VOLTAGE
	SURGE ARRESTER		CAPACITOR - KVAR INDICATED
	METER WITH SWITCH - SCALE RANGE SHOWN		GROUND
	GROUND		PICK-UP SETTING
	TIME CURRENT CHARACTERISTIC RELAY WITH CT		PUSH-BUTTON SWITCH, MUSHROOM HEAD, MAINTAINED CONTACT
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN		PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
	PUSH-BUTTON SWITCH, MAINTAINED CONTACTS WITH MECHANICAL INTERLOCK		NORMALLY CLOSED, TIME DELAY OPENING
	NORMALLY CLOSED, TIME DELAY CLOSING		NORMALLY OPEN, TIME DELAY CLOSED
	NORMALLY OPEN, TIME DELAY OPEN		REMOTE DEVICE
	SEE AFTER SWITCH, MAINTAINED CONTACT - CHART IDENTIFIES OPERATION		POSITION INDICATOR
	CURRENT TRANSFORMER, NUMBER INDICATED		INDICATING LIGHT, PUSH-TO-TEST, LETTER INDICATES COLOR
	INDICATING LIGHT, LETTER INDICATES COLOR		AMMETER
	AMMETER		VOLTMETER
	VOLTMETER		METER
	WEATHERPROOF TRANSFORMER		TRANSFORMER

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DOUBLE POLE		FUSE - RATING INDICATED
	FIRE ALARM BELL		DRAWOUT CIRCUIT BREAKER, LOW-VOLTAGE
	FIRE ALARM HORN		DRAWOUT CIRCUIT BREAKER, MEDIUM VOLTAGE
	FIRE ALARM COMBINATION STROBE/SIREN		DRAWOUT FUSED SWITCH, MEDIUM VOLTAGE
	FIRE ALARM COMBINATION DETECTOR		SURGE ARRESTER
	AIR DUCT IONIZATION DETECTOR		CAPACITOR - KVAR INDICATED
	FIRE ALARM STATION, AUTOMATIC, HEAT DETECTOR		GROUND
	DOUBLE POLE		PICK-UP SETTING
	FIRE ALARM BELL		PUSH-BUTTON SWITCH, MUSHROOM HEAD, MAINTAINED CONTACT
	FIRE ALARM HORN		PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
	FIRE ALARM COMBINATION STROBE/SIREN		PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
	FIRE ALARM COMBINATION DETECTOR		PUSH-BUTTON SWITCH, MAINTAINED CONTACTS WITH MECHANICAL INTERLOCK
	AIR DUCT IONIZATION DETECTOR		NORMALLY CLOSED, TIME DELAY OPENING
	FIRE ALARM STATION, AUTOMATIC, HEAT DETECTOR		NORMALLY CLOSED, TIME DELAY CLOSING
	DOUBLE POLE		NORMALLY OPEN, TIME DELAY CLOSED
	FIRE ALARM BELL		NORMALLY OPEN, TIME DELAY OPEN
	FIRE ALARM HORN		REMOTE DEVICE
	FIRE ALARM COMBINATION STROBE/SIREN		SEE AFTER SWITCH, MAINTAINED CONTACT - CHART IDENTIFIES OPERATION
	FIRE ALARM COMBINATION DETECTOR		POSITION INDICATOR
	AIR DUCT IONIZATION DETECTOR		CURRENT TRANSFORMER, NUMBER INDICATED
	FIRE ALARM STATION, AUTOMATIC, HEAT DETECTOR		INDICATING LIGHT, PUSH-TO-TEST, LETTER INDICATES COLOR
	DOUBLE POLE		AMMETER
	FIRE ALARM BELL		VOLTMETER
	FIRE ALARM HORN		METER
	FIRE ALARM COMBINATION STROBE/SIREN		TRANSFORMER
	FIRE ALARM COMBINATION DETECTOR		TRANSFORMER
	AIR DUCT IONIZATION DETECTOR		TRANSFORMER

ABBREVIATIONS		ABBREVIATIONS	
LA	LATCHING RELAY	LA	LATCHING RELAY
LF	LIGHTS	LF	LIGHTS
M	MOTOR CONTRACTOR	M	MOTOR CONTRACTOR
MC	MOTOR CENTER	MC	MOTOR CENTER
MS	MOTOR STARTER	MS	MOTOR STARTER
MTD	MOUNTED	MTD	MOUNTED
N	NEUTRAL	N	NEUTRAL
NC	NORMALLY CLOSED	NC	NORMALLY CLOSED
NL	NIGHT LIGHT	NL	NIGHT LIGHT
NP	NONE	NP	NONE
OC	OVERLOAD RELAY	OC	OVERLOAD RELAY
PB	PULL BOX, PUSH-BUTTON	PB	PULL BOX, PUSH-BUTTON
PC	PHOTOCELL	PC	PHOTOCELL
PM	PHASE MONITOR RELAY	PM	PHASE MONITOR RELAY
PNL	PANEL	PNL	PANEL
P	POSTING TRANSFORMER	P	POSTING TRANSFORMER
PVC	POLYVINYL CHLORIDE CONDUIT	PVC	POLYVINYL CHLORIDE CONDUIT
R	RECEPTACLE	R	RECEPTACLE
RCD	REMOTE CONTROL	RCD	REMOTE CONTROL
RM	REMOTE MULTIPLEXER	RM	REMOTE MULTIPLEXER
RS	REVERSE	RS	REVERSE
R	RED	R	RED
RT	REDUCED VOLTAGE REVERSING	RT	REDUCED VOLTAGE REVERSING
RVR	REVERSING	RVR	REVERSING
S	SWITCH	S	SWITCH
S	SWITCH	S	SWITCH
S	SWITCH	S	SWITCH
S	SWITCH	S	SWITCH

NOTES:
 1. THIS IS A STANDARD LEGEND SHEET. SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS DRAWING AND NOT ON THE PLANS.
 2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS, SUCH AS MECHANICAL AND STRUCTURAL, REFER TO OTHER LEGENDS.
 3. FOR TERMINATION OF SHIELDED INSTRUMENTATION CABLE, SEE (15550).
 4. FOR CONDUIT GROUNDING INSIDE ENCLOSURES, SEE (15552).

CH2MHILL

BIOWESTINGGROUNDWATER
 TREATMENT FACILITY MODIFICATIONS
 PENTA WOOD PRODUCTS SITE LTRA
 ENGINEERING SUPPORT
 TOWN OF DANIELS, WISCONSIN

PACKAGE 2
 GENERAL

ELECTRICAL LEGEND

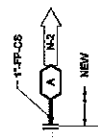
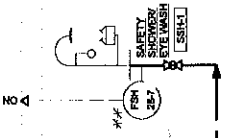
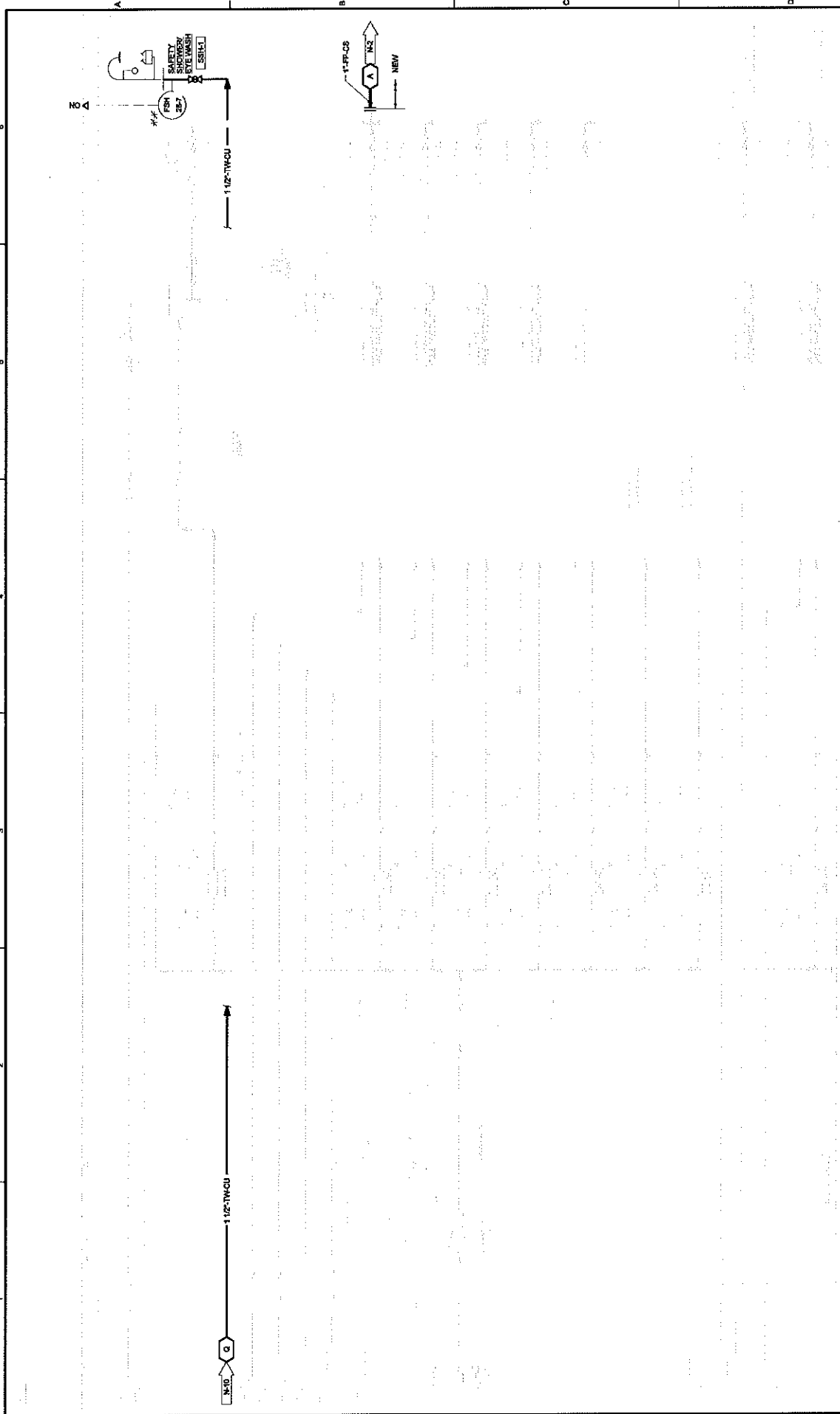
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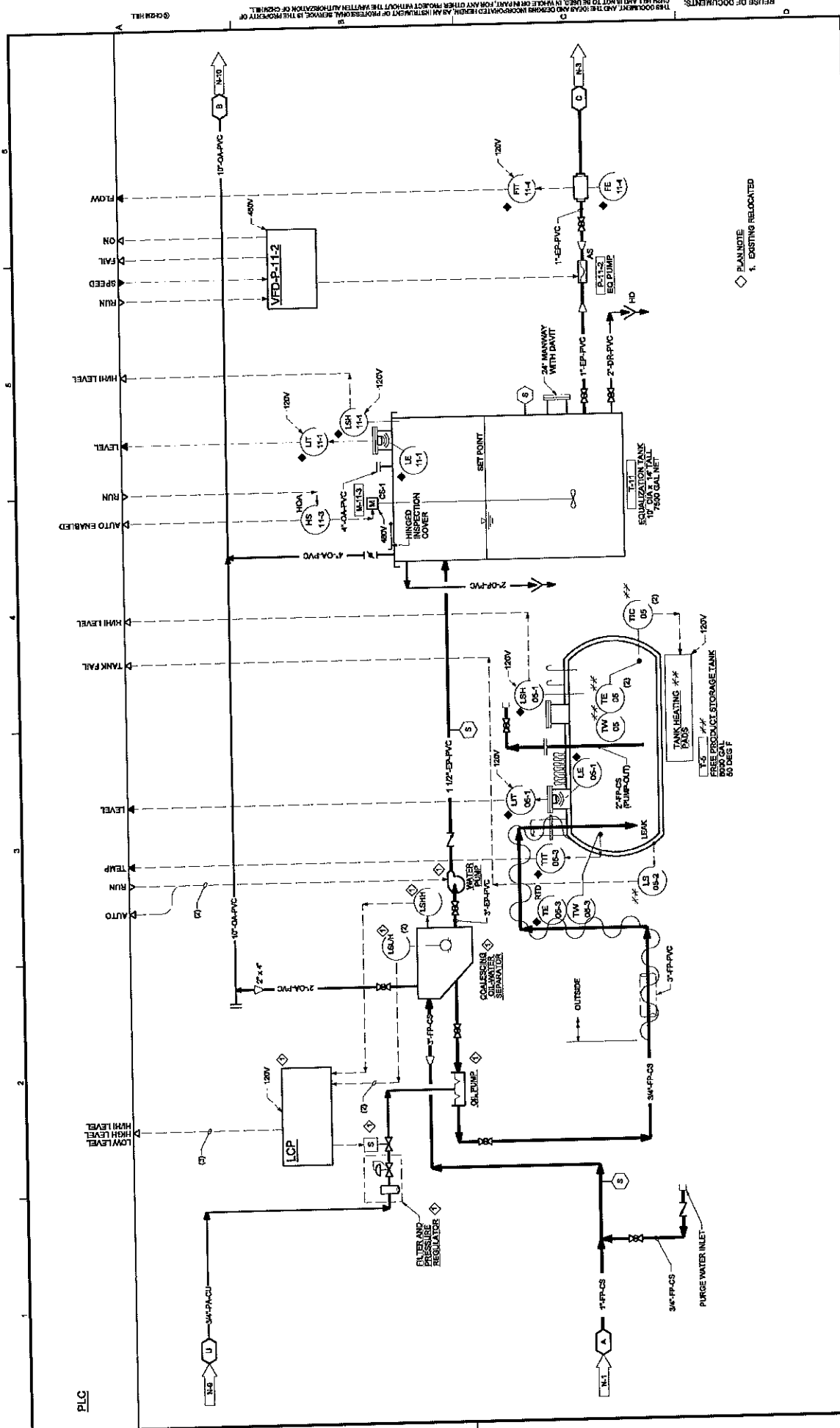
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MODIFY TIME: 12:46:45

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DESIGNER: B. J. WILLIAMS FOR: T. E. STODOL DATE: JUNE 2003 DRAWN BY: J. COBBERT CHECKED BY: B. J. WILLIAMS		NO. DATE 1 1/2" TWCU		REVISION 1 1/2" TWCU		VERIFY SCALE 1" = 10' IN FIELD ORIGINAL DRAWING IF PART ONE MATCH ON SCALE AND APPROVAL		CH2MHILL		BIOVENTURES SCIENCE AND TREATMENT FACILITY MODIFICATIONS PENTAWOOD PRODUCTS SITE LTRA TOWN OF DANIELS, WISCONSIN		PACKAGE 2 INSTRUMENTATION AND CONTROL PRODUCTION EXTRACTION & BIOVENTING P&ID		SHEET 11 DATE: MARCH 2003 DATE: MARCH 2003 PROJ. 150115		MODIFY TIME: 06:23:27
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NO. 1 DATE BY REVISION	NO. 2 DATE BY REVISION	NO. 3 DATE BY REVISION	NO. 4 DATE BY REVISION	NO. 5 DATE BY REVISION	NO. 6 DATE BY REVISION	NO. 7 DATE BY REVISION	NO. 8 DATE BY REVISION	NO. 9 DATE BY REVISION	NO. 10 DATE BY REVISION	NO. 11 DATE BY REVISION	NO. 12 DATE BY REVISION
CH2MHILL											
SCHEMATIC OF INSTRUMENTATION AND CONTROL FREE PRODUCT RECOVERY SYSTEM P&ID											
PACKAGE 2 INSTRUMENTATION AND CONTROL FREE PRODUCT RECOVERY SYSTEM P&ID											
SCHEMATIC OF INSTRUMENTATION AND CONTROL TREATMENT FACILITY MODIFICATIONS PENTACORD PRODUCTS SITE LTRA ENGINEERING SUPPORT TOWN OF DANIELS, WISCONSIN											
SHEET 12 DWG. N-2 DATE MARCH 2003 PROJ. 159815											
FILENAME: P&ID02C_159815.dgn MODIFY DATE: 28-MAR-2003 MODIFY TIME: 10:23:28											

◆ PLAN NOTE
 1. EXISTING RELOCATED

PLC

LOW LEVEL
HIGH LEVEL

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LEVEL

TANK FAIL
LEVEL

AUTO ENABLED
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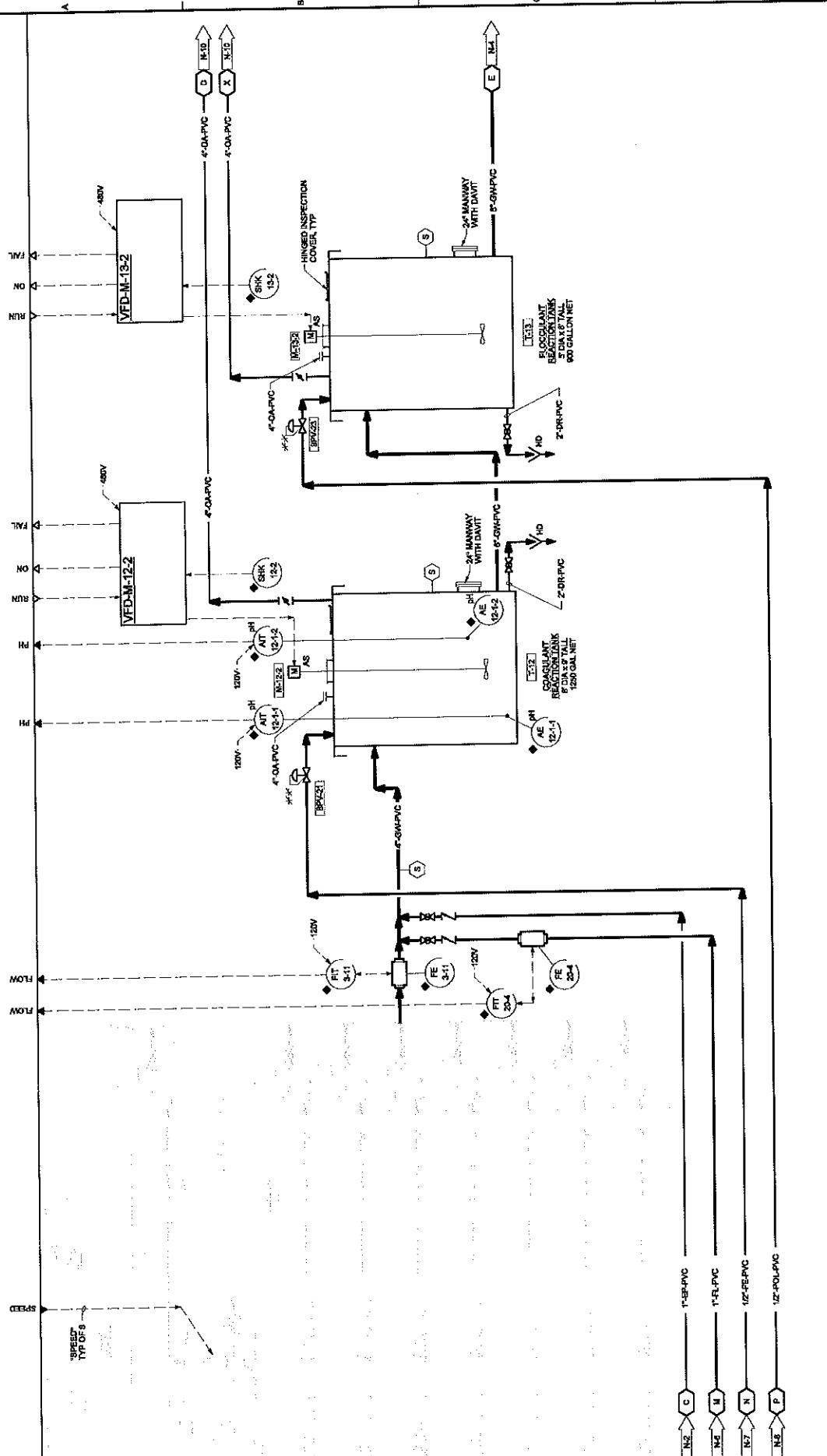
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DESIGN: J. W. WOOD DRAWN: M. J. MANNING CHECKED: J. G. SMITH DATE: 11/06/20	REVISION: _____ DATE: _____ BY: _____ FOR: _____	PROJECT NO.: 04-006-2003 PROJECT NAME: GROUNDWATER EXTRACTION AND TREATMENT FACILITY MODIFICATIONS CLIENT: PENTA WOOD PRODUCTS SITE, LTRA ADDRESS: TOWN OF DANIELS, WISCONSIN	SHEET NO.: 13 DATE: MARCH 2003 PROJECT NO.: 04-006-2003 MODIFY TIME: 11:06:28
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CHECKED BY: J. G. SMITH
 DATE: 11/06/20
 PROJECT NO.: 04-006-2003

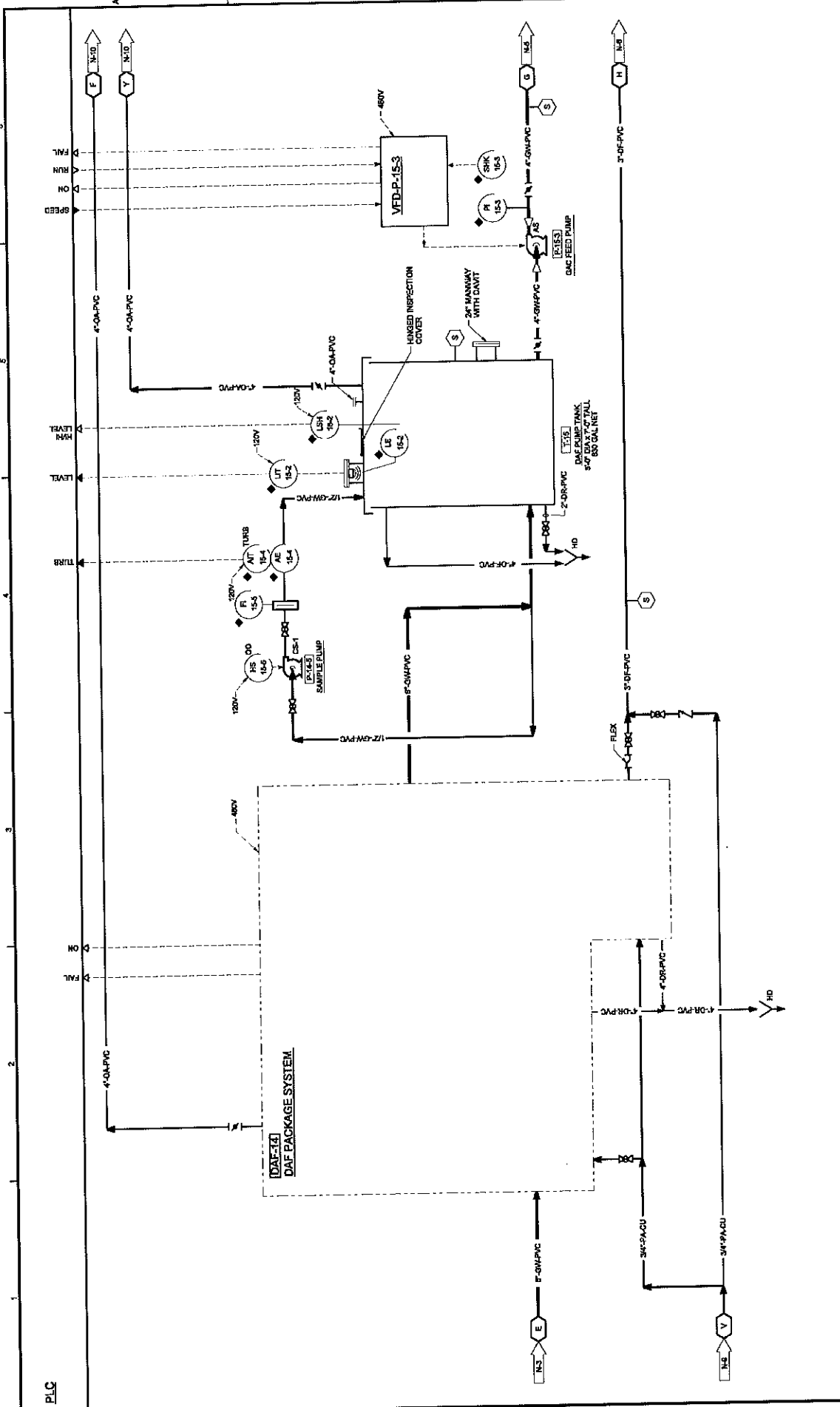
CH2MHILL

GROUNDWATER EXTRACTION AND
 TREATMENT FACILITY MODIFICATIONS
 PENTA WOOD PRODUCTS SITE, LTRA
 ENGINEERING SUPPORT
 TOWN OF DANIELS, WISCONSIN

