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Detail  
Design Report

# Solid Waste Operations Complex W-113

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OCT 11 1995  
OSTI

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# Solid Waste Retrieval Facilities – Phase I Detail Design Drawings

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Prepared for



Westinghouse  
Hanford Company

Prepared by

MASTER

**Raytheon**  
Engineers & Constructors



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MASTER

September 1995

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UN



# SWOC W113 - DRAWING LIST

## STRUCTURAL

DRAWING NO.	TITLE	CONTRACT/REFERENCE
H-2-823273 SHT 1	STRUCTURAL ENCLOSURE FOUNDATION PLAN & SECTION	C
H-2-823274 SHT 1	STRUCTURAL MISCELLANEOUS DETAILS	C
H-2-823275 SHT 1	STRUCTURAL TRENCH ACCESS STAIRS PLANS & SECTIONS	C
H-2-823276 SHT 1	STRUCTURAL MISCELLANEOUS PLATFORMS SECTIONS & DETAILS	C
H-2-823277 SHT 1	STRUCTURAL OVERPACK DELIDDING/REIDDING PLATFORM	C

## PROCESS

DRAWING NO.	TITLE	CONTRACT/REFERENCE
H-2-823288 SHT 1	BLOCK FLOW DIAGRAM	R
H-2-823289 SHT 1	PROCESS FLOW DIAGRAM (START-UP OPERATIONS)	R
H-2-823289 SHT 2	PROCESS FLOW DIAGRAM (START-UP OPERATIONS)	R
H-2-823290 SHT 1	PROCESS FLOW DIAGRAM (POST START-UP OPERATIONS)	R
H-2-823290 SHT 2	PROCESS FLOW DIAGRAM (POST START-UP OPERATIONS)	R
H-2-823293 SHT 1	OPERATIONAL SCHEMATIC DRUM REMOVAL SEQUENCE	R
H-2-823293 SHT 2	OPERATIONAL SCHEMATIC DRUM REMOVAL SEQUENCE	R
H-2-823294 SHT 1	OPERATIONAL SCHEMATIC SOIL REMOVAL BY GENERAL CONTRACTOR	C
H-2-823294 SHT 2	OPERATIONAL SCHEMATIC SOIL REMOVAL BY GENERAL CONTRACTOR	C
H-2-823295 SHT 1	OPERATIONAL SCHEMATIC DRUM RETRIEVAL OPS ELEVATIONS	R
H-2-823296 SHT 1	OPERATIONAL SCHEMATIC BOX RETRIEVAL OPS	R
H-2-823296 SHT 2	OPERATIONAL SCHEMATIC BOX RETRIEVAL OPS	R
H-2-823296 SHT 3	OPERATIONAL SCHEMATIC BOX RETRIEVAL OPS (BOXES ON PALLETS)	R
H-2-823296 SHT 4	OPERATIONAL SCHEMATIC BOX RETRIEVAL OPS (BOXES NOT ON PALLETS)	R

## PROCESS

DRAWING NO.	TITLE	CONTRACT/REFERENCE
H-2-823303 SHT 1	EQUIPMENT LAYOUT INTERFACE WITH HGS/NDE/MDA START-UP OPERATIONS	R
H-2-823304 SHT 1	INTERFACE WITH HGS/NDE/MDA POST START-UP OPERATIONS	R
H-2-823304 SHT 2	INTERFACE WITH NDE/MDA AND RC RELEASE STATION POST START-UP OPERATIONS	R
H-2-823305 SHT 1	OPERATIONAL SCHEMATIC DURING START-UP OF DRUM RETRIEVAL	R
H-2-823305 SHT 2	OPERATION SCHEMATIC DURING START-UP OF DRUM RETRIEVAL	R
H-2-823305 SHT 3	OPERATIONAL SCHEMATIC DURING START-UP OF DRUM RETRIEVAL	R
H-2-823306 SHT 1	TRENCH ENCLOSURE EQUIPMENT LAYOUT PLAN POST START-UP	R
H-2-823306 SHT 2	TRENCH ENCLOSURE EQUIPMENT LAYOUT SECTION POST START-UP	R
H-2-823307 SHT 1	EQUIPMENT LAYOUT TRENCH VACUUMING SYSTEM	C
H-2-823307 SHT 2	EQUIPMENT LAYOUT TRENCH VACUUMING OPERATION	C
H-2-823310 SHT 1	SUSPECT DRUM RETRIEVAL SCHEMATIC	R

## HVAC

DRAWING NO.	TITLE	CONTRACT/REFERENCE
H-2-823341 SHT 1	TRENCH ENCLOSURE BUILDING HVAC AIR FLOW DIAGRAM	R
H-2-823342 SHT 1	TRENCH ENCLOSURE BUILDING HVAC - GENERAL ARRANGEMENT & EQUIPMENT SCHEDULES	C
H-2-823343 SHT 1	TRENCH ENCLOSURE BUILDING HVAC SECTIONS & DETAILS	C
H-2-823344 SHT 1	GENERAL OFFICE BUILDING/RETRIEVAL STAFF CHANGE BUILDING HVAC AIR FLOW DIAGRAM	C

## FIRE PROTECTION

DRAWING NO.	TITLE	CONTRACT/REFERENCE
H-2-823362 SHT 1	FIRE PROTECTION/UTILITY WATER TRENCH ENCLOSURE MECHANICAL FLOW DIAGRAM	C
H-2-823363 SHT 1	FIRE PROTECTION SPRINKLER COVERAGE TRENCH ENCLOSURE	C

## ELECTRICAL

DRAWING NO.	TITLE	CONTRACT/REFERENCE
H-2-823364 SHT 1	ELECTRICAL GENERAL NOTES & LEGEND	C
H-2-823365 SHT 1	TELECOMMUNICATIONS BLOCK FLOW DIAGRAM	C
H-2-823366 SHT 1	MASTER SINGLE LINE DIAGRAM	C
H-2-823367 SHT 1	ELECTRICAL EQUIPMENT LOCATION/UNDERGROUND RACEWAY OVERALL PLAN	C
H-2-823367 SHT 1A	ELECTRICAL EQUIPMENT LOCATION/UNDERGROUND RACEWAY OVERALL PLAN	C
H-2-823367 SHT 2	ELECTRICAL & TELECOMMUNICATIONS UNDERGROUND CONDUIT PLANS & DETAILS	C
H-2-823367 SHT 3	ELECTRICAL & TELECOMMUNICATIONS UNDERGROUND CONDUIT DETAILS	C
H-2-823367 SHT 4	ELECTRICAL & TELECOMMUNICATIONS DETAILS	C
H-2-823367 SHT 5	ELECTRICAL & TELECOMMUNICATIONS UNDERGROUND CONDUIT DETAILS	C
H-2-823369 SHT 1	ELECTRICAL OVERHEAD LINE DETAILS	C
H-2-823371 SHT 1	ELECTRICAL GROUNDING & LIGHTNING PROTECTION PLANS & DETAILS	C
H-2-823371 SHT 2	ELECTRICAL GROUNDING & LIGHTNING PROTECTION DETAILS	C
H-2-823372 SHT 1	ELECTRICAL TRENCH ENCLOSURE LIGHTING PLAN	C
H-2-823373 SHT 1	ELECTRICAL TRENCH ENCLOSURE COMMUNICATION PLAN AND DETAILS	C
H-2-823374 SHT 1	ELECTRICAL TRENCH ENCLOSURE POWER PLAN AND DETAILS	C
H-2-823375 SHT 1	ELECTRICAL DISTRIBUTION PANEL BOARD SCHEDULE AND MISC SCHEMATICS	C
H-2-823376 SHT 1	ELECTRICAL & TELECOMM LAYOUT GENERAL OFFICE BUILDING/RETRIEVAL STAFF CHANGE BUILDING	C

## INSTRUMENTATION & CONTROLS

DRAWING NO.	TITLE	CONTRACT/REFERENCE
H-2-823406 SHT 1	INSTRUMENTATION GENERAL NOTES LEGEND & SYMBOLS	C
H-2-823407 SHT 1	INSTRUMENT LOCATION PLAN TRENCH ENCLOSURE (STARTUP)	C
H-2-823407 SHT 2	INSTRUMENT LOCATION PLAN TRENCH ENCLOSURE (POST STARTUP)	R
H-2-823408 SHT 1	INSTRUMENTATION DMS BLOCK DIAGRAM (STARTUP)	C
H-2-823408 SHT 2	INSTRUMENTATION DMS BLOCK DIAGRAM (POST STARTUP)	R
H-2-823409 SHT 1	INSTRUMENTATION BAR CODE READER BLOCK DIAGRAM	C
H-2-823410 SHT 1	INSTRUMENTATION ISOKINETIC SAMPLING SYSTEM (ISS) PROCESS & INSTRUMENT DIAGRAM	C
H-2-823411 SHT 1	INSTRUMENTATION RADIOLOGICAL INSTRUMENTATION BLOCK DIAGRAM	C
H-2-823412 SHT 1	INSTRUMENTATION DATA ACQUISITION SYSTEM BLOCK DIAGRAM	C
H-2-823413 SHT 1	INSTRUMENT LOCATION PLAN GENERAL OFFICE BUILDING/RETRIEVAL STAFF CHANGE BUILDING	C

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 1610  
 01/14/2008

MEC-80-W113-FIR-001  
REV 0 PAGE 142

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Engineers & Constructors

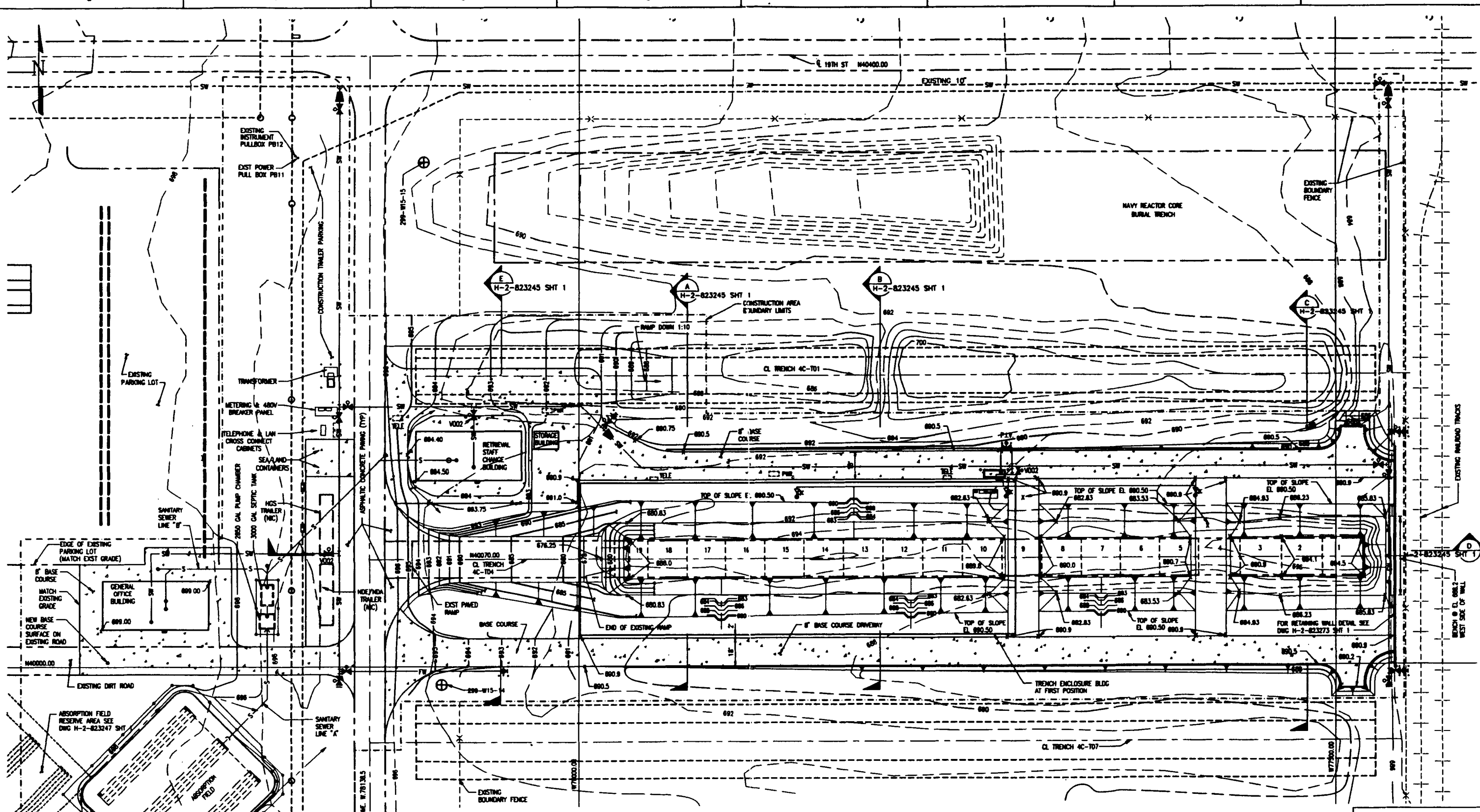
U.S. DEPARTMENT OF ENERGY  
HIGHLAND OPERATIONS OFFICE  
WESTHOUSE HAMFORD COMPANY

SWOC W113  
DRAWING INDEX

REVISION	BY	DATE	DESCRIPTION	REV BY/DATE	DATE	APPROVAL/DATE	OTHER	APPROVED FOR IMPLEMENTATION	DATE	SCALE	BLDG NO.	INSTR NO.	DRAWING NUMBER	REV
DESIGNED	E. WILSON	08-08-05												
DRAWN	E. WILSON	08-08-05												
CHECKED	CHALLENGER	08-28-05												
LEAD USER	B. BRULIN	09-26-05												
ENCL. USER	B. BRULIN	9-21-05												
PRIN. USER	K. HERRON	9-26-05												
	G.A.	G. FINEST	9/26/05											
D											218 W478	0000	H-2-823242	0

DRAWING TRACEABILITY LIST	REFERENCE DRAWINGS	REVISIONS	CADFILE: 80232428	CADCODE: DOS: 8.2; ACD: 2.12; NN





GRADING PLAN

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 2 21A, 22A

SWC-W113-F10-001  
 REV 0 PAGE 143  
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 RICHLAND OPERATIONS OFFICE  
 WESTINGHOUSE HANFORD COMPANY

**SWOC W113**  
**CIVIL**  
**GRADING PLAN**

REVISION	BY	DATE
REVISION 1	A. FORT	10-08-84
REVISION 2	S. TRUST	09-10-85
CHECKED	T. TRIBELL	09-10-85
LEAD DESIGNED	T. TRIBELL	9/23/85
DESIGNED	R. GIBB	9/24/85
PROJECT MANAGER	R. GIBB	9/26/85
BY	G. TRUST	9/26/85

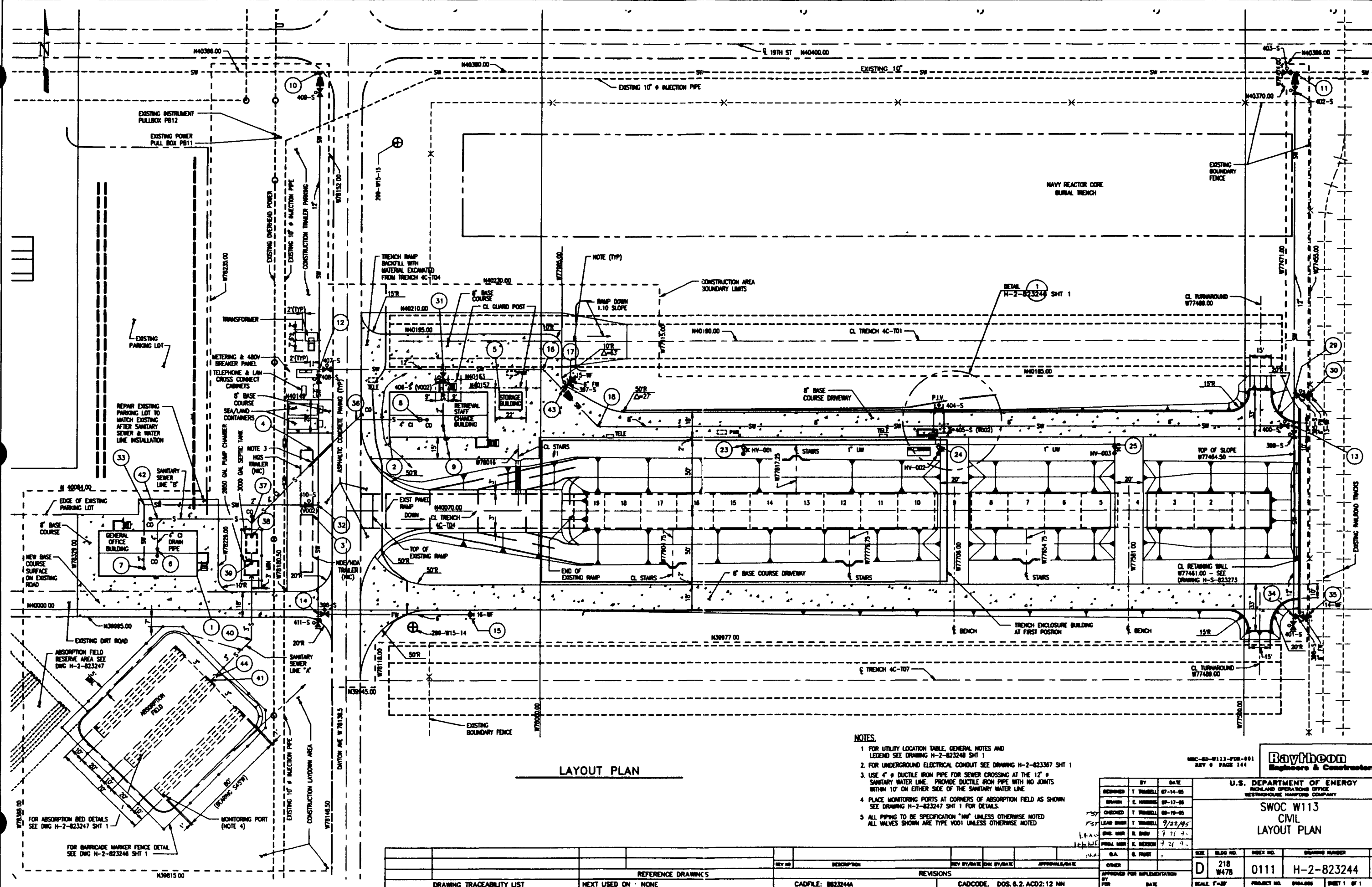
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COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED





LAYOUT PLAN

- NOTES:
- FOR UTILITY LOCATION TABLE, GENERAL NOTES AND LEGEND SEE DRAWING H-2-823248 SHT 1
  - FOR UNDERGROUND ELECTRICAL CONDUIT SEE DRAWING H-2-823267 SHT 1
  - USE 6" DUCTILE IRON PIPE FOR SEWER CROSSING AT THE 12" SANITARY WATER LINE. PROVIDE DUCTILE IRON PIPE WITH NO JOINTS WITHIN 10' ON EITHER SIDE OF THE SANITARY WATER LINE.
  - PLACE MONITORING PORTS AT CORNERS OF ABSORPTION FIELD AS SHOWN SEE DRAWING H-2-823247 SHT 1 FOR DETAILS.
  - ALL PIPING TO BE SPECIFICATION "HW" UNLESS OTHERWISE NOTED. ALL VALVES SHOWN ARE TYPE V001 UNLESS OTHERWISE NOTED.

ENC-8D-W113-FOR-001  
REV 0 PAGE 144

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WESTINGHOUSE HANFORD COMPANY

SWOC W113  
CIVIL  
LAYOUT PLAN

REVISION	BY	DATE
REVISIONED	T. TRIBELL	07-14-95
DRAWN	E. WARRING	07-17-95
CHECKED	T. TRIBELL	08-10-95
LEAD ENGR	T. TRIBELL	9/22/95
ENGR. IN CH.	E. BISH	9/21/95
PROJ. MGR.	E. BERSON	9/21/95
G.A.	G. FRUST	

REV	BLDG NO.	SHEET NO.	DRAWING NUMBER	REV
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SCALE: 1"=30'				
PROJECT NO. 094486 SHEET 1 OF 1				

REV NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

DRAWING TRACEABILITY LIST

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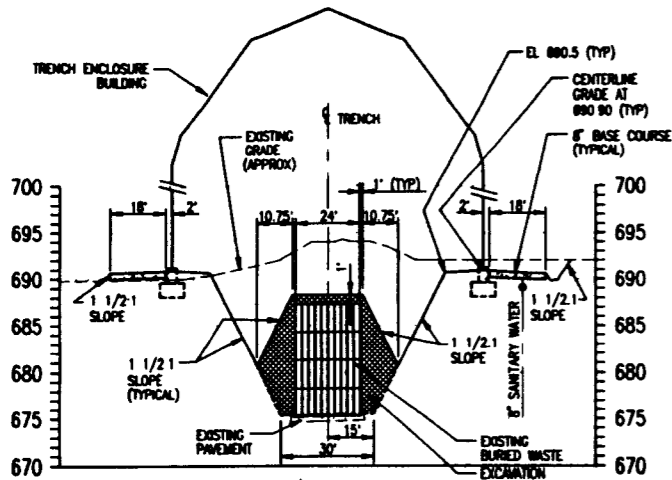
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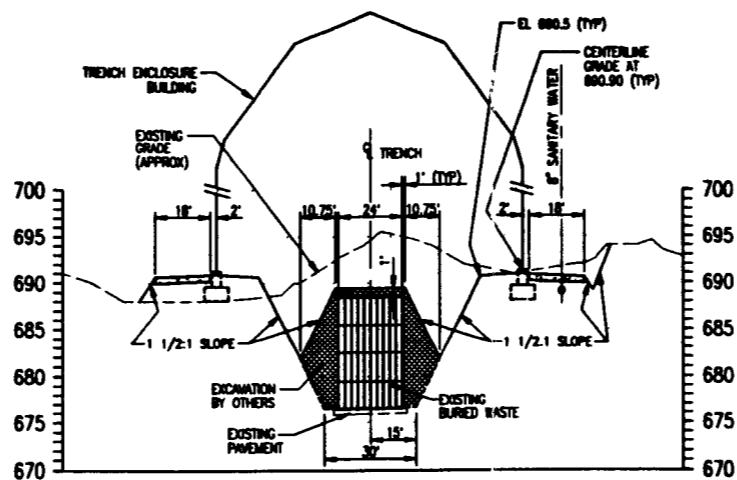
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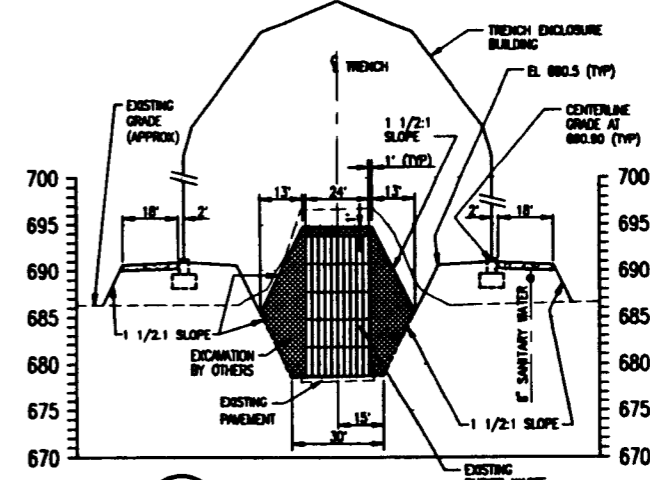
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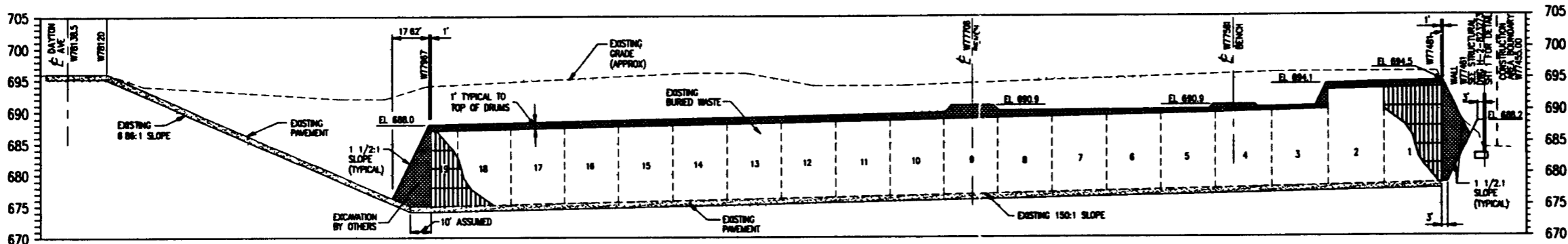
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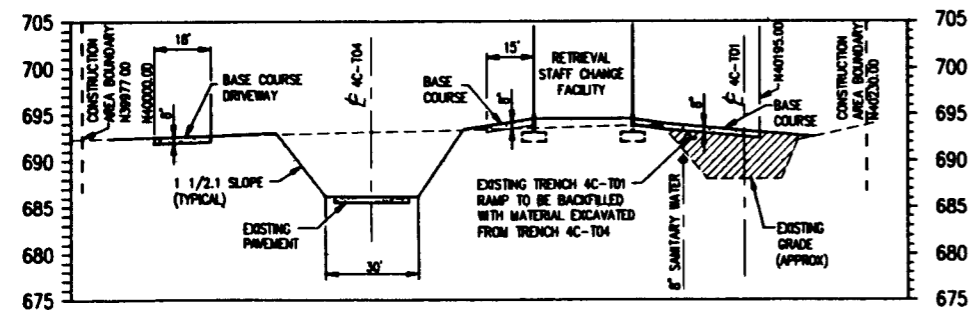
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1"=10' VERT



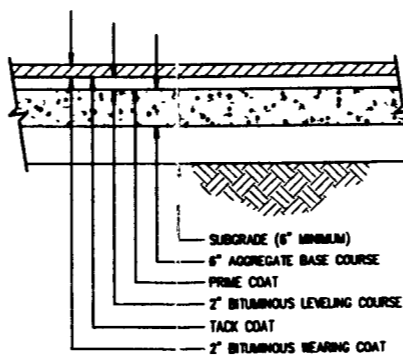
C SECTION  
H-2-823243 SHT 1 SCALE: 1"=30' HORIZ  
1"=10' VERT



D SECTION  
H-2-823243 SHT 1 SCALE: 1"=30' HORIZ  
1"=10' VERT



E SECTION  
H-2-823243 SHT 1 SCALE: 1"=30' HORIZ  
1"=10' VERT



TYPICAL PAVEMENT SECTION  
NOT TO SCALE

NOTES:

1. THE SLOPE AND ELEVATION OF THE EXISTING RAMP AND EXISTING ASPHALT ON WHICH THE WASTE DRUMS AND BOXES SIT WERE INTERPOLATED FROM EXISTING DRAWINGS AND SITE SURVEYS. THE ACTUAL LOCATION AND ELEVATIONS MAY VARY AND SHALL BE FIELD VERIFIED PRIOR TO COMMENCING EXCAVATION OPERATIONS.
2. FOR GENERAL NOTES SEE DRAWING H-2-823248 SHT 1

SWC-ED-0113-FOR-001  
REV 6 PAGE 145

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NICHOLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY  
**SWOC W113**  
CIVIL  
**GRADING SECTIONS & DETAILS**

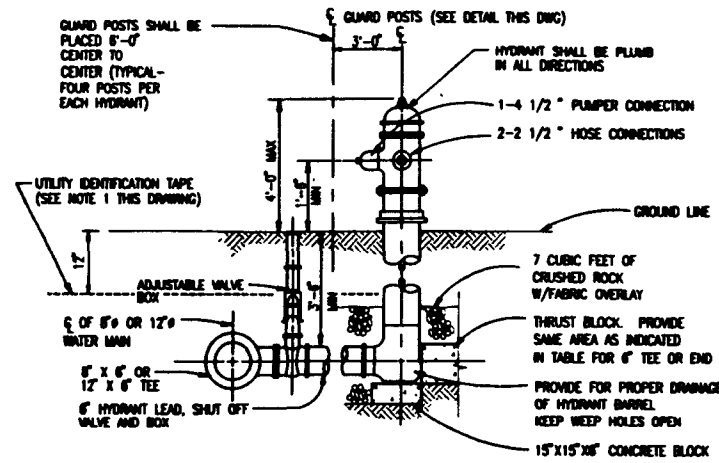
BY	DATE
DESIGNED: A. FORT	07-14-05
DRAWN: E. WERNER	07-14-05
CHECKED: I. TRINELLI	09-16-05
LEAD ENGR: T. TRINELLI	7/22/05
ENR. MGR: E. BISH	7/21/05
PRJ. MGR: E. BISH	7/21/05
S.A.: G. PAUST	7/22/05

REV	DATE	DESCRIPTION	APPROVAL
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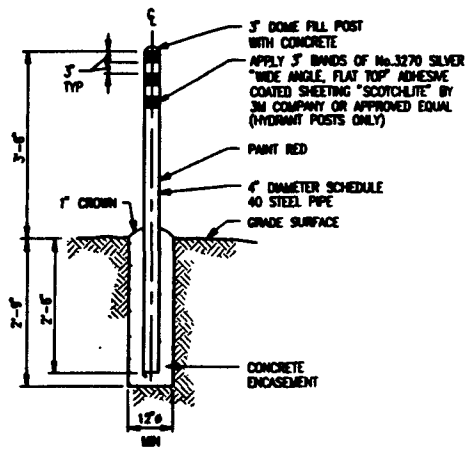
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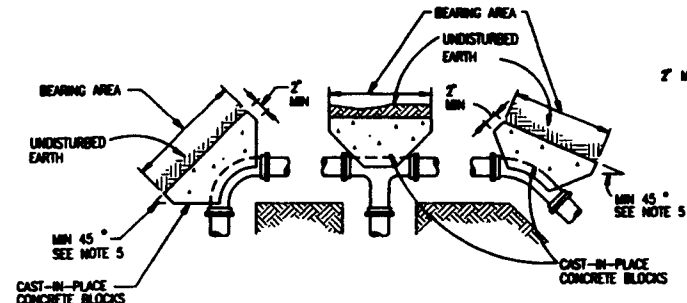
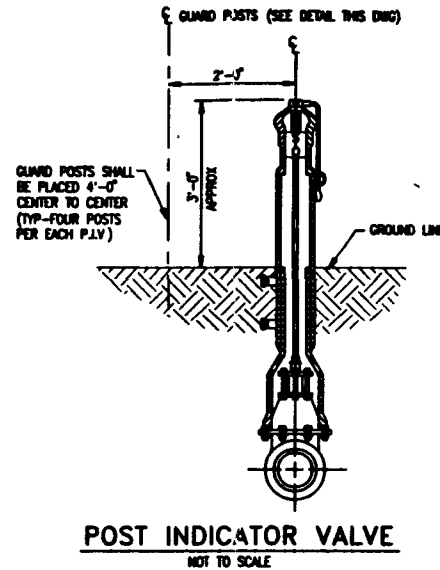
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CADD: M. J. COLE  
PLOT DATE: 11/14/06



**TYPICAL FIRE HYDRANT SETTING**  
NOT TO SCALE



**GUARD POST DETAIL**  
NOT TO SCALE



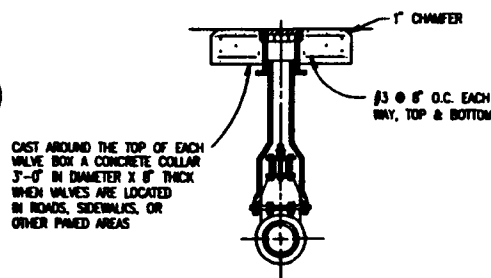
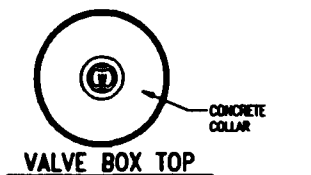
FITTING SIZES	VALVE TEE & END	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
2"	0.6	0.8	0.5	0.25	0.25
6"	5.0	7.0	4.0	2.0	1.0
8"	8.2	11.8	6.3	3.2	1.6
10" & 12"	17.5	24.8	13.3	6.8	3.5

ALLOWABLE SOIL BEARING PRESSURE 2,000 P.S.F.  
TEST PRESSURE 250 P.S.F.

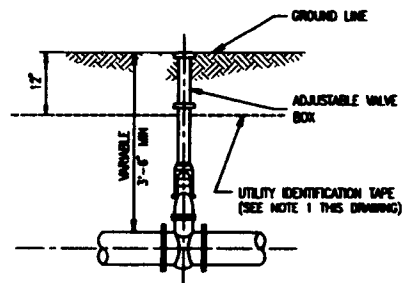
**THRUST BLOCK NOTES:**

1. PLACE 4 MIL. POLYETHYLENE BETWEEN CONCRETE AND FITTING (CONCRETE SHALL NOT INTERFERE WITH JOINT)
2. MINIMUM CONCRETE THICKNESS SHALL BE 12 INCHES.
3. THE HORIZONTAL DIMENSION OF THE BEARING AREA SHALL BE BETWEEN 0.8 AND 1.25 TIMES THE VERTICAL DIMENSION.
4. THRUST BLOCK ORIENTATION SHALL BE SUCH THAT THE CENTER OF THE FITTING CORRESPONDS WITH THE CENTER OF THE THRUST BLOCK.
5. THE MINIMUM ALLOWABLE ANGLE (EITHER VERTICAL OR HORIZONTAL) SHALL BE 45 DEGREES.
6. WHERE CONCRETE THRUST BLOCKS ARE USED FOR VERTICAL BENDS THE ROSS SHALL BE INCORPORATED IN THE THRUST BLOCK DESIGN AS PER NFPA-24

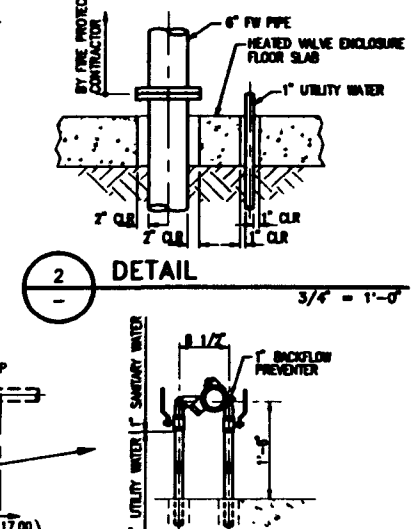
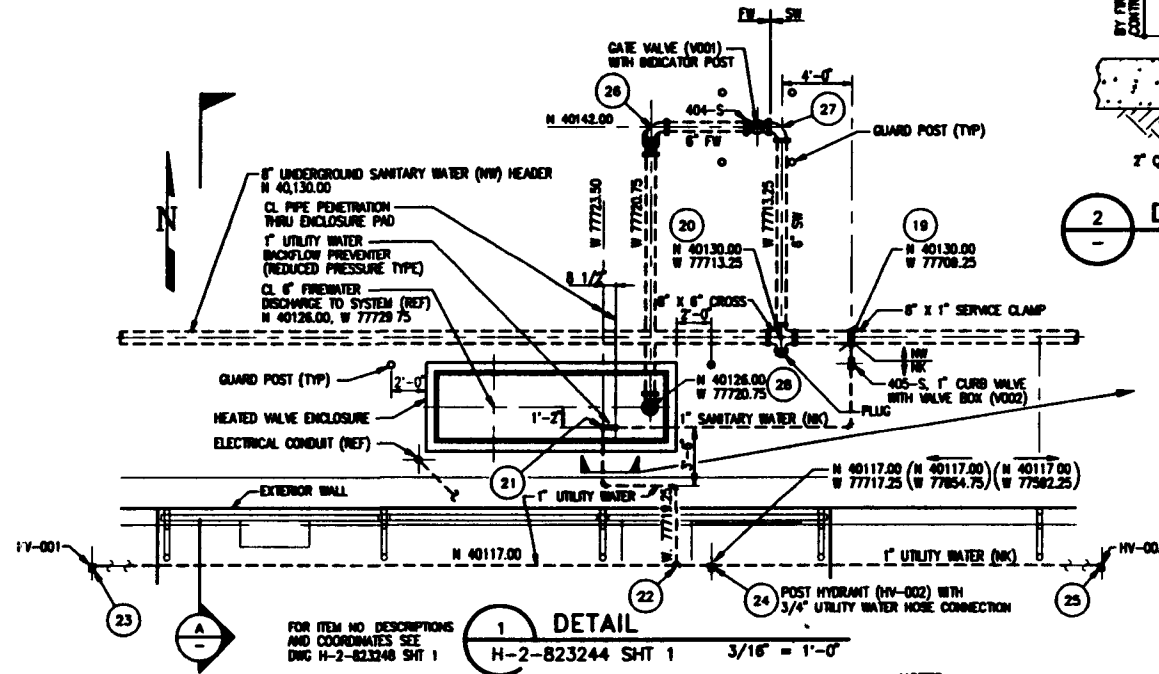
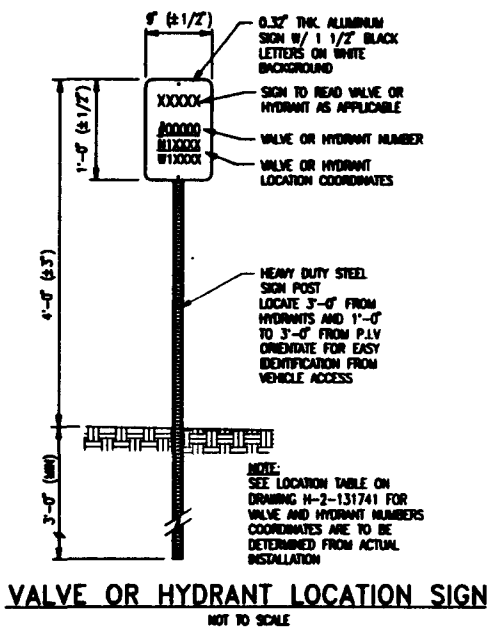
**TYPICAL THRUST BLOCKING DETAIL**  
NOT TO SCALE



**DETAIL VALVE BOX**  
NOT TO SCALE

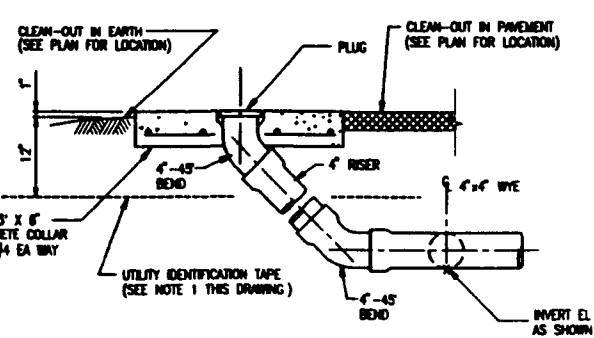
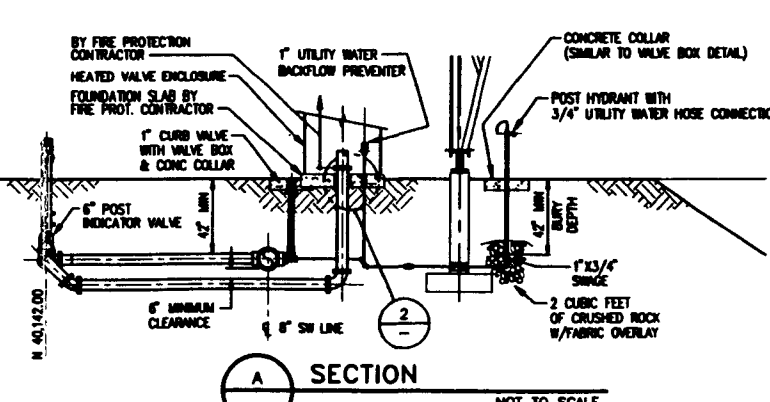


**TYPICAL VALVE SETTING**  
NOT TO SCALE

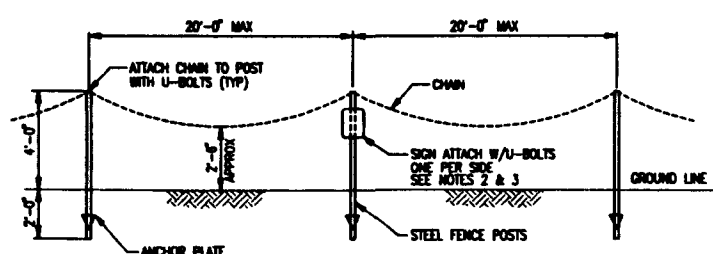


**NOTES:**

1. UTILITY IDENTIFICATION TAPE SHALL BE REQUIRED ABOVE ALL UNDERGROUND UTILITIES. THE DEPTH OF BURY SHALL BE 12" FROM FINISHED GRADE. THE TAPE SHALL BE 6" WIDE, POLYETHYLENE, 4.5 MIL. THICK, LABELED AND COLOR CODED AS PER THE INDUSTRY STANDARDS. (SEE SPECIFICATION SECTION 02200)
2. SIGNS AT ABSORPTION FIELD TO BE TWENTY GAUGE GALVANIZED STEEL PLATE PAINTED WITH TWO COATS OF YELLOW ENAMEL.
3. SIGN MESSAGE TO BE "SIS DISPOSAL FIELD" IN 1" HIGH BLACK LETTERS.



**CLEAN-OUT DETAIL**  
NOT TO SCALE



**BARRICADE MARKER FENCE**  
NOT TO SCALE

REC-82-113-970-001  
REV 0 PAGE 146

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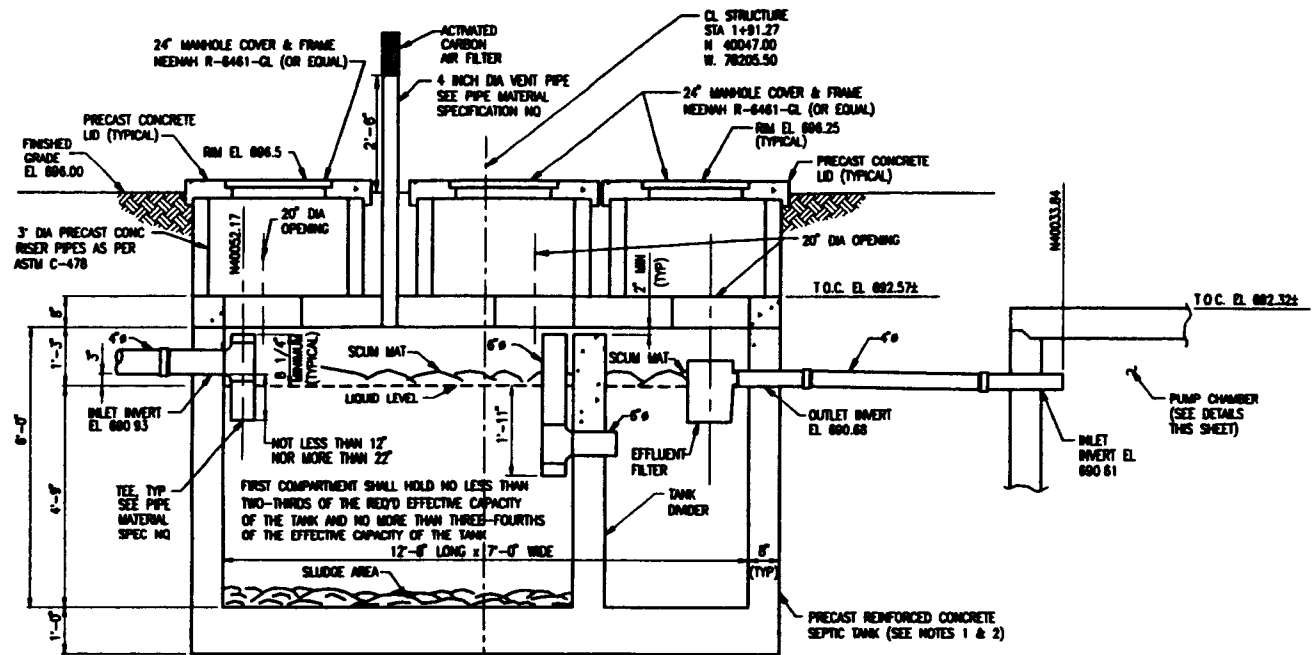
U.S. DEPARTMENT OF ENERGY  
NICHOLAS OPERATIONS OFFICE  
WESTBOROUGH, MASSACHUSETTS COMPANY

SWOC W113  
CIVIL  
UTILITIES - SECTIONS & DETAILS

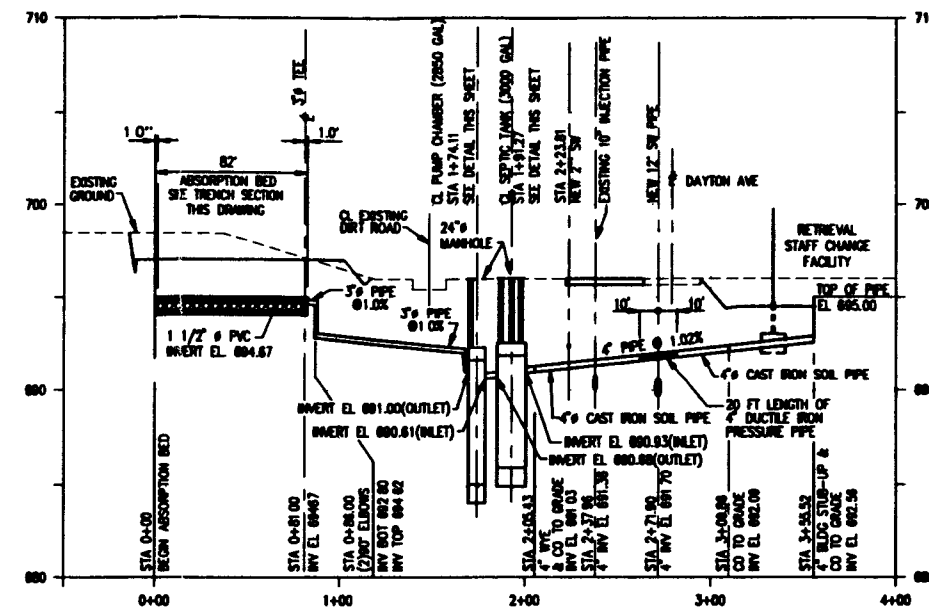
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DESIGNED	A. PORT	08-25-05
DRAWN	A. PORT	08-25-05
CHECKED	T. WHEELER	09-19-05
LEAD ENGINEER	T. WHEELER	9/19/05
ENCL. MGR.	R. SHU	9-26-05
PRJ. MGR.	K. HERRON	9-26-05
S.A.	G. FINNEY	9-26-05
OTHER		
APPROVED FOR IMPLEMENTATION		
DATE		

REV. NO.	DESCRIPTION	REV. DATE	CHK. BY	APP. DATE

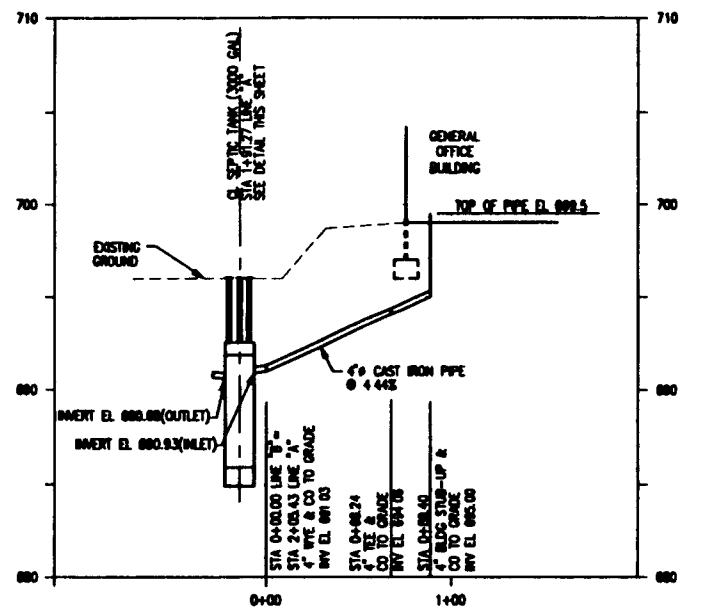
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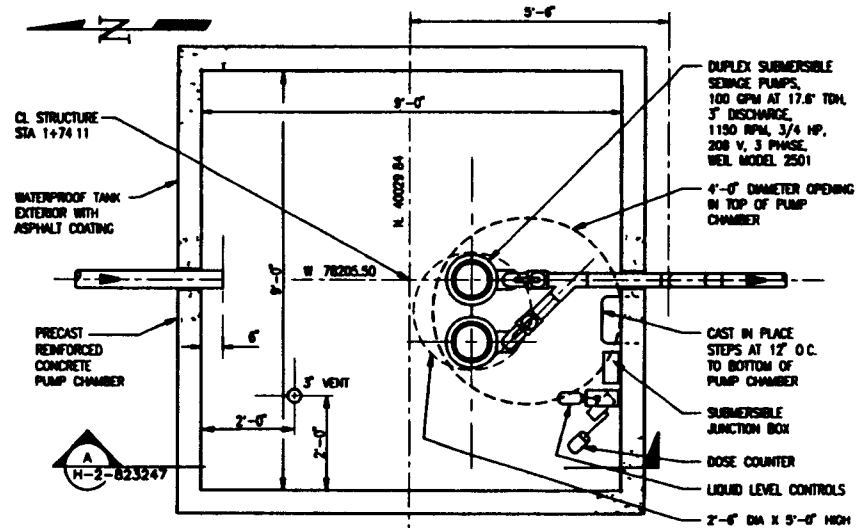
**SEPTIC TANK SECTION**  
NOT TO SCALE



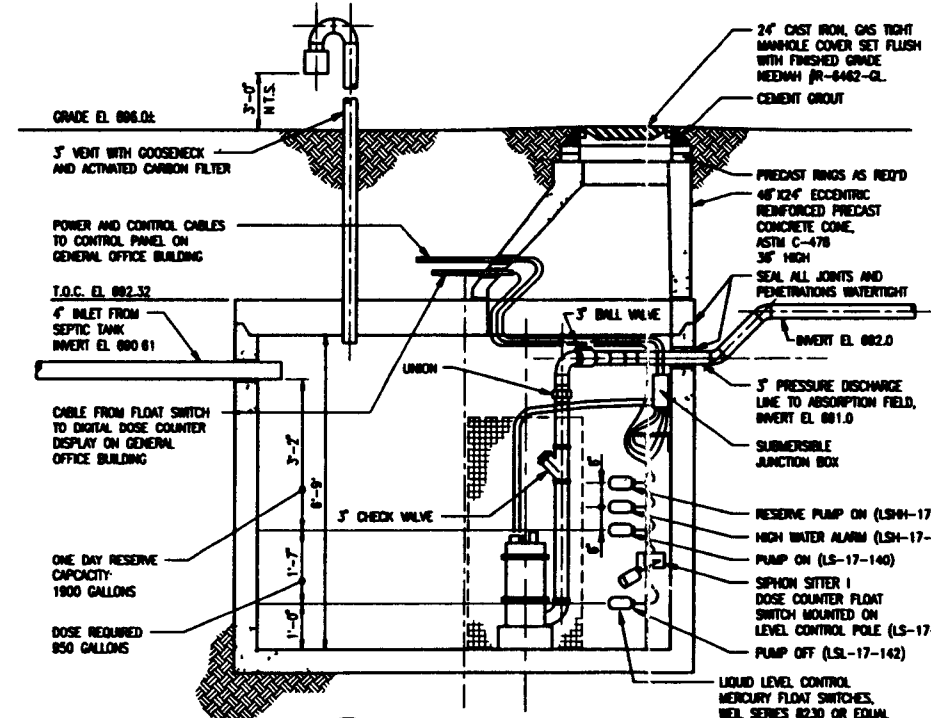
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VERT 1"=5'



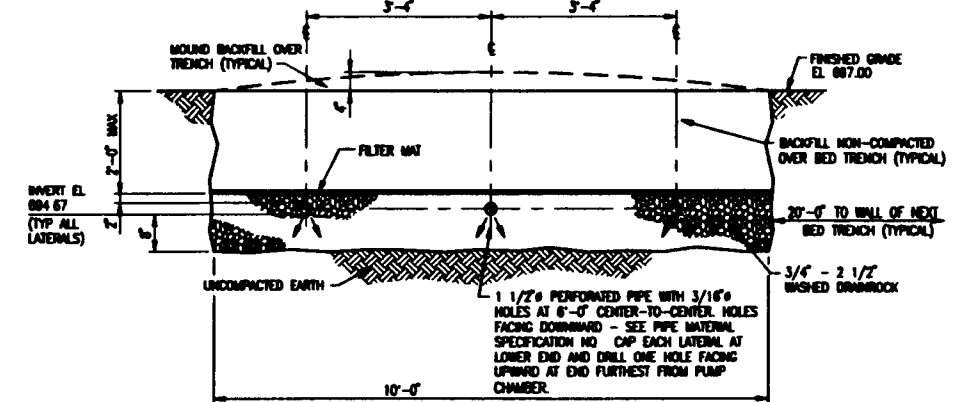
**SANITARY SEWER PROFILE-LINE "B"**  
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VERT 1"=5'



**SEPTIC SYSTEM PUMP CHAMBER**  
SCALE 1/2"=1'-0"

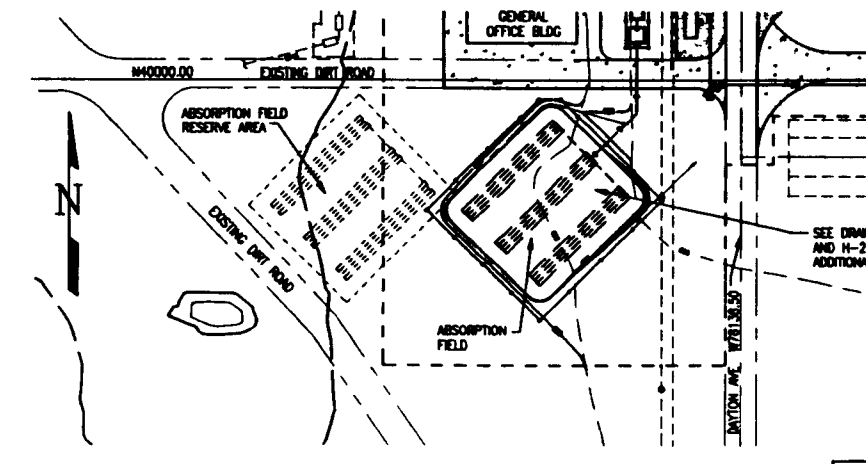


**SECTION A**  
H-2-823247 SHT 1 1/2" = 1'-0"

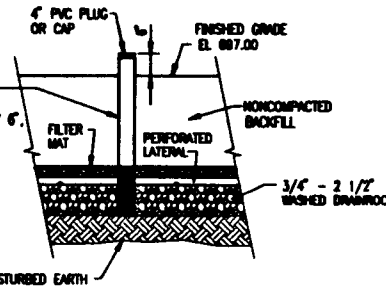


**TYPICAL ABSORPTION BED TRENCH SECTION**  
NOT TO SCALE

- NOTES:**
- CONCRETE FOR PRE-CAST SEPTIC TANK AND PUMP CHAMBER SHALL BE AIR ENTRAINED AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 P.S.I.
  - CONCRETE FOR PRE-CAST SEPTIC TANK AND PUMP CHAMBER SHALL BE MADE WITH TYPE V CEMENT AND 3/4" MAXIMUM SIZE AGGREGATE.
  - PRECAST REINFORCED CONCRETE SEPTIC TANK AND PUMP CHAMBER SHALL BE DESIGNED TO SUPPORT THE ANTICIPATED EARTH AND CONSTRUCTION LOADS.
  - THE SANITARY SEWER SYSTEM HAS BEEN SIZED TO ACCOMMODATE 36 PERSONS AT A RATE OF 15 gpd PER PERSON, 30 SHIFT WORKERS AT A RATE OF 45 gpd PER PERSON AND KITCHEN FACILITIES AT THE RATE OF 9 gpd FOR A TOTAL OF 1800 GALLONS PER DAY.
  - ABSORPTION BEDS ARE DESIGNED FOR AN INFILTRATION RATE OF 0.8 gpd/ft<sup>2</sup>.
  - THE SEPTIC TANK IS DESIGNED FOR 3000 GALLONS (1 1/2 TIMES THE DESIGN DAILY FLOW RATE).
  - THE PUMP CHAMBER IS DESIGNED TO TRANSFER TWO DOSES/DAY AT 950 gpd/DOSE TO THE ABSORPTION FIELD. PUMPS ARE SIZED TO PROVIDE 4'-0" MINIMUM RESIDUAL HEAD AT THE ABSORPTION BED LATERALS.
  - THE PUMP CHAMBER SIZE WILL PROVIDE 1 DAY RESERVE CAPACITY IF A POWER FAILURE OCCURS AT THE PUMP START LIQUID LEVEL.



**PLAN - ABSORPTION FIELD**  
SCALE HORIZ 1"=80'



**MONITORING PORT DETAIL**  
NOT TO SCALE

DRAWING TRACEABILITY LIST		REFERENCE DRAWINGS		REVISIONS		APPROVALS	
REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPVLR/DATE	DATE	SCALE AS SHOWN	PROJECT NO.

REV	BY	DATE	DESCRIPTION

NO.	DATE	BY	DESCRIPTION

REC-80-1113-P20-001  
REV 0 PAGE 147

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RESEARCH OPERATIONS OFFICE  
WESTHOUSE HAMFORD COMPANY

**SWOC W113**  
CML  
SEPTIC SYSTEM

NO.	DATE	BY	DESCRIPTION

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

LOCATION TABLE

POINT NUMBER	COORDINATE		DESCRIPTION
	NORTH	WEST	
1	40024.00	78244.00	SOUTHEAST CORNER OF GENERAL OFFICE BUILDING
2	40122.00	78108.00	SOUTHWEST CORNER OF RETRIEVAL STAFF CHANGE FACILITY
3	40067.00	78182.50	NORTHEAST CORNER OF MDE/MDA TRAILER (NIC)
4	40113.00	78182.50	NORTHEAST CORNER OF HEAD GAS SAMPLING TRAILER (NIC)
5	40154.00	78029.50	NORTHWEST CORNER OF RETRIEVAL STAFF STORAGE BUILDING
6	40043.00	78272.50	GENERAL OFFICE BUILDING 4" SANITARY SEWER STUB-UP AND CLEAN-OUT TO GRADE. TOP OF PIPE EL. 899.50
7	40029.50	78282.50	GENERAL OFFICE BUILDING 2" SANITARY WATER STUB-UP TOP OF PIPE EL. 899.50
8	40135.00	78066.00	RETRIEVAL STAFF CHANGE FACILITY 4" SANITARY SEWER STUB-UP AND CLEAN-OUT TO GRADE. TOP OF PIPE EL. 895.00
9	40130.00	78071.00	RETRIEVAL STAFF CHANGE FACILITY 2" SANITARY WATER STUB-UP TOP OF PIPE EL. 895.00
10	40380.00	78158.50	TE-IN TO EXISTING 10" SW LINE, 10x10 TAPPING SLEEVE, 12"x10" REDUCER AND 12" GATE VALVE (#408-S) WITH VALVE BOX.
11	40380.00	77485.00	TE TO EXISTING 10" SW LINE, 10" CUT-IN SLEEVE, 10" GATE VALVE (#403-S) WITH VALVE BOX, 10x10 TEE, 12x10 REDUCER, 12" GATE VALVE (#402-S) WITH VALVE BOX.
12	40170.00	78158.50	12" TEE, 12" GATE VALVE (#407-S) AND 12" GATE VALVE (#408-S) WITH VALVE BOXES.
13	40130.00	77485.00	12" TEE, 6" GATE VALVE (#400-S) AND 12" GATE VALVE (#399-S) WITH VALVE BOXES.
14	39997.00	78158.50	12" TEE, 12" GATE VALVE (#411-S), 6" GATE VALVE (#398-S) WITH VALVE BOXES, AND 12" BLIND FLANGE.
15	39997.00	78050.00	FIRE HYDRANT (#114-WF)
16	40170.00	77996.50	45° BEND
17	40180.00	77980.00	FIRE HYDRANT (#115-WF)
18	40130.00	77958.50	PI 45° BEND
19	40130.00	77709.25	6"x1" SERVICE CLAMP, 1" VALVE (#405-S) WITH VALVE BOX (SEE DETAIL 1 ON DWG H-2-823246 SHT 1)
20	40130.00	77713.25	6"x6" CROSS (SEE DETAIL 1 ON DWG H-2-823246 SHT 1)
21	40124.83	77723.50	1" UTILITY WATER BACKFLOW PREVENTER (SEE DETAIL 1 ON DWG H-2-823246 SHT 1)
22	40117.00	77719.25	1" TEE (SEE DETAIL 1 ON DWG H-2-823246 SHT 1)
23	40117.00	77854.75	3/4" POST HYDRANT (#W-001), 1"x1" ELL, 1"x3/4" SWING
24	40117.00	77717.25	3/4" POST HYDRANT (#W-002), 1"x1" TEE, 1"x3/4" SWING
25	40117.00	77582.25	3/4" POST HYDRANT (#W-003), 1"x1" ELL, 1"x3/4" SWING
26	40142.00	77720.75	PI 6" FW, 6" 90° BEND 6" 45° BEND (ROTATE TOP 45°) (SEE DETAIL 1 ON DWG H-2-823246 SHT 1)
27	40142.00	77713.25	PI 6" FW, 6" BEND, 6" FW (#404-S) WITH INDICATOR POST. (SEE DETAIL 1 ON DWG H-2-823246 SHT 1)
28	40126.00	77720.75	6" STUB-UP, TOP OF PIPE EL. 891.50. (SEE DETAIL 1 ON DWG H-2-823246 SHT 1)
29	40150.00	77485.00	12" TEE WITH 6" GATE VALVE (#395-S) AND VALVE BOX
30	40150.00	77459.00	FIRE HYDRANT (#113-WF)
31	40170.00	78071.00	12"x2" TAPPED TEE AND 2" GATE VALVE (#406-S) WITH VALVE BOX
32	40074.18	78158.50	12"x2" TAPPED TEE AND 2" GATE VALVE (#410-S) WITH VALVE BOX
33	40074.18	78282.50	PI 2" 90° BEND
34	39995.00	77485.00	12" TEE, 12" GATE VALVE (#401-S), 6" GATE VALVE (#396-S) WITH VALVE BOXES AND 12" BLIND FLANGE.
35	39995.00	77459.00	FIRE HYDRANT (#114-WF)
36	40135.00	78131.88	PI 4" WYE AND CLEAN-OUT TO GRADE.
37	40081.18	78205.50	PI 4" DOUBLE WYE WITH CLEAN-OUT TO GRADE.
38	40052.17	78205.50	6" SEPTIC TANK INLET TEE.
39	40033.84	78205.50	PUMP CHAMBER INLET
40	39978.75	78205.50	PI 3" (1) 45° BEND
41	39948.04	78235.21	3" TEE
42	40064.18	78272.50	4" WYE AND CLEAN-OUT TO GRADE.
43	40155.75	77984.25	12" TEE, 12" REDUCER AND 6" GATE VALVE (#397-S) WITH VALVE BOX.
44	39932.58	78231.87	(2) 3" 90° BENDS

LEGEND:

	NEW CONTOUR
	EXISTING CONTOUR
	NEW FIRE HYDRANT
	POINT LOCATION NUMBER
	EXISTING FENCE
	EXISTING POWER POLE
	NEW SANITARY SEWER WITH CLEAN-OUT
	EXISTING SANITARY WATER
	NEW SANITARY WATER
	VALVE WITH POST INDICATOR
	VALVE WITH VALVE BOX
	VALVE
	POST HYDRANT WITH HOSE CONNECTION
	SPOT ELEVATION
	POWER PULL BOX
	TELECOMMUNICATIONS PULL BOX
	ASPHALTIC CONCRETE PAVEMENT
	BASE COURSE
	CONSTRUCTION AREA BOUNDARY LIMITS
	BARRICADE FENCE
	SLOPE INDICATOR

ABBREVIATIONS:

APROX	-	APPROXIMATE
CO	-	CLEAN-OUT
CONC	-	CONCRETE
DN	-	DIAMETER
EL	-	ELEVATION
EXIST	-	EXISTING
GPM	-	GALLONS PER MINUTE
HORIZ	-	HORIZONTAL
HW	-	HWENT
HP	-	HIGH POINT
N	-	NORTH
NAT	-	NATURAL
P.I.	-	POINT OF INTERSECTION
P.I.V.	-	POST INDICATOR VALVE
P.S.I.	-	POUNDS PER SQUARE INCH
P.S.F.	-	POUNDS PER SQUARE FOOT
PVC	-	POLYVINYL CHLORIDE
R	-	RADIUS
STA	-	STATION
S	-	SANITARY SEWER
SW	-	SANITARY WATER
TDH	-	TOTAL DYNAMIC HEAD
TYP	-	TYPICAL
VERT	-	VERTICAL
W	-	WEST
CL	-	CENTERLINE

GENERAL NOTES:

1. WATER LINES SHALL HAVE 42 INCHES MINIMUM COVER.
2. HORIZONTAL CONTROL IS BASED ON HANFORD PLANT COORDINATE SYSTEM.
3. VERTICAL CONTROL IS BASED ON HANFORD PLANT DATUM.

NOTE: REFERENCE DWG H-2-823244 SHT 1 FOR POINT NUMBER LOCATIONS.

\* UTILITY STUB-UP LOCATIONS ARE TENTATIVE. COORDINATE WITH TRAILER MANUFACTURER FOR FINAL LOCATIONS.

HW-82-0113-728-001  
REV 0 PAGE 148

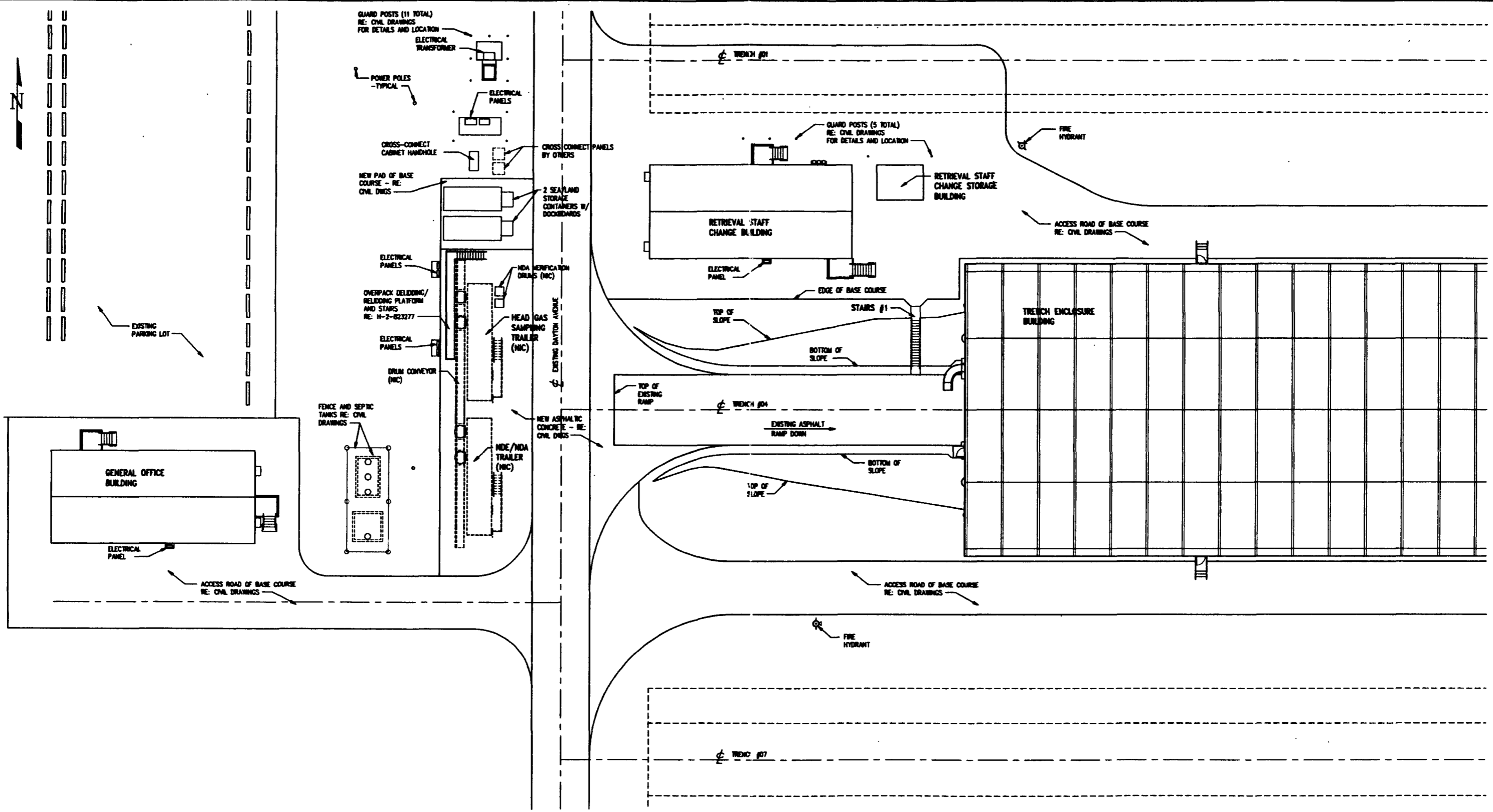
**Raytheon**  
Engineers & Constructors

REVISION	BY	DATE	U.S. DEPARTMENT OF ENERGY HOLAND OPERATIONS OFFICE WESTINGHOUSE HANFORD COMPANY			
DESIGNED	A. FURT	07-14-95	SWOC W113 CIVIL LEGEND, ABBREVIATIONS & LOCATION TABLE			
DRAWN	E. HERRING	07-14-95				
CHECKED	I. TRINELLI	08-10-95				
LEAD ENGR	I. TRINELLI	9/22/95				
ENGR. IN CH.	R. BISH	9/21/95				
PROJ. MGR.	E. HERRING	9/21/95	G.A. & P.M.F. 7/22/95 SCALE: NONE PROJECT NO. 09AL000 SHEET 1 OF 1			
APPROVED FOR IMPLEMENTATION			DATE	BY	REV	
DRAWING TRACEABILITY LIST			REFERENCE DRAWINGS	REVISIONS	CADFILE: 8823248A	CADCODE: DOS: 6.2; ACD2: 12; NN

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED



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NOTE:  
 REFER TO CIVIL SITE PLAN DRAWINGS H-2-823243 AND  
 H-2-823244 FOR CONSTRUCTION BOUNDARIES AND  
 ACTUAL LOCATIONS.