PACKAGE 2
 INSTRUMENTATION AND CONTROL
 GROUNDWATER EXTRACTION AND
 COAGULATION AND FLOCCULATION
 P&ID

SHEET 13
 DATE: MARCH 2003
 PROJECT NO.: 04-006-2003

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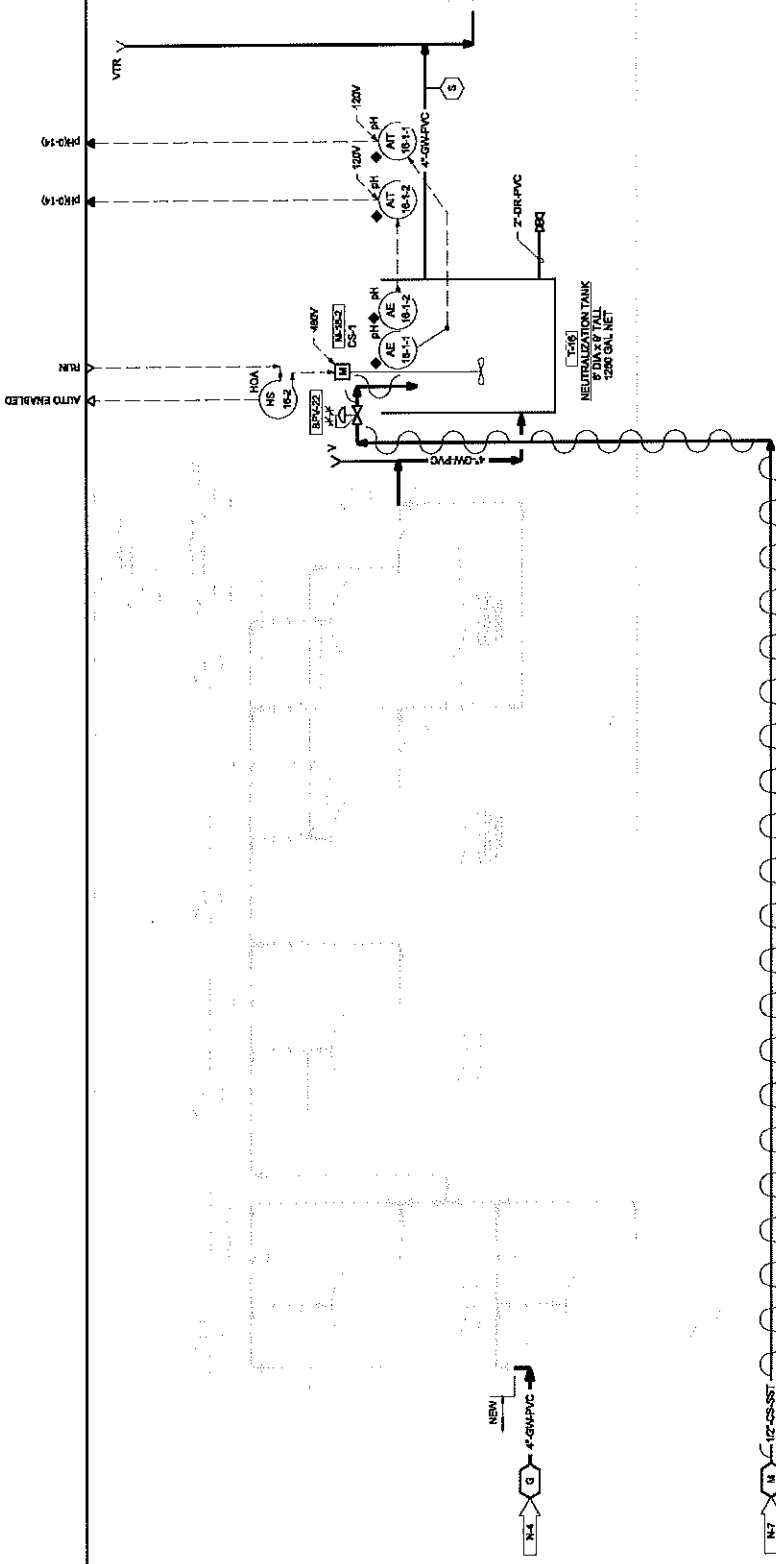
DESIGN: B. WILSON DRAWN: B. WILSON CHECKED: T. J. SHERROD DATE: 03/08/03 BY: J. W. C.	NO. DATE 1 03/08/03 2 03/08/03 3 03/08/03 4 03/08/03 5 03/08/03	REVISION 1 2 3 4 5	VERIFY SCALE 1:1 2:1 3:1 4:1 5:1 6:1 7:1 8:1 9:1 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 21:1 22:1 23:1 24:1 25:1 26:1 27:1 28:1 29:1 30:1 31:1 32:1 33:1 34:1 35:1 36:1 37:1 38:1 39:1 40:1 41:1 42:1 43:1 44:1 45:1 46:1 47:1 48:1 49:1 50:1 51:1 52:1 53:1 54:1 55:1 56:1 57:1 58:1 59:1 60:1 61:1 62:1 63:1 64:1 65:1 66:1 67:1 68:1 69:1 70:1 71:1 72:1 73:1 74:1 75:1 76:1 77:1 78:1 79:1 80:1 81:1 82:1 83:1 84:1 85:1 86:1 87:1 88:1 89:1 90:1 91:1 92:1 93:1 94:1 95:1 96:1 97:1 98:1 99:1 100:1	CH2MHILL SOUVENIR/GEORGINA WATER TREATMENT FACILITY MODIFICATIONS PENNA WISDO PRODUCTS SITE LTRA TOWN OF DANIELS, WISCONSIN	PACKAGE 2 INSTRUMENTATION AND CONTROL DISSOLVED AIR FLotation UNIT SYSTEM PAID	SHEET 14 DWS N4 DATE MARCH 2003 PROJ #58119 MODIFY TIME: 00:01:17
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PLC

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PLC

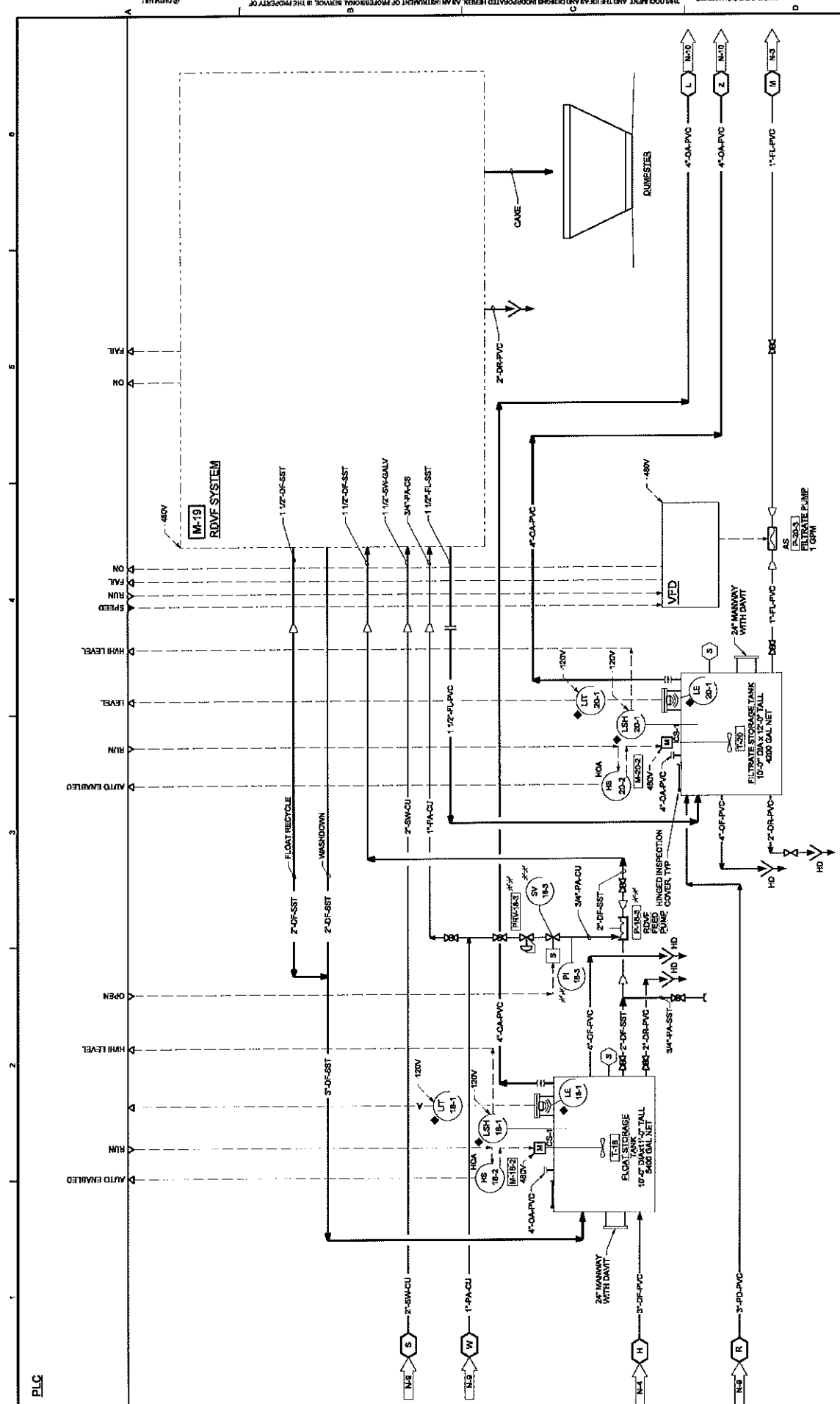
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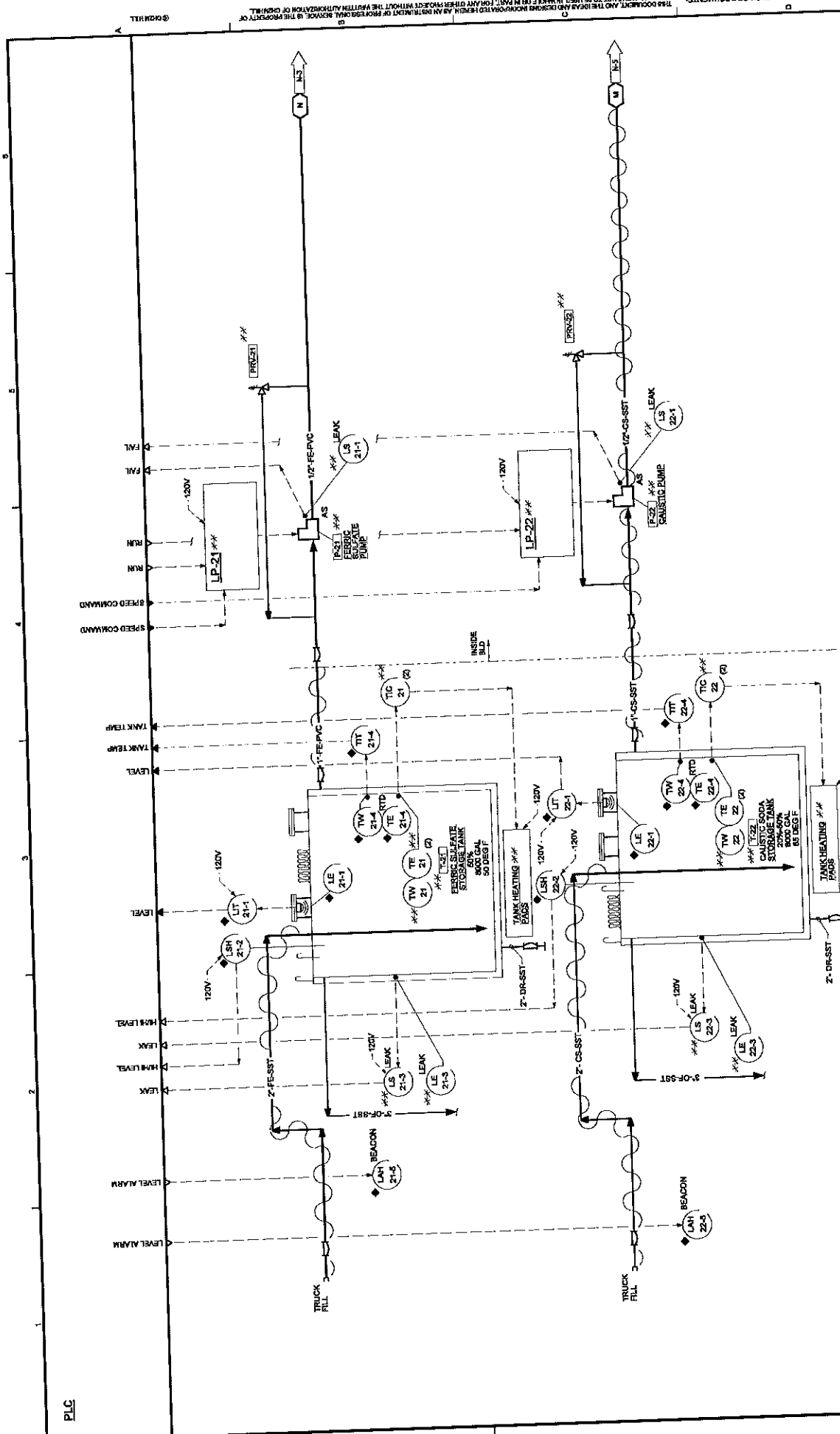
REVISED BY: J. WILKINS DATE: 8/1/00	DESIGNED BY: M. W. HANSEN DATE: 1/1/00	CHECKED BY: J. WILKINS DATE: 1/1/00	DATE: 8/1/00	BY: J. WILKINS	REVISION	NO.	DATE
REVISION SCALE AS SHOWN IN THIS DRAWING ORIGINAL PROVISION IF NOT ONE INCH THIS SHEET ADJUST AS SHOWN IN THIS DRAWING						PACKAGE 3 INSTRUMENTATION AND CONTROL GRANULAR ACTIVATED CARBON TREATMENT SYSTEM P&ID FILENAME: P202056_199815.dwg DATE: 28-MAR-2003 MODIFY TIME: 08:31:51	
PROJECT: BENTON/ST. JOHNS WASTEWATER TREATMENT FACILITY IMPROVEMENTS PERKINS WOOD PRODUCTS SITE, LTRA TOWN OF DANIELS, WISCONSIN						SHEET 15 DWG 14-6 DATE MARCH 2003 PROJ 199815	

CH2MHILL

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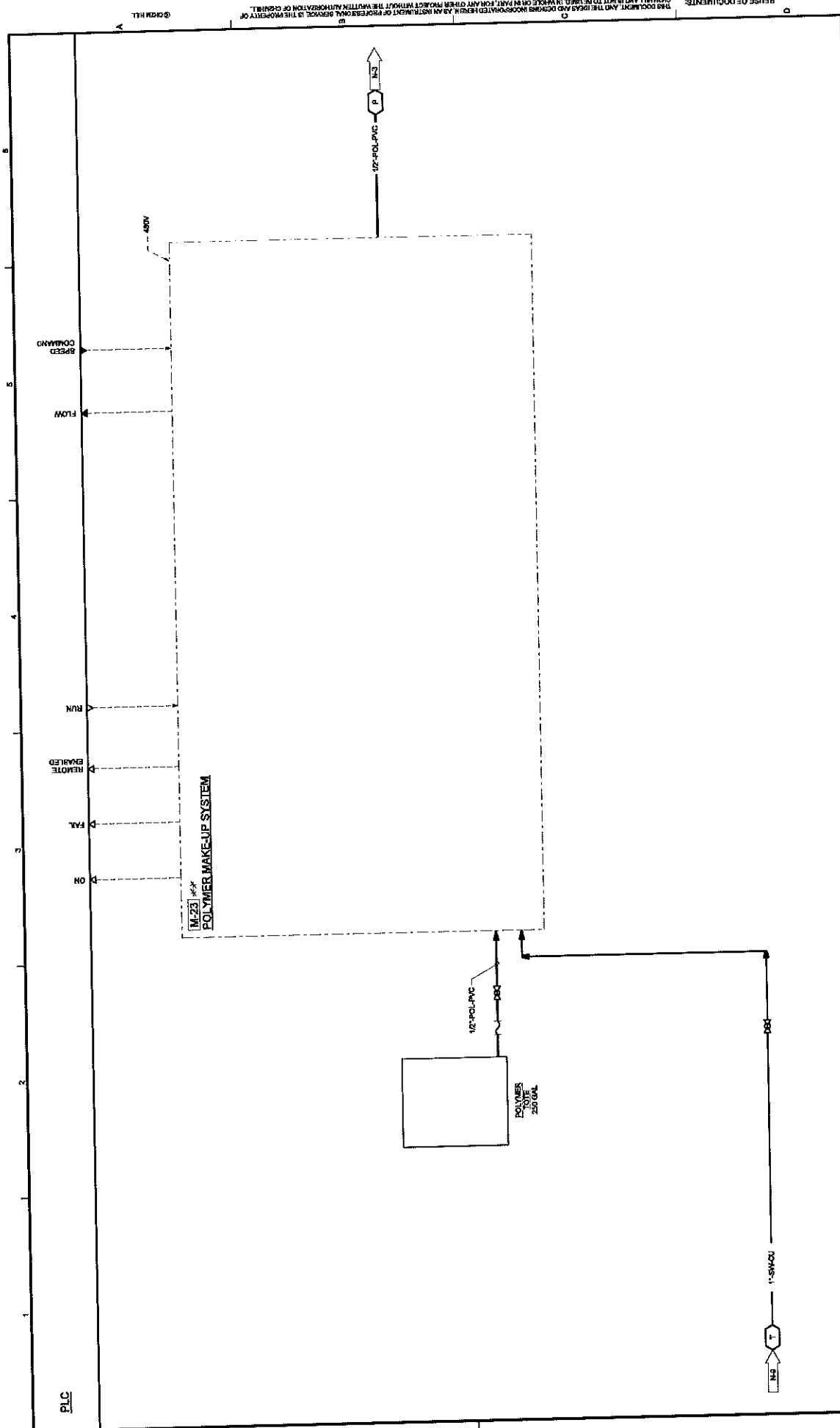
0807 BAYVIEW 09 FAYO 01 MANIFESTO 02 JACOB 03 BURNS	NO. DATE 1 11-17-03 2 01-04-04 3 01-11-04 4 01-11-04 5 02-09-05 6 02-09-05	MURKIN	CHECK SCALE SCALE CHECK ON ORIGINAL DRAWING F NOT OK IN ORIGINAL SCALE BY: JACOB	CH2MHILL	PERMITS/PERMITS/NOTIFICATIONS TREATMENT FACILITY MODIFICATIONS TOWN OF DANIELS, WISCONSIN	PACKAGE 2 INSTRUMENTATION & CONTROL	SHEET 16
						ROTARY DRUM VACUUM FILTER SYSTEM AND FILTRATE TANK P&ID	DWG NO 146
						FILENAME: p42082_158116.dwg	DATE MARCH 2005
						MODIFY DATE: 24-MAR-2005	PKG: 158115



PLC

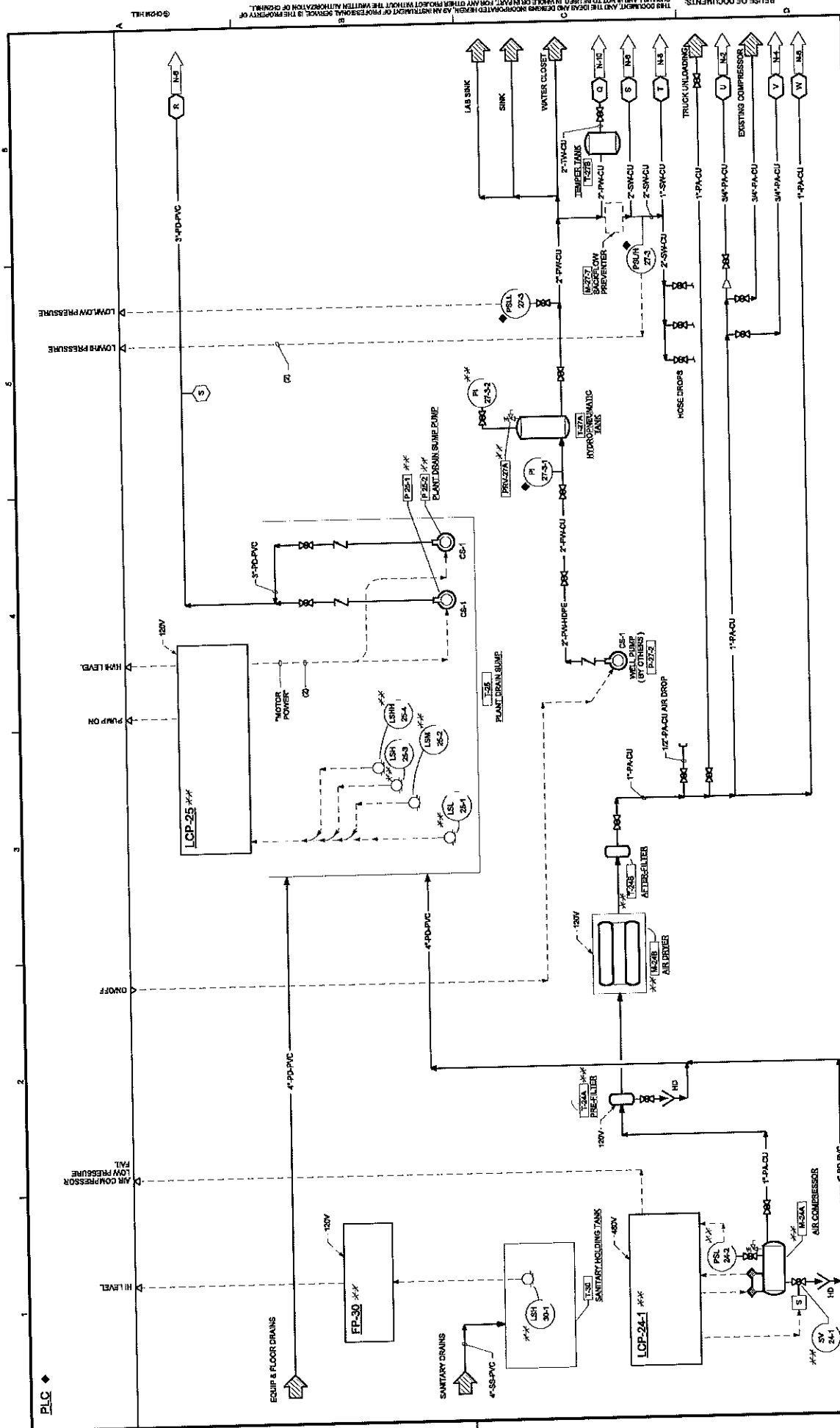
10801 BAWILLIAMS OR T.E. WOOD OR J. CARROLL OR K. BENDER	NO. DATE REV.	REVISION	B' 1000 1000	CH2MHILL	BROWNTON'S CHEMICAL TREATMENT FACILITY MODIFICATIONS FERROUS SULFATE FEED SYSTEM	PACKAGE 2 INSTRUMENTATION AND CONTROL CHEMICAL STORAGE AND FEED SYSTEM P&ID	SHEET 17 DWG NO. 7 DATE MARCH 2003 PROJ 15815 MODIFY TIME: 15:47:59
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PROJECT: BURLINGTON DRAWN: J. E. MURPHY DATE: 12-20-2003 CHECK: J. E. MURPHY BY: J. E. MURPHY	NO. 1 DATE	REVISION	VERIFY SCALE DATE IS ONE INCH ON DRAWING EQUALS 10 FEET ON GROUND UNLESS NOTED OTHERWISE	CH2MHILL	BRUNSWICK WISCONSIN WATER TREATMENT FACILITY MODIFICATIONS PENTAWOOD PARKWAY SITE LTRA POLYMER MAKE-UP SYSTEM TOWN OF DANIELS, WISCONSIN	PACKAGE 2 INSTRUMENTATION AND CONTROL POLYMER MAKE-UP SYSTEM P&ID	SHEET 19 DRAWN: J. E. MURPHY DATE: MARCH 2003 P&ID: 158816	FILENAME: P&ID2003_158816.dwg MODIFY DATE: 24-MAR-2003 MODIFY TIME: 14:47:18
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1 2 3 4 5 6	R N G	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200	201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300	301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400	401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500	501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600	601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700	701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800	801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900	901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000
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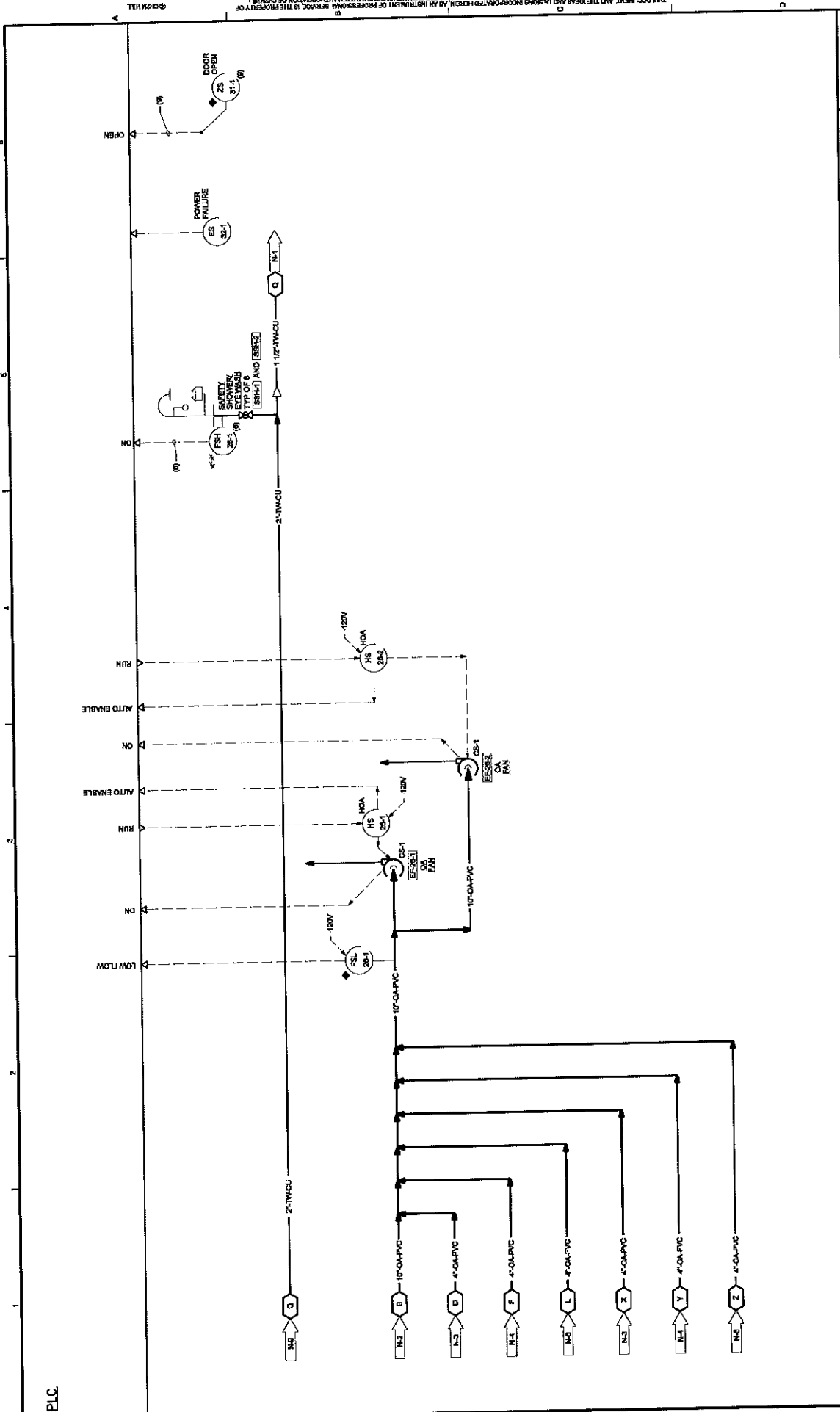
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PROJECT 19	PACKAGE 2
DRAWING NO. N4	INSTRUMENTATION & CONTROL
DATE MARCH 2003	AIR, WATER AND PLANT DRAINS
DRAWING NO. 158K15	PL&ID
FILENAME: P:\2709C_15815.dwg	MODIFY DATE: 28-MAR-2003

VERIFICATION SCALE:
 REVIEWED BY: J. W. WILSON
 CHECKED BY: J. W. WILSON
 DRAWN BY: J. W. WILSON
 TOWN OF DANIELS, WISCONSIN
 PENTAGON FACILITY MODIFICATIONS
 TREATMENT FACILITY MODIFICATIONS
 INSTRUMENTATION & CONTROL

CH2MHILL

DATE: 03/18/03	BY: JWW	NO. 2472	REV. 1
DATE: 03/18/03	BY: JWW	NO. 2472	REV. 2
DATE: 03/18/03	BY: JWW	NO. 2472	REV. 3
DATE: 03/18/03	BY: JWW	NO. 2472	REV. 4
DATE: 03/18/03	BY: JWW	NO. 2472	REV. 5
DATE: 03/18/03	BY: JWW	NO. 2472	REV. 6
DATE: 03/18/03	BY: JWW	NO. 2472	REV. 7
DATE: 03/18/03	BY: JWW	NO. 2472	REV. 8
DATE: 03/18/03	BY: JWW	NO. 2472	REV. 9
DATE: 03/18/03	BY: JWW	NO. 2472	REV. 10

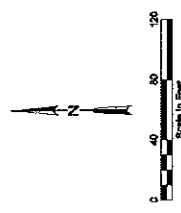
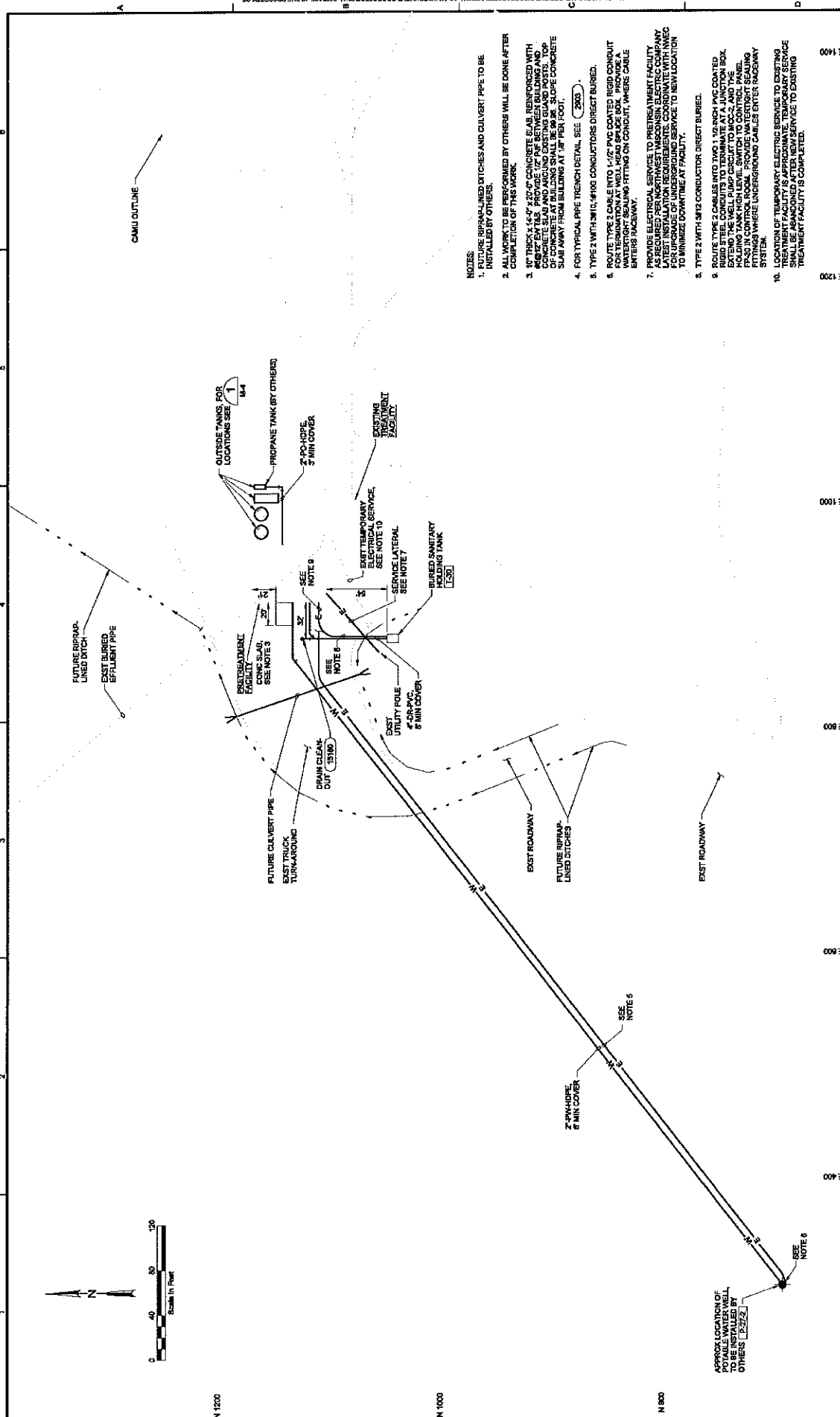


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DRAWN: B. WILKINS OK: B. WILKINS CHK: M. A. ERBUTT PWD: J. COCHRAN PWD: B. WILKINS	NO. DATE REVISION	BY: J. WOOD DATE: 03/21/2003	VERIFY SCALE 1:1 2:1 3:1 4:1 5:1 6:1 7:1 8:1 9:1 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 21:1 22:1 23:1 24:1 25:1 26:1 27:1 28:1 29:1 30:1 31:1 32:1 33:1 34:1 35:1 36:1 37:1 38:1 39:1 40:1 41:1 42:1 43:1 44:1 45:1 46:1 47:1 48:1 49:1 50:1 51:1 52:1 53:1 54:1 55:1 56:1 57:1 58:1 59:1 60:1 61:1 62:1 63:1 64:1 65:1 66:1 67:1 68:1 69:1 70:1 71:1 72:1 73:1 74:1 75:1 76:1 77:1 78:1 79:1 80:1 81:1 82:1 83:1 84:1 85:1 86:1 87:1 88:1 89:1 90:1 91:1 92:1 93:1 94:1 95:1 96:1 97:1 98:1 99:1 100:1	CH2MHILL	CONSULTING ENGINEER TREATMENT FACILITY MODIFICATIONS PENNY HANCO PROPERTIES SITE LTRA ENGINEERING SUPPORT TOWN OF DANIELS, WISCONSIN	PACKAGE 2 INSTRUMENTATION AND CONTROL VENTILATION FAN	SHEET 20 DWG: N-10 DATE: MARCH 2003 PROJ: 168315 MODIFY TIME: 16:03:34
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FILE NAME: p42710c_15815.cpl MODIFY DATE: 24-MAR-2003

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N 1200

N 1000

N 800

- NOTES:**
1. FUTURE RIPRAP-LINED DITCHES AND CULVERT PIPE TO BE INSTALLED BY OTHERS.
 2. ALL WORK TO BE PERFORMED BY OTHERS WILL BE DONE AFTER COMPLETION OF THIS WORK.
 3. 10" THICK X 14'-0" X 22'-0" CONCRETE SLAB, REINFORCED WITH #4 BARS AT 18" ON CENTER, WITH 2" MIN. SLOPE AWAY FROM BUILDING AND 1" MIN. SLOPE AWAY FROM CURB. CONCRETE SHALL BE 3000 PSI. SLOPE CONCRETE SLAB AWAY FROM BUILDING AT 1/8" PER FOOT.
 4. FOR TYPICAL PIPE TRENCH DETAIL, SEE (2003).
 5. TYPE 2 WITH 1/2" 14K14K08 CONDUCTORS DIRECT BURIED.
 6. ROUTE TYPE 2 CABLE INTO 1/2" PVC COATED RIGID CONDUIT WITH 1/2" MIN. SLOPE AWAY FROM BUILDING. PROVIDE WATER-TIGHT SEALING FITTINGS ON CONDUIT, WHERE CABLE ENTERS ROADWAY.
 7. PROVIDE ELECTRICAL SERVICE TO PRETREATMENT FACILITY AS REQUIRED PER NORTHWEST WISCONSIN ELECTRIC COMPANY. PROVIDE UNDERGROUND SERVICE TO NEW LOCATION FOR IMPROVE DOWNTIME AT FACILITY.
 8. TYPE 2 WITH 3/4" CONDUCTOR DIRECT BURIED.
 9. ROUTE TYPE 2 CABLE INTO 1/2" 14K14K08 RIGID STEEL CONDUIT TO TERMINATE AT A JUNCTION BOX. EXTEND THE WELL RAMP CONDUIT TO MCC-2, AND THE 1/2" 14K14K08 RIGID STEEL CONDUIT TO THE PRETREATMENT FACILITY IN CONDUIT. PROVIDE WATER-TIGHT SEALING FITTINGS WHERE UNDERGROUND CABLES ENTER RACEWAY SYSTEM.
 10. LOCATION OF TEMPORARY ELECTRICAL SERVICE TO EXISTING SANITARY TANK TO BE DETERMINED AFTER THE SANITARY TANK SHALL BE ABANDONED AFTER NEW SERVICE TO EXISTING TREATMENT FACILITY IS COMPLETED.

DRAWN: M. S. STEINBERG BY: J. M. JAFFEE CHK: J. OLSON DATE: 10/15/03	VERIFY SCALE MATCH ALL DIMENSIONS TO THIS SHEET. ALL DIMENSIONS SHALL BE IN FEET AND INCHES.	BOBERTHING UNDERGROUND WATER TREATMENT FACILITY MODIFICATIONS PENTA WOOD PRODUCTS SITE, LITRA TOWN OF DANIELA, WISCONSIN	CH2MHILL	SHEET 21 DWG C-1 DATE: MARCH 2003 PROJ. 100415	FILENAME: p202101_100415.dwg MODIFY DATE: 26-MAR-2003 MODIFY TIME: 11:25:51
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NOON	DATE	BY	APP'D

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NOON	DATE	BY	APP'D

NOON	DATE	BY	APP'D

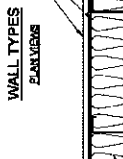
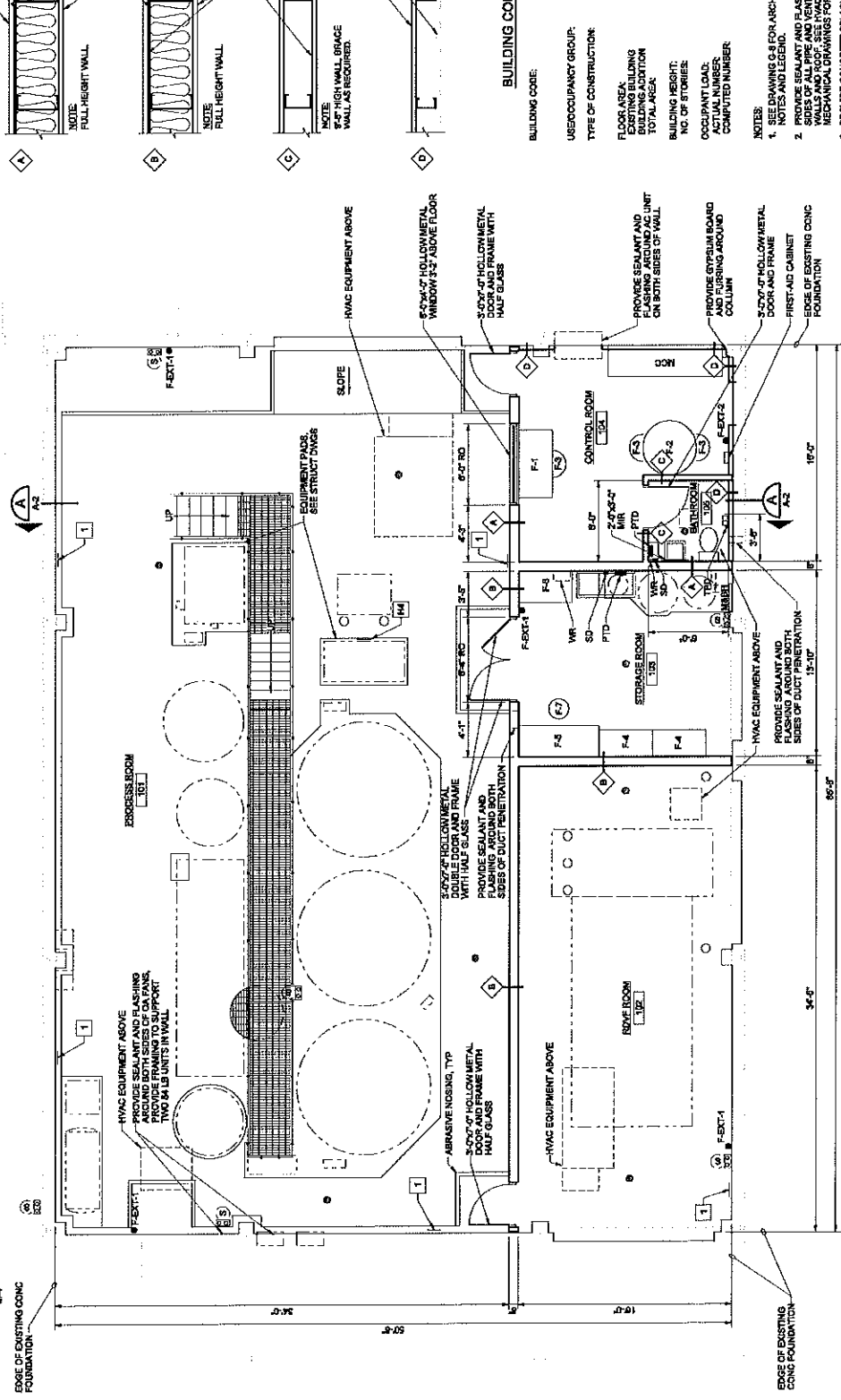
NOON	DATE	BY	APP'D

NOON	DATE	BY	APP'D

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FOR CONTINUATION, SEE DWG M-1

CONNECTOR BUILDING



NOTE: FULL HEIGHT WALL

NOTE: FULL HEIGHT WALL

NOTE: FULL HEIGHT WALL AS REQUIRED

NOTE: FULL HEIGHT WALL AS REQUIRED

BUILDING CODE DATA

BUILDING CODE: THE 2009 WISCONSIN COMMERCIAL BUILDING CODE
 USE/OCCUPANCY GROUP: F-2 NONHABITABLE NONRESIDENTIAL TYPICAL
 FLOOR AREA: 1,280 SQ FT BUILDING ADDITION TOTAL AREA: 4,816 SQ FT
 BUILDING HEIGHT: 28 FEET NO. OF STORIES: 1 STORY
 OCCUPANT LOAD: 0 OCCUPANTS ACTUAL NUMBER: 46 OCCUPANTS COMPUTED NUMBER

NOTES:
 1. SEE DRAWING G-8 FOR ARCHITECTURAL GENERAL NOTES AND LEGEND.
 2. PROVIDE SEALANT AND FLASHING AROUND BOTH SIDES OF ALL PIPE AND VENT PENETRATIONS IN MECHANICAL DRAWINGS FOR LOCATION AND SIZE.
 3. PROVIDE CONCRETE SPLASHBLOCKS AT ALL EXISTING DOWNSPOUTS.
 4. ADJUST EXISTING ROLL-UP DOORS FOR PROPER OPERATION AND FLOOR SEAL AFTER FLOOR SLAB IS POURED AND ELECTRICAL INSTALLED.