WIC-80-W113-PDR-001  
 REV 8 PAGE 150

**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTINGHOUSE HANFORD COMPANY

SWOC W113  
 ARCHITECTURAL  
 SITE PLAN

REVISION	BY	DATE
DESIGNED	CHALLENGER	08-12-05
DRAWN	CHALLENGER	08-12-05
CHECKED	B. BOWEN	08-16-05
LEAD ENGR	B. BOWEN	9-23-05
ENR. MGR	R. BISH	9-26-05
PRJ. MGR	K. NEWMAN	9-26-05

103  
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 107

REV	DATE	DESCRIPTION
D	218 W478	0801 H-2-823251

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

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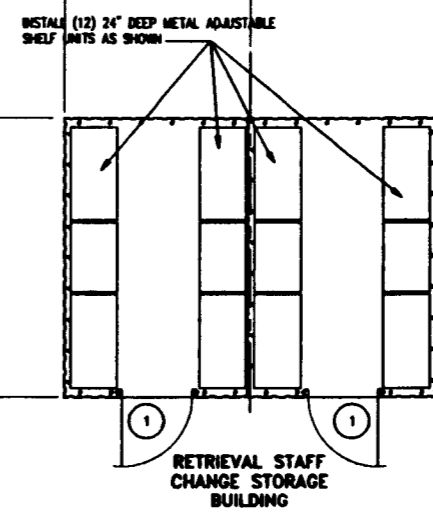
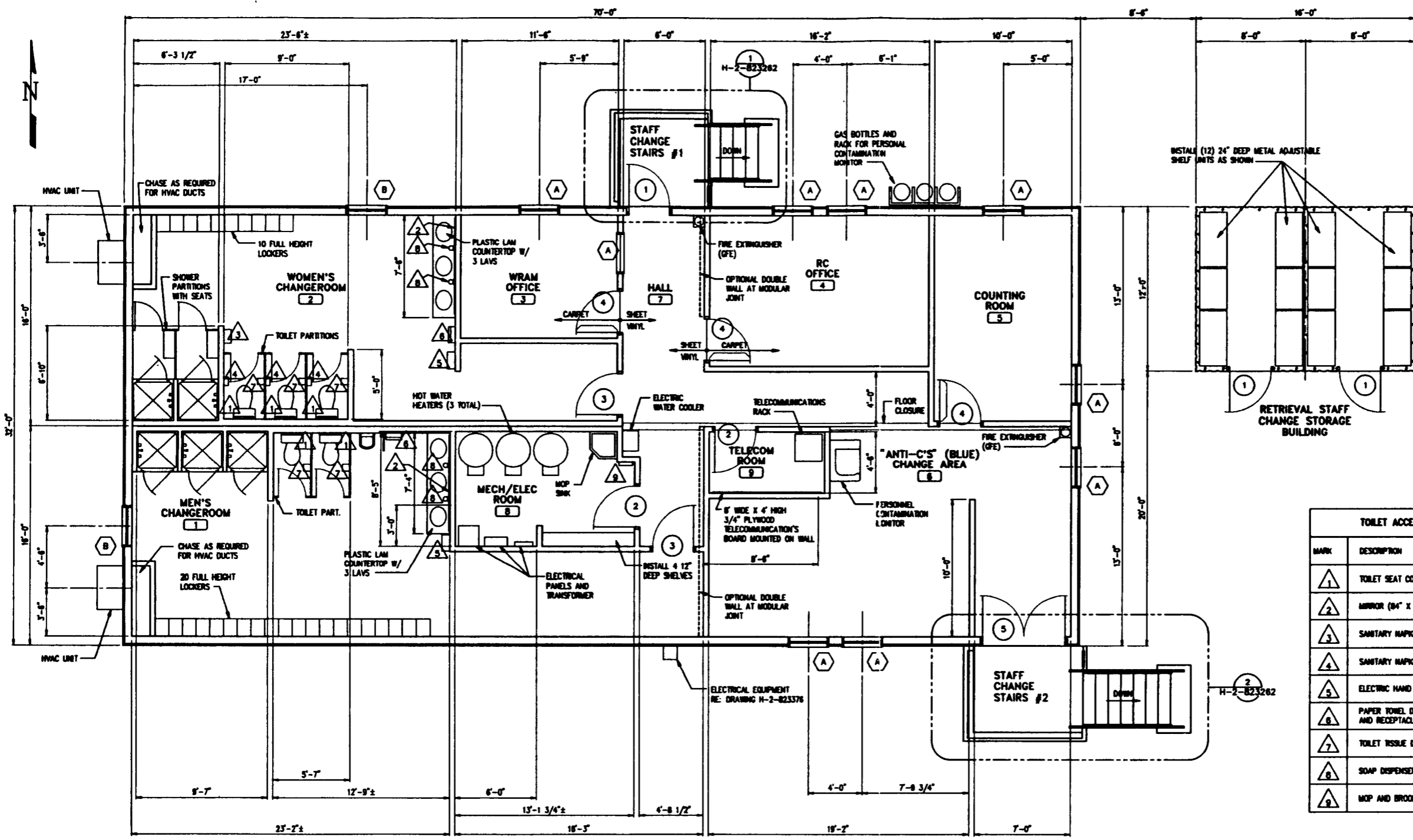
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CADCODE: DOS: 6.2: ACD2: 12: NH

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED







TOILET ACCESSORIES		
MARK	DESCRIPTION	MOUNTING HEIGHT AND REMARKS
△1	TOILET SEAT COVER DISPENSER	60" TO TOP OF DISPENSER
△2	MIRROR (24" X 36")	75" TO TOP OF MIRROR
△3	SANITARY NAPKIN/TAMPON DISPENSER	74" TO TOP OF DISPENSER
△4	SANITARY NAPKIN DISPOSAL	34" TO TOP OF DISPOSAL
△5	ELECTRIC HAND DRYER	IN MEN'S, 48" TO BOTTOM OF DRYER IN WOMEN'S, 44" TO BOTTOM OF DRYER
△6	PAPER TOWEL DISPENSER AND RECEPTACLE	78" TO TOP OF DISPENSER 32" TO TOP OF RECEPTACLE
△7	TOILET TISSUE DISPENSER	57" TO TOP OF DISPENSER
△8	SOAP DISPENSER	LOCATE ABOVE BACKSPASH OF COUNTERTOP
△9	MOP AND BROOM HOLDER	60" TO TOP OF SHELF

**DOOR TYPES**

- 1 3'-0" X 6'-8" EXTERIOR DOOR
- 2 3'-0" X 6'-8" INTERIOR DOOR
- 3 3'-0" X 6'-8" RESTROOM DOOR
- 4 3'-0" X 6'-8" INTERIOR BUTCH DOOR WITH SHELF
- 5 PAIR 3'-0" X 6'-8" EXTERIOR DOORS

**WINDOW TYPES**

- A 36" WIDE X 48" HIGH ALUMINUM FIXED SASH WINDOW
- B 36" WIDE X 24" HIGH ALUMINUM FIXED SASH WINDOW WITH FROSTED GLAZING

**FLOOR PLAN**

WBC-00-W113-FSR-001  
REV 9 PAGE 152



U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

SWOC W113  
RETRIEVAL STAFF CHANGE  
AND STORAGE BUILDINGS  
FLOOR PLAN

REVISION	BY	DATE
DESIGNED	COLLIER	00-10-95
DRAWN	COLLIER	00-10-95
CHECKED	E. BURIN	00-10-95
LEAD DESIGNED	E. BURIN	9/22/95
ENL. DESIGNED	E. BURIN	9-21-95
FINAL DESIGNED	E. BURIN	9-21-95
APP. FOR REPLICATION	G.A. & RUF	9/26/95

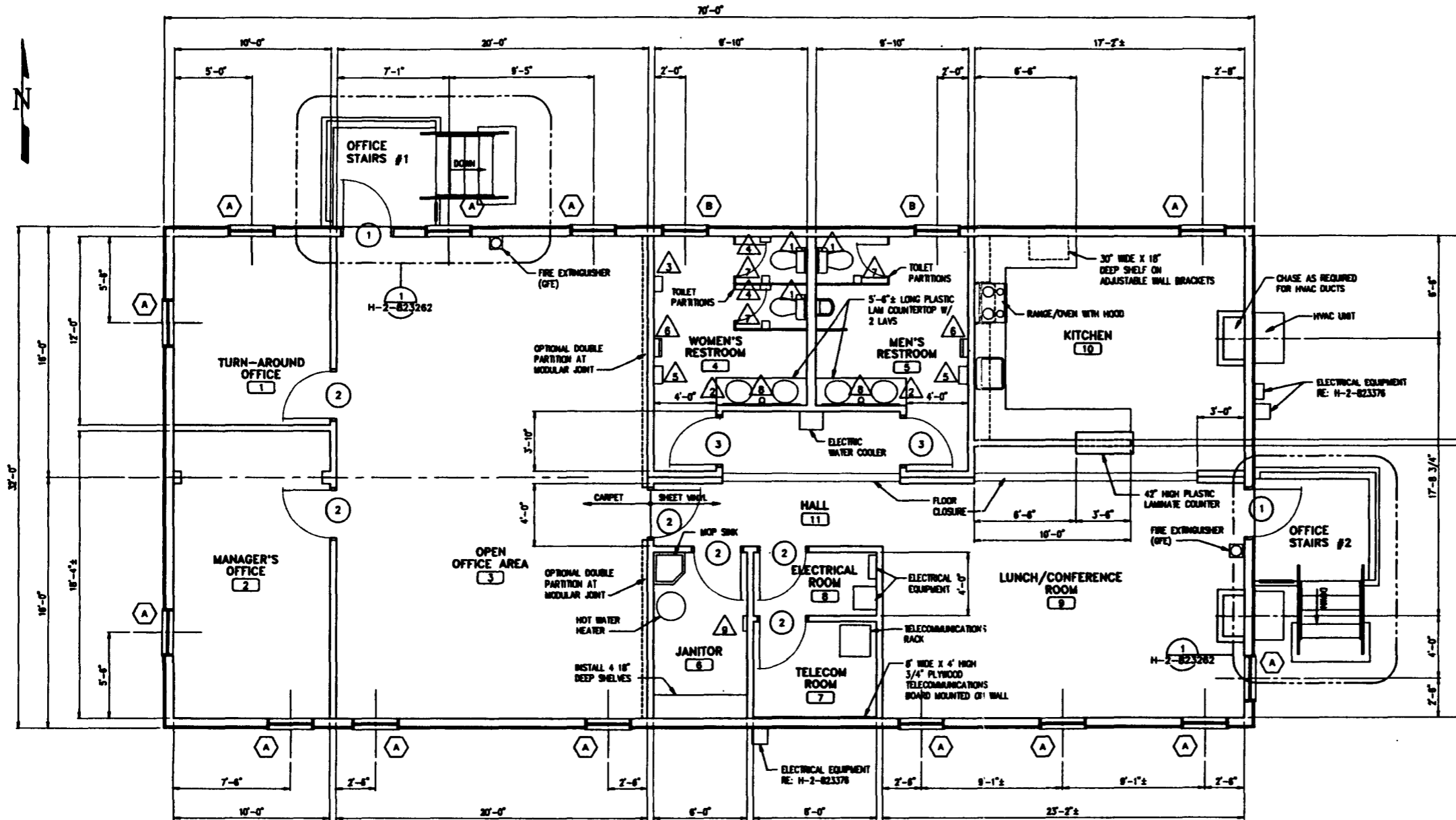
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 PERM 01/10/99





FLOOR PLAN

TOILET ACCESSORIES		
MARK	DESCRIPTION	MOUNTING HEIGHT AND REMARKS
1	TOILET SEAT COVER DISPENSER	60" TO TOP OF DISPENSER
2	MIRROR (60" X 36")	75" TO TOP OF MIRROR
3	SANITARY NAPKIN/TAMPON DISPENSER	74" TO TOP OF DISPENSER
4	SANITARY NAPKIN DISPOSAL	34" TO TOP OF DISPOSAL
5	ELECTRIC HAND DRYER	IN MEN'S, 46" TO BOTTOM OF DRYER IN WOMEN'S, 44" TO BOTTOM OF DRYER
6	PAPER TOWEL DISPENSER AND RECEPTACLE	78" TO TOP OF DISPENSER 32" TO TOP OF RECEPTACLE
7	TOILET TISSUE DISPENSER	57" TO TOP OF DISPENSER
8	SOAP DISPENSER	LOCATE ABOVE BACKSPASH OF COUNTERTOP
9	MOP AND BROOM HOLDER	60" TO TOP OF SHELF

WINDOW TYPES

- A 36" WIDE X 48" HIGH ALUMINUM FIXED SASH WINDOW
- B 36" WIDE X 24" HIGH ALUMINUM FIXED SASH WINDOW WITH FROSTED GLASS

DOOR TYPES

- 1 3'-0" X 6'-8" EXTERIOR DOOR
- 2 3'-0" X 6'-8" INTERIOR DOOR
- 3 3'-0" X 6'-8" RESTROOM DOOR

DRAWING TRACEABILITY LIST		NEXT USED ON: NONE		CADFILE: 8823252D		CADCODE: DOS: 6.2: ACD: 12: NN	
REFERENCE DRAWINGS				REVISIONS			
REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE	APPROVED FOR IMPLEMENTATION BY DATE		
D	MO-XXX	0800	H-2-823252	0	SCALE: 1/4" = 1'-0"		

DESIGNED: CHALLENGER 08-01-88  
 DRAWN: CHALLENGER 08-01-88  
 CHECKED: D. BOWLEN 08-10-88  
 LEAD ENGINEER: D. BOWLEN 9/23/95  
 DESIGNED: D. BOWLEN 1/27/96  
 PROJECT MANAGER: K. BOWLEN 9/21/96  
 S.A.: G. FRIST 9/21/95

**Raytheon**  
Engineers & Constructors

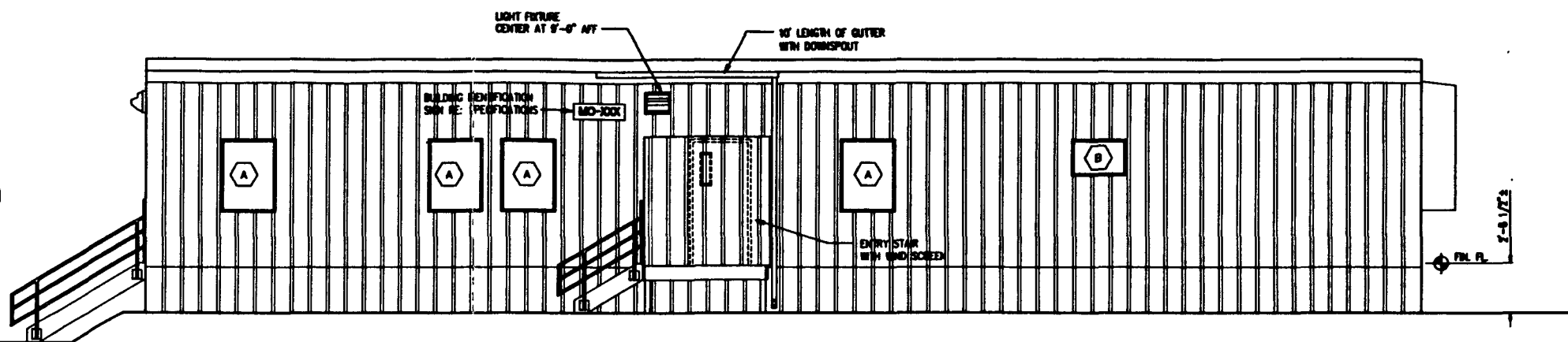
U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTINGHOUSE HANFORD COMPANY  
**SWOC W113  
 GENERAL OFFICE BUILDING  
 FLOOR PLAN**  
 SHEET 4 OF 4

RETRIEVAL STAFF CHANGE STORAGE BUILDING

INSTALL 2 12" X 16" ADJUSTABLE WALL LOUVERS - LOCATE HIGH ON WALL CENTERED IN SPACE

LIGHT FIXTURE CENTER AT 9'-0" AFF

10' LENGTH OF OUTER WITH DOWNSPOUT

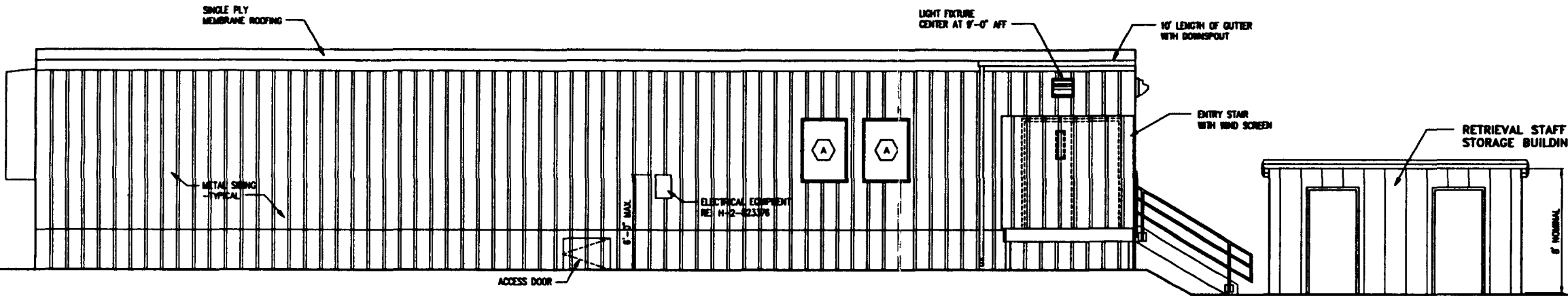


**NORTH ELEVATION**

SINGLE PLY MEMBRANE ROOFING

LIGHT FIXTURE CENTER AT 9'-0" AFF

10' LENGTH OF OUTER WITH DOWNSPOUT

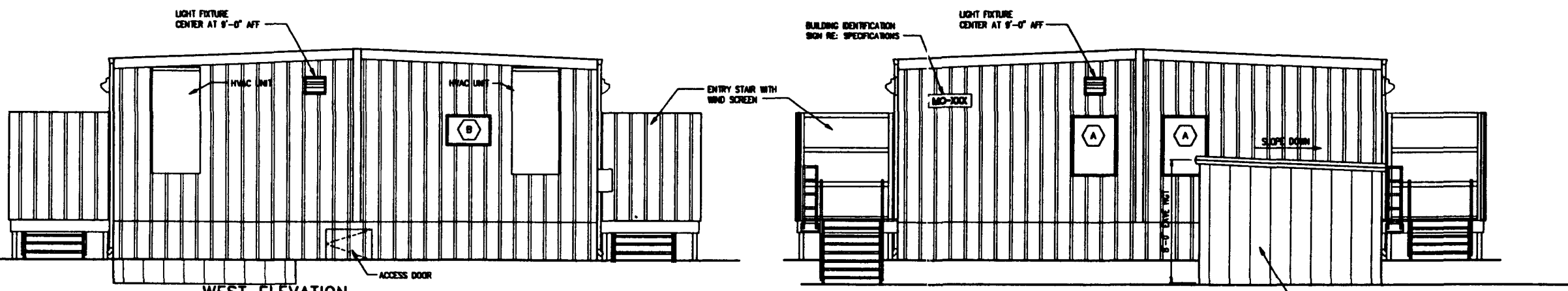


**SOUTH ELEVATION**

LIGHT FIXTURE CENTER AT 9'-0" AFF

BUILDING IDENTIFICATION SIGN RE: SPECIFICATIONS

LIGHT FIXTURE CENTER AT 9'-0" AFF



**WEST ELEVATION**

**EAST ELEVATION**

NOTE:  
SEE SHEET H-2-823282 FOR  
DETAILS OF ENTRY STAIRS  
AND WIND SCREEN



REC-88-W113-700-001  
REV 0 PAGE 155

U.S. DEPARTMENT OF ENERGY  
NORFOLK OPERATIONS OFFICE  
WESTHOUSE HAMPDEN COMPANY

**SWOC W113**  
**RETRIEVAL STAFF CHANGE BUILDING AND STORAGE BUILDING ELEVATIONS**

REVISION	BY	DATE
DRAWN	COLLIER	08-02-05
CHECKED	S. BOHLEN	08-10-05
HEAD ENGINEER	S. BOHLEN	9/27/05
DESIGN MANAGER	E. BOHLEN	9-28-05
PROJECT MANAGER	E. BOHLEN	9-28-05
BY	G.A. ROYCE	9/28/05

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL DATE

NO	DATE	BY	DESCRIPTION

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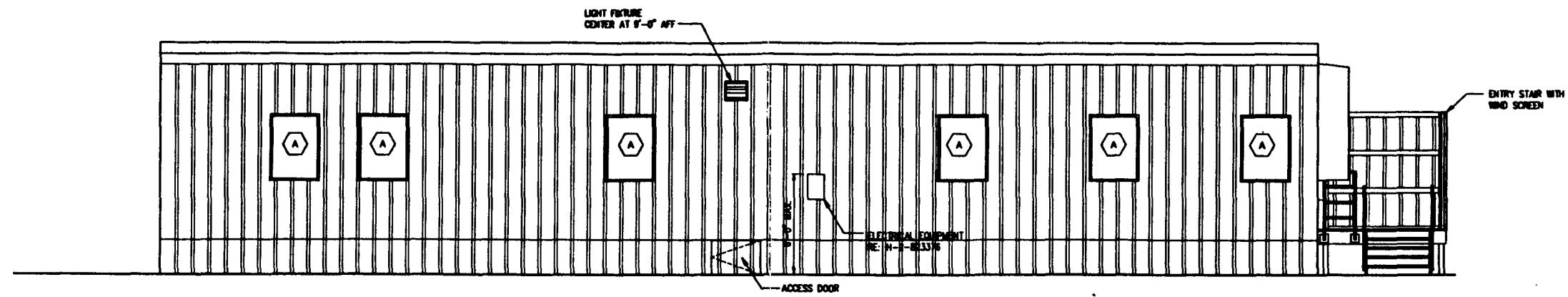
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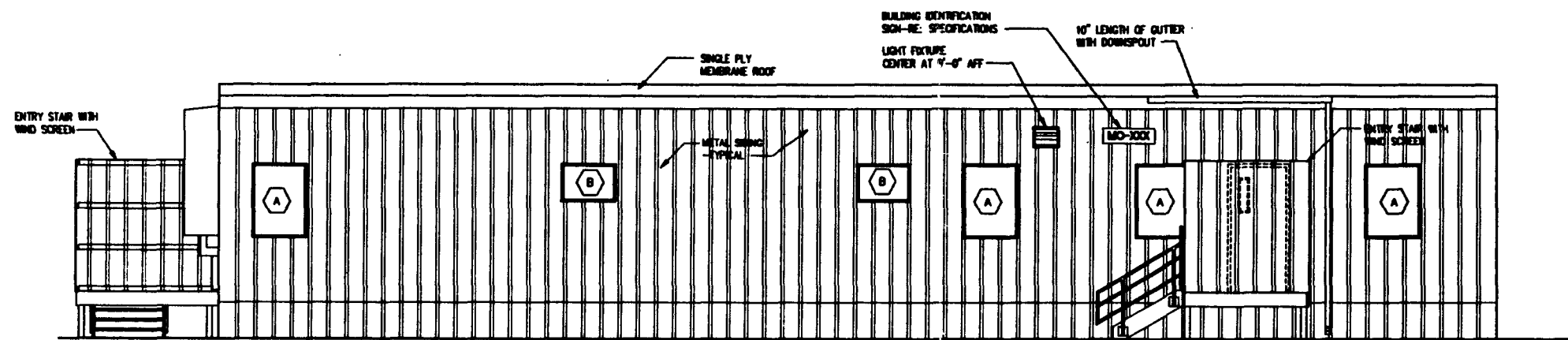
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PROJECT NO. 084888 SHEET 1 OF 3

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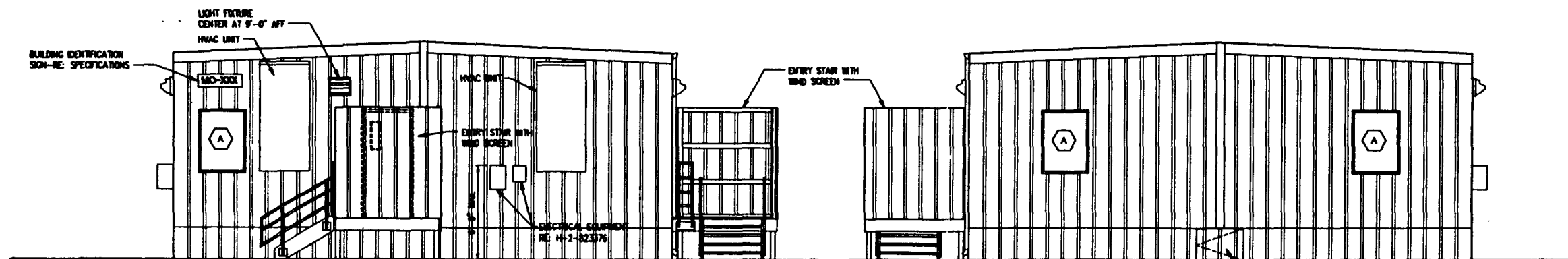
2 09/22/05 08:34 12499789 0144000 JANCA HESSEDAUNA  
 12499789 0144000 JANCA HESSEDAUNA  
 12499789 0144000 JANCA HESSEDAUNA  
 12499789 0144000 JANCA HESSEDAUNA



**SOUTH ELEVATION**



**NORTH ELEVATION**



**EAST ELEVATION**

**WEST ELEVATION**

NOTE:  
SEE SHEET H-2-823262 FOR  
DETAILS OF ENTRY STAIRS  
AND WIND SCREEN

W113-ED-W113-FOR-001  
REV 0 PAGE 136

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY  
**SWOC W113  
GENERAL OFFICE BUILDING  
ELEVATIONS**

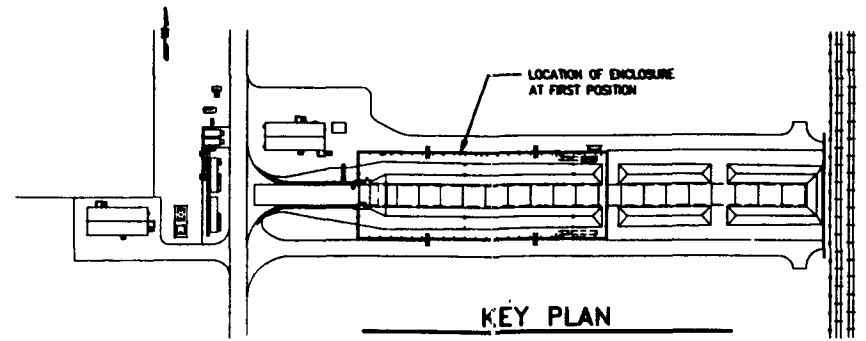
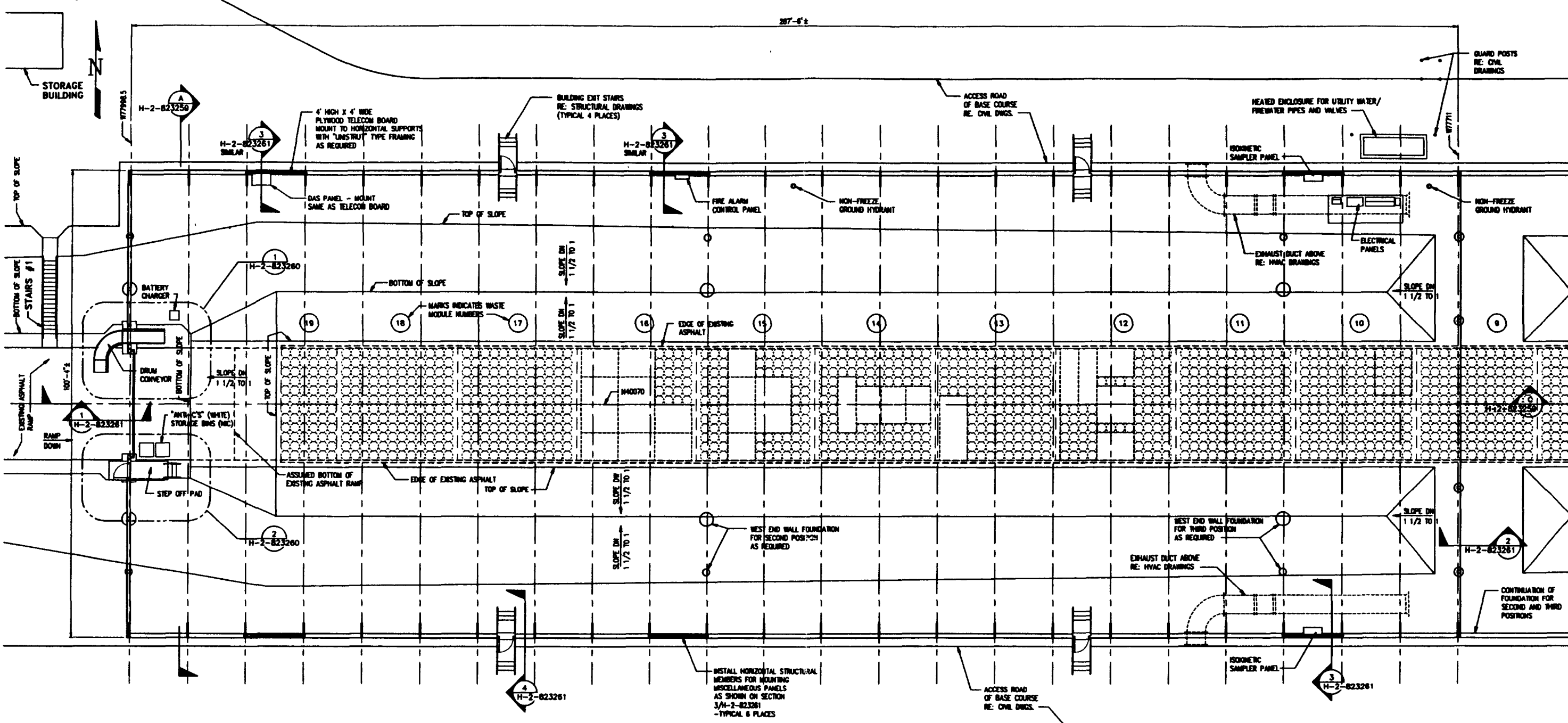
REVISION	BY	DATE
DESIGNED	CHALLENGER	05-02-95
DRAWN	CHALLENGER	05-02-95
CHECKED	A. BERLIN	05-10-95
LEAD ENGINEER	A. BERLIN	9/22/95
ENGINEER	A. BERLIN	9-26-95
PROJECT MANAGER	A. BERLIN	9-27-95
DATE	A. BERLIN	9/24/95

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
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REFERENCE DRAWINGS		REVISIONS		CADCODE: DOS: 6.2; ACD2: 12; NN

REV	BLDG NO.	BUCK NO.	DRAWING NUMBER	REV
D	MO-300X	0801	H-2-823253	0
SCALE: 1/4" = 1'-0"		PROJECT NO.	080888	SHEET 2 OF 3

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

15 20/22/95 CAD FILE: W113-ED-W113-FOR-001 188531151549337  
 16 01/04/95



ALARA NOTE:  
 PREDICTED OPERATOR RADIATION DOSES  
 ARE BASED ON MAINTAINING EQUIPMENT  
 CONFIGURATIONS/LOCATIONS SHOWN AND ON  
 OPERATING PARAMETERS (TIME/DISTANCE/  
 SEQUENCE) DESCRIBED IN THE DETAILED  
 DESIGN REPORT  
 (WIC-SD-W113-FDR-001, REV 0)

WIC-SD-W113-FDR-001  
 REV 0 PAGE 157

**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTINGHOUSE MAINTENANCE COMPANY

SWOC W113  
 FLOOR PLAN  
 TRENCH ENCLOSURE BUILDING  
 START-UP AT FIRST POSITION

BY	DATE
DESIGNED: D. BOWEN	08-28-04
DRAWN: D. BOWEN	08-28-04
CHECKED: D. BOWEN	09-15-05
LEAD ENGINEER: D. BOWEN	9/22/05
ENCL. USER: R. BISH	9/22/05
FIELD USER: K. MERRIN	9/22/05
OTHER:	9/22/05
APPROVED FOR CONSTRUCTION:	
BY:	
DATE:	

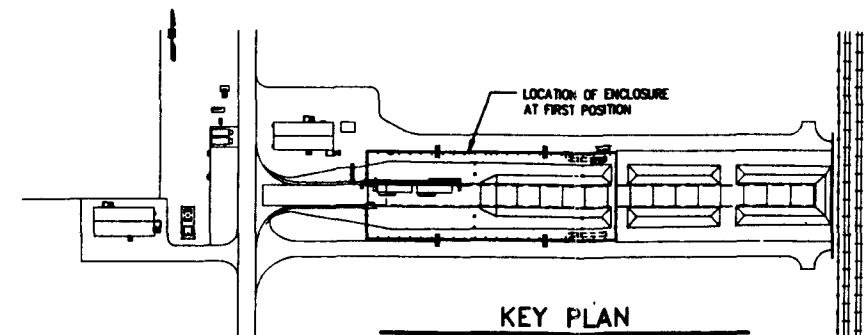
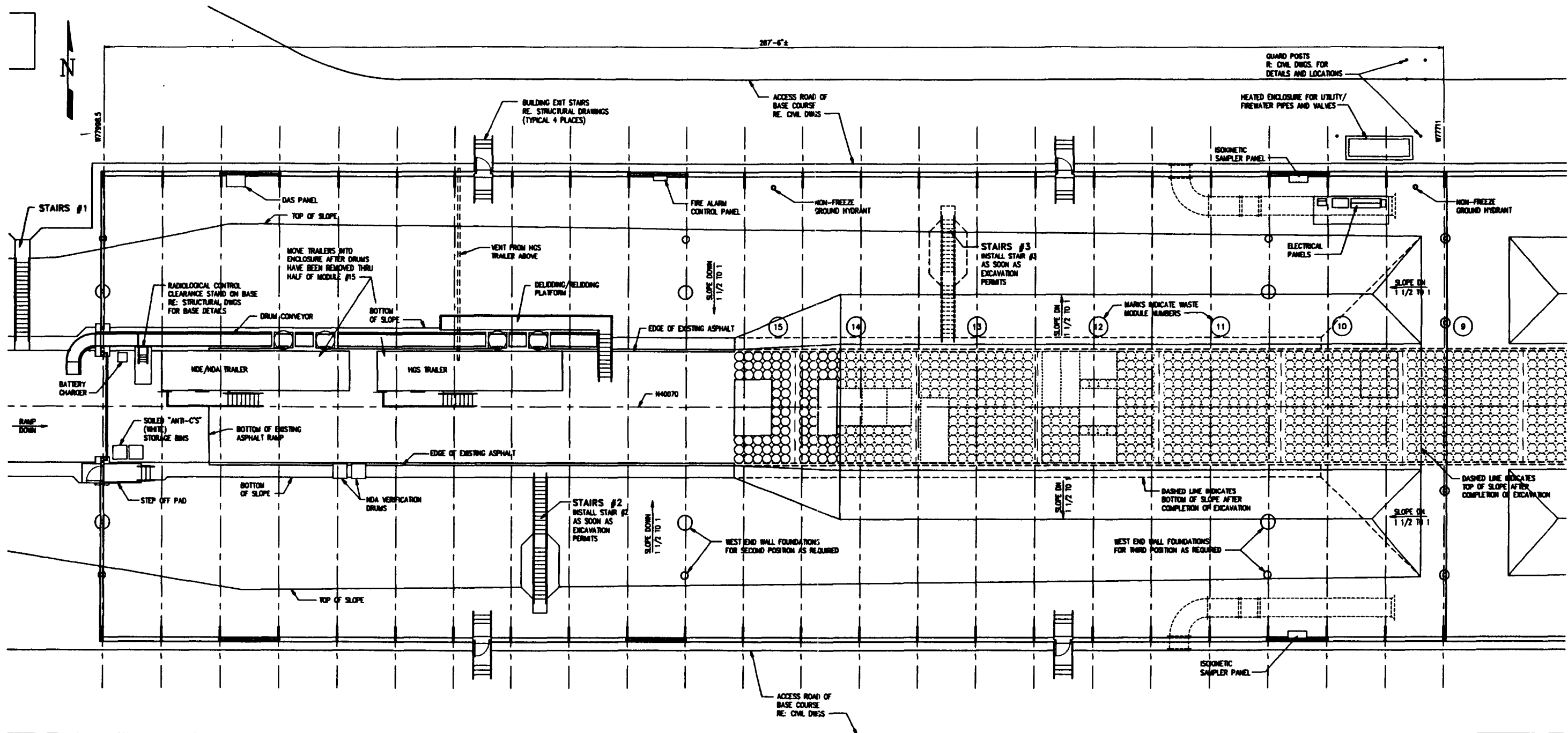
REV	DESCRIPTION	DATE
D	218 W478	0800
	H-2-823257	0

REV	DESCRIPTION	DATE	APPROVAL

DRAWING TRACEABILITY LIST	NEXT USED ON: NONE	CADFILE: 8823257A	CADCODE: DOS: 8.2: ACD2: 12: NN
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COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

10/22/05 08:53  
 COLOR  
 1 1 = 1/8"  
 12345678901011121314  
 15161718192021222324  
 25 26  
 018A.008  
 PLOT 0112000



ALARA NOTE  
PREDICTED OPERATOR RADIATION DOSES  
ARE BASED ON MAINTAINING EQUIPMENT  
CONFIGURATIONS, LOCATIONS SHOWN AND ON  
OPERATING PARAMETERS (TIME/DISTANCE/  
SEQUENCE) DESCRIBED IN THE DETAILED  
DESIGN REPORT  
(WAC-SD-W113-FOR-001, REV 0)

U.S. DEPARTMENT OF ENERGY  
SICILAND OPERATIONS OFFICE  
WESTBOROUGH, MASSACHUSETTS

**SWOC W113  
FLOOR PLAN  
TRAILERS IN AT FIRST POSITION**

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

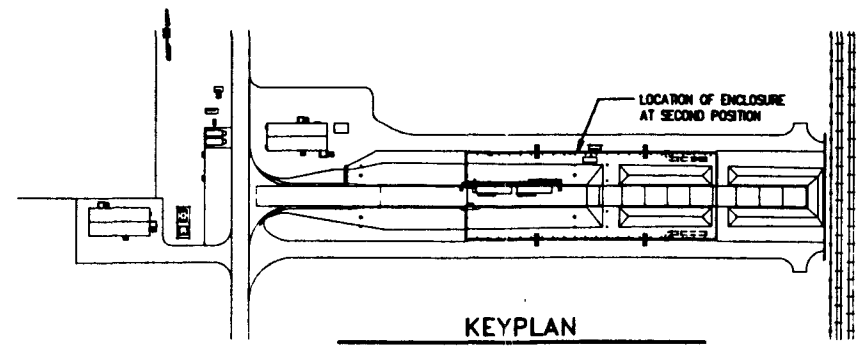
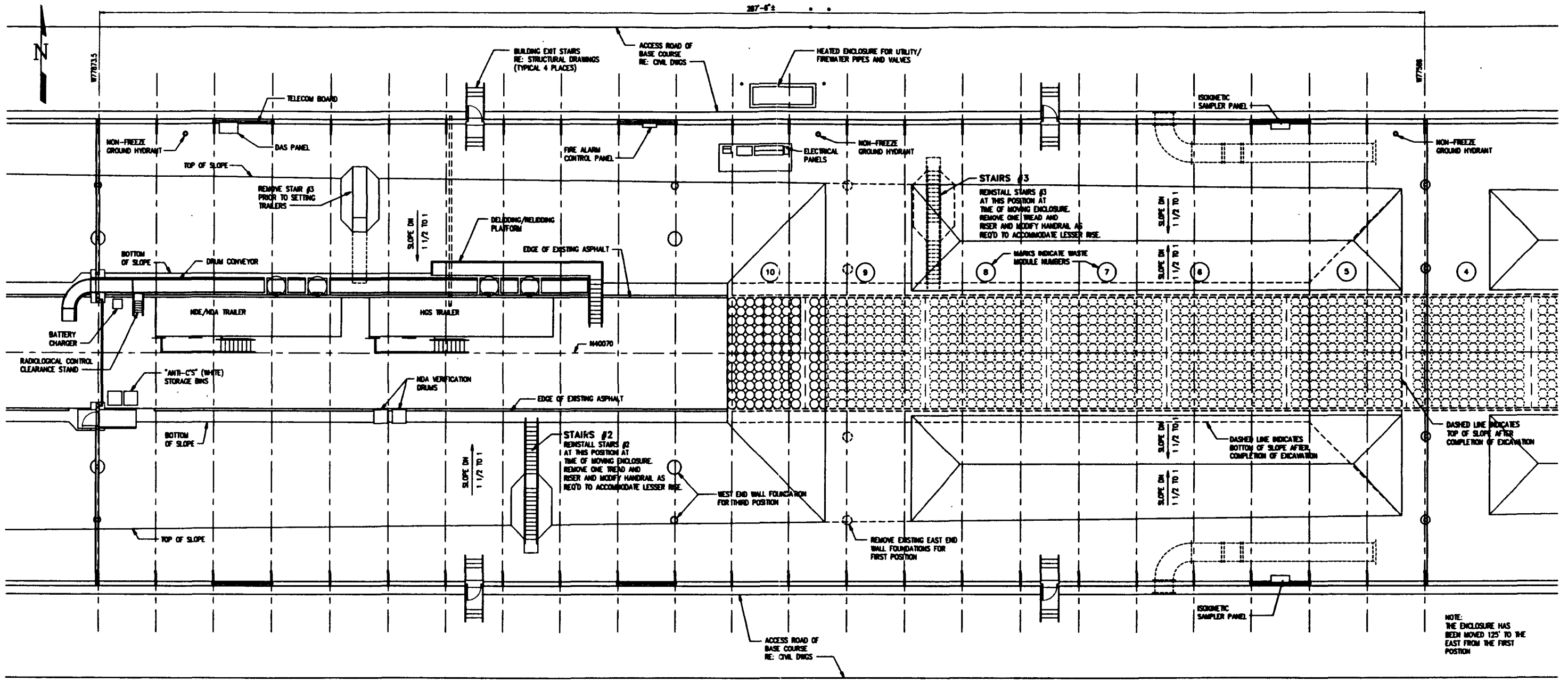
SHEET 2 OF 4

Baytheon  
Engineers & Constructors

REV	BY	DATE
DESIGNED	B. SCHLIER	03-20-94
DRAWN	G. SULLIVAN	03-20-94
CHECKED	B. SCHLIER	03-18-95
LEAD DESIGNER	B. SCHLIER	09/22/95
ENCL. NO.	B. SCHLIER	4-26-95
PROJ. NO.	B. SCHLIER	4-27-95
S.A.		9/20/95
OTHER		
APPROVED FOR IMPLEMENTATION		

REV NO.	DESCRIPTION	REV. BY/DATE	CHK. BY/DATE	APPROVAL/DATE
	REFERENCE DRAWINGS			
	REVISIONS			
	APPROVED FOR IMPLEMENTATION			

12/22/95 08:38 CAD: MS: [unclear] 12/22/95 09:14:27 PLOT: [unclear] 12/22/95 09:14:27 PLOT: [unclear] 12/22/95 09:14:27 PLOT: [unclear] 12/22/95 09:14:27 PLOT: [unclear]



**ALARA NOTE:**  
 PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (WMC-SD-W113-FDR-001, REV 0).

WMC-SD-W113-FDR-001  
 REV 0 PAGE 139

**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 NICHOLAS OPERATIONS OFFICE  
 WESTINGHOUSE HANFORD COMPANY  
 SWOC W113  
 FLOOR PLAN  
 TRENCH ENCLOSURE BUILDING  
 SECOND POSITION

REVISION	BY	DATE
DESIGNED	D. BUEHL	08-20-04
DRAWN	C. LEISHER	08-10-04
CHECKED	D. BUEHL	08-10-04
LEAD DESIGNED	D. BUEHL	9/22/04
ENG. DESIGNED	D. BUEHL	9-21-04
PROJ. MGR.	R. HENSON	9-21-04
APPROVED FOR IMPLEMENTATION	D. BUEHL	9/22/04

REV	DATE	DESCRIPTION
D	218	0800
	W478	H-2-823257
		0

REV NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVALS/DATE

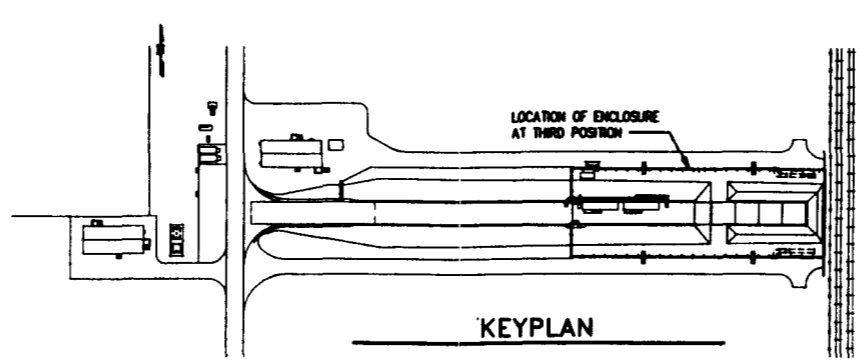
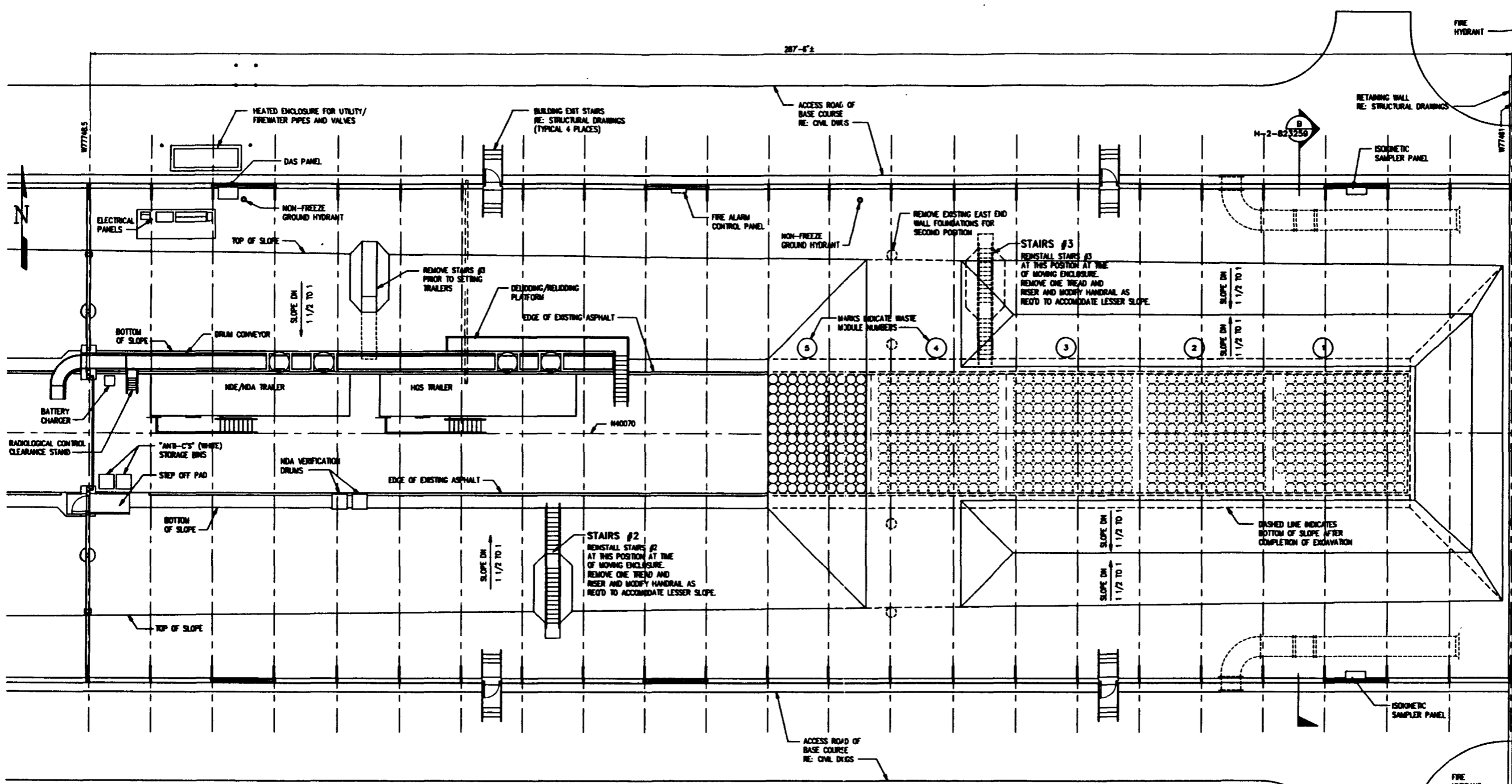
DRAWING TRACEABILITY LIST      NEXT USED ON : NONE      CADFILE: 0823257C      CADCODE: DOS: 6.2; ACD2: 12; NN

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

1 - 138    COLOR    PLOT    18331151305321    08/22/04    08:16:00  
 18331151305321    08/22/04    08:16:00    18331151305321    08/22/04    08:16:00



287'-6"



ALARA NOTE:  
 PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (WMC-SD-W113-FOR-001, REV 0).

NOTE:  
 THE ENCLOSURE HAS BEEN MOVED 125' TO THE EAST FROM THE SECOND POSITION

WMC-SD-W113-FOR-001  
 REV 0 PAGE 160

**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTINGHOUSE HANFORD COMPANY

SWOC W113  
 FLOOR PLAN  
 TRENCH ENCLOSURE BUILDING  
 THIRD POSITION

BY	DATE
DESIGNED B. BOHLN	08-28-04
DRAWN CHALLENGER	10-10-04
CHECKED B. BOHLN	09-10-05
LEAD ENGR B. BOHLN	9/22/05
ENGR. IN CH. K. BERBER	9-27-05
PROJ. MGR. K. BERBER	9-27-05
APPROVED FOR IMPLEMENTATION	9/26/05

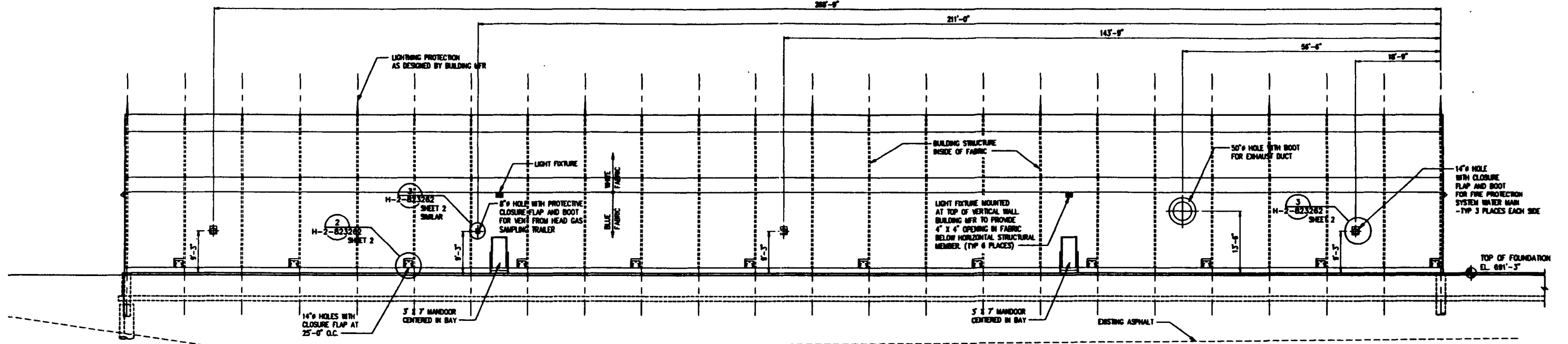
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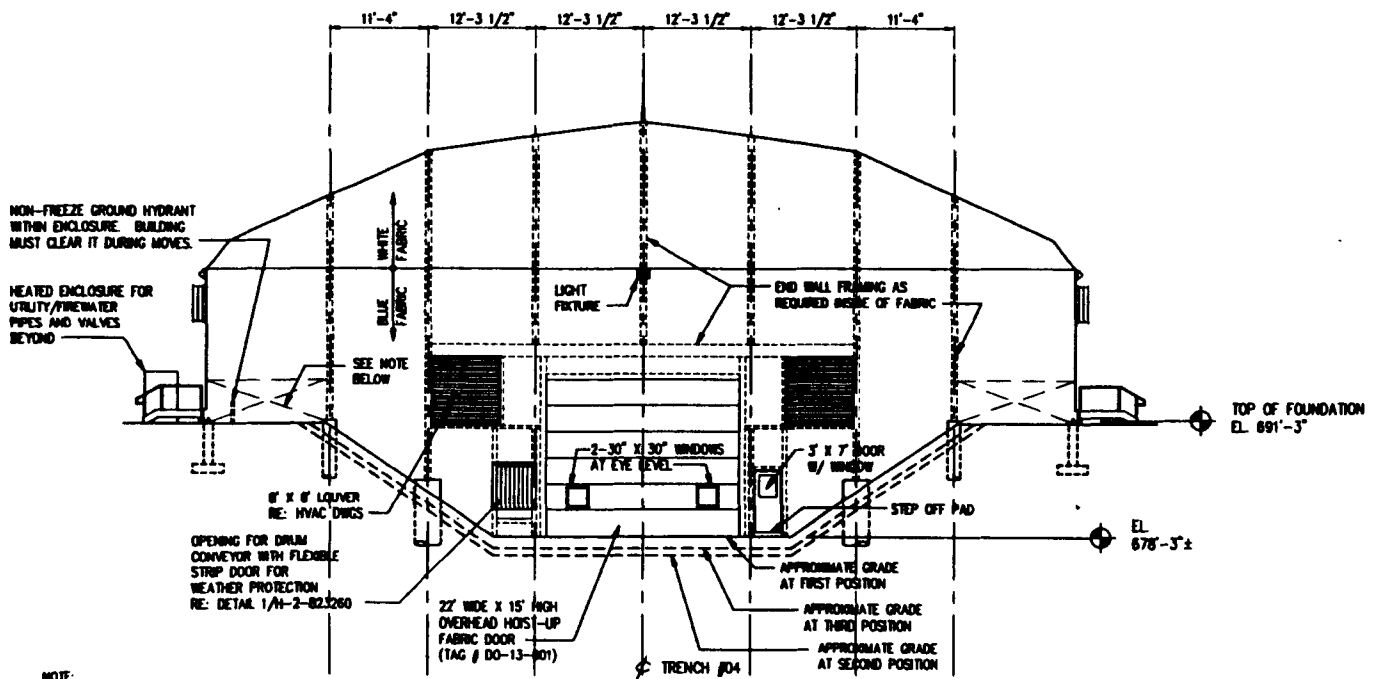
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D	218	0800	H-2-823257
	W478		

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

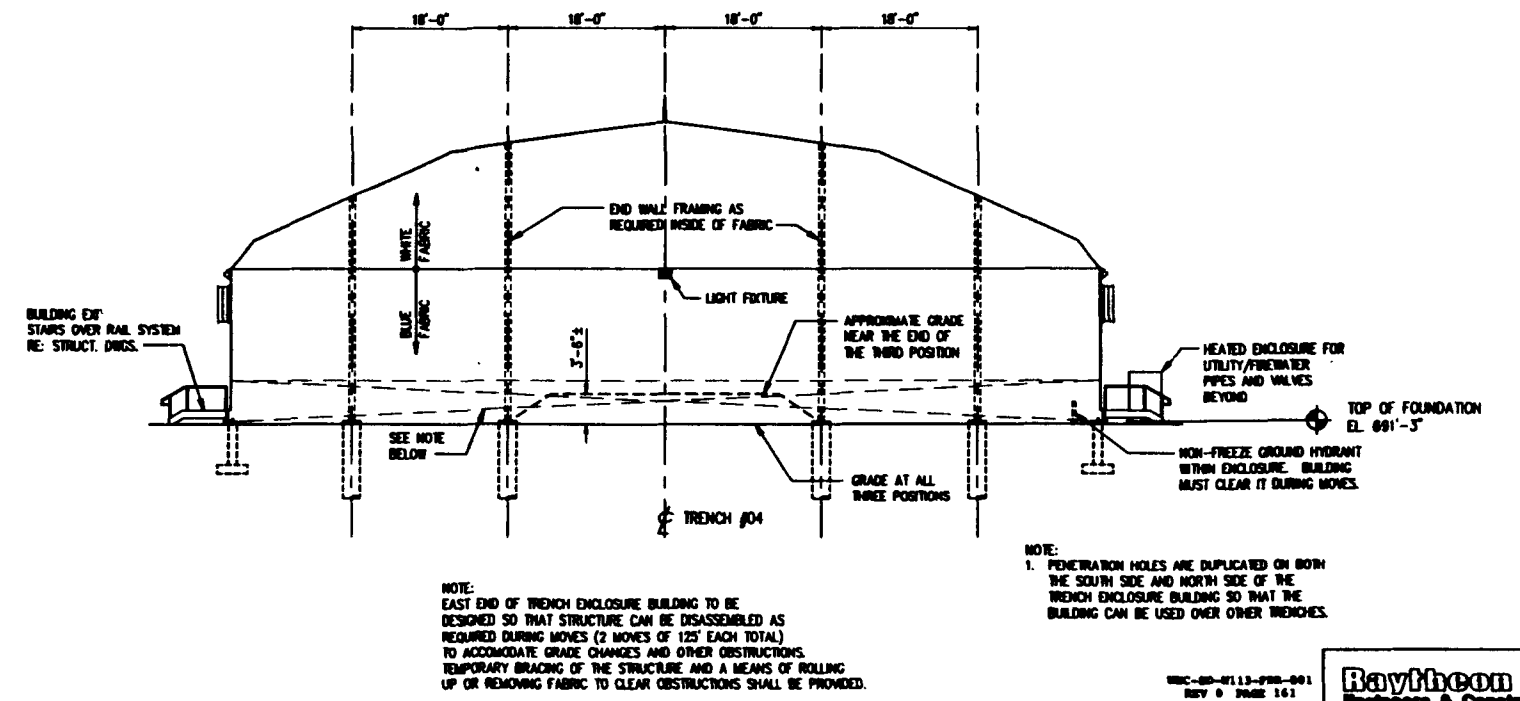
1 - 128  
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**SOUTH ELEVATION**  
AT THE FIRST POSITION



**WEST ELEVATION**  
AT THE FIRST POSITION



**EAST ELEVATION**  
AT THE FIRST POSITION

NOTE:  
WEST END OF TRENCH ENCLOSURE BUILDING TO BE DESIGNED SO THAT STRUCTURE CAN BE DISASSEMBLED AS REQUIRED DURING MOVES (2 MOVES OF 125' EACH TOTAL) TO ACCOMMODATE GRADE CHANGES AND OTHER OBSTRUCTIONS. THE THREE DOORS, THEIR JAMBS AND SUPPORTING STRUCTURE SHALL BE DESIGNED SO THAT THEIR ELEVATION CAN BE ADJUSTED TO SEAL AGAINST THE EXISTING GRADE AT ALL THREE POSITIONS. TEMPORARY BRACING OF STRUCTURE AND A MEANS OF ROLLING UP OR REMOVING FABRIC SHALL BE PROVIDED. END WALLS SHALL BE FRAMED TO PERMIT THE PLACEMENT OF REQUIRED FOUNDATIONS FOR ALL THREE POSITIONS OF THE STRUCTURE DURING INITIAL CONSTRUCTION.

NOTE:  
EAST END OF TRENCH ENCLOSURE BUILDING TO BE DESIGNED SO THAT STRUCTURE CAN BE DISASSEMBLED AS REQUIRED DURING MOVES (2 MOVES OF 125' EACH TOTAL) TO ACCOMMODATE GRADE CHANGES AND OTHER OBSTRUCTIONS. TEMPORARY BRACING OF THE STRUCTURE AND A MEANS OF ROLLING UP OR REMOVING FABRIC TO CLEAR OBSTRUCTIONS SHALL BE PROVIDED.

NOTE:  
1. PENETRATION HOLES ARE DUPLICATED ON BOTH THE SOUTH SIDE AND NORTH SIDE OF THE TRENCH ENCLOSURE BUILDING SO THAT THE BUILDING CAN BE USED OVER OTHER TRENCHES.

SEC-88-0113-PFB-001  
REV 9 PAGE 161

**Raytheon**  
Engineers & Constructors

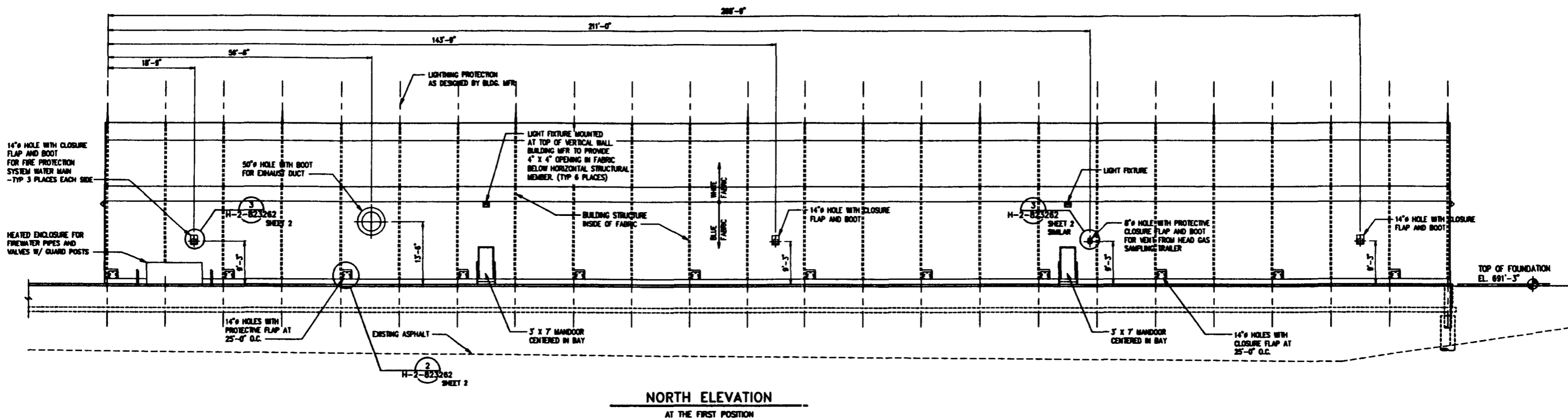
U.S. DEPARTMENT OF ENERGY  
NORLAND OPERATIONS OFFICE  
WESTHOUSE HANFORD COMPANY

**SWOC W113**  
**BUILDING ELEVATIONS**  
**TRENCH ENCLOSURE BUILDING**

DESIGNED	BY	DATE
B. BOHLER	B. BOHLER	10-05-94
CHECKED	BY	DATE
B. BOHLER	B. BOHLER	09-19-95
LEAD OVER	BY	DATE
B. BOHLER	B. BOHLER	9/22/95
ENR. USER	BY	DATE
B. BOHLER	B. BOHLER	9-21-95
PROJ. USER	BY	DATE
B. BOHLER	B. BOHLER	9-21-95
DATE	BY	DATE
9-22-95	B. BOHLER	9-22-95

SIZE	BLD NO.	INDEX NO.	DRAWING NUMBER	REV
D	218	0800	H-2-823258	0
SCALE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	
3/2"=1'-0"	004-000	1	2	

REV NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
DRAWING TRACEABILITY LIST				
NEXT USED ON : NONE				
CADFILE: 8823258A				
CADCODE: DOS: 6.2; ACD2: 12; NH				



NORTH ELEVATION  
AT THE FIRST POSITION

11-1-128  
 COLOR  
 1 2 3 4 5 6 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  
 11-1-128

REC-80-W113-FWB-001  
REV 0 PAGE 162



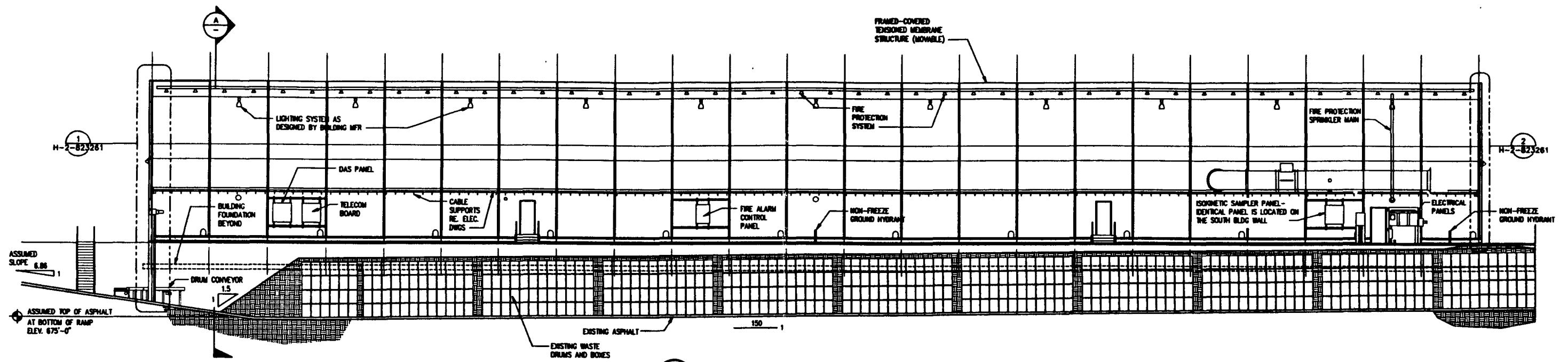
U.S. DEPARTMENT OF ENERGY BICKLAND OPERATIONS OFFICE WESTINGHOUSE HANFORD COMPANY	
SWOC W113 BUILDING ELEVATION TRENCH ENCLOSURE BUILDING	
REV	DESCRIPTION
D	218 W478 0801 H-2-823258 0
SCALE	3/8" = 1'-0"
PROJECT NO.	0004.000
SHEET	2 OF 2

BY	DATE
DESIGNED: D. BOWEN	08-28-94
DRAWN: COLLENDER	08-28-94
CHECKED: D. BOWEN	09-19-95
LEAD ENGR: D. BOWEN	9/22/95
ENGR. IN CH: R. SHU	1/7/99
PRG. MGR: E. GIBSON	9/21/94
C.A.:	9/26/95

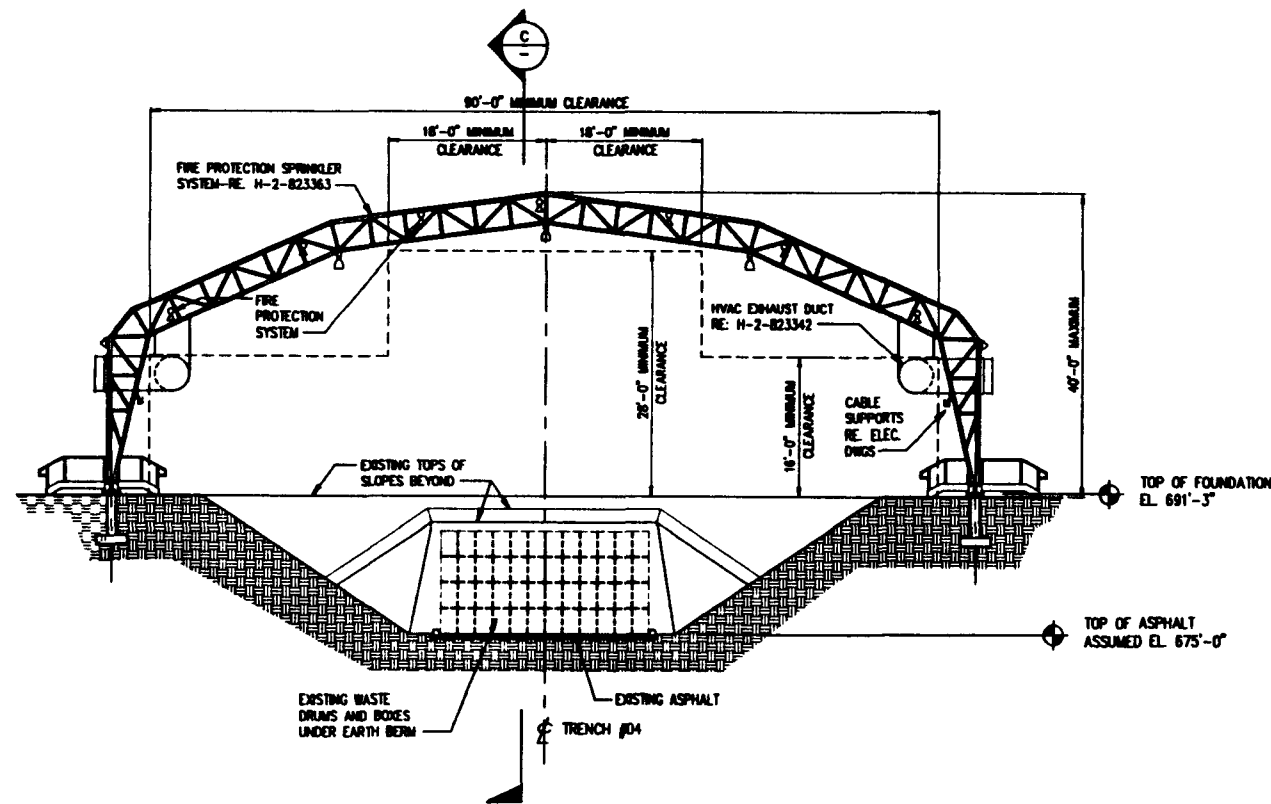
REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVALS/DATE

DRAWING TRACEABILITY LIST      NEXT USED ON : NONE      CADFILE: 08232588      CADCODE: DOS: 6 2. ACD2 12 NN

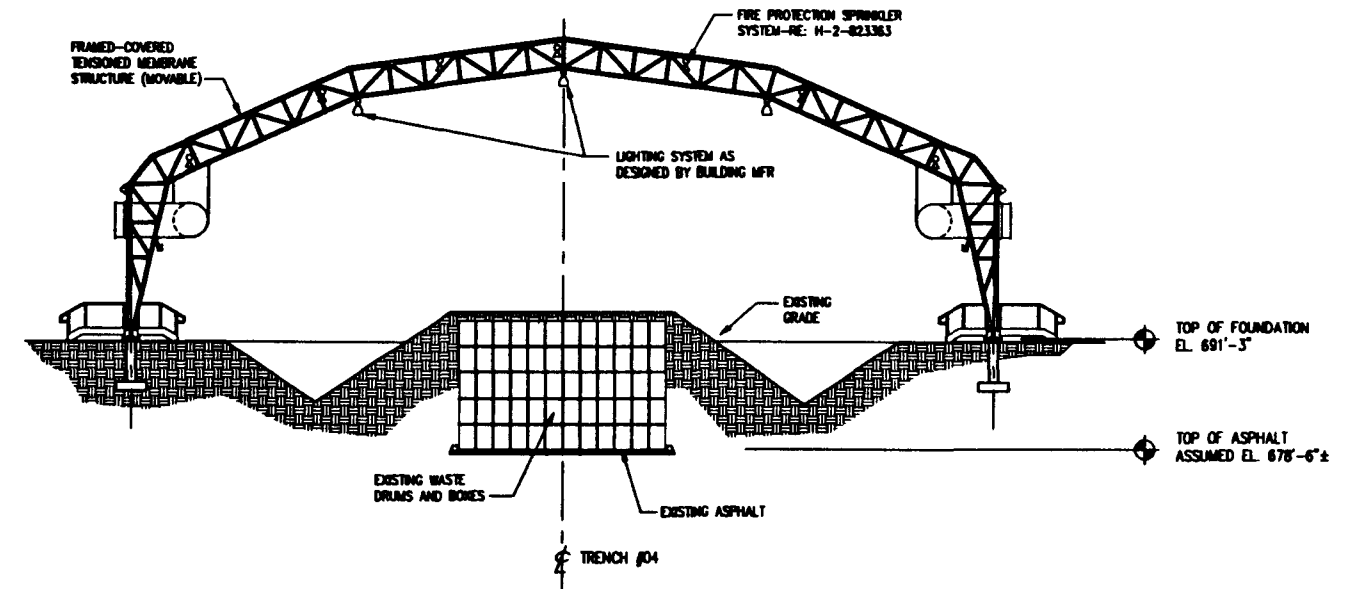
COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED



C SECTION AT TRENCH  
H-2-823257 SHT. 1



A SECTION AT WEST END OF TRENCH  
H-2-823257 SHT. 1



B SECTION AT EAST END OF TRENCH  
H-2-823257 SHT. 4

NOTE: BUILDING SHOWN IN THIRD POSITION

HHC-80-W113-PDR-001  
REV 8 PAGE 163

Baytheon  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

SWOC W113  
BUILDING SECTIONS  
TRENCH ENCLOSURE BUILDING

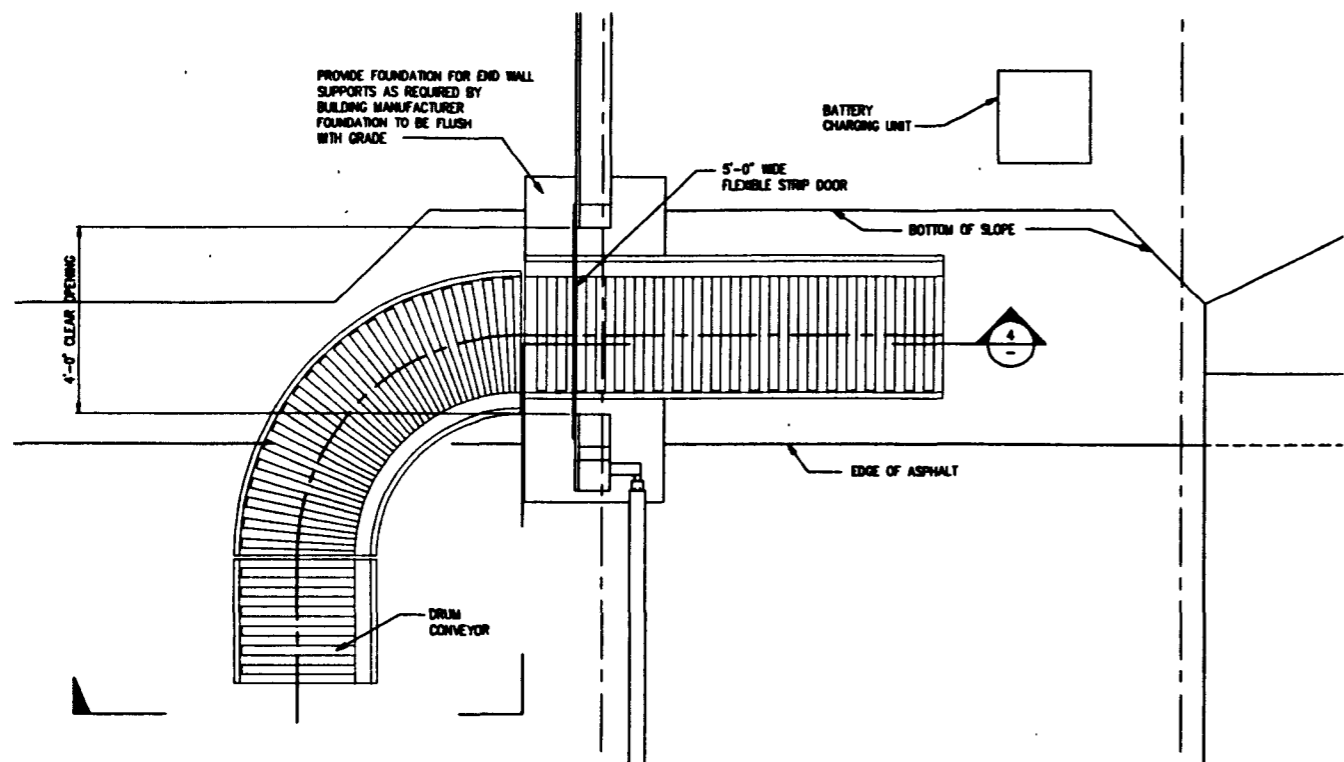
REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
REFERENCE DRAWINGS				
DRAWING TRACEABILITY LIST				
NEXT USED ON: NONE				

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
REVISIONS				
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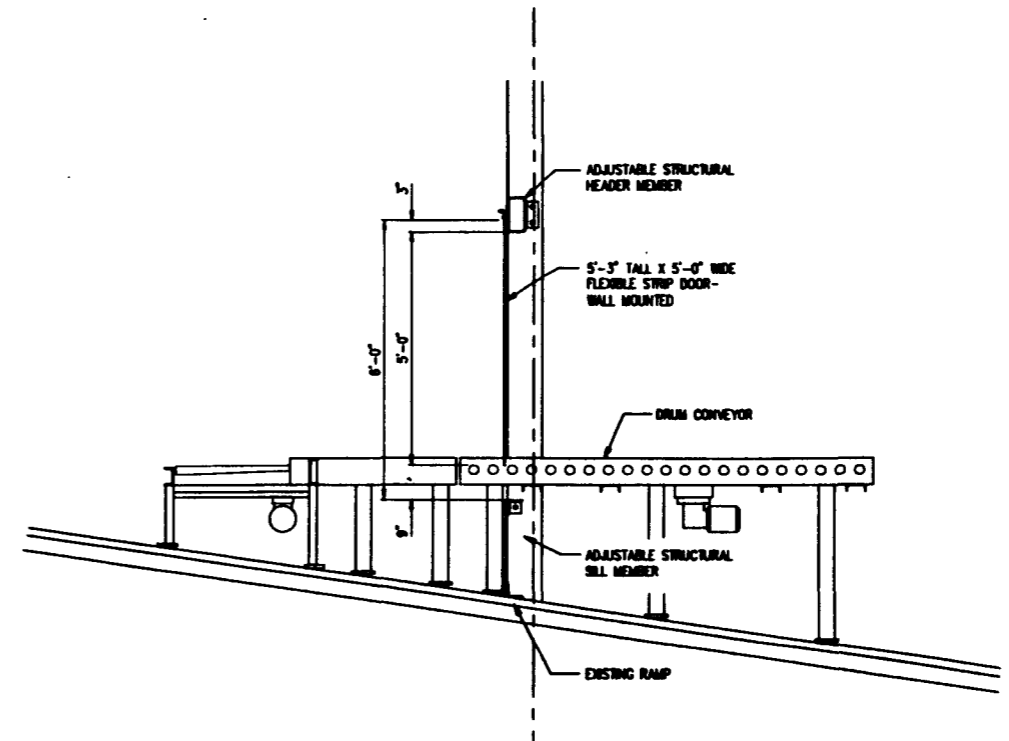
DATE	BY	DESCRIPTION
08-28-04	B. BIRLIN	DESIGNED
08-28-04	C. COLLIER	DRAWN
08-19-05	B. BIRLIN	CHECKED
9/20/95	B. BIRLIN	LEAD ENGINEER
9/21/95	R. BISH	ENG. WDR
1-21-95	E. WERSON	PRD. WDR
9/20/95	G. FRIST	S.A.