PLAN
1/4"=1'-0"

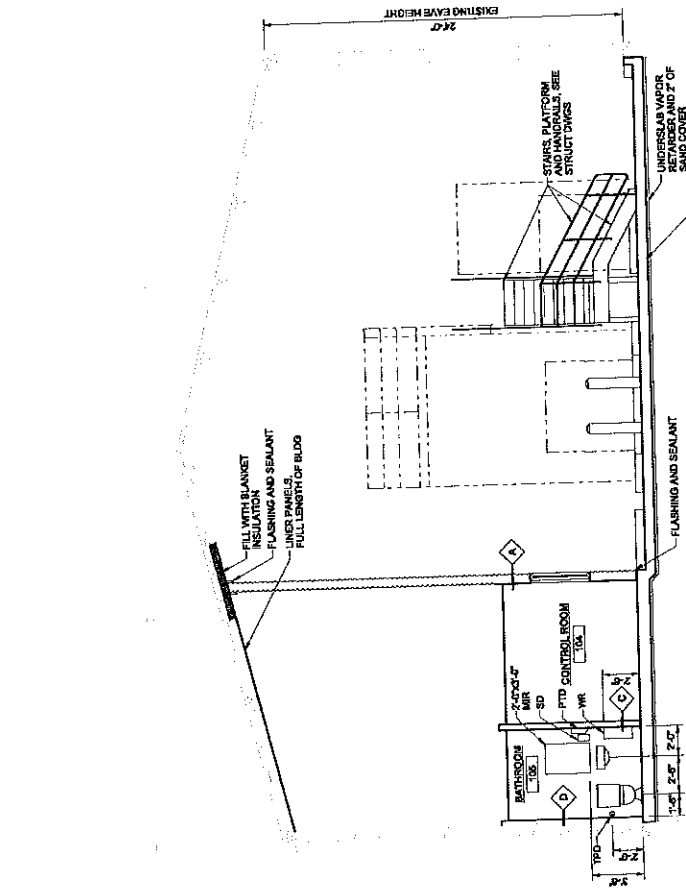
DESIGNER R.S. BURGESS	CHECKER R.S. BURGESS	DATE 12/14/10	NO. 1000	DATE 12/14/10	BY R.S. BURGESS	SCALE AS SHOWN	PROJECT TOWN OF DANIELS, WISCONSIN	PROJECT PRETREATMENT FACILITY	PACKAGE ARCHITECTURAL	SHEET 22
DATE MARCH 2020	PROJECT 168116	DATE 168116	PROJECT 168116	DATE 168116	PROJECT 168116	SCALE AS SHOWN	PROJECT TOWN OF DANIELS, WISCONSIN	PROJECT PRETREATMENT FACILITY	PACKAGE ARCHITECTURAL	SHEET 22

CH2MHILL

FILENAME: P02610_168116.dgn MODIFY DATE: 26-04-2020
 PROJECT: PRETREATMENT FACILITY
 SHEET: 22
 DATE: MARCH 2020
 PROJECT: 168116

INTERIOR FINISH SCHEDULE

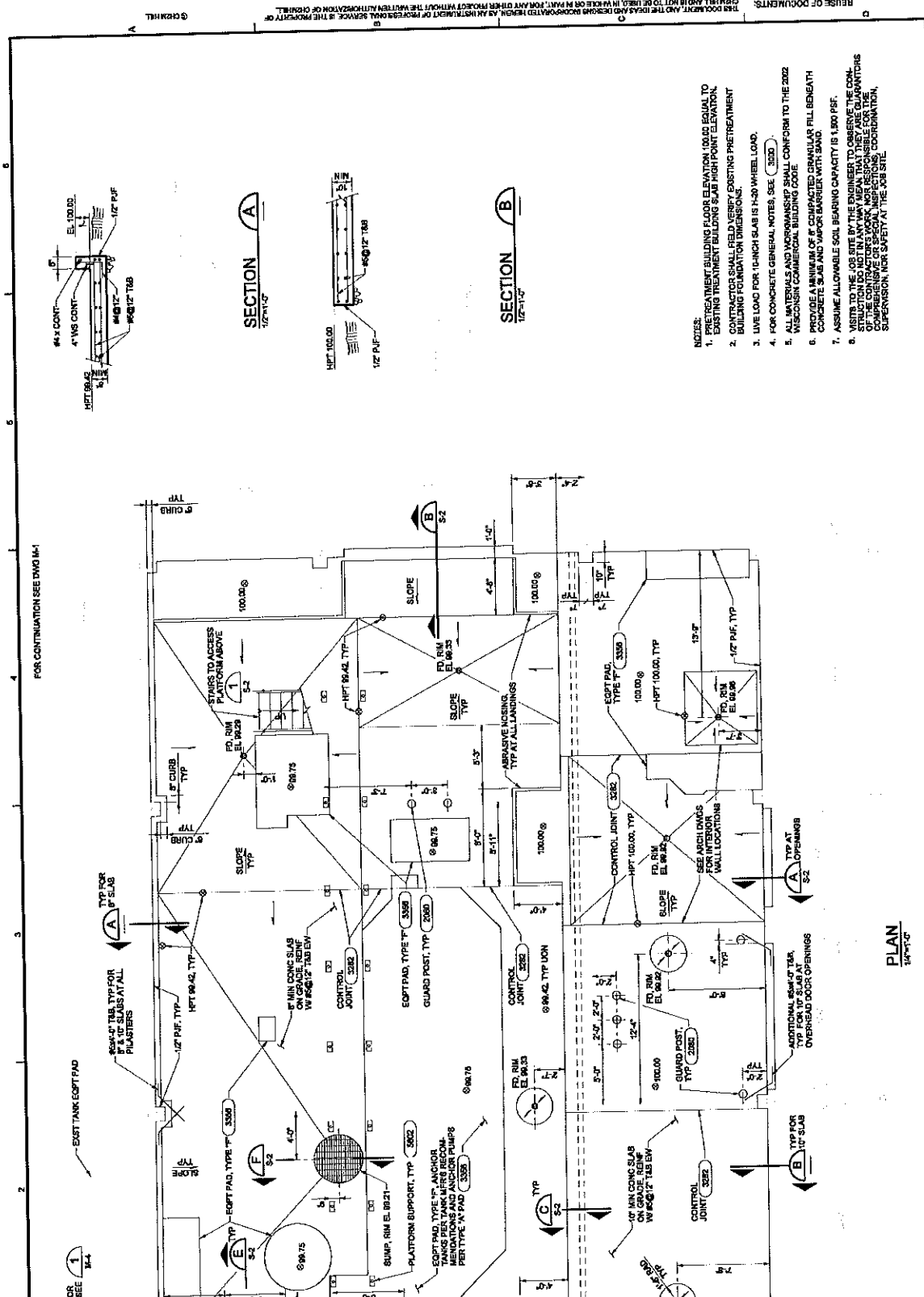
ROOM NUMBER	ROOM NAME	FLOOR			BASE OR WAINSCOT			NORTH WALL			EAST WALL			SOUTH WALL			WEST WALL			CEILING			MISCELLANEOUS			REMARKS
		SUBT.	FINISH	COLOR	HEIGHT	MATL	FINISH	COLOR	MATL	FINISH	COLOR	MATL	FINISH	COLOR	HEIGHT	MATL	FINISH	COLOR	MATL	FINISH	COLOR	ITEM	MATL	FINISH	COLOR	
101	PROCESS ROOM	CONC	SEALER	CLEAR	---	---	---	METAL	EXST	WHITE	METAL	EXST	WHITE	METAL	EXST	WHITE	METAL	EXST	WHITE	24-32	VRYL	EXST	WHITE			
102	RYOF ROOM	CONC	SEALER	CLEAR	---	---	---	METAL	EXST	WHITE	METAL	EXST	WHITE	METAL	EXST	WHITE	METAL	EXST	WHITE	14-0"	METAL	EXST	WHITE			
103	STORAGE ROOM	CONC	SEALER	CLEAR	---	---	---	METAL	EXST	WHITE	METAL	EXST	WHITE	METAL	EXST	WHITE	METAL	EXST	WHITE	8-0"	SAT	EXST	WHITE			*SHERMAN WILLIAMS PAINT COLOR
104	CONTROL ROOM	CONC	SEALER	CLEAR	4"	RUBBER	EXST	BRN	WRB	115	SW1270	WRB	115	SW1270	WRB	115	SW1270	WRB	115	SW1270	SAT	EXST	WHITE			*SHERMAN WILLIAMS PAINT COLOR
105	BATHROOM	CONC	SEALER	CLEAR	4"	RUBBER	EXST	BRN	WRB	115	SW1270	WRB	115	SW1270	WRB	115	SW1270	WRB	115	SW1270	SAT	EXST	WHITE			



BUILDING SECTION A
1/8"=1'-0"

DRAWN BY: R.C. BERGER CHECKED BY: R.C. BERGER DATE: MARCH 2003 PROJECT: 158615	SHEET: 23 DWG: A-2 DATE: MARCH 2003 PROJ: 158615 MODIFY TIME: 10:15:33
PROJECT: ROBERTSONS UNIFORMS TREATMENT FACILITY MODIFICATIONS TOWN OF DANIELS, WISCONSIN	PACKAGE 2 ARCHITECTURAL PRETREATMENT FACILITY INTERIOR FINISH SCHEDULE AND BUILDING SECTION
CH2MHILL	FILENAME: P:\2002\158615.dwg MODIFY DATE: 25-MAR-2003

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DESIGN	DATE	NO.	BY	REVISION
SK	MARCH 2003			
CHK				
TOPIC				
CH2MHILL				
REQUESTING ORGANIZATION TREATMENT FACILITY MODIFICATIONS PENNY WISCO PRODUCTS SITE LTRA ENGINEERING SUPPORT TOWN OF DANIELS, WISCONSIN				
PACKAGE 2 STRUCTURAL PRETREATMENT FACILITY PLAN AND SECTIONS				
SHEET	DATE	NO.	BY	REVISION
24	MARCH 2003			
FILENAME: PWD078_138615.dgn MODIFY DATE: 26-MAR-2003 MODIFY TIME: 14:23:40				

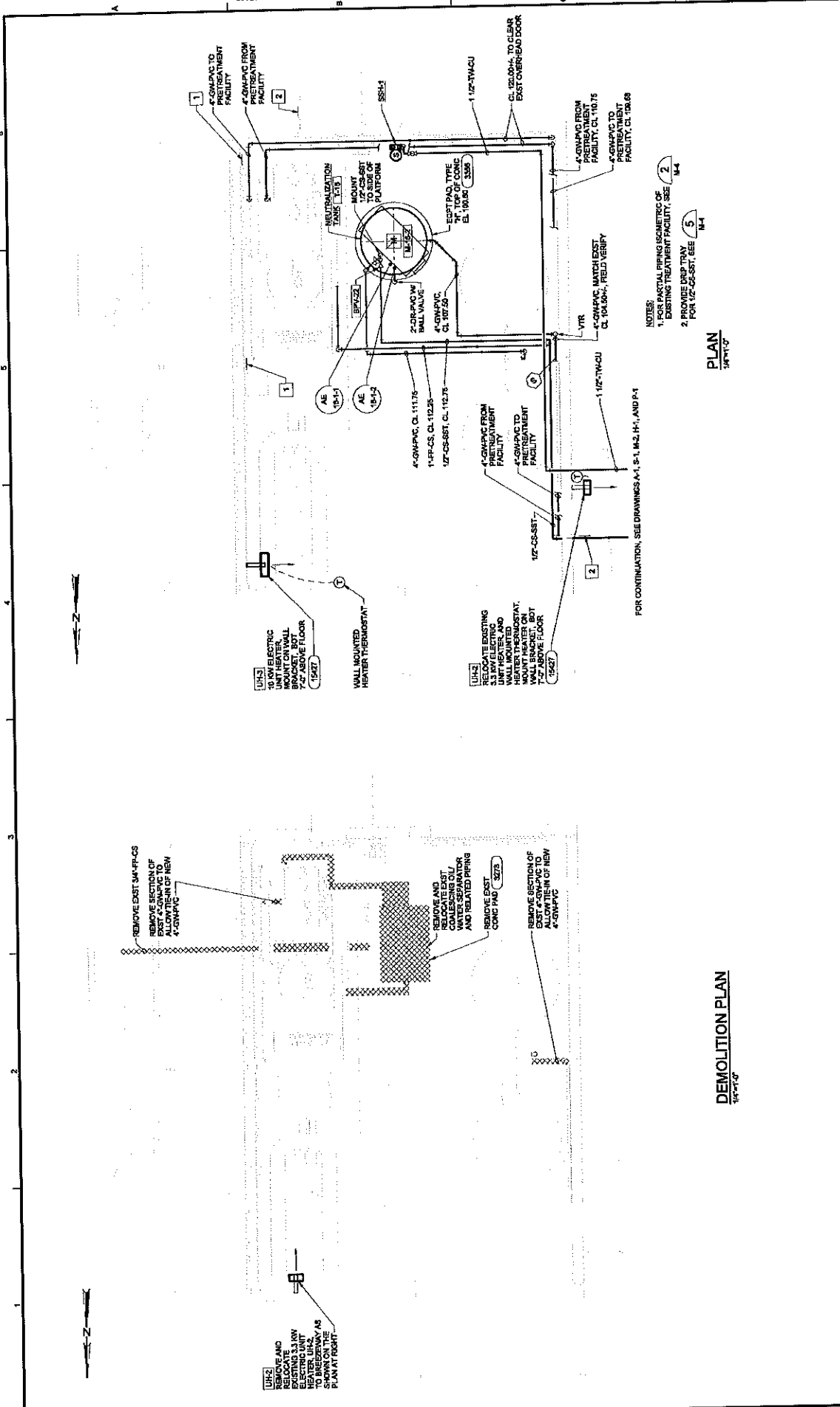
NOTES:

- PRETREATMENT BUILDING FLOOR ELEVATION 100.00 EQUAL TO EXISTING TREATMENT BUILDING SLAB HIGH POINT ELEVATION. BUILDING FOUNDATION DIMENSIONS.
- LIVE LOAD FOR 12-INCH SLAB IS H-30 WHEEL LOAD.
- FOR CONCRETE GENERAL NOTES, SEE (300).
- ALL REINFORCING AND UNDERPINNING SHALL CONFORM TO THE 2002 WISCONSIN COMMERCIAL BUILDING CODE.
- PRODUCE A MINIMUM OF 8" COMPACTED GRANULAR FILL BENEATH CONCRETE SLABS AND WAPOR BARRIER WITH SAND.
- ASSUME ALLOWABLE SOIL BEARING CAPACITY IS 1,500 PSF.
- REFER TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION TO VERIFY THAT ALL MATERIALS AND METHODS OF CONSTRUCTION DO NOT IN ANY WAY MEAN THAT THEY ARE EQUIVALENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL OBTAIN THE SUPERVISION, NGR SAFETY AT THE JOB SITE.

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

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

PLAN
1/4"=1'-0"



DEMOLITION PLAN
1/4" = 1'-0"

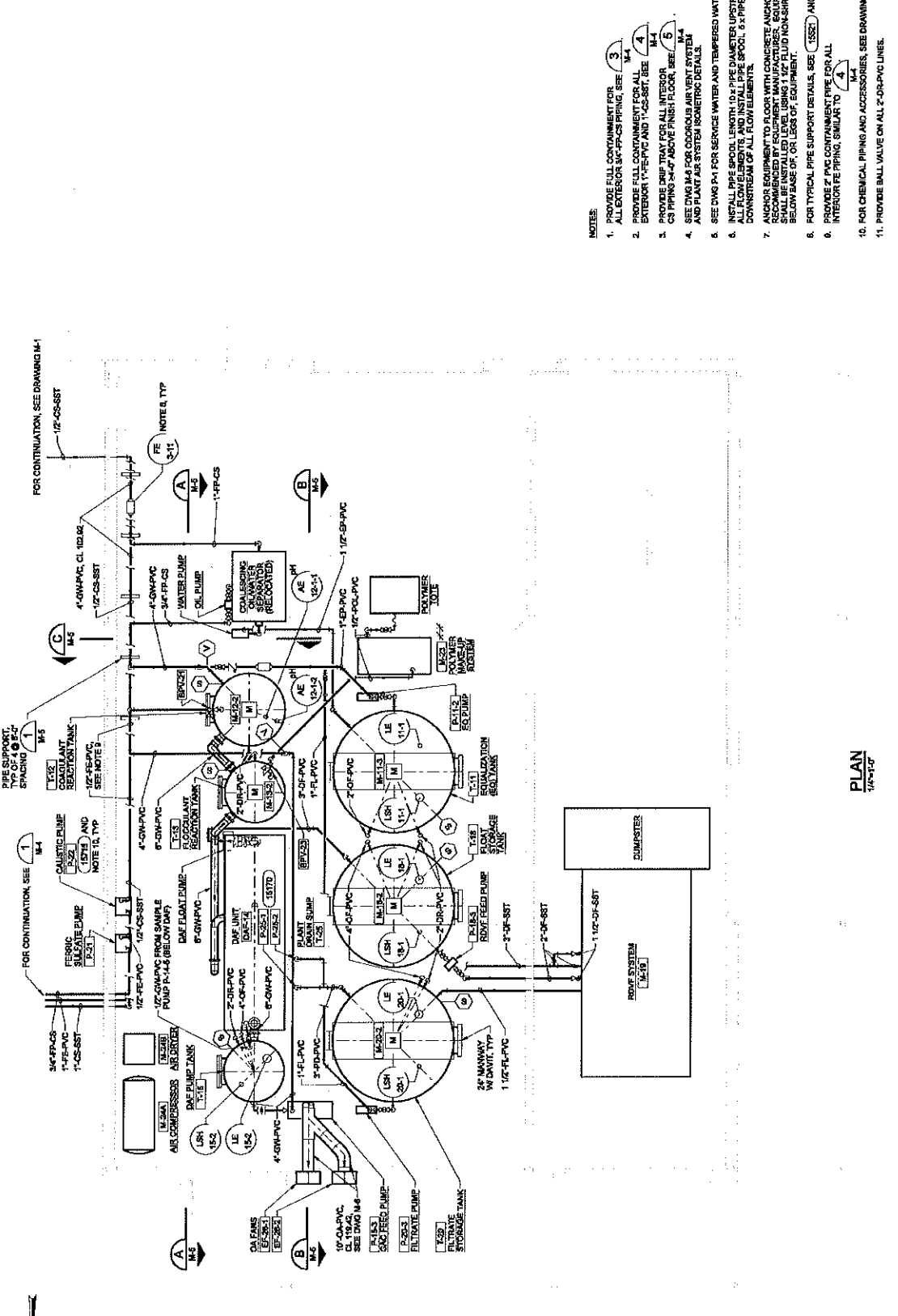
FOR CONTINUATION, SEE DRAWINGS A-1, S-1, M-2, H-1, AND P-1

- NOTES:
1. FOR PARTIAL PIPING ISOMETRIC OF EXISTING TREATMENT FACILITY, SEE 2 M-4
 2. PROVIDE DRIP TRAY FOR 1/2" CS-SST, SEE 5 M-4

PLAN
1/4" = 1'-0"

DESIGNED BY: SCHEIDT CHECKED BY: D. HANSEN DATE: 12/15/03 PROJECT NO.: 03-001	PROJECT: 03-001 SHEET NO.: 20 DATE: 12/15/03 PROJECT NO.: 03-001	PACKAGE 2 MECHANICAL EXISTING TREATMENT FACILITY DEMOLITION PLAN AND PLAN	PROJECT: 03-001 SHEET NO.: 20 DATE: 12/15/03 PROJECT NO.: 03-001
CH2MHILL		PROJECT: 03-001 SHEET NO.: 20 DATE: 12/15/03 PROJECT NO.: 03-001	
PROJECT: 03-001 SHEET NO.: 20 DATE: 12/15/03 PROJECT NO.: 03-001		PROJECT: 03-001 SHEET NO.: 20 DATE: 12/15/03 PROJECT NO.: 03-001	
PROJECT: 03-001 SHEET NO.: 20 DATE: 12/15/03 PROJECT NO.: 03-001		PROJECT: 03-001 SHEET NO.: 20 DATE: 12/15/03 PROJECT NO.: 03-001	

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DESIGN	ENGINEER	NO.	DATE	REVISION
BY	DATE	BY	DATE	REVISION
VERIFY SCALE BASE DIM ON ON ORIGINAL DRAWING IF NOT ONE INCH ON THE FIRST DRAWING NUMBER THEREAFTER.				
CH2MHILL				
SOVENTINGGROUNDWATER TREATMENT FACILITY MODIFICATIONS PENTA WOOD PRODUCTS SITE LTRA TOWN OF DANIELS, WISCONSIN				
PROJECT MECHANICAL PRETREATMENT FACILITY PLAN				
FILENAME: pntm202_15816.dgn MODIFY DATE: 28-MAR-2005 SHEET 27 DWG M-2 DATE MARCH 2005 PROJ 15816				

PLAN
1/4"=1'-0"

- NOTES:
1. PROVIDE FULL CONTAINMENT FOR ALL EXTERIOR 3/4" FFCS PIPING, SEE M-4.
 2. PROVIDE FULL CONTAINMENT FOR ALL EXTERIOR 1" FE-PVC AND 1" CS-SST, SEE M-4.
 3. PROVIDE DRIP TRAY FOR ALL INTERIOR CS PIPING 2" > ABOVE FINISH FLOOR, SEE M-4 AND PLANT AIR SYSTEM ISOMETRIC DETAILS.
 4. SEE DWG M-4 FOR COORDINATE AIR VENT SYSTEM AND PLANT AIR SYSTEM ISOMETRIC DETAILS.
 5. SEE DWG P-1 FOR SERVICE WATER AND TEMPERED WATER PLAN.
 6. INSTALL PIPE SPOOL LENGTH 1/2" PIPE DIAMETER UPSTREAM OF VALVE AND 1" PIPE DIAMETER DOWNSTREAM OF ALL FLOW ELEMENTS.
 7. ANCHOR EQUIPMENT TO FLOOR WITH CONCRETE ANCHORS AS RECOMMENDED BY EQUIPMENT MANUFACTURER. EQUIPMENT SHALL BE INSTALLED LEVEL USING 1/2" FLUID NON-SHRINK GROUT BELOW BASE OR, OR LESS OF, EQUIPMENT.
 8. FOR TYPICAL PIPE SUPPORT DETAILS, SEE (1555) AND (1555).
 9. PROVIDE 2" PVC CONTAINMENT PIPE FOR ALL INTERIOR FE PIPING, SIMILAR TO M-4.
 10. FOR CHEMICAL PIPING AND ACCESSORIES, SEE DRAWING M-7.
 11. PROVIDE BALL VALVE ON ALL 2"-OD-PVC LINES.

FOR CONTINUATION, SEE DRAWING M-1

FOR CONTINUATION, SEE M-4

FOR CONTINUATION, SEE M-5

FOR CONTINUATION, SEE M-6

FOR CONTINUATION, SEE M-7

FOR CONTINUATION, SEE M-8

FOR CONTINUATION, SEE M-9

FOR CONTINUATION, SEE M-10

FOR CONTINUATION, SEE M-11

FOR CONTINUATION, SEE M-12

FOR CONTINUATION, SEE M-13

FOR CONTINUATION, SEE M-14

FOR CONTINUATION, SEE M-15

FOR CONTINUATION, SEE M-16

FOR CONTINUATION, SEE M-17

FOR CONTINUATION, SEE M-18

FOR CONTINUATION, SEE M-19

FOR CONTINUATION, SEE M-20

FOR CONTINUATION, SEE M-21

FOR CONTINUATION, SEE M-22

FOR CONTINUATION, SEE M-23

FOR CONTINUATION, SEE M-24

FOR CONTINUATION, SEE M-25

FOR CONTINUATION, SEE M-26

FOR CONTINUATION, SEE M-27

FOR CONTINUATION, SEE M-28

FOR CONTINUATION, SEE M-29

FOR CONTINUATION, SEE M-30

FOR CONTINUATION, SEE M-31

FOR CONTINUATION, SEE M-32

FOR CONTINUATION, SEE M-33

FOR CONTINUATION, SEE M-34

FOR CONTINUATION, SEE M-35

FOR CONTINUATION, SEE M-36

FOR CONTINUATION, SEE M-37

FOR CONTINUATION, SEE M-38

FOR CONTINUATION, SEE M-39

FOR CONTINUATION, SEE M-40

FOR CONTINUATION, SEE M-41

FOR CONTINUATION, SEE M-42

FOR CONTINUATION, SEE M-43

FOR CONTINUATION, SEE M-44

FOR CONTINUATION, SEE M-45

FOR CONTINUATION, SEE M-46

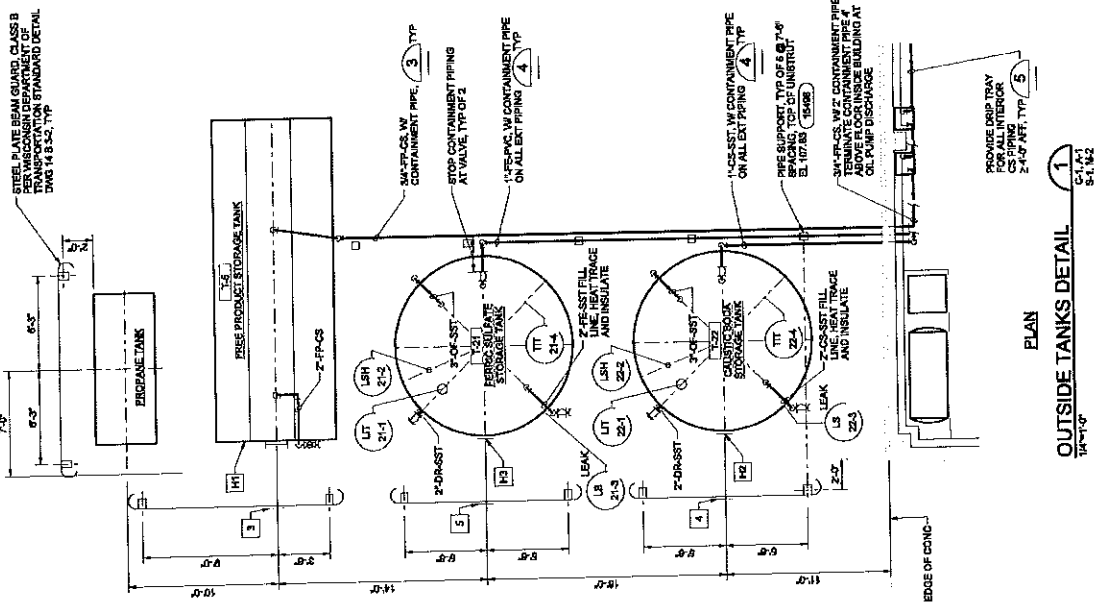
FOR CONTINUATION, SEE M-47

FOR CONTINUATION, SEE M-48

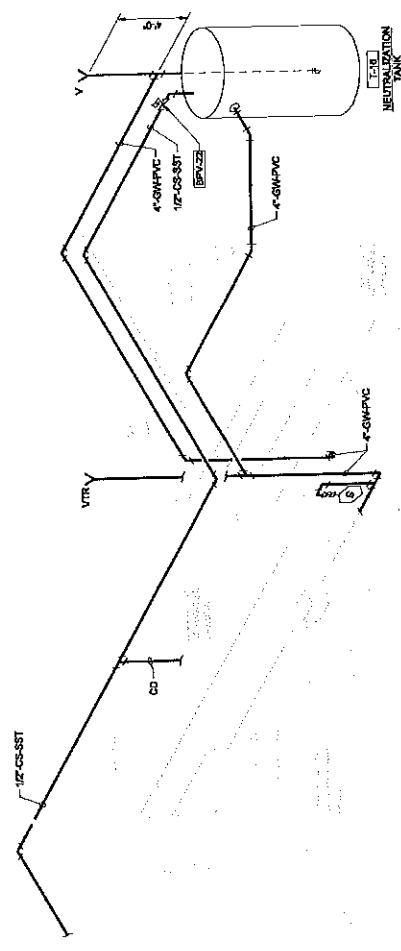
FOR CONTINUATION, SEE M-49

FOR CONTINUATION, SEE M-50

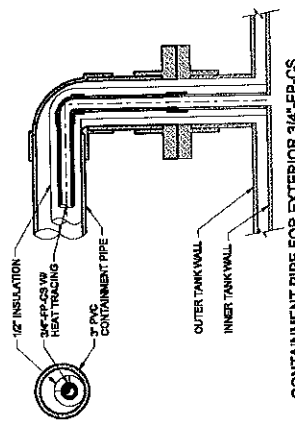
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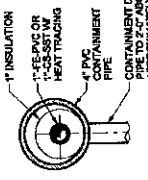
OUTSIDE TANKS DETAIL
1/4"=1'-0"
S-1, M-2
S-1, M-2



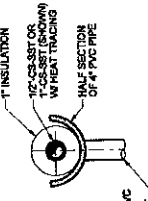
**EXISTING TREATMENT FACILITY
GROUNDWATER PIPING MODIFICATIONS**
ISOMETRIC DETAIL 2
M-1
NTS



DETAIL 3
NTS
CONTAINMENT PIPE FOR EXTERIOR 3/4\"/>



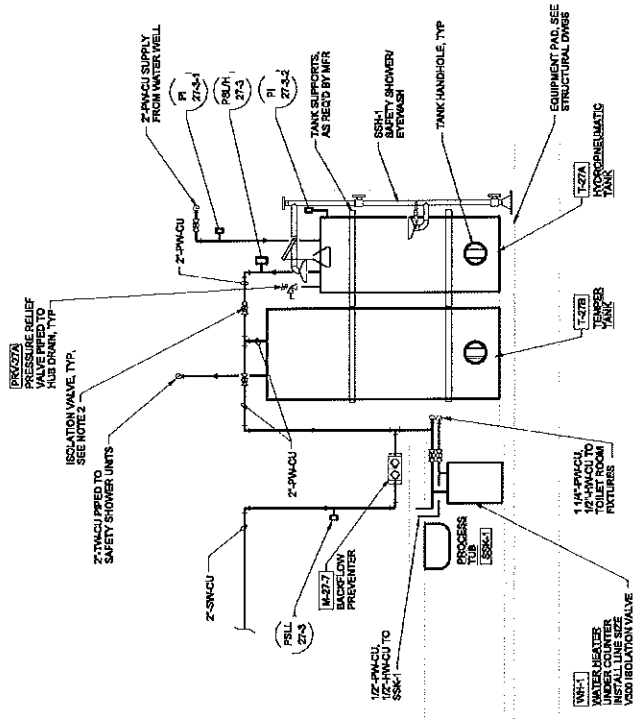
DETAIL 4
3\"/>



DETAIL 5
3\"/>

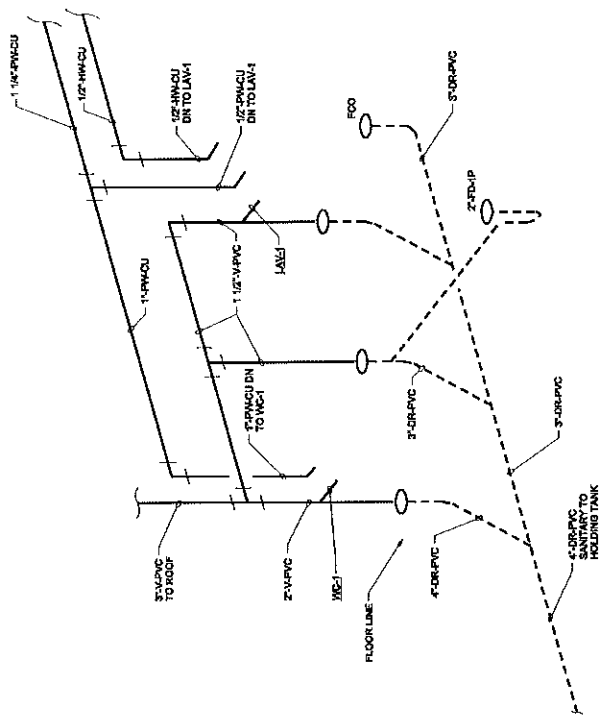
CH2MHILL PROJECT: PERMANENT FACILITY MODIFICATIONS TREATMENT FACILITY ADDITIONS PERMANENT FACILITY SITE LTRA TOWN OF DANIELS, WISCONSIN	PACKAGE 2 MECHANICAL PRETREATMENT FACILITY DETAILS	SHEET 28 DWG M-4 DATE MARCH 2003 PDU 188815
VERIFY SCALE PERMANENT FACILITY MODIFICATIONS TREATMENT FACILITY ADDITIONS PERMANENT FACILITY SITE LTRA TOWN OF DANIELS, WISCONSIN BY JAVS SALES REPRESENTATIVE	FILENAME: p2m02m4_188815.dwt MODIFY DATE: 28-MAR-2003	MODIFY TIME: 13:54:56

1 2 3 4 5



- NOTES:
1. INSTALL TANK DRAIN VALVE AND PIPE DRAIN LINE TO FLOOR OR HUB DRAIN.
 2. PROVIDE WITH LOCKABLE HANDLE ON ISOLATION VALVE.

SECTION A
1/2" = 1'-0"
P-1



WASTE & VENT PIPING ISOMETRIC DETAIL
N78

DESIGN	ADJ. SAUER	NO.	DATE	BY	REVISION
DRAWN	ADJ. SAUER				
CHECKED	PL. J. LAUBACH				
PROJECT	06-10386				
PROJECT	ROBERTINGERO UNDERWATER TREATMENT FACILITY INVESTIGATIONS	PACKAGE 2	PLUMBING	SHEET 34	
PRETREATMENT FACILITY SECTION AND DETAIL			DATE	MARCH 2003	
TOWN OF DANIELS, WISCONSIN			PROJECT	158815	
FILENAME: project_158815.dgn			MODIFY DATE:	25-MAR-2003	MODIFY TIME: 11:10:12

VERIFY SCALE
BAR SCALE 1/4" = 1'-0"
ORIG. DRAWING
IF NOT ON THIS SHEET, ADJUST
SCALE ACCORDINGLY.

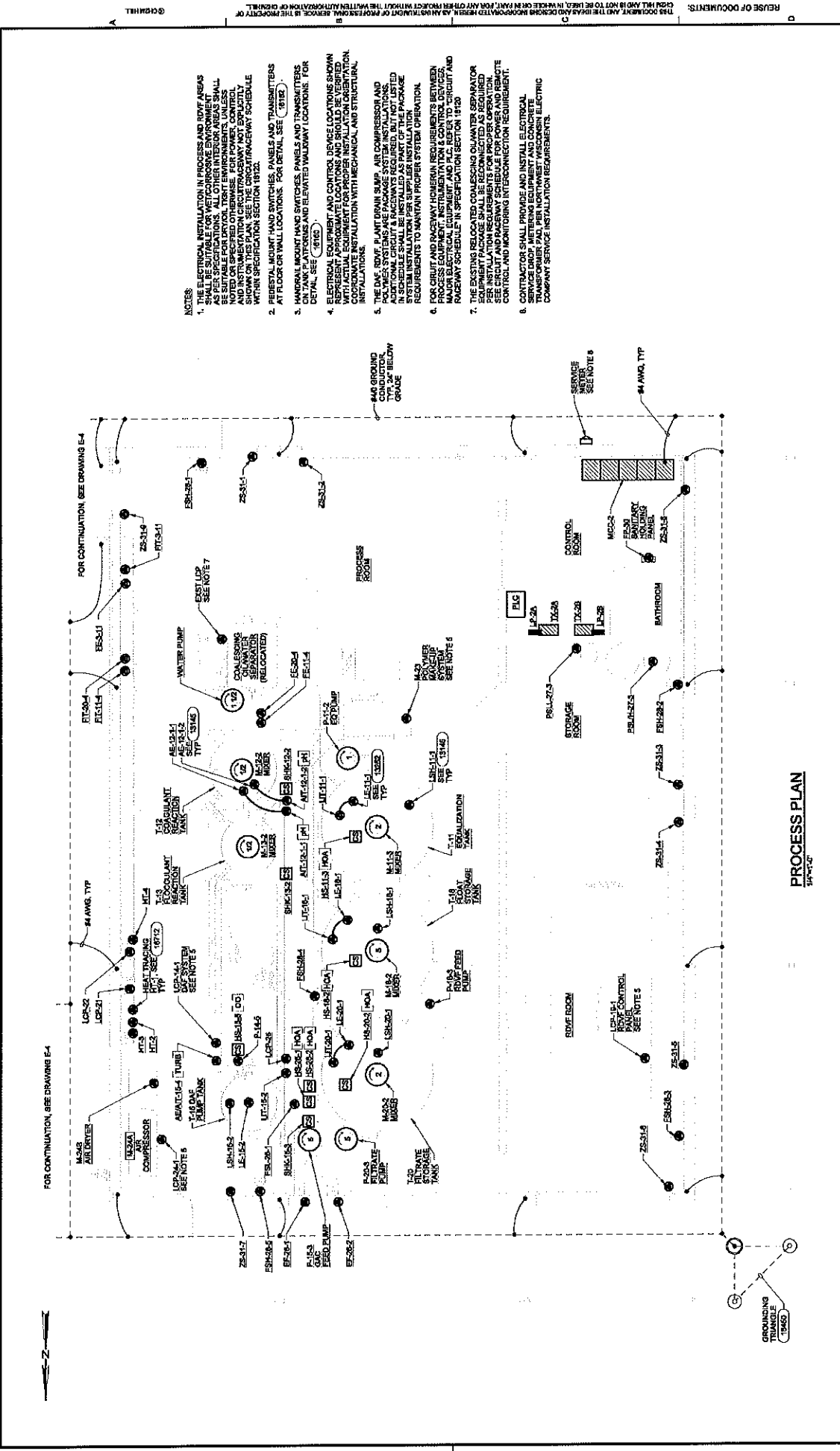
CH2MHILL

PROJECTINGERO UNDERWATER TREATMENT FACILITY INVESTIGATIONS
PENTAWOOD PRODUCTS SITE LTRA
TOWN OF DANIELS, WISCONSIN

SYMBOL	VOLTAGE	DESCRIPTION	MANUFACTURER	CATALOG NO.	LAMPS	MOUNTING
1	120V, 1PH	HID HIGH BAY, PRISMATIC BORGESLOCATE GLASS REFLECTORS SUPPORTED BY STEEL RODS AND RETAINER RINGS. DIE CAST ALUMINUM BALLAST HOUSING, MODUL LAMP BASE WITH THROUGH POWER HOOK ASSEMBLY AND SAFETY CHAIN. HEAVY DUTY DIECAST ALUMINUM HOUSING AND HIGH EFFICIENT BALLAST.	HOLDORPHANE	PER500MTRF51	1-250W CLEAR/WH	PENDANT
2	120V	DIE-CAST ALUMINUM HOUSING, BRONZE FINISH, MOLDED PRISMATIC THERMAL SHOCK RESISTANT, BORGESLOCATE GLASS REFRACTOR AND INTERNAL HID BALLAST. WALL MOUNT OVER RECESSED OUTLET BOX. SUITABLE FOR WET LOCATIONS. INTERNAL PHOTOCELL CONTROL AND FUSING.	HOLDORPHANE WALLPACKETTE	WPA24PWH-12-82 P-F1	2X16W CLEAR/WH	SURFACE
3	120V	SIMILAR TO TYPE 2, EXCEPT WALLPACK II (60 WATT FROTURE).	HOLDORPHANE WALLPACK II	WPK2-180WH-RT-8K	160W CLEAR/WH	WALL MOUNT
4	120V	Z X 4 STATIC TROFFER WITH PARABOLIC SHAPED LOWER SILVER FINISH. POSITIVE LATCHING, 3" DEEP, 2-4 CELL, DOUBLE DOORS, 2 LAMP WITH HIGH FREQUENCY, HPF ELECTRONIC RAPID START BALLAST.	DAY-BRITE BENJAMIN	PARALOVER III SP8224-PP22	(2) FOZT8 RAPID START	RECESSED
5	120V	SIMILAR TO TYPE 4, EXCEPT INCLUDES SELF CONTAINED EMERGENCY POWER PACK (DEB-7)	DAY-BRITE	PARALOVER II EP8224-PP22	(2) FOZT8 RAPID START	RECESSED
6	120V	Z X 2 STATIC TROFFER WITH PARABOLIC SHAPED LOWER SILVER FINISH. POSITIVE LATCHING, 3" DEEP, 3 CELL, 2 LAMP WITH HIGH FREQUENCY, HPF ELECTRONIC RAPID START BALLAST.	DAY-BRITE	PARALOVER II P8224-PP22	(2) FOZT8 RAPID START	RECESSED
7	120V	1 X 4 INDUSTRIAL WALK PROCELAM ENAMEL STEEL REFLECTOR SLOTTED FOR 10% UP-LIGHT. STEEL CHANNEL, WHITE ENAMEL FINISH. ENERGY SAVING BALLAST, 4200LM.	DAY-BRITE	FL-102-40-120V	(2) EST806, CWSS 4200lm	SURFACE or PENDANT
8	120V	EMERGENCY BATTERY UNIT, 671 x 449 x 260, COMPLETELY SELF-CONTAINED TEST-SIGNAL, CHARGE RATE INDICATORS, BATTERY CHARGER, PURE LEAD, 16 YEAR MAINTENANCE FREE BATTERY; TWO 7.5 WATT SEALED BEAM LAMP HEADS, UNIVERSAL MOUNTING, MINIMUM BRAIN OPERATION.	DUAL-LITE	E2-2 SERIES	LAMPS FURNISHED WITH UNIT	WALL MOUNTED
9	120V	EXIT LIGHT, SELF CONTAINED EMERGENCY BATTERY UNIT, POWER PACK WITH INTEGRAL PURE LEAD BATTERY, MAINTENANCE FREE, BROWN, 4 1/4 x 10-1/2", DIE-CAST ALUMINUM HOUSING, WITH WHITE FINISH, RED STENCIL LETTERS, DOWNLIGHT, CHARGE RATE, PILOT LIGHT AND TEST SWITCH, UNIVERSAL MOUNTING, ARROWS AS INDICATED ON PLANS.	DUAL-LITE	EXCALIBUR CHRYMHEP	(2) 18W	WALL MOUNTED or PENDANT

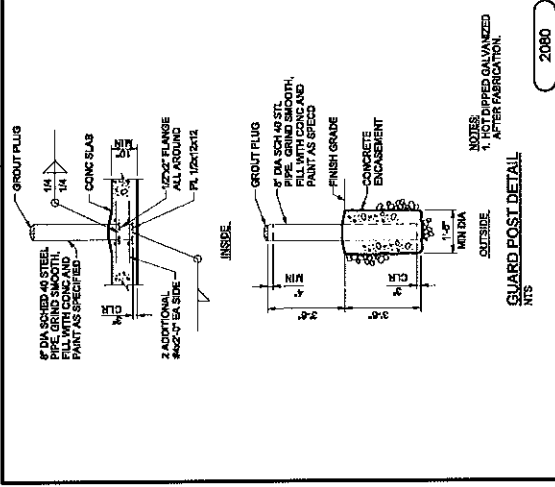
PANEL SCHEDULE LP-2A									
ENCLOSURE: NEMA 1									
VOLTAGE: 208/120 VOLTS									
WIRING: 4 WIRE									
MOUNTING: SURFACE									
LOCATION: CONTROL ROOM									
INTERUPTING RATING - 10,000 AMPS, RMS, SYMMETRICAL									
DESCRIPTION	LOAD AMPS	BKR SIZE	BKR POLES	THREE PHASE NO.	CRK NO.	BKR SIZE	BKR POLES	CRK NO.	LOADS
R/C CABINET	18.7	30	1	1	1	20	1	2	51.7 LOADS - PHASE A
CONV LCP	10.0	20	1	3	4	20	1	4	34.0 LOADS - PHASE B
UT-05-ALSH-05-ALS-05-2E-LEAK	3.0	20	1	6	6	20	1	6	6.0 LOADS - PHASE C
UT-11-ALSH-11-RT-11-4	3.0	20	1	7	8	20	1	8	6.0 AVERAGE CONNECTED AMPS
UT-18-ALSH-18-1	3.0	20	1	11	12	20	1	12	17.4 TOTAL LOADS CONNECTED KVA
SAMPLER PUMP P-44-2	3.0	20	1	13	14	20	1	14	
UT-18-ALSH-18-1	3.0	20	1	15	16	20	1	16	
UT-18-ALSH-18-1	3.0	20	1	17	18	20	1	18	
SUMP PUMP PANEL LP-25	22.0	30	1	19	21	20	1	21	
SPARE	1.0	20	1	21	22	20	1	22	
SPARE	1.0	20	1	23	24	20	1	24	
SPARE	1.0	20	1	25	26	20	1	26	
SPARE	1.0	20	1	27	28	20	1	28	
SPARE	1.0	20	1	29	30	20	1	30	
SPARE	1.0	20	1	31	32	20	1	32	
SPARE	1.0	20	1	33	34	20	1	34	
SPARE	1.0	20	1	35	36	20	1	36	
SPARE	1.0	20	1	37	38	20	1	38	
SPARE	1.0	20	1	39	40	20	1	40	
SPARE	1.0	20	1	41	42	20	1	42	

PANEL SCHEDULE LP-2B									
ENCLOSURE: NEMA 1									
VOLTAGE: 208/120 VOLTS									
WIRING: 4 WIRE									
MOUNTING: SURFACE									
LOCATION: CONTROL ROOM									
INTERUPTING RATING - 10,000 AMPS, RMS, SYMMETRICAL									
DESCRIPTION	LOAD AMPS	BKR SIZE	BKR POLES	THREE PHASE NO.	CRK NO.	BKR SIZE	BKR POLES	CRK NO.	LOADS
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	1	2	20	1	2	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	3	4	20	1	5	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	5	6	20	1	7	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	7	8	20	1	9	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	9	10	20	1	11	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	11	12	20	1	13	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	13	14	20	1	15	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	15	16	20	1	17	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	17	18	20	1	19	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	19	20	20	1	21	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	21	22	20	1	23	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	23	24	20	1	25	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	25	26	20	1	27	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	27	28	20	1	29	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	29	30	20	1	31	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	31	32	20	1	33	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	33	34	20	1	35	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	35	36	20	1	37	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	37	38	20	1	39	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	39	40	20	1	41	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	41	42	20	1	43	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	43	44	20	1	45	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	45	46	20	1	47	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	47	48	20	1	49	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	49	50	20	1	51	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	51	52	20	1	53	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	53	54	20	1	55	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	55	56	20	1	57	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	57	58	20	1	59	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	59	60	20	1	61	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	61	62	20	1	63	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	63	64	20	1	65	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	65	66	20	1	67	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	67	68	20	1	69	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	69	70	20	1	71	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	71	72	20	1	73	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	73	74	20	1	75	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	75	76	20	1	77	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	77	78	20	1	79	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	79	80	20	1	81	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	81	82	20	1	83	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	83	84	20	1	85	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	85	86	20	1	87	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	87	88	20	1	89	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	89	90	20	1	91	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	91	92	20	1	93	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	93	94	20	1	95	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	95	96	20	1	97	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	97	98	20	1	99	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	99	100	20	1	101	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	101	102	20	1	103	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	103	104	20	1	105	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	105	106	20	1	107	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	107	108	20	1	109	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	109	110	20	1	111	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	111	112	20	1	113	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	113	114	20	1	115	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	115	116	20	1	117	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	117	118	20	1	119	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	119	120	20	1	121	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	121	122	20	1	123	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	123	124	20	1	125	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	125	126	20	1	127	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	127	128	20	1	129	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	129	130	20	1	131	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	131	132	20	1	133	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	133	134	20	1	135	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	135	136	20	1	137	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	137	138	20	1	139	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	139	140	20	1	141	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	141	142	20	1	143	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	143	144	20	1	145	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	145	146	20	1	147	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	147	148	20	1	149	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	149	150	20	1	151	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	151	152	20	1	153	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	153	154	20	1	155	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	155	156	20	1	157	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	157	158	20	1	159	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	159	160	20	1	161	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	161	162	20	1	163	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	163	164	20	1	165	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	165	166	20	1	167	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	167	168	20	1	169	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	169	170	20	1	171	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	171	172	20	1	173	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	173	174	20	1	175	14.0
LTS-PROCESS ROOM (VAL LP-1)	13.0	20	2	175					



- NOTES**
1. THE ELECTRICAL INSTALLATION IN PROCESS AND ROOF AREAS AS PER SPECIFICATIONS WILL COVER INTERIOR AREAS SHALL BE SUITABLE FOR DRY, TIGHT ENVIRONMENTS, UNLESS NOTED OR SPECIFIED OTHERWISE. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, LATEST EDITION, AND ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. SEE THE CIRCUIT RAY TRACING SCHEDULE WITHIN SPECIFICATION SECTION 1812Z.
 2. PERISTALTIC MOUNT HAND SWITCHES, PANELS AND TRANSMITTERS AT FLOOR OR WALL LOCATIONS. FOR DETAIL SEE (918)Z.
 3. HANGAR MOUNT HAND SWITCHES, PANELS AND TRANSMITTERS ON TANK PLATFORMS AND ELEVATED WALKWAY LOCATIONS. FOR DETAIL SEE (918)Z.
 4. ELECTRICAL EQUIPMENT AND CONTROL DEVICE LOCATIONS SHOWN WITHIN THIS DRAWING SHALL BE INSTALLED IN ACCORDANCE WITH ACTUAL EQUIPMENT FOR PROPER INSTALLATION ORIENTATION. COORDINATE INSTALLATION WITH MECHANICAL AND STRUCTURAL INSTALLATIONS.
 5. THE DAF, ROOF PLANT DRAIN PUMP, AIR COMPRESSOR AND ADDITIONAL CIRCUIT & RACEWAYS REQUIRED, BUT NOT LISTED IN SCHEDULE SHALL BE INSTALLED AS PART OF THE PACKAGE ELECTRICAL INSTALLATION. SEE THE CIRCUIT RAY TRACING SCHEDULE FOR PROPER SYSTEM OPERATION.
 6. FOR CIRCUIT AND RACEWAY HORIZONTAL REQUIREMENTS BETWEEN MAJOR ELECTRICAL EQUIPMENT AND P.C. REFER TO CIRCUIT AND RACEWAY SCHEDULE IN SPECIFICATION SECTION 1812Z.
 7. THE EXISTING RELOCATED COALESCING OIL/WATER SEPARATOR SHALL BE INSTALLED IN ACCORDANCE WITH THE CIRCUIT RAY TRACING SCHEDULE FOR PROPER OPERATION. SEE CIRCUIT AND RACEWAY SCHEDULE FOR POWER AND REMOTE CONTROL AND MONITORING INTERCONNECTION REQUIREMENTS.
 8. CONTRACTOR SHALL PROVIDE AND INSTALL ELECTRICAL SERVICE DROPS, WIRING EQUIPMENT AND CONCEALED ELECTRICAL SERVICE INSTALLATION REQUIREMENTS.