REV	DESCRIPTION	DATE
0	ISSUED FOR CONSTRUCTION	
1		
2		
3		
4		

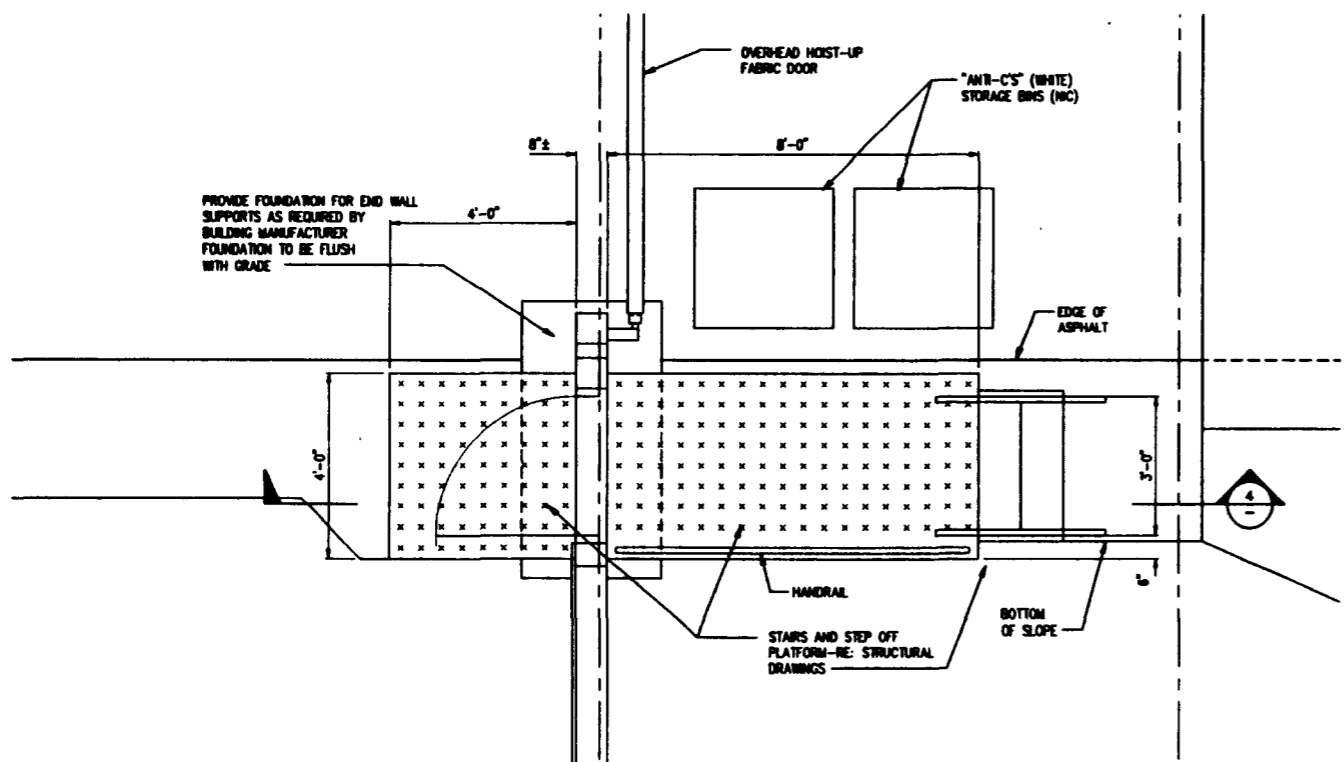
D	218	0801	H-2-823259	0
	W478			



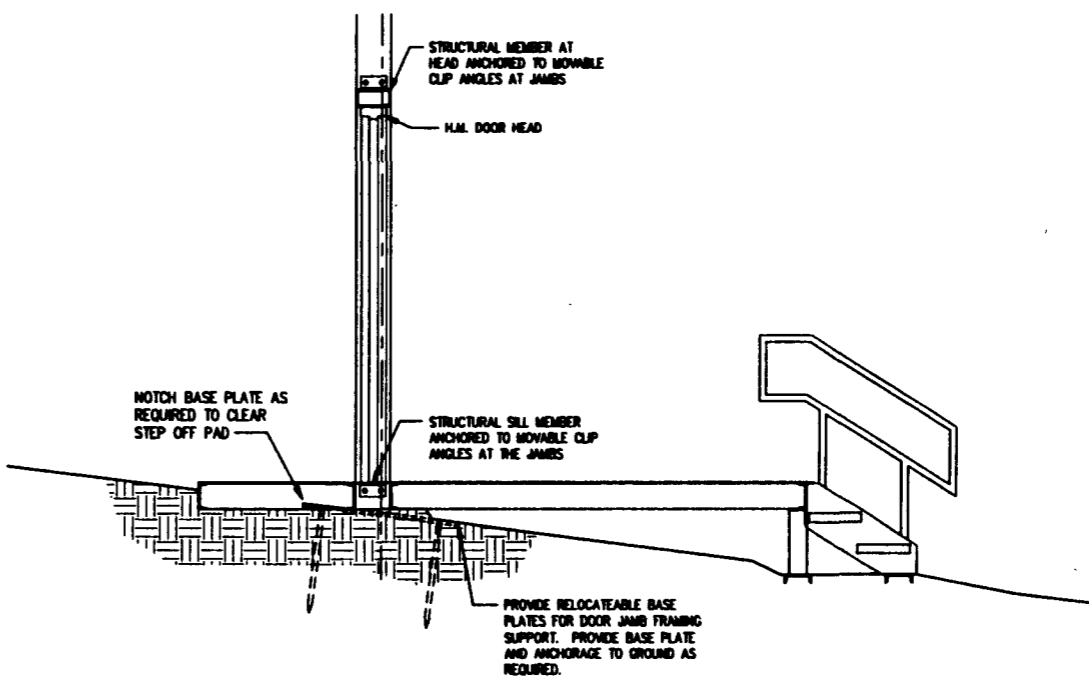
1 ENLARGED PLAN AT CONVEYOR  
H-2-823257 1/2" = 1'-0"



3 SECTION AT ENTRY CONVEYOR  
1/2" = 1'-0"



2 ENLARGED PLAN AT STEP OFF PAD  
H-2-823257 1/2" = 1'-0"



4 SECTION AT STEP OFF PAD  
1/2" = 1'-0"

18/23/95 0840 12:48:00 08/23/95 0840 12:48:00 08/23/95 0840 12:48:00  
 COLOR FOR BROW 18/23/95 0840 12:48:00 08/23/95 0840 12:48:00 08/23/95 0840 12:48:00  
 18/23/95 0840 12:48:00 08/23/95 0840 12:48:00 08/23/95 0840 12:48:00

REC-80-0113-FOR-001  
REV 9 PAGE 164

**Raytheon**  
Engineers & Constructors

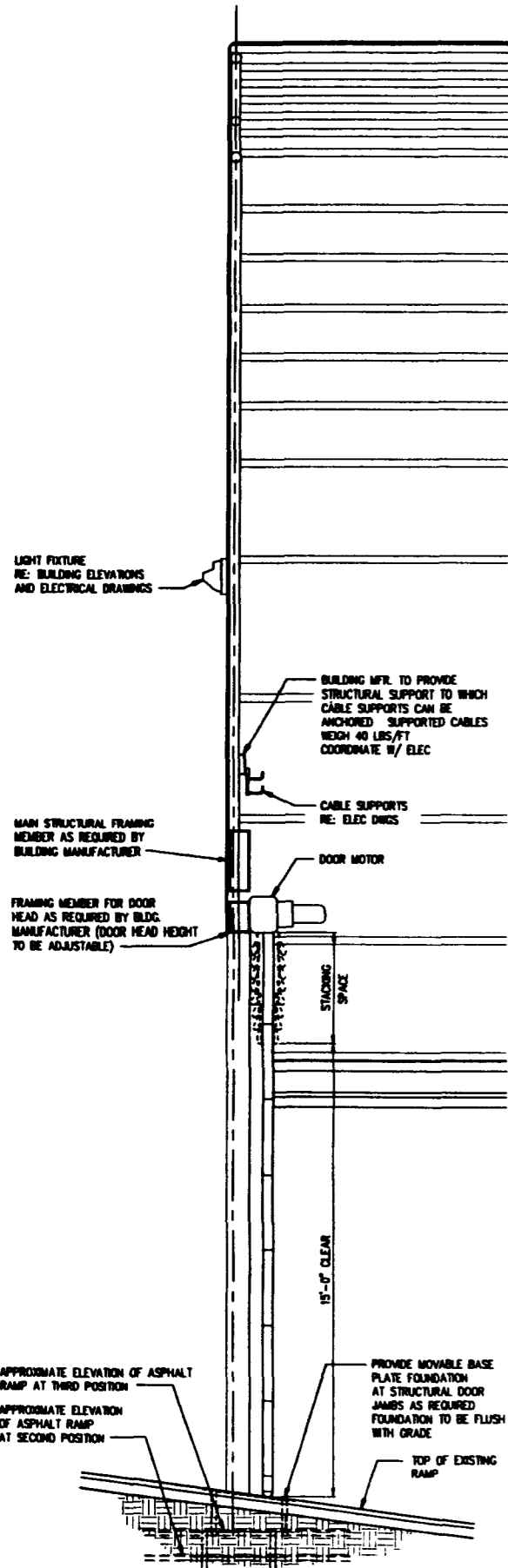
U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTHOUSE MANFORD COMPANY

SWOC W113  
ENLARGED PLANS  
TRENCH ENCLOSURE BUILDING

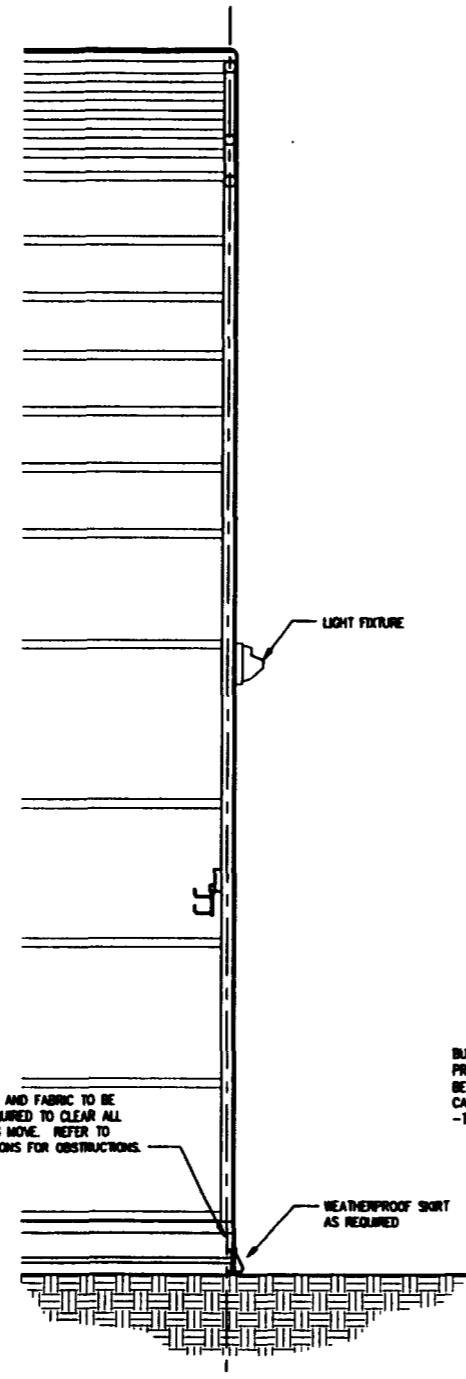
BY	DATE	SCALE	BLDG NO.	INDEX NO.	DRAWING NUMBER	REV
DESIGNED	CHALLENGER	08-20-95				
DRAWN	CHALLENGER	08-20-95				
CHECKED	D. BOHLER	08-19-95				
LEAD ENGR	D. BOHLER	9/22/95				
ENR. ENGR	D. BOHLER	9/27/95				
PRJ. MGR	C. HERRON	11-21-95				
QA	D. FINEY	9/26/95				
OTHER						
APPROVED FOR IMPLEMENTATION						
BY	DATE					

REV NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
	REFERENCE DRAWINGS			
	REVISIONS			
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	NEXT USED ON : NONE			
	CADFILE: 8823280A			
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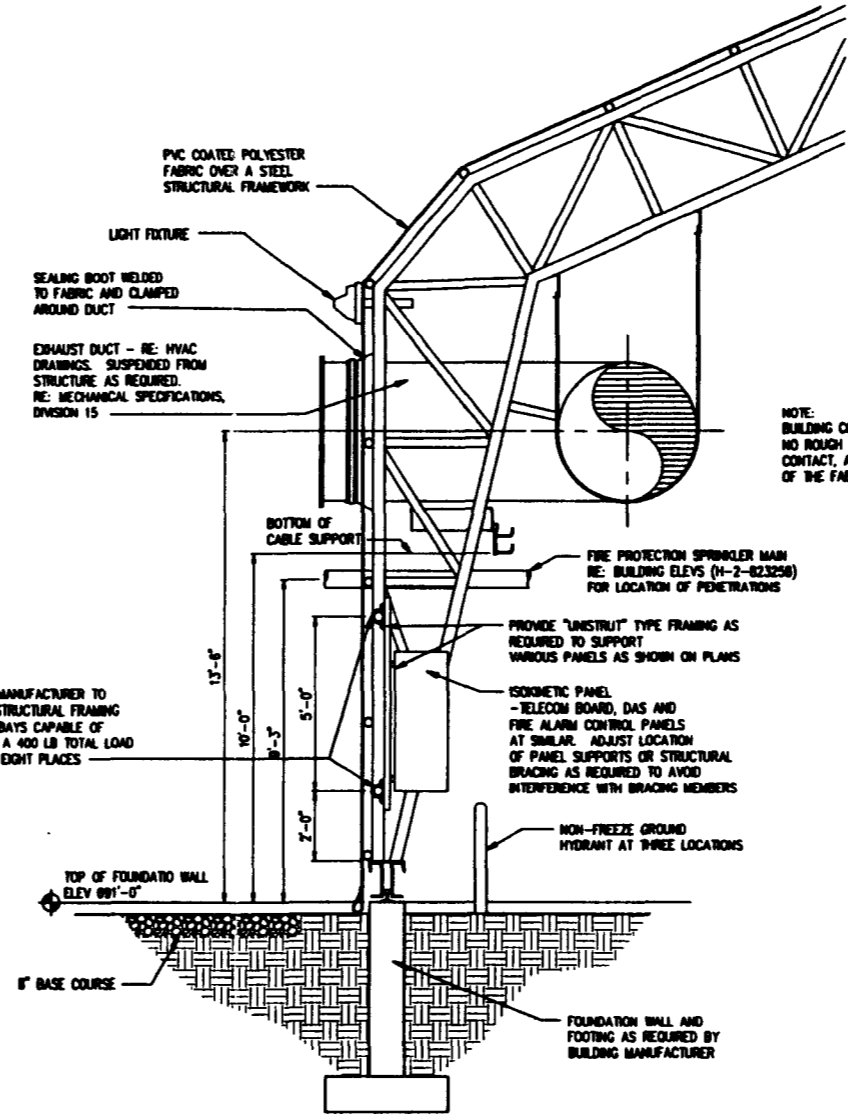
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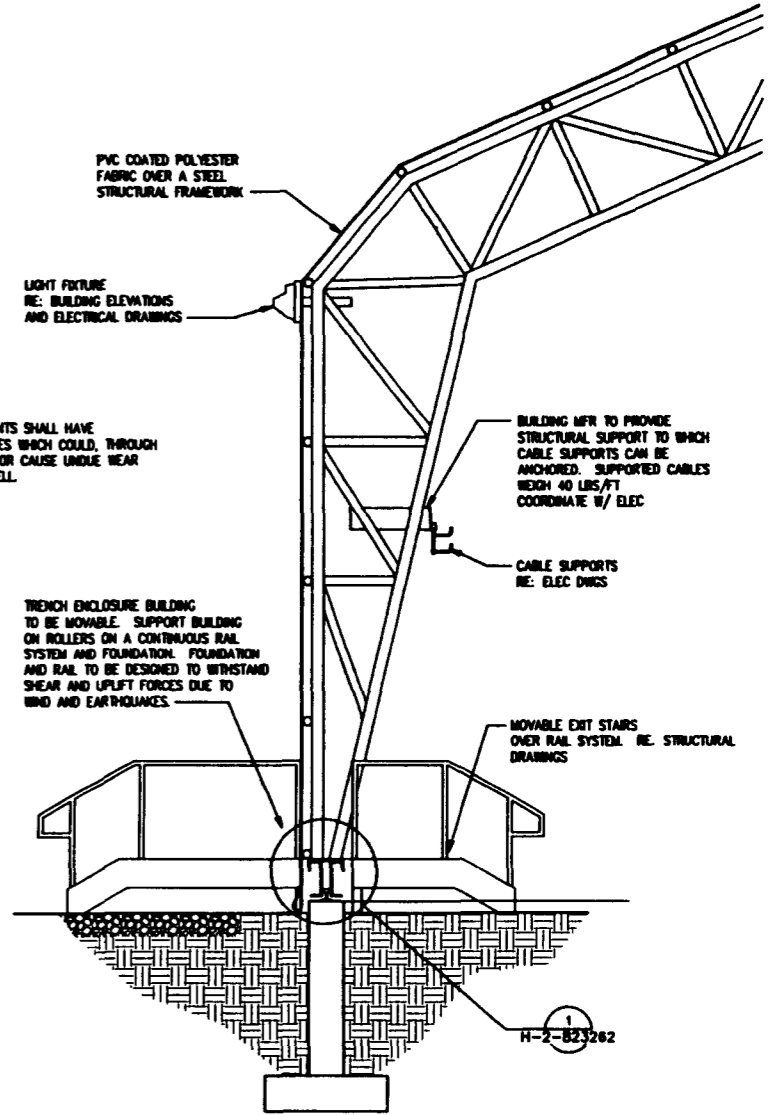
**1 SECTION @ END WALL**  
H-2-823257 SHEET 1



**2 SECTION @ END WALL**  
H-2-823257 SHEET 1



**3 SECTION @ SIDE WALL**  
H-2-823257 SHEET 1



**4 SECTION @ SIDE WALL**  
H-2-823257 SHEET 1

18272/RS 08/05/18 1234567891011121314151617181920212223  
 COLOR FOR MEAS 1883115 3540322  
 DATE 1 - 22  
 PLOT 01/14/02  
 FORM W-1000

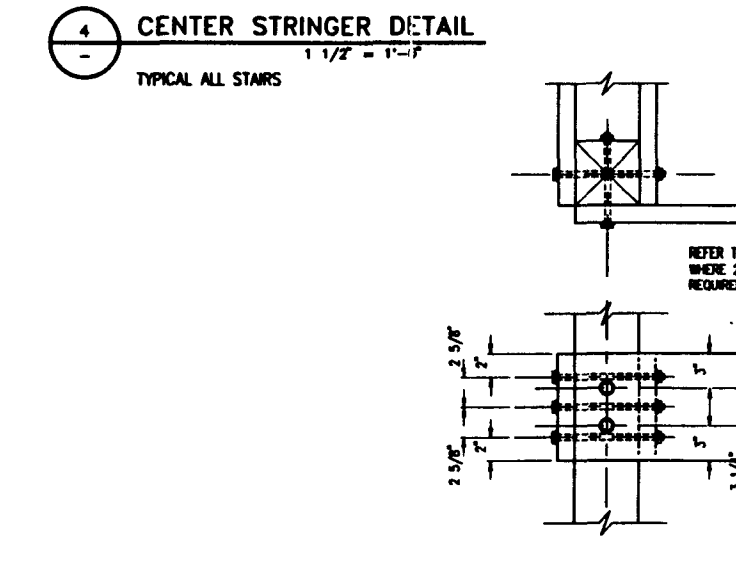
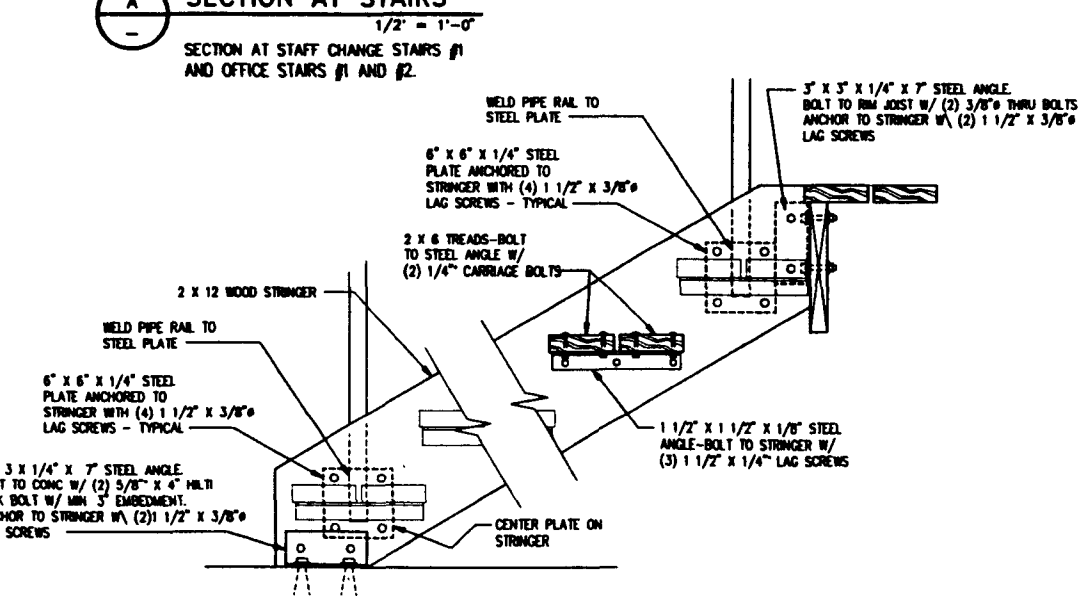
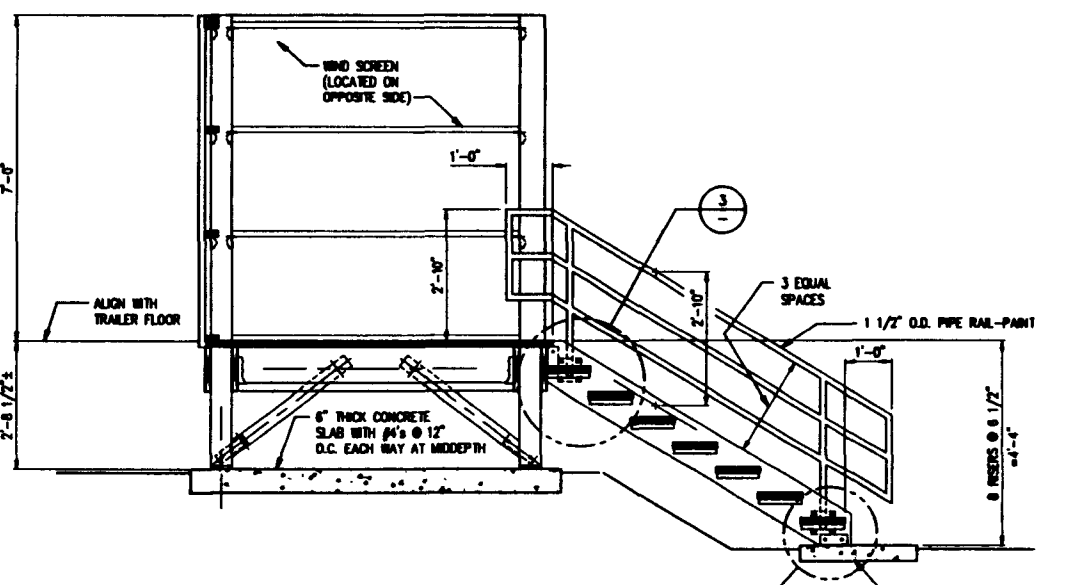
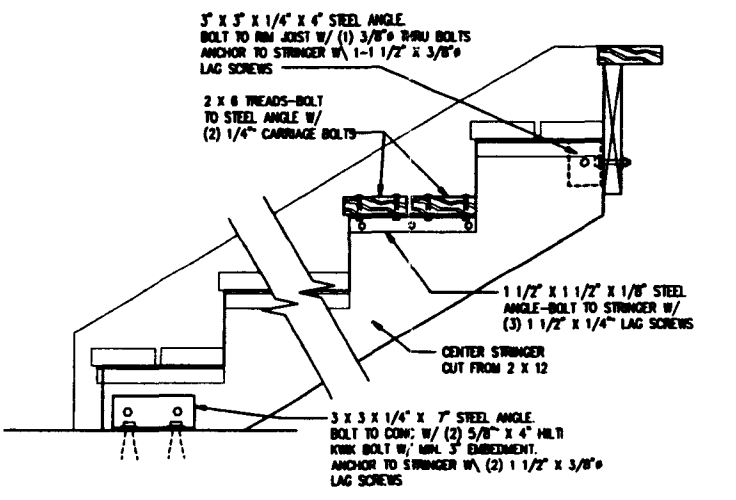
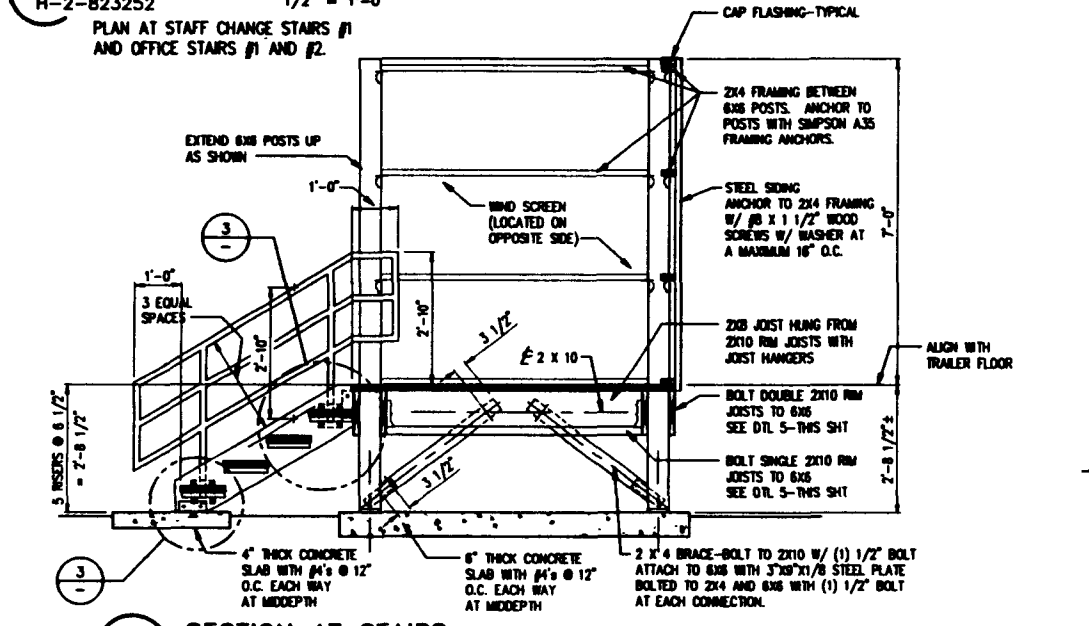
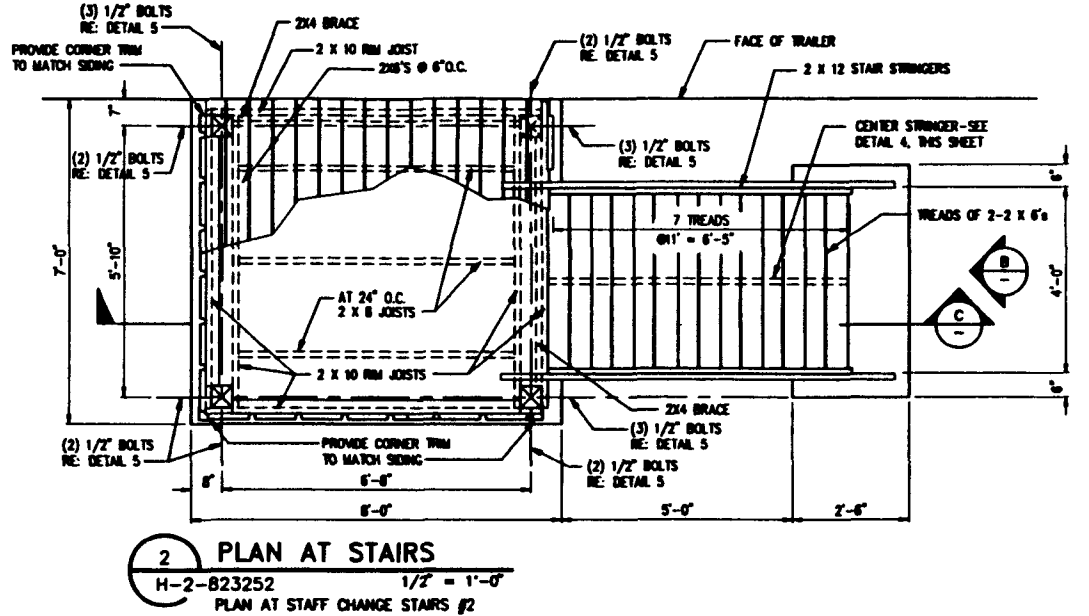
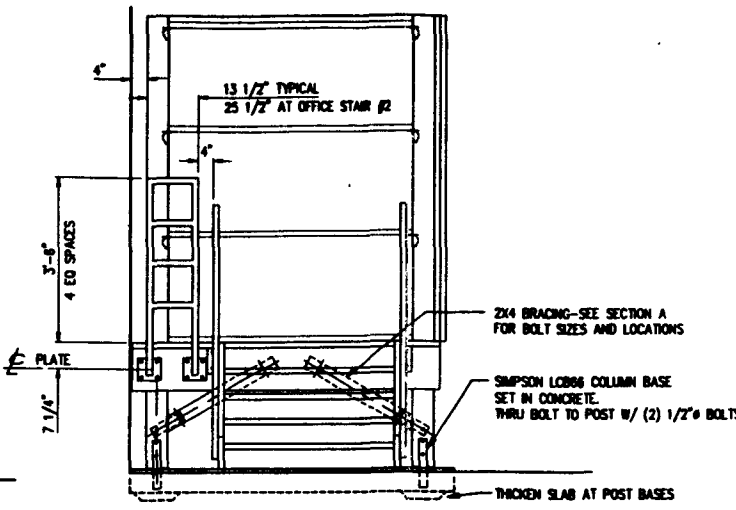
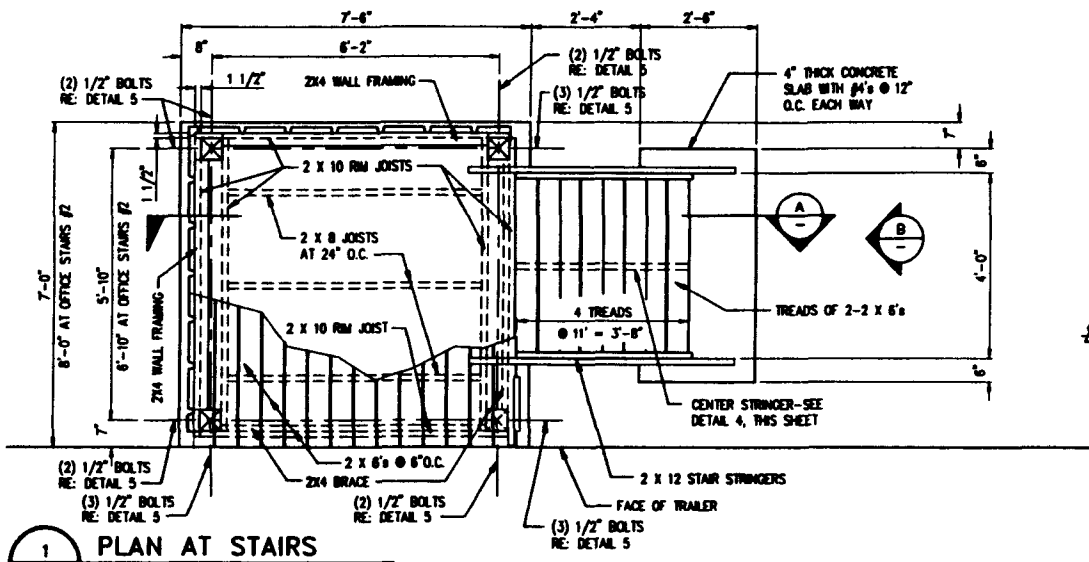
**Raytheon**  
Engineers & Constructors

REVISION	BY	DATE	U.S. DEPARTMENT OF ENERGY
DESIGNED	CHALLENGER	08-07-05	RICHLAND OPERATIONS OFFICE
DRAWN	CHALLENGER	08-07-05	WESTHOUSE HAMFORD COMPANY
CHECKED	B. BOHLEN	09-16-05	SWOC W113 WALL SECTIONS TRENCH ENCLOSURE BUILDING
LEAD DESIG	B. BOHLEN	9/22/05	
ENR. MGR	B. BOHLEN	9/27/05	
PROJ. MGR	E. NELSON	9/27/05	
C.A.	B. FRIST	9/28/05	
OTHER			
APPROVED FOR IMPLEMENTATION			
BY			
DATE			

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

DRAWING TRACEABILITY LIST	REFERENCE DRAWINGS	REVISIONS
NEXT USED ON : NONE	CADFILE: 8823261A	CADCODE: DOS:6.2:ACD2:12:NN

SCALE	BLDG NO.	INDEX NO.	DRAWING NUMBER	REV
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SCALE: 3/8"=1'-0"				



NOTES:

- STRUCTURAL MEMBERS TO BE PRESERVATIVE TREATED DOUGLAS FIR, GRADE #2 OR BETTER.
- APPLY SEALER TO ALL EXPOSED WOOD INCLUDING UNDERSIDE OF TREADS AND DECKING.
- NOTES IN ON PLANS, SECTIONS AND ELEVATIONS APPLY TO ALL PLANS, SECTIONS AND ELEVATIONS ON THIS SHEET.
- ALL METAL SHALL BE GALVANIZED.
- VERIFY ACTUAL TRAILER FLOOR HEIGHT BEFORE FABRICATING STAIRS. ADJUST RISERS AS REQUIRED (7" MAXIMUM RISER).

RAYTHEON ENGINEERS & CONSTRUCTORS

U.S. DEPARTMENT OF ENERGY  
WESTINGHOUSE HANFORD COMPANY

SWOC W113  
STAIR DETAILS  
GENERAL OFFICE/RETIVAL  
STAFF CHANGE BUILDING

REVISED	BY	DATE	SCALE	BLDG NO.	SHEET NO.	BRANNING NUMBER	REV
DESIGNED	CHALLENGER	04-20-85					
DRAWN	CHALLENGER	04-20-85					
CHECKED	CHALLENGER	08-01-85					
LEAD ENGR.	R. HENSLER	9/22/95					
ENCL. ENGR.	R. HENSLER	10-27-95					
PROJ. ENGR.	R. HENSLER	10-27-95					
G.A.	G. TRUST	7/26/95					
OTHER							
APPROVED FOR IMPLEMENTATION							
BY							
DATE							

D MO-XXX 0801 H-2-B23262 0

SCALE: AS SHOWN PROJECT NO. 0804-008 SHEET 1 OF 2

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
	REFERENCE DRAWINGS			
	REVISIONS			

DRAWING TRACEABILITY LIST

NEXT USED ON : NONE

CADFILE: B23262A

CADCODE: DOS: 6.2: ACD2: 12: NN

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

18-010-000-001 (Rev. 10-20-79) 18-010-000-001 (Rev. 10-20-79)



LEGEND

- ← AIRFLOW DIRECTION
- IN-LINE CENTRIFUGAL FAN WITH MOTOR DRIVE
- OUTSIDE AIR INTAKE AIR LOUVER
- WIRE MESH BIRD SCREEN
- OSA OUTSIDE AIR

NOTES:

1 FOR EQUIPMENT DATA SEE EQUIPMENT SCHEDULES ON DRAWING H-2-823342 SHT 1

**HVAC AIR FLOW DIAGRAM - TRENCH ENCLOSURE BUILDING**

WEC-80-0113-PDR-001  
REV 0 PAGE 100

**Baytheon**  
Engineers & Constructors

BY	DATE
DESIGNED E. WILSON	08-14-85
DRAWN E. WILSON	08-14-85
CHECKED FEBERSON	08-20-85
LEAD ENGR E. WILSON	
ENGR IN CH E. WILSON	9-27-85
PRJ. MGR K. WILSON	9-27-85
OTHER	

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE MAMFORD COMPANY

SWOC W113  
TRENCH ENCLOSURE BUILDING  
HVAC AIR FLOW DIAGRAM

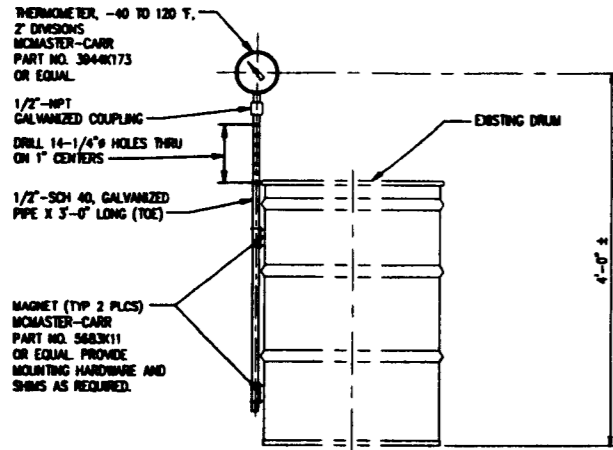
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		REVISIONS						
		DRAWING TRACEABILITY LIST						
		NEXT USED ON : NONE						
		CADFILE: 8023341A						
		CADCODE: DOS: 6.2: ACD2: 12: NN						

REV	NO	DESCRIPTION	DATE	BY
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COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

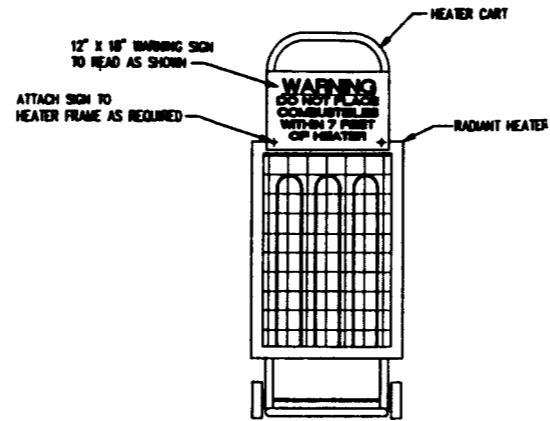






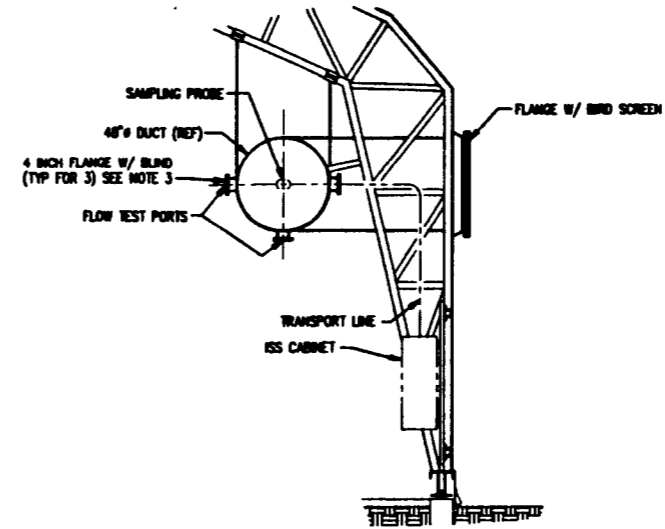
**THERMOMETER MOUNTING DETAIL**

SCALE: NTS



**PORTABLE RADIANT HEATER  
WARNING SIGN DETAIL**

SCALE: NTS

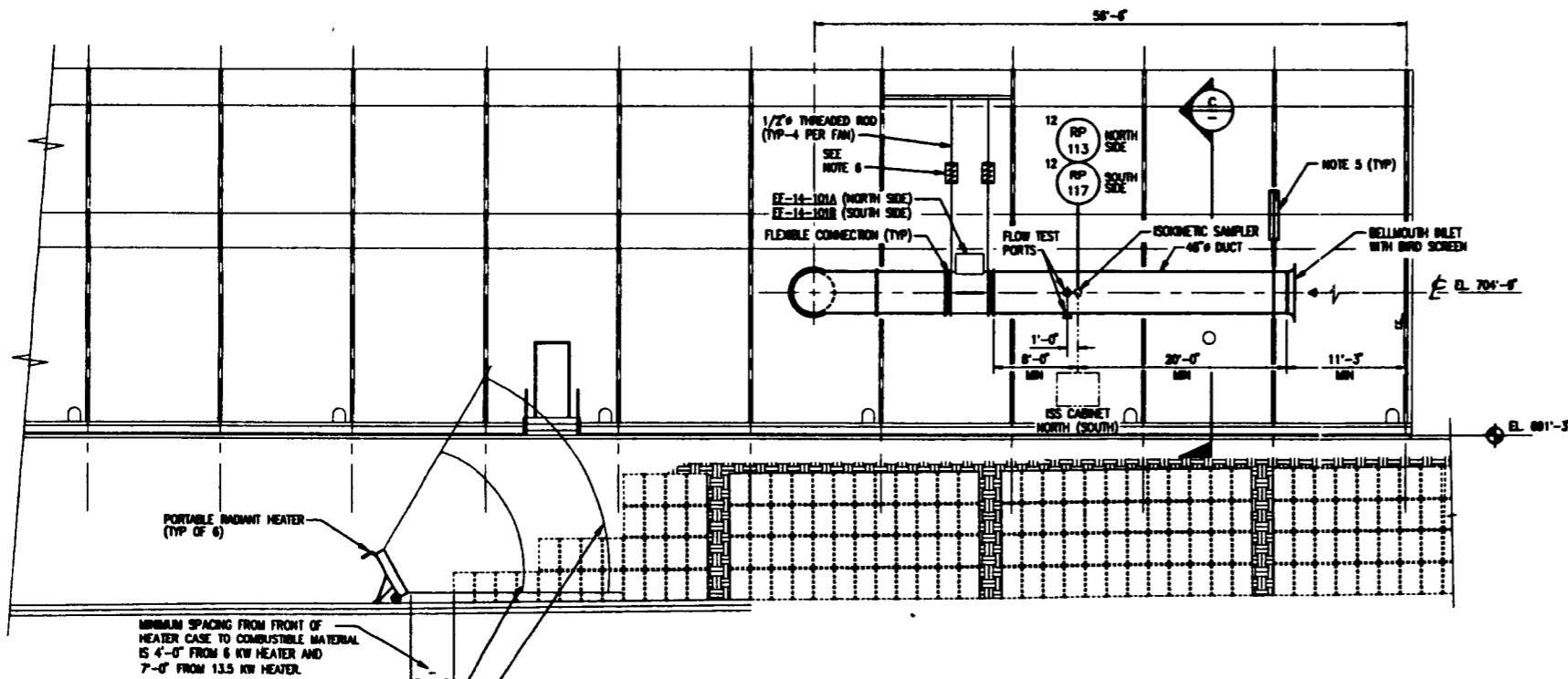


**C SECTION**

SCALE: NTS

**NOTES:**

1. ITEMS SHOWN IN PHANTOM ARE SUPPLIED AS SPECIFIED IN SPECIFICATION SECTION 13452 - ISOKINETIC SAMPLING SYSTEM (ISS).
2. ALL PENETRATIONS INTO THE DUCT SHALL BE FLUSH WITH THE INSIDE OF THE DUCT WALL TO ENSURE THAT FLOW DISTURBANCES ARE MINIMAL.
3. THE ISS SELLER IS RESPONSIBLE FOR SPECIFYING THE DUCT PENETRATION INTERFACE REQUIREMENTS WITH THE ISS PROBE AND ASSOCIATED TRANSPORT LINES. THE DUCT SELLER IS RESPONSIBLE FOR THE MANUFACTURE OF THE INTERFACE FLANGE IN ACCORDANCE WITH THE ISS SELLER REQUIREMENTS.
4. THE ISS CABINET AND ASSOCIATED TRANSPORT LINE TO BE SUITABLY SUPPORTED.
5. FOR DUCT SUPPORTS SEE SPECIFICATION NO. 15800.
6. HANGER SPRING ISOLATORS, MASON INDUSTRIES MODEL DMHS-02100 OR APPROVED EQUAL (TYP-4 PER FAN)



**A SECTION**  
H-2-823342 SHT 1 1/8" = 1'-0"  
(NORTH SIDE)

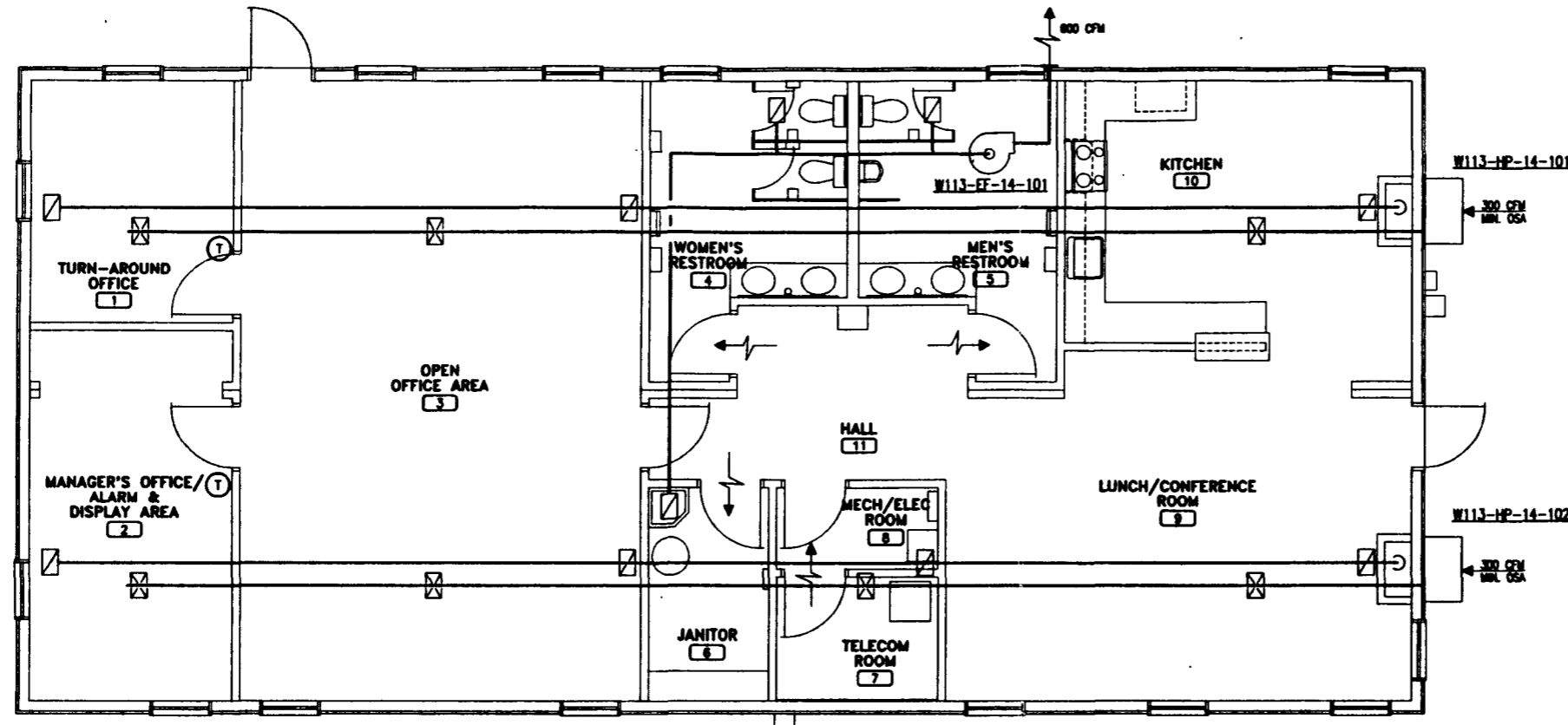
**B SECTION (OPPOSITE HAND)**  
H-2-823342 SHT 1 1/8" = 1'-0"  
(SOUTH SIDE)

WDC-ED-W113-FDH-001  
REV 0 PAGE 200

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY RICHLAND OPERATIONS OFFICE WESTINGHOUSE HANFORD COMPANY		
<b>SWOC W113 TRENCH ENCLOSURE BUILDING HVAC SECTIONS &amp; DETAILS</b>		
DESIGNED	H. EDREY	10-27-94
DRAWN	R. WOOD	10-28-94
CHECKED	E. WONG	10-28-94
LEAD ENGR	E. WONG	
ENCL. ENGR	R. SHU	9-21-95
PRJ. ENGR	E. WOODEN	9-21-95
DATE	9/26/95	
BY		
DATE		
APPROVED FOR IMPLEMENTATION		
BY		
DATE		
REV	DESCRIPTION	DATE
D	218 W478 8901 H-2-823343	0









REV	NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
REFERENCE DRAWINGS					
DRAWING TRACEABILITY LIST					
NEXT USED ON: NONE					
CADFILE: 882334A			CADCODE: DOS: 6.2; ACD2: 12; NN		

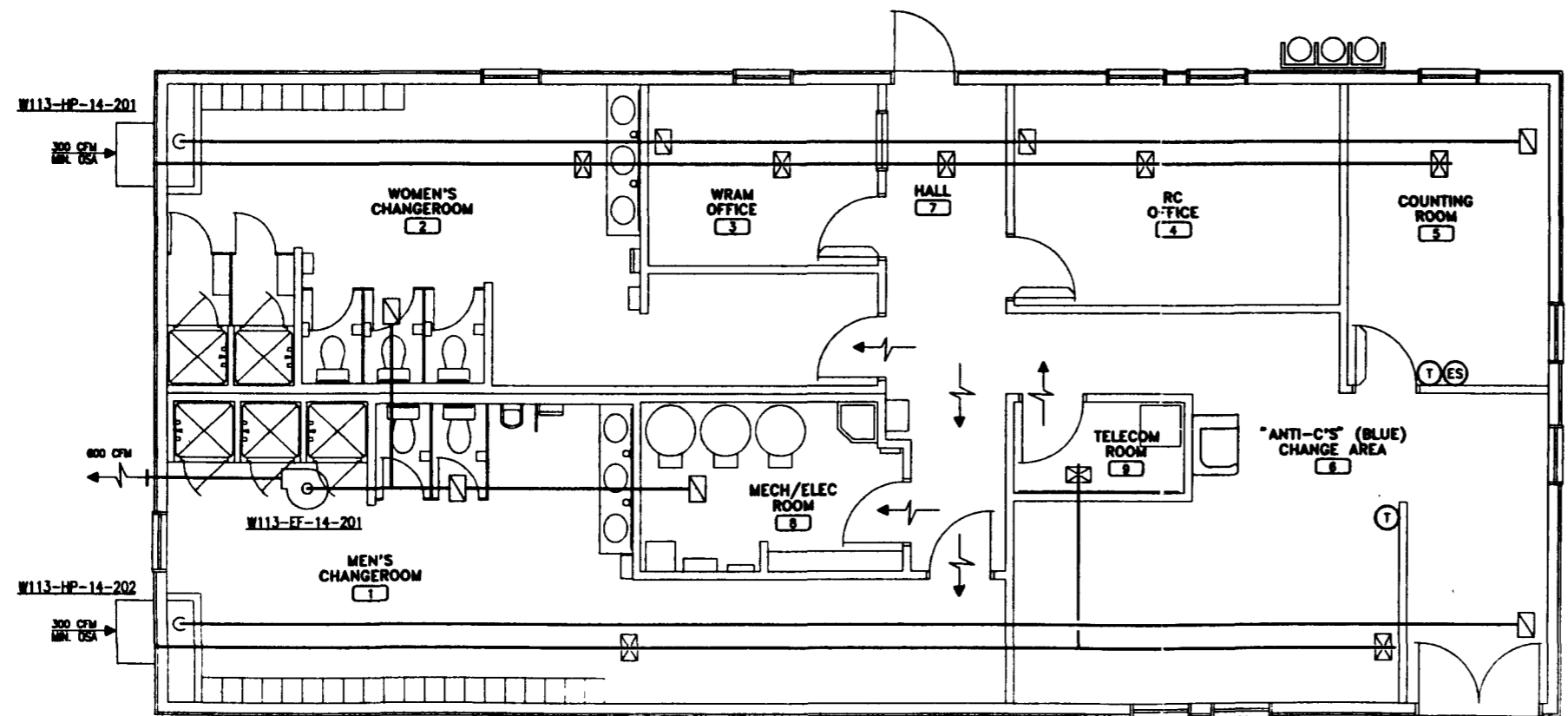


HVAC AIRFLOW DIAGRAM - GENERAL OFFICE BUILDING

- NOTES:**
- THIS DIAGRAM IS NOT INTENDED TO REPRESENT QUANTITY OR LOCATION OF SUPPLY, RETURN OR EXHAUST REGISTERS AND DIFFUSERS, BUT ONLY TO IDENTIFY THE SERVICE REQUIREMENTS TO EACH ROOM.
  - AIR QUANTITIES TO ROOMS SHALL BE BASED ON LOAD CALCULATIONS TO BE PERFORMED BY BUILDING VENDOR.
  - EACH HEAT PUMP UNIT SHALL DELIVER 1500 CFM (MIN) WITH A MINIMUM FRESH AIR SETTING OF 300 CFM AND INCORPORATE AN ECONOMIZER CYCLE.
  - EXHAUST FANS SHALL BE INTERLOCKED TO RUN WHEN BOTH HEAT PUMP INDOOR FANS IN THEIR RESPECTIVE BUILDING ARE RUNNING. EACH EXHAUST FAN SHALL BE RATED AT 600 CFM.
  - RETRIEVAL STAFF CHANGE BUILDING SHALL HAVE MANUAL KILL BUTTON (ES) LOCATED IN COUNTING ROOM TO SHUT DOWN VENTILATION SYSTEM.

**LEGEND**

-  CENTRIFUGAL FAN WITH MOTOR DRIVE
-  RETURN OR EXHAUST AIRFLOW DIRECTION
-  SUPPLY AIRFLOW DIRECTION
-  THERMOSTAT
-  EMERGENCY STOP BUTTON
-  SUPPLY AIR
-  RETURN OR EXHAUST AIR
-  OSA OUTSIDE AIR



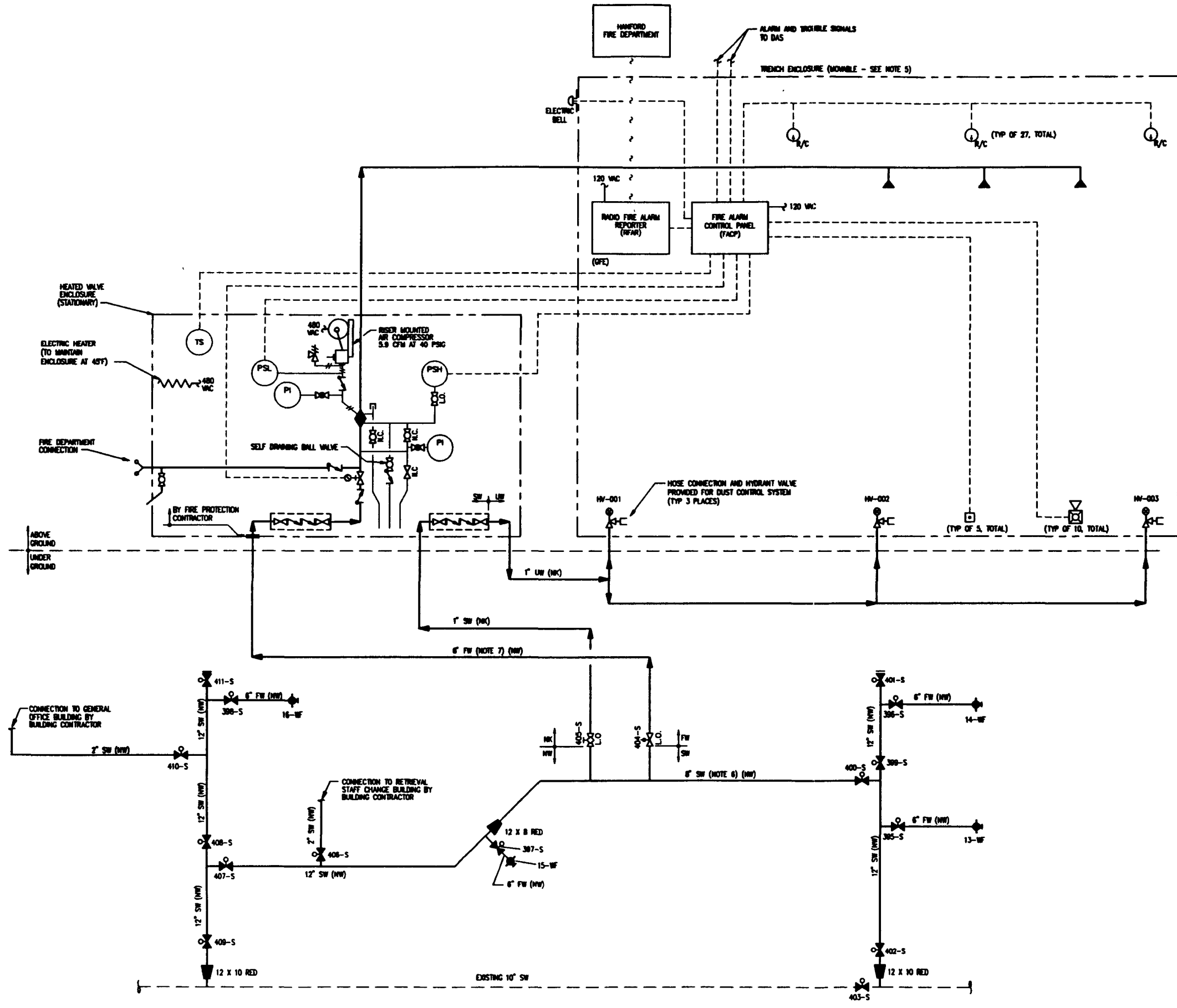
HVAC AIRFLOW DIAGRAM - RETRIEVAL STAFF CHANGE BUILDING

W113-ED-W113-F2B-001  
REV 9 PAGE 201  
**Raytheon**  
Engineers & Constructors

REVISED	BY	DATE	U.S. DEPARTMENT OF ENERGY NICKLAND OPERATIONS OFFICE WESTHOUSE HANFORD COMPANY	
DESIGNED	H. GIBNET	05-14-95	<b>SWOC W113</b> <b>GENERAL OFFICE BUILDING/            RETRIEVAL STAFF CHANGE BUILDING</b> <b>HVAC AIR FLOW DIAGRAM</b>	
DRAWN	E. NELSON	05-15-95		
CHECKED	E. WONG	05-20-95		
LEAD ENGINEER	E. WONG			
ENCL. USER	R. SHU	9-26-95		
PRIN. USER	H. BECKER	9-26-95		
O.S.A.	G. FROST	1/12/03		
REV	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
D	EO-XXX EO-XXX	7001	H-2-823344	0
SCALE: NONE PROJECT NO. 0004800 SHEET 1 OF 1				

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**NOTES:**

1. THE DESIGN OF THE SPRINKLER SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 13, AND SPECIFICATION SECTION 15300.
2. THE DESIGN OF THE ALARM AND DETECTION SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 72, AND SPECIFICATION SECTION 16720.
3. MANUAL FIRE EXTINGUISHERS ARE TO BE LOCATED IN ACCORDANCE WITH NFPA 10, AND SPECIFICATION SECTION 10522.
4. THIS DRAWING REPRESENTS THE BID BASIS ONLY AND IS NOT THE FINAL DESIGN.
5. FOR MOVABLE TRENCH ENCLOSURE POSITIONS SEE DRAWING H-2-823257.
6. FOR UNDERGROUND WATER HEADER DETAILS SEE DRAWING H-2-823246.
7. THE 6" DIAMETER AS SHOWN IS THE MINIMUM REQUIRED SIZE OF THE LATERAL SELLER TO DETERMINE FINAL SIZE BASED ON SYSTEM DESIGN.

**LEGEND**

- PIPING
- ENCLOSURE BOUNDARY
- - - ELECTRICAL CIRCUIT
- RADIO SIGNAL
- GFE GOVERNMENT FURNISHED EQUIPMENT
- L.O. LOCKED OPEN
- N.C. NORMALLY CLOSED
- ⎓ REDUCED PRESSURE BACKFLOW PREVENTER
- ⊕ AIR COMPRESSOR
- ⚡ ELECTRIC HEATER
- ⌚ ELECTRIC BELL
- ⚠ 10# ABC MULTI-PURPOSE DRY CHEMICAL FIRE EXTINGUISHER, 4A-50BC
- [FACP] FIRE ALARM CONTROL PANEL
- SW SANITARY WATER
- FW FIRE WATER
- UW UTILITY WATER
- ☐ MANUAL PULL STATION
- ⚡ HOV STROKE UNIT
- ▲ SPRINKLER HEAD CLOSED
- ⓪ THERMAL DETECTOR (DATE COMPENSATED)
- ⊖ SPRINKLER HEAD
- ⊕ RISER
- ◆ DRY PIPE VALVE
- ⊕ OSBY VALVE WITH TAMPER SWITCH
- ∇ CHECK VALVE
- ∇ POST INDICATOR VALVE
- ∇ GATE VALVE
- ∇ BALL VALVE
- ∇ GLOBE VALVE
- ∇ CURB VALVE
- ∇ VALVE W/ VALVE BOX
- ∇ REDUCER
- ⊕ FIRE HYDRANT
- ⊕ GROUND HYDRANT VALVE W/ HOSE CONNECTION
- ∇ SELF DRAINING BALL VALVE
- ∇ FIRE DEPARTMENT CONNECTION

WIC-80-0113-FMR-001  
REV 9 PAGE 202

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTHOUSE HANFORD COMPANY

SWOC W113  
FIRE PROTECTION/UTILITY WATER  
TRENCH ENCLOSURE  
MECHANICAL FLOW DIAGRAM

BY	DATE
DESIGNED SHIFFERT	10-25-04
DRAWN GREGGLES	10-29-04
CHECKED L. POSE	09-29-05
LEAD ENGR F. TROSE	06/26/05
ENR. ENR. R. BURR	9-26-05
PRJL ENR. E. NORDEN	9-28-05
C.A.	8.20.05
C.A.	9.20.05

REV NO.	DESCRIPTION	REV BY/DATE	DATE	APPROVAL
H-2-823257	TRENCH ENCLOSURE BUILDING - FLOOR PLAN - PIPINGS			
H-2-823246	CHK. VALVES - SECTIONS & DETAILS			
REFERENCE DRAWINGS		REVISIONS		
DRAWING TRACEABILITY LIST				
NEXT USED ON : NONE		CADFILE: 8823362A		CADCODE: DOS:8.2:ACD2:12:NN

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W47B				
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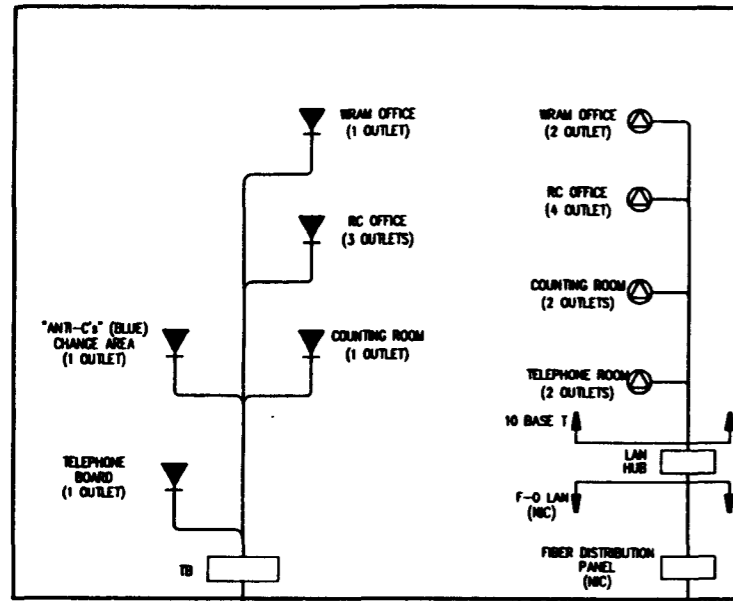
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 COLOR FOR REVISION: 1825118308321  
 DATE: 09/26/05  
 DRAWN BY: F. TROSE  
 CHECKED BY: L. POSE  
 DESIGNED BY: SHIFFERT  
 PROJECT: SWOC W113  
 11/24/2005 9:14:00 AM

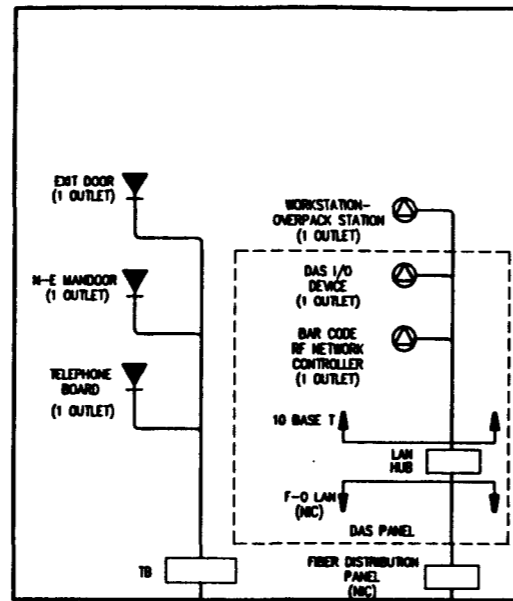




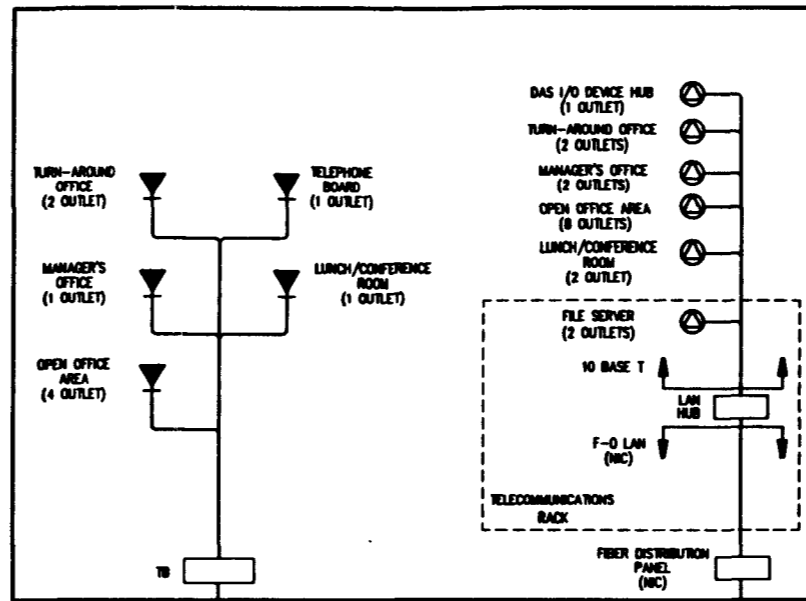
RETRIEVAL STAFF CHANGE FACILITY  
(SEE NOTE 1)



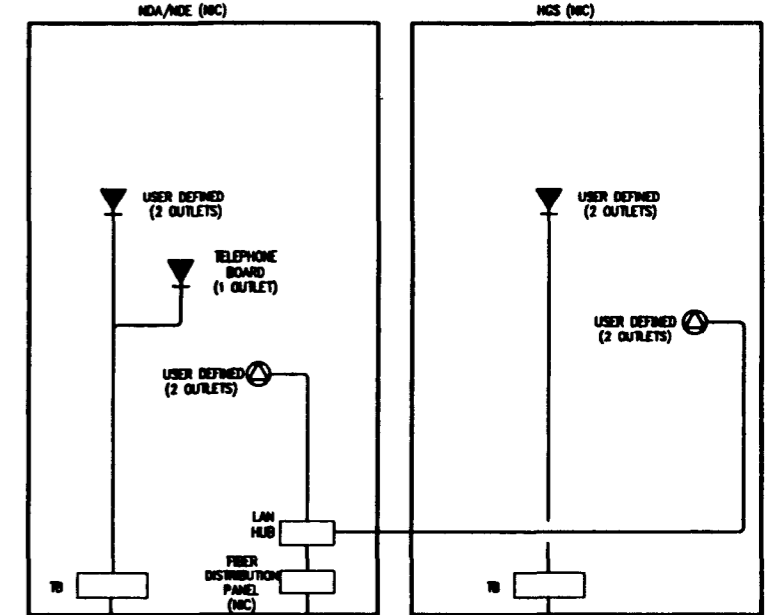
TRENCH ENCLOSURE BUILDING  
(SEE NOTE 1)



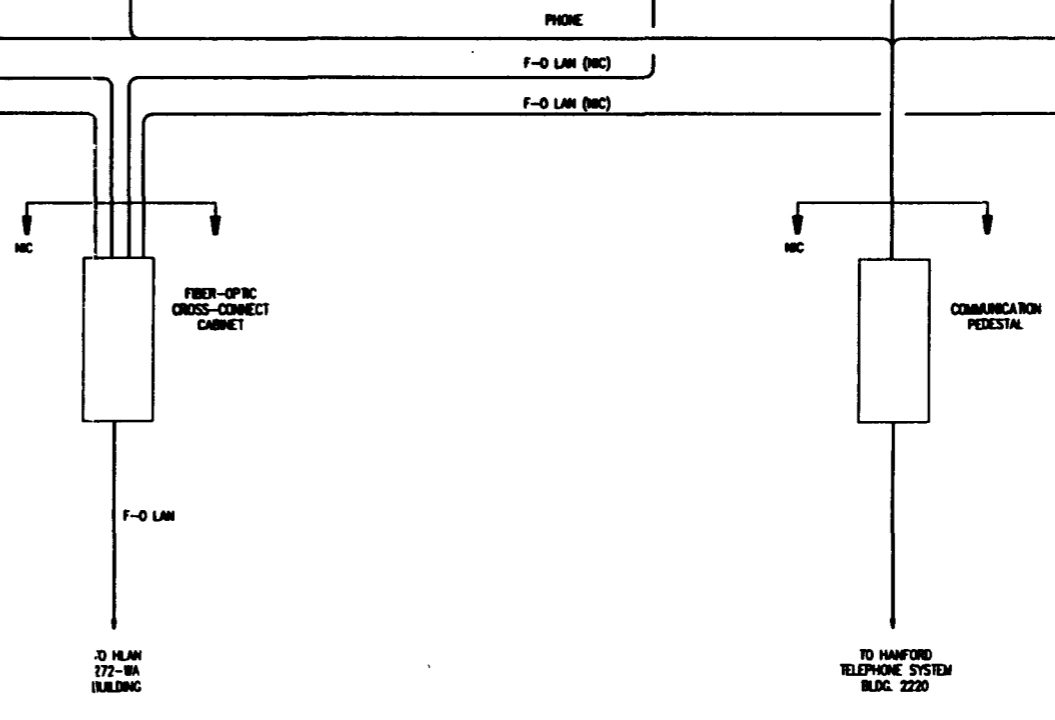
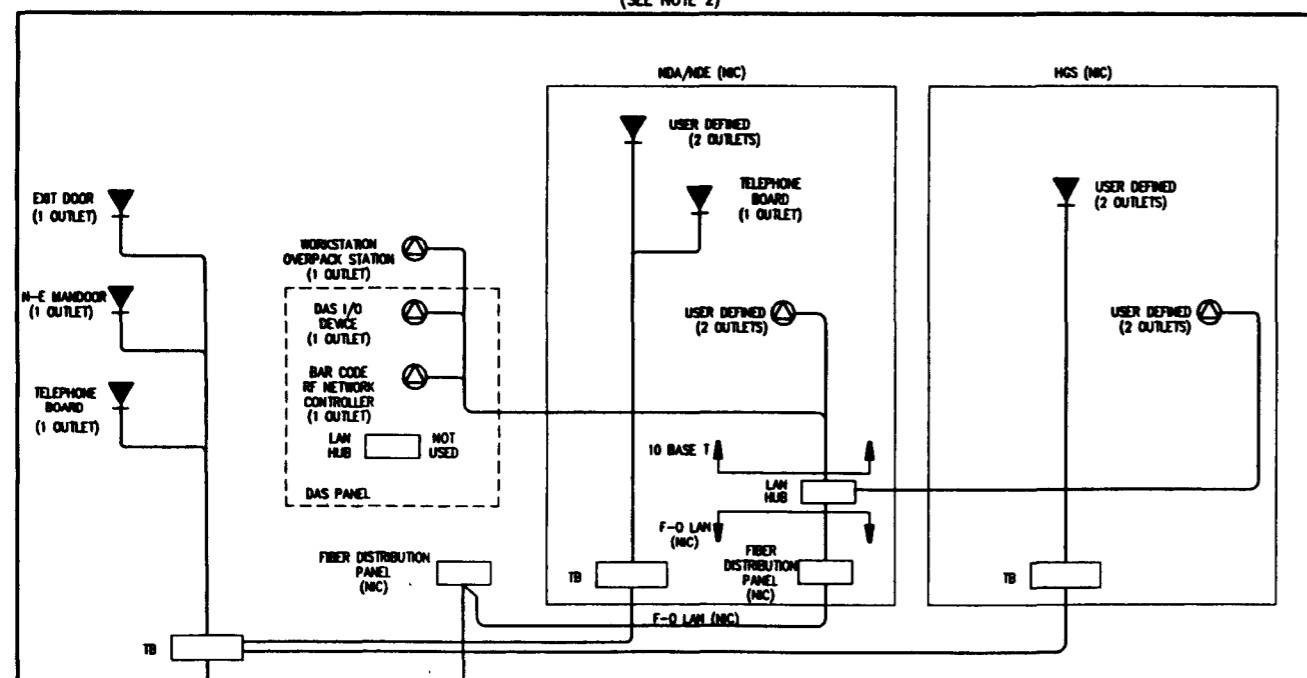
GENERAL OFFICE BUILDING  
(SEE NOTE 1)



HEAD GAS SAMPLING TRAILER AND NDE/NOA TRAILERS  
(SEE NOTE 1)



TRENCH ENCLOSURE BUILDING  
(SEE NOTE 2)



- NOTES:  
1. CONFIGURATION SHOWN IN START-UP MODE.  
2. CONFIGURATION SHOWN IN POST START-UP MODE.

NRC-80-W113-FOR-001  
REV 0 PAGE 205

**Baytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTBOROUGH, MASSACHUSETTS

**SWOC W113**  
TELECOMMUNICATIONS  
BLOCK FLOW DIAGRAM

REV	BY	DATE
DESIGNED	B. ELY	05-20-05
DRAWN	R. MURPHY	05-20-05
CHECKED	CHAMBERS	05-20-05
LEAD ENGR	CHAMBERS	7/26/05
ENCL. MGR	R. BISH	7-26-05
PRJCL. MGR	R. MURPHY	7-26-05
BY	E. FRIST	12/21/05

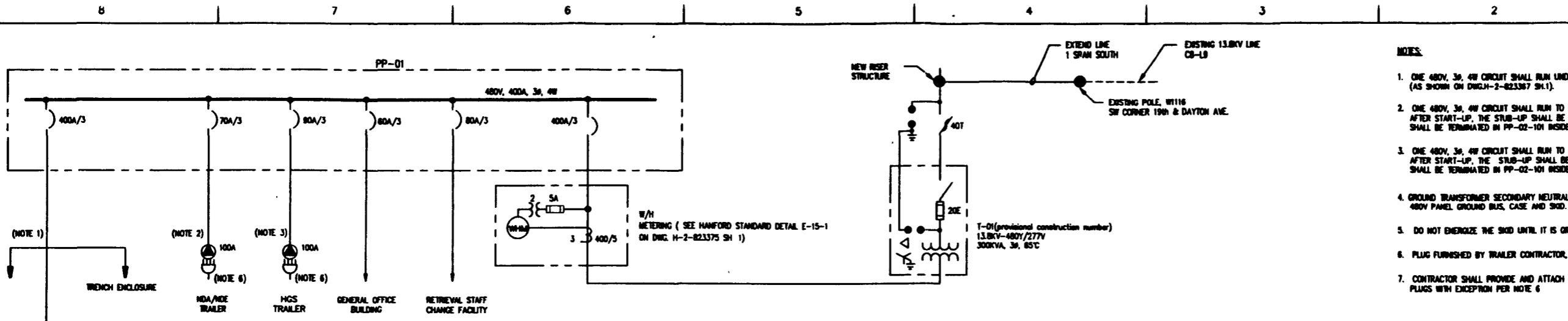
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D	218	7602	H-2-823365	0

NO.	DESCRIPTION	REV. NO.	DESCRIPTION	REV. DATE	CHK. BY	DATE	APPROVAL	DATE
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2	H-2-82340 BLDG		REVISIONS					

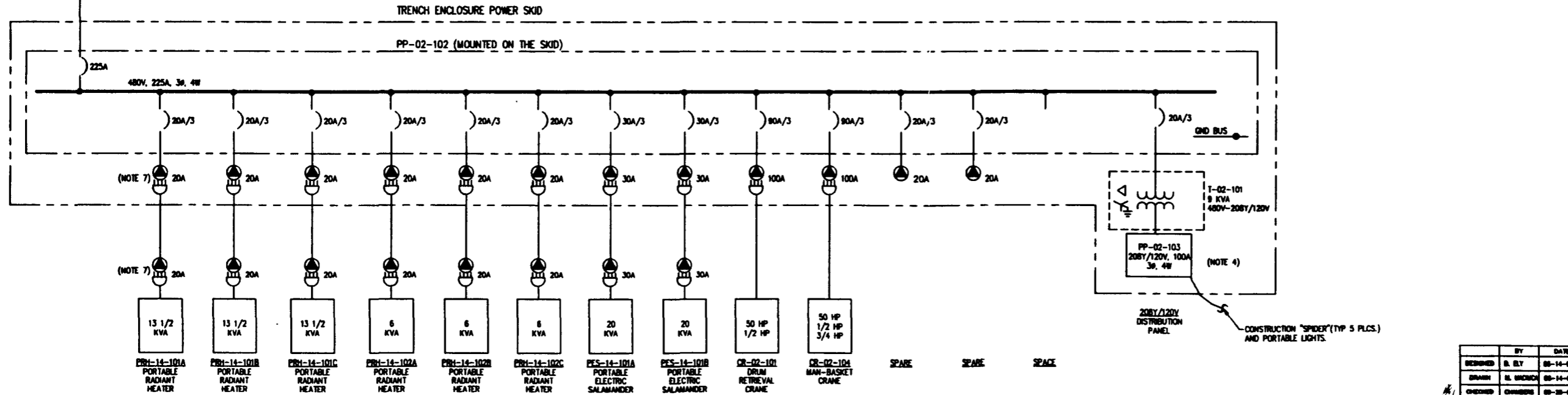
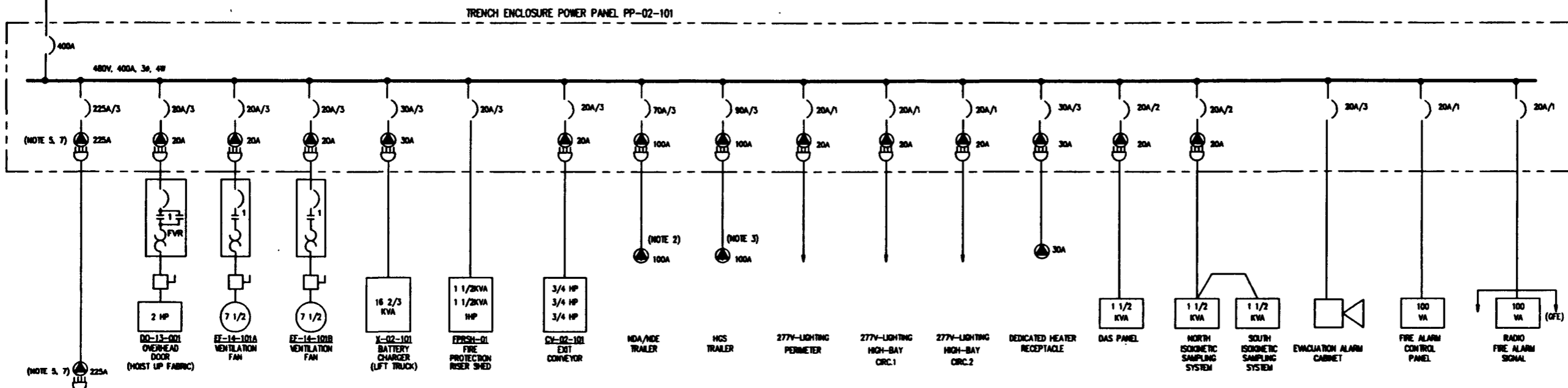
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COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

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 34 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 00  
 FROM W113000



- NOTES:**
- ONE 480V, 3Ø, 4W CIRCUIT SHALL RUN UNDERGROUND AND STUB-UP IN PP-02-101 (AS SHOWN ON DWG-H-2-823367 SH.1).
  - ONE 480V, 3Ø, 4W CIRCUIT SHALL RUN TO THE START-UP LOCATION FOR NDA/NDE TRAILER. AFTER START-UP, THE STUB-UP SHALL BE ABANDONED IN PLACE AND THE NEW NDA/NDE CIRCUIT SHALL BE TERMINATED IN PP-02-101 INSIDE THE TRENCH ENCLOSURE.
  - ONE 480V, 3Ø, 4W CIRCUIT SHALL RUN TO THE START-UP LOCATION FOR HGS TRAILER. AFTER START-UP, THE STUB-UP SHALL BE ABANDONED IN PLACE AND THE NEW HGS CIRCUIT SHALL BE TERMINATED IN PP-02-101 INSIDE THE TRENCH ENCLOSURE.
  - GROUND TRANSFORMER SECONDARY NEUTRAL GROUND TRANSFORMER CASE, 120/208V DISTRIBUTION PANEL CASE, 480V PANEL GROUND BUS, CASE AND SKID.
  - DO NOT ENERGIZE THE SKID UNTIL IT IS GROUNDED.
  - PLUG FURNISHED BY TRAILER CONTRACTOR, INSTALLED WITH TRAILER INSTALLATION.
  - CONTRACTOR SHALL PROVIDE AND ATTACH ALL 480V RECEPTACLES AND PLUGS WITH EXCEPTION PER NOTE 6.