DRAWN BY: M. WILSON CHECKED BY: M. SCHERT DATE: 1/10/03	PROJECT NO.: 040454-10016401 PROJECT NAME: PRETREATMENT FACILITY PROCESS PLAN	SHEET NO.: 06 TOTAL SHEETS: 06 DATE: MARCH 2003 PROJ. 158915
PROJECT: BROWNSVILLE CLIENT: CH2MHILL PROJECT: TREATMENT FACILITY IMPROVEMENTS SITE: LURA LOCATION: TOWN OF DANIELS, WISCONSIN	PROJECT NO.: 040454-10016401 PROJECT NAME: PRETREATMENT FACILITY PROCESS PLAN	SHEET NO.: 06 TOTAL SHEETS: 06 DATE: MARCH 2003 PROJ. 158915
PROJECT: BROWNSVILLE CLIENT: CH2MHILL PROJECT: TREATMENT FACILITY IMPROVEMENTS SITE: LURA LOCATION: TOWN OF DANIELS, WISCONSIN	PROJECT NO.: 040454-10016401 PROJECT NAME: PRETREATMENT FACILITY PROCESS PLAN	SHEET NO.: 06 TOTAL SHEETS: 06 DATE: MARCH 2003 PROJ. 158915



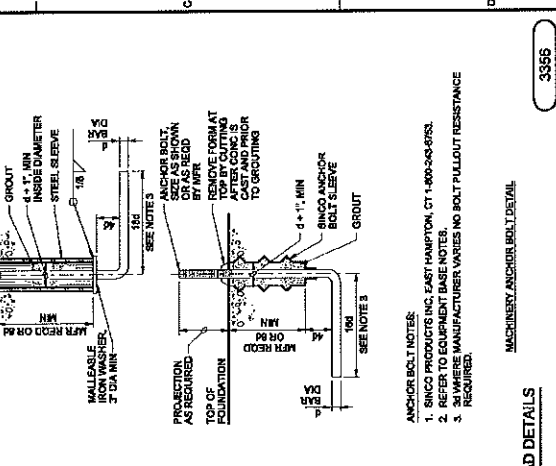
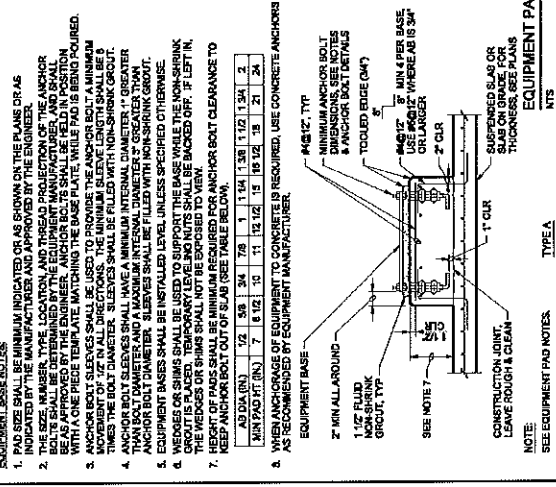
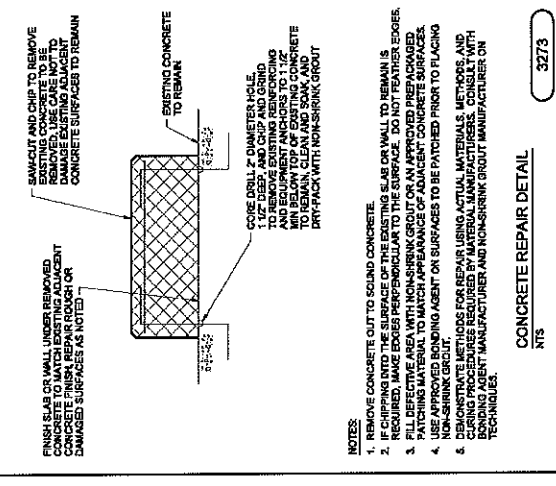
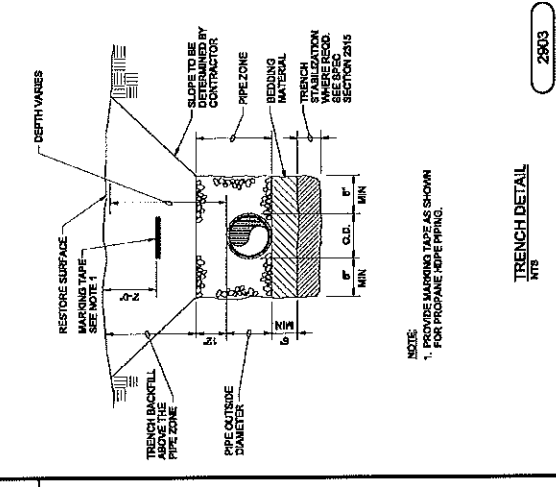
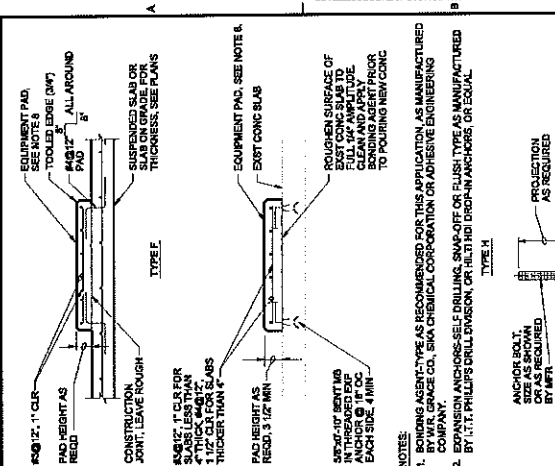
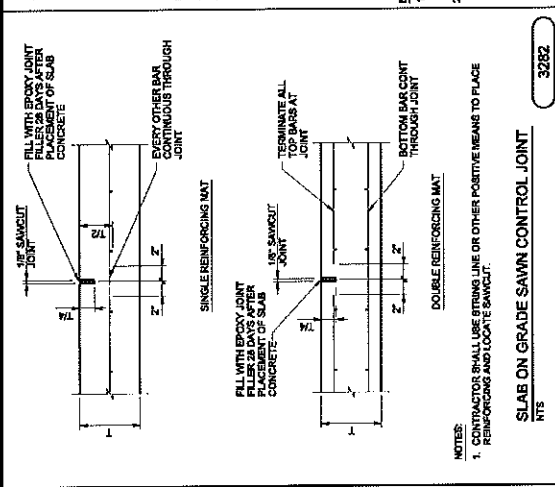
REINFORCING STEEL:

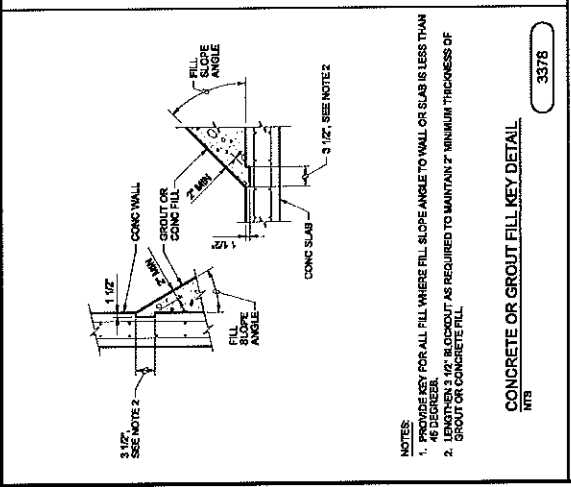
- CLEARANCE FOR REINFORCEMENT BARS, UNLESS SHOWN OTHERWISE, SHALL BE:
 - WHEN PLACED ON GRADE: 1" MIN.
 - ALL OTHER CONCRETE SURFACES: 1 1/2"
 #6 BAR OR LARGER: 2"
- ALL BARS, UNLESS OTHERWISE SHOWN, SHALL BE A 90 DEGREE STANDARD HOOK AS SHOWN IN LATEST EDITION OF ACI 308.
- ALL REINFORCEMENT LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENT:

CONCRETE DESIGN STRENGTH = 4,000 PSI		GRADE & REINFORCING STEEL										
LAP SPICE (IN)	BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13
SPACING-6"	TOP BAR	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"
SPACING-6"	OTHER BAR	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"
SPACING-8"	TOP BAR	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"
SPACING-8"	OTHER BAR	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"
SPACING-9"	TOP BAR	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"
SPACING-9"	OTHER BAR	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"
SPACING-10"	TOP BAR	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"
SPACING-10"	OTHER BAR	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"	14"

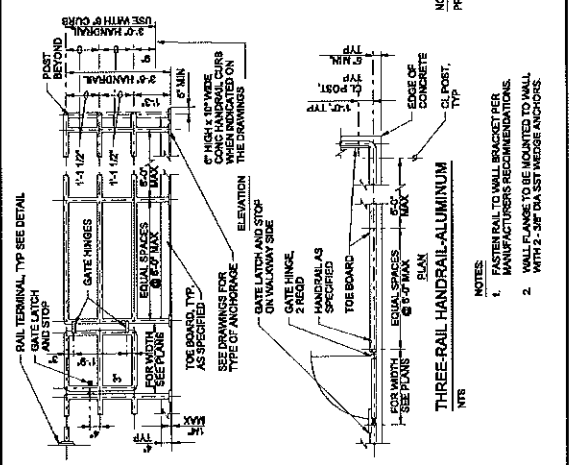
TOP BARS SHALL BE DEFINED AS ANY REINFORCING BARS PLACED SUCH THAT MORE THAN ONE BAR IS REQUIRED TO BE SPACED AT THE BAR SPACING. ALL REINFORCING BARS HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.

GRADE AND DETAIL BE SET GRADE AS MATERIAL AS SPECIFIED UNLESS ALL SLABS AND FOOTINGS TO UNDISTURBED EARTH WITH MINIMUM THICKNESS EQUAL TO 8" UNLESS OTHERWISE NOTED.

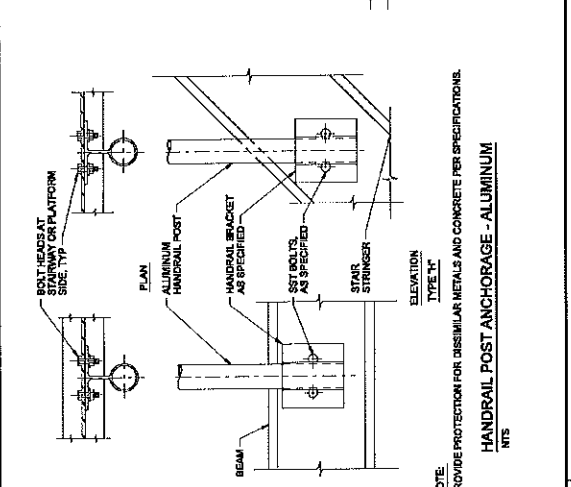




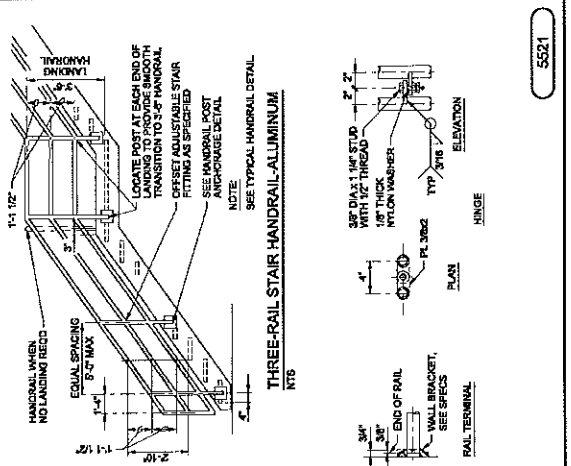
NOTES:
 1. PROVIDE KEY FOR ALL FILL WHERE FILL SLOPE ANGLE TO WALL OR SLAB IS LESS THAN 45 DEGREES.
 2. LENGTHEN 3/16" BLOCKOUT AS REQUIRED TO MAINTAIN 7" MINIMUM THICKNESS OF GROUT OR CONCRETE FILL.



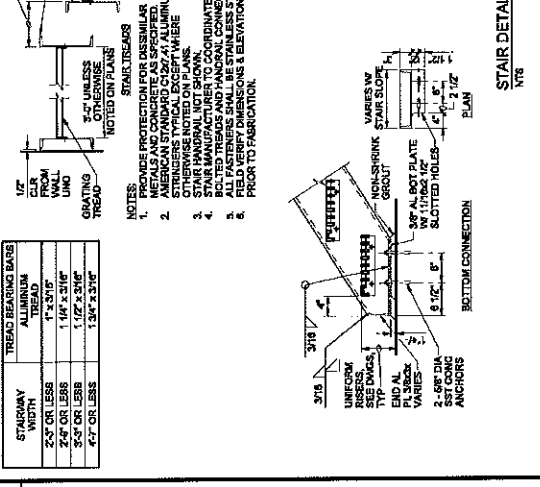
NOTES:
 1. FASTEN RAIL TO WALL BRACKET PER MANUFACTURER'S RECOMMENDATIONS.
 2. WALL FLANGE TO BE MOUNTED TO WALL WITH 2-3/8" DIA SST WEDGE ANCHORS.



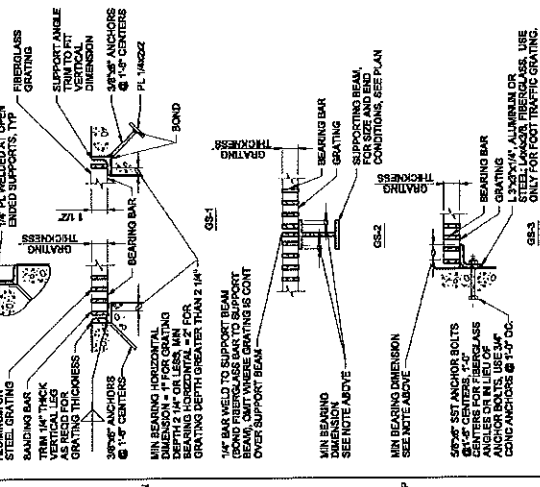
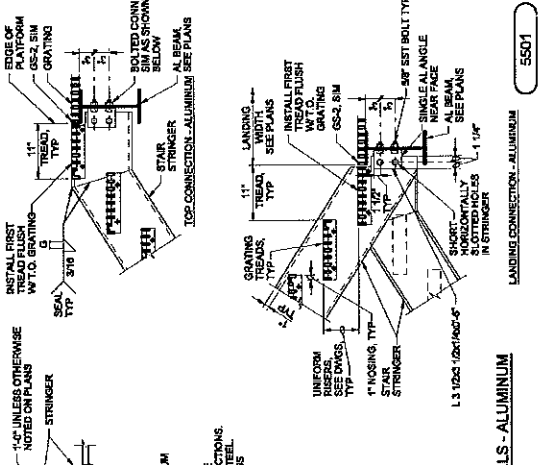
NOTE:
 PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE PER SPECIFICATIONS.



NOTE:
 SEE TYPICAL HANDRAIL DETAIL.
 LOCATE POST AT EACH END OF HANDRAIL.
 OFFSET ADJUSTABLE STAR TRANSITION TO 2-5/8" HANDRAIL FITTING AS SPECIFIED.
 SEE HANDRAIL POST ANCHORAGE DETAIL.



NOTES:
 1. PROVIDE PROTECTION FOR DISSIMILAR METALS PER MANUFACTURER'S RECOMMENDATIONS.
 2. AMERICAN STANDARD GROUT/ALUMINUM STRAINERS TYPICAL EXCEPT WHERE NOTED OTHERWISE.
 3. STAIR MANUFACTURER TO COORDINATE WITH ARCHITECT FOR FINISH ELEVATIONS.
 4. ALL FASTENERS SHALL BE STAINLESS STEEL.
 5. PRIOR TO FABRICATION.



GENERAL NOTES:
 1. GRATING SPAN - SEE PLAN.
 2. WIDTH OF GRATING SECTIONS SHALL NOT EXCEED 5'-0".
 3. MATERIAL FOR GRATING SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION.
 4. MATERIAL FOR SUPPORTS OF STEEL AND ALUMINUM GRATING TO BE SAME AS GRATING, EXCEPT METAL SUPPORTS THAT ARE EMBEDDED IN CONCRETE SHALL BE TYPE 316 STAINLESS STEEL.
 5. UNLESS NOTED OTHERWISE ON PLANS, GRATING THICKNESS SHALL BE AS APPLICABLE TO GRAVITY TRAFFIC.
 6. BEARING BAR THICKNESS FOR GRATING TO BE 3/16" MINIMUM.
 7. BARS ALL EDGES WITH 9/16" DEPTH OF BEARING BAR.
 8. PROVIDE MISCELLANEOUS GRATING FASTENERS AS REQUIRED.
 9. TYPE OF MATERIAL USED SHALL BE AS SHOWN ON PLANS OR INDICATED IN NOTES.
 10. THE HORIZONTAL CLEARANCE BETWEEN THE GRATING AND GRATES SHALL NOT BE MORE THAN 1/4" NOR MORE THAN 1/2" UNLESS AS SPECIFIED.
 11. ALL GRATING SECTIONS, WHEN IN PLACE, SHALL ALWAYS BE FIRMLY ANCHORED TO THEIR SUPPORTS AS SPECIFIED.

MAXIMUM SPAN	GRATING THICKNESS TABLE	
	ALUMINUM	STEEL
3'-0"	1 1/8"	1"
4'-0"	1 1/2"	1 1/2"
5'-0"	1 3/4"	1 1/2"
6'-0"	2"	1 1/2"
7'-0"	2 1/4"	1 1/2"
7'-0"	2 1/2"	1 3/4"

CH2MHILL

STANDARD DETAILS

PACKAGE 2

SHEET 42

DWG D2

DATE MARCH 2002

PROJ 158115

FILENAME: p462021_158115.dwg MODIFY DATE: 28-MAR-2003

MODIFY TIME: 14:54:48

TOWN OF DANIELS, WISCONSIN

PENNA WOOD PRODUCTS SITE ULTRA

BROWNTINGROUNDAWAY

TREATMENT FACILITY IMPROVEMENTS

STAIR DETAILS - ALUMINUM

LANDING CONNECTION - ALUMINUM

FOOT TRAFFIC

HANDRAIL POST ANCHORAGE - ALUMINUM

THREE-RAIL HANDRAIL-ALUMINUM

THREE-RAIL STAR HANDRAIL-ALUMINUM

CONCRETE OR GROUT FILL KEY DETAIL

STANDARD GRATING DETAIL

5501

5521

5596

NO. DATE

REVISION

DESIGNED BY: J. ALLEN

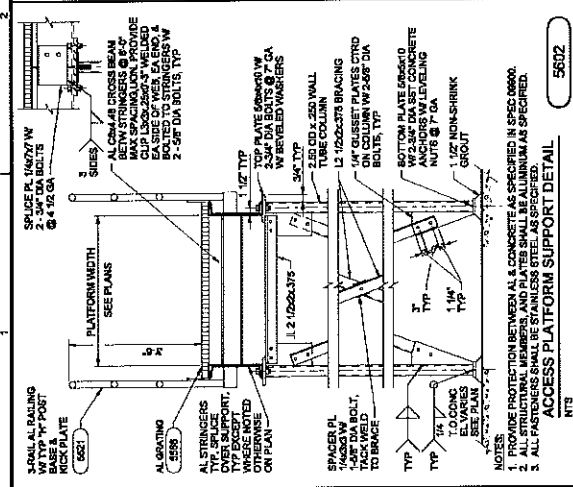
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DRAWN BY: M. GARDNER

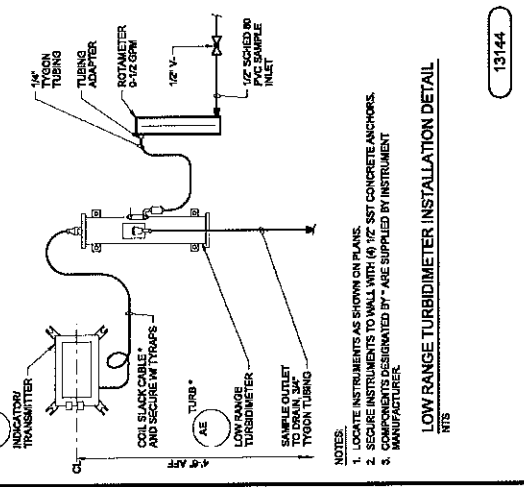
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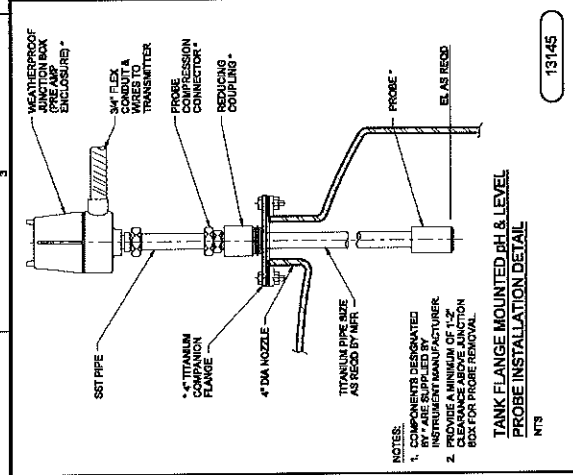
BY: J. ALLEN



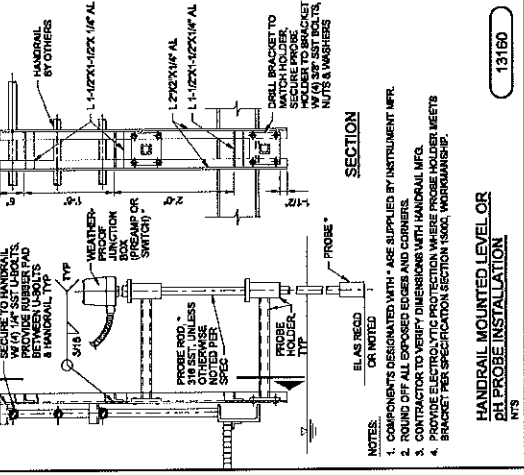
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ACCESS PLATFORM SUPPORT DETAIL
 NTS