WPC-82-W113-FRM-001  
REV 0 PAGE 294

**Baytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
INLAND OPERATIONS OFFICE  
WESTROUSE HANFORD COMPANY

**SWOC W113  
MASTER SINGLE LINE DIAGRAM**

DESIGNED	BY	DATE
B. ELY	B. ELY	05-14-05
DRAWN	H. WICKON	05-14-05
CHECKED	CHAMBERS	05-20-05
LEAD ENGR	CHAMBERS	4/22/06
ENCL. DES	R. SHU	9/21/05
PROJ. MGR	E. HERRON	9/21/05
APP. FOR IMPLEMENTATION	G.A. & FRIST	4/22/05

REV	NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVALS/DATE

REV	NO.	DESCRIPTION

SIZE	BLDG NO.	INDEX NO.	ISSUANCE NUMBER	REV
D	218	7201	H-2-823366	0

SCALE: NONE PROJECT NO. 0904-008 SHEET 1 OF 1

REV	NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVALS/DATE

REV	NO.	DESCRIPTION

DRAWING TRACEABILITY LIST	REFERENCE DRAWINGS	REVISIONS
	NEXT USED ON : NONE	

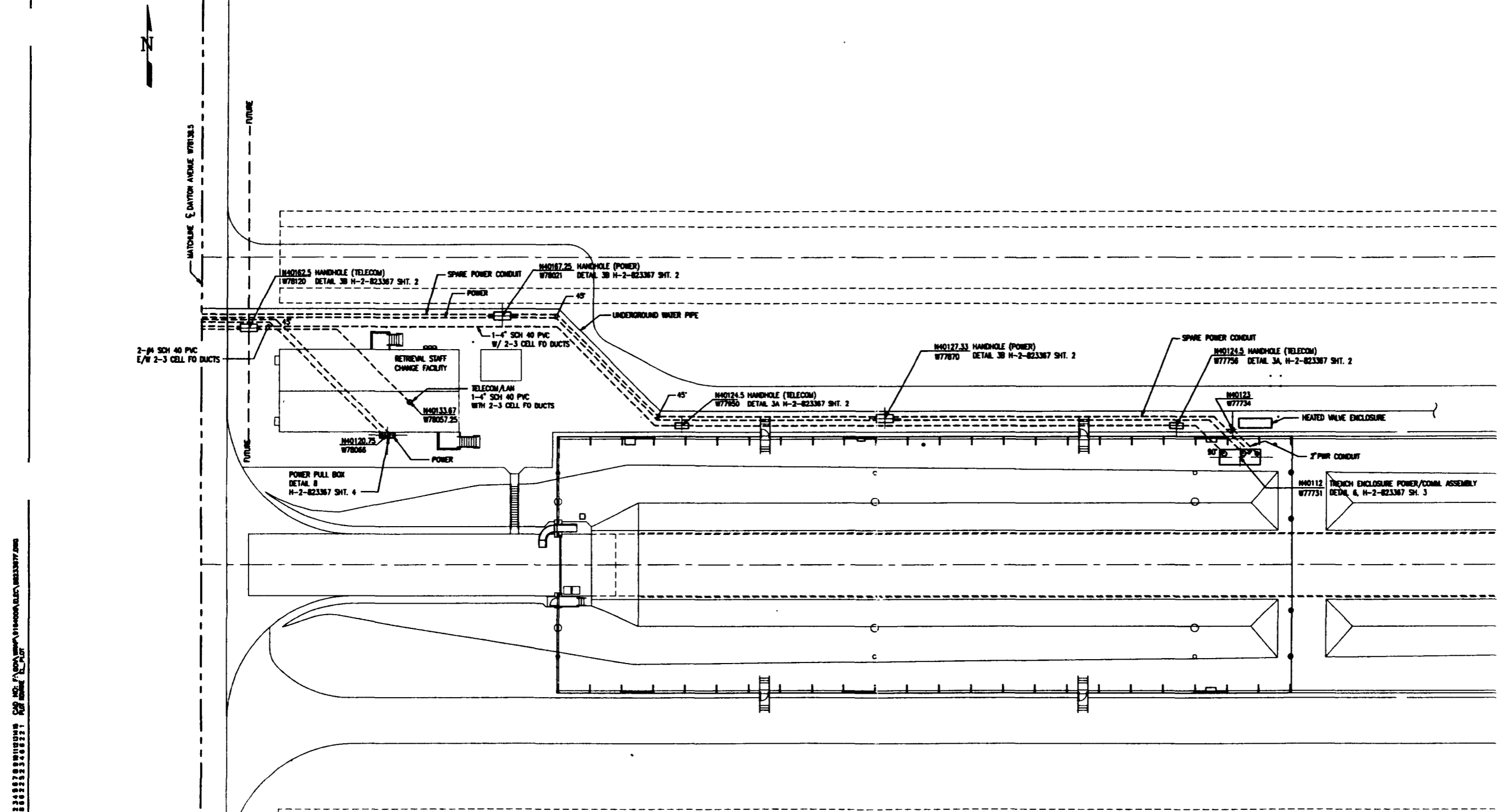
CADFILE: 8823366A CADCODE: DOS: 6.2; ACD2: 12; NN

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED





NOTES:  
SEE DRAWING H-2-823367, SH. 1  
FOR NOTES.



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1" = 34'

DATE: 08/24/95  
SCALE: 1" = 34'

WOC-82-8113-PDR-001  
REV 0 PAGE 200

Raytheon  
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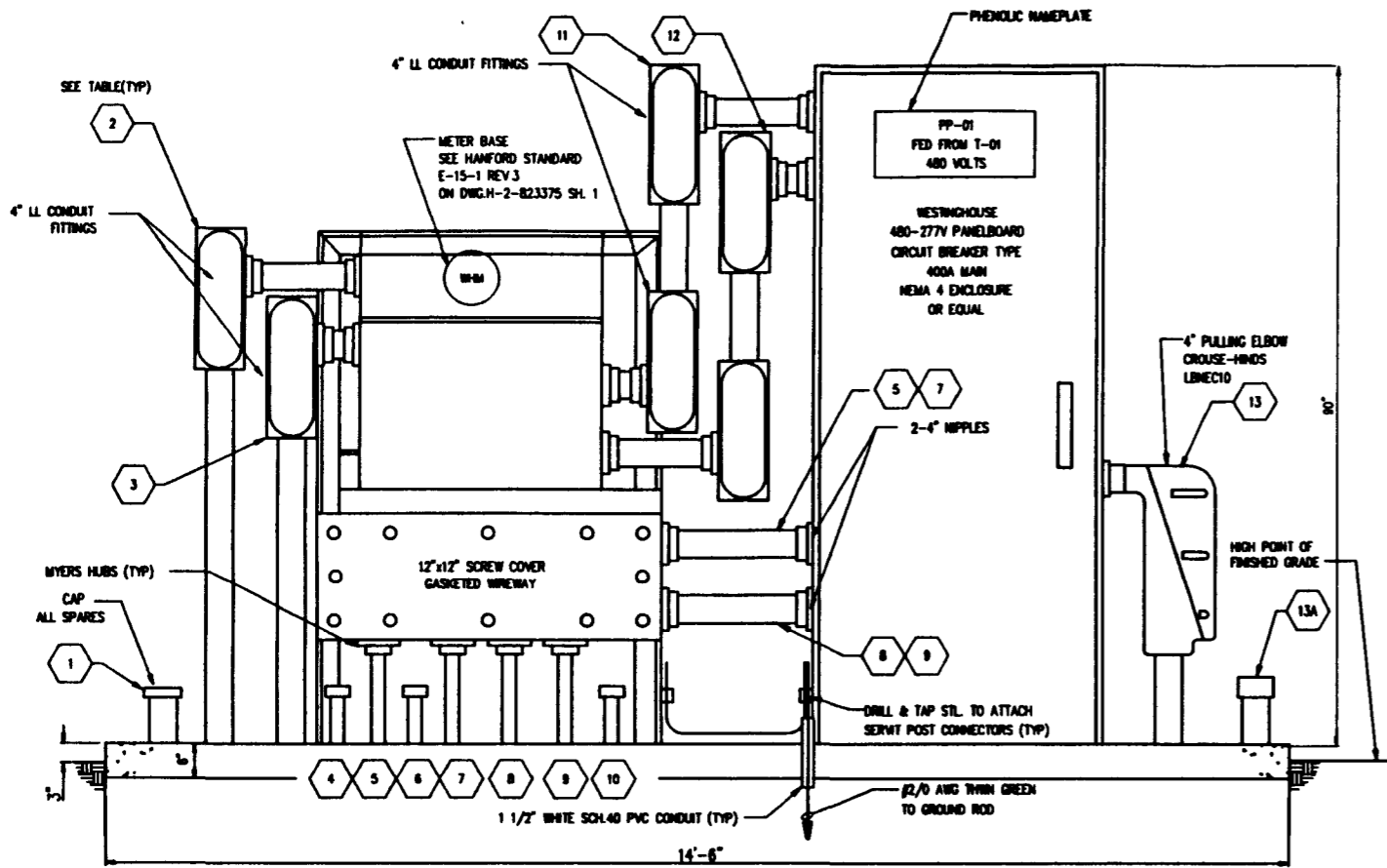
U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE MANFORD COMPANY  
**SWOC W113  
ELECTRICAL EQUIPMENT LOCATION/  
UNDERGROUND RACEWAY  
OVERALL PLAN**

BY	DATE	DESCRIPTION
H. HERSON	08-25-95	DESIGNED
H. HERSON	08-27-95	DRAWN
CHAMBERS	09-25-95	CHECKED
CHAMBERS		LEAD ENGR
B. OBLI	9.26.95	ENR. REVR
H. HERSON	9.26.95	PROJ. ENR
S. PRIST		ENR. S.A.

REV	NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
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		NEXT USED ON: NONE			
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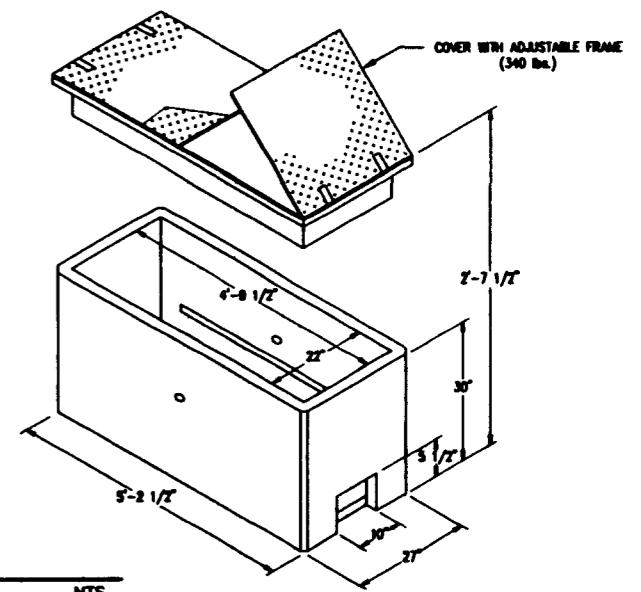
SIZE	BLDG NO.	INDEX NO.	DRAWING NUMBER	REV
D	218	8001	H-2-823367	0
	W478			
SCALE: 1" = 34'	PROJECT NO. 004-088	SHEET 14 OF 3		

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

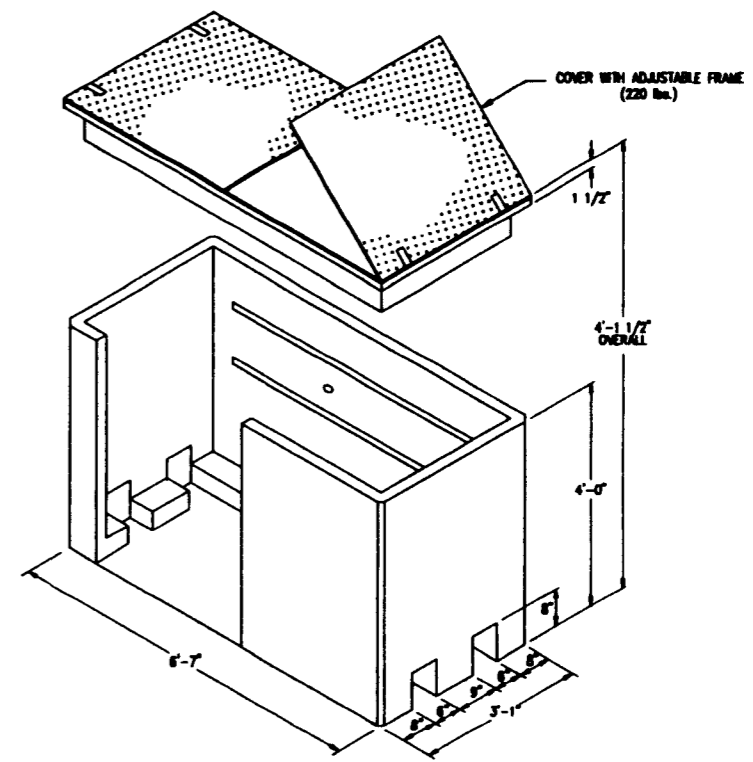


**1** DETAIL 1-METERING AND 480V BREAKER PANEL PP-01  
H-2-823367 SH.1 N.T.S.

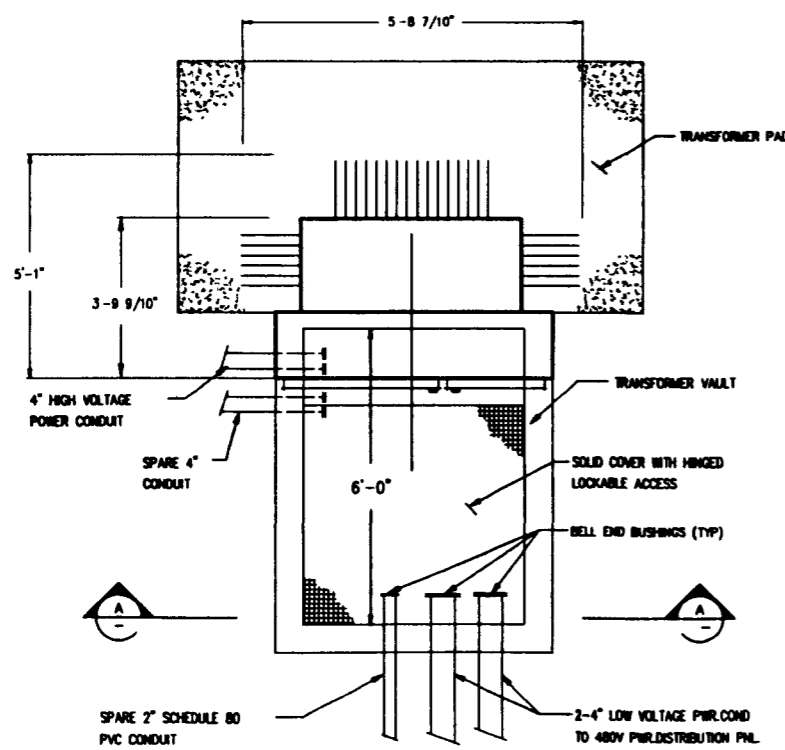
ITEM	SIZE	DESCRIPTION	FILL
1	4"	T-01 13.8KV-480Y/277V 300KVA TRANSFORMER VAULT	SPARE
2	4"	T-01 13.8KV-480Y/277V 300KVA TRANSFORMER VAULT	4/250MCH W/1/2 CHD
3	4"	T-01 13.8KV-480Y/277V 300KVA TRANSFORMER VAULT	4/250MCH W/1/2 CHD
4	2"	GENERAL OFFICE BUILDING	SPARE
5	2"	GENERAL OFFICE BUILDING	3/8 AWC W/1/8 CHD
6	2"	HQS TRAILER	SPARE
7	2"	HQS/ADA TRAILER	4/4 AWC W/1/4 CHD
8	2"	HQS TRAILER	4/2 AWC W/1/8 CHD
9	2"	RETRIEVAL STAFF CHANGE FACILITY	4/4 AWC W/1/8 CHD
10	2"	RETRIEVAL STAFF CHANGE FACILITY	SPARE
11	4"	SECONDARY SIDE OF METER TO MAIN LUGS IN 480Y-277V PANEL	4/250 MCH W/1/2 CHD
12	4"	SECONDARY SIDE OF METER TO MAIN LUGS IN 480Y-277V PANEL	4/250 MCH W/1/2 CHD
13	4"	TRENCH ENCLOSURE POWER	4/500 MCH W/1/4 CHD
13A	4"	TRENCH ENCLOSURE	SPARE



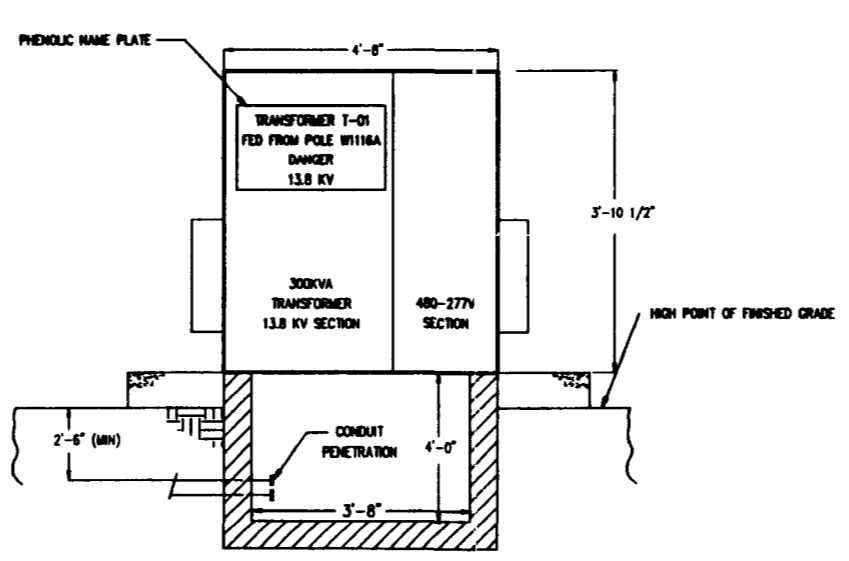
**3A** DETAIL  
H-2-823367 SH.1 N.T.S.  
TYPICAL POWER AND TELECOMMUNICATIONS HANDHOLE  
PREFABRICATED UTILITY VAULT Co. MODEL No. 284-TA  
OR EQUAL



**3B** DETAIL  
H-2-823367 SH.1 N.T.S.  
TYPICAL POWER AND TELECOMMUNICATIONS HANDHOLE  
PREFABRICATED UTILITY VAULT Co. MODEL No. 25-TA  
OR EQUAL



**2** DETAIL 2-TRANSFORMER T-01  
H-2-823367 SH.1 N.T.S.



**A** SECTION A-A

- NOTES:  
1. TRANSFORMER DIMENSIONS SHOWN ARE APPROXIMATE  
2. TRANSFORMER PAD AND VAULT ARE PRE-FABRICATED, OF APPROXIMATE DIMENSIONS AS SHOWN TO MATCH TRANSFORMER, SIMILAR TO UTILITY VAULT No. 644-LA AND 88-36-9, OR EQUAL.

- NOTES:  
1. HANDHOLES SHALL BE SUITABLE IN OFF-STREET LOCATIONS WHERE NOT SUBJECT TO HIGH DENSITY TRAFFIC.  
2. HANDHOLES ARE PRE-FABRICATED UNITS.

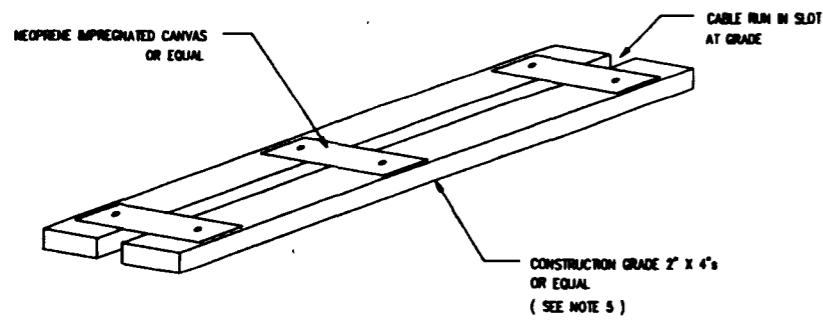
U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

**Raytheon**  
Engineers & Constructors

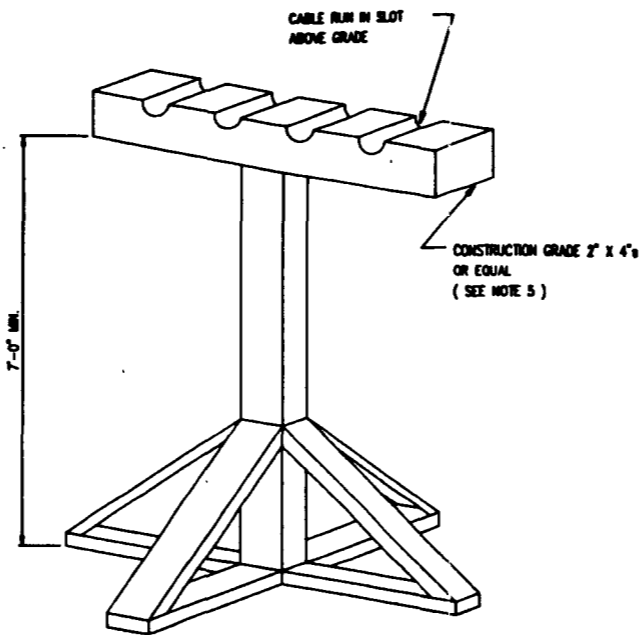
SWOC W113  
ELECTRICAL & TELECOMMUNICATIONS  
UNDERGROUND CONDUIT  
PLANS & DETAILS

NO.	BY	DATE	SCALE	SHEET NO.	TOTAL SHEETS
DESIGNED	R. WICKEN	08-27-95		7201	3
DRAWN	R. WICKEN	08-28-95			
CHECKED	CHANDLER	08-28-95			
LEAD ENGINEER	CHANDLER	08-28-95			
ENCL. MGR.	R. BERRY	9-21-95			
PROJ. MGR.	K. BERRY	9-21-95			
CHECKED	G. BERRY	9/22/95			
APPROVED FOR DETAILS DESIGN					
BY	DATE				

NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
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	DRAWING TRACEABILITY LIST			
	NEXT USED ON : NONE			
	CADFILE: 88233678			
	REVISIONS			
	CADCODE: DOS: 6.2: ACD2: 12: NN			



4 DETAIL 4-CABLE PROTECTION ON GRADE



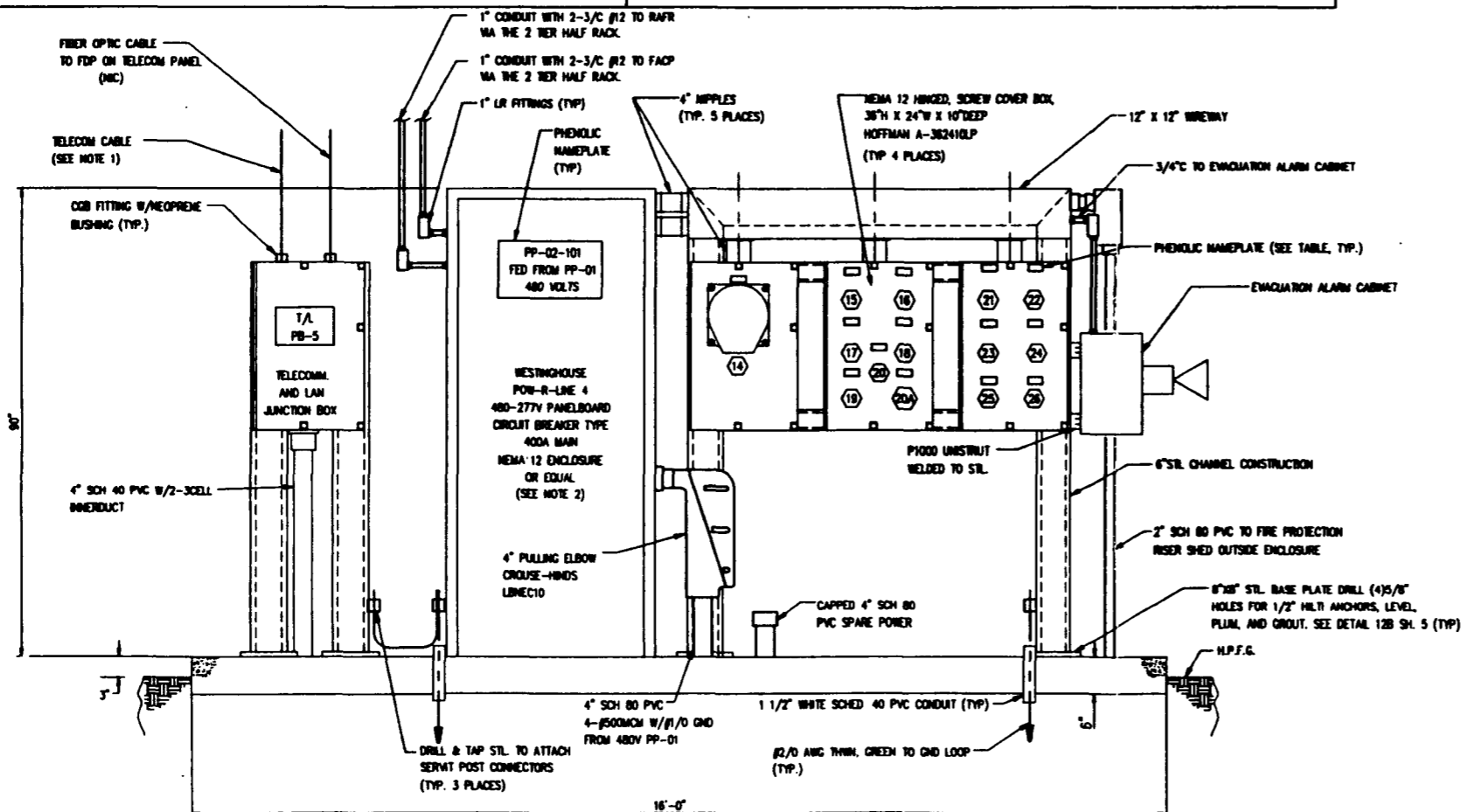
5 DETAIL 5-CABLE PROTECTION ABOVE GRADE

ITEM	AMP RATING (RECEPTACLE)	TAGS (PHENOLIC NAME PLATE)	CABLE OUT TO LOAD	LENGTH (NOTE 3)
14	300A	PP-02-102 TRENCH ENCLOSURE POWER SHD	4C-#1/0 AWG W/#1 PORTABLE POWER CABLE TYPE "C" HOUSTON WBC 312040104	200'
15	20A	DO-13-001 OVERHEAD DOOR	3C-#12 W/GND TYPE "TC" CABLE	340'
16	20A	EF-14-101A VENTILATION FAN	3C-#8 W/GND TYPE "TC" CABLE	675'
17	20A	EF-14-101B VENTILATION FAN	3C-#8 W/GND TYPE "TC" CABLE	800'
18	20A	CY-02-101, 102, 103 EXIT CONVEYORS	3C-#12 W/GND TYPE "TC" CABLE	320'
19	20A	277V LIGHTING (PERIMETER)	2C-#12AWG W/GND TYPE "TC" CABLE	728'
20	20A	277V LIGHTING (H-BAY)	2C-#12AWG W/GND TYPE "TC" CABLE	320'
20A	20A	277V LIGHTING (H-BAY)	2C-#12AWG W/GND TYPE "TC" CABLE	320'
21	100A	NDA/NDE TRAILER	4C-#1AWG W/#10 GND TYPE "TC" CABLE	280'
22	100A	HGS TRAILER	4C-#2AWG W/#10 GND TYPE "TC" CABLE	240'
23	30A	X-02-101 BATTERY CHARGER	3C-#10AWG W/GND TYPE "TC" CABLE	320'
24	30A	DEDICATED FRIED HEATER RECEPTACLE BY THE OVERHEAD DOOR.	4C-#10AWG W/GND TYPE "TC" CABLE	320'
25	20A	DAS PANEL	2C-#12AWG W/GND TYPE "TC" CABLE	275'
26	20A	ISOKINETIC SAMPLING SYSTEM PANELS (2)	2C-#12AWG W/GND TYPE "TC" CABLE	450'

NOTES:

- ROUTE TELECOM AND LAN CABLES IN 2-TIER HALF RACK.
- BOND GROUND BUS TO CASE INSIDE PANELBOARD.
- CABLE LENGTHS SHOWN REFLECT THE ABILITY TO REACH ALL FIRED LOADS FOR POSITIONS 1, 2 AND 3 IN TRENCH ENCLOSURE.
- ROUTE CABLE TO COMBINATION STARTERS/START-STOP PUSH BUTTONS (LOCATED BY OVERHEAD DOOR), DISCONNECTS AND VENTILATION FANS.
- ALL WOOD SHALL BE FIRE RETARDANT.

- 300A RECEPTACLE, 4-POLE W/GND AND CAP FOR PANEL MOUNTING, MELTRIC 48-34017 AND 48-30000-825. 300A PLUG W/CAP, MELTRIC 48-31017 AND 48-30000-128.
- 20A RECEPTACLE, 3-POLE W/GND AND CAP FOR 30 DEGREE PANEL MOUNTING WITH PLUG, MELTRIC TYPE DS 33-17043 AND PVC PROTECTIVE CAP FOR PLUG DS18C.
- 100A RECEPTACLE, 3-POLE W/GND AND CAP FOR 30 DEGREE PANEL MOUNTING WITH PLUG, MELTRIC TYPE DS 33-87043 AND PVC PROTECTIVE CAP FOR PLUG DS125C.
- 30A RECEPTACLE, 3-POLE W/GND AND CAP FOR 30 DEGREE PANEL MOUNTING WITH PLUG, MELTRIC TYPE DS 33-37043 AND PVC PROTECTIVE CAP FOR PLUG DS32C.



6 DETAIL 6- TRENCH ENCLOSURE POWER/COMMUNICATION ASSEMBLY  
H-2-823367 SH.1

WBC-82-1113-PDR-001  
REV 0 PAGE 210

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Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
NICHOLAND OPERATIONS OFFICE  
WESTINGHOUSE HAMFORD COMPANY

SWOC W113  
ELECTRICAL & TELECOMMUNICATIONS  
UNDERGROUND CONDUIT  
DETAILS

REV	BY	DATE
DESIGNED	H. HERRON	08-27-05
DRAWN	H. HERRON	08-29-05
CHECKED	CHAMBERS	08-29-05
LEAD ENGR	CHAMBERS	08-29-05
ENR. USER	E. SHU	7-21-06
PRGR. USER	H. HERRON	7-21-06
OTHER	G. FRIST	
APPROVED FOR IMPLEMENTATION		
BY		DATE

REV	BLDG NO.	INDEX NO.	DRAWING NUMBER	REV
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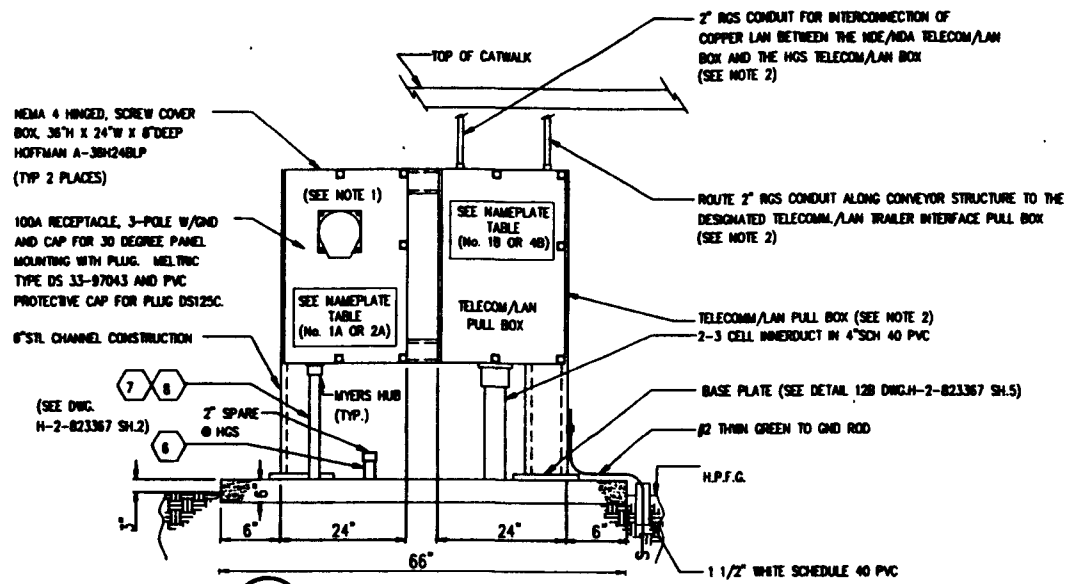
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CADFILE: 823367C

REVISIONS

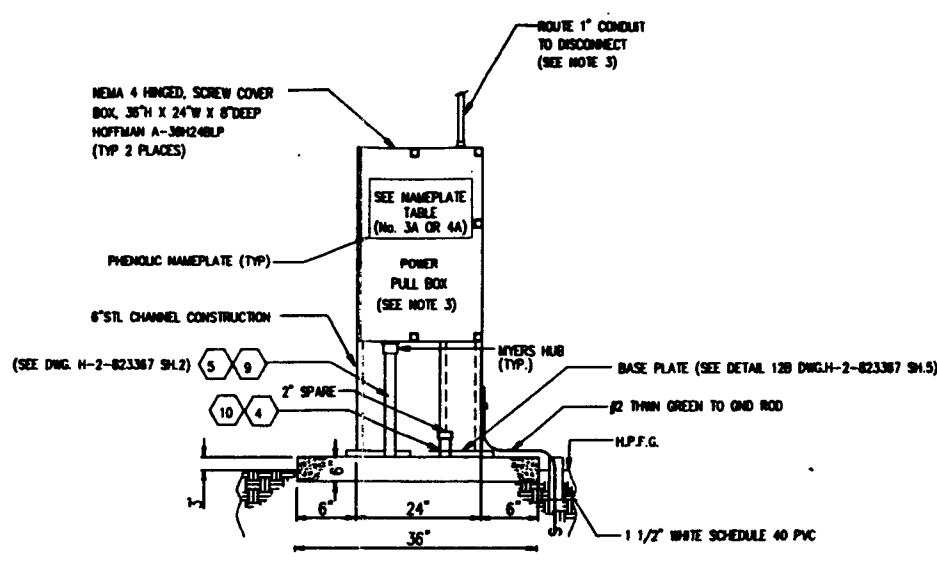
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COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED



7 DETAIL 7  
H-2-823367 SH.1 N.T.S.

**POWER & TELECOMMUNICATIONS FOR NDE/NDA AND HGS TRAILERS**  
(TYP. 2 PLACES)



8 DETAIL 8  
H-2-823367 SH.1 N.T.S.

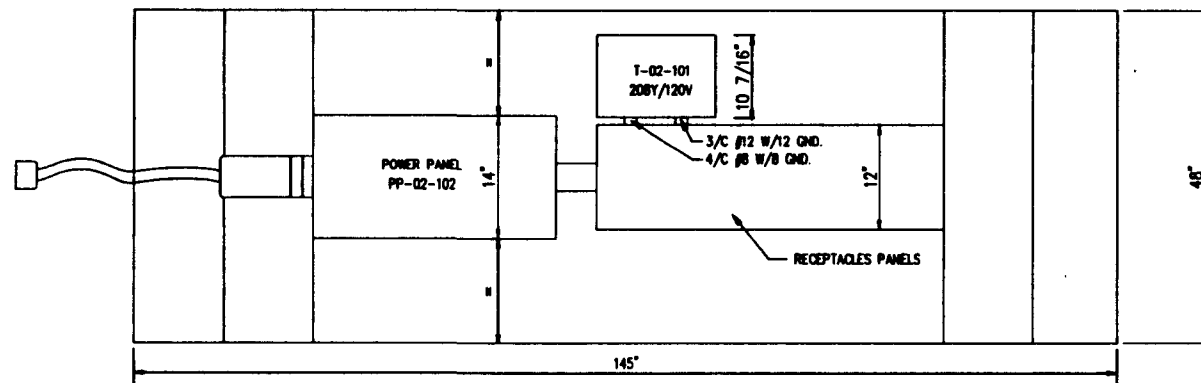
**POWER & TELECOMMUNICATIONS FOR GENERAL OFFICE BLDG. AND RETRIEVAL STAFF CHANGE FACILITY**  
(TYP. 2 PLACES)

NOTES:

- NDE/NDA AND HGS TRAILER MANUFACTURER SHALL SUPPLY 100 FEET OF 100 AMP RATED TYPE C PORTABLE CABLE WITH PLUG FROM A 100 AMP DISCONNECT MOUNTED ON EACH TRAILER TO A DESIGNATED POWER RECEPTACLE BOX.
- NDE/NDA AND HGS TRAILER VENDOR WILL PROVIDE TELECOMMUNICATION AND LAN INTERFACE PULL BOXES ON THE EXTERIOR OF TRAILERS. RACEWAY FROM TELECOMMUNICATION AND LAN PULL BOXES TO EACH TRAILER BY OTHERS.
- GOB AND RSCF TRAILER VENDOR WILL PROVIDE SERVICE ENTRANCE DISCONNECT ON THE EXTERIOR OF TRAILERS. CONTRACTOR SHALL PROVIDE RACEWAY AND WIRE TO LINE SIDE OF DISCONNECT.
- FIBER OPTIC CABLE BENDING RADIUS SHALL NOT BE LESS THAN 12 INCHES.
- THE GOB, RSCF, NDE/NDA AND HGS TRAILER MANUFACTURERS WILL PROVIDE 120V RECEPTABLES ON THE OUTSIDE PERIMETER OF TRAILERS.

TABLE (NAME PLATES)

No.	SERVICE	POWER PB (A)	TELECOMMUNICATION/LAN PB (B)
1	NDE/NDA TRAILER	PWR. PB R-1	T/A. PB-1
2	HGS TRAILER	PWR. PB R-2	T/A. PB-2
3	GENERAL OFFICE BLDG.	PWR. PB-1	
4	RETRIEVAL STAFF CHANGE FACILITY	PWR. PB-2	



PLAN

TABLE (PANEL PP-02-102)

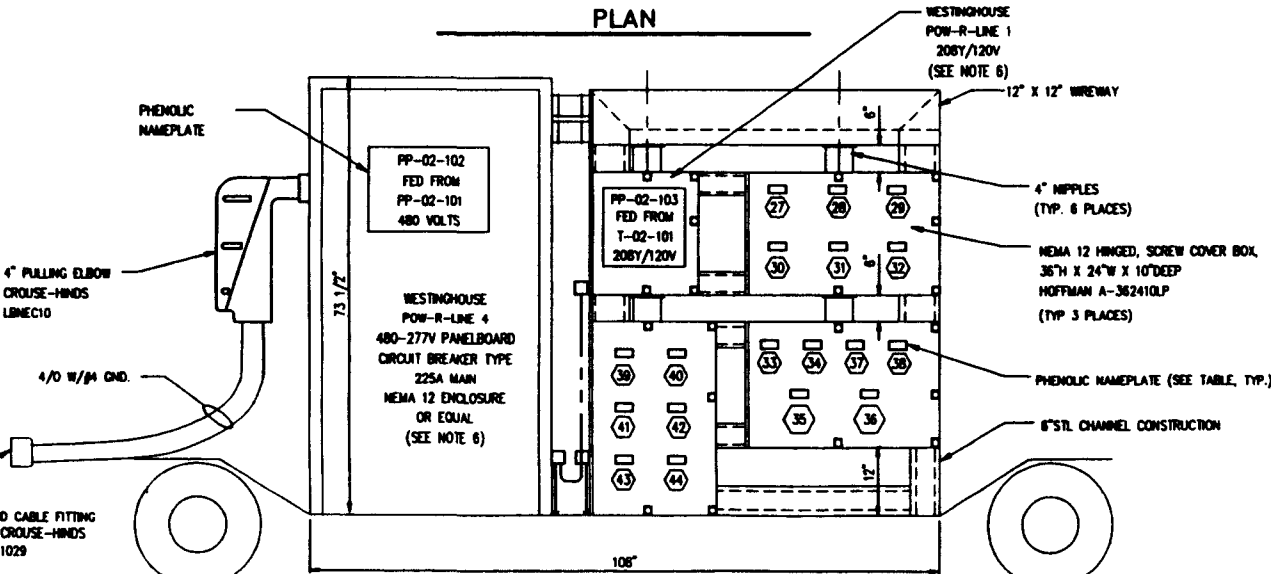
ITEM	AMP RATING (RECEPTACLE)	TAGS (PHENOLIC NAME PLATE)	CABLE	LENGTH
27	20A	PRH-14-101A PORTABLE RADIANT HEATER	3/C#12 W/12 GND. SO CORD FOR HEAVY USAGE	120'
28	20A	PRH-14-101B PORTABLE RADIANT HEATER	3/C#12 W/12 GND. SO CORD FOR HEAVY USAGE	120'
29	20A	PRH-14-101C PORTABLE RADIANT HEATER	3/C#12 W/12 GND. SO CORD FOR HEAVY USAGE	120'
30	20A	PRH-14-102A PORTABLE RADIANT HEATER	3/C#12 W/12 GND. SO CORD FOR HEAVY USAGE	120'
31	20A	PRH-14-102B PORTABLE RADIANT HEATER	3/C#12 W/12 GND. SO CORD FOR HEAVY USAGE	120'
32	20A	PRH-14-102C PORTABLE RADIANT HEATER	3/C#12 W/12 GND. SO CORD FOR HEAVY USAGE	120'
33	30A	PES-14-101A PORTABLE ELECTRIC SALAMANDER	3/C#10 W/10 GND. SO CORD FOR HEAVY USAGE	120'
34	30A	PES-14-101B PORTABLE ELECTRIC SALAMANDER	3/C#10 W/10 GND. SO CORD FOR HEAVY USAGE	120'
35	100A	CR-02-101 DRUM RETRIEVAL CRANE	3/C#2 W/8 GND. SO CORD FOR HEAVY USAGE	110'
36	100A	CR-02-104 MAN-BASKET CRANE	3/C#2 W/8 GND. SO CORD FOR HEAVY USAGE	90'
37	20A	SPARE		
38	20A	SPARE		

TABLE (PANEL PP-02-103)

ITEM	AMP RATING (RECEPTACLE)	TAGS (PHENOLIC NAME PLATE)	CABLE	LENGTH
39	60A	SPIDER 1	2/C#8 W/8 GND. SO CORD FOR HEAVY USAGE	120'
40	60A	SPIDER 2	2/C#8 W/8 GND. SO CORD FOR HEAVY USAGE	60'
41	60A	SPIDER 3	2/C#8 W/8 GND. SO CORD FOR HEAVY USAGE	60'
42	60A	SPIDER 4	2/C#8 W/8 GND. SO CORD FOR HEAVY USAGE	60'
43	60A	SPIDER 5	2/C#8 W/8 GND. SO CORD FOR HEAVY USAGE	60'
44	20A	SPARE		

NOTES: (CONTD.)

- 20A RECEPTACLE, 3-POLE W/GND AND CAP FOR 30 DEGREE PANEL MOUNTING WITH PLUG, MELTRIC TYPE DS 33-17043 AND PVC PROTECTIVE CAP FOR PLUG DS18C.
- 30A RECEPTACLE, 3-POLE W/GND AND CAP FOR 30 DEGREE PANEL MOUNTING WITH PLUG, MELTRIC TYPE DS 33-67042 AND PVC PROTECTIVE CAP FOR PLUG DS32C.
- 60A RECEPTACLE, 2-POLE W/GND AND CAP FOR 30 DEGREE PANEL MOUNTING WITH PLUG, MELTRIC TYPE DS 33-97043 AND PVC PROTECTIVE CAP FOR PLUG DS125C.
- 100A RECEPTACLE, 3-POLE W/GND AND CAP FOR 30 DEGREE PANEL MOUNTING WITH PLUG, MELTRIC TYPE DS 33-97043 AND PVC PROTECTIVE CAP FOR PLUG DS125C.
- 6. BOND NEUTRAL BUS TO GROUND BUS AND CASE INSIDE PANELBOARDS.
- 7. BOND NEUTRAL TAP TO CASE INSIDE TRANSFORMER.



9 DETAIL 9-TRENCH ENCLOSURE POWER SKID  
H-2-823367 SH.1 N.T.S.

SWC-82-8113-PDR-901  
REV 6 PAGE 211  
**Raytheon**  
Engineers & Constructors

BY	DATE	DESCRIPTION
DESIGNED	H. HERRON	07-14-82
DRAWN	H. HERRON	07-28-82
CHECKED	CHAMBERS	08-25-82
LEAD ENGR	CHAMBERS	9-2-82
ENCL. MGR	R. BISH	9-28-82
PRJ. MGR	K. HERRON	9-28-82

U.S. DEPARTMENT OF ENERGY  
NORLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

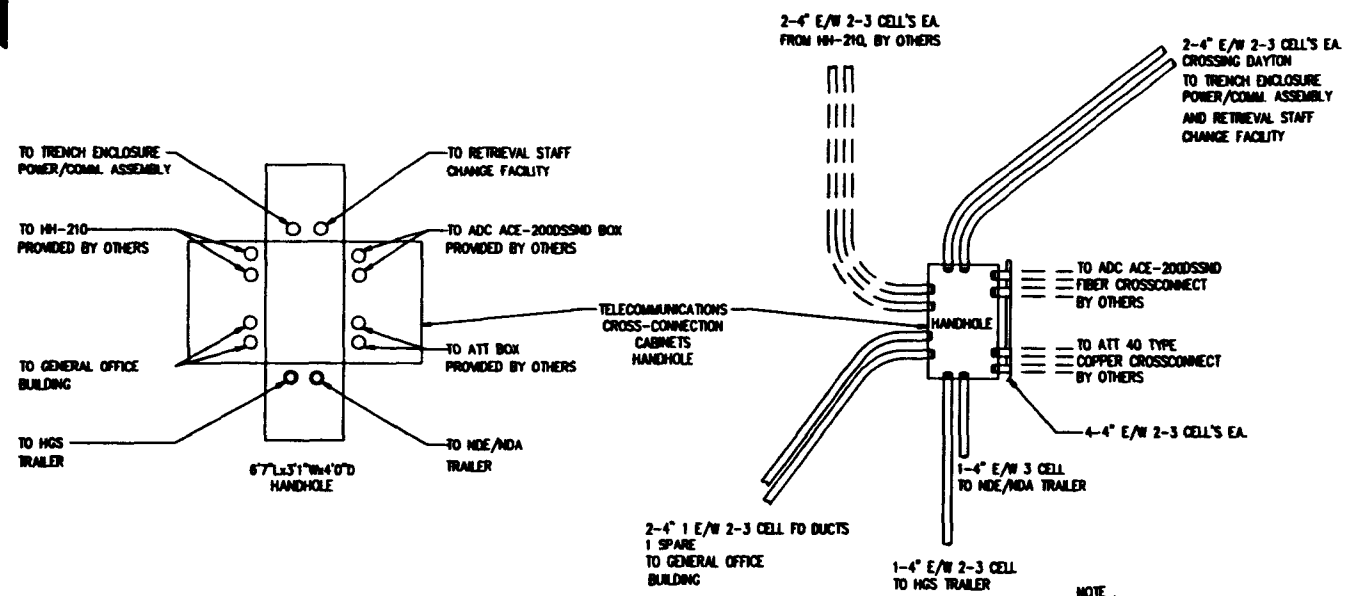
SWOC W113  
ELECTRICAL & TELECOMMUNICATIONS  
DETAILS

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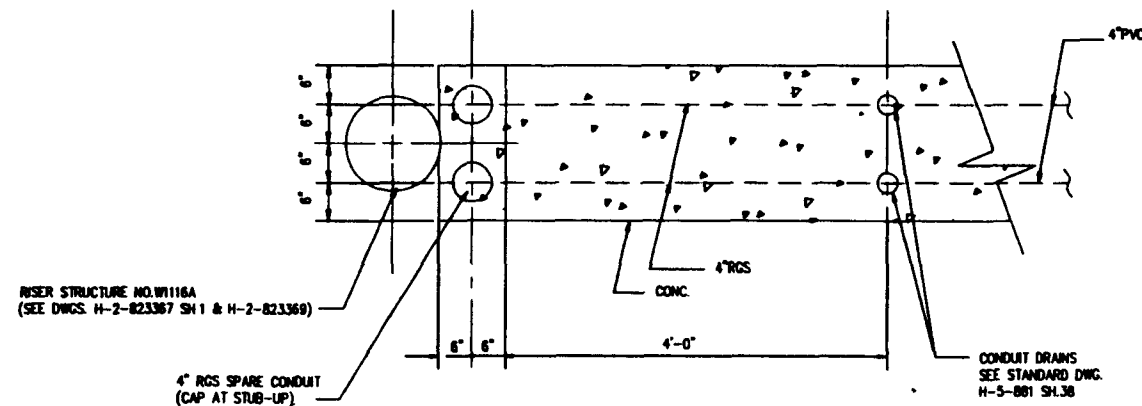
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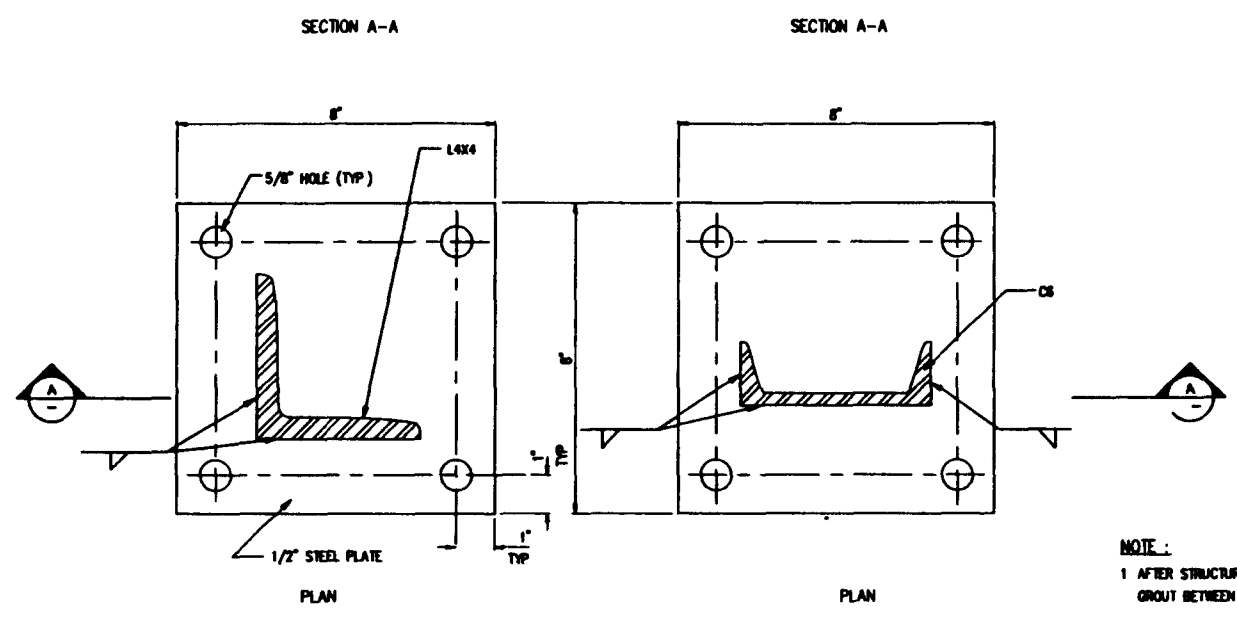
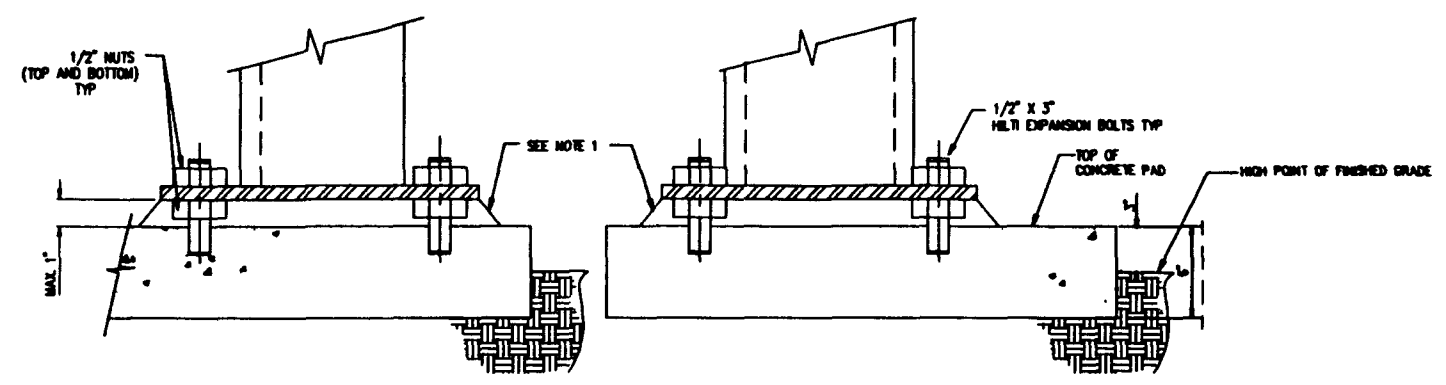
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10 DETAIL 10-TELECOMM. CROSS-CONNECT CABINET HANDHOLE  
H-2-823367 SH.1



11 DETAIL 11-PLAN- U. G. DUCT AT RISER POLE  
H-2-823367 SHT 1 SCALE: 1" = 1'-0"



DETAIL 12A DETAIL 12B

12 DETAIL 12-BASE PLATE ON CONCRETE PAD (TYP.)  
H-2-823273 SH.1

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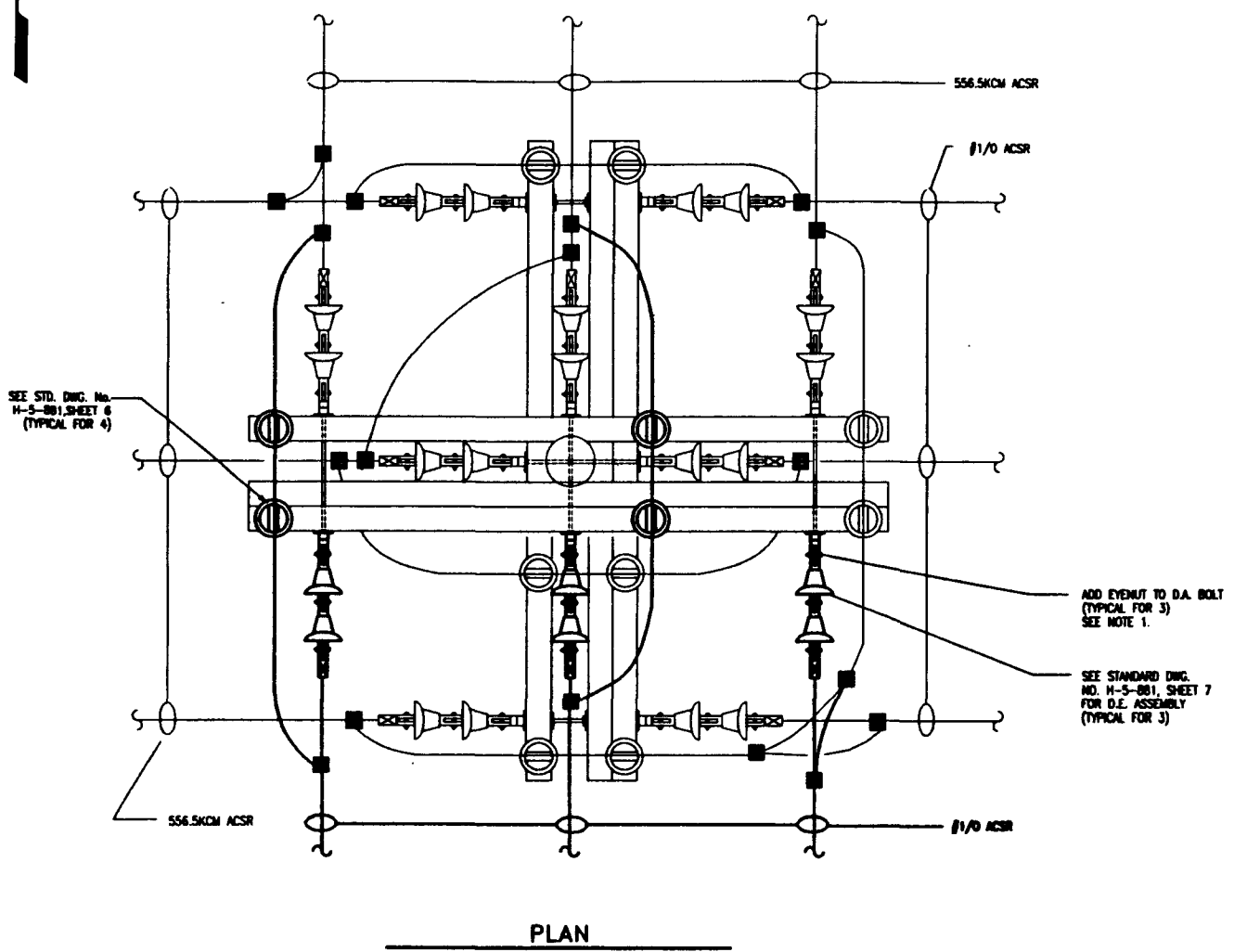
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 COL. NO. 96  
 COL. NO. 97  
 COL. NO. 98  
 COL. NO. 99  
 COL. NO. 100

UDC-80-W113-FIB-001  
 REV 8 PAGE 212  
**Raytheon**  
 Engineers & Constructors

DESIGNED H. HEDON 07-21-85		U.S. DEPARTMENT OF ENERGY NORLAND OPERATIONS OFFICE WESTHOUSE HAMFORD COMPANY	
CHECKED D. HEDON 09-28-85		SWOC W113 ELECTRICAL & TELECOMMUNICATIONS UNDERGROUND CONDUIT DETAILS	
LEAD ENGR D. HEDON 9/28/85		SIZE D	BLDG NO. 216
ENR. DWR E. HEDON 9-28-85		INSTR. NO. W478	DRAWING NUMBER H-2-823367
PRIN. ENR E. HEDON 9-28-85		SCALE AS SHOWN	REV 0
APPROVED FOR IMPLEMENTATION BY DATE		PROJECT NO. 970488	SHEET # OF # 3

REV	NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
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REFERENCE DRAWINGS					
REVISIONS					
CADFILE: 8823367E					
CADCODE: DOS:6.2:ACD2:12.NH					
NEXT USED ON: NONE					

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

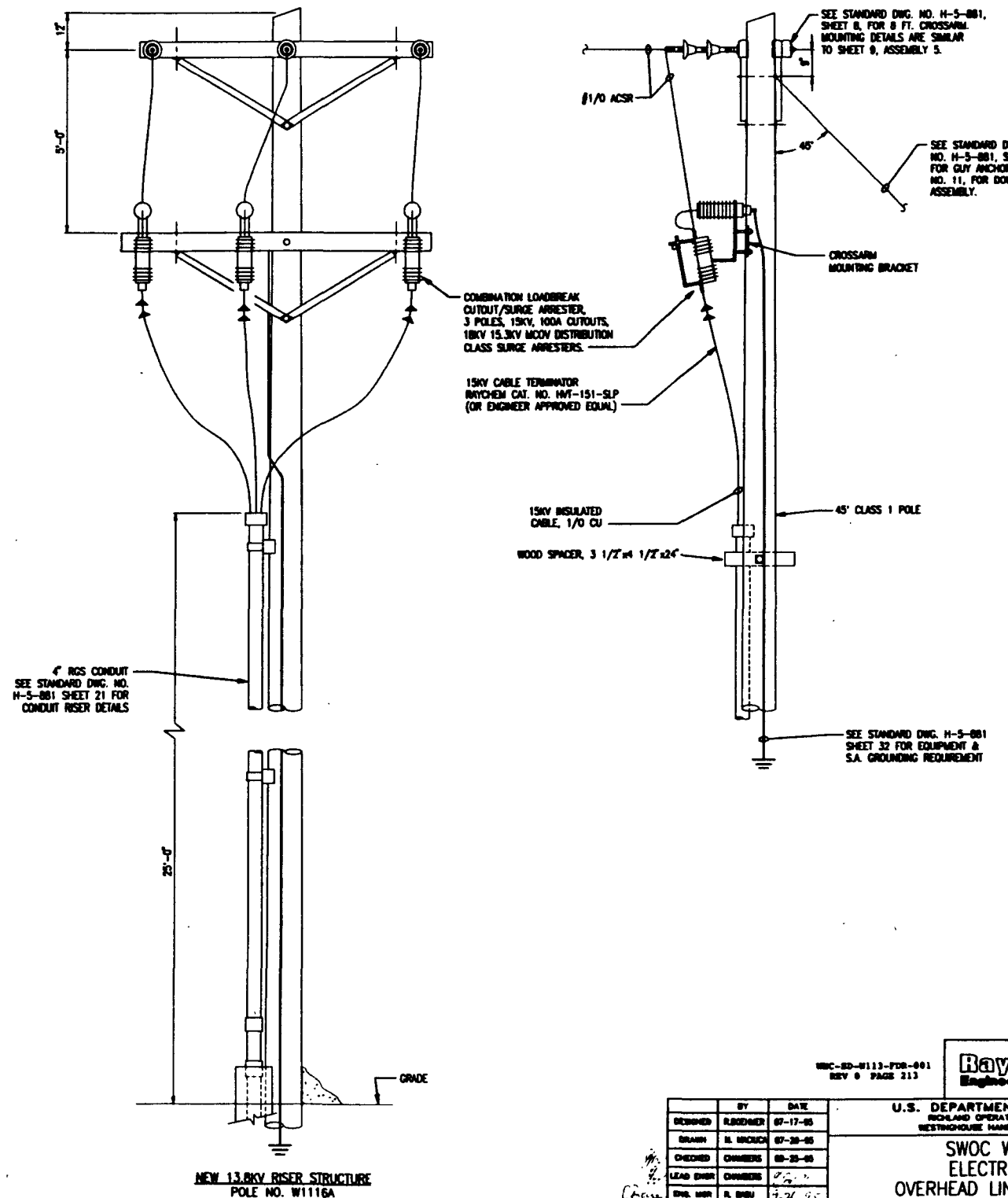
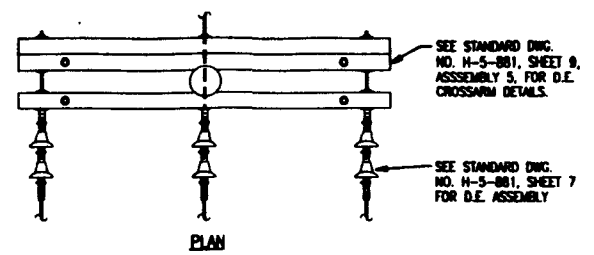


EXISTING 13.8 KV STRUCTURE  
POLE NO. W1116  
THIS DETAIL IS N.T.S.

- NOTES:
1. PREPARE POLE W1116 FOR A NEW TAP TO THE SOUTH BY ADDING EYENUTS TO TOP ARM D.A.BOLTS. IF CENTER PHASE IS ATTACHED WITH MACHINE BOLT, REPLACE MACHINE BOLT WITH APPROPRIATE SIZE D.A. BOLT.
  2. EXISTING EQUIPMENT IS SHOWN WITH LIGHT LINES. NEW EQUIPMENT IS SHOWN WITH HEAVY SOLID LINES.
  3. BONDING FOR NEW HARDWARE MAY BE TAPPED TO EXISTING BONDING GROUND RISER.

SAG & TENSION TABLE

TEMPERATURE	CONDUCTOR SIZE = #1/0 AWC ACSR "BAYMET"											
	40'	50'	60'	70'	80'	90'						
TENSION LB.	908	823	740	658	576	495						
SPAN LENGTH	SAG FT.	SEC'S	SAG FT.	SEC'S	SAG FT.	SEC'S						
	175 FT.	.82	2.36	.67	2.45	.74	2.56	.84	2.74	.96	2.93	1.12



NEW 13.8KV RISER STRUCTURE  
POLE NO. W1116A

W1116-W1113-PDR-001  
REV 0 PAGE 213

**Raytheon**  
Engineers & Constructors

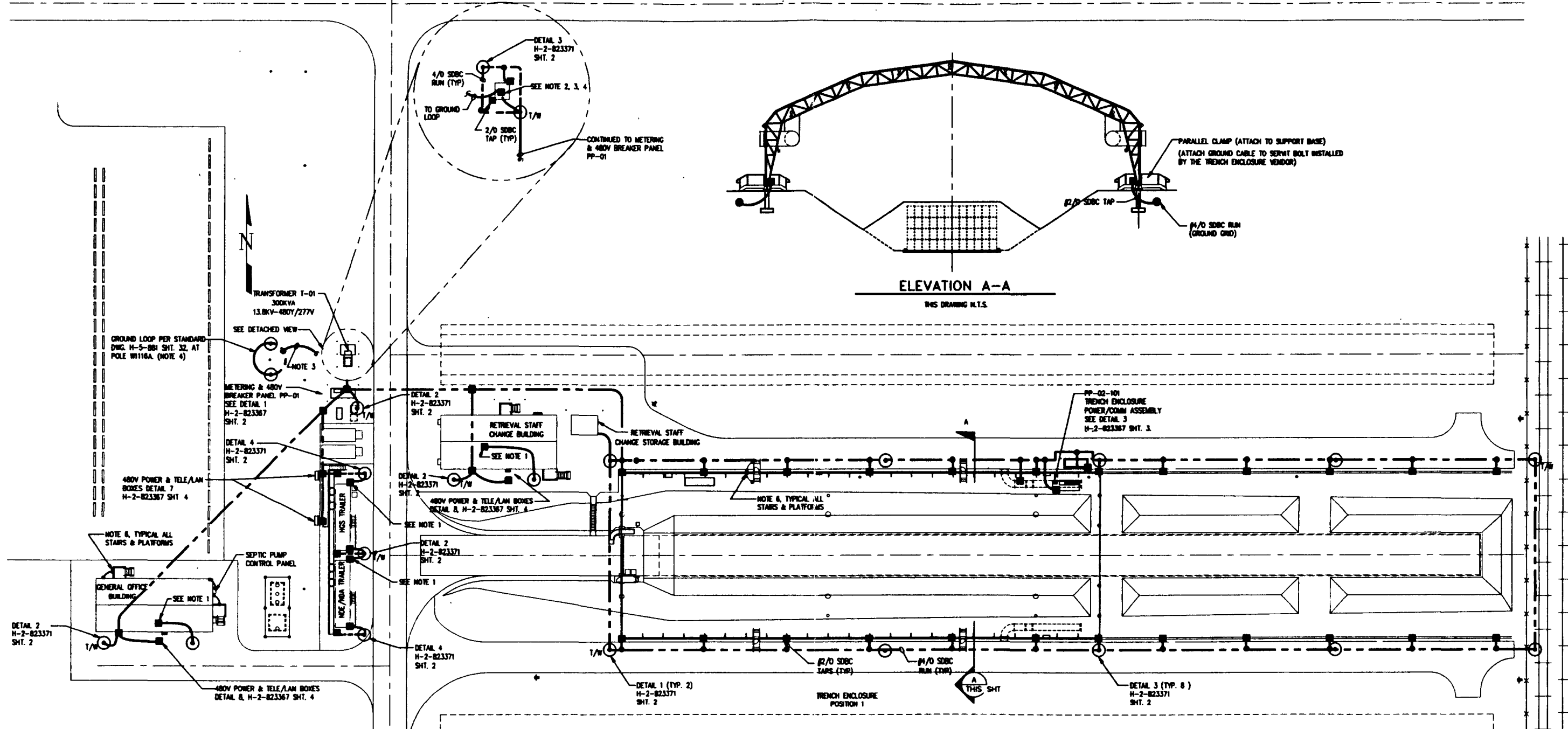
DESIGNED	BY	DATE	U.S. DEPARTMENT OF ENERGY				
BRANN	B. BRANN	07-17-95	NICHOLAND OPERATIONS OFFICE				
CHECKED	CHAMBERS	08-25-95	WESTINGHOUSE HANFORD COMPANY				
LEAD ENGR	CHAMBERS		<b>SWOC W113 ELECTRICAL OVERHEAD LINE DETAILS</b>				
ENCL ENGR	R. ENCL	9-20-95					
PROJ ENGR	E. MERSON	9-27-95					
C.A.	E. FRIST						
APPROVED FOR IMPLEMENTATION	BY	DATE	SIZE	BLDG NO.	INDEX NO.	DRAWING NUMBER	REV
			D	218 W478	8001	H-2-823369	0
SCALE: 1/2"=1'-0"			PROJECT NO.	9164000	SHEET 1 OF 1		

REV NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
REFERENCE DRAWINGS				
DRAWING TRACEABILITY LIST				
NEXT USED ON : NONE				
CADFILE: 8823388A		CADCODE: DOS:6.2:ACD2:12:NN		

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

DATE PLOTTED: 10/25/95 10:52 AM BY: 0144 DWT  
JOB NO.: 9164000  
JOB NAME: SWOC W113  
DRAWING NO.: H-2-823369  
SHEET NO.: 1 OF 1

1 2 3 4 5 6 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  
 COLOR FOR BIDDING 2888252368221 FOR BIDDING 2888252368221  
 3/20/2005 11:14 AM  
 3/20/2005 11:14 AM



- NOTE:
- 1 CONTRACTOR SHALL PROVIDE GROUND ROD FOR TRANSFORMER SECONDARY NEUTRAL CONNECTION.
  - 2 GROUND TRANSFORMER SECONDARY NEUTRAL.
  - 3 RUN INSULATED (GREEN) 4/0 GROUND CONDUCTOR FROM 13.8KV SURGE ARRESTOR TO GROUND GRID AT POLE W1116A.
  - 4 ENSURE GROUND GRID AROUND POLE W1116A AND TRANSFORMER T-01 HAVE NO LESS THAN 20 FEET SEPARATION.
  - 5 TRENCH ENCLOSURE VENDOR TO PROVIDE A LIGHTNING PROTECTION SYSTEM.
  - 6 GROUND ALL STAR PIECES TO ENCLOSURE AND/OR TRAILER STEEL.
  - 7 GROUND TRANSFORMER SECONDARY NEUTRAL GROUND TRANSFORMER CASE, 120/208V DISTRIBUTION PANEL CASE, 480V PANEL BUS, CASE AND SKID.

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

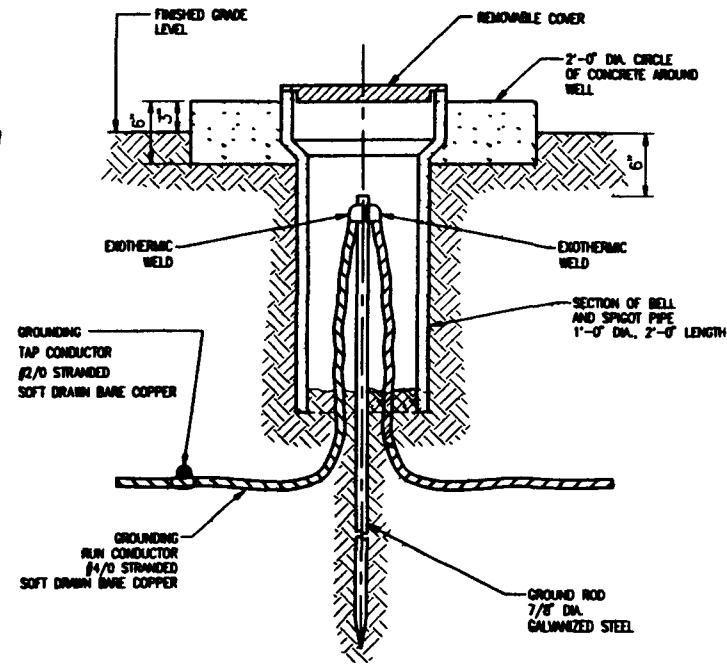
BY	DATE
DESIGNED: H. HEBBEN	05-07-05
DRAWN: B. BRIDGES	05-07-05
CHECKED: CHAMBERS	06-25-05
LEAD ENGR: CHAMBERS	7-26-05
ENR. MGR: E. SHU	7-26-05
PRJ. MGR: H. HEBBEN	9-26-05
BY: G. PAUL	9/26/05

U.S. DEPARTMENT OF ENERGY NICHOLAS OPERATIONS OFFICE WESTINGHOUSE HANFORD COMPANY			
<b>SWOC W113 ELECTRICAL GROUNDING &amp; LIGHTNING PROTECTION PLANS &amp; DETAILS</b>			
SIZE: D	BLDG NO: 218	INDEX NO: 8001	REVISION NUMBER: H-2-823371
SCALE: 1"=30'	PROJECT NO: 0904086	SHEET 1 OF 2	

WIC-82-W113-PDS-001  
 REV 0 PAGE 214  
**Raytheon**  
 Engineers & Constructors

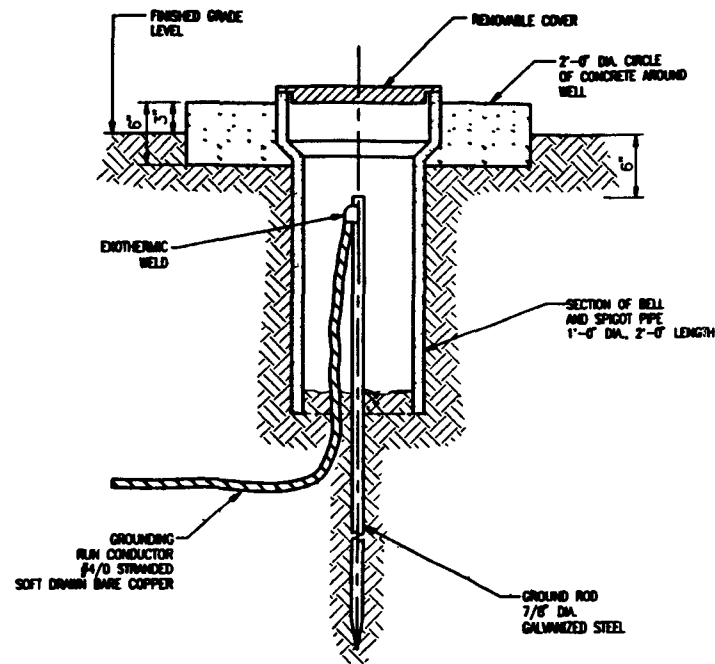
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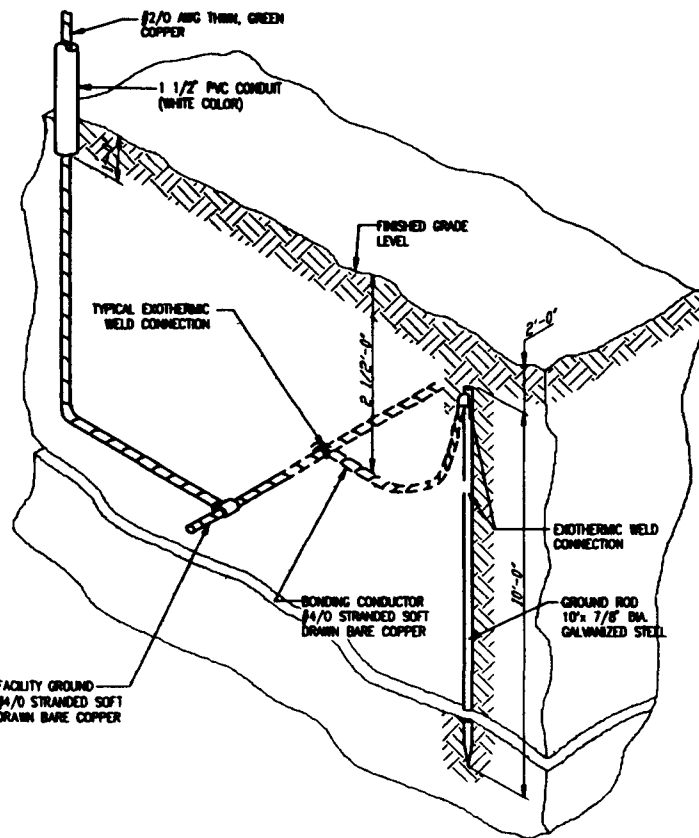
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H-2-823371 SH.1 N.T.S.

GROUND ROD WITH ACCESSIBLE TEST WELL  
AT TRENCH ENCLOSURE

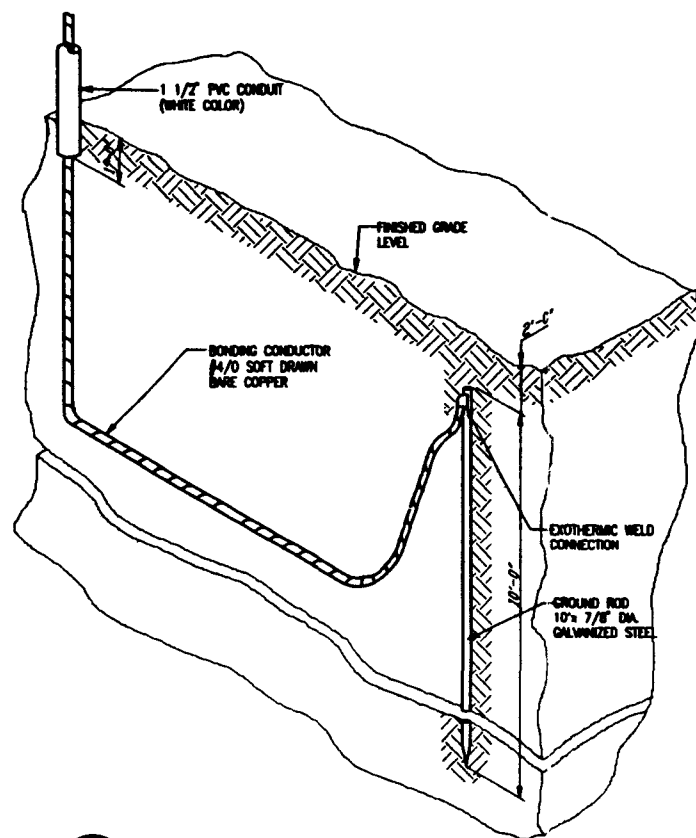


2 DETAIL 2  
H-2-823371 SH.1 N.T.S.

GROUND ROD WITH ACCESSIBLE TEST WELL



3 DETAIL 3 - GROUND ROD FOR TRENCH ENCLOSURE  
H-2-823371 SH.1 N.T.S.



4 DETAIL 4 - GROUND ROD  
H-2-823371 SH.1 N.T.S.

WMC-ED-W113-FDR-001  
REV 0 PAGE 213

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

SWOC W113  
ELECTRICAL  
GROUNDING & LIGHTNING PROTECTION  
DETAILS

REV	BY	DATE	DESCRIPTION
DESIGNED	H. HERSON	06-07-85	
DRAWN	H. HERSON	06-07-85	
CHECKED	CHAMBERS	06-28-85	
LEAD ENGR	CHAMBERS	06-28-85	
ENCL. MGR	H. HERSON	7-26-85	
PROJ. MGR	H. HERSON	7-26-85	
OTHER	G. FRIST	7-26-85	
APPROVED FOR IMPLEMENTATION			
BY			
DATE			

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
	REFERENCE DRAWINGS			
	REVISIONS			
	DRAWING TRACEABILITY LIST			
	NEXT USED ON : NONE			
	CADFILE: 823371B			
	CADCODE: DOS: 6.2: ACD2.12.NH			

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

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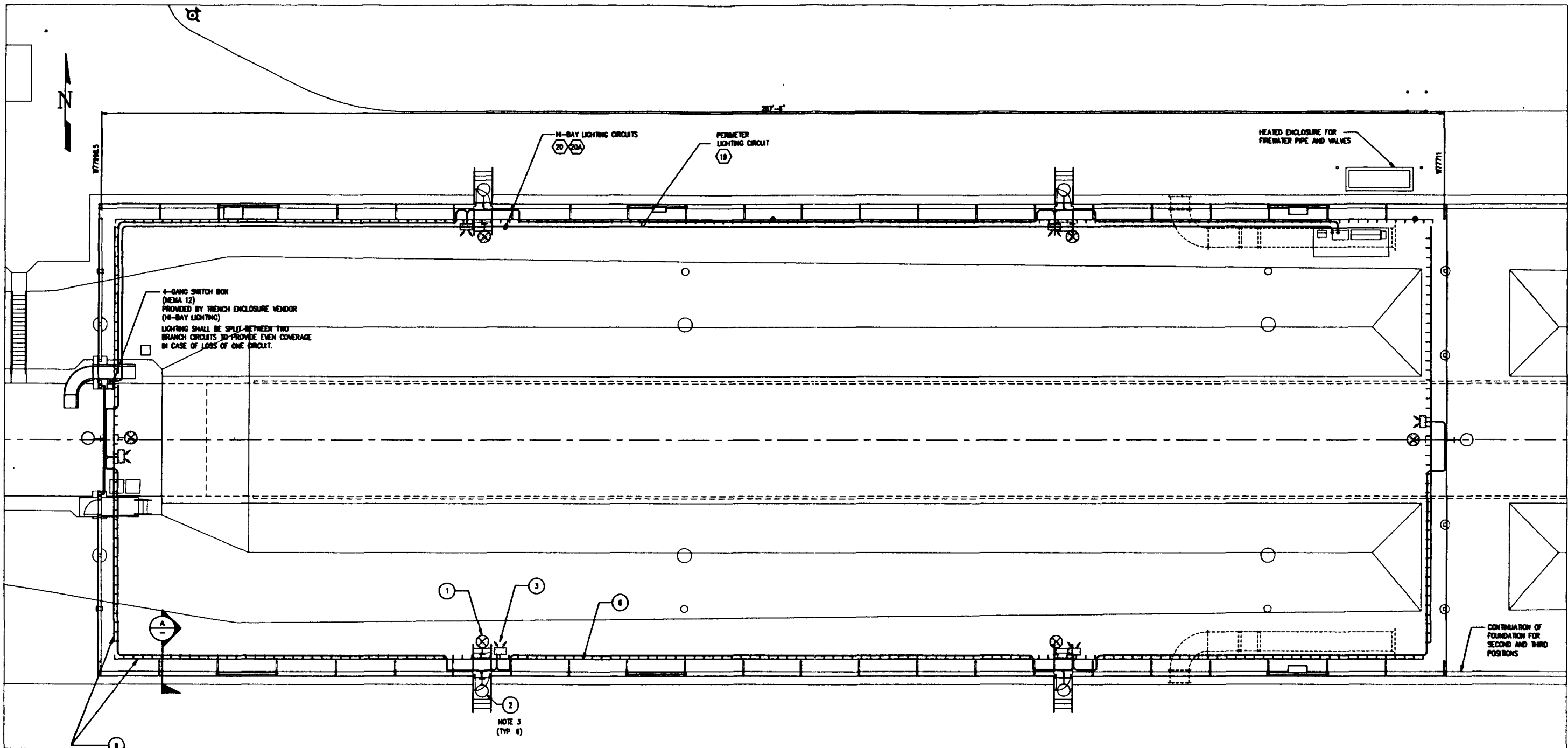


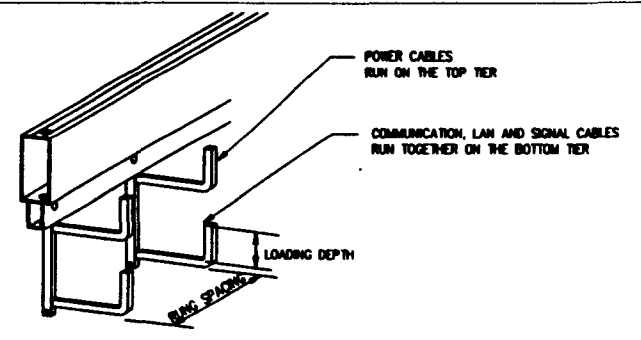
TABLE FOR LIGHTING FIXTURE

ITEM	QTY	DESCRIPTION
1	6 EA	EXIT SIGN, SELF-LUMINOUS COLOR, WHITE LETTERING WITH GREEN BACKGROUND BRANDHURST MODEL B-100-US OR EQUAL
2	6 EA	WALL MOUNT LIGHT FIXTURE, 175 WATT MERCURY VAPOR, 277 VOLT, WEATHER PROOF, WITH PHOTOCONTROL KIT HOLOPHANE WALLPACK CATALOG # WL 2K 175MV 278K-F1 WITH WL2KPR20/24/27 OR EQUAL
3	6 EA	EMERGENCY DUAL-LITE, NEMA 12, 277 VOLT OPERATION SIMILAR TO WESCO LUMENETTE ML SERIES OR EQUAL
4	2 EA	PORTABLE AREAMASTER JR WIDE BEAM FLOODLIGHTS 175W METAL HALIDE MEDIUM BASE LAMP, 120VAC APPLETON OR EQUAL (SEE NOTE 1, NOT SHOWN ON PLAN)

TABLE FOR CABLE SUPPORT (SEE DETAIL)

ITEM	QTY	DESCRIPTION
6	64 EA	TWO-TIER HALF-RACK B-LINE CENT-R-RAIL CABLE TRAY SYSTEM, BULLETIN CR-85, MULTI-TIER HALF-RACK, 3" LOADING DEPTH, ALUMINUM, 2 TIER, 9" RIBING SPACING, 8" WIDTH, 144" LENGTH CATALOG # C3 A 2M 08 08 144 (OR ENGINEER APPROVED EQUAL)

NOTE  
 1. PORTABLE FLOODLIGHTS SHALL BE USED BY OPERATIONS TO PROVIDE FOR ILLUMINATION OF DRUM WORK FACE.  
 2. AFTER LEAVING CABLE TRAY ALL CIRCUITS SHALL BE ROUTED IN CONDUIT TO FINAL LOAD.  
 3. SEE ARCHITECTURAL ELEVATIONS FOR EXTERIOR LIGHT MOUNTING LOCATIONS.



A SECTION - TWO TIER HALF RACK

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

REF NO	DESCRIPTION

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

BY	DATE
DESIGNED: S. MICKEL	08-20-95
DRAWN: S. MICKEL	08-21-95
CHECKED: CHAMBERS	08-28-95
LEAD ENGR: CHAMBERS	9-2-95
ENCL. MGR: S. MICKEL	9-28-95
PRJ. MGR: E. MERRILL	9-28-95
C.A. S. FRIST	9-28-95
OTHER	
APPROVED FOR IMPLEMENTATION BY	
DATE	

8823372A-001  
 REV 0 PAGE 216

**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTBOROUGH, MASSACHUSETTS

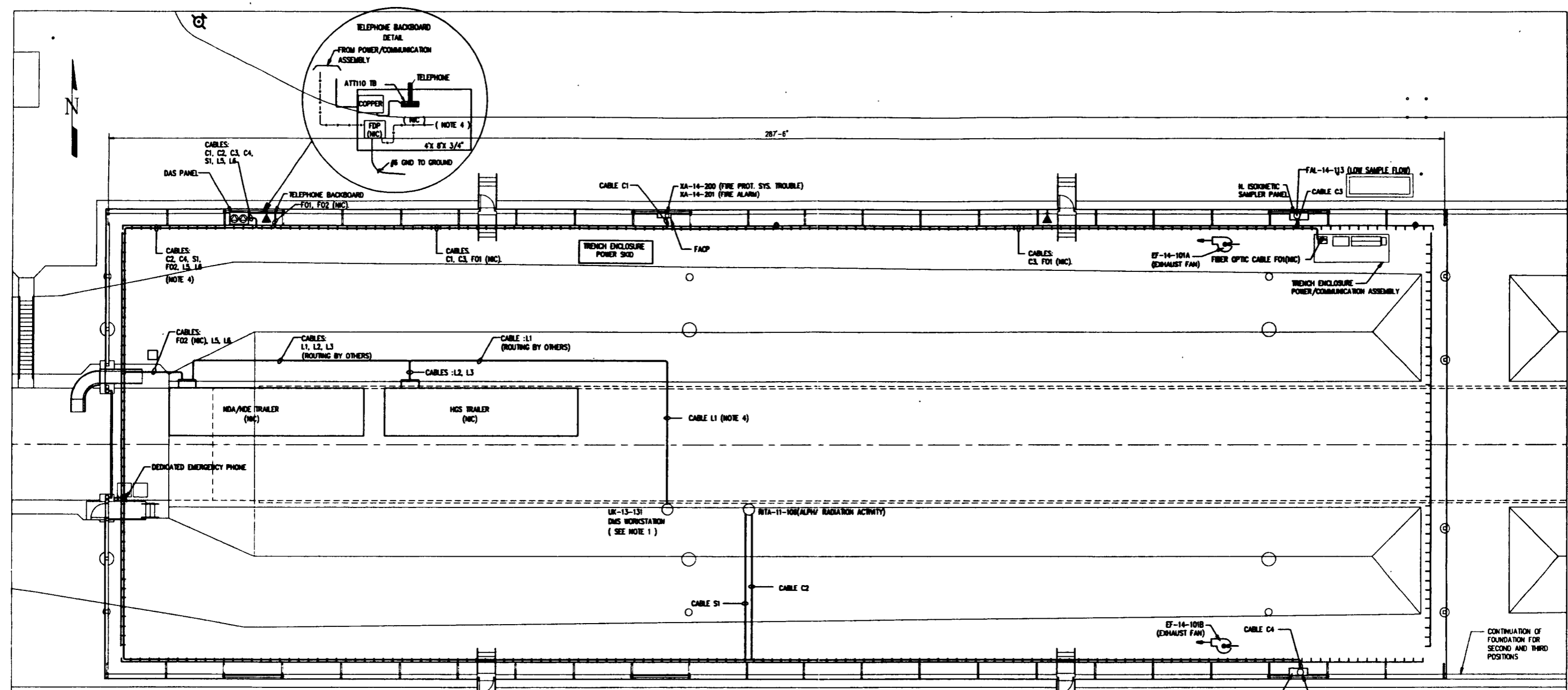
**SWOC W113  
 ELECTRICAL  
 TRENCH ENCLOSURE  
 LIGHTING PLAN**

REV	DATE	DESCRIPTION
D	218	8001
	W478	H-2-823372
		0

SCALE: NONE PROJECT NO: 89A-000 SHEET 1 OF 1

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

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 41  
 01/24/83 11 41



**CABLE LIST**

CABLE #	FROM	TO	CABLE SIZE	INSTALLATION		COMMENTS
				BY	WHEN	
C1	FACP	DAS PNL	5/C#14	GC	-	2 ALARMS
C2	RTA-11-108	DAS PNL	5/C#14	WHC	STARTUP	2 ALARMS
C3	N. ISOKINETIC SAMPLE PNL	DAS PNL	2/C#14	GC	-	ALARM
C4	S. ISOKINETIC SAMPLE PNL	DAS PNL	2/C#14	GC	-	ALARM
L1	DNS WORKSTATION	SEE NOTE 4	4 PAIR CAT. 5	WHC	STARTUP	LAN
L2	NDA/NDE	HGS	4 PAIR CAT. 5	WHC	POST STARTUP	LAN
L3	NDA/NDE	HGS	4 PAIR CAT. 5	WHC	POST STARTUP	LAN
L5	DAS PNL	NDA/NDE HUB	4 PAIR CAT. 5	WHC	POST STARTUP	LAN
L6	BAR CODE	NDA/NDE HUB	4 PAIR CAT. 5	WHC	POST STARTUP	LAN
S1	RTA-11-108	DAS PNL	17MP#16	GC	-	ANALOG SIGNAL
F01	TRENCH ENCL. POWER/COMM. ASSEMBLY	DAS PNL	FIBER OPTIC (NIC)	-	-	LAN
F02	TELEPHONE BACKBOARD	NDA/NDE HUB	FIBER OPTIC (NIC)	-	POST STARTUP (SEE NOTE 4)	LAN

GC-GENERAL CONTRACTOR  
 WHC-WESTINGHOUSE MANFORD CO.

**NOTES:**

1. A DNS WORKSTATION WILL BE LOCATED AT THE OVERPACK STATION AND WILL MOVE WITH THE WORKFACE.
2. TELEPHONE CABLES SHALL BE RUN FROM TELEPHONE BACKBOARD TO THE TELEPHONE OUTLETS SHOWN ON THE LAYOUT AND TO THE TELEPHONE BACKBOARD IN NDA/NDE AND HGS TRAILERS.
3. AFTER LEAVING CABLE TRAY, ALL CIRCUITS SHALL BE ROUTED IN CONDUIT OR DIRECT BURIED TO FINAL DEVICE.
4. F02 AND L1 SHALL BE RUN TO DAS PANEL IN STARTUP MODE, AND SHALL BE RUN TO NDA/NDE TRAILER IN POST STARTUP MODE, AS SHOWN.
5. ROUTE TELECOM AND LAN CABLES IN 2-TIER HALF RACK.

WEC-82-W113-F08-001  
 REV 0 PAGE 217

**Raytheon**  
 Engineers & Constructors

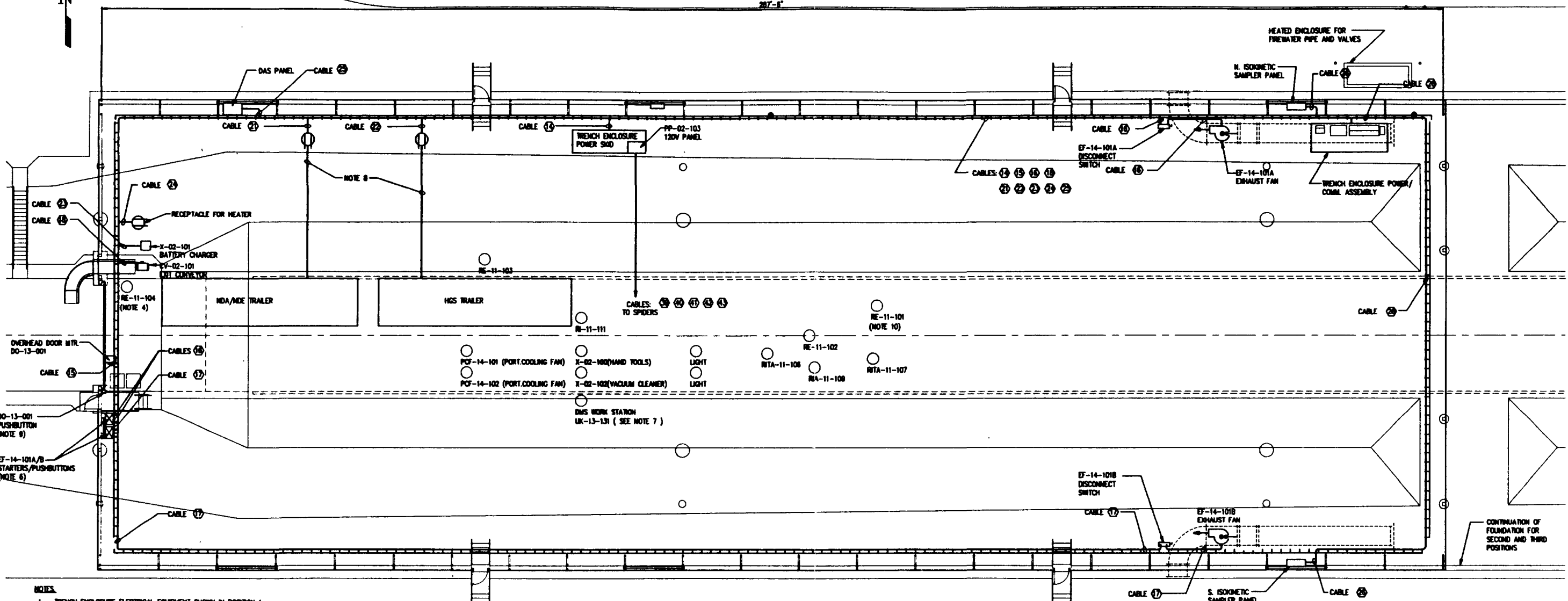
U.S. DEPARTMENT OF ENERGY  
 WINDLAND OPERATIONS OFFICE  
 WESTINGHOUSE MANFORD COMPANY  
 SWOC W113  
 ELECTRICAL  
 TRENCH ENCLOSURE  
 COMMUNICATION PLAN AND DETAILS

BY	DATE
DESIGNED: H. BRUCHA	07-17-82
DRAWN: H. BRUCHA	07-19-82
CHECKED: CHAMBERS	08-25-82
LEAD ENGR: CHAMBERS	
ENG. MGR: R. BISH	9.7.82
PROJ. MGR: E. HERRIN	9.7.82
D.A. G. FRIST	
OTHER:	

REV	DESCRIPTION	DATE	BY	APP. DATE
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REV	DESCRIPTION	DATE	BY	APP. DATE
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NEXT USED ON : NONE				
CADFILE: B823373A				
CADCODE: DOS: 6.2: ACD2: 12: MN				

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED



**NOTES:**

1. TRENCH ENCLOSURE ELECTRICAL EQUIPMENT SHOWN IN POSITION 1
2. THE POWER SMO SHALL MOVE WITH THE WORKFACE AT THE TOP OF THE TRENCH.
3. THE 480V POWER CABLES (FEEDS FOR FIXED LOADS) SHALL BE RUN ON THE TOP TIER OF THE TWO TIER HALF RACK AND SHALL HAVE ENOUGH LENGTH (LAD BACK IN THE TRAY) TO COVER THE NEXT 2 TRENCH ENCLOSURE POSITIONS. KEEP TRAY RATED CABLES OFF THE FLOOR.
4. RE-11-104 SHALL BE FED FROM A 120V OUTLET MOUNTED ON THE OUTSIDE OF THE NDA/NDE TRAILER.
5. FIVE 120V SPIDERS SHALL SUPPLY POWER TO ALL 120V DEVICES. EACH SPIDER HAS SIX 120V RECEPTACLES. THE SPIDERS SHALL BE LOCATED WHERE NEEDED. THE FOLLOWING LOADS ARE TO BE PLUGGED INTO THESE SPIDERS.  
RE-11-102, RITA-11-108, RITA-11-107, RITA-11-109, RE-11-103, R-11-111, PCF-14-101, X-02-100(TOOLS), X-02-102(VACUUM CLEANER) AND A PORTABLE 175W LIGHT  
PCF-14-102, DMS WORK STATION (UK-13-131) AND A PORTABLE 175W LIGHT.
6. MOUNT, WIRE AND TERMINATE COMBINATION STARTERS WITH START-STOP PUSHBUTTONS FOR EACH EXHAUST FAN, EF-14-101A & B, APPROXIMATELY AS SHOWN.
7. A DMS WORKSTATION WILL BE LOCATED AT THE OVERPACK STATION AND WILL MOVE WITH THE WORKFACE.
8. NDA/NDE AND HGS TRAILERS SHALL BE PLUGGED INTO TWO RECEPTACLES LOCATED OFF THE TWO TIER HALF RACK APPROXIMATELY AS SHOWN.
9. MOUNT VENDOR-SUPPLIED PUSHBUTTON FOR OVER HEAD DOOR APPROXIMATELY 42" ABOVE FINISHED GRADE.
10. THE CRANE MANUFACTURER SHALL SUPPLY 120V TO A QUADREX RECEPTACLE ON THE MAN-BASKET. RE-11-101 SHALL PLUG INTO THIS RECEPTACLE.
11. AFTER LEAVING CABLE TRAY, ALL CIRCUITS SHALL BE ROUTED IN CONDUIT TO FINAL LOAD.

WEC-00-1113-PDR-001  
REV 0 PAGE 310

**Raytheon**  
Engineers & Constructors

DESIGNED	H. BROOKA	07-13-95
DRAWN	H. BROOKA	07-17-95
CHECKED	CHAMBERS	08-28-95
LEAD ENGINEER	CHAMBERS	9-2-95
ENCL. MGR.	R. ENO	9-28-95
PRJ. MGR.	E. HERRIN	9-28-95
CHK. O.A.	G. FRIST	9-28-95
APPROVED FOR IMPLEMENTATION		
BY		
FOR		
DATE		

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

**SWOC W113  
ELECTRICAL  
TRENCH ENCLOSURE  
POWER PLAN AND DETAILS**

REV	DATE	DESCRIPTION
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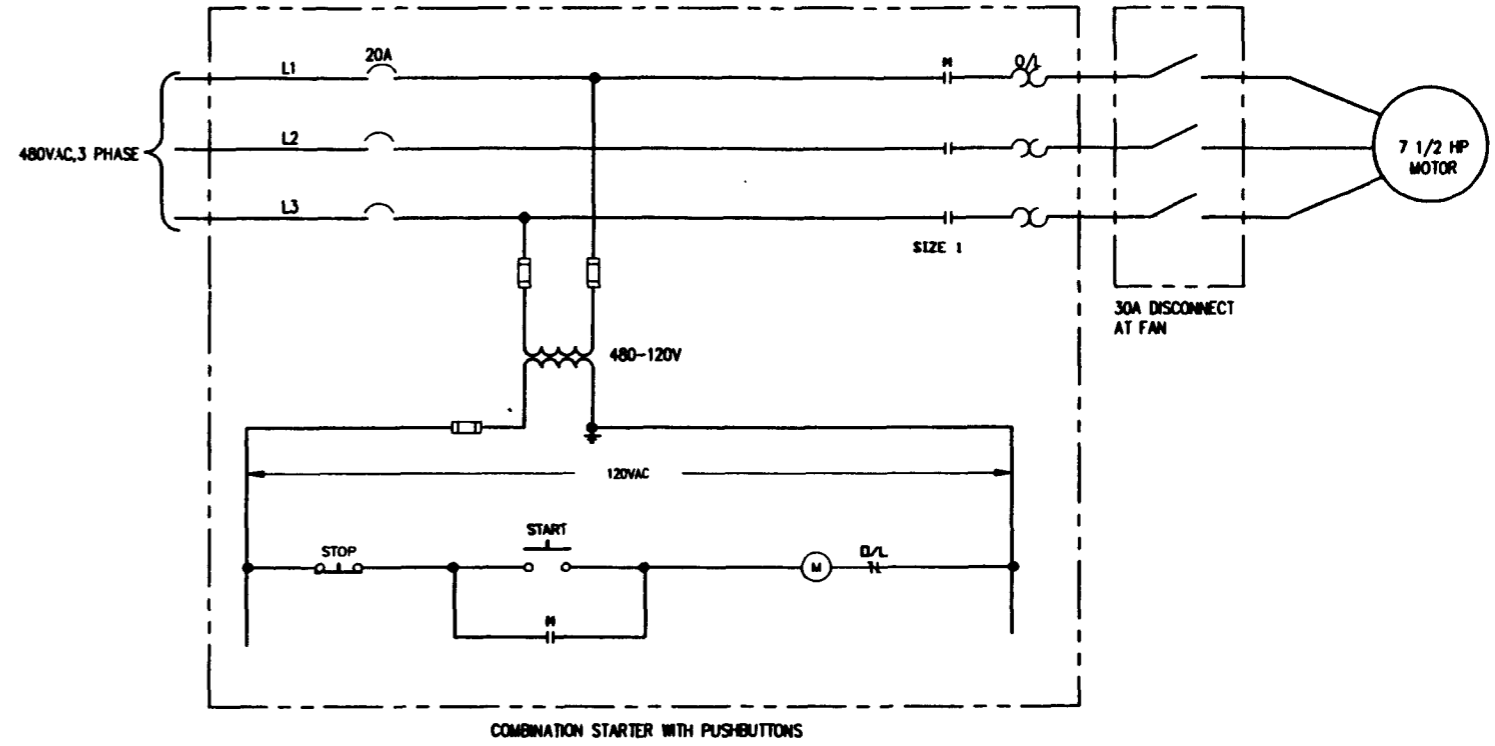
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	REVISIONS			
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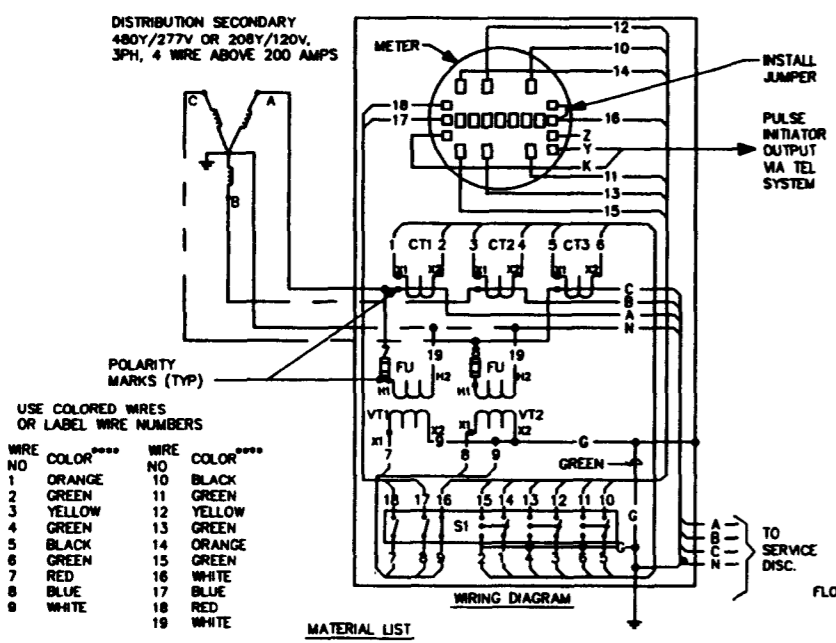
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 FROM WILSON

PANEL NO. PP-02-103		AICS 10K		LOCATION SKID								
SERVICE VOLTAGE 208Y/120VAC		MAINS NONE		ENTRY TOP/BOT								
SOURCE T-02-101		BUS RATING 100A		ENCLOSURE NEMA 12								
SERVICE	LOAD(VA)			BKR AMP	CKT NO	PHASE	CCT NO	BKR AMP	LOAD(VA)			SERVICE
	A	B	C						A	B	C	
SPIDER 1 (RE-11-101)	2640			60	1	A	2	60				SPIDER 5 (SPARE)
SPIDER 3 (RE-11-101)	3895			60	3	B	4	60				SPARE
SPIDER 2 (RE-11-101 & 10-11-111)		972		60	5	C	6	60			2375	SPIDER 4 (RE-11-101 & 10-11-111)
SPACE					7	A	8					SPACE
SPACE					9	B	10					SPACE
SPACE					11	C	12					SPACE
TOTAL	2640	3895	972								2375	TOTAL 9882VA
TOTAL		TOTAL		D.F.		DEMAND						
LIGHTING LOAD		350VA		1.00		350VA						
RECEPTACLES		9532VA		.50		4765VA						
MOTOR LOAD				.90								
SPARE				.50								
TOTAL		9882VA				5115VA						

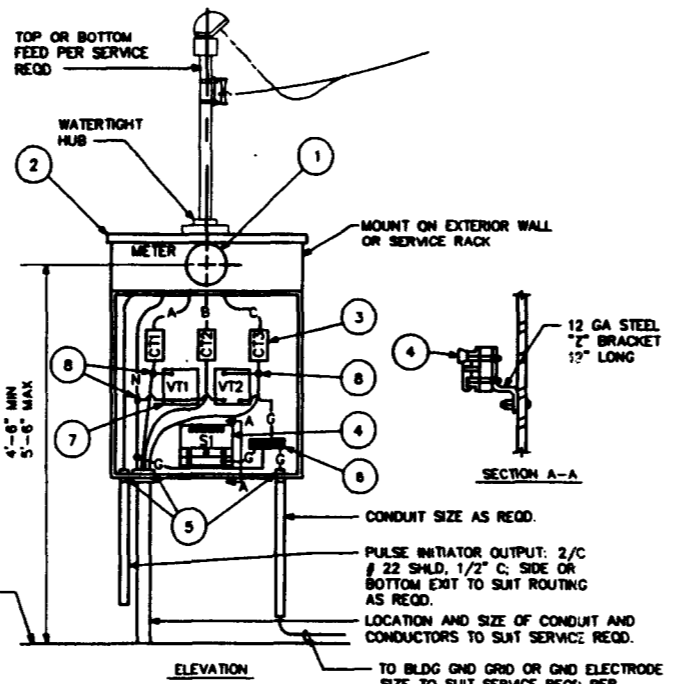


480V STARTER DIAGRAM FOR EXHAUST FANS EF-14-101A & B



USE COLORED WIRES OR LABEL WIRE NUMBERS

WIRE NO	COLOR	WIRE NO	COLOR
1	ORANGE	10	BLACK
2	GREEN	11	GREEN
3	YELLOW	12	YELLOW
4	GREEN	13	GREEN
5	BLACK	14	ORANGE
6	GREEN	15	GREEN
7	RED	16	WHITE
8	BLUE	17	BLUE
9	WHITE	18	RED
		19	WHITE



- NOTES
- POTENTIAL TRANSFORMER WIRING AND CURRENT TRANSFORMER SECONDARY WIRING SHALL BE NO. 12 AWG STRANDED COPPER, TYPE XHHW WITH 600V INSULATION.
  - CURRENT TRANSFORMER WIRING SHALL BE CONTINUOUS WITHOUT SPLICES OR TAPS, AND SHALL BE TERMINATED WITH RING TYPE LUGS.
  - TO INSURE PROPER PHASE RELATIONSHIPS, CONNECT INSTRUMENT TRANSFORMERS WITH POLARITY MARKS AS SHOWN (FACING THE SOURCE).
  - ADD JUMPER TO METER CASE
  - METER GROUND SHOULD BE CONNECTED TO THE BUILDING GROUND WHEN THE METER IS LOCATED ON THE BUILDING WALL.

QTY	PART NO	DESCRIPTION	REFERENCE
1	1	METER, W/THOUR DEMAND, SOCKET TYPE, 2 STATOR, CLASS 10, 120VAC, FOR USE WITH 3 CTS AND 2-288/120V VTS, 480Y/277V OR 208Y/120V 3PH, 4 WIRE SERVICE COMPLETE WITH A M-90 REGISTER AND A PULSE INITIATOR OUTPUT BOARD.	GE TYPE VM-65-5
1	2	COMBINATION METER AND CURRENT TRANSFORMER CABINET: 400A MAX, 3PH 4 WIRE WYE, NEMA TYPE 3R, WITH AUTOMATIC CIRCUIT CLOSING DEVICES	CIRCLE AW 122013
3	3	CURRENT TRANSFORMER, 200-400 A ABOVE 400A	GE JCW-0** GE JAK-0**
1	4	TEST SWITCH, 9 POLES	SUPERIOR 1034-F**
1	5	BUSHING, INSULATED GROUNDING TYPE (GROUNDING TYPE LOCKWASHER AND BUSHING IS ALSO ACCEPTABLE WHEN NOT CONNECTED TO A KNOCKOUT PER NEC 250.72(g))	OZ/GEDNEY CO TYPE BLG **
1	6	GROUNDING LUG (BOLT TO ENCLOSURE)	GE CAT NO. TGLT EQUIPMENT GND KIT**
2	7	VOLTAGE TRANSFORMER, 288/120V, WITH ONE (1) PRIMARY FUSE	GE JVA-0** **
3	8	SPLIT BOLT CONNECTOR & TAPE FOR 600V	

\*\*MAY BE THE EQUIVALENT PRODUCT      \*\*\*VTS NOT REQUIRED FOR 208Y/120V SERVICE  
 \*\*\*\*COLORED TAPE IS UNACCEPTABLE

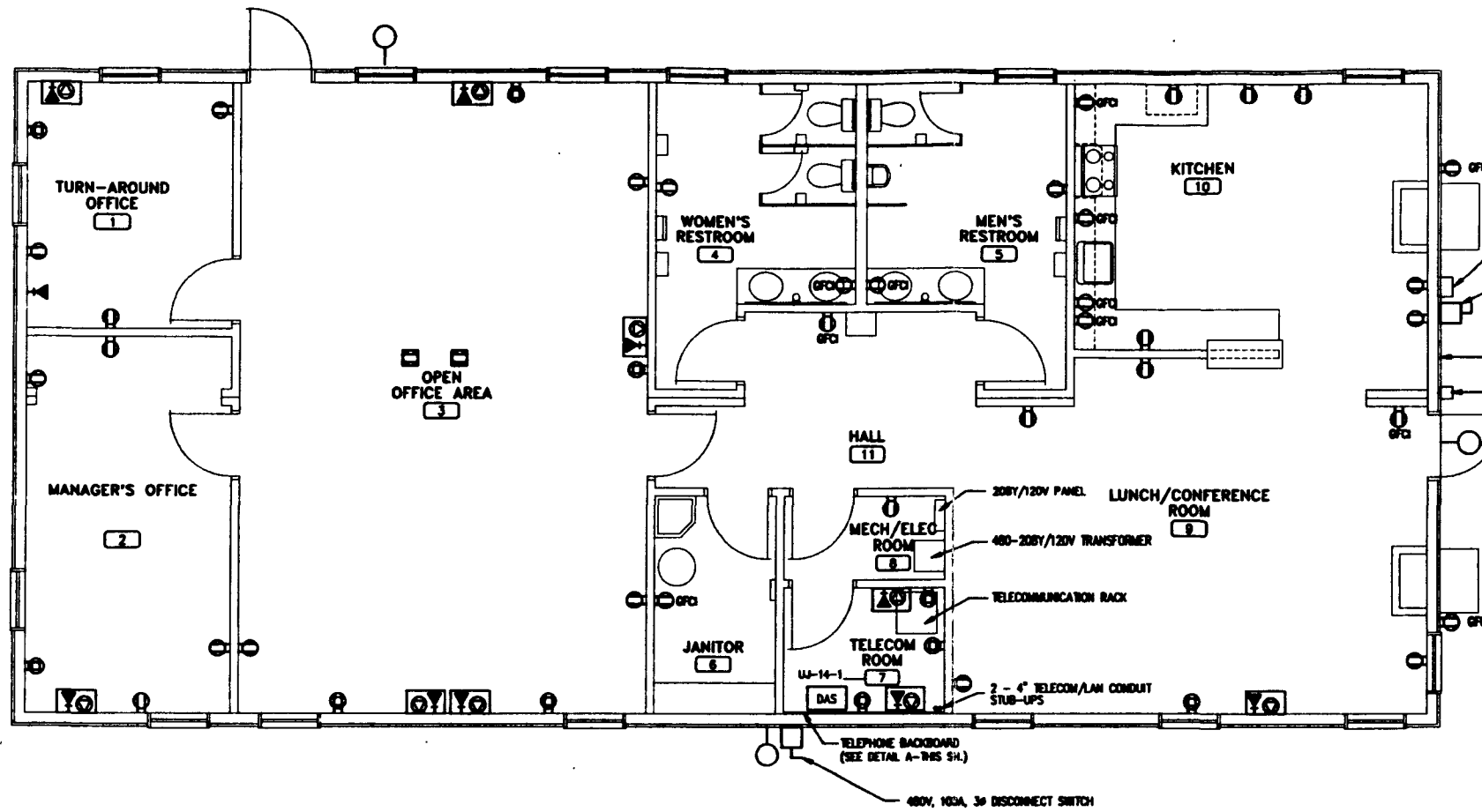
DESCRIPTION		HANFORD PLANT STANDARDS		REVISION
		SEE HANFORD, WASHINGTON		E- 5-1
PREP OR REV BY	DATE	DESCRIPTION	REV BY/DATE	APPROVAL/DATE
	8-12-81	ELECTRICAL STANDARD		
APPROVED	DATE	METER INSTALLATION FOR 480Y/277V OR 208Y/120V, 3 PHASE 4 WIRE SERVICE ABOVE 200 AMPS	REVISION NO	
			3	

RAYTHEON  
 Engineers & Constructors

DESIGNED		BY		DATE	
CHECKED		BY		DATE	
LEAD ENGINEER		BY		DATE	
ENCL. MGR.		BY		DATE	
PROJ. MGR.		BY		DATE	
G.A. & FINISH		BY		DATE	
APPROVED FOR IMPLEMENTATION		BY		DATE	
SCALE: NONE		PROJECT NO. 094888		SHEET 1 OF 1	
U.S. DEPARTMENT OF ENERGY		RICHLAND OPERATIONS OFFICE		WESTINGHOUSE HANFORD COMPANY	
SWOC W113		ELECTRICAL		DISTRIBUTION PANEL BOARD SCHEDULE AND MISC. SCHEMATICS	
SIZE	BLDG NO.	INDEX NO.	DRAWING NUMBER		
D	218 W478	7201	H-2-823375		

DRAWING TRACEABILITY LIST		NEXT USED ON : NONE		CADFILE: 8823375A		CADCODE: DOS: 6.2: ACD2: 12: NN	
REFERENCE DRAWINGS		REVISIONS		APPROVAL/DATE		OTHER	

**ELECTRICAL &  
TELECOMMUNICATIONS LAYOUT  
GENERAL OFFICE BUILDING**

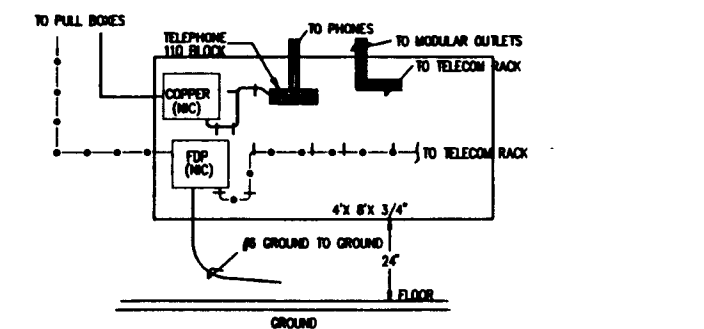


- NOTES:**
- PROVISIONS FOR MOUNTING OF 13 1/2 IN W X 15 1/2 IN H X 7 IN D SEPTIC PUMP ALARM PANEL. CONTRACTOR SHALL PROVIDE AND INSTALL POWER AND ALARM CABLES FROM THE SEPTIC PUMP ALARM PANEL TO THE PUMP CHAMBER. (SEE DWG. H-2-823387 FOR ROUTING).
  - TRAILER VENDOR SHALL PROVIDE TELECOMMUNICATION AND LAN INTERFACE PULL BOXES ON THE EXTERIOR OF BOTH TRAILERS.
  - TRAILER VENDOR SHALL PROVIDE SERVICE ENTRANCE DISCONNECT ON THE EXTERIOR OF BOTH TRAILERS.
  - FIBER OPTIC CABLE BENDING RADIUS SHALL NOT BE LESS THAN 12 INCHES.
  - TRAILER VENDOR SHALL PROVIDE 120V RECEPTACLES ON THE OUTSIDE PERIMETER OF TRAILERS.
  - RIA-11-102, LOCATED IN THE RETRIEVAL STAFF CHANGE FACILITY'S "ANTI-C'S" CHANGE AREA, SHALL BE HARDWIRED ON A DEDICATED 120V, 20A CIRCUIT.
  - REFER TO CABLE LIST FOR TRAILER VENDOR AND GENERAL CONTRACTOR WIRING RESPONSIBILITIES.
  - TRAILER VENDOR TO FURNISH PROVISIONS FOR MOUNTING OF A 4\" X 4\" X 2\" DOSE COUNTER DISPLAY PANEL PROVIDED BY OTHERS.
  - WIRE TWO LAN CIRCUITS AND ONE TELEPHONE CIRCUIT AS SHOWN BELOW:  

LAN	TELEPHONE
CATEGORY 5	CATEGORY 3
FIBER SC	RL1
	LAN
	CATEGORY 5
  - FURNISH A STANDARD TELEPHONE OUTLET.
  - WALL MOUNT LIGHT FIXTURE, 175W MERCURY VAPOR, 120V, WEATHERPROOF, WITH PHOTOCONTROL KIT. (HALOPHANE WALLPACK CATALOG # WL 2K 175WV 120V) SEE ARCHITECTURAL ELEVATION FOR EXTERIOR LIGHT FIXTURE MOUNTING LOCATIONS.

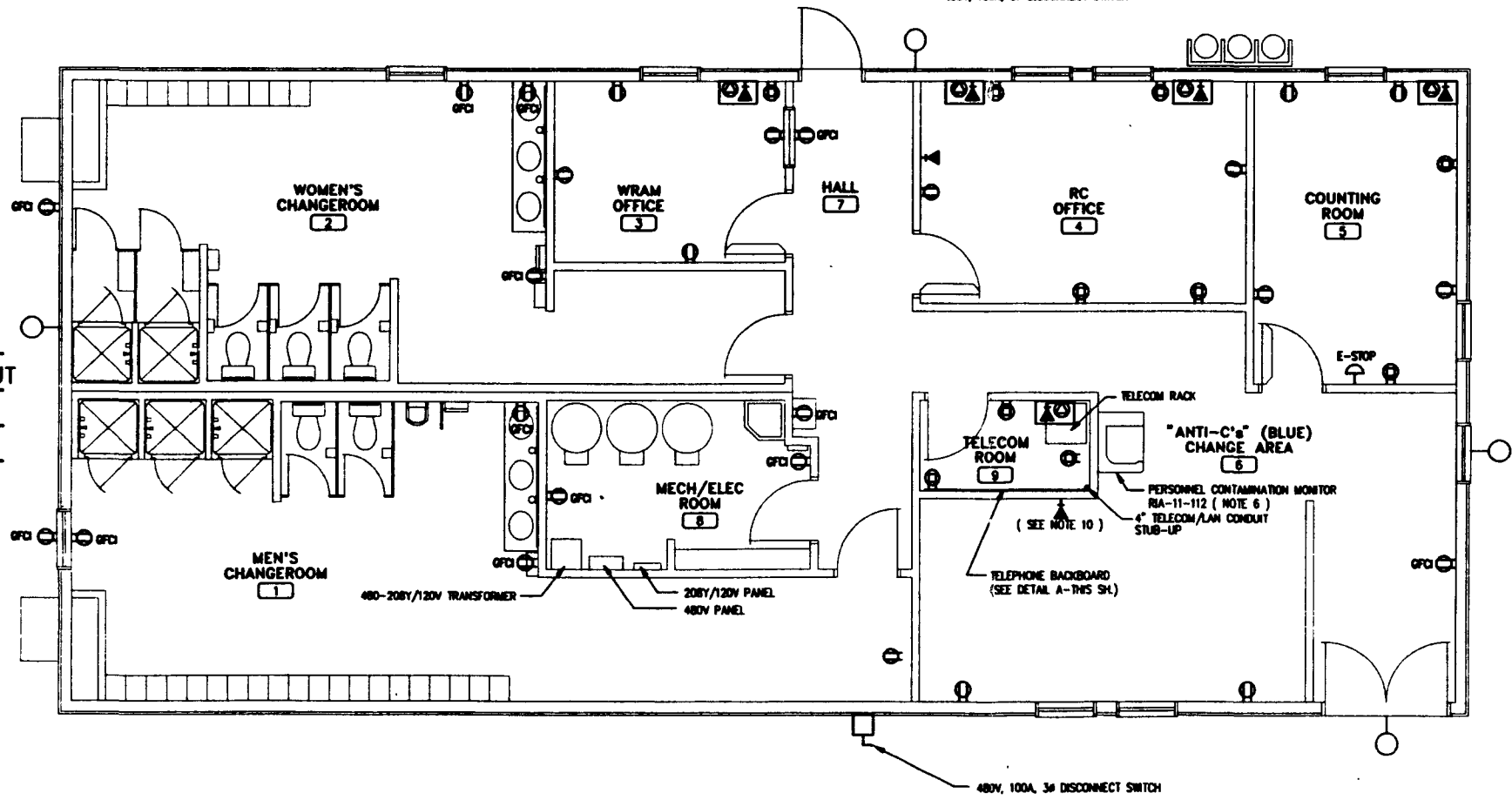
**CABLE LIST**

CABLE NUMBER	FROM	TO	CABLE SIZE	INSTALLATION BY	COMMENTS
C5	PULL BOX OUTSIDE ON EAST WALL OF THE GOB TRAILER	GOB DAS	5/C/14	TRAILER VENDOR TO PULL BOX GC FROM PULL BOX TO ALARM PANEL.	ALARM
C6	SEPTIC TANK PUMP CHAMBER	SEPTIC TANK CONTROL PNL.	9/C/14	GC	4 LEVEL SWITCHES
C7	UPS	DAS	2/C/14	GC	120VAC UPS POWER
C8	UPS	DAS	2/C/14	GC	ALARM
C9	DOSE COUNTER DISPLAY PANEL	DOSE COUNTER IN THE SEPTIC PP.CHAMBER	5/C/14	GC	LV. SW. COUNTER
L4	GOB DAS	GOB HUB	4 PAIR CAT.5	GC	LAN



**(A) DETAIL A - TYPICAL BACKBOARD LAYOUT**  
N.T.S.

**ELECTRICAL &  
TELECOMMUNICATIONS LAYOUT  
RETRIEVAL STAFF  
CHANGE BUILDING**



WOC-82-0113-PDR-001  
REV 0 PAGE 220  
**Baytheon**  
Engineers & Constructors

BY	DATE	DESCRIPTION
DESIGNED	B. ELY	07-24-85
DRAWN	H. MURPHY	07-24-85
CHECKED	CHAMBERS	08-28-85
LEAD ENGINEER	CHAMBERS	07-24-85
ENG. WSR	R. BISH	07-24-85
PROJ. MGR	H. MURPHY	07-24-85
C.A.	S. FRIST	07-24-85
OTHER		

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY  
SWOC W113  
ELECTRICAL & TELECOMM LAYOUT  
GENERAL OFFICE BUILDING/  
RETRIEVAL STAFF CHANGE BUILDING

SIZE	BLDG NO.	SHEET NO.	DRAWING NUMBER	REV
D	MO-XXX	7201	H-2-823376	0
	MO-YYY			

APPROVED FOR IMPLEMENTATION BY: [Signature] DATE: [Date]

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
	REFERENCE DRAWINGS			
	REVISIONS			

DRAWING TRACEABILITY LIST: NEXT USED ON: NONE  
CADFILE: B023376A  
CADCODE: DOS: 6.2; ACD2: 12; MN

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

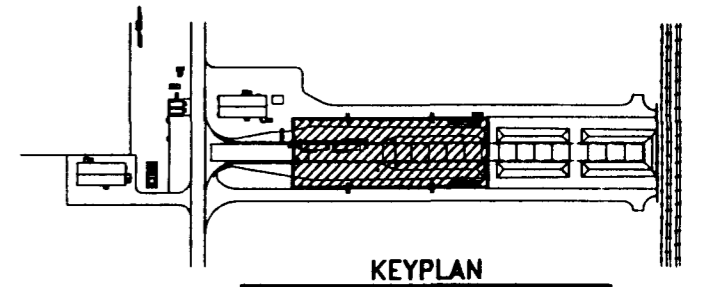
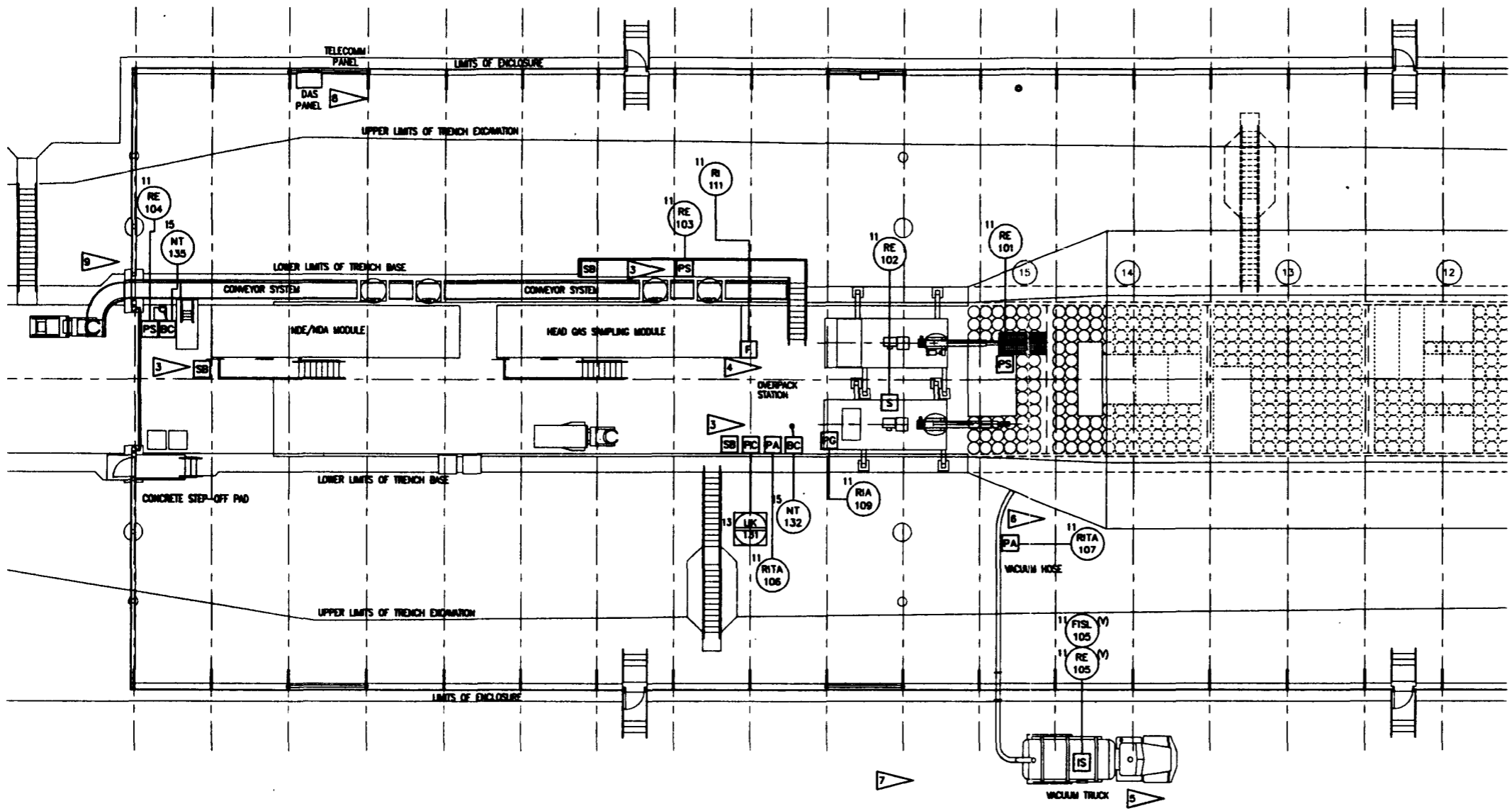
12345678901011121314151617181920212223242526272829303132333435363738394041424344454647484950  
COLOR FOR REFER 208Y/120V PANE 480V PANE  
E 1 - 48  
08/24/85 0111  
FROM W11300







- NOTES:**
- FOR GENERAL NOTES, LEGEND AND SYMBOLS SEE DRAWING H-2-823406 SHEET 1.
  - FACILITY EXHAUST (ISOMETRIC SAMPLING IDENTIFIED ON P&ID DRAWINGS REF H-2-823342 AND H-2-823343)
    - 3 SHIELDED BOX TO PROVIDE REDUCED BACKGROUND TO ALLOW QUALITATIVE EXAMINATION OF SHEARS.
    - 4 FRESH MONITOR TO BE LOCATED ON HEAD GAS SAMPLING MODULE.
    - 5 RECORD SAMPLER SAMPLES VICIUM EXHAUST.
    - 6 PORTABLE ALPHA CAL, RITA-107, TO BE LOCATED IN THE VICINITY OF THE HOSE WHEN THE PERSONNEL ARE IN THE AREA.
    - 7 TRENCH ENCLOSURE SHOWN IN POSITION 1.
    - 8 PANELS SHOWN IN APPROXIMATE LOCATIONS. PANELS TO BE ATTACHED TO TRENCH ENCLOSURE.
    - 9 FOR CONVEYOR CONTROLS SEE DRAWING H-2-823407 SHEET 1.



**PLAN**

**ALARA NOTE:**  
 PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT  
 (WVC-SD-W113-FDR-001, REV 0).

WVC-SD-W113-FDR-001  
 REV 0 PAGE 223

**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTHOUSE HANFORD COMPANY

SWOC W113  
 INSTRUMENT LOCATION PLAN  
 TRENCH ENCLOSURE  
 (POST STARTUP)

BY	DATE
DESIGNED A. WILSON	08-24-95
DRAWN E. WILSON	08-24-95
CHECKED R. FUCHS	08-21-95
LEAD ENGR. A. CHEN	-
ENGR. SUPERVISOR E. SHU	9-27-95
PROJECT MANAGER K. HENDERSON	9-26-95
APPROVED FOR IMPLEMENTATION	9-26-95

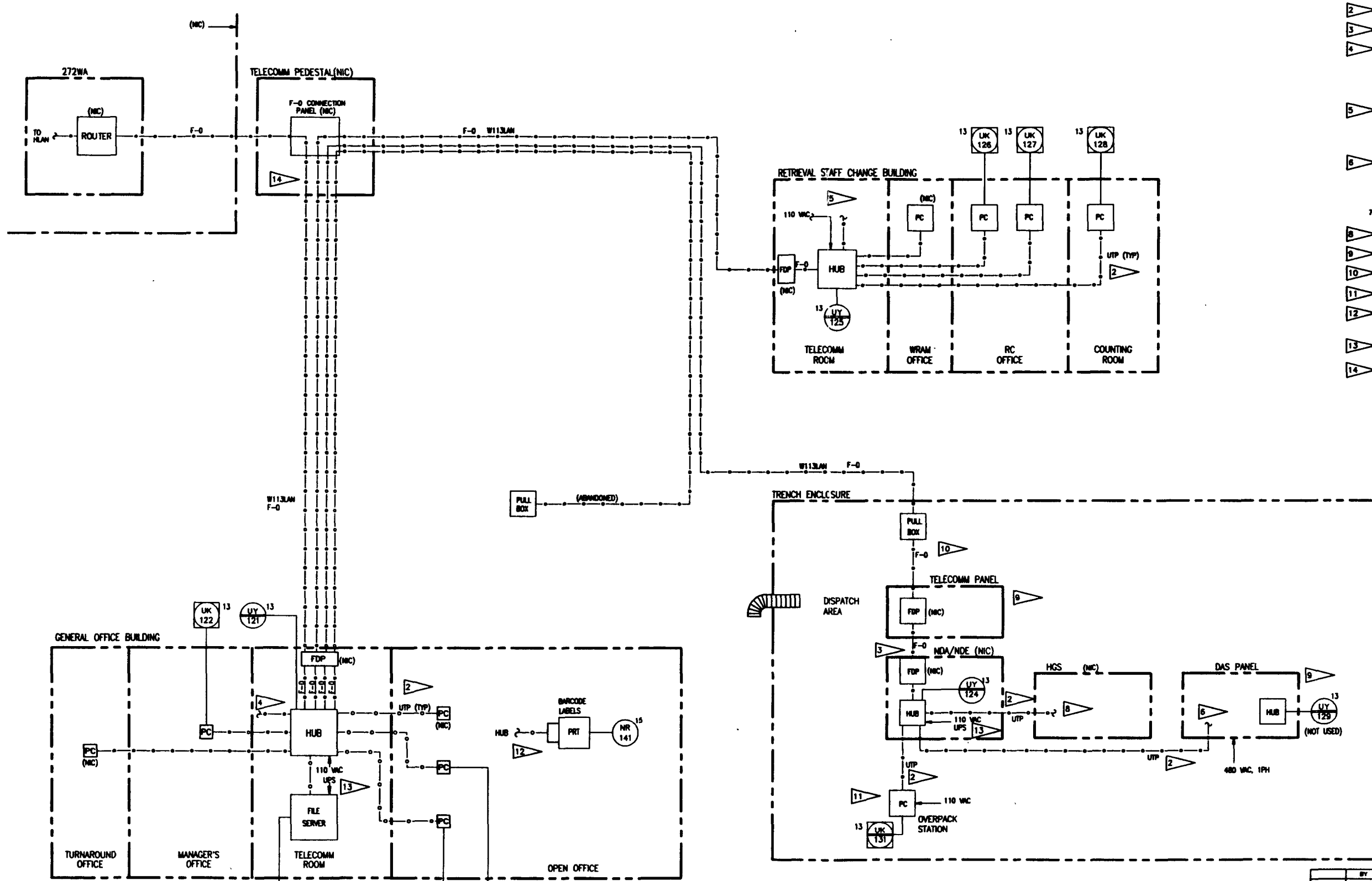
REV	DESCRIPTION	DATE
D	218 W478	5901
	H-2-823407	0

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVALS/DATE
REFERENCE DRAWINGS				
REVISIONS				
DRAWING TRACEABILITY LIST				
NEXT USED ON : NONE				
CADFILE: 8823407B				
CADCODE: DOS: 6.2; ACD2: 12; NH				

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

1234567890112131415161718192021222324252627282930  
 COLOR PLOT NUMBER 123456789012345678901234567890  
 1 - 128  
 08/21/95 08:00:00  
 FORM 8712899





- NOTES:**
- FOR GENERAL NOTES, LEGEND AND SYMBOLS SEE DRAWING H-2-823408 SHT 1.
  - MAXIMUM DISTANCE IS 100 METERS.
  - MAXIMUM DISTANCE IS 100 FEET.
  - TO OTHER LAN CONNECTIONS.
    - PRINTER
    - DAS I/O DEVICE
    - SPARES
 SEE REFERENCE DRAWINGS.
  - TO OTHER LAN CONNECTIONS.
    - PRINTERS
    - SPARES
 SEE REFERENCE DRAWINGS.
  - TO OTHER LAN CONNECTIONS.
    - RF NETWORK CONTROLLER
    - DAS I/O DEVICE
 SEE REFERENCE DRAWINGS.
  - ALL FIBER-OPTIC LAN CABLES ARE NIC.
  - QUANTITY PER HGS REQUIREMENTS.
  - ATTACHED TO TRENCH ENCLOSURE BUILDING.
  - INSIDE TRENCH ENCLOSURE BUILDING AT POSITION 3.
  - WORKSTATION MOVES WITH WORKFACE PROGRESS.
  - NETWORK INTERFACE FOR SPECIAL PURPOSE PRINTERS IS PROVIDED BY DNS VENDOR. REFER TO SPECIFICATION 13461. NETWORK INTERFACE FOR OFFICE EQUIPMENT IS NIC.
  - UPS IN TELECOMMUNICATIONS RACK OR DAS PANEL. REFER TO SPECIFICATION 13461.
  - REFERENCE DRAWING H-2-823387 SHEET 5 FOR TELECOMMUNICATIONS CONNECTION DETAILS AND SCOPE.

12345678901011121314151617181920212223242526272829303132333435363738394041424344454647484950  
 COLOR FOR REFERENCE 5:0:0 6:0:0 7:0:0 8:0:0 9:0:0 10:0:0 11:0:0 12:0:0 13:0:0 14:0:0 15:0:0 16:0:0 17:0:0 18:0:0 19:0:0 20:0:0 21:0:0 22:0:0 23:0:0 24:0:0 25:0:0 26:0:0 27:0:0 28:0:0 29:0:0 30:0:0 31:0:0 32:0:0 33:0:0 34:0:0 35:0:0 36:0:0 37:0:0 38:0:0 39:0:0 40:0:0 41:0:0 42:0:0 43:0:0 44:0:0 45:0:0 46:0:0 47:0:0 48:0:0 49:0:0 50:0:0  
 1 1  
 21

NIC-80-W113-FDR-001  
REV 0 PAGE 225

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
NICHOLS OPERATIONS OFFICE  
WESTHOUSE HANFORD COMPANY

SWOC W113  
INSTRUMENTATION  
DMS BLOCK DIAGRAM  
(POST STARTUP)

BY	DATE
DESIGNED	B. CHEN 05-24-05
DRAWN	L. BENA 05-25-05
CHECKED	R. FREN 06-21-05
LEAD ENGINEER	B. CHEN 06-21-05
ENCL. MANAGER	R. BENU 07-21-05
PROJECT MANAGER	R. BENU 07-21-05
APPROVED FOR IMPLEMENTATION	G.A. G. PRUITT 07/20/05
DATE	

REV	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
D	218 W478			

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
H-2-82340	BAR CODE RENDER BLOCK SHOWN			
H-2-82341	DMS BLOCK SHOWN			
H-2-82340	TELECOMMUNICATIONS - BLOCK FLOW SHOWN			
H-2-82341	RETRIEVAL LOCKER PLAN - AREA BUILDING/CHARGE FACILITY			
H-2-82347	RETRIEVAL LOCKER PLAN - TRENCH ENCLOSURE			

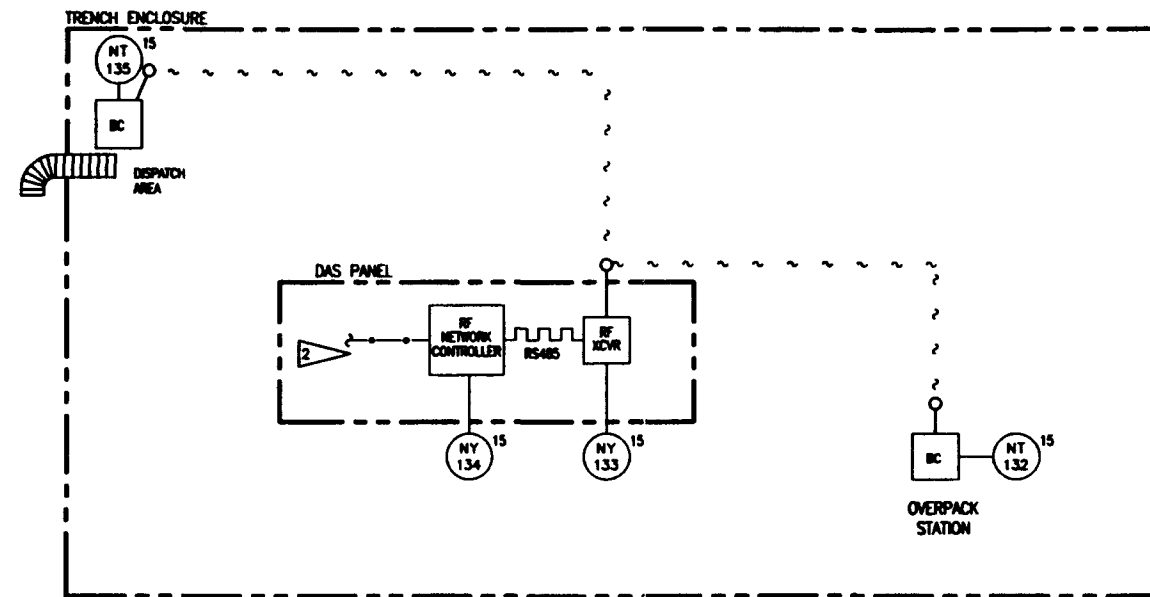
REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

DRAWING TRACEABILITY LIST  
NEXT USED ON : NONE  
CADFILE: 8823408B  
CADCODE: DOS:6.2:ACD2:12:NN

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

**NOTES.**

1. FOR GENERAL NOTES, LEGEND AND SYMBOLS SEE DRAWING H-2-823408 SHT 1
2. CONNECTION TO LAN REFER TO DRAWING H-2-823408.
3. PORTABLE RF BARCODE EQUIPMENT SHOWN IN TYPICAL LOCATIONS. SEE DRAWINGS H-2-823289 AND H-2-823290 FOR SPECIFIC USES.



1234567890101112131415161718192021222324252627282930313233343536373839404142434445464748495051525354555657585960616263646566676869707172737475767778798081828384858687888990919293949596979899100  
 COLOR FOR PLOT  
 1 = 1

WEC-82-W113-FDR-001  
REV 0 PAGE 226



U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE MANFORD COMPANY

**SWOC W113  
INSTRUMENTATION  
BAR CODE READER  
BLOCK DIAGRAM**

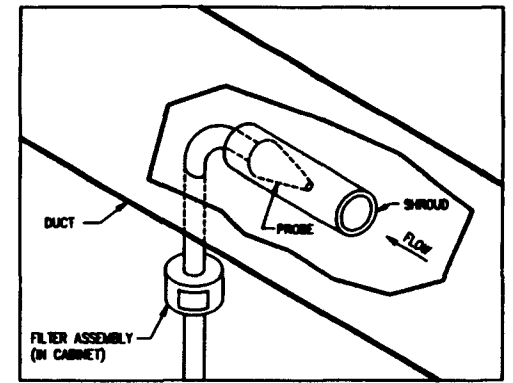
REVISED	BY	DATE
DESIGNED	B. CHEVER	05-25-95
DRAWN	L. WREN	05-25-95
CHECKED	B. FRENCH	06-21-95
LEAD DESK	B. CHEVER	?
ENCL. DESK	B. SHEU	7 26 95
FINAL DESK	K. BERSON	9 26 95
OTHER	G. FRIST	9 26 95

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVALS/DATE
H-2-823407	OVERLAINST LOCATION PLAN - TRENCH ENCLOSURE			
REFERENCE DRAWINGS				
DRAWING TRACEABILITY LIST				
NEXT USED ON NONE				
CADFILE: 8823408A				
CADCODE: DOS. 6.2: ACD2:12:NN				

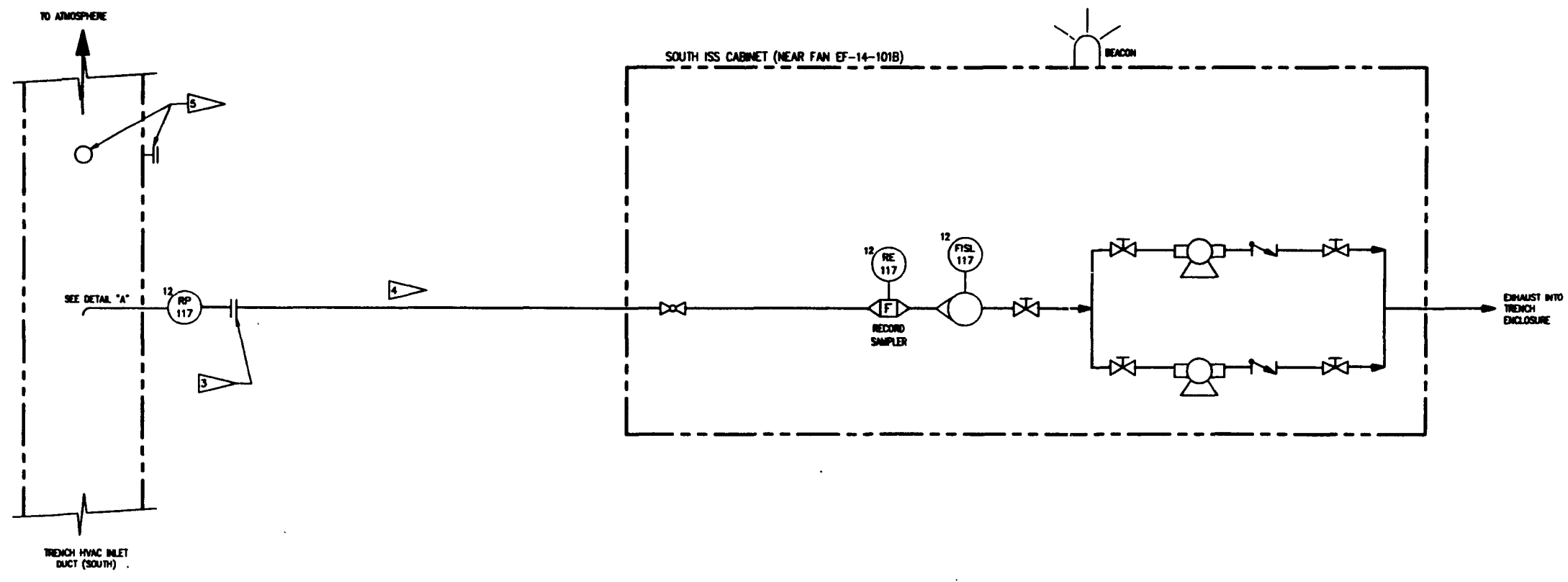
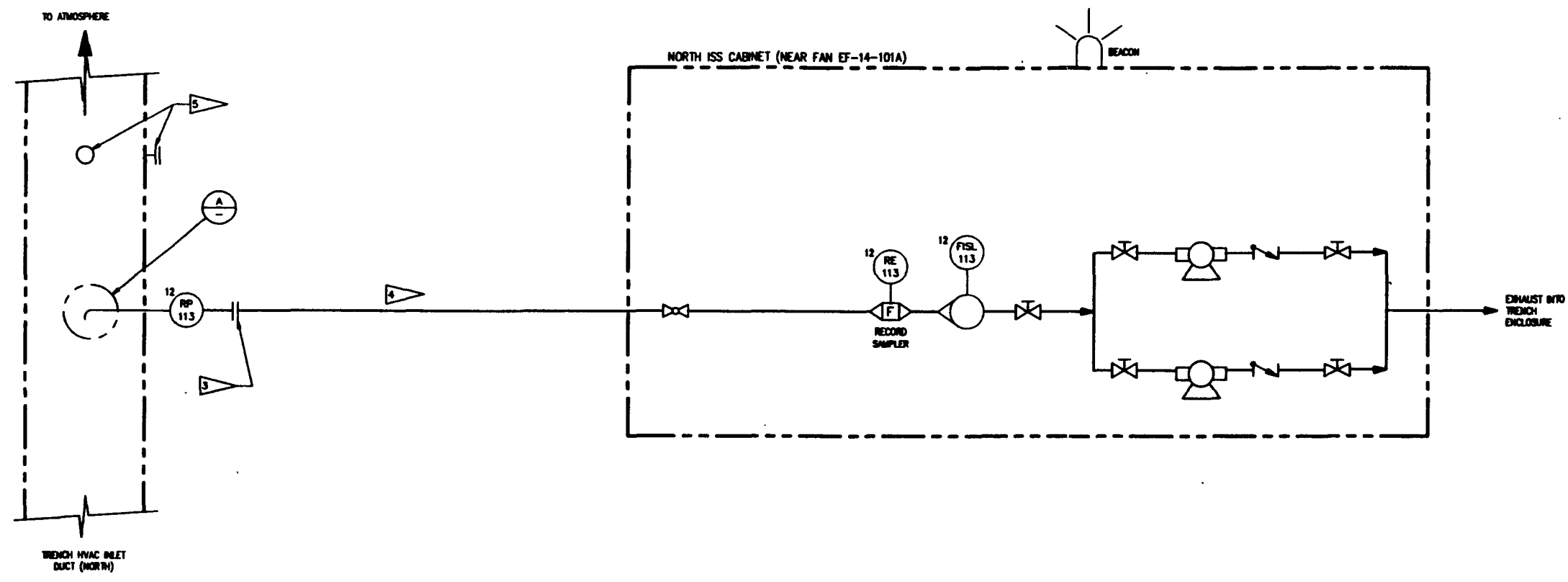
SIZE	BLDG NO.	INDEX NO.	DRAWING NUMBER	REV
D	218	5901	H-2-823409	0
SCALE: NONE				
PROJECT NO. 004688				
SHEET 1 OF 1				

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

- NOTES:**
- 1. FOR GENERAL NOTES, LEGEND AND SYMBOLS SEE DRAWING H-2-823406 SHIT 1.
  - 2. DELETED
  - 3. ISS PROBE ASSEMBLY: PROBE CONNECTION ON DUCT SHALL MATCH PROBE ASSEMBLY DESIGN.
  - 4. ALL SAMPLE TUBING PROVIDED BY VENDOR. ALL LINE SIZES SHALL BE CALCULATED BY THE VENDOR TO PROVIDE MAXIMUM PARTICLE COLLECTION EFFICIENCY. ALL SAMPLE TUBING SHALL BE 316 STAINLESS STEEL.
  - 5. EACH DUCT SHALL HAVE 2-4" FLANGED (WITH BLIND) TEST PORTS ORIENTED 90° FROM EACH OTHER.