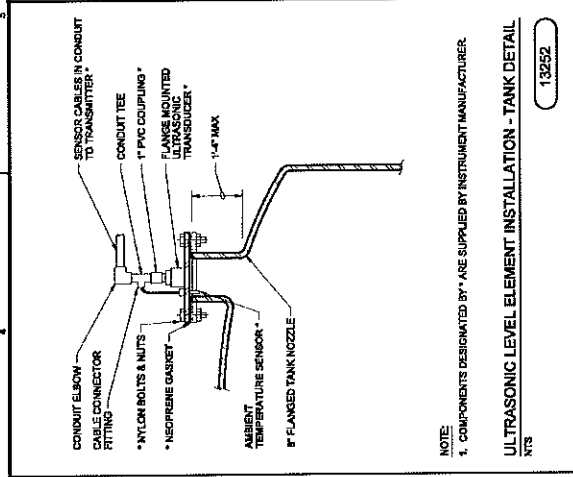
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LOW RANGE TURBIDIMETER INSTALLATION DETAIL
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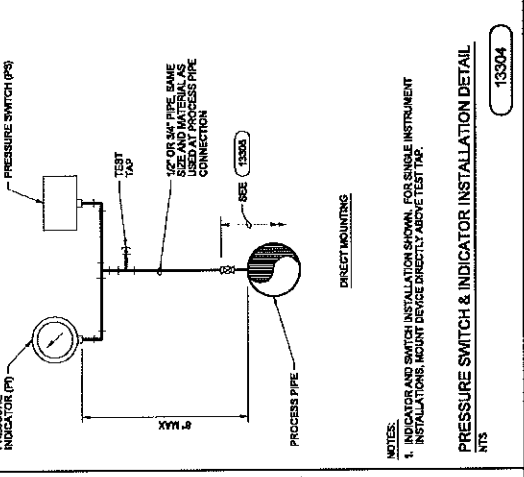
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TANK FLANGE MOUNTED pH & LEVEL PROBE INSTALLATION DETAIL
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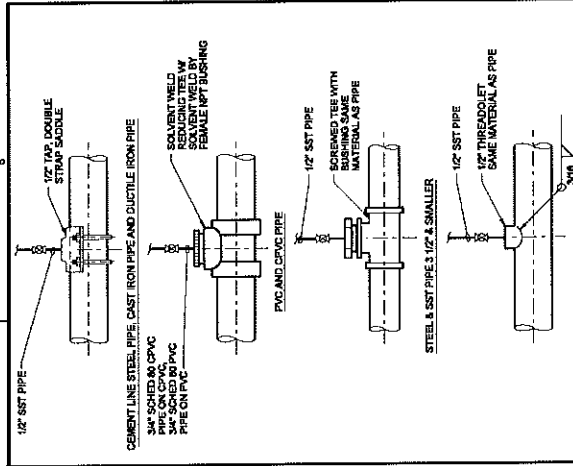
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HANDRAIL MOUNTED LEVEL OR pH PROBE INSTALLATION DETAIL
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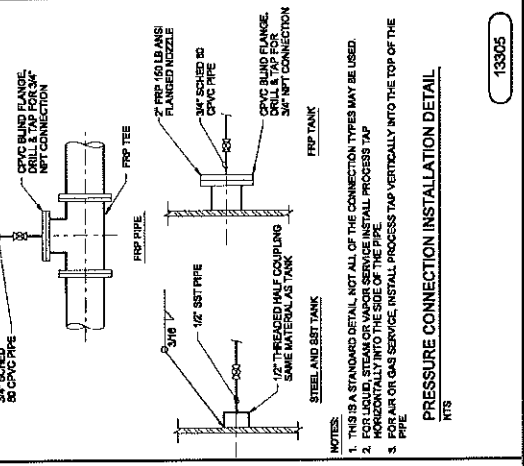
13252
ULTRASONIC LEVEL ELEMENT INSTALLATION - TANK DETAIL
 NTS



13304
PRESSURE SWITCH & INDICATOR INSTALLATION DETAIL
 NTS



13305
PRESSURE CONNECTION INSTALLATION DETAIL
 NTS



13305
PRESSURE CONNECTION INSTALLATION DETAIL
 NTS

DESIGN	BY	DATE	NO.	DATE
OR	BY	DATE	NO.	DATE
APP'D	BY	DATE	NO.	DATE
APP'D	BY	DATE	NO.	DATE

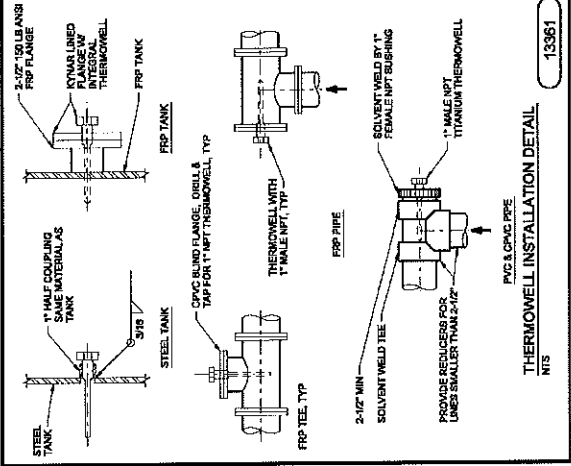
CH2MHILL

BIOWATER/BIOWASTE TREATMENT FACILITY MODIFICATIONS
 PENTAWOOD PRODUCTS SITE ULTRA ENGINEERING SUPPORT
 TOWN OF DANIELS, WISCONSIN

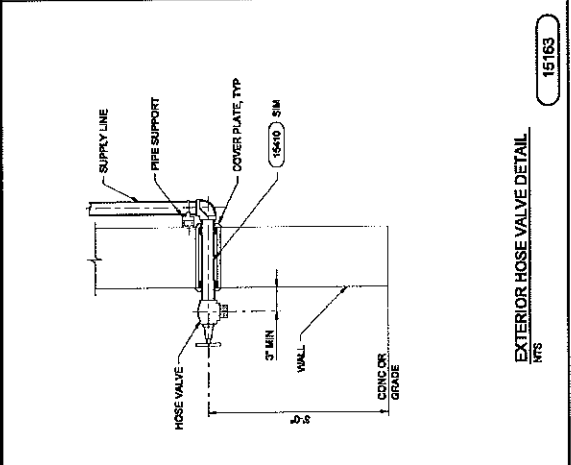
PACKAGE 2
 STANDARD DETAILS

SHEET 43
 DATE: MARCH 2003
 PROJ: 08R15

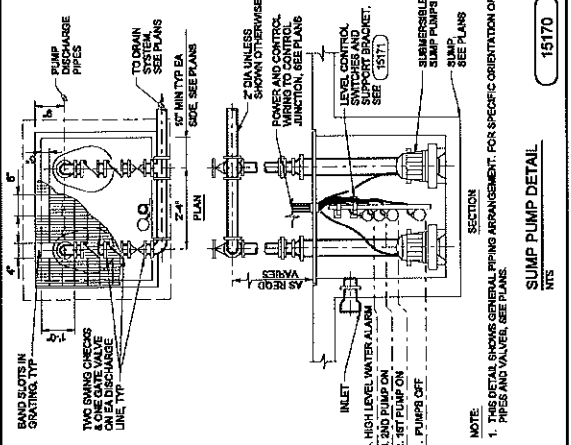
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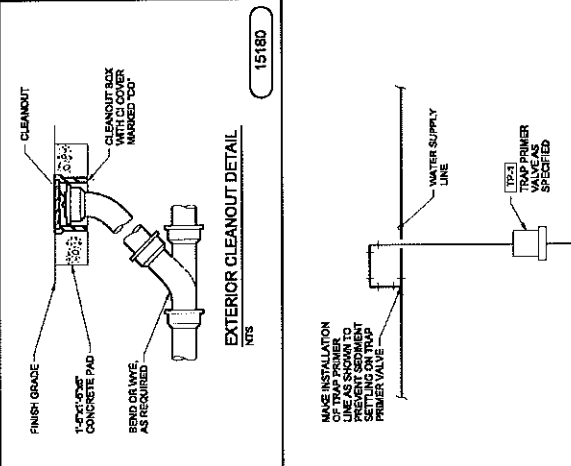
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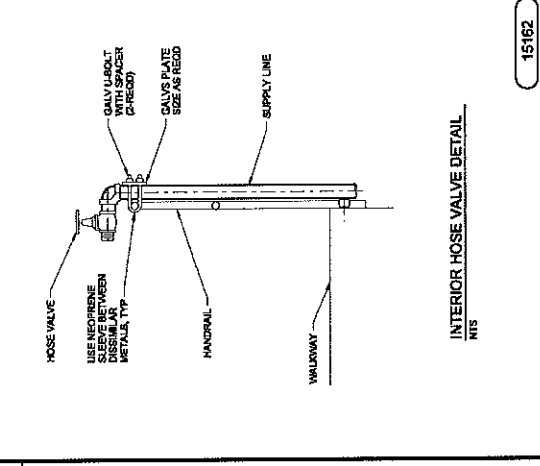
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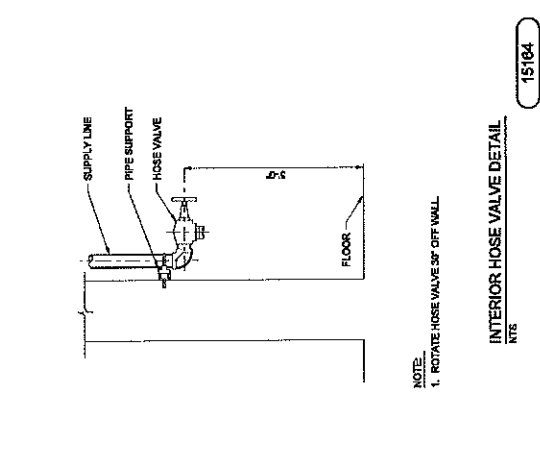
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SUMP PUMP DETAIL
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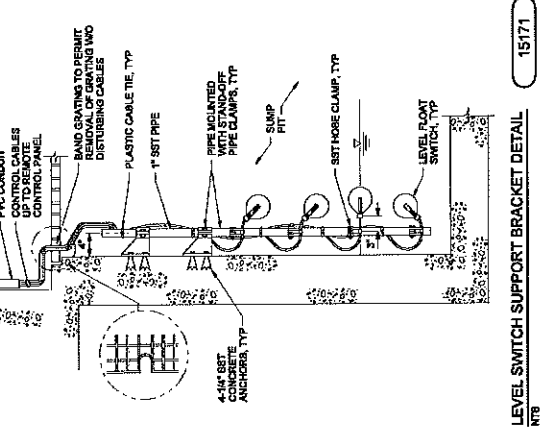
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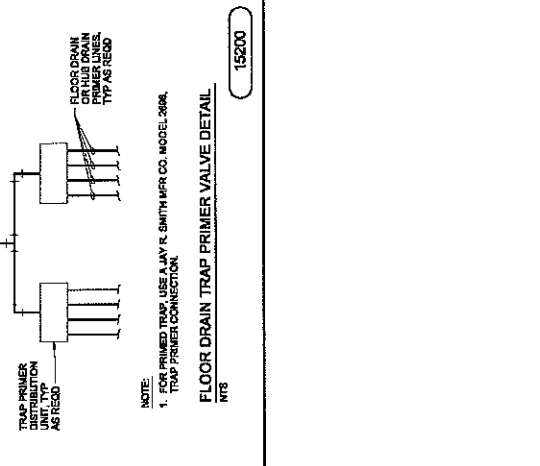
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INTERIOR HOSE VALVE DETAIL
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15164
INTERIOR HOSE VALVE DETAIL
 NTS



15171
LEVEL SWITCH SUPPORT BRACKET DETAIL
 NTS



15200
FLOOR DRAIN TRAP PRIMER VALVE DETAIL
 NTS

DESIGNER	DATE	NO.	REVISION
DR			
CHK			
APP			
SCALE	AS SHOWN		
DATE	MARCH 2003		
PROJ.	15815		
PAGE	2		
SHEET	44		
PACKAGE	STANDARD DETAILS		
PROJECT	BIOWASTING/GROUNDWATER TREATMENT FACILITY IMPROVATIONS		
CLIENT	PENITA WOOD PRODUCTS SITE LITRA TOWN OF DANIELS, WISCONSIN		
FILENAME	pkw2003_15815.dwg	MODIFY DATE	28-MAR-2003
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CH2MHILL

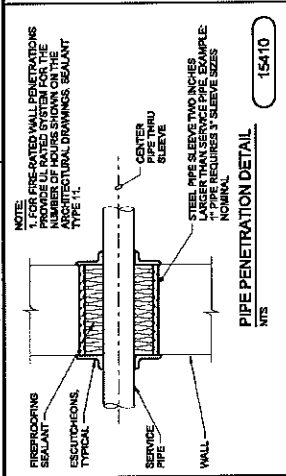
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REVISION

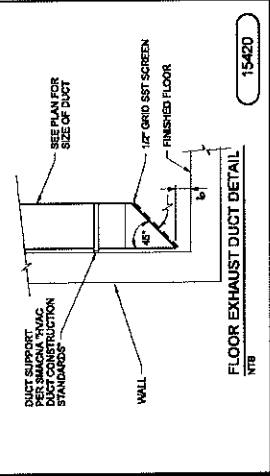
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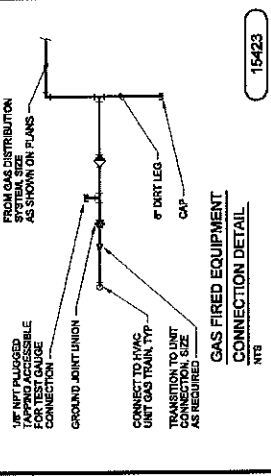
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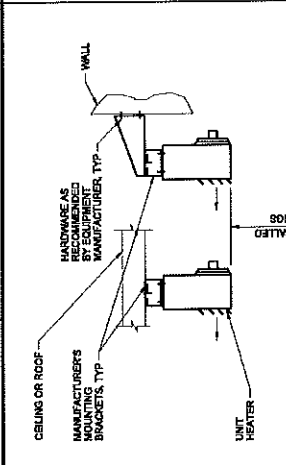
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PIPE PENETRATION DETAIL
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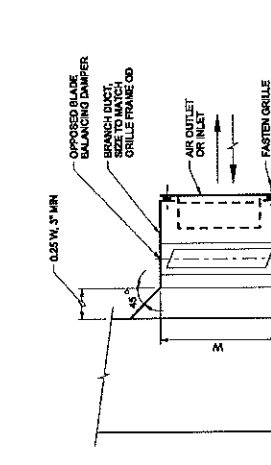
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FLOOR EXHAUST DUCT DETAIL
NTS



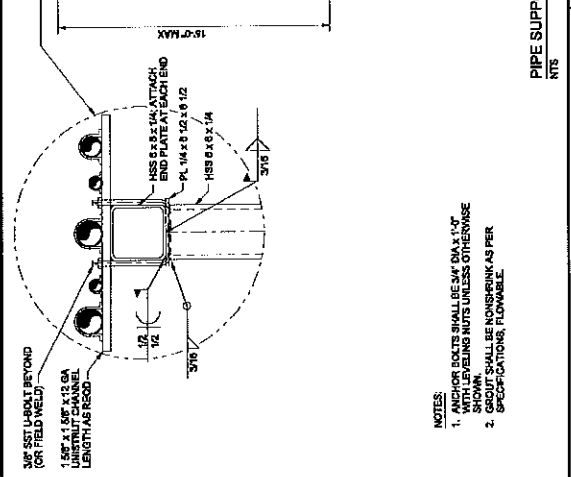
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GAS FIRED EQUIPMENT CONNECTION DETAIL
NTS



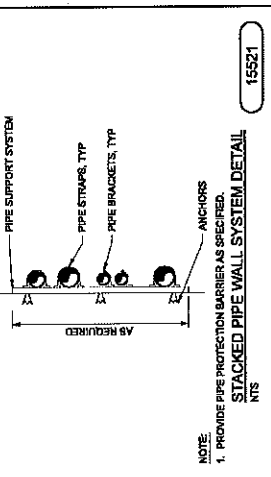
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UNIT HEATER MOUNTING DETAIL
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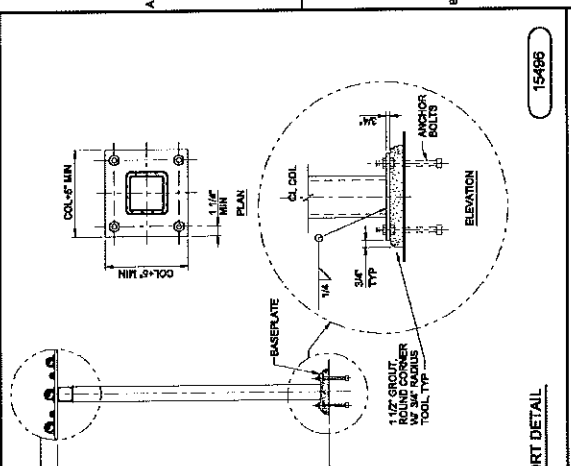
15454
DUCT MOUNTED AIR OUTLET OR INLET DETAIL
NTS



15486
PIPE SUPPORT DETAIL
NTS



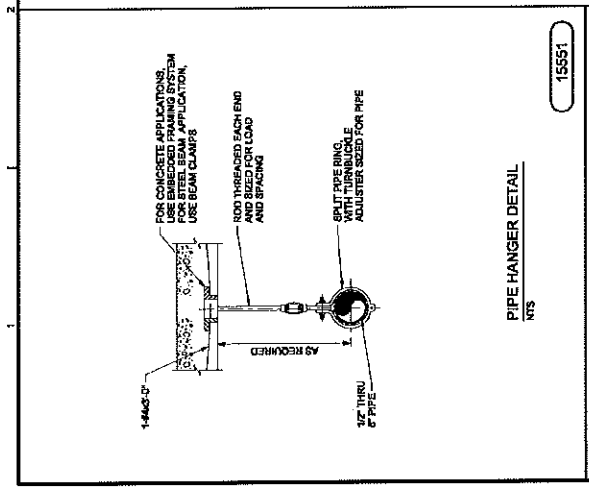
15521
STACKED PIPE WALL SYSTEM DETAIL
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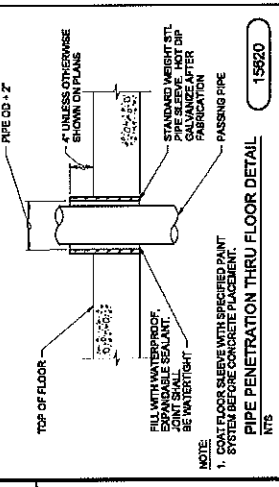
15486
PIPE SUPPORT DETAIL
NTS

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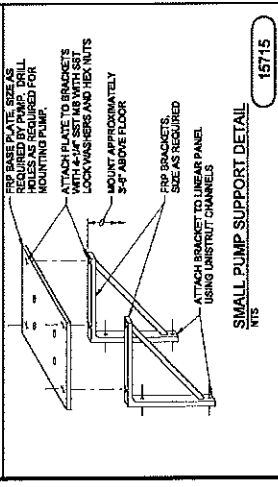
15486 PIPE SUPPORT DETAIL NTS	15521 STACKED PIPE WALL SYSTEM DETAIL NTS	15427 UNIT HEATER MOUNTING DETAIL NTS	15423 GAS FIRED EQUIPMENT CONNECTION DETAIL NTS	15410 PIPE PENETRATION DETAIL NTS	15420 FLOOR EXHAUST DUCT DETAIL NTS	15454 DUCT MOUNTED AIR OUTLET OR INLET DETAIL NTS	15486 PIPE SUPPORT DETAIL NTS	
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BIOVENTING/GROUNDWATER TREATMENT FACILITY MODIFICATIONS PENTA WOOD PRODUCTS SITE LURA ENGINEERING SERVICES CORP. TOWN OF DANVERS, MASSACHUSETTS				STANDARD DETAILS				SHEET 45 DWG D-6 DATE MARCH 2003 PROJ. 16816
CH2MHILL								
VERIFY SCALE 1" = 1'-0" ALL DIMENSIONS IN FEET AND INCHES UNLESS OTHERWISE NOTED THE SET, ADD BY SCALE ACCESSIBLY.								
15486 PIPE SUPPORT DETAIL NTS	15521 STACKED PIPE WALL SYSTEM DETAIL NTS	15427 UNIT HEATER MOUNTING DETAIL NTS	15423 GAS FIRED EQUIPMENT CONNECTION DETAIL NTS	15410 PIPE PENETRATION DETAIL NTS	15420 FLOOR EXHAUST DUCT DETAIL NTS	15454 DUCT MOUNTED AIR OUTLET OR INLET DETAIL NTS	15486 PIPE SUPPORT DETAIL NTS	



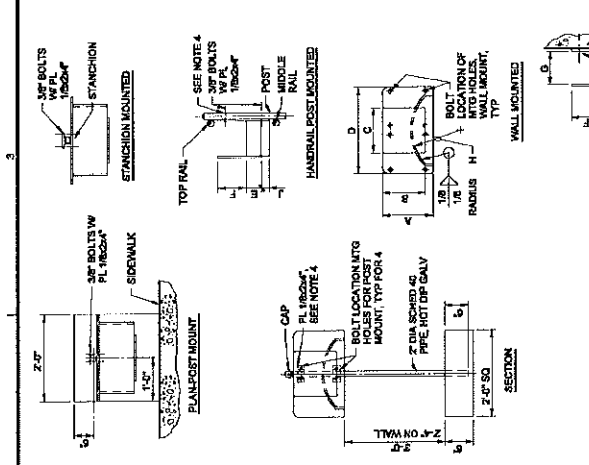
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PIPE HANGER DETAIL
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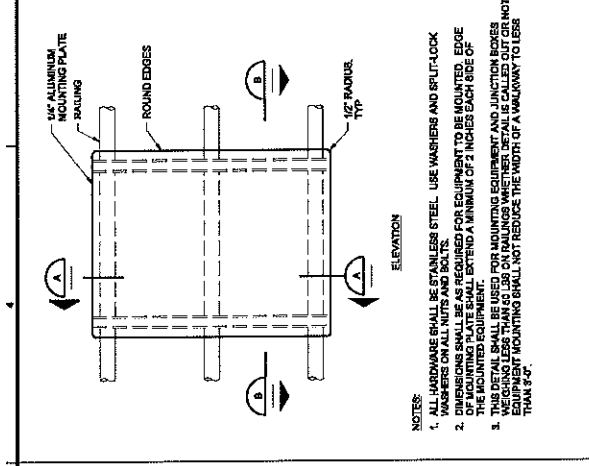
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PIPE PENETRATION THRU FLOOR DETAIL
NFS



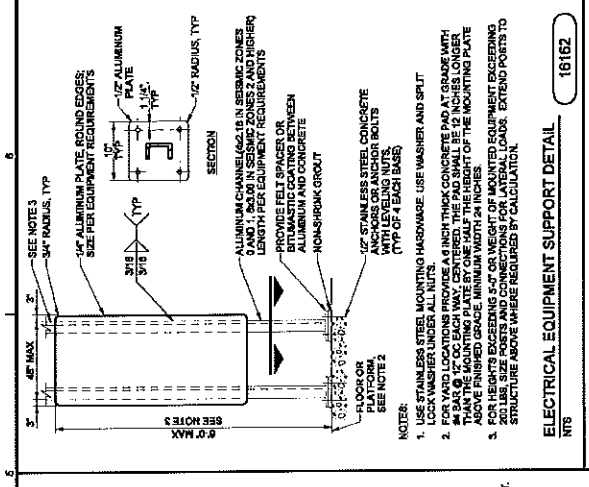
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SMALL PUMP SUPPORT DETAIL
NFS