**(A)** PARTICULATE SOURCE SAMPLING WITH SHROUDED PROBE



WEC-80-1113-P08-001  
REV 0 PAGE 227

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

SWOC W113  
INSTRUMENTATION  
ISOKINETIC SAMPLING SYSTEM (ISS)  
PROCESS & INSTRUMENT DIAGRAM

	BY	DATE
DESIGNED	A. WATSON	04-26-88
DRAWN	E. WILSON	04-28-88
CHECKED	R. FISCH	08-21-88
LEAD ENGR	B. CHENET	
ENCL. MGR	R. SHU	5.27.93
PROJ. MGR	K. BERSON	4.24.93
G.A.	G. FINEST	11/20/97
OTHER		
APPROVED FOR IMPLEMENTATION		
BY	DATE	

NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

NO.	DESCRIPTION
H-2-823411	INDOOR/OUTDOOR INSTRUMENTATION BLOCK DIAGRAM
H-2-823443	INAC - SECTIONS AND DETAILS
H-2-823442	INAC - GENERAL ARRANGEMENT AND EQUIPMENT SCHEDULES
H-2-823881	DUAL SECTION-TRENCH ENCLOSURE DRAWING

DRAWING TRACEABILITY LIST      NEXT USED ON : NONE      CADFILE: 8823410A      CADCODE: DOS: 6.2: ACD2: 12: NH

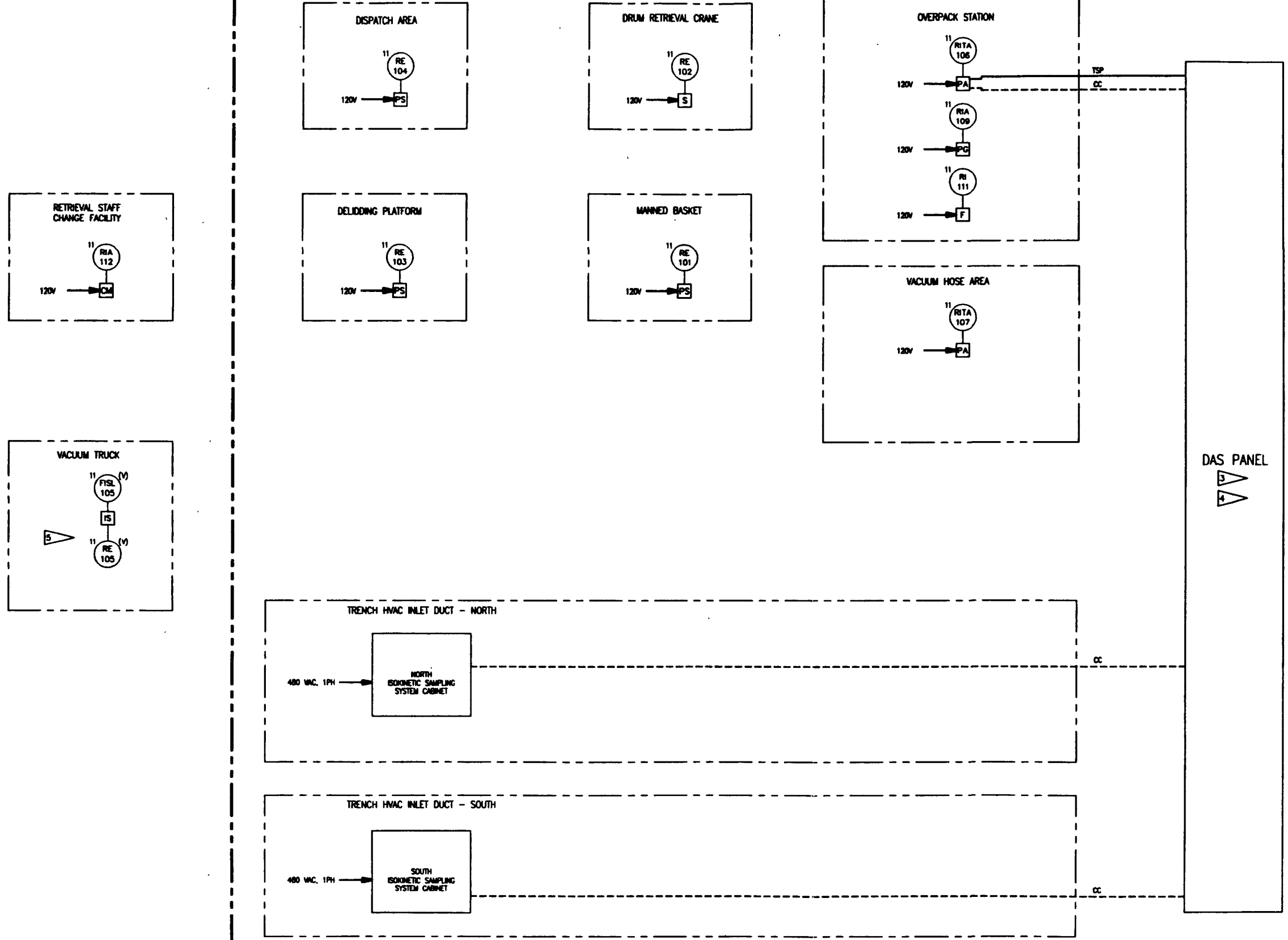
COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

10/27/93 10:37 AM 5144 D08 1 OF 1 COLOR FOR PLOT 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999,1000

OUTSIDE TRENCH ENCLOSURE

TRENCH ENCLOSURE

- NOTES:
- FOR GENERAL NOTES, LEGEND AND SYMBOLS SEE DRAWING H-2-823408 SHEET 1.
  - ITEMS PREFIXED P (SEE DWG. H-2-823408) ARE EITHER PORTABLE OR MOBILE DEVICES.
  - SEE DRAWING H-2-823412 FOR DAS BLOCK DIAGRAM.
  - REFER TO I/O LIST FOR TYPE AND QUANTITY OF SIGNALS.
  - VACUUM TRUCK TO SUPPLY POWER TO SAMPLER.



WIC-8D-W113-PDR-001  
REV 0 PAGE 220

**Raytheon**  
Engineers & Constructors

DESIGNED	BY	DATE
A. WISER	A. WISER	05-09-05
DRAWN	L. WISER	05-10-05
CHECKED	R. FINCH	05-21-05
LEAD ENGR	B. CHEDEN	
ENR. MGR	R. BOW	9/21/05
PRJ. MGR	E. WISER	9/21/05

REV	NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

SCALE	BLDG NO.	INDEX NO.	DRAWING NUMBER	REV
D	218 W47B	5901	H-2-823411	0

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

**SWOC W113  
INSTRUMENTATION  
RADIOLOGICAL INSTRUMENTATION  
BLOCK DIAGRAM**

APPROVED FOR IMPLEMENTATION BY: [Signature] DATE: [Date]

REV NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
H-2-823407	INSTRUMENT LOCATION PLAN - TRENCH ENCLOSURE			
H-2-823413	INSTRUMENTATION LOCATION PLAN - ASBESTOS BLDG/CHANGE FACILITY			
H-2-823410	ISOKINETIC SAMPLING SYSTEM - P & ID			

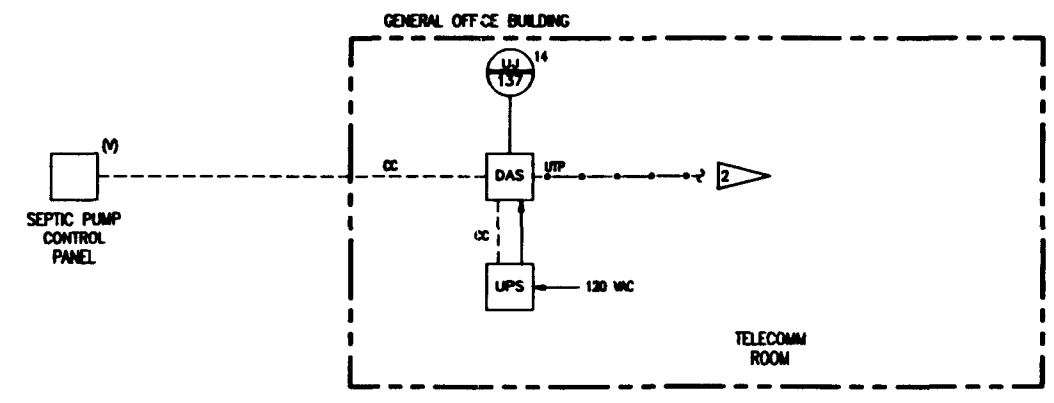
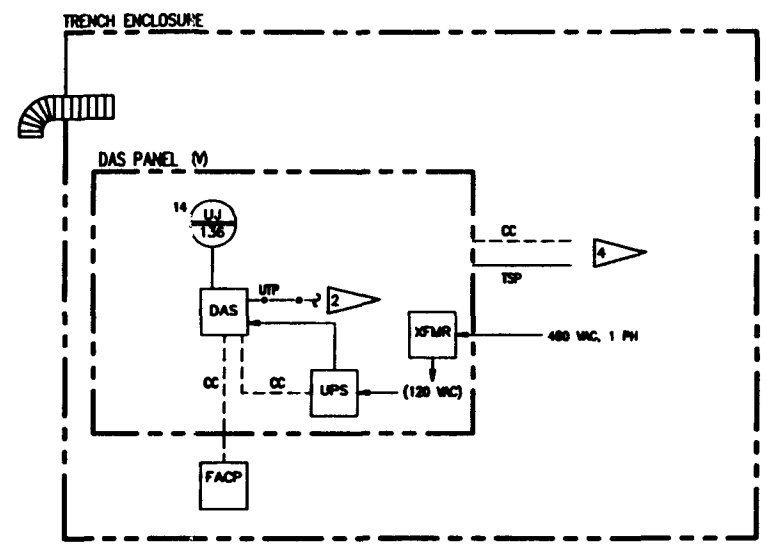
  

REVISIONS	CADFILE	CADCODE
	8823411A	DOS: 6.2; ACD2: 12; NN

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 1-1  
 10/27/05 10:37 AM  
 5144.000

10/21/98 10:42 AM  
 1 - 1  
 COLOR  
 FOR  
 1 2 3 4 5 6 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  
 10/21/98 10:42 AM

- NOTES:**
1. FOR GENERAL NOTES, LEGEND AND SYMBOLS SEE DRAWING H-2-823408 SHIT 1
  2. LAN CONNECTION TO DAS HUB. REFER TO DRAWING H-2-823408.
  3. REFER TO I/O LIST FOR DETAILS OF SIGNALS TO DAS.
  4. REFER TO DWG. H-2-823411 FOR ADDITIONAL I/O.



NO.	DESCRIPTION	REV. NO.	DATE
H-2-823411	INSTRUMENTATION - BLOCK DIAGRAM		
H-2-823410	BIOMETRIC SWIPE SYSTEM - BLOCK DIAGRAM		
H-2-823382	TRENCH ENCLOSURE - MECHANICAL FLOW DIAGRAM		

REV. NO.	DESCRIPTION	REV. BY/DATE	CHK. BY/DATE	APPROVAL/DATE

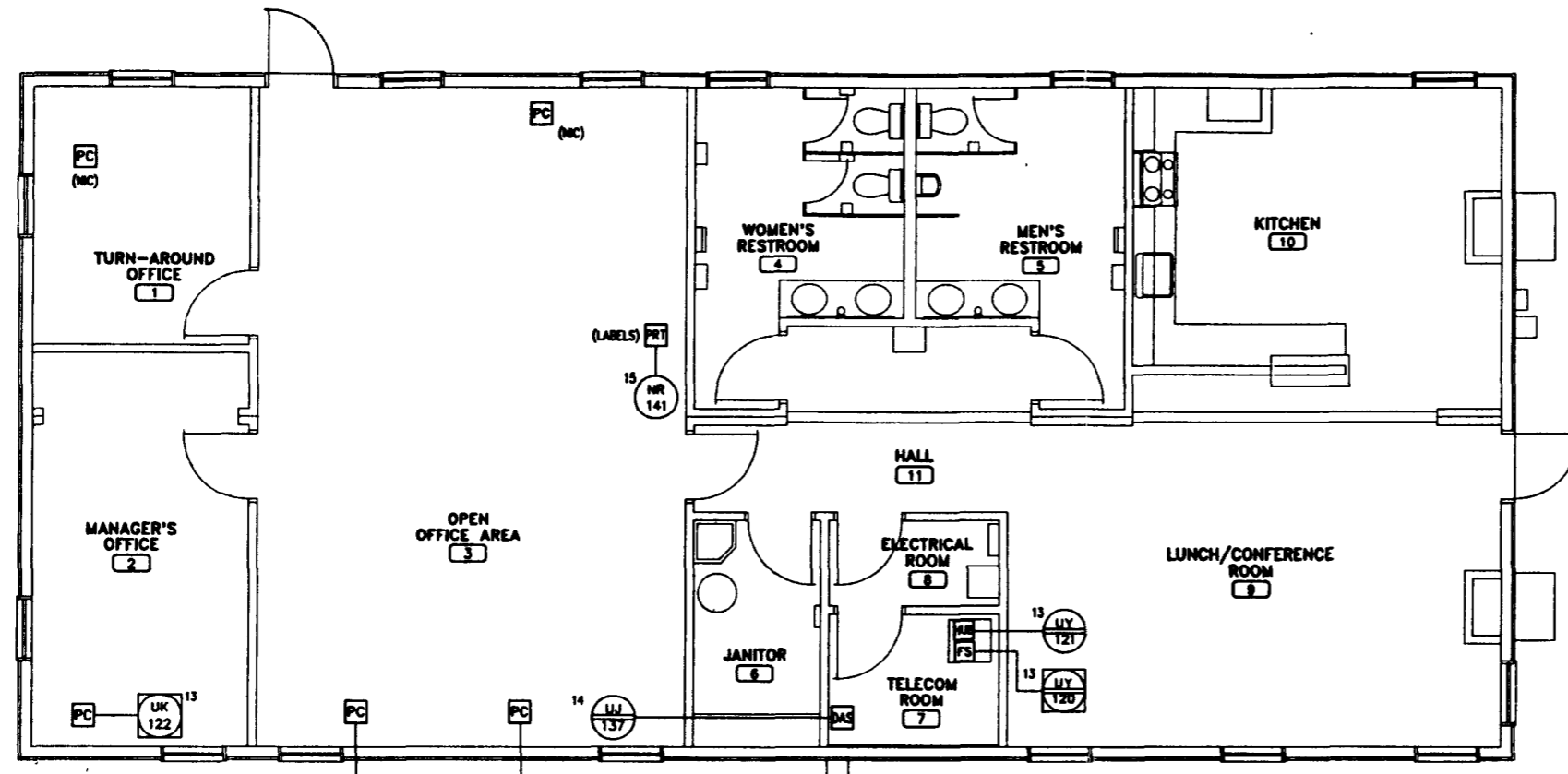
DESIGNED	S. CHEN	05-28-05
DRAWN	L. BISH	05-28-05
CHECKED	S. FUCH	06-21-05
LEAD ENGR	S. CHEN	
ENGR. IN CH.	S. BISH	7/26/05
PRJ. MGR.	S. BISH	8/22/05
APP. FOR IMPLEMENTATION	S. FUCH	8/22/05
BY		
DATE		

NWC-80-W113-PDR-001  
 REV 0 PAGE 229  
**Raytheon**  
 Engineers & Constructors

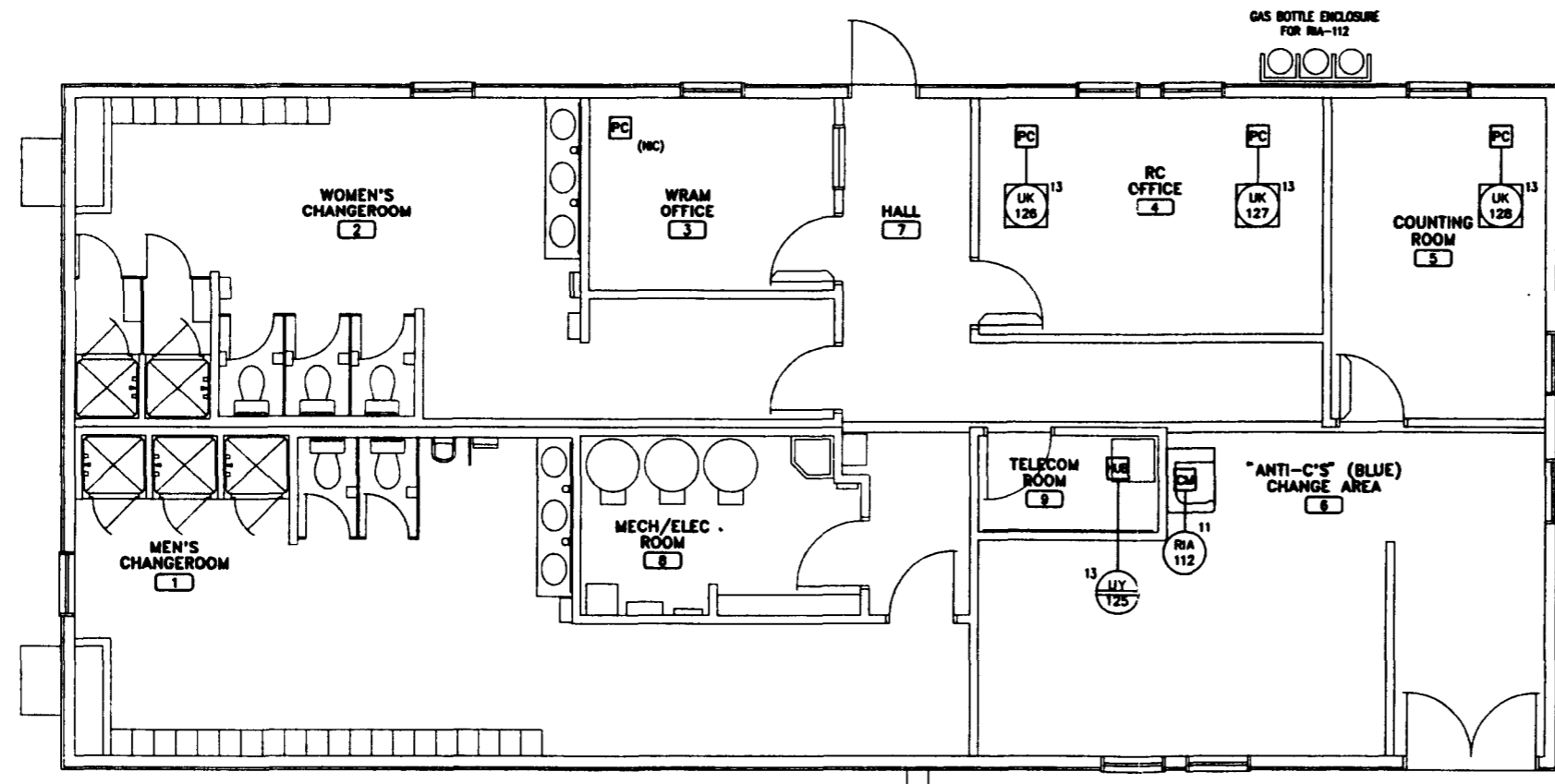
U.S. DEPARTMENT OF ENERGY				
RICHLAND OPERATIONS OFFICE				
WESTINGHOUSE HAMPSON COMPANY				
<b>SWOC W113</b>				
<b>INSTRUMENTATION</b>				
<b>DATA ACQUISITION SYSTEM</b>				
<b>BLOCK DIAGRAM</b>				
REV	BLDG NO.	SHEET NO.	DRAWING NUMBER	REV
D	218	5901	H-2-823412	0
SCALE: NONE	PROJECT NO.	ISSUED	SHEET 1 OF 1	

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

NOTES:  
 1. FOR GENERAL NOTES, LEGEND AND SYMBOLS SEE DRAWING H-2-823406 SHT 1.



PLAN - GENERAL OFFICE BUILDING



PLAN - RETRIEVAL STAFF CHANGE BUILDING

**Raytheon**  
 Engineers & Constructors

WEC-ED-W113-FDG-001  
 REV 0 PAGE 230

U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTINGHOUSE HANFORD COMPANY

SWOC W113  
 INSTRUMENT LOCATION PLAN  
 GENERAL OFFICE BUILDING/  
 RETRIEVAL STAFF CHANGE BUILDING

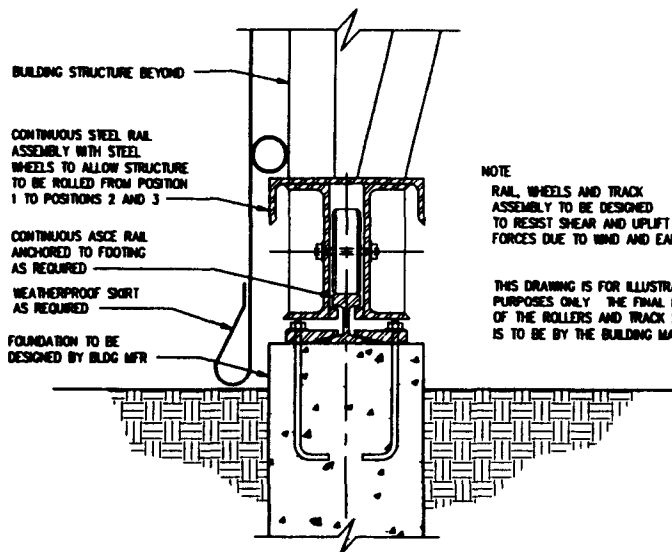
REVISED	BY	DATE
DESIGNED	A. WELSH	05-24-85
DRAWN	E. WELSH	05-24-85
CHECKED	B. PUGH	06-21-85
LEAD USER	B. CHENEY	
ENCL. USER	R. BISH	
PRD. USER	K. BISHOP	
S.A.	G. FRIST	
OWNER		
APPROVED FOR IMPLEMENTATION		
BY	DATE	

REV NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

REV	DATE	DESCRIPTION

1 - 46  
 CAD FILE: 8823413A  
 PLOT DATE: 09/21/95 10:28 AM  
 PLOT BY: J. BISHOP

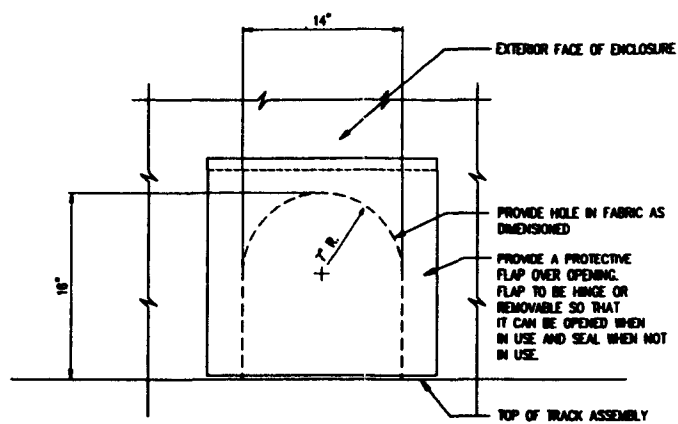




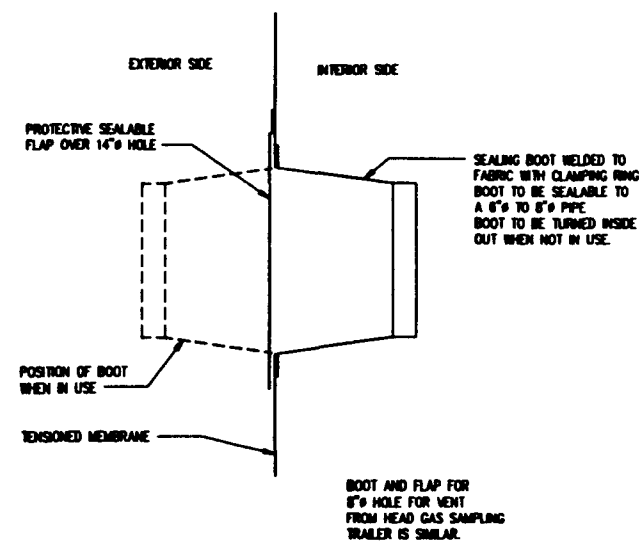
NOTE  
 RAIL, WHEELS AND TRACK ASSEMBLY TO BE DESIGNED TO RESIST SHEAR AND UPLIFT FORCES DUE TO WIND AND EARTHQUAKE.

THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY. THE FINAL DESIGN OF THE ROLLERS AND TRACK SYSTEM IS TO BE BY THE BUILDING MANUFACTURER.

**1** DETAIL FOUNDATION/TRACK ASSEMBLY  
 H-2-823261 1 1/2"-1'-0"



**2** DETAIL OF VACUMM HOSE HOLE  
 H-2-823258 1 1/2"-1'-0"



**3** DETAIL OF OPENING FOR FIRE MAIN  
 H-2-823258 1 1/2"-1'-0"

183311513495321 FOR RECORD  
 1234567890101112  
 10 JAN 1986  
 11

WDC-80-1113-PDR-001  
 REV 6 PAGE 167

**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 MIDLAND OPERATIONS OFFICE  
 WESTINGHOUSE HANFORD COMPANY

SWOC W113  
 DETAILS  
 TRENCH ENCLOSURE BUILDING

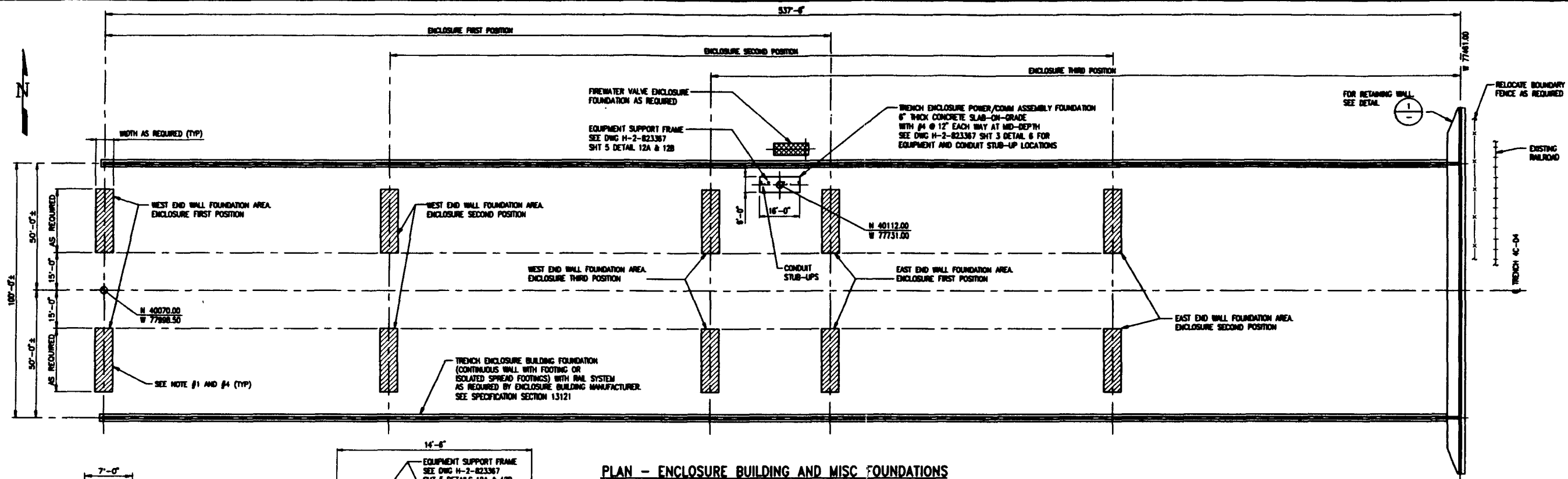
BY	DATE
DESIGNED CALLENDER	05-27-85
DRAWN CALLENDER	05-27-85
CHECKED D. SWIN	05-19-85
LEAD ENGR D. SWIN	7/22/85
ENR. MGR R. SWIN	9-21-85
PRJ. MGR K. NEWSON	9-21-85
Q.A. G. FRIST	9/26/85
OTHER	

*Handwritten initials and notes:*  
 IIB  
 IIS  
 IIS  
 14 in hole

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
REFERENCE DRAWINGS		REVISIONS		
DRAWING TRACEABILITY LIST		NEXT USED ON : NONE		CADFILE. 88232628
				CADCODE. DOS. 6 2 ACD2-12 NN

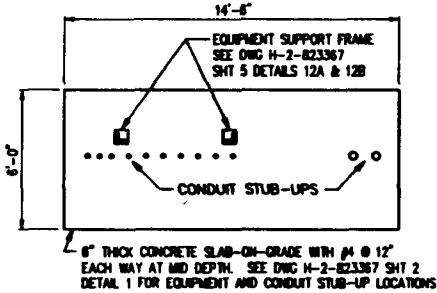
SIZE	BLDG NO.	INDEX NO.	DRAWING NUMBER	REV
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SCALE AS NOTED		PROJECT NO.	08A-088	SHEET 2 OF 2

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED



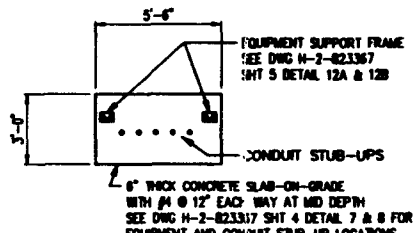
PLAN - ENCLOSURE BUILDING AND MISC FOUNDATIONS

SCALE: NONE



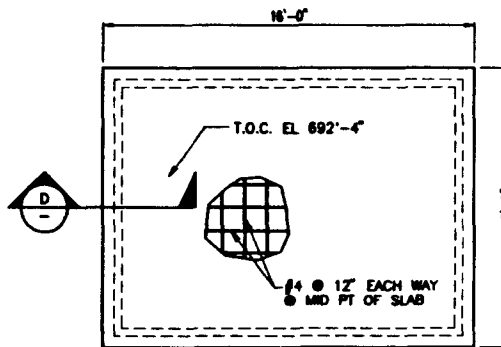
PLAN METERING & 480V BREAKER PANEL PP-01 FOUNDATION

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



PLAN POWER & TELECOMMUNICATIONS EQUIPMENT FOUNDATIONS AT NDE/NTA & HGS TRAILERS, GENERAL OFFICE BUILDING AND RETRIEVAL STAFF CHANGE BUILDING

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

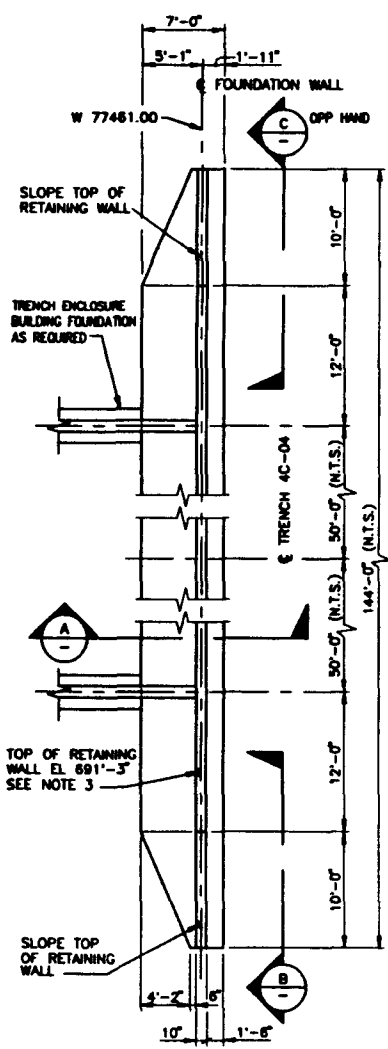


PLAN RETRIEVAL STAFF CHANGE STORAGE BUILDING FOUNDATION

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

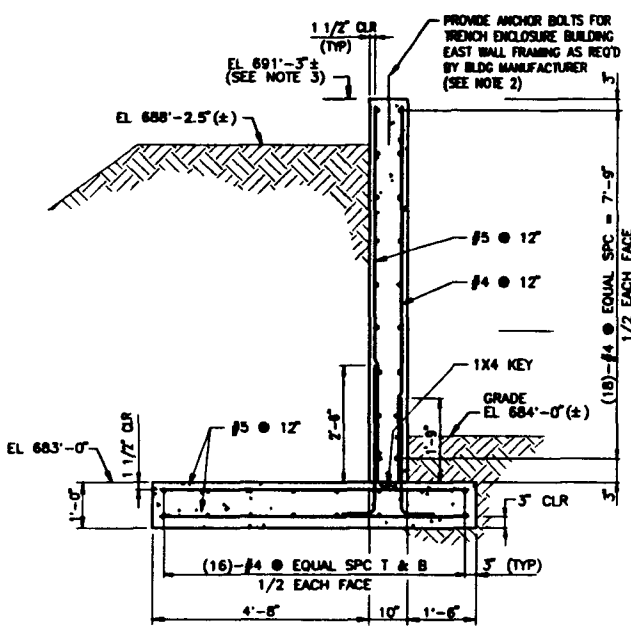
NOTES:

1. AREA AVAILABLE FOR FOUNDATION INSTALLATION. ENCLOSURE BUILDING FOUNDATION LOCATIONS SHALL BE LIMITED TO THE AREAS INDICATED TO ENSURE PROTECTION FOR BURNED WASTE DURING CONSTRUCTION.
2. RETAINING WALL MAY BE UTILIZED FOR TRENCH ENCLOSURE BUILDING THIRD POSITION EAST END WALL SUPPORT AND EAST END BUILDING FRAME. PROVIDE ANCHOR BOLTS AND OTHER ITEMS AS REQUIRED BY ENCLOSURE BUILDING MANUFACTURER.
3. TOP OF WALL ELEVATION SHALL BE ADJUSTED TO MEET THE REQUIREMENTS OF THE TRENCH ENCLOSURE BUILDING MANUFACTURER FOR SUPPORT OF THE EAST END WALL.
4. END WALL FOUNDATIONS FOR THE TRENCH ENCLOSURE BUILDING THIRD POSITION LOCATIONS TO AVOID ADDITIONAL FOUNDATION CONSTRUCTION DURING BUILDING RELOCATIONS.
5. FOR GENERAL NOTES, SEE DWG H-2-823276 SHT 1.



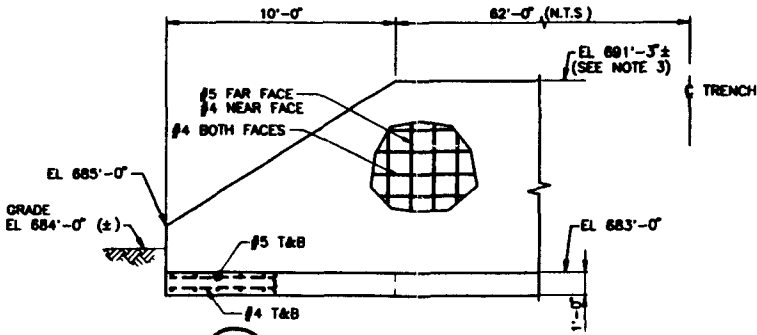
1 DETAIL

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



A SECTION

1/2"=1'-0"

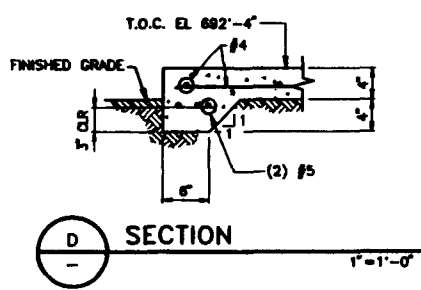


B SECTION (AS SHOWN)

1/4"=1'-0"

C SECTION (OPP. HAND)

1/4"=1'-0"



D SECTION

1"=1'-0"

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

08/20/93 DR: 123456789010111213141516171819202122232425262728293031323334353637383940414243444546474849505152535455565758596061626364656667686970717273747576777879808182838485868788899091929394959697989900  
 21 AC 01/14/00  
 COLOR PER DWG 123456789010111213141516171819202122232425262728293031323334353637383940414243444546474849505152535455565758596061626364656667686970717273747576777879808182838485868788899091929394959697989900  
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REC-82-W113-PDR-001  
REV 0 PAGE 160

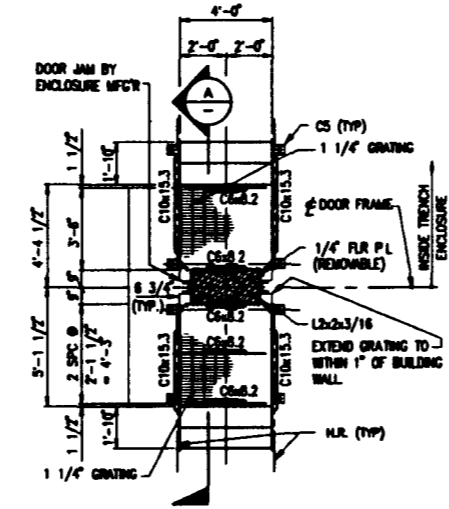
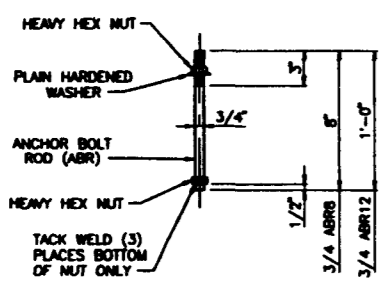
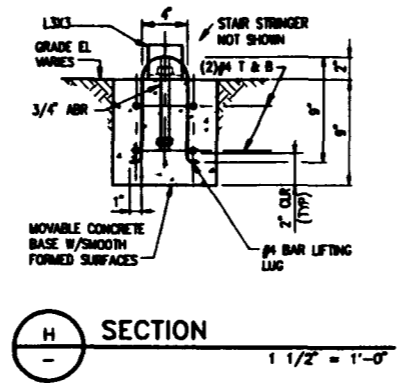
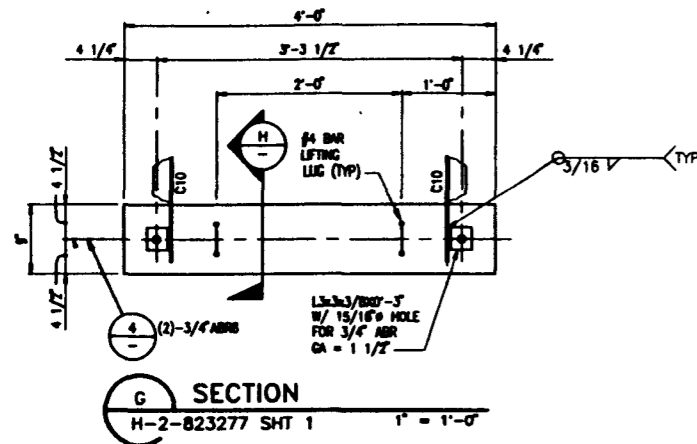
**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

SWOC W113  
STRUCTURAL  
ENCLOSURE FOUNDATION  
PLAN & SECTION

REV	BY	DATE
DESIGNED	S. SHAY	11-16-01
DRAWN	S. SHAY	10-19-01
CHECKED	T. WARELL	09-19-00
LEAD ENGR	T. WARELL	9/19/00
ENR. SUPER	R. SHAY	4/21/92
PRJ. MGR	E. BROWN	5/21/92
APP'D FOR CONSTRUCTION		
BY		
DATE		

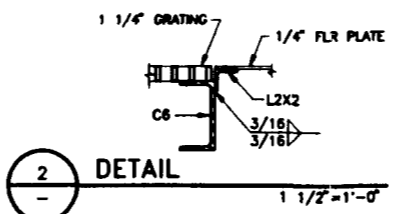
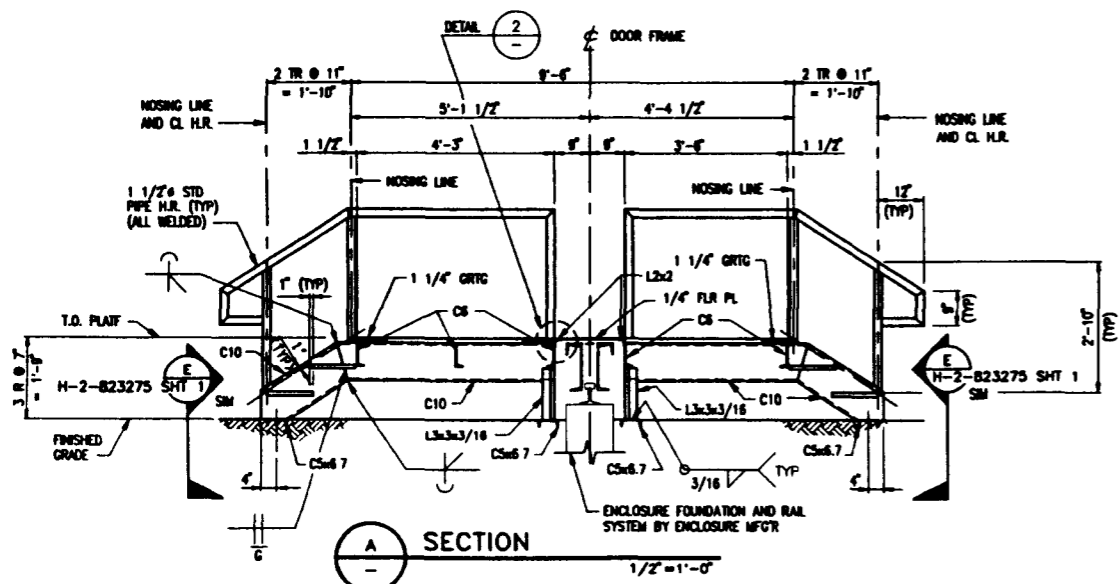
REV	BLDG NO.	SECT NO.	DRAWING NUMBER	REV
D	218	0900	H-2-823273	0
SCALE: AS SHOWN	PROJECT NO.	0900000	SHEET 1 OF 1	



4 DETAIL-ANCHOR BOLT  
H-2-823277 SHT 1 NOT TO SCALE

PLAN - BUILDING EXIT STAIR  
SCALE: 1/4" = 1'-0"  
(4 REQUIRED)

NOTES:  
1. WELD PIECES WITH MIN 3/16" FILLET WELD UNLESS NOTED OTHERWISE.  
2. FOR GENERAL NOTES SEE DWG H-2-823276 SHT 1



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

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

RAYTHEON  
Engineers & Constructors

REV	BY	DATE	DESCRIPTION
DESIGNED	E. PEREZ	08-07-06	
DRAWN	S. SILBY	08-07-06	
CHECKED	T. WIMBELL	08-10-06	
LEAD ENGR	T. WIMBELL	9/22/05	
ENR. MGR	R. SHU	9/21/05	
PRJ. MGR	E. WARDEN	9/21/05	
APP. FOR IMPLEMENTATION	G.A. G. FRIST	9/26/05	

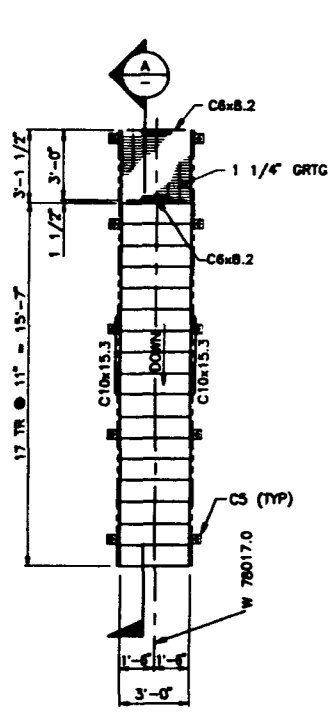
U.S. DEPARTMENT OF ENERGY RICKLAND OPERATIONS OFFICE WESTINGHOUSE HANFORD COMPANY												
SWOC W113 STRUCTURAL MISCELLANEOUS DETAILS												
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REV	DESCRIPTION	DATE										
D	218 W478	1000										
H-2-823274												
0												

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

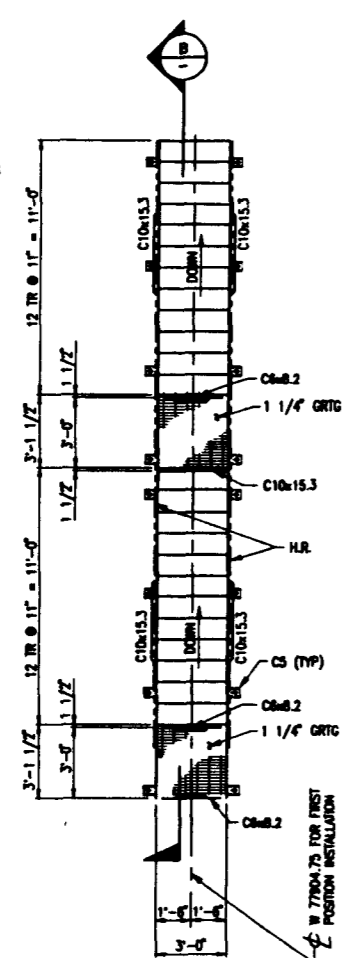
  

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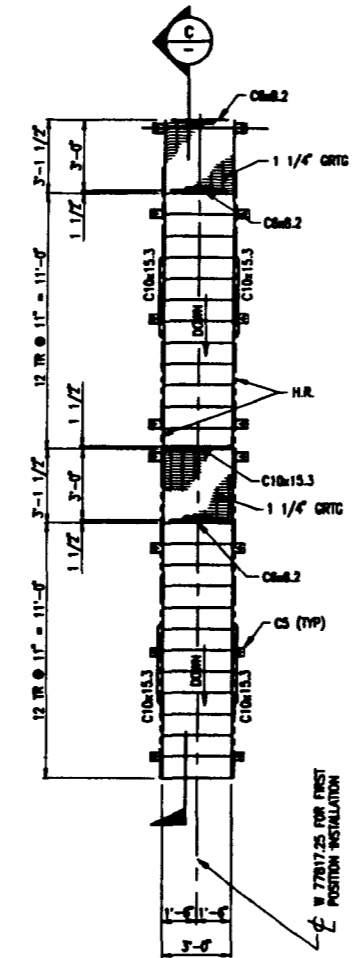
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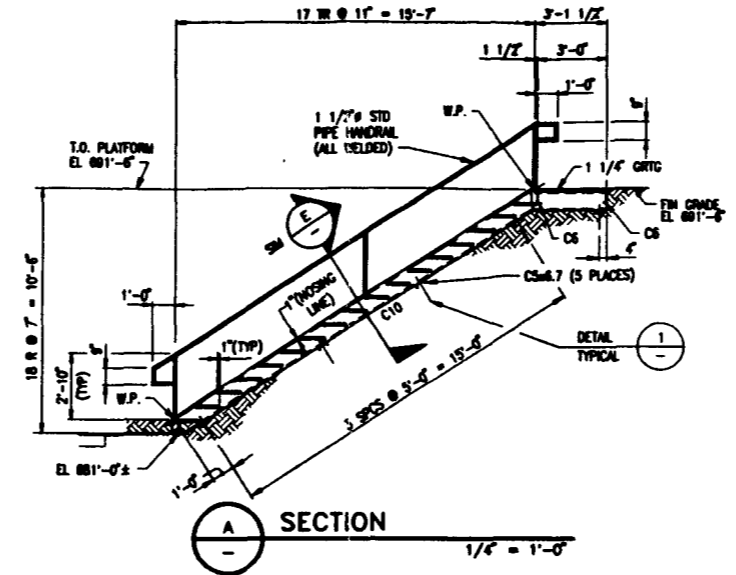
PLAN - STAIR NO 1  
SCALE: 1/4" = 1'-0"



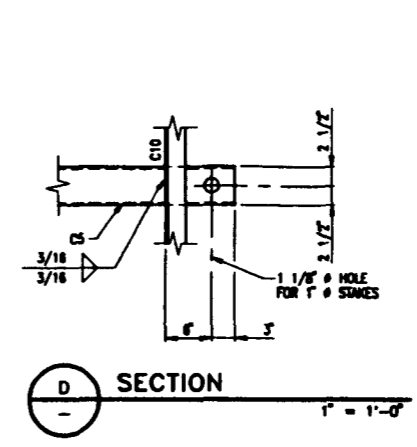
PLAN - STAIR NO 2  
SCALE: 1/4" = 1'-0"



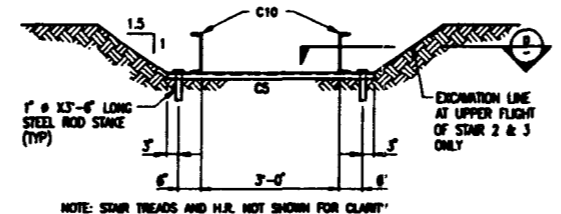
PLAN - STAIR NO 3  
SCALE: 1/4" = 1'-0"



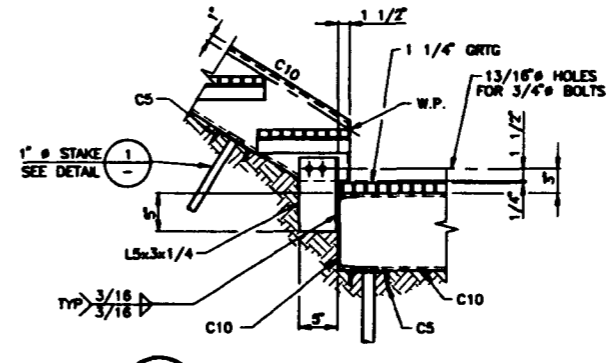
SECTION A  
1/4" = 1'-0"



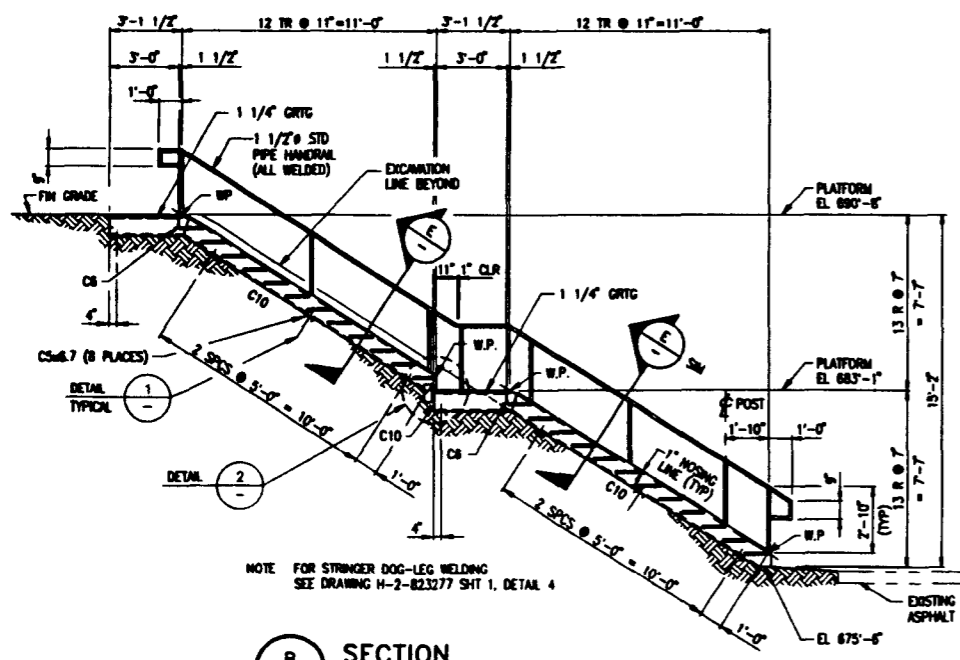
SECTION D  
1" = 1'-0"



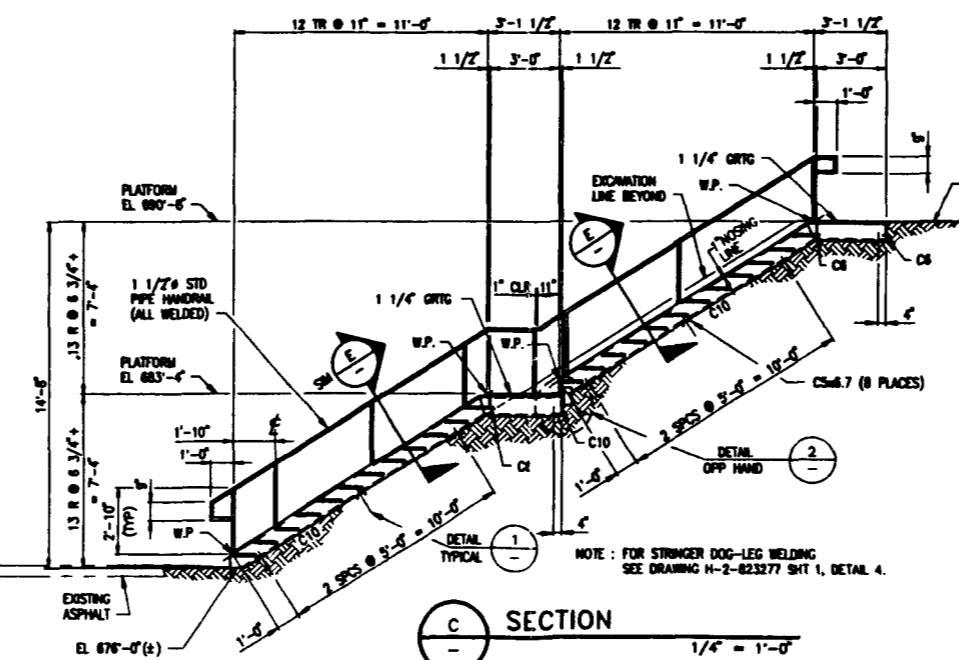
SECTION E  
1/2" = 1'-0"



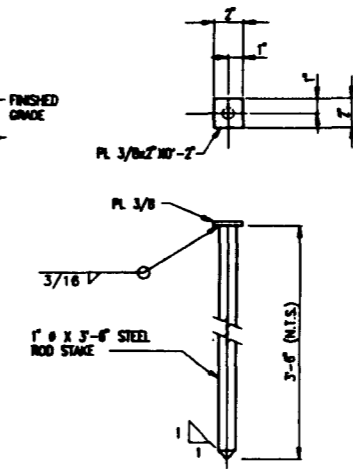
DETAIL 2  
1" = 1'-0"



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



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



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

- NOTES:
1. WELD PIECES WITH MIN 3/16" FILLET WELD UNLESS NOTED OTHERWISE.
  2. STAIRS NO. 2 AND NO. 3 SHALL BE FABRICATED IN TWO (2) SECTIONS.
  3. WORK POINTS (WP) SHOWN ARE AT STAIR NOSINGS.
  4. FOR GENERAL NOTES SEE DWG H-2-823276 SHT 1.

NSC-82-1113-P28-001  
REV 0 PAGE 170

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

SWOC W113  
STRUCTURAL  
TRENCH ACCESS STAIRS  
PLANS & SECTIONS

REVISION	BY	DATE
DESIGNED	V. PEREZ	05-07-85
DRAWN	S. TALBOT	05-07-85
CHECKED	T. WAINWELL	05-10-85
LEAD ENGINEER	T. WAINWELL	9/22/95
ENG. IN CHARGE	R. SHU	9/22/95
PROJ. MGR.	R. SHU	9/22/95
CHECKED	G. A.	9/22/95

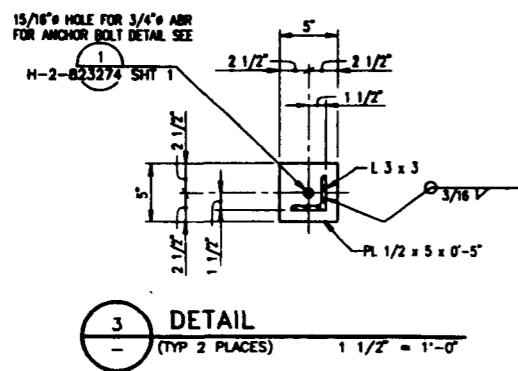
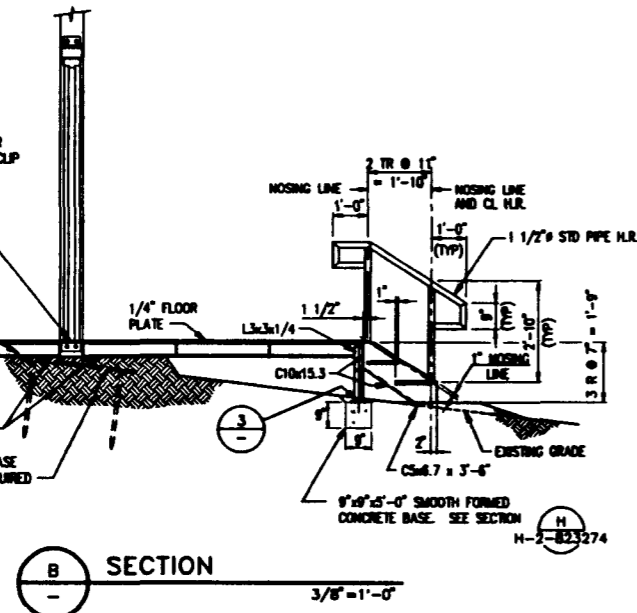
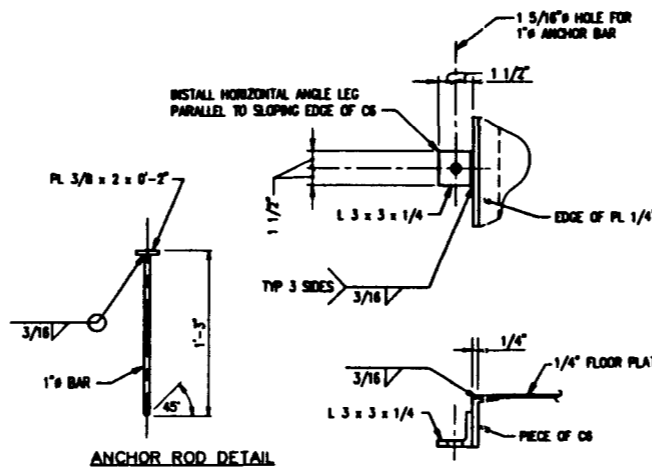
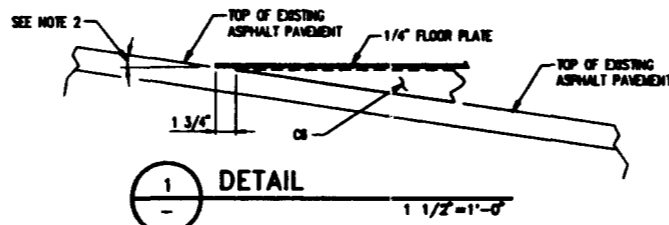
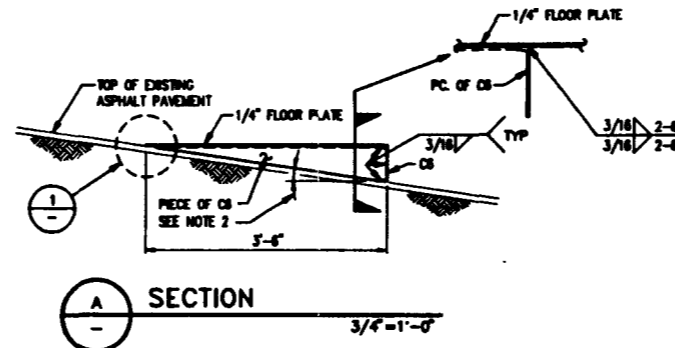
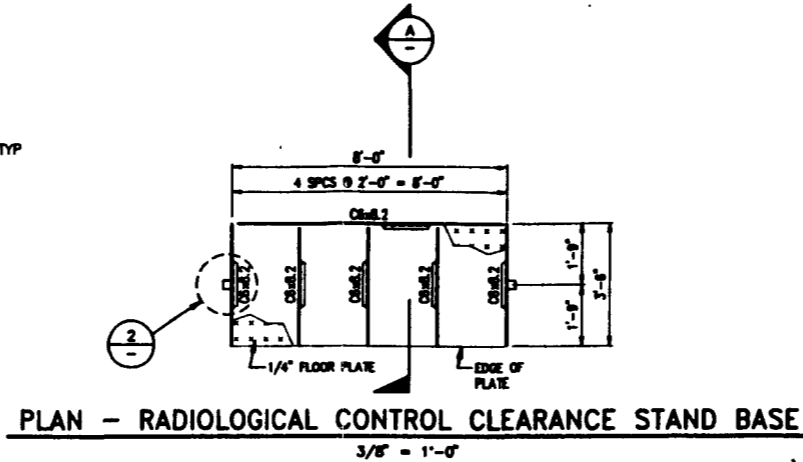
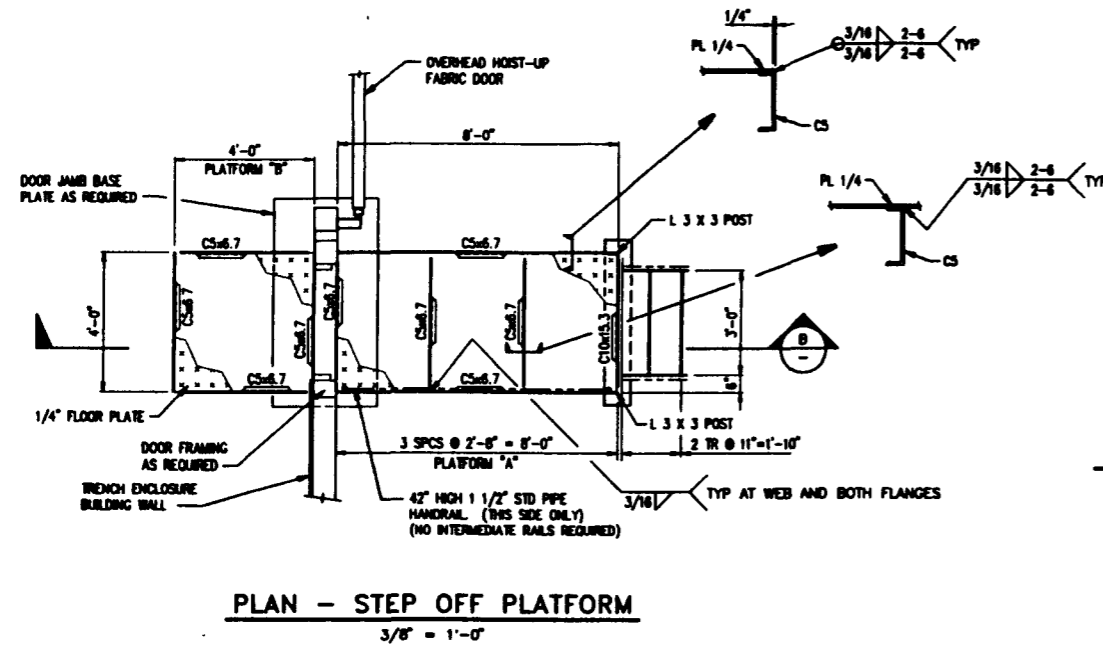
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D	218	1000	H-2-823275	0

REV NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

REFERENCE DRAWINGS	REVISIONS

DRAWING TRACEABILITY LIST	NEXT USED ON	CADFILE	CADCODE
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COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED



**GENERAL NOTES**

- EQUIPMENT FOUNDATION DIMENSIONS SHALL BE VERIFIED FOR ACTUAL PURCHASED EQUIPMENT PRIOR TO CONSTRUCTION.
- STRUCTURAL STEEL SHAPES, BARS AND PLATES : ASTM A36.
- CONCRETE :  $f'_c = 3000$  PSI
- CONCRETE REINFORCING :  $f_y = 60,000$  PSI (40,000 PSI FOR #3 BARS)
- CONCRETE COVER FOR REINFORCING TO BE IN ACCORDANCE WITH ACI 318-88 PARAGRAPH 7.7.
- ANCHOR BOLTS : PROVIDE ANCHOR BOLTS FOR EQUIPMENT IN SIZE, SHAPE AND STYLE REQUIRED BY THE EQUIPMENT MANUFACTURER.
- DO NOT WELD ANCHOR BOLTS TO CONCRETE REINFORCING.
- FROST DEPTH : 2'-6" BELOW GRADE.
- EXPOSED EDGES AND CORNERS OF FORMED CONCRETE TO BE CHAMFERED 3/4 INCH.
- WELDING ELECTRODES : E70X1
- HIGH STRENGTH BOLTS : 3/4" DIAMETER A325-N.
- COMMON BOLTS : ASTM A307.
- LINE LOAD FOR STAIRS AND PLATFORMS : 100 PSF.

**ABBREVIATIONS**

ABR	ANCHOR BOLT ROD	N.T.S.	NOT TO SCALE
Ø	AT	OPP	OPPOSITE
$\frac{1}{2}$	CENTERLINE	PC	PIECE
C/C	CENTER-TO-CENTER	PL	PLATE
CLR	CLEAR	PLATF	PLATFORM
CONC	CONCRETE	R	RSERS
DRG	DRAWING	SHT	SHEET
EL.	ELEVATION	SM	SIMILAR
EXIST	EXISTING	SPCS	SPACES
FIN	FISHED	STD	STANDARD
FLR	FLOOR	T.O.	TOP OF
GA	GAUGE	T.O.C.	TOP OF CONCRETE
GRG	GRATING	T.O.G.	TOP OF GRATING
H.R.	HANDRAIL	TR	TRADES
MFG	MANUFACTURER	TYP	TYPICAL
MIN	MINIMUM	U.L.	UNLESS NOTED
MISC	MISCELLANEOUS	WP	WORK POINT
NO.	NUMBER		

**NOTES :**

- FOR PLATFORM LOCATIONS SEE DRAWINGS H-2-823257 SHT 1 AND H-2-823280 SHT 1.
- VERIFY TRENCH RAMP SLOPE PRIOR TO PLATFORM FABRICATION.

H-2-823276-001  
REV 0 PAGE 171

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
MILWAUKEE OPERATIONS OFFICE  
WESTBOROUGH MANUFORD COMPANY

SWOC W113  
STRUCTURAL  
MISCELLANEOUS PLATFORMS  
SECTIONS & DETAILS

DATE	BY	DATE	BY	DATE	BY
07-21-05	V. PEREZ	07-21-05	G. HENNEL	08-10-05	T. WENZEL
08-10-05	T. WENZEL	08-10-05	T. WENZEL	08-10-05	T. WENZEL
08-10-05	T. WENZEL	08-10-05	T. WENZEL	08-10-05	T. WENZEL
08-10-05	T. WENZEL	08-10-05	T. WENZEL	08-10-05	T. WENZEL
08-10-05	T. WENZEL	08-10-05	T. WENZEL	08-10-05	T. WENZEL

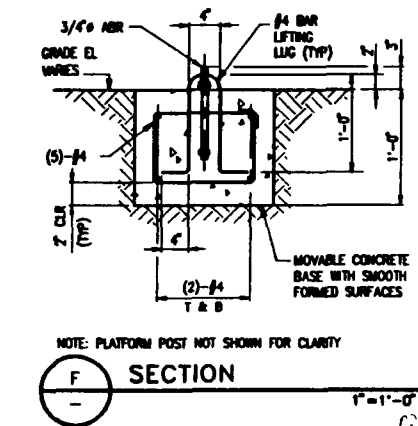
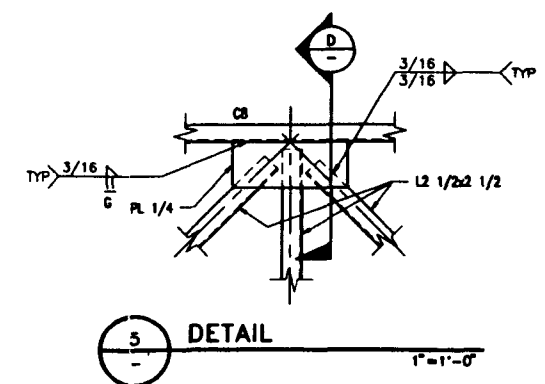
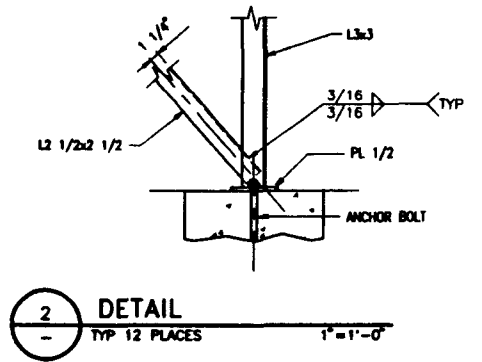
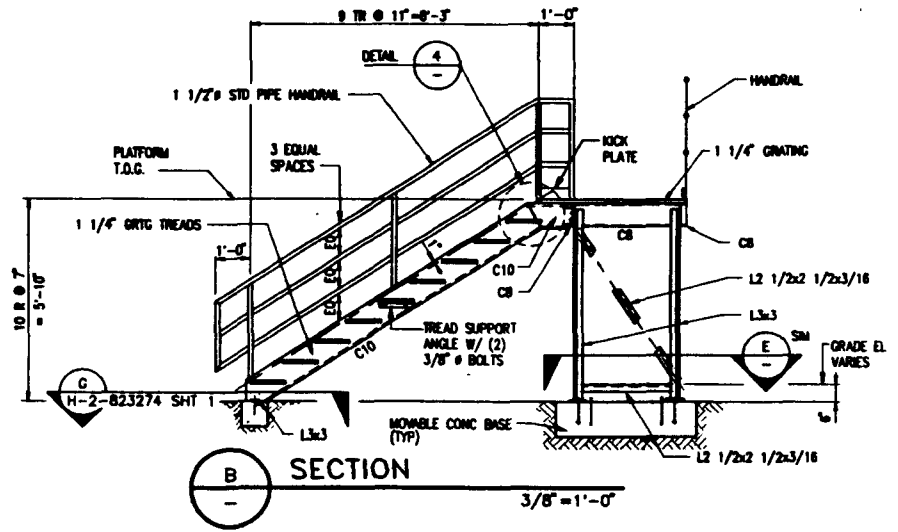
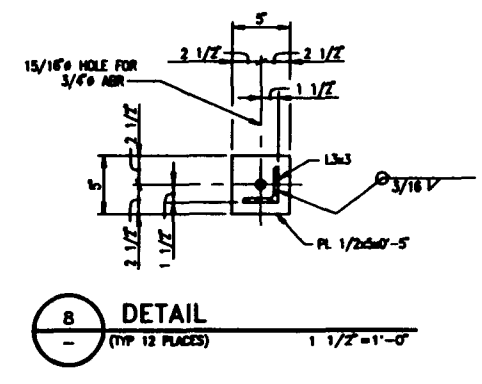
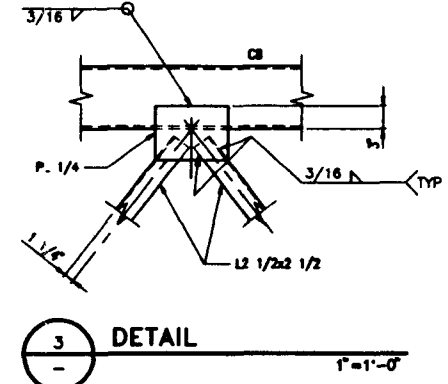
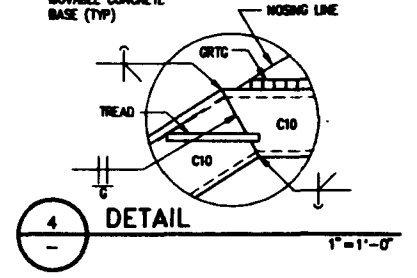
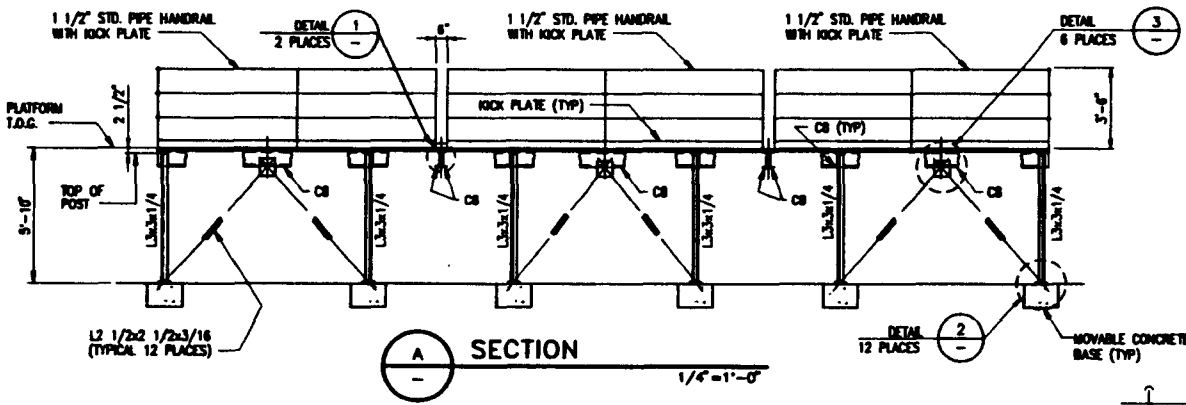
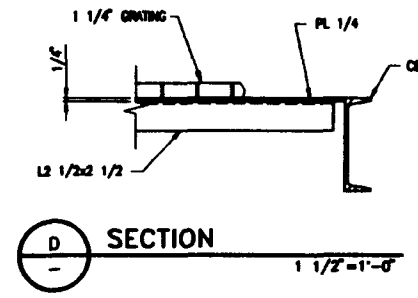
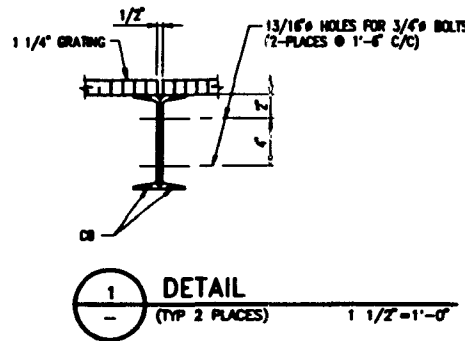
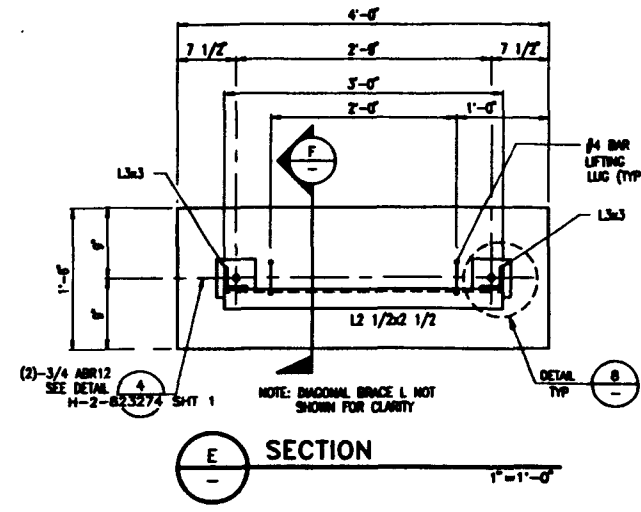
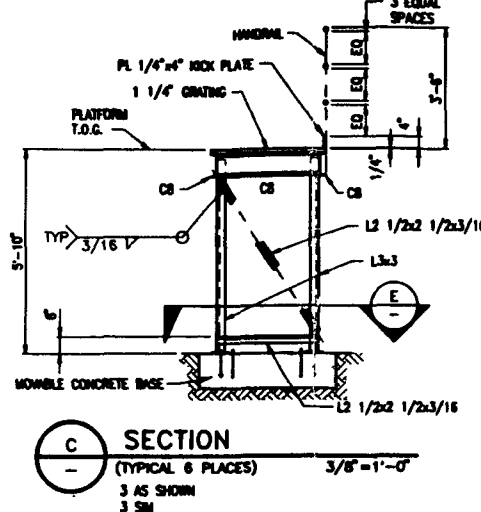
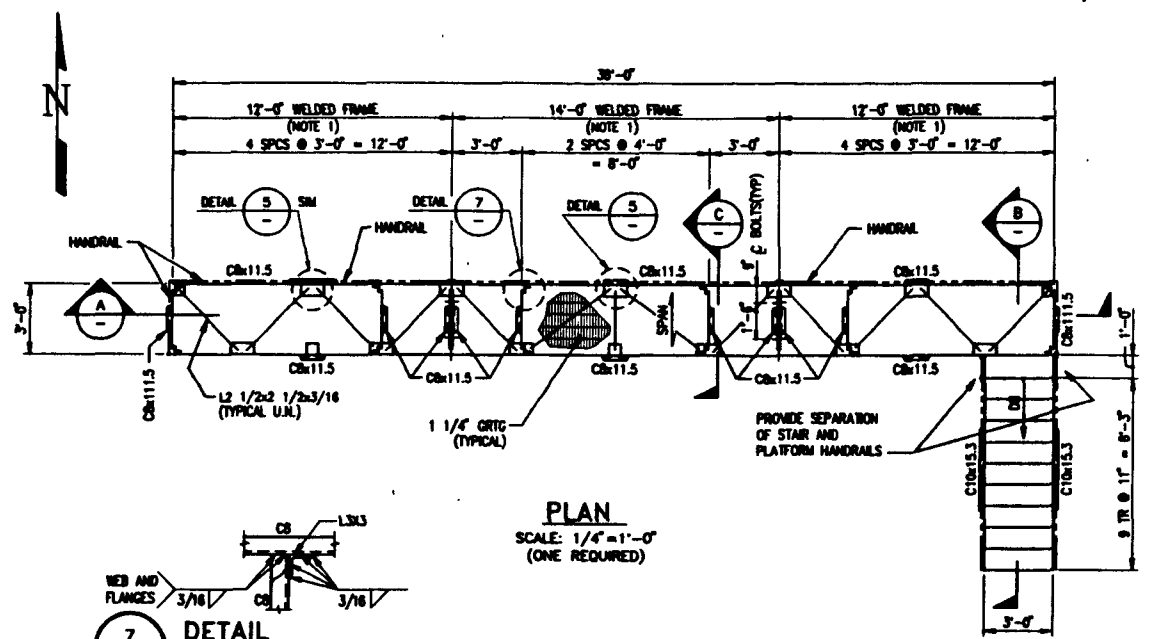
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D	218	W478	1000	H-2-823276

REV	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVALS/DATE

DRAWING TRACEABILITY LIST  
NEXT USED ON : NONE

REVISIONS  
CADFILE: 823276A  
CADCODE: DOS: 6.2; ACD2: 12; NH



- NOTES:**
- WELD PIECES WITH MIN 3/16" FILLET WELD UNLESS NOTED OTHERWISE.
  - FOR PLATFORM LOCATION SEE DRAWING H-2-823251 SHEETS 2 THRU 4 OF 4. ONE RELOCATABLE PLATFORM REQUIRED.
  - FOR GENERAL NOTES SEE DWG H-2-823276 SHIT 1.

WEC-82-W113-FOR-001  
REV 6 PAGE 172

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

**SWOC W113**  
STRUCTURAL  
OVERPACK DELIDDING/  
RELIPPING PLATFORM

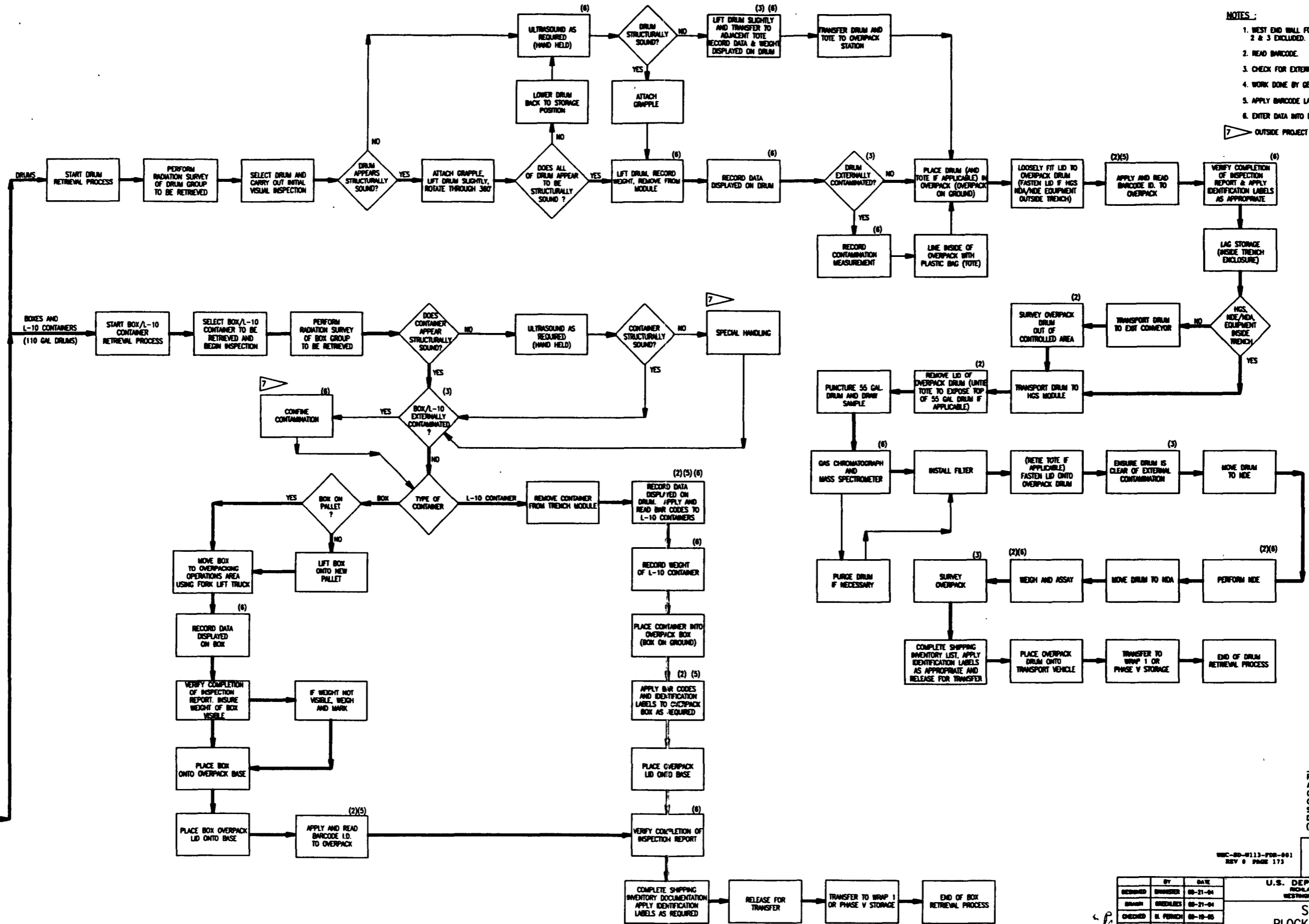
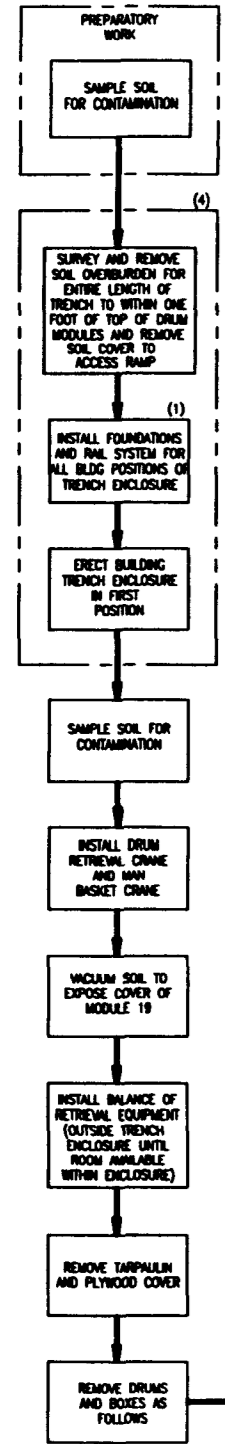
REVISION	BY	DATE
DESIGNED	V. FOREZ	05-08-95
DRAWN	S. TILLOT	05-08-95
CHECKED	T. TRINELLI	05-10-95
LEAD ENGINEER	T. TRINELLI	9/23/95
ENCL. MGR	R. BISH	4/21/95
PRJ. MGR	R. BISH	11/21/95
APP. MGR	G. BUSH	9/24/95

REV	NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
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		NEXT USED ON : NONE			
		CADFILE: 823277A			
		REVISIONS			
		CADCODE: DOS: 6.2; ACD2: 12; NN			
		APPROVED FOR IMPLEMENTATION BY: [Signature]			
		DATE: [Date]			

REV	NO	DESCRIPTION
D	218 W478	0104 H-2-823277
		0

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

- NOTES:
- WEST END WALL FOUNDATION FOR POSITIONS 2 & 3 EXCLUDED.
  - READ BARCODE.
  - CHECK FOR EXTERNAL CONTAMINATION ON DRUM/BOX.
  - WORK DONE BY GENERAL CONTRACTOR.
  - APPLY BARCODE LABELS.
  - ENTER DATA INTO DMS.
  - OUTSIDE PROJECT SCOPE.



ALARA NOTE:  
 PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (WIC-SD-W113-FDR-001, REV 0).

WIC-SD-W113-FDR-001  
 REV 0 PAGE 173  
**Raytheon**  
 Engineers & Constructors

REVISION	BY	DATE
DESIGNED	BRIDGES	09-21-04
DRAWN	BRIDGES	09-21-04
CHECKED	H. PERCH	09-19-05
LEAD USER	BRIDGES	4-26-05
DRG. USER	A. BRADLE	9-21-05
PROJ. MGR	E. BISHOP	7-27-05
APP. FOR IMPLEMENTATION		
BY		
DATE		

SIZE	BLDG NO.	SHEET NO.	DRAWING NUMBER	REV
D	218	7000	H-2-823288	0
SCALE: NONE	PROJECT NO. 09A4000	SHEET 1 OF 1		

REV NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

REFERENCE DRAWINGS				
DRAWING TRACEABILITY LIST	NEXT USED ON : NONE	CADFILE: 0823288A	CADCODE: DOS: 6.2: ACC2:12: NN	

W113-RT-02-103  
DRUM GRAPPLE  
CAP. 1,000 LBS

W113-X-02-102  
VACUUM CLEANER  
CAP. 55 GAL  
110 CFM

W113-EXC-01-102  
VACUUM SOIL  
REMOVAL EQUIPMENT  
CAP. 16 CU YD

W113-DO-13-001  
OVERHEAD HOIST UP  
FABRIC DOOR  
2 HP

W113-FT-02-101  
FORK LIFT TRUCK (ELECTRIC)  
CAP. 8,000 LBS AT  
36" LOAD CENTER

W113-CR-02-101  
DRUM RETRIEVAL CRANE  
CAP. 14,000 LBS  
50 HP

W113-FT-02-102  
FORK LIFT TRUCK (DIESEL)  
CAP. 4,000 LBS

W113-CR-02-104  
MAN-BASKET CRANE  
CAP. 30,000 LBS  
50 HP

W113-RT-02-101  
DRUM GRAB  
CAP. 1,000 LBS

W113-RT-02-105  
ROTATING HOOK  
CAP. 2,000 LBS  
1/2 HP

W113-RT-02-102  
DRUM GRAB  
CAP. 1,000 LBS

W113-RT-02-106  
ROTATING HOOK  
CAP. 20,000 LBS  
1/2 HP

W113-X-02-101  
BATTERY CHARGER  
16.9 KW

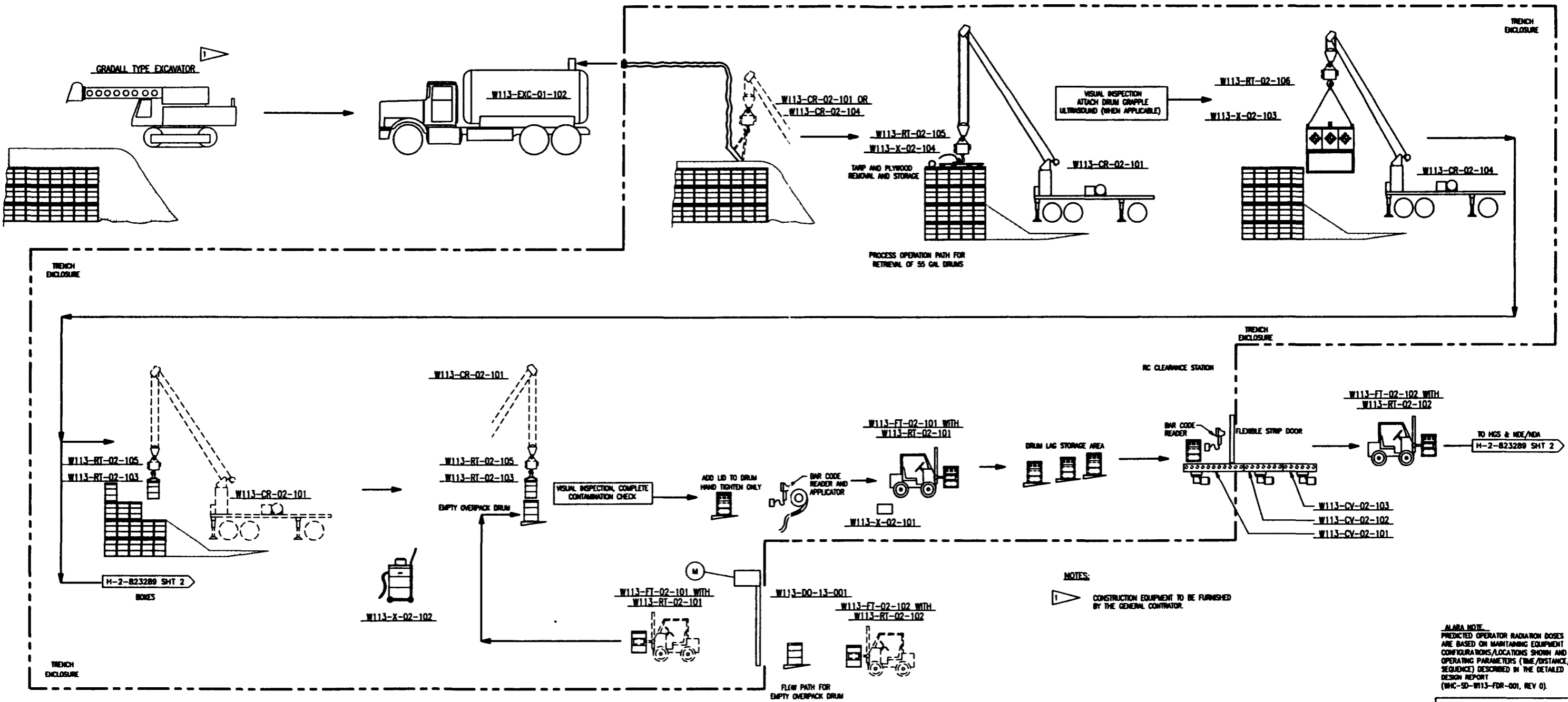
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VACUUM CUPS  
CAP. 70 LBS  
3/4 HP

W113-CV-02-101  
TRANSFER CONVEYOR  
(STRAIGHT)  
CAP. 4,000 LBS  
3/4 HP

W113-CV-02-102  
EXIT CONVEYOR  
(CURVED)  
CAP. 3,000 LBS  
3/4 HP

W113-CV-02-103  
EXIT CONVEYOR  
(STRAIGHT)  
CAP. 1,000 LBS  
3/4 HP

W113-X-02-103  
MAN-BASKET  
CAP. 750 LBS (PERSONNEL)  
2,000 LBS (ADDITIONAL SHIELDING)



NOTES:  
1. CONSTRUCTION EQUIPMENT TO BE FURNISHED BY THE GENERAL CONTRACTOR.

ALARA NOTE:  
PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (W113-SD-W113-FDR-001, REV 0).

W113-SD-W113-FDR-001  
REV 0 PAGE 174

**Baytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
ECLAIRAGE OPERATIONS OFFICE  
WESTINGHOUSE HAWFORD COMPANY

SWOC W113  
PROCESS FLOW DIAGRAM  
(START-UP OPERATIONS)

BY	DATE
DESIGNED: S. HOWER	08-23-04
DRAWN: S. HOWER	08-23-04
CHECKED: D. FRUEN	09-19-05
LEAD ENGR: S. HOWER	11-20-05
ENR. MAN: A. BUCKLE	11-20-05
PRJ. MGR: E. BERSON	11-20-05

REV	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
D	218	W478	7000	H-2-823289

MATERIAL FLOW (MODULES 14-19)		
	TOTAL	THROUGHPUT PER SHIFT
55 GAL DRUMS	2662	16
BOXES	20	2(8'x8'x13')

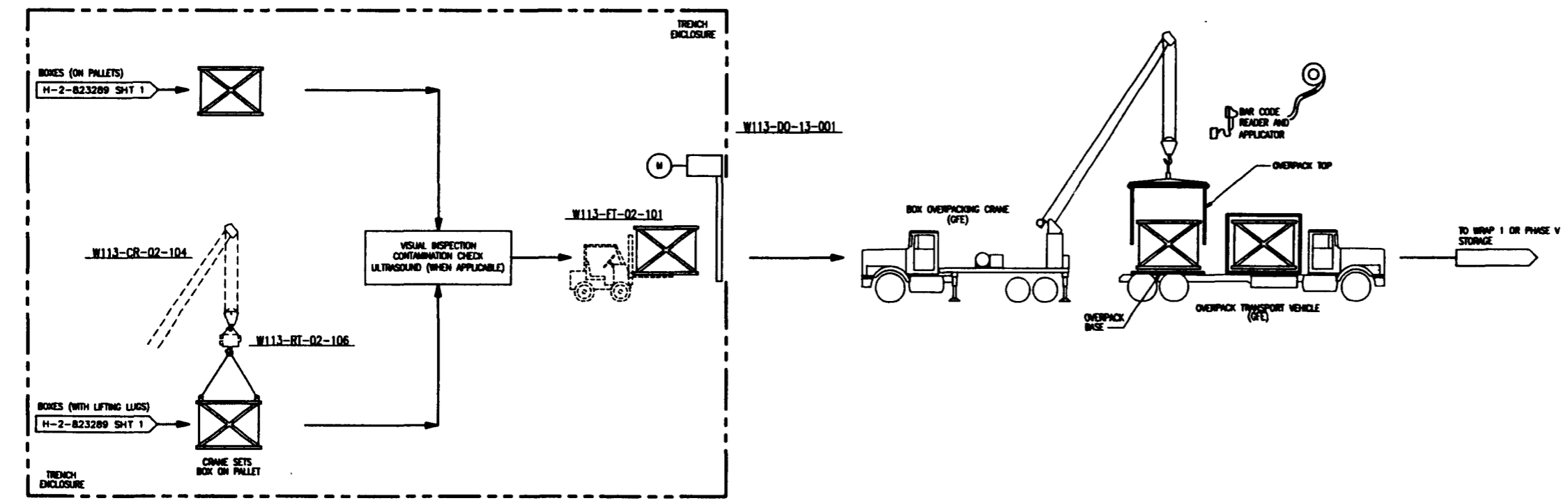
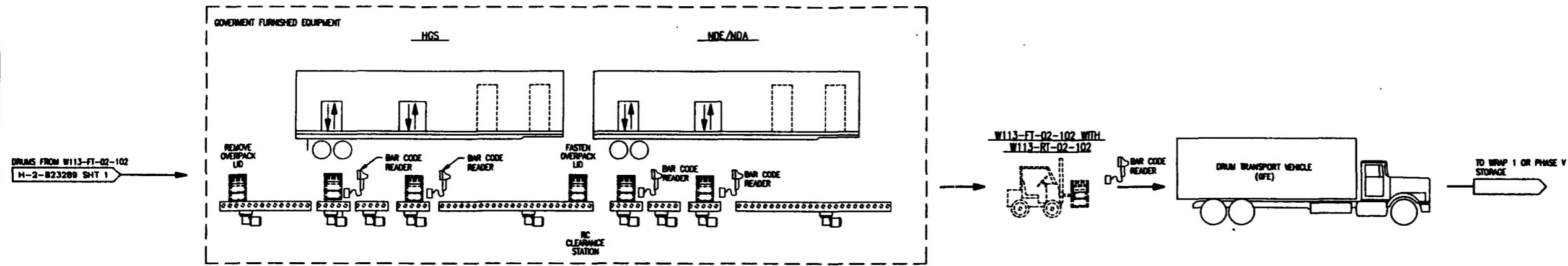
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CADFILE: 8823288A				

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
REFERENCE DRAWINGS				
REVISIONS				
CADCODE: DOS.6.2:ACD2:12:NN				

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

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 COLOR: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20  
 PLOT NUMBER: 5 0 6 0 5 5 3 3 3 3 3 1  
 08/20/05 08:00  
 3





1 2 3 4 5 6 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

MATERIAL FLOW (MODULES 14-19)		
	TOTAL	THROUGHPUT PER SHIFT
55 GAL DRUMS	2662	16
BOXES	20	2(8'x8'x13')

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVALS/DATE

DATE	BY	DATE	U.S. DEPARTMENT OF ENERGY
			RICHLAND OPERATIONS OFFICE
			WESTINGHOUSE HAMPSHIRE COMPANY
			SWOC W113
			PROCESS FLOW DIAGRAM
			(START-UP OPERATIONS)

REV	DESCRIPTION	DATE	BY	DATE
D				

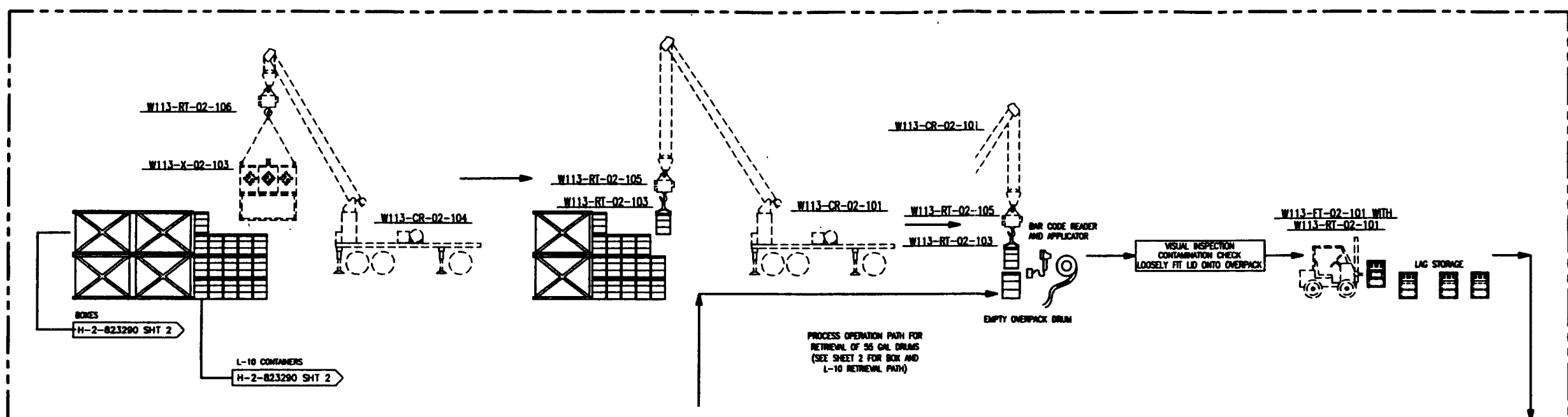
  

NO	BLDG NO	DRWG NO	ISSUANCE	REV
218	7000	H-2-823289		0

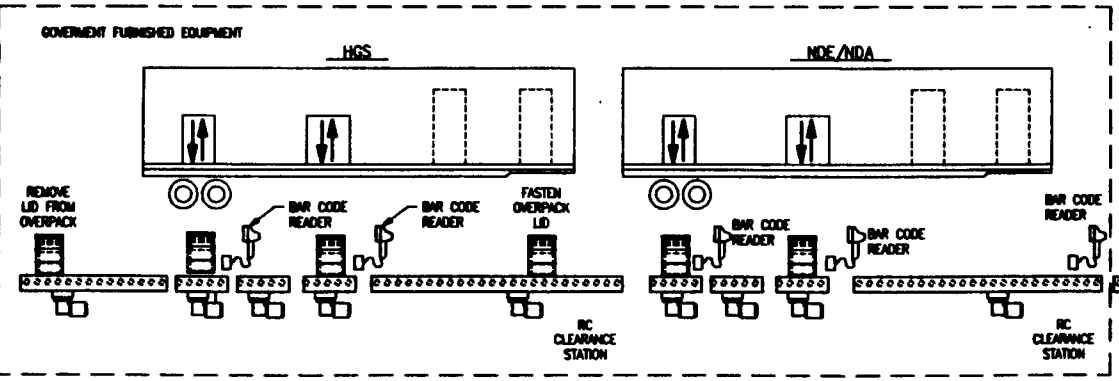
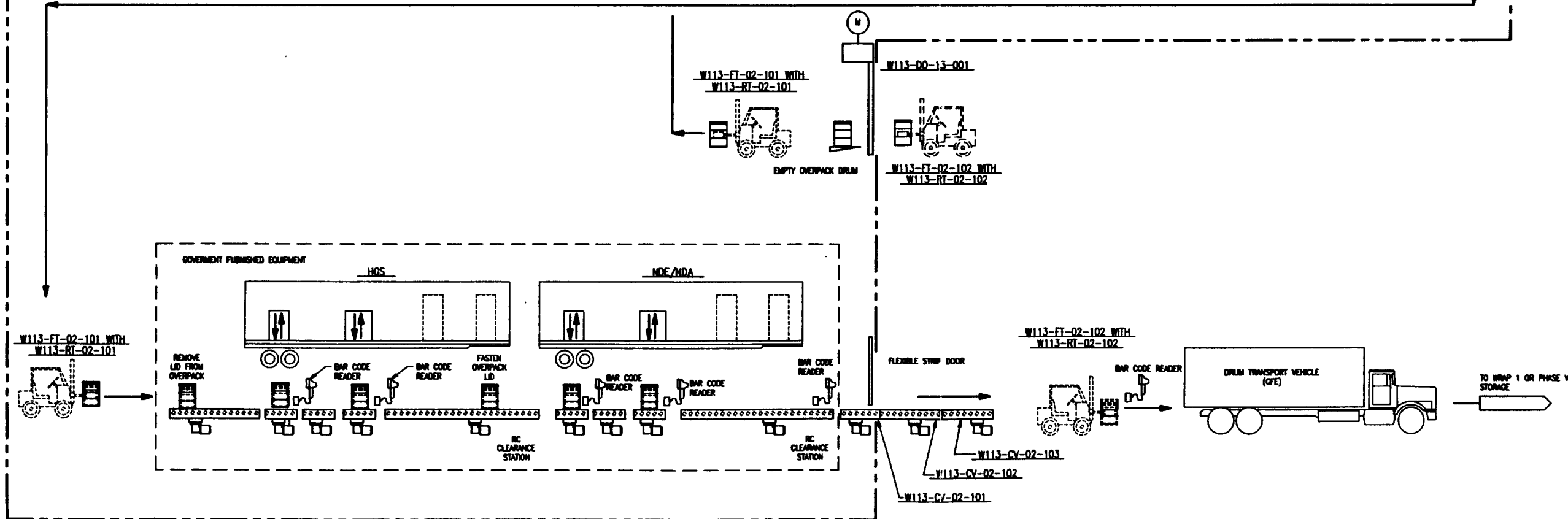
ALARA NOTE:  
 PREDICTED OPERATOR RADIATION DOSES  
 ARE BASED ON MAINTAINING EQUIPMENT  
 CONFIGURATIONS, LOCATIONS SHOWN AND ON  
 OPERATING PARAMETERS (TIME/DISTANCE/  
 SEQUENCE) DESCRIBED IN THE DETAILED  
 DESIGN REPORT  
 (W113-3D-W113-FOR-001, REV 0).

**Raytheon**  
 Engineers & Constructors

W113-3D-W113-FOR-001  
 REV 0 PAGE 175



PROCESS OPERATION PATH FOR RETRIEVAL OF 55 GAL DRUMS (SEE SHEET 2 FOR BOX AND L-10 RETRIEVAL PATH)



ALARA NOTE:  
PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (W113-SD-W113-FDR-001, REV 0).

W113-SD-W113-FDR-001  
REV 0 PAGE 176

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
NICHOLS OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

SWOC W113  
PROCESS FLOW DIAGRAM  
(POST START-UP OPERATIONS)

MATERIAL FLOW		
	TOTAL	THROUGH PUT PER SHIFT
55 GAL DRUMS	7232	16
BOXES	18	1(>8'x8'x13') 2(<8'x8'x13')
110 GAL DRUMS	57	1

REV	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

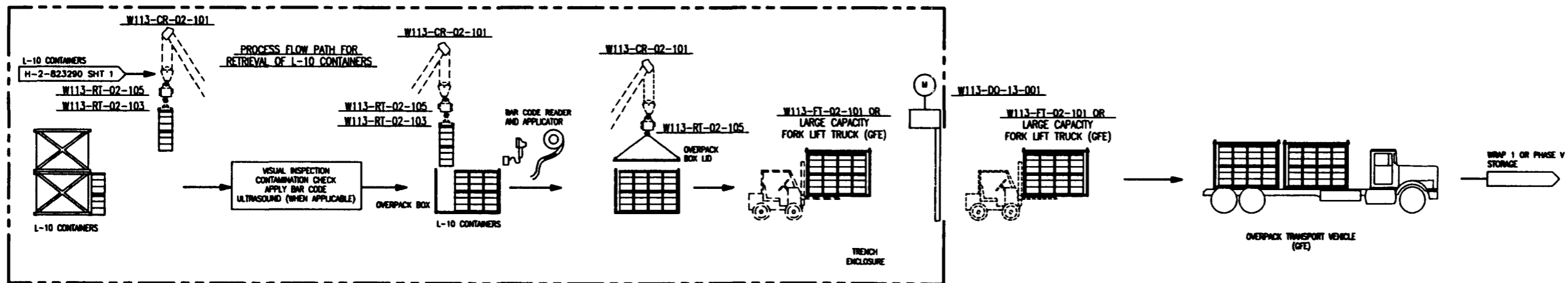
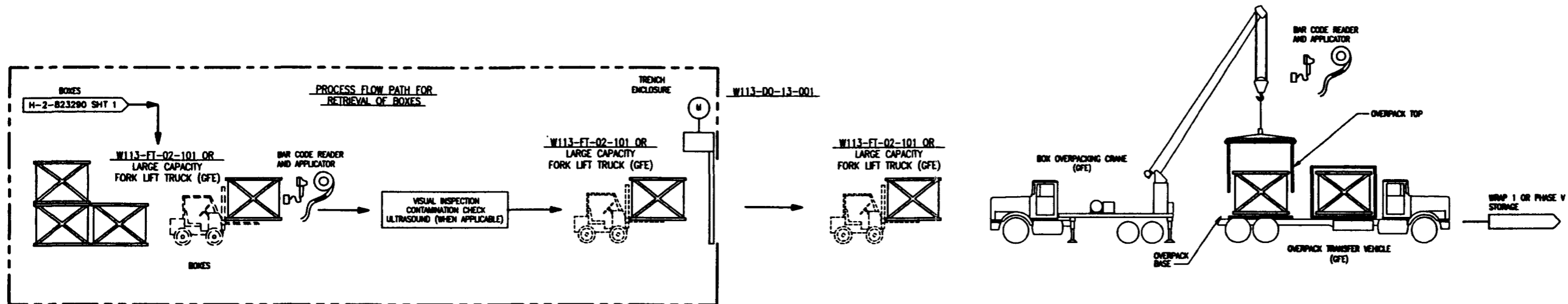
  

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ALARA NOTE:  
 PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT  
 (W113-DQ-13-001, REV 0)

MATERIAL FLOW		
	TOTAL	THROUGH PUT PER SHIFT
55 GAL DRUMS	7232	16
BOXES	18	1 (>8'x8'x13') 2 (<8'x8'x13')
110 GAL DRUMS	57	1

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVALS/DATE

BY	DATE
DESIGNED: DUNNEN	02-02-95
DRAWN: K. ROSE	02-02-95
CHECKED: H. FURCH	02-10-95
LEAD ENGINEER: DUNNEN	7-26-95
ENCL. MGR: J. BUCKLE	9-26-95
PRJCT. MGR: E. HERRON	7-21-95
OTHER: S.A. E. FRIEST	9/26/95

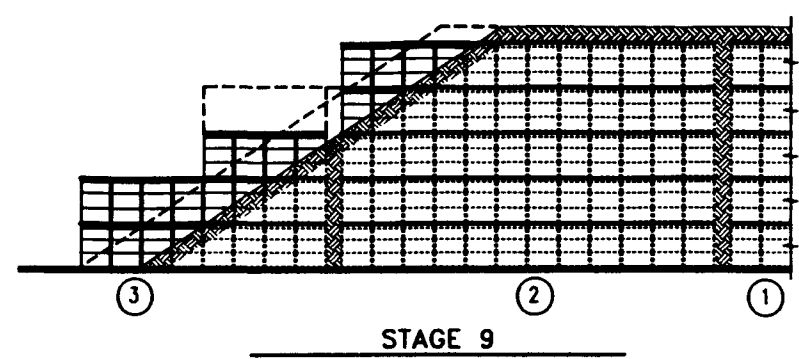
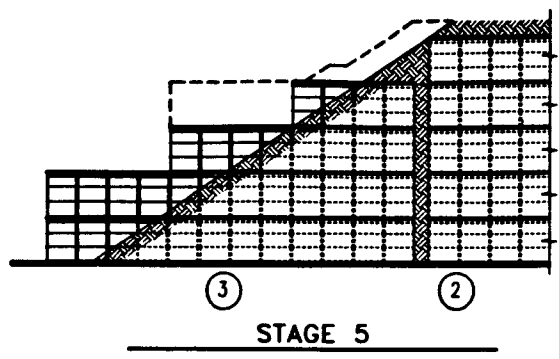
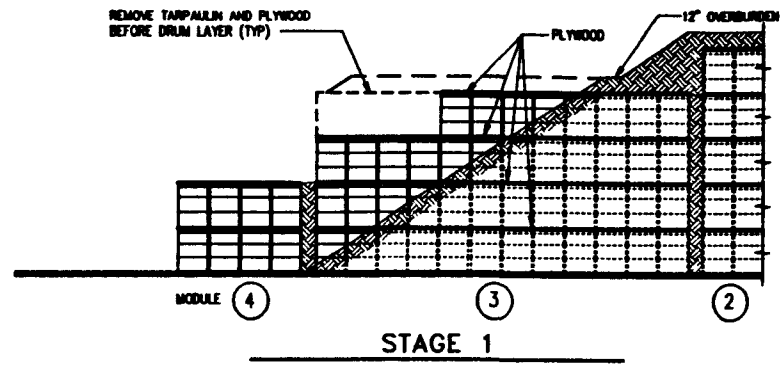
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W113-DQ-13-001  
 REV 0 PAGE 177

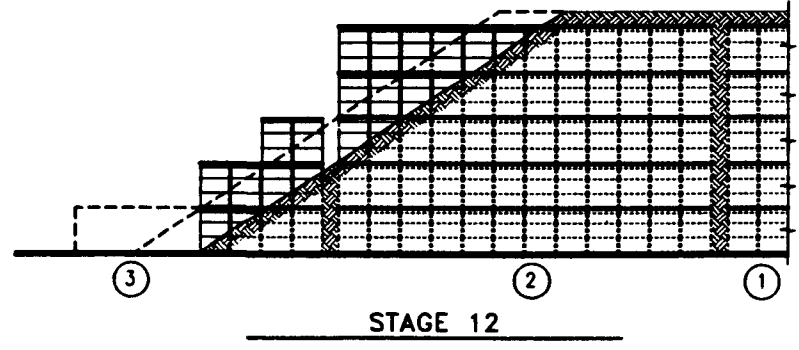
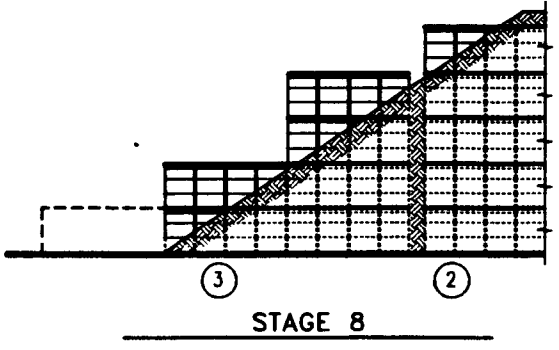
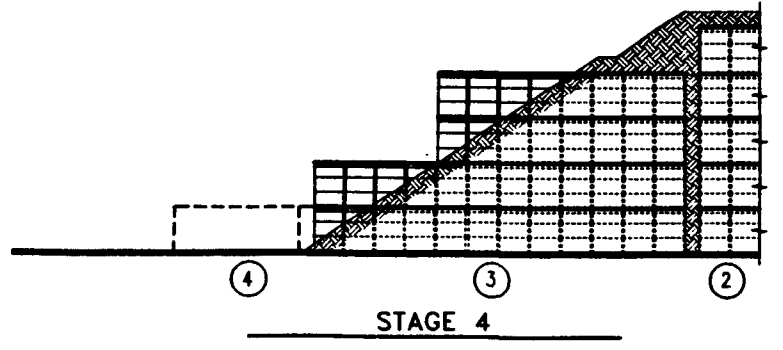
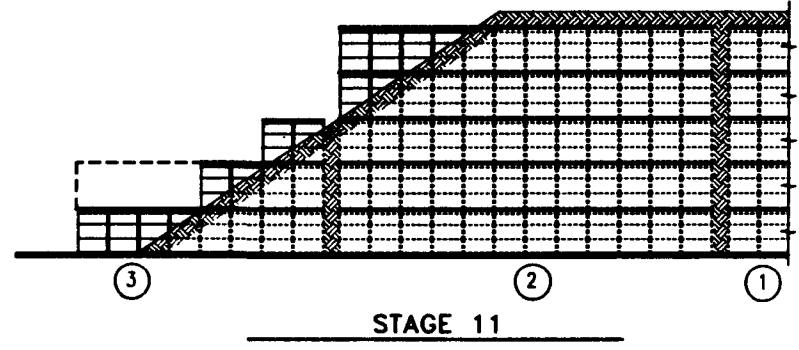
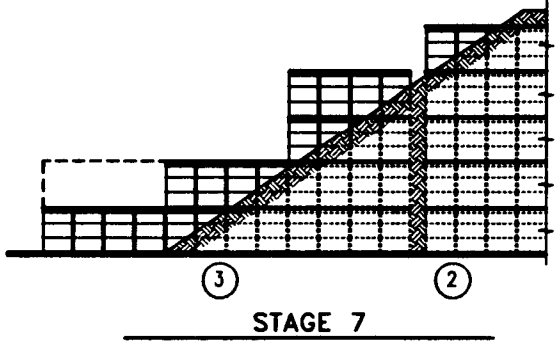
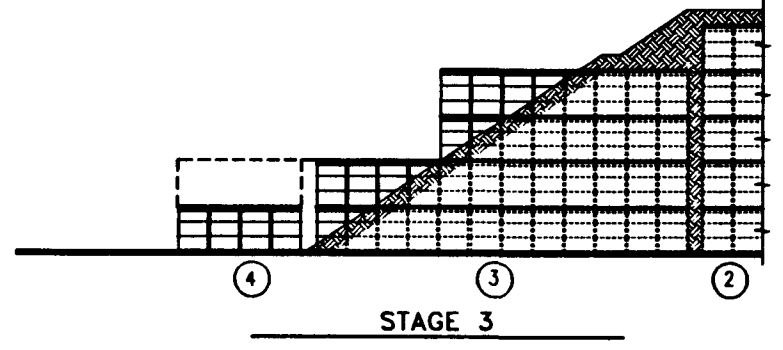
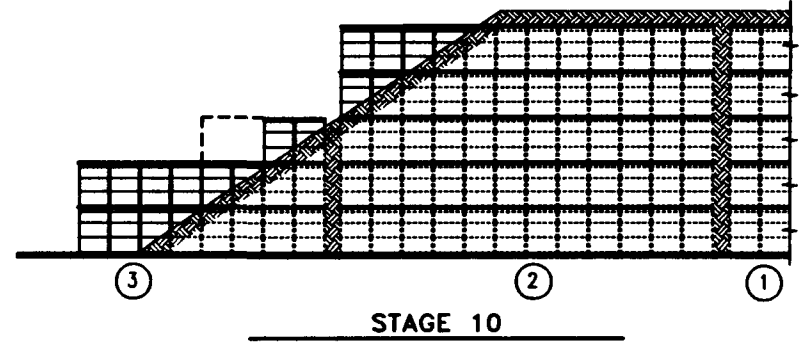
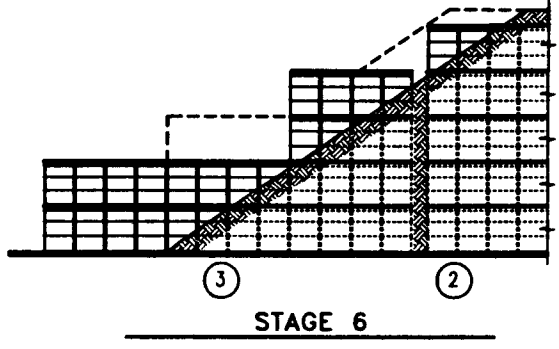
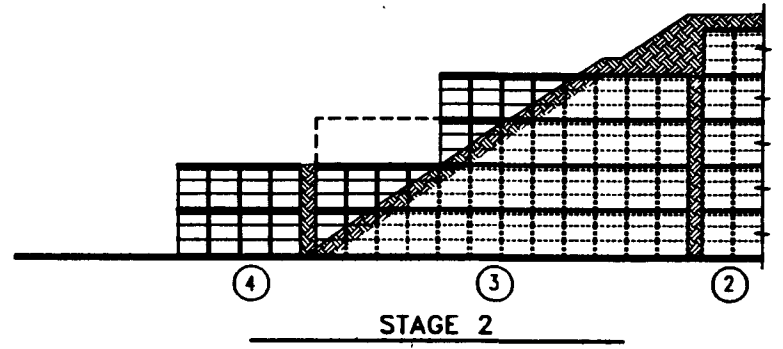
**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTINGHOUSE HANFORD COMPANY

SWOC W113  
 PROCESS FLOW DIAGRAM  
 (POST START-UP OPERATIONS)



- NOTES:**
1. MODULE 1-4 SHOWN AS TYPICAL. REMOVAL SEQUENCE FOR OTHER MODULES SIMILAR.
  2. FOR ESTABLISHMENT OF DRUM STAGGER SEE DRAWING H-2-823305.
  3. REFER TO DRAWING H-2-823307 FOR TYPICAL DEPLOYMENT OF VACUUM SOIL REMOVAL EQUIPMENT.
  4. STAGE 8 REPRESENTS PROFILE OF MODULES 5 AND 10 WHEN TRENCH ENCLOSURE IS REPOSITIONED. (MODULE 10 FOR END OF POSTION 1, MODULE 5 FOR END OF POSTION 2).
  5. ONLY MODULES 1 AND 2 ARE STACKED 5 DRUMS HIGH.



**ALARA NOTE:**  
 PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (WHC-SD-W113-FDR-001, REV 0).

WHC-SD-W113-FDR-001  
 REV 0 PAGE 178

**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 MIDLAND OPERATIONS OFFICE  
 WESTHOUSE HANFORD COMPANY

**SWOC W113  
 OPERATIONAL SCHEMATIC  
 DRUM REMOVAL SEQUENCE**

BY	DATE
DESIGNED E. ROSS	08-14-95
DRAWN L. BISH	08-14-95
CHECKED M. PERICH	08-16-95
LEAD ENGR BRUNSER	4-28-95
ENR. MGR J. BUCKLE	9-26-95
PROJ. MGR E. ROSS	9-21-95
QA G. ROSS	9/26/95

REV	BLDG NO.	INDEX NO.	DRAWING NUMBER	REV
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	W478			

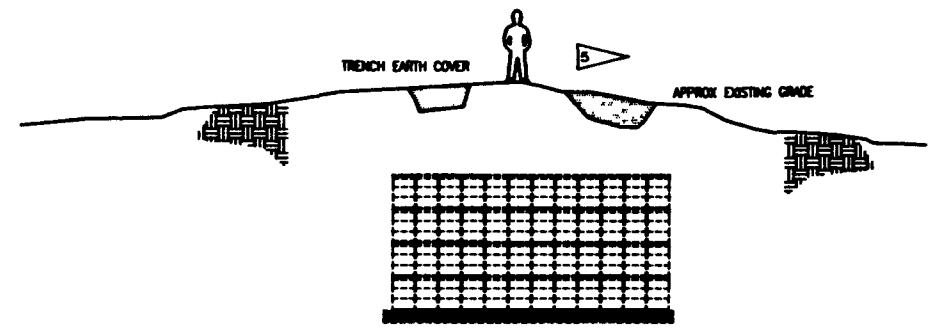
REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

DRAWING TRACEABILITY LIST      NEXT USED ON : NONE      CADFILE: 8823293A      CADCODE: DOS: 6.2: ACD2: 12: NN

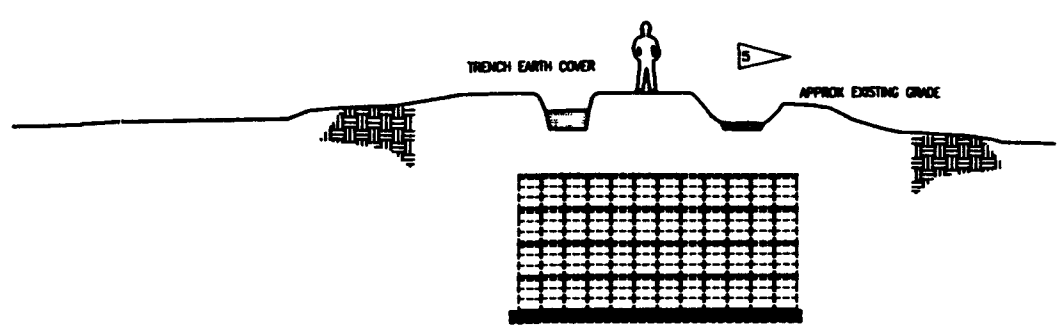
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 24 01/14/95



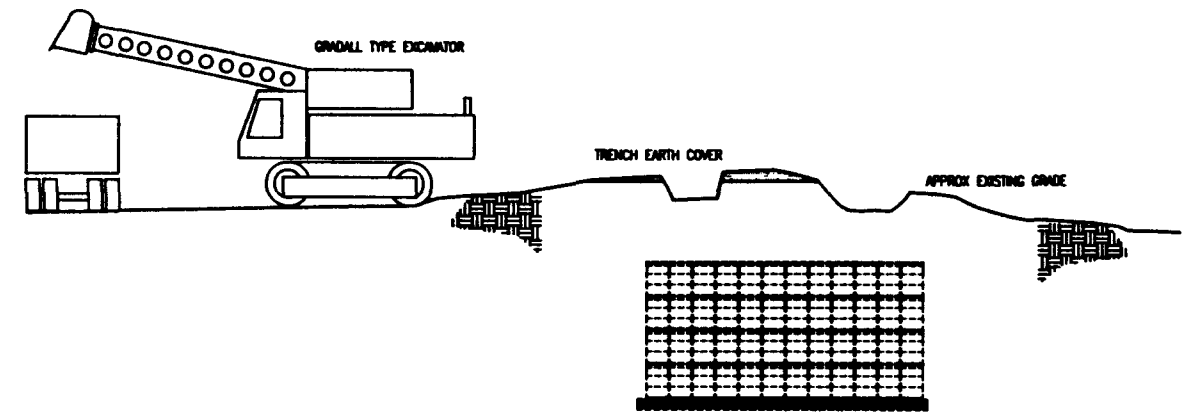
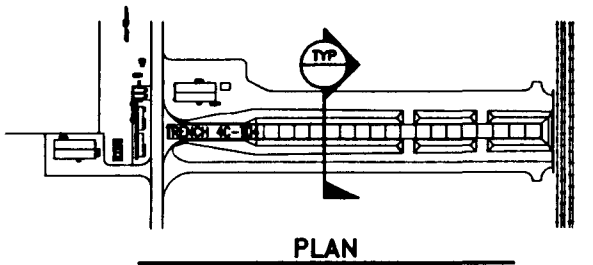
- NOTES**
1. SEE SPEC NO 02200 FOR FURTHER REQUIREMENTS
  2. REPEAT STAGES UNTIL EXPLORATORY HOLES EXPOSE PLYWOOD/TARP AT TOP OF DRUM MODULE.
  3. FOR INITIAL AND FINAL GRADING SEE DRAWING H-2-823243
  4. AFTER EACH STAGE OF MECHANICAL EXCAVATION THE SURFACE OF THE SOIL WILL BE MONITORED FOR CONTAMINATION BY A WMC HPT. THIS IS TO BE CARRIED OUT PRIOR TO DIGGING NEXT EXPLORATORY HOLES.
  5. EXPLORATORY HOLES TO BE INSPECTED AND APPROVED BY WMC PRIOR TO REMOVAL OF SOIL USING MECHANICAL EQUIPMENT



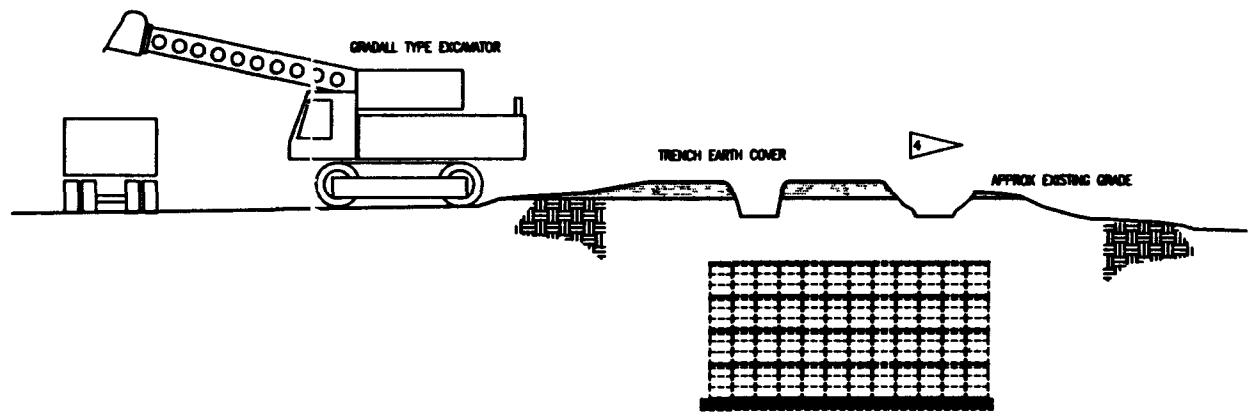
**STAGE 1 - MANUALLY DIG EXPLORATORY HOLES 2'-0" DEEP**  
VIEW LOOKING WEST



**STAGE 3 - MANUALLY DEEPEN EXPLORATORY HOLES 2'-0" TOTAL DEPTH**  
VIEW LOOKING EAST



**STAGE 2 - MECHANICALLY REMOVE 1'-0" OF OVERBURDEN**  
VIEW LOOKING EAST



**STAGE 4 - MECHANICALLY REMOVE 1'-0" OF OVERBURDEN**  
VIEW LOOKING EAST

**ALARA NOTE**  
PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (WMC-SD-W113-FDR-001, REV 0).

WMC-SD-W113-FDR-001  
REV 0 PAGE 100

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
NICHOLAND OPERATIONS OFFICE  
WESTINGHOUSE HAMFORD COMPANY

SWOC W113  
OPERATIONAL SCHEMATIC  
SOIL REMOVAL  
BY GENERAL CONTRACTOR

REVISION	BY	DATE
DESIGNED	K. ROSS	10-05-01
DRAWN	K. ROSS	10-05-01
CHECKED	N. PIERCE	09-10-00
LEAD ENGR	BRUNNER	7-24-99
ENR. MGR	J. BUCKLE	7-26-95
PRJ. MGR	K. DENSON	1-2-97
OTHER	G. FROST	9/26/99

REV	DATE	DESCRIPTION
D	218 W478	7001 H-2-823294

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

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NEXT USED ON . NONE

CADFILE B23294A

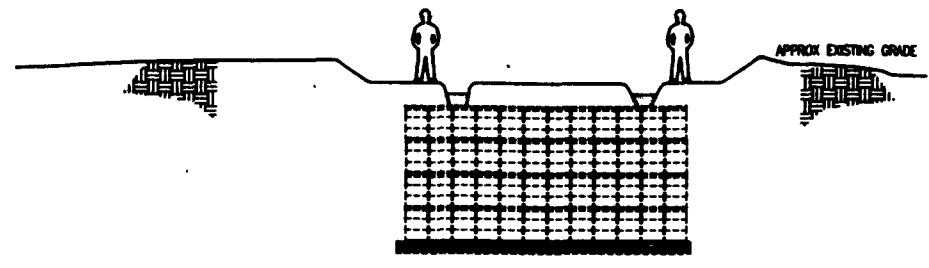
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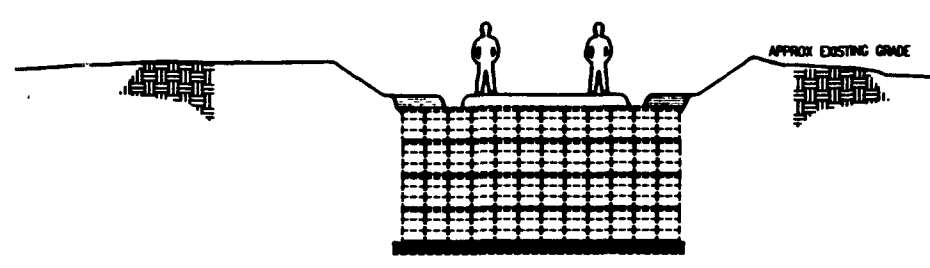
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**NOTES**

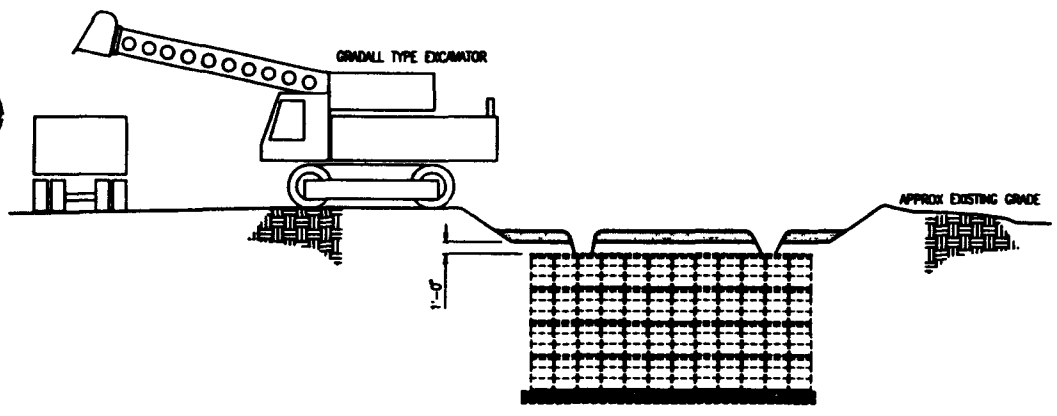
- SEE SPEC NO. 02200 FOR FURTHER REQUIREMENTS.
- FOR DETAIL AND FINAL GRADING SEE DRAWING H-2-823243.
- DRUM OR BOXES NOT TO BE UNCOVERED OR DAMAGED DURING OVERBURDEN REMOVAL.
- EXCAVATION OF THE OF THE SOIL AT THE SIDES OF THE TRENCH CAN BE CARRIED OUT FOR EACH MODULE AS THE OVERBURDEN COVERING EACH MODULE IS REMOVED (STAGE 1 THROUGH 7) OR AFTER COMPLETION OF STAGES 1 THROUGH 7 FOR ALL 10 MODULES.



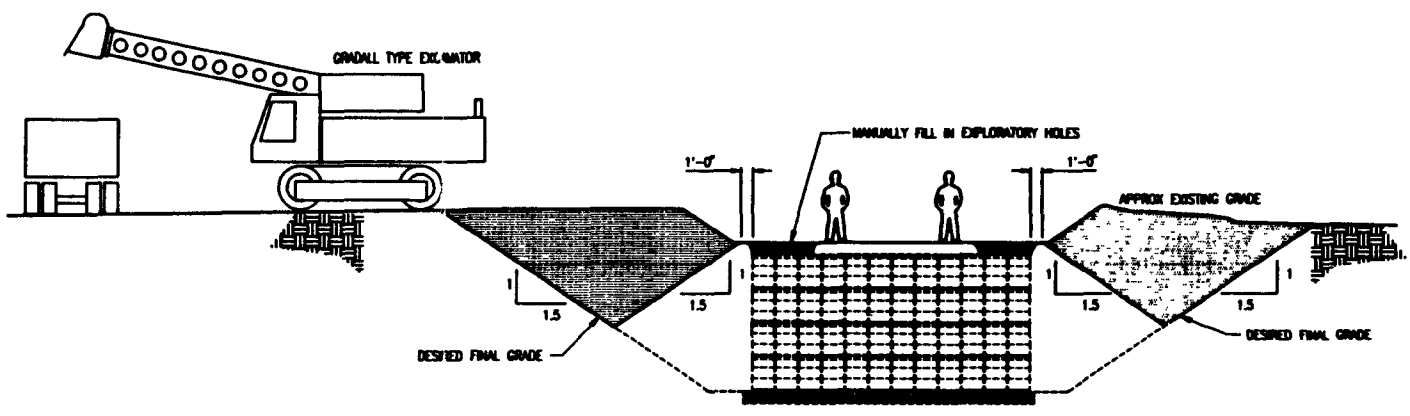
**STAGE 5 - MANUALLY DEEPEN EXPLORATORY HOLES TO EXPOSE PLYWOOD**  
VIEW LOOKING EAST



**STAGE 7 - MANUALLY EXTEND EXPLORATORY HOLES TO LOCATE EDGES OF DRUM MODULE**  
VIEW LOOKING EAST



**STAGE 6 - MECHANICALLY REMOVE OVERBURDEN TO WITHIN 1'-0" PLYWOOD**  
VIEW LOOKING EAST



**STAGE 8 - MECHANICALLY REMOVE OVERBURDEN AT SIDES OF DRUMS**  
VIEW LOOKING EAST

**ALARA NOTE:**  
PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT  
(WAC-SD-W113-FDR-001, REV 0)

WAC-SD-W113-FDR-001  
REV 0 PAGE 101

**Baytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE MANFORD COMPANY

SWOC W113  
OPERATIONAL SCHEMATIC  
SOIL REMOVAL  
BY GENERAL CONTRACTOR

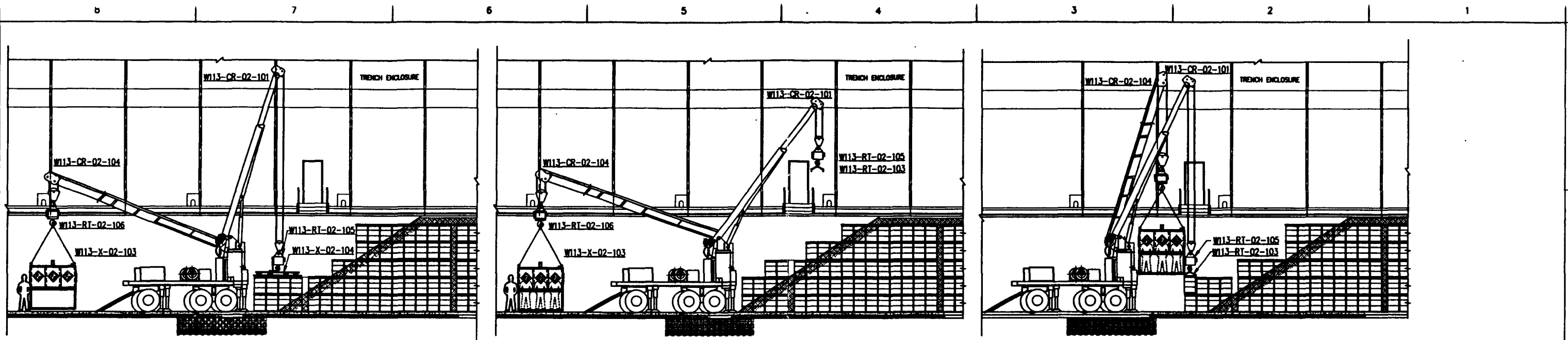
BY	DATE
DESIGNED K. BOSS	10-09-94
DRAWN K. BOSS	10-09-94
CHECKED H. FISCH	09-19-95
LEAD ENGR ENGINEER	9-22-95
ENR. MR. J. BECKLE	9-26-95
PRJ. MR. K. BERSON	9-27-95
OTHER	9/26/95

REV	BLDG NO.	DIBEX NO.	DRAWING NUMBER	REV
D	218	7001	H-2-823294	0
	W478			

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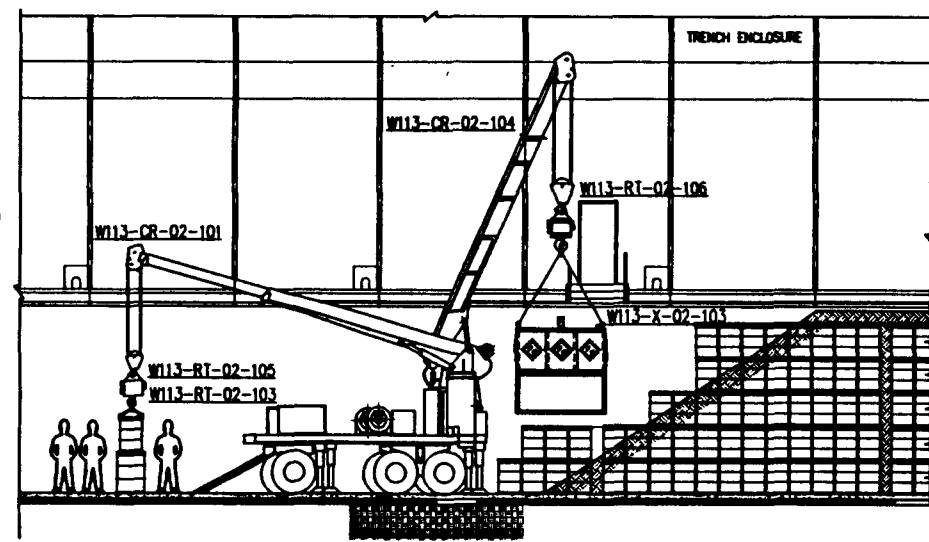
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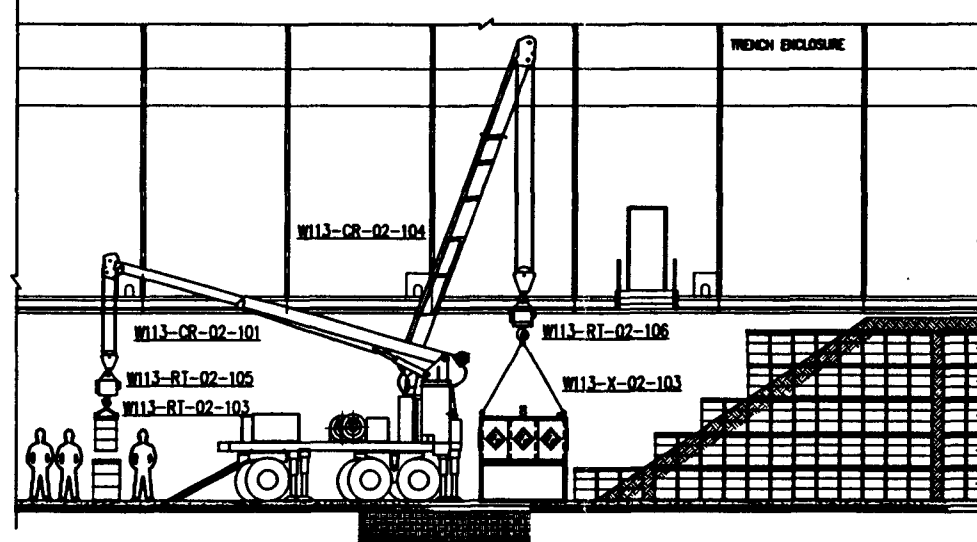
REMOVAL OF PLYWOOD

PERSONNEL GAIN ENTRY TO MAN-BASKET

ROTATION AND INSPECTION OF A DRUM AFTER IT HAS BEEN LIFTED



BARCODE, LABEL AND OVERPACK 55 GAL DRUM



DRUM RETRIEVAL FROM TIER 1  
BARCODE, LABEL AND OVERPACK 55 GAL DRUM

(MAN-BASKET CRANE SHOWN IN POSITION FOLLOWING RETRIEVAL OF THE LAST DRUM OF A CAMPION)

NOTES:  
1. THIS DRAWING DOES NOT DEPICT A SEQUENCE OF DRUM RETRIEVAL OPERATIONS. IT IS INTENDED TO DEPICT THE TYPICAL DEPLOYMENT OF THE DRUM RETRIEVAL EQUIPMENT.

ALARA NOTE:  
PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT  
(W113-SD-W113-FDR-001, REV 0)

W113-SD-W113-FDR-001  
REV 0 PAGE 182

**Raytheon**  
Engineers & Constructors

BY	DATE	DESCRIPTION
DRAWN	80-24-04	E. ROSE
CHECKED	80-24-04	E. ROSE
LEAD ENGR	80-10-05	R. P. J.
ENGR	7-27-90	J. BUCKLE
ENGR	7-27-90	J. BUCKLE
APPROVED FOR IMPLEMENTATION	8/20/90	G. PAUST

U.S. DEPARTMENT OF ENERGY  
NICHOLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

SWOC W113  
OPERATIONAL SCHEMATIC  
DRUM RETRIEVAL OPS  
ELEVATIONS

REV	DESCRIPTION	DATE
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	W47B	H-2-823295
		0

SCALE: NONE  
PROJECT NO: 0944.000  
SHEET 1 OF 1

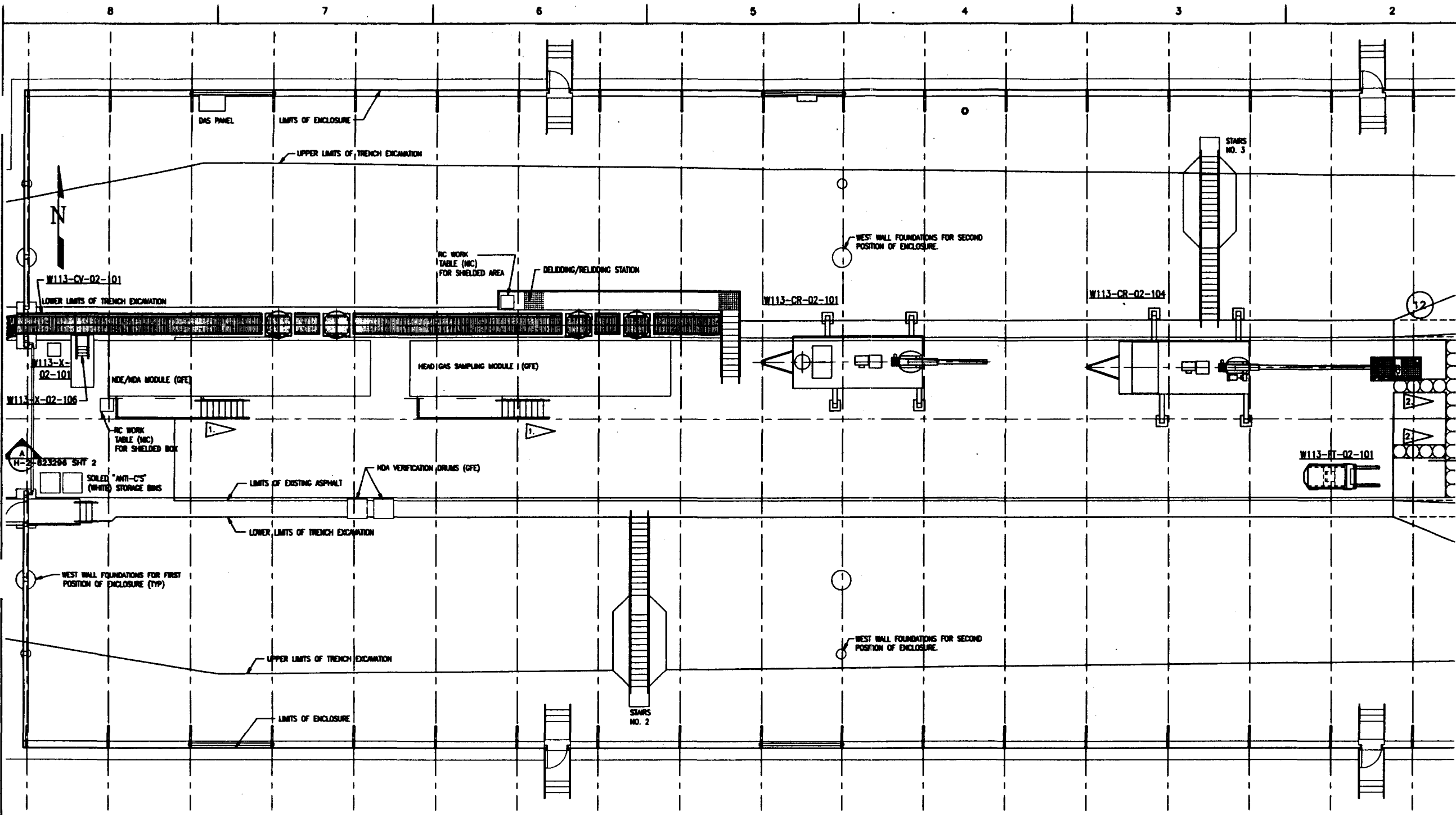
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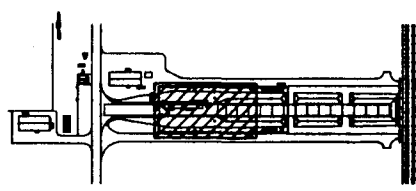
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 FROM W113080





NOTES:  
 1. PLATFORM AND STAIRS FOR PERSONNEL ACCESS TO NDE, NDA, AND HDS CONTROL ROOMS HAVE TO BE REACHED TO ALLOW BIG BOX FROM MODULE 13 TO PASS.  
 2. DRAINS TO BE REMOVED PRIOR TO BOX REMOVAL.



KEY PLAN  
 N.T.S.

PLAN

DEPLOYMENT OF EQUIPMENT DURING BOX RETRIEVAL OPERATIONS (TYPICAL)

1 - 98  
 CAD FILE: 822296A  
 DRAWING NUMBER: 1575  
 SHEET NUMBER: H-2-823296  
 DATE: 9/26/95

822296-001  
 REV 0 PAGE 103  
**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTINGHOUSE HANFORD COMPANY

SWOC W113  
 OPERATIONAL SCHEMATIC  
 BOX RETRIEVAL OPS

REVISION	BY	DATE
DESIGNED	E. BOSS	05-09-95
DRAWN	E. BOSS	05-09-95
CHECKED	S. FURNESS	05-10-95
LEAD DESIGNED	ENGINEER	9-2-95
DES. DESIGNED	A. BRIDLE	9-26-95
FINAL DESIGNED	E. BOSS	11-21-95
APPROVED FOR IMPLEMENTATION	E. BOSS	9/26/95

REV NO	DESCRIPTION	REV BY/DATE	JOB BY/DATE	APPROVAL DATE

REV NO	DESCRIPTION	REV BY/DATE	JOB BY/DATE	APPROVAL DATE

DRAWING TRACEABILITY LIST

REFERENCE DRAWINGS  
 NEXT USED ON : NONE

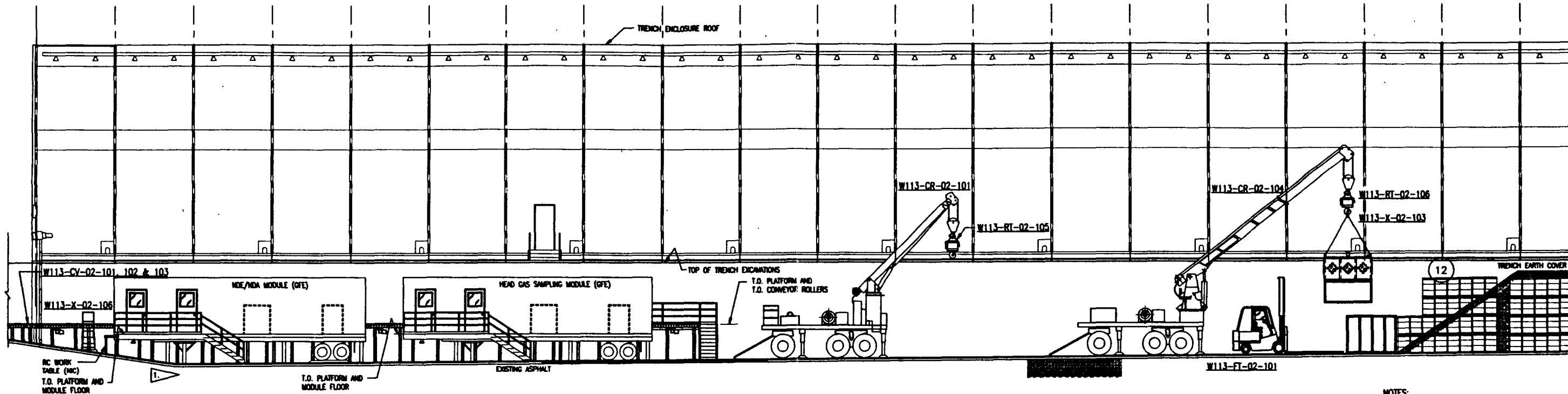
CADFILE: 822296A

REVISIONS  
 CADCODE: DOS: 6.2; ACD2: 12; NN

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COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

8 7 6 5 4 3 2 1



**A SECTION**  
H-2-823298 SHT 1

**NOTES:**  
1. FIELD VERIFY LOCATION OF RAMP INTERSECTION WITH TRENCH, SLOPE OF RAMP & TRENCH PRIOR TO FABRICATION OF SUPPORTS.