15720
HOSE RACK DETAILS
NFS

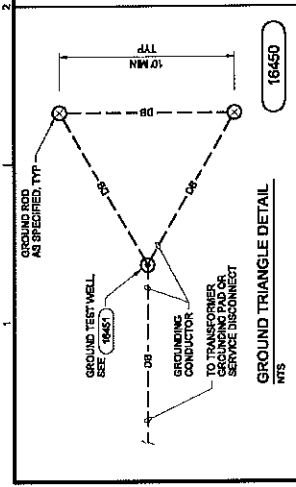


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RAILING MOUNTED EQUIPMENT SUPPORT DETAIL
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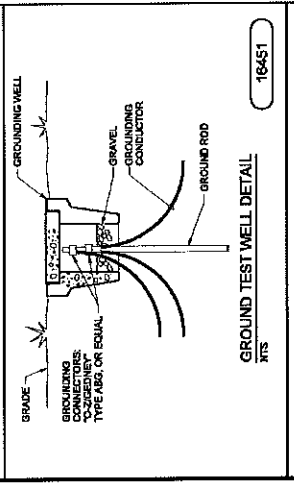


15162
ELECTRICAL EQUIPMENT SUPPORT DETAIL
NFS

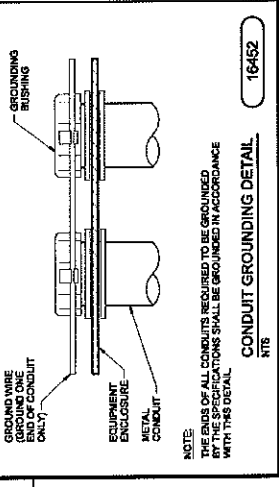
DESIGNER A.S. OLSON CHECKED D. BROWN DATE 12/15/00	REVISION NO. DATE	VERIFY CODE MOUNTING DRAWING PART ONE PART TWO PART THREE PART FOUR PART FIVE PART SIX PART SEVEN PART EIGHT PART NINE PART TEN	PROJECT BROWNSVILLE TREATMENT FACILITY PHASE 1 TOWN OF DANIELS, WISCONSIN	PACKAGE 2 STANDARD DETAILS	SHEET 40 DWG. D-6 DATE MARCH 2003 PROJ. 15815
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16450
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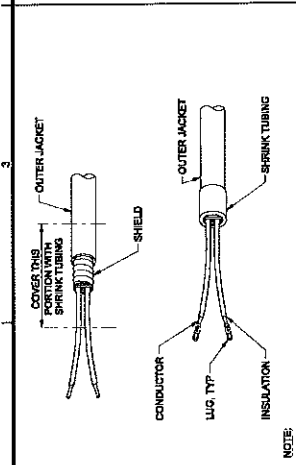


16451
NTS



16452
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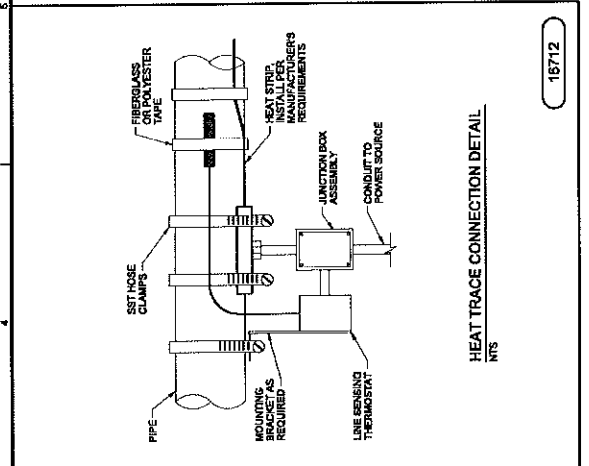
NOTE:
ALL CONDUITS REQUIRED TO BE GROUNDING BUSING SHALL BE GROUNDING BUSING IN ACCORDANCE WITH THIS DETAIL.



16560
NTS

NOTE:
ALL SHIELDED INSTRUMENTATION CABLE SHALL BE TERMINATED IN ACCORDANCE WITH THIS DETAIL WHERE GROUNDING IS NOT REQUIRED.

NOTE:
ALL SHIELDED INSTRUMENTATION CABLE SHALL BE TERMINATED IN ACCORDANCE WITH THIS DETAIL WHERE GROUNDING IS REQUIRED.



16712
NTS

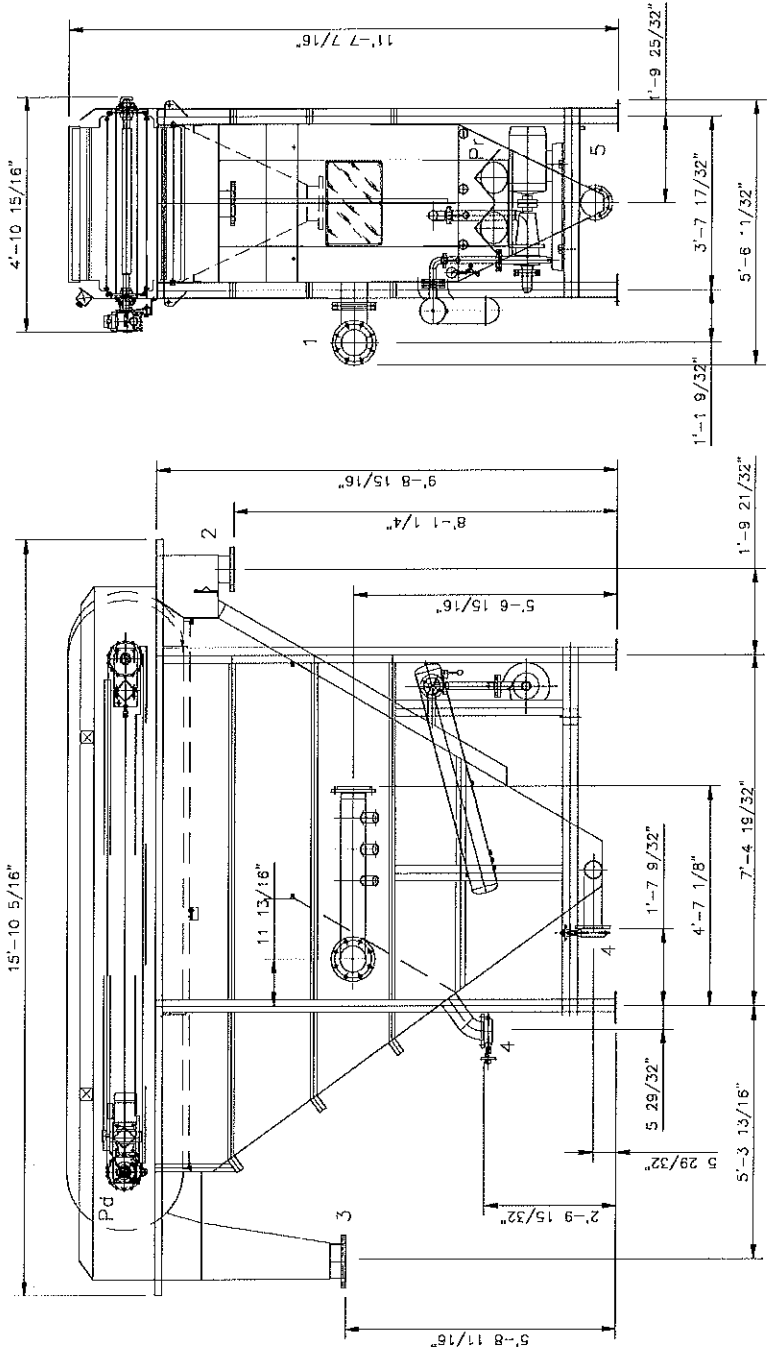
HEAT TRACE CONNECTION DETAIL
NTS

<table border="1"> <tr><td>DESIGNER</td><td>WILLIAMS</td></tr> <tr><td>CHECKED</td><td>DARWIN</td></tr> <tr><td>DATE</td><td>RENDER</td></tr> <tr><td>PROJECT</td><td>RENDER</td></tr> </table>	DESIGNER	WILLIAMS	CHECKED	DARWIN	DATE	RENDER	PROJECT	RENDER	<table border="1"> <tr><td>NO.</td><td>DATE</td></tr> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> <tr><td>5</td><td></td></tr> <tr><td>6</td><td></td></tr> <tr><td>7</td><td></td></tr> <tr><td>8</td><td></td></tr> <tr><td>9</td><td></td></tr> <tr><td>10</td><td></td></tr> </table>	NO.	DATE	1		2		3		4		5		6		7		8		9		10		<table border="1"> <tr><td>REVISION</td><td>BY</td><td>DATE</td></tr> <tr><td>1</td><td>AKC</td><td></td></tr> <tr><td>2</td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td></tr> </table>	REVISION	BY	DATE	1	AKC		2			3			4			5			6			7			8			9			10			<table border="1"> <tr><td>VERIFY SCALE</td><td>DATE</td></tr> <tr><td>1:1</td><td>10/1/03</td></tr> <tr><td>1:1</td><td>10/1/03</td></tr> <tr><td>1:1</td><td>10/1/03</td></tr> <tr><td>1:1</td><td>10/1/03</td></tr> <tr><td>1:1</td><td>10/1/03</td></tr> <tr><td>1:1</td><td>10/1/03</td></tr> <tr><td>1:1</td><td>10/1/03</td></tr> <tr><td>1:1</td><td>10/1/03</td></tr> <tr><td>1:1</td><td>10/1/03</td></tr> <tr><td>1:1</td><td>10/1/03</td></tr> </table>	VERIFY SCALE	DATE	1:1	10/1/03	1:1	10/1/03	1:1	10/1/03	1:1	10/1/03	1:1	10/1/03	1:1	10/1/03	1:1	10/1/03	1:1	10/1/03	1:1	10/1/03	1:1	10/1/03	<table border="1"> <tr><td>PACKAGE 2</td></tr> <tr><td>STANDARD DETAILS</td></tr> <tr><td>BRASSING/GROUNDWATER TREATMENT FACILITY MODIFICATIONS</td></tr> <tr><td>PERMITS/WORK PRODUCTS SITE LTRA</td></tr> <tr><td>ENGINEERING SUPPORT</td></tr> <tr><td>TOWN OF DANIELS, WISCONSIN</td></tr> </table>	PACKAGE 2	STANDARD DETAILS	BRASSING/GROUNDWATER TREATMENT FACILITY MODIFICATIONS	PERMITS/WORK PRODUCTS SITE LTRA	ENGINEERING SUPPORT	TOWN OF DANIELS, WISCONSIN	<table border="1"> <tr><td>SHEET 47</td></tr> <tr><td>NO. D-7</td></tr> <tr><td>DATE MARCH 2003</td></tr> <tr><td>PROJ. 168715</td></tr> <tr><td>MODIFY TIME 14.36.23</td></tr> </table>	SHEET 47	NO. D-7	DATE MARCH 2003	PROJ. 168715	MODIFY TIME 14.36.23
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PACKAGE 2
STANDARD DETAILS
BRASSING/GROUNDWATER TREATMENT FACILITY MODIFICATIONS
PERMITS/WORK PRODUCTS SITE LTRA
ENGINEERING SUPPORT
TOWN OF DANIELS, WISCONSIN



SHEET 47
NO. D-7
DATE MARCH 2003
PROJ. 168715
MODIFY TIME 14.36.23

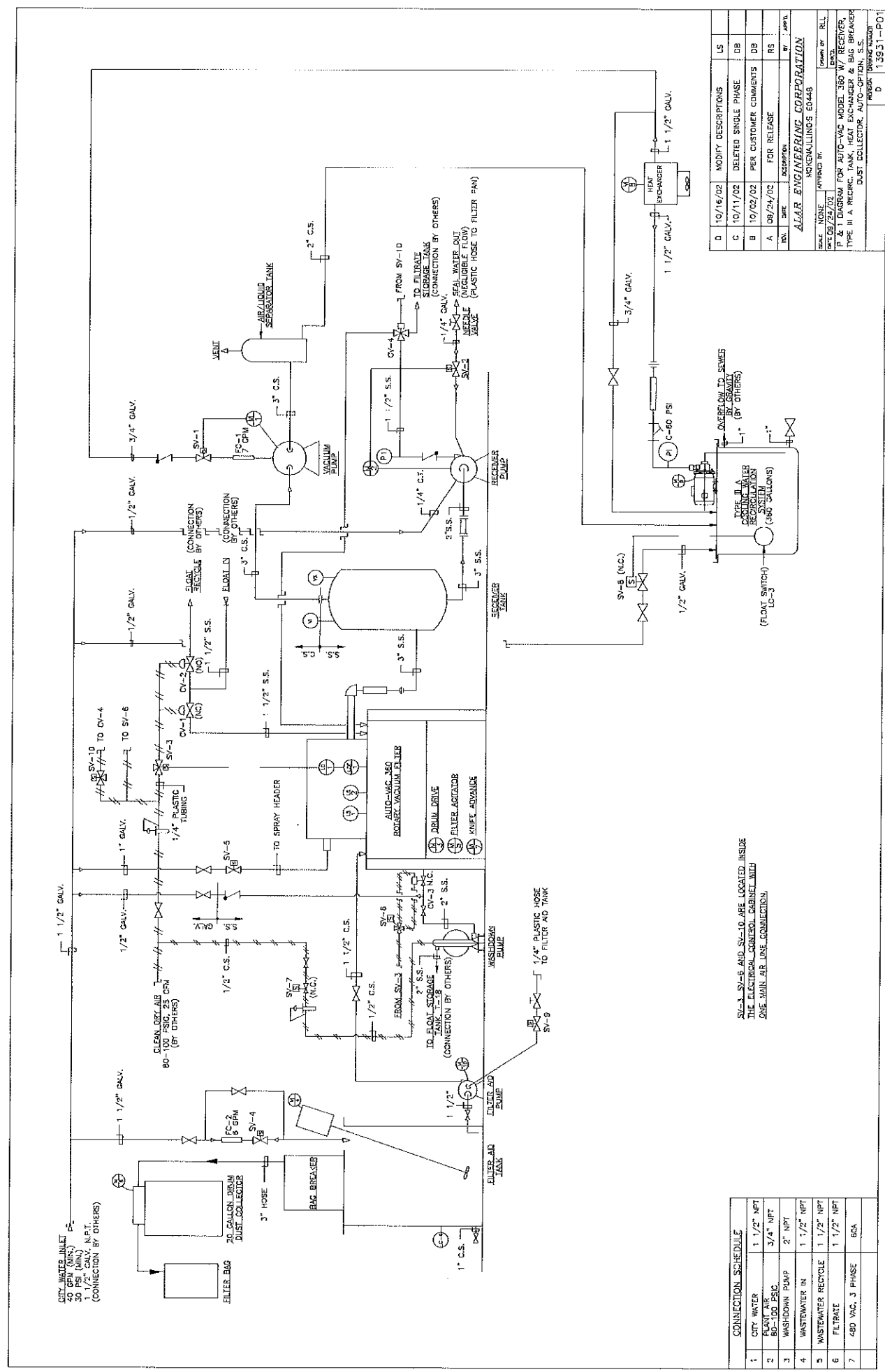


- 1 INFLUENT
- 2 EFFLUENT
- 3 FLOTATION SLUDGE
- 4 SEDIMENT
- 5 AIR

TYPE	1	2	3	Option	4	5	Pr
IPFO45E	6"	6"	6"	3"	4"	1/4" G	2300 lb 0.37 kW 5.5 KW

CHANGES RESERVED

		NIJHUIS WATER TECHNOLOGY	
Nijhuis Water Technology b.v. Arhaiseweg 32 P.O. Box 89 7090 AB DIXPERLO Phone (31)315 655466 Fax (31)315 655494 E-mail: info@nijhuis-water.nl >> COPYRIGHT RESERVED <<			
TITLE : DIMENSIONED SKETCH IPFO45E		PROJECT :	
PROJECT N° :		Scale : 1:25 Do not scale Unit : inch	
Size : A3 Document number : 800112		Sheet : 1 Number of sheets : 2	
Projection : 		Checked : Mech: Eng.	
Drawn :		Date :	
Description :		Approved : Eng.	
REVISION			



CONNECTION SCHEDULE	
1	CITY WATER INLET 40 GPM (MIN.) 50 GPM (MAX.) 1 1/2" NPT (CONNECTION BY OTHERS)
2	PLANT AIR 80-100 PSIG 3/4" NPT
3	WASHDOWN PUMP 2" NPT
4	WASTEWATER IN 1 1/2" NPT
5	WASTEWATER RECYCLE 1 1/2" NPT
6	ELTRAC 1 1/2" NPT
7	480 VAC, 3 PHASE 6EA

SV-8, SV-9 AND SV-10 ARE LOCATED INSIDE THE ELECTRICAL CONTROL CABINET WITH ONE MAIN AIR LINE CONNECTION.

NO.	DATE	DESCRIPTION	BY	APP'D.
D	10/16/02	MODIFY DESCRIPTIONS	LS	
C	10/11/02	DELETED SINGLE PHASE	DB	
B	10/02/02	PER CUSTOMER COMMENTS	DB	
A	09/24/02	FOR RELEASE	RS	

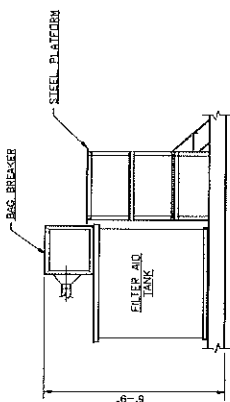
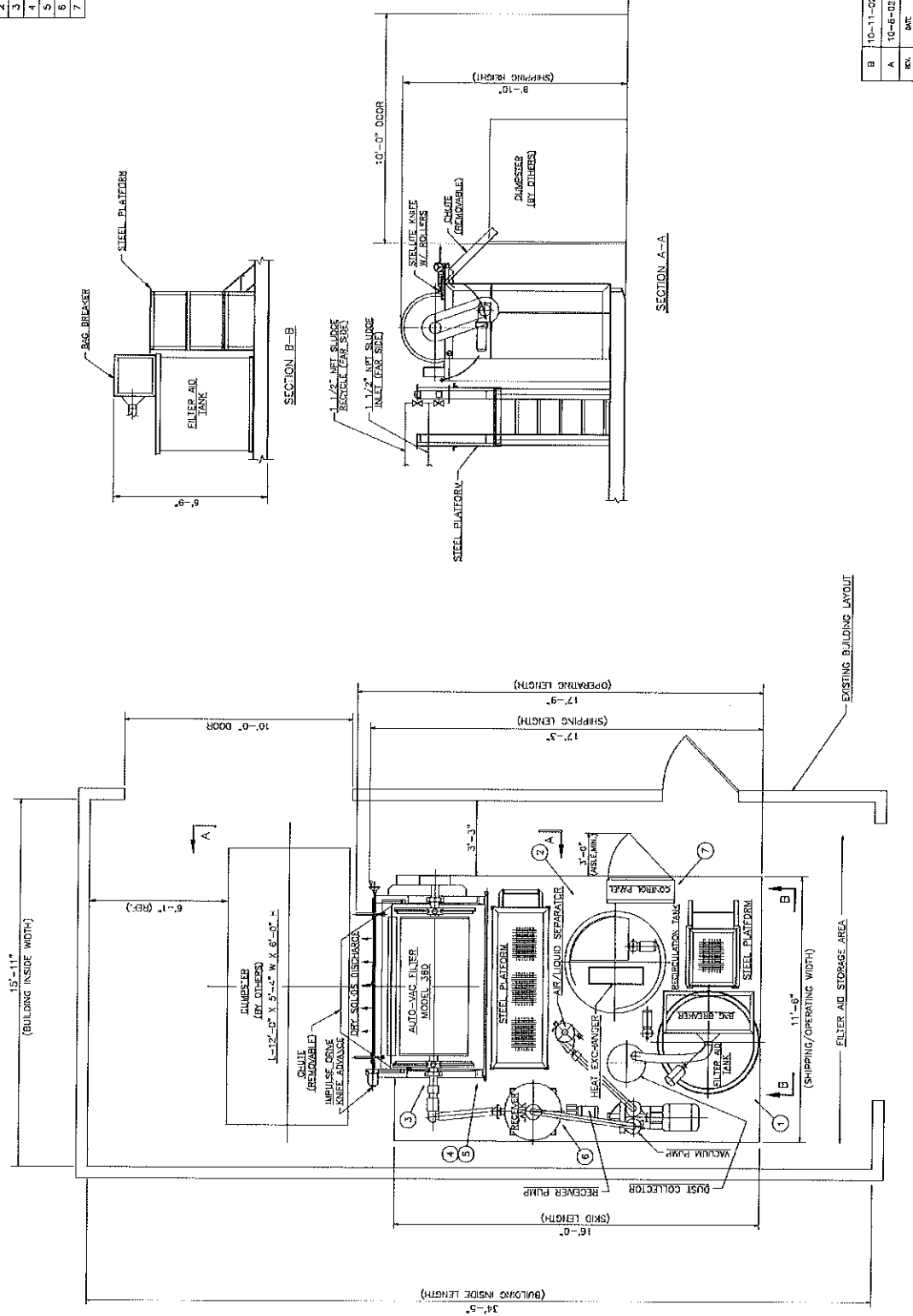
ALVAR ENGINEERING CORPORATION
MCKENNA LINDS 60448

SCALE	APPROVED BY	DRAWN BY
NONE		RL
DATE 02/25/02		DB

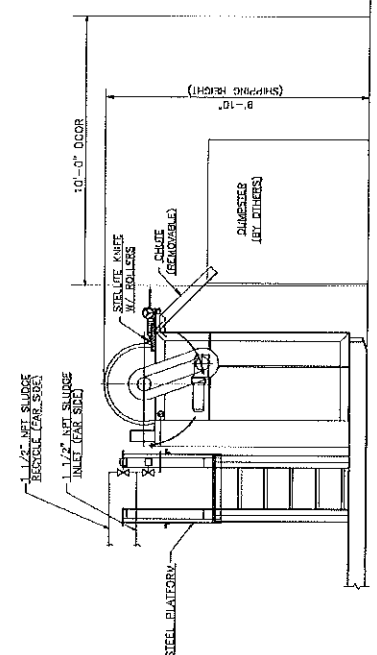
TYPE III A RECIRC. TANK, HEAT EXCHANGER & BAG BREAKER
DUST COLLECTOR, AUTO-VAC 350 ROTARY VACUUM FILTER, FILTER AGITATOR, FILTER ADVANCE

D 13931-PO1

CONNECTION SCHEDULE	
1	CITY WATER 1 1/2" NPT
2	PLANT AIR 80-100 PSIG 3/4" NPT
3	WASHDOWN PUMP 2" NPT
4	WASTEWATER IN 1 1/2" NPT
5	WASTEWATER RECYCLE 1 1/2" NPT
6	FILTRATE 1 1/2" NPT
7	480 VAC, 3Ø 6D AMP.



SECTION B-B



SECTION A-A

REV.	DATE	DESCRIPTION	BY	APP'D.
B	10-1-02	ADDED CONNECTION SCHEDULE	ACS	ACS
A	10-6-02	FOR INFORMATION	ACS	IT

DRAWN BY: ACS
 CHECKED BY: [blank]
 SCALE: 1/2" = 1'-0" (Approved by: [blank])
 PROJECT: [blank]
 CLIENT: [blank]
 ADDRESS: [blank]
 CITY: [blank] STATE: [blank] ZIP: [blank]
 PHONE: [blank] FAX: [blank]
 E-MAIL: [blank]

ALAIR ENGINEERING CORPORATION
 1400 N. WISCONSIN ST.
 DEERFIELD, ILLINOIS 60015

PROJECT: [blank]
 SHEET: [blank] OF [blank]
 DATE: [blank]