1234567890101112131415161718192021222324252627282930  
 COLOR FOR REFERENCE  
 09/20/95 07:00  
 2 274 9/16/2005  
 FORM 915/900

REC-80-W113-FOR-001  
REV 6 PAGE 104

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
ROSLAND OPERATIONS OFFICE  
WESTHOUSE HAMFORD COMPANY

**SWOC W113**  
OPERATIONAL SCHEMATIC  
BOX RETRIEVAL OPS

BY	DATE
DESIGNED E. ROSE	08-24-94
DRAWN E. ROSE	08-24-94
CHECKED M. FURICH	08-10-95
LEAD ENGR ENGINEER	9-26-95
ENGR MGR J. ENCHALE	9-26-95
PRJAL MGR E. HERRING	9/26/95
ENGR J. BA	9/26/95

REV	DATE	DESCRIPTION
D	218 W478	1575 H-2-823296

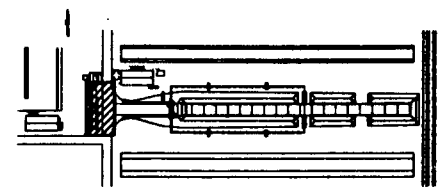
REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
DRAWING TRACEABILITY LIST				
REFERENCE DRAWINGS				
NEXT USED ON : NONE				
CADFILE: 8823298				
REVISIONS				
CADCODE: DOS: 6.2: ACD2:12:NN				

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

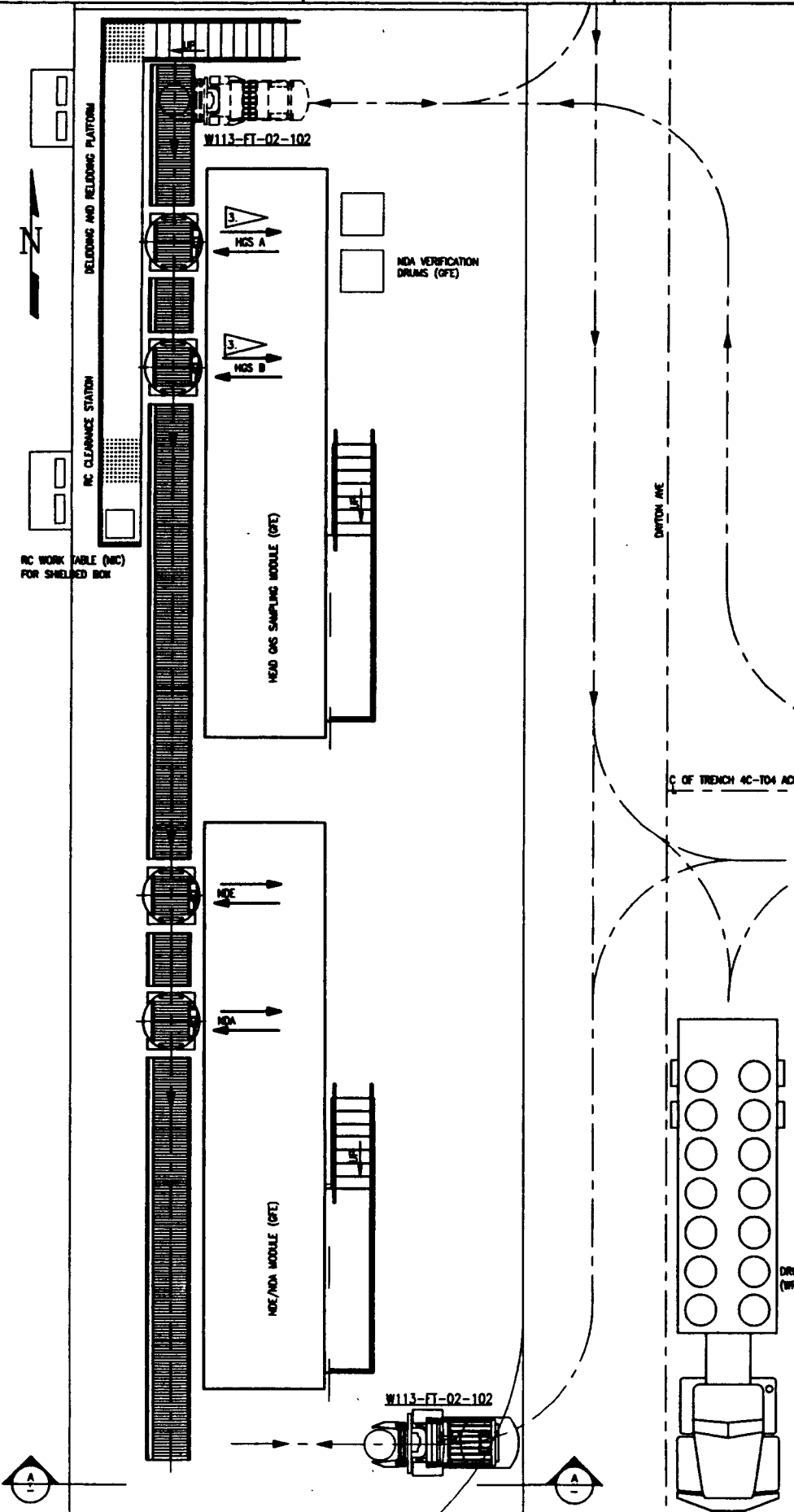




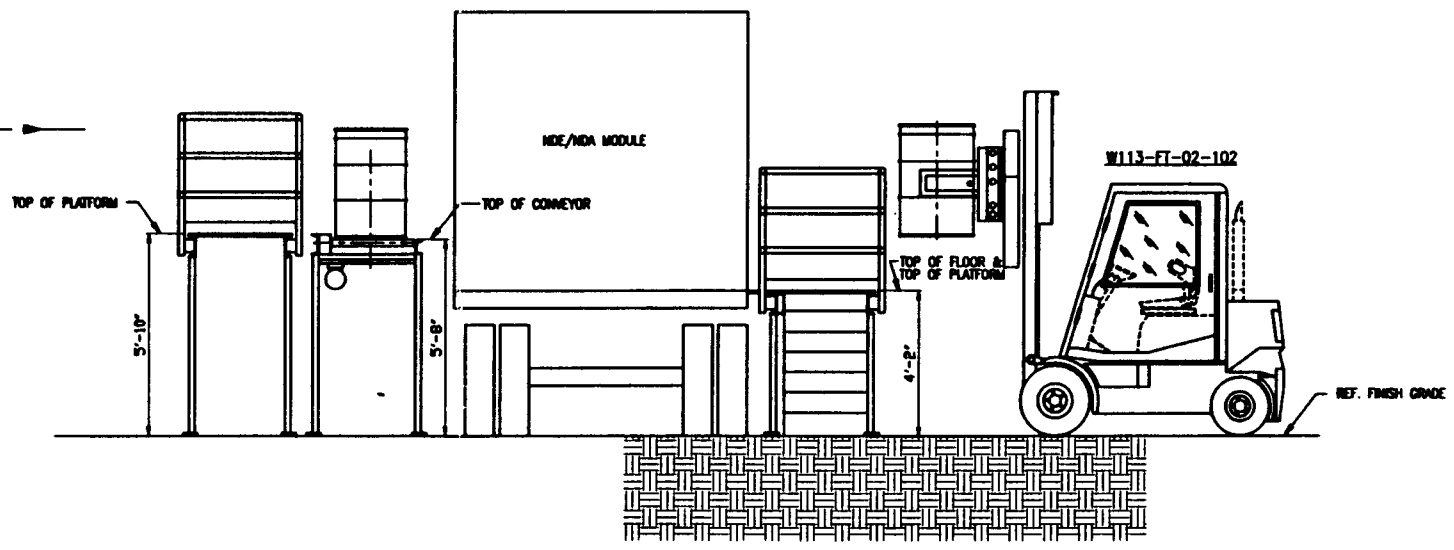
- NOTES**
1. HEAD GAS SAMPLING (HGS), NDE/NDA MODULE AND ASSOCIATED CONVEYOR SYSTEM ARE GOVERNMENT FURNISHED EQUIPMENT (GFE) ITEMS.
  2. DIMENSIONS GIVEN ARE REFERENCE. EQUIPMENT HEIGHT WILL NEED ADJUSTMENT TO SUIT SITE.
  3. HGS UNITS (A AND B) ARE IDENTICAL HEAD GAS SAMPLING OF A DRUM IS REQUIRED BY ONE OF THE TWO UNITS, NOT BOTH.



**KEY PLAN**  
NTS



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



**A SECTION**  
3/8" = 1'-0"

**ALARA NOTE:**  
PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (W113-SD-W113-FDR-001, REV 0).

W113-SD-W113-FDR-001  
REV 0 PAGE 187

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
NICHOLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

**SWOC W113**  
EQUIPMENT LAYOUT  
INTERFACE WITH HGS/NDE/NDA  
START-UP OPERATIONS

REV	BY	DATE
DESIGNED	K. ROSS	10-15-94
DRAWN	K. ROSS	10-15-94
CHECKED	K. PUNICH	09-18-95
LEAD ENGR	ENGINEER	9-26-95
ENR. SUPER	A. BUCKLE	9-26-95
PROJ. SUPER	K. WELSH	9-26-95
CH. ENGR.	G. FRIST	9/26/95

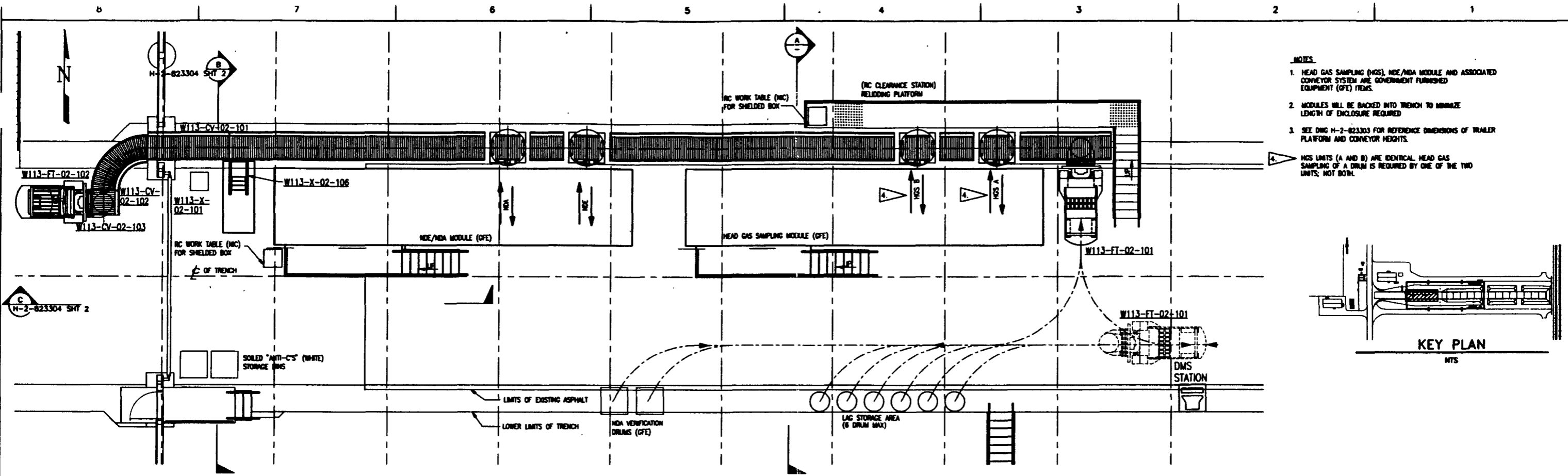
REV	BLDG NO.	DRWG NO.	DRWG NUMBER	REV
D	218	7001	H-2-823303	0
W478				

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

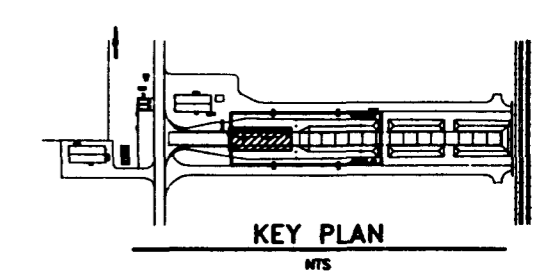
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COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

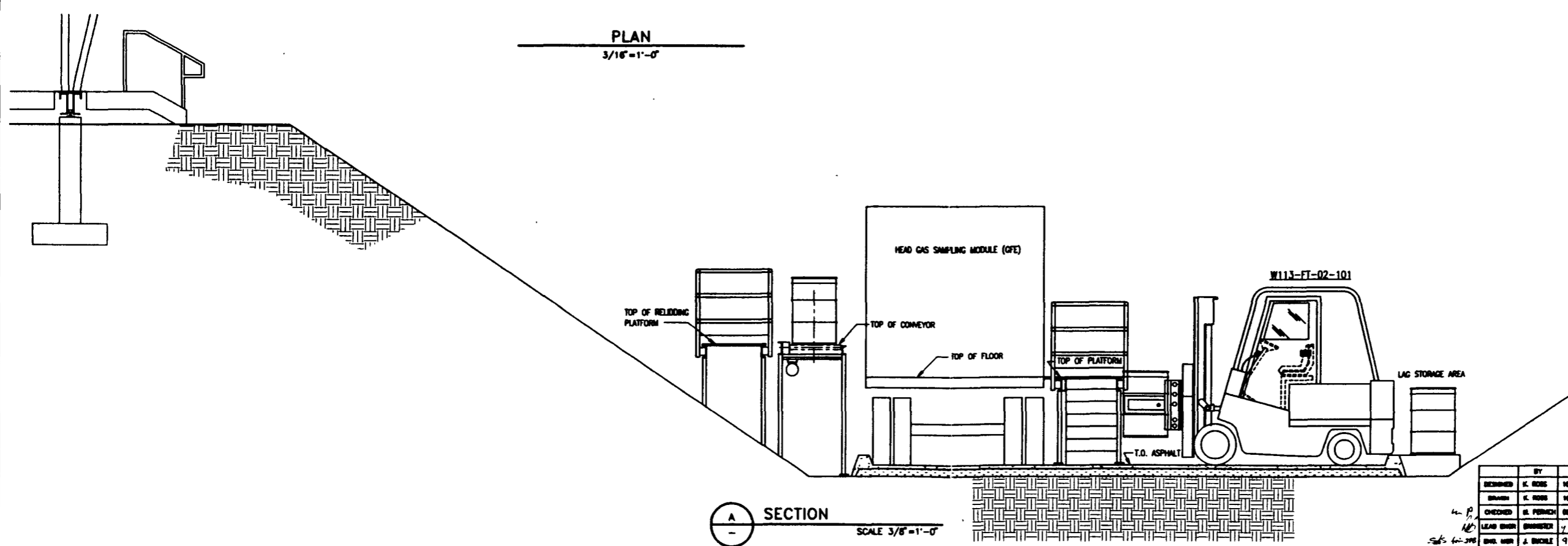
DATE: 10/15/94  
 DRAWN BY: K. ROSS  
 CHECKED BY: K. PUNICH  
 ENGR. SUPER: A. BUCKLE  
 PROJ. SUPER: K. WELSH  
 CH. ENGR.: G. FRIST  
 SCALE: AS SHOWN  
 PROJECT NO.: SWOC-W113  
 SHEET 1 OF 1



- NOTES**
1. HEAD GAS SAMPLING (HGS), NDE/NDM MODULE AND ASSOCIATED CONVEYOR SYSTEM ARE GOVERNMENT FURNISHED EQUIPMENT (GFE) ITEMS.
  2. MODULES WILL BE BACKED INTO TRENCH TO MINIMIZE LENGTH OF ENCLOSURE REQUIRED.
  3. SEE DWG H-2-823303 FOR REFERENCE DIMENSIONS OF TRAILER PLATFORM AND CONVEYOR HEIGHTS.
  4. HGS LIMITS (A AND B) ARE IDENTICAL HEAD GAS SAMPLING OF A DRUM IS REQUIRED BY ONE OF THE TWO LIMITS; NOT BOTH.



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



**ALABA NOTE:**  
PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (WMC-SD-W113-FDR-001, REV 0).

WMC-SD-W113-FDR-001  
REV 0 PAGE 100

**Raytheon**  
Engineers & Constructors

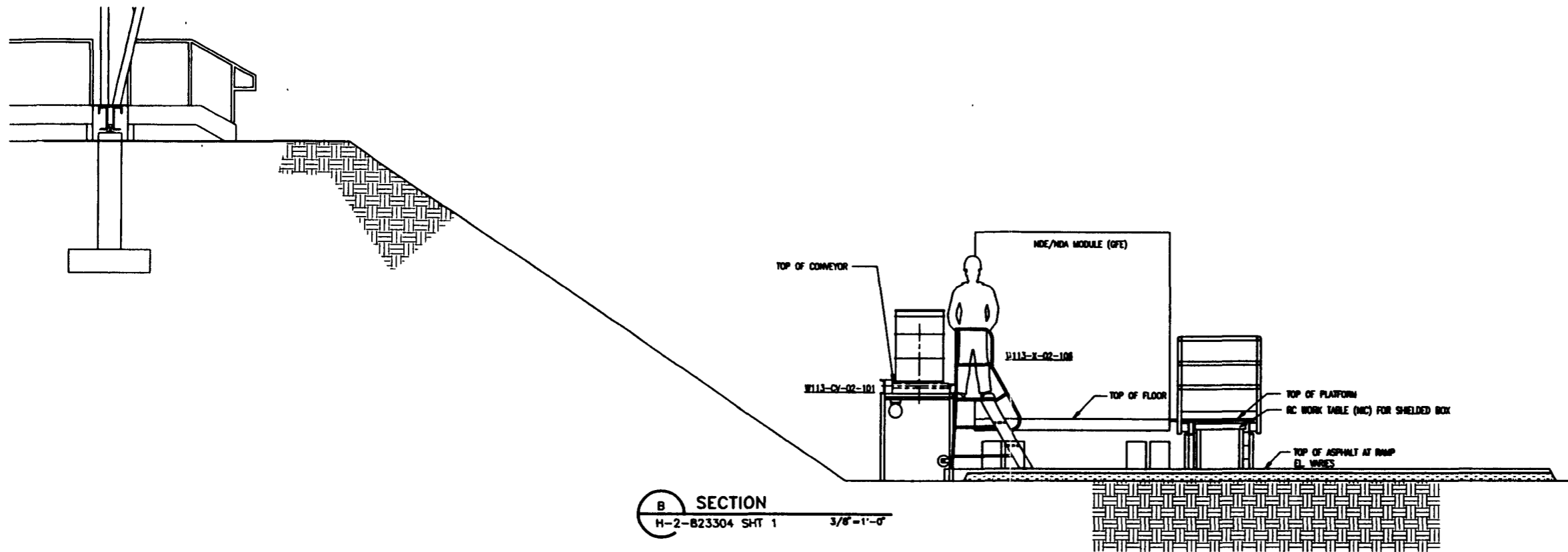
**U.S. DEPARTMENT OF ENERGY**  
NICHOLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY  
**SWOC W113**  
**INTERFACE WITH HGS/NDE/NDM**  
**POST START-UP OPERATIONS**

BY	DATE
DESIGNED: K. ROSS	10-15-94
DRAWN: K. ROSS	10-15-94
CHECKED: S. PIRICH	09-19-95
LEAD ENGR: BRUNNER	4-24-95
ENR. MGR: J. BRUCE	9-24-95
PRJ. MGR: K. BRUNER	1-21-95
S.A. S. PRUITT	9/20/95

REV	NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
REFERENCE DRAWINGS					
DRAWING TRACEABILITY LIST					
NEXT USED ON : NONE					
CADFILE: B23300A			CADCODE: DOS: 6.2; ACD2: 12; NN		
APPROVED FOR IMPLEMENTATION BY:		DATE:		SCALE: AS SHOWN	
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PROJECT NO. 0944888		SHEET 1 OF 2			

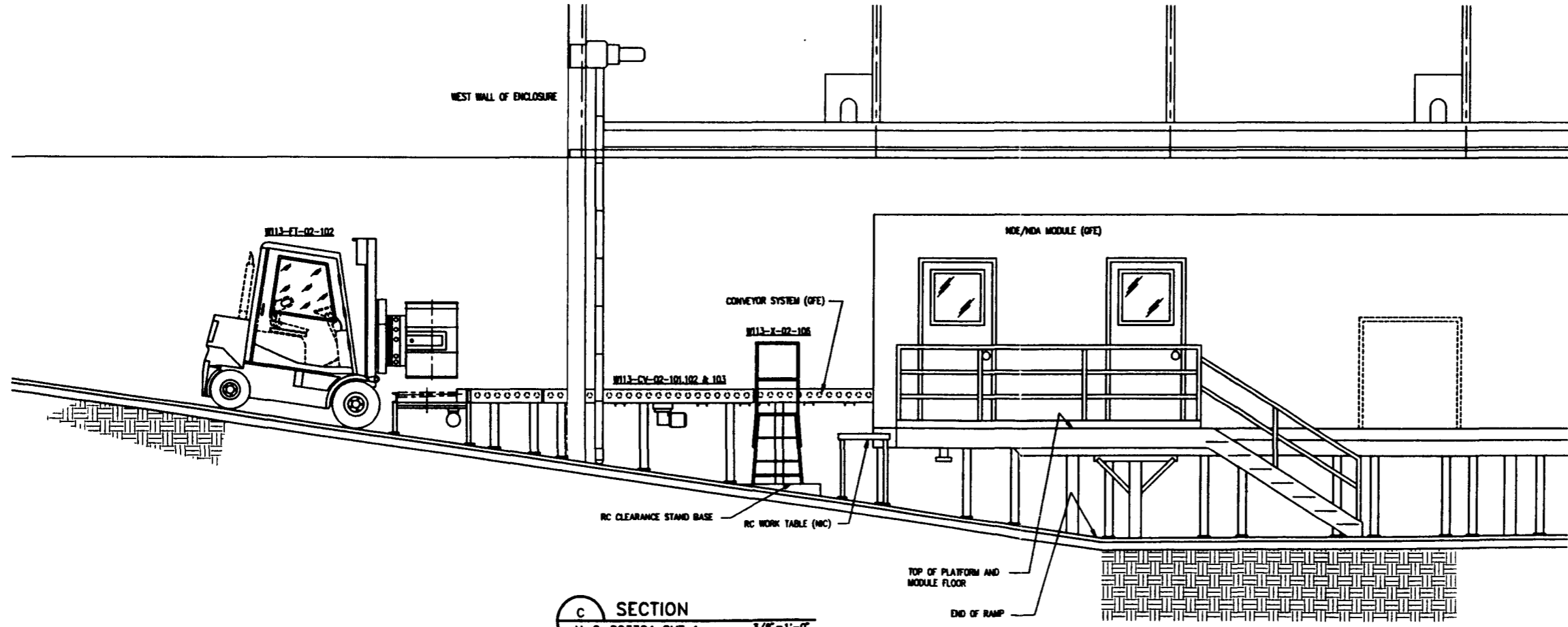
COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

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 11/15/95 11:42 AM  
 PLOT



**B SECTION**  
H-2-823304 SHT 1 3/8"=1'-0"

- NOTES**
- 1.) HEAD GAS SAMPLING (HGS), NDE/NDI MODULE AND ASSOCIATED CONVEYOR SYSTEM ARE GOVERNMENT FURNISHED EQUIPMENT (GFE) ITEMS.
  - 2.) MODULES WILL BE BACKED INTO TRENCH TO MINIMIZE LENGTH OF ENCLOSURE REQUIRED.
  - 3.) SEE DRAWING H-2-823303 FOR REFERENCE DIMENSIONS OF TRAILER AND CONVEYOR HEIGHTS.



**C SECTION**  
H-2-823304 SHT 1 3/8"=1'-0"

**ALARA NOTE:**  
PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (W113-SD-W113-FDR-001, REV 0).

W113-SD-W113-FDR-001  
REV 0 PAGE 109

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U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE MANFORD COMPANY

SWOC W113  
INTERFACE WITH NDE/NDI  
AND RC RELEASE STATION  
POST START-UP OPERATIONS

REVISED	BY	DATE
DESIGNED	K. ROSS	08-20-95
DRAWN	K. ROSS	08-29-95
CHECKED	H. FURCH	09-19-95
LEAD ENGR	ENGINEER	9-26-95
ENR. INSP	J. BUCKLE	9-26-95
PRJL. INSP	K. BISHOP	9-27-95
G.A.	G. FROST	9/26/95

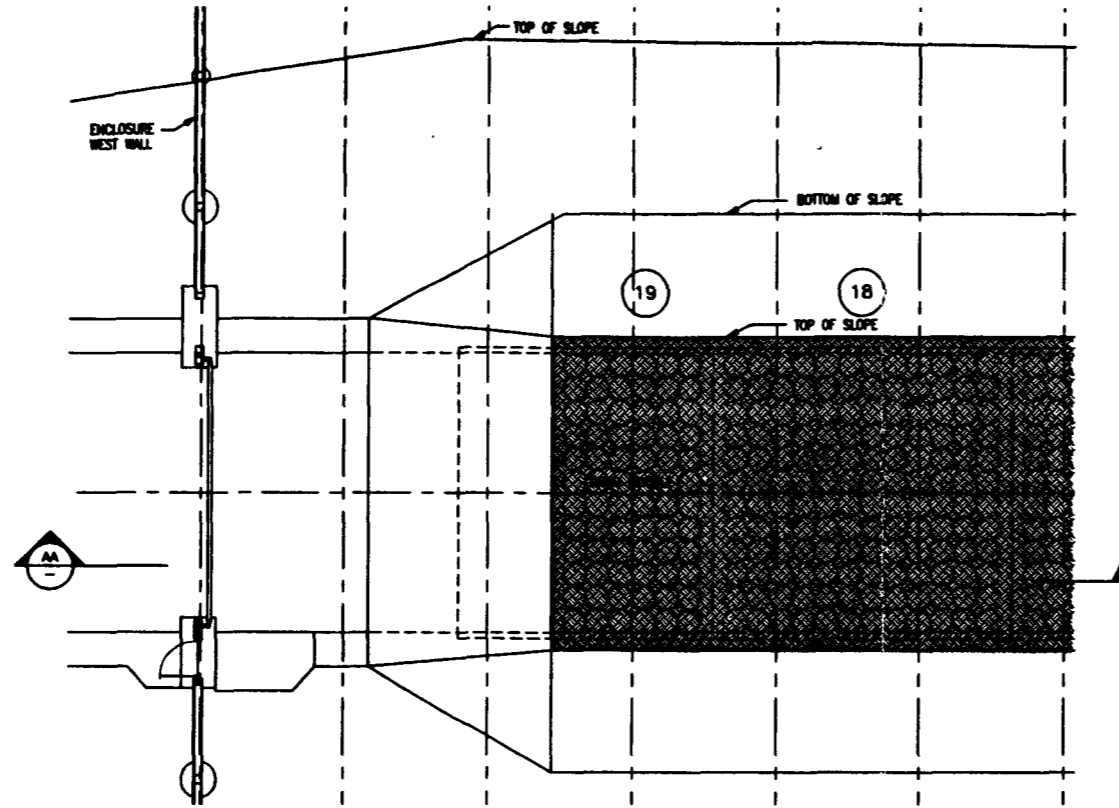
REV	BLDG NO.	SHEET NO.	DRAWING NUMBER
D	218	7001	H-2-823304
	W478		

REV NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
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	REVISIONS			
	APPROVED FOR IMPLEMENTATION BY FOR			

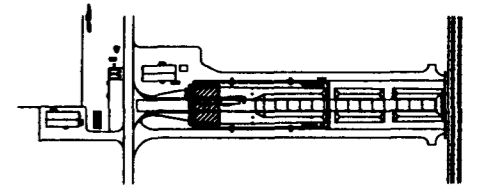
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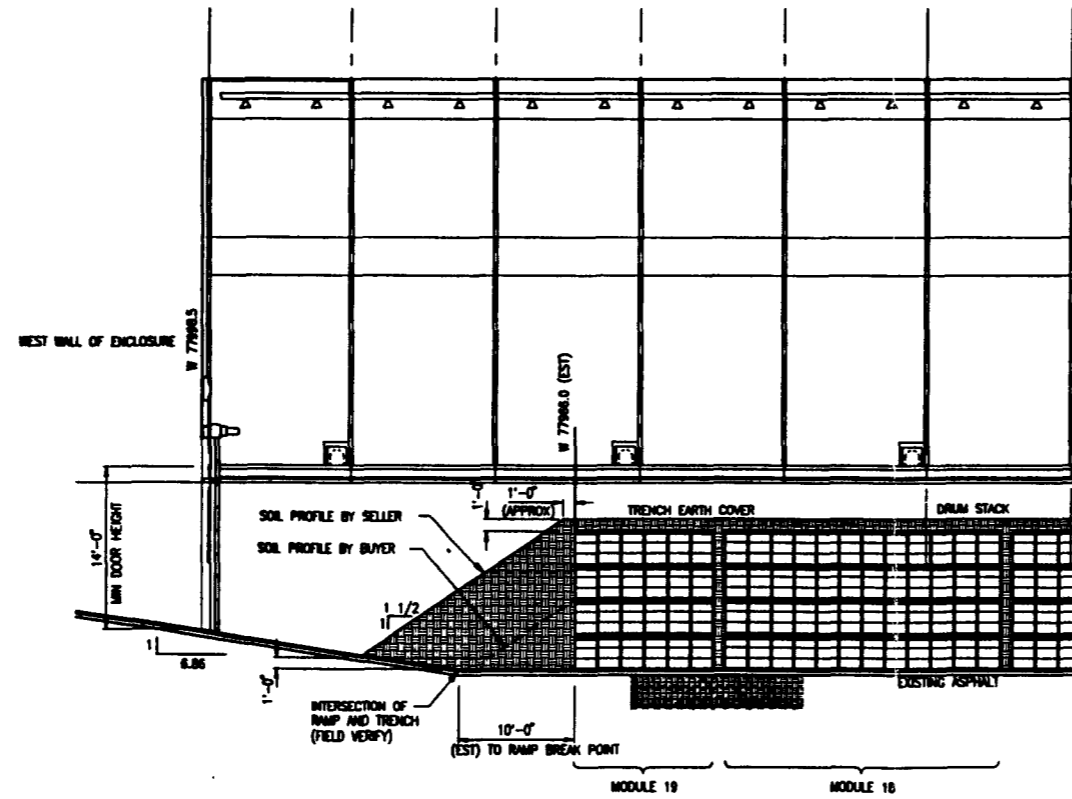
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 09/20/95 074  
 01/04/00  
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BEGINNING OF PHASE I



KEY PLAN  
N.T.S.



SECTION  
AA

ALARA NOTE:  
PREDICTED OPERATOR RADIATION DOSES  
ARE BASED ON MAINTAINING EQUIPMENT  
CONFIGURATIONS/LOCATIONS SHOWN AND ON  
OPERATING PARAMETERS (TIME/DISTANCE/  
SEQUENCE) DESCRIBED IN THE DETAILED  
DESIGN REPORT  
(WMC-SD-W113-FDR-001, REV 0).

WMC-SD-W113-FDR-001  
REV 0 PAGE 190

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Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTHOUSE MANFORD COMPANY

SWOC W113  
OPERATIONAL SCHEMATIC  
DURING START-UP  
OF DRUM RETRIEVAL

BY	DATE
DESIGNED: K. ROSS	08-28-04
DRAWN: K. ROSS	08-28-04
CHECKED: H. PERICH	09-10-05
LEAD ENGINEER: B. BENDER	9-26-05
DRG. MGR: J. BUCKLE	9-26-05
PROJ. MGR: K. MERRIN	1-21-07
APP.:	
OTHER:	

REV	DATE	DESCRIPTION	BY	DATE	APPROVAL
D	218	1575	H-2-823305	0	

REV	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
	REFERENCE DRAWINGS			
	REVISIONS			
	APPROVED FOR IMPLEMENTATION			

DRAWING TRACEABILITY LIST

NEXT USED ON : NONE

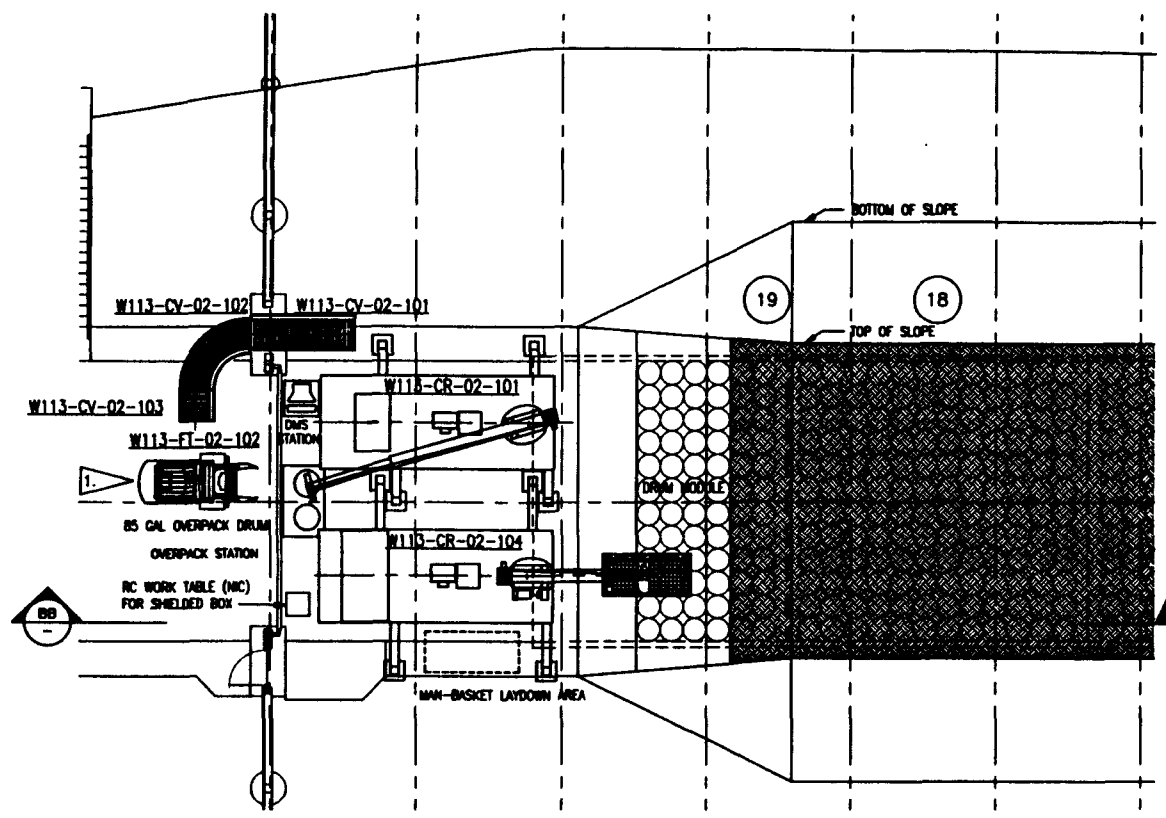
CADFILE: 8823305A

CADCODE: DOS: 6.2: ACD2: 12: NN

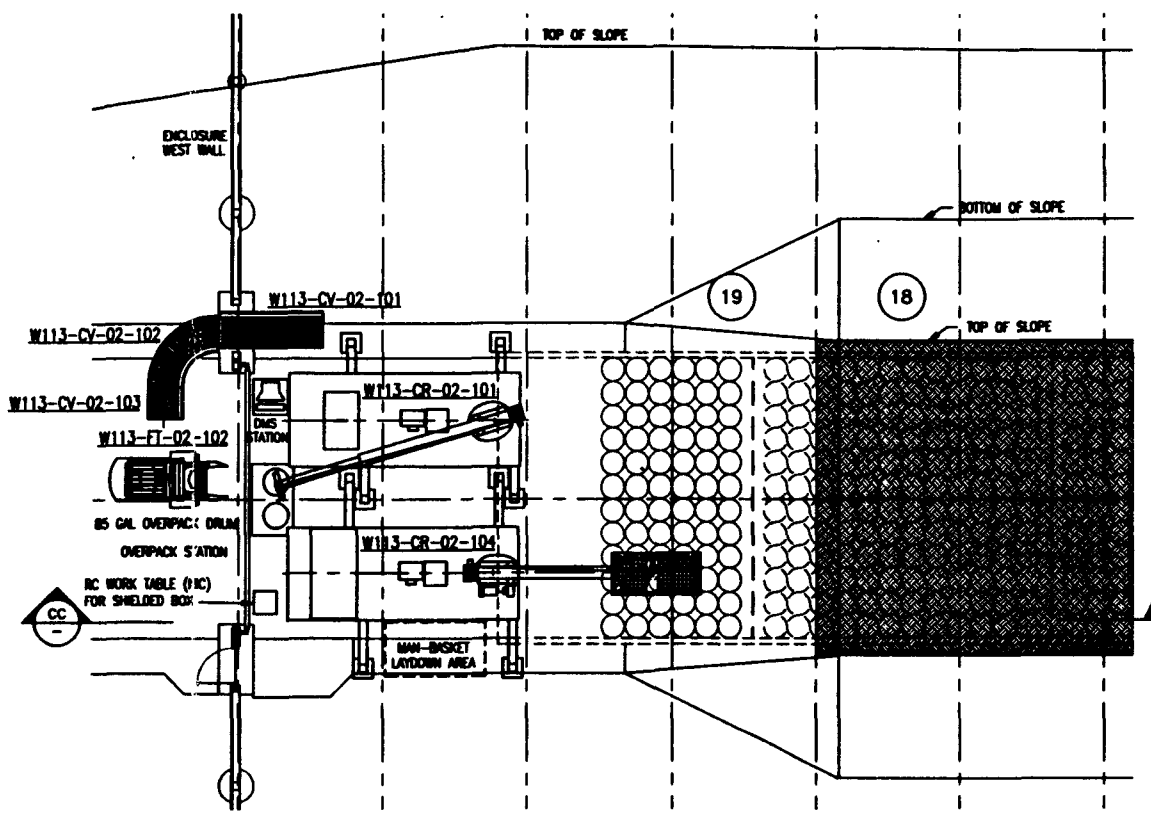
COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

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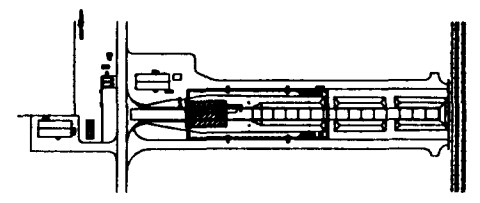


BEGINNING OF PHASE II

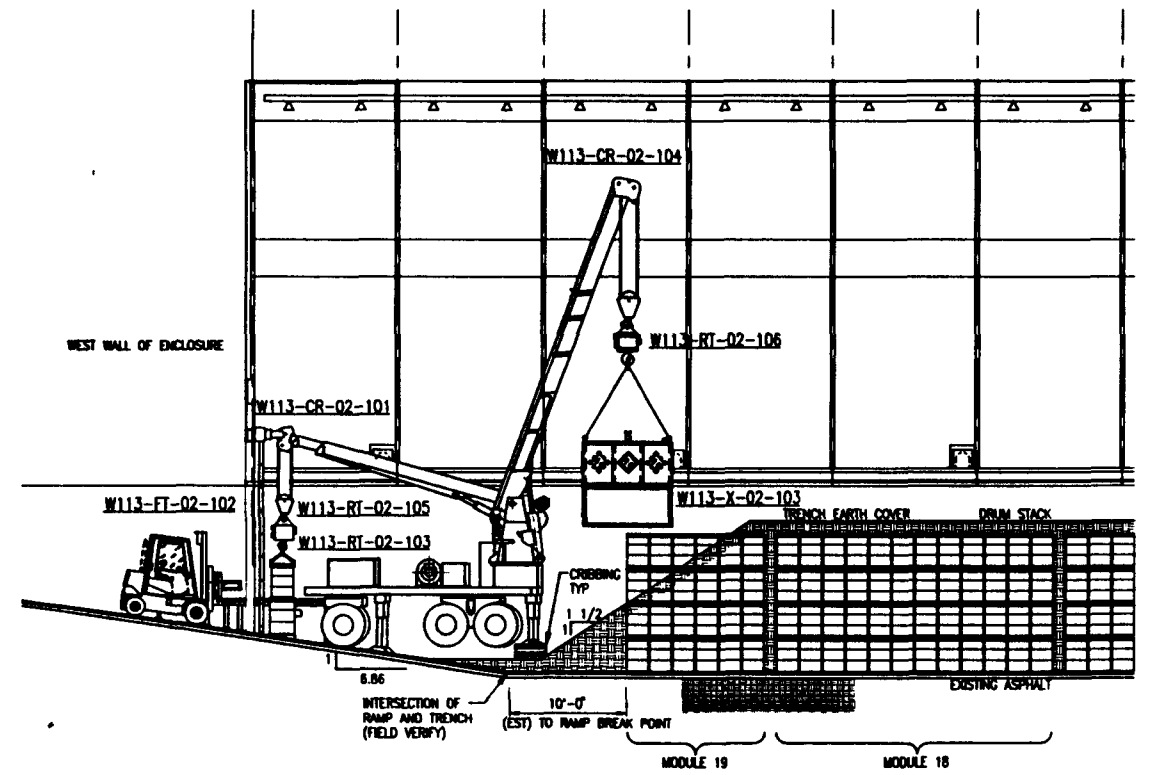


MIDDLE OF PHASE II

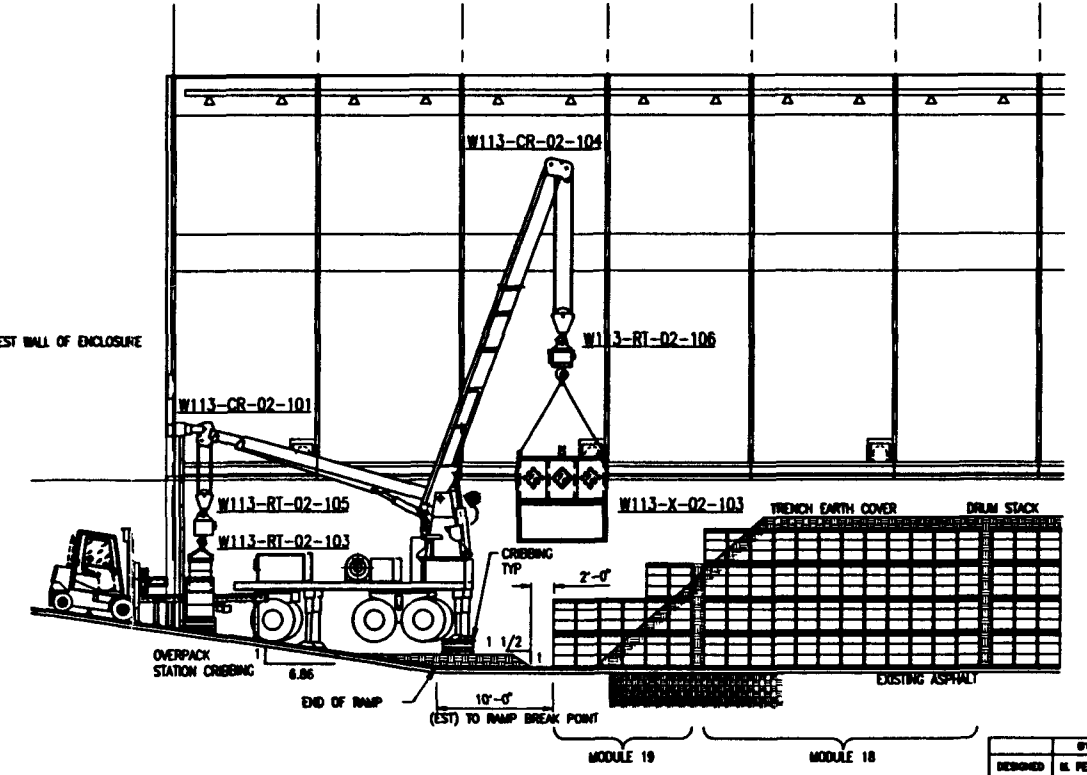
NOTES:  
 1. W113-FY-02-102 TO SET EMPTY OVERPACK DRUMS AT OVERPACK STATION AND REMOVE RADIOLOGICAL CONTROL CLEARED DRUM.



KEY PLAN  
 N.T.S.



BB SECTION



CC SECTION

ALARA NOTE:  
 PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (WMC-SD-W113-PDR-001, REV 0).

WMC-SD-W113-PDR-001  
 REV 0 PAGE 191

Raytheon  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 WOLAND OPERATIONS OFFICE  
 WESTHOUSE HANFORD COMPANY

SWOC W113  
 OPERATION SCHEMATIC  
 DURING START-UP  
 OF DRUM RETRIEVAL

DESIGNED	BY	DATE
W. PERICH	E. BORG	07-05-95
CHECKED <td>BY <td>DATE</td> </td>	BY <td>DATE</td>	DATE
W. PERICH	E. BORG	08-10-95
LEAD ENGINEER	DATE	
W. PERICH	4-26-95	
DR. W. PERICH	7-26-95	
DR. W. PERICH	7-26-95	
DR. W. PERICH	7-26-95	
DR. W. PERICH	7-26-95	
DR. W. PERICH	7-26-95	

REV	DATE	DESCRIPTION
D	218	W478
	1575	H-2-B23305
		0

REV	DATE	DESCRIPTION	APPROVAL

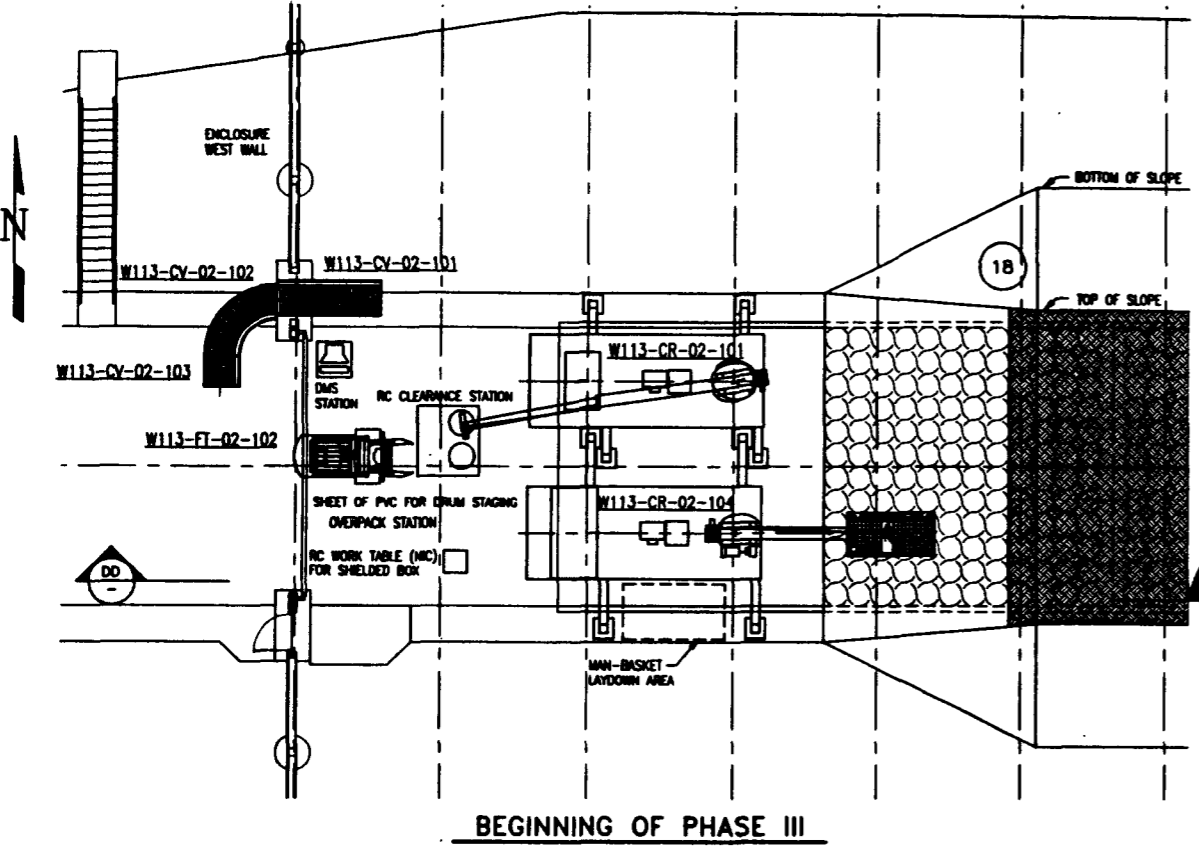
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 NEXT USED ON: NONE  
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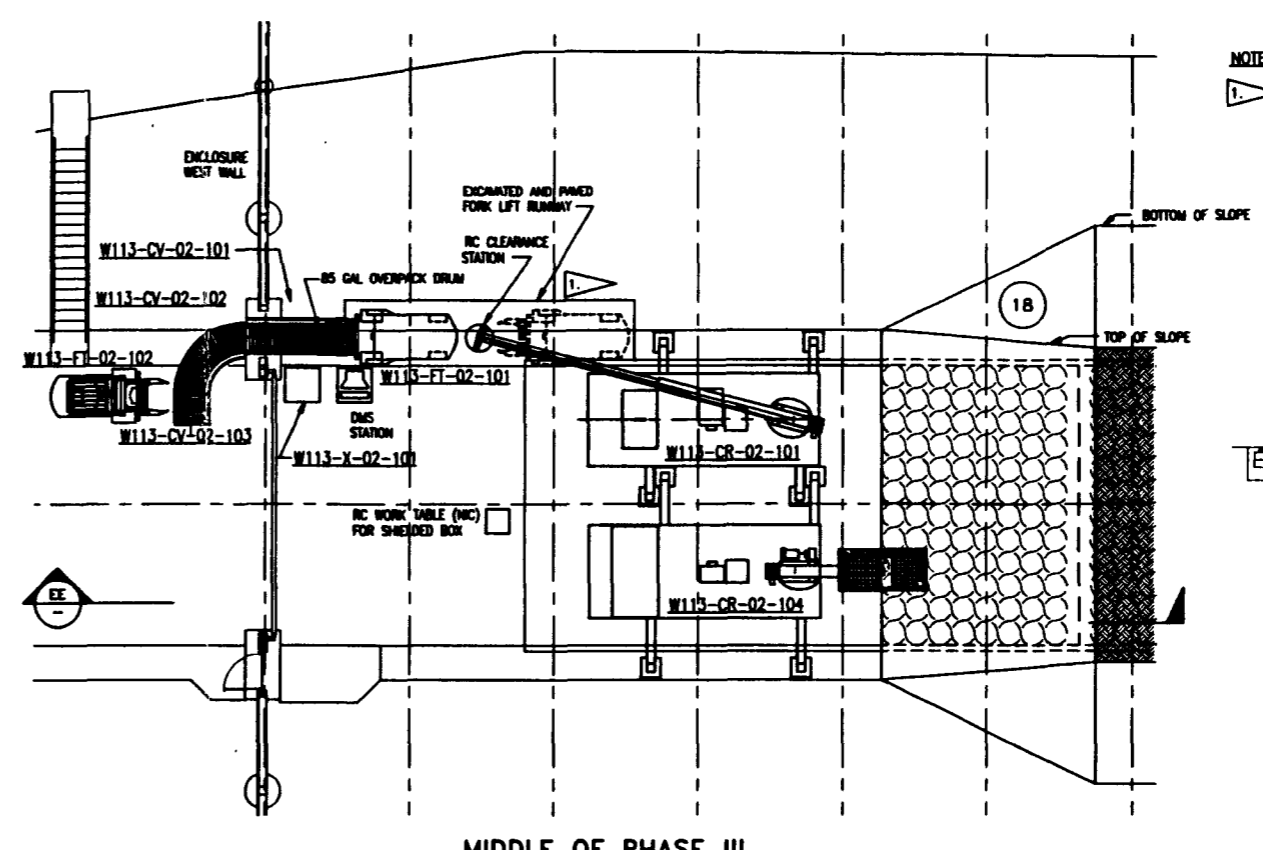
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FORM 0113000

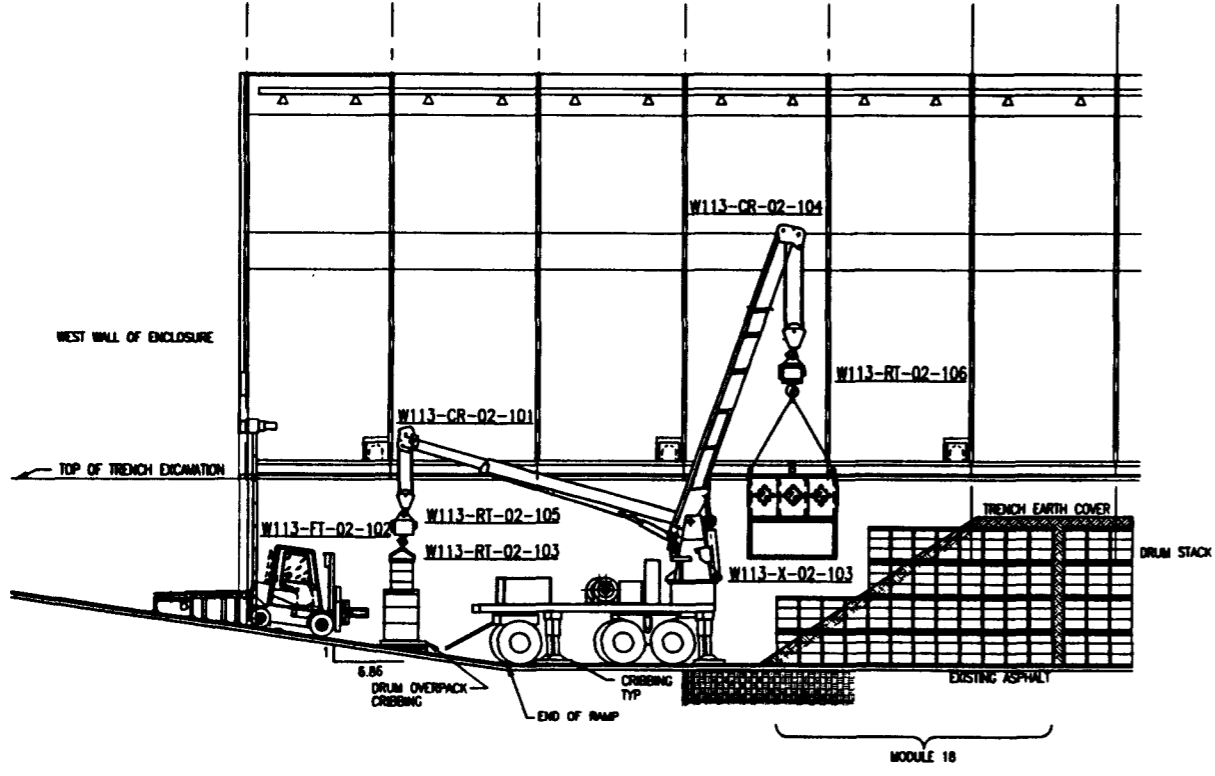
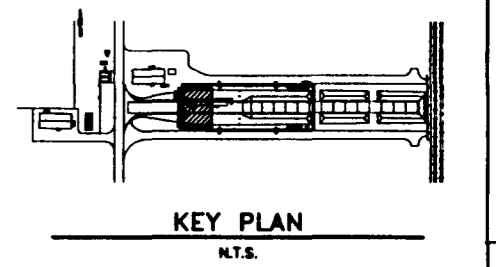


BEGINNING OF PHASE III

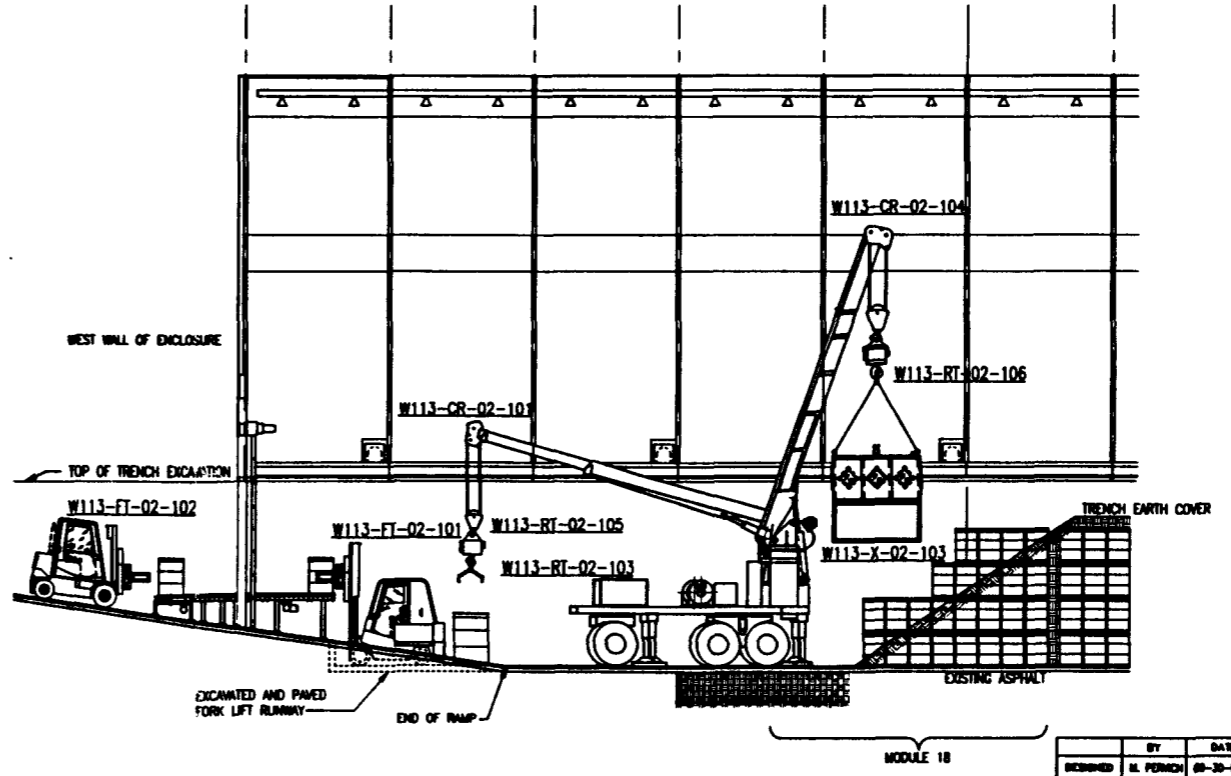


MIDDLE OF PHASE III

NOTES:  
 1. AFTER RADIOLOGICAL CONTROL HAS CLEARED THE DRUM, FORK LIFT W113-FT-02-101 TRANSFERS THE OVERPACK TO CONVEYOR, AFTER BEING PLACED ON GROUND BY DRUM CRANE.



DD SECTION



EE SECTION

ALARA NOTE:  
 PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (W113-SD-W113-FOR-001, REV 0).

W113-SD-W113-FOR-001  
 REV 0 PAGE 192

**Baytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTINGHOUSE HANFORD COMPANY

SWOC W113  
 OPERATIONAL SCHEMATIC  
 DURING START-UP  
 OF DRUM RETRIEVAL

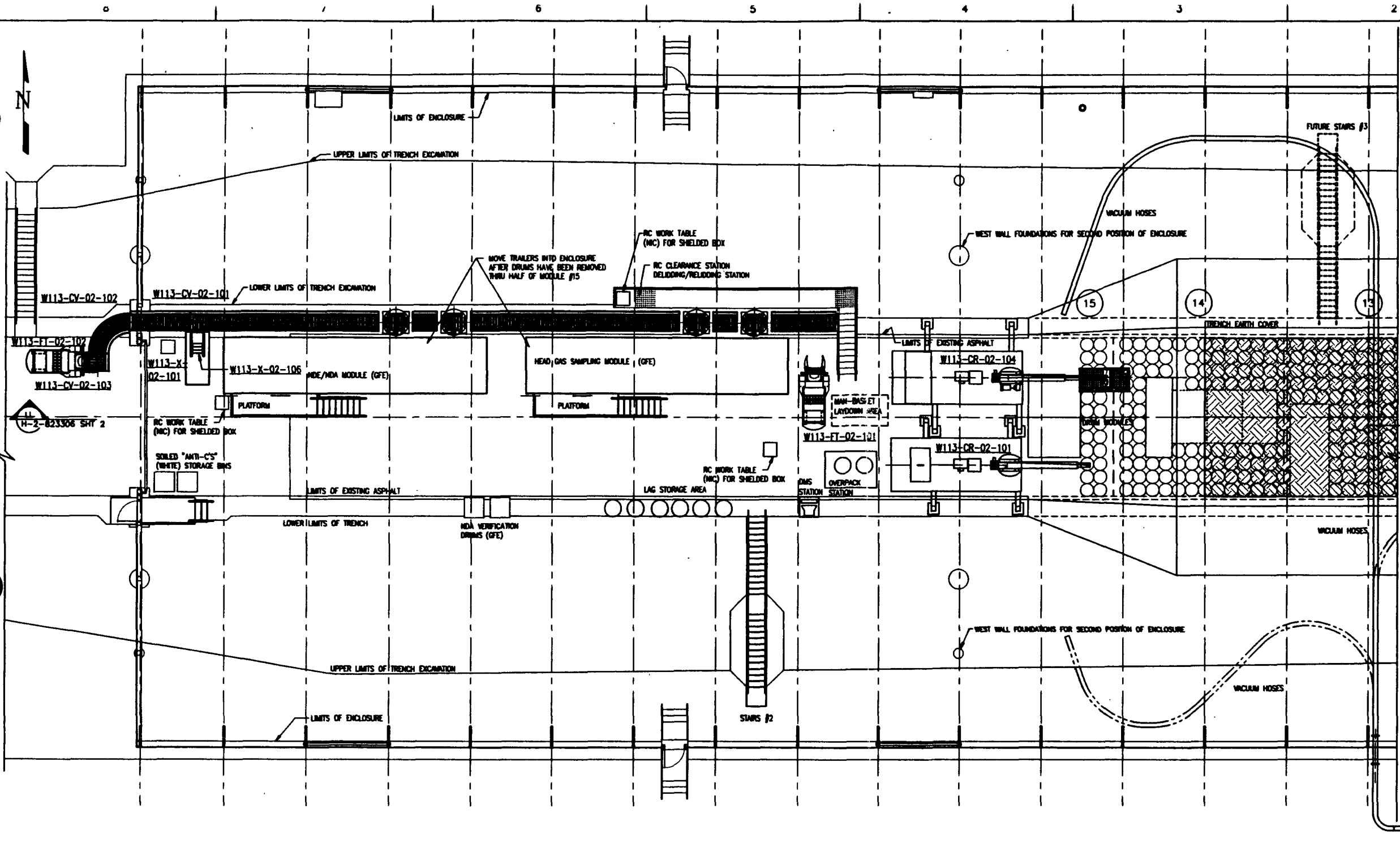
BY	DATE
DESIGNED: M. PERICH	08-20-94
DRAWN: K. ROSS	07-03-94
CHECKED: S. PERICH	08-10-94
LEAD ENGR: BRUNNER	9-28-94
ENR. MGR: J. BUCKLE	9-24-95
PROJ. MGR: K. DENNIN	9-27-95
C.A.: G. PAUST	9/26/95

REV	DATE	DESCRIPTION
D	218	W478
	1575	H-2-823305
		0

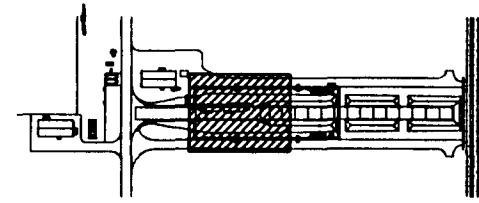
REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

REF. NO.	DESCRIPTION

02/20/95 BY: 0104/DC  
 2 LAR  
 P100 W113030  
 122498788W1130303 CAD: MCF: (C:\P100\W1130303\W1130303.DWG)  
 COLOR PLOT DATE: 02/22/95 13:52:13



NOTES:  
 1. VACUUM TRUCK CAN ACCESS BOTH NORTH AND SOUTH SIDES OF TRENCH ENCLOSURE.



KEY PLAN  
 N.T.S.

PLAN

ALARA NOTE:  
 PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (WMC-SD-W113-FDR-001, REV 0).

WMC-SD-W113-FDR-001  
 REV 0 PAGE 193

**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTINGHOUSE HANFORD COMPANY

SWOC W113  
 TRENCH ENCLOSURE  
 EQUIPMENT LAYOUT PLAN  
 POST START-UP

DESIGNED	BY	DATE
K. ROSE	K. ROSE	08-24-04
CHECKED	K. PERKIN	08-10-05
LEAD ENGR	ENGINEER	9-21-05
ENR. MGR	A. BUCKLE	9-26-05
PRJ. MGR	K. HERRON	9-27-05
QA	G. FRIEL	9/26/05

REV	DATE	DESCRIPTION	BY	APP'D
D	218	1575	H-2-823306	0

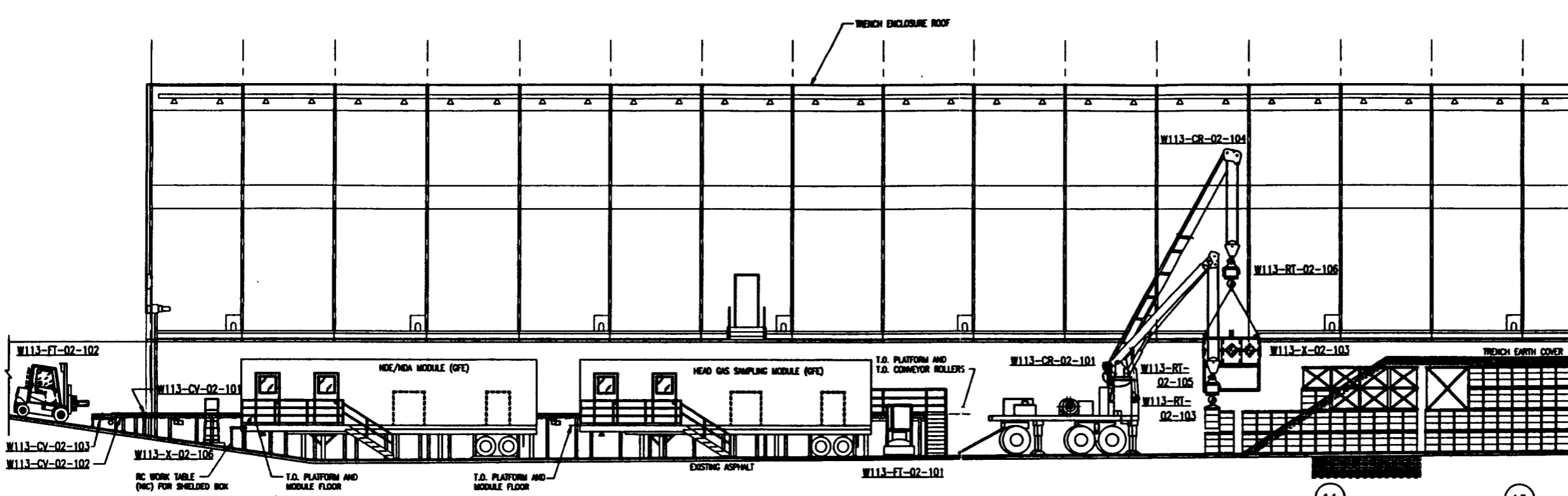
REV NO	DESCRIPTION	REV P1/DATE	REV P2/DATE	APP'D
DRAWING TRACEABILITY LIST				
REFERENCE DRAWINGS				
NEXT USED ON : NONE				

REV NO	DESCRIPTION	REV P1/DATE	REV P2/DATE	APP'D
DRAWING TRACEABILITY LIST				
REFERENCE DRAWINGS				
NEXT USED ON : NONE				

CADFILE: B23306A  
 CADCODE: DOS:6.2:ACD2:12:NN

COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

08/20/05 07:52:00  
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**LL SECTION**  
H-2-823306 SHT 1

**ALARA NOTE:**  
PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (WMC-SD-W113-FDR-001, REV 0).

WMC-SD-W113-FDR-001  
REV 0 PAGE 194

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE MANUFORD COMPANY

SWOC W113  
TRENCH ENCLOSURE  
EQUIPMENT LAYOUT SECTION  
POST START-UP

BY	DATE
DESIGNED E. ROSS	02-24-94
DRAWN E. ROSS	02-24-94
CHECKED H. FRENCH	02-10-95
LEAD ENGR BRUNNER	4-26-95
ENGR. SUPERV. J. BUCKLE	7-26-95
PRJ. MGR. E. MERRIN	9-26-95
DATE	1/26/95

REV	DATE	DESCRIPTION
D	218	W478

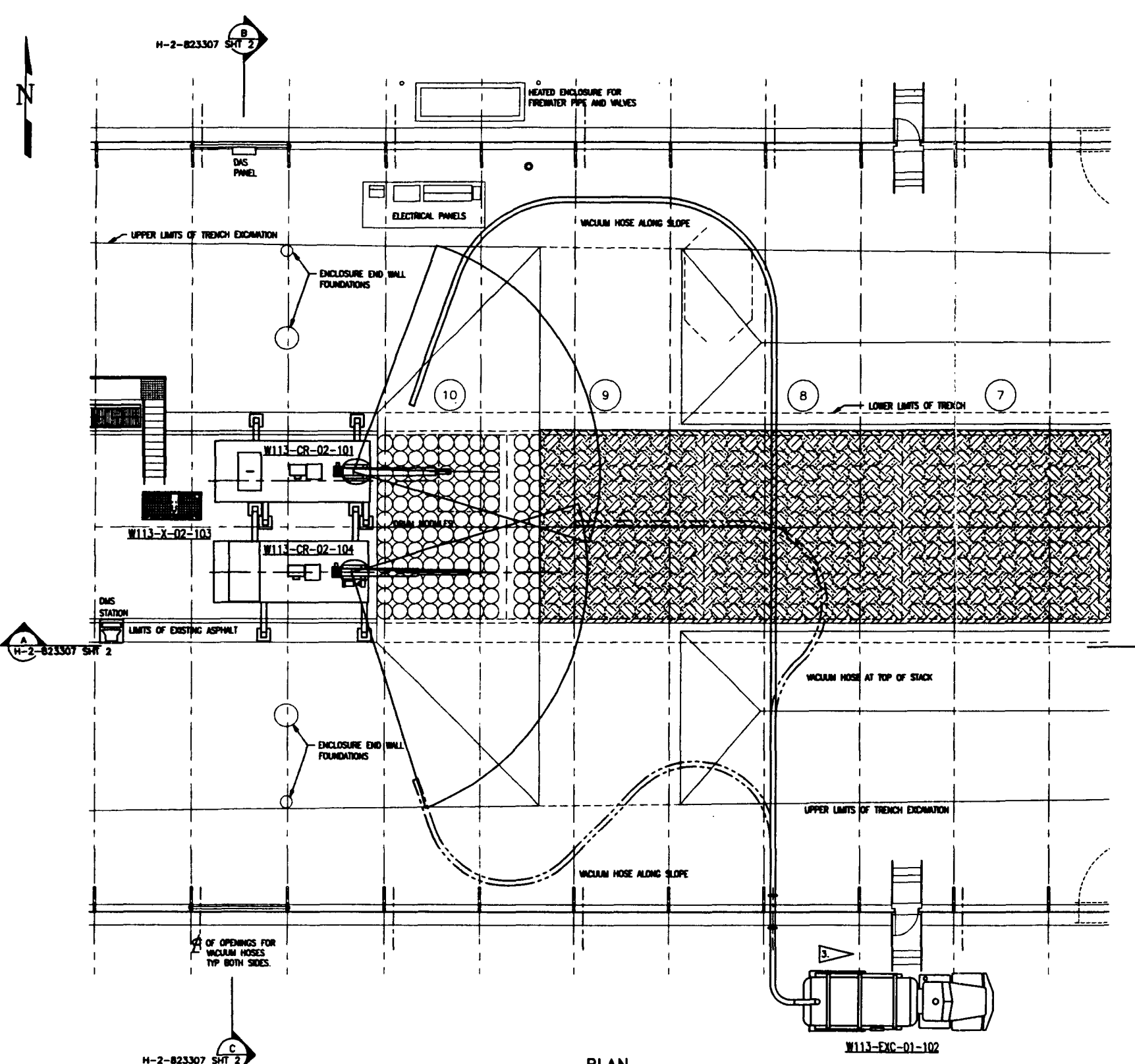
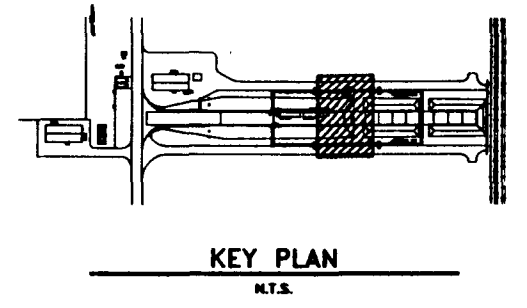
REV	DATE	DESCRIPTION
D	218	W478

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVALS/DATE

REFERENCE DRAWINGS      CADFILE: B233068      CADCODE: DOS: 6.2: ACD2: 12: NN

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- NOTES:**
- CRANE ORIENTATION, LOCATION MAY BE DIFFERENT AT TIMES.
  - REFER TO H-2-823283 FOR STAGED OVERBURDEN REMOVAL DURING NORMAL DRUM RETRIEVAL OPERATIONS.
  - VACUUM TRUCK CAN ACCESS BOTH NORTH AND SOUTH SIDE OF TRENCH ENCLOSURE.
  - THIS DRAWING IS TYPICAL OF VACUUMING OPERATIONS FOR ALL MODULES.



**PLAN**

**ALARA NOTE:**  
PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND ON OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (WMC-SD-W113-FDR-001, REV 0).

WMC-SD-W113-FDR-001  
REV 0 PAGE 193

**Raytheon**  
Engineers & Constructors

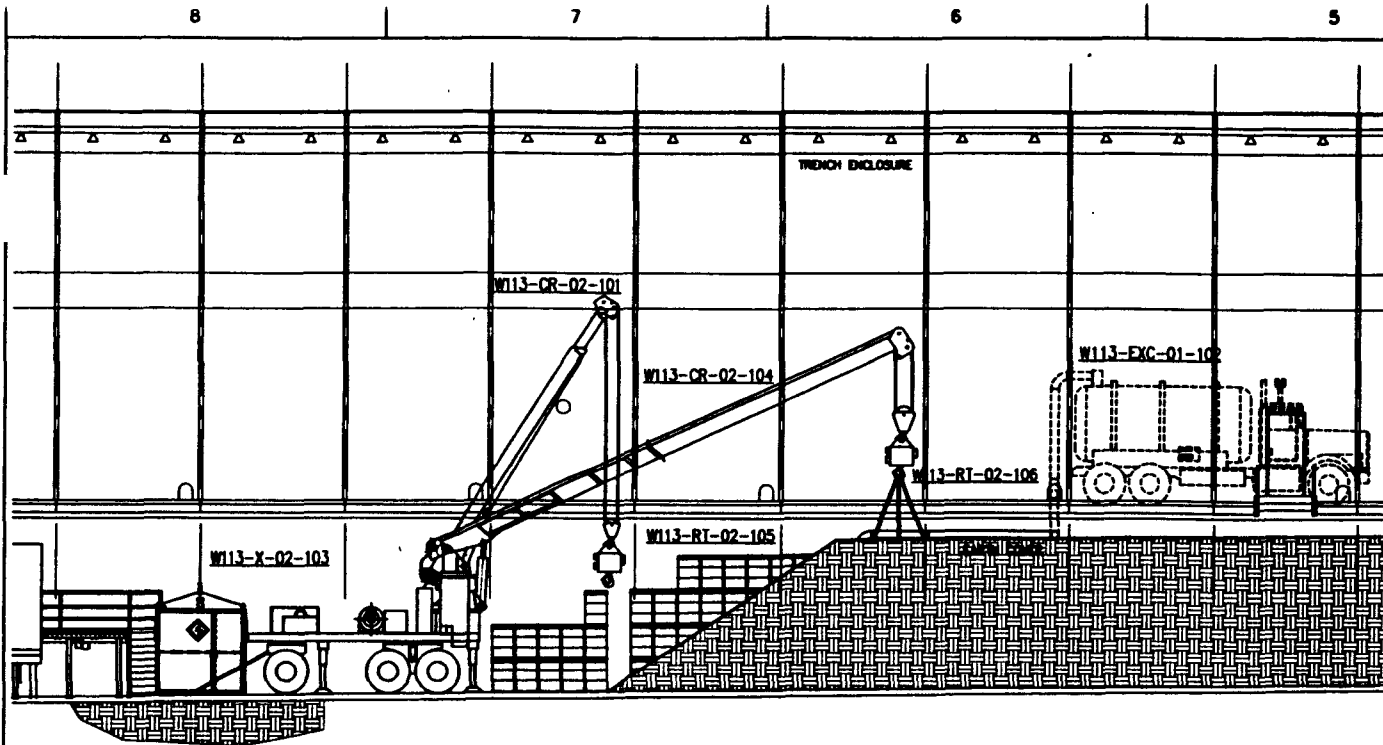
BY	DATE	U.S. DEPARTMENT OF ENERGY RICKLAND OPERATIONS OFFICE WESTINGHOUSE MANUFORD COMPANY							
DESIGNED: J. BRAD	07-10-85	<b>SWOC W113 EQUIPMENT LAYOUT TRENCH VACUUMING SYSTEM</b>							
DRAWN: K. BOSE	07-10-85								
CHECKED: M. FURMAN	08-10-85								
LEAD ENGR: BIRNBERG	9-21-85								
ENGR: J. BUCKLE	9-26-85								
PROJ. MGR: K. BERSON	11-21-85								
C.A. G. PAUST	11/20/85								
OTHER:									
APPROVED FOR IMPLEMENTATION BY:	DATE:								
FOR:	DATE:								
REV	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE	SIZE	BLDG NO.	INDEX NO.	DRAWING NUMBER	REV
D	218 W478	1575	H-2-823307	0					

REV	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE
	REFERENCE DRAWINGS			
	REVISIONS			
	APPROVED FOR IMPLEMENTATION BY:			
	FOR:			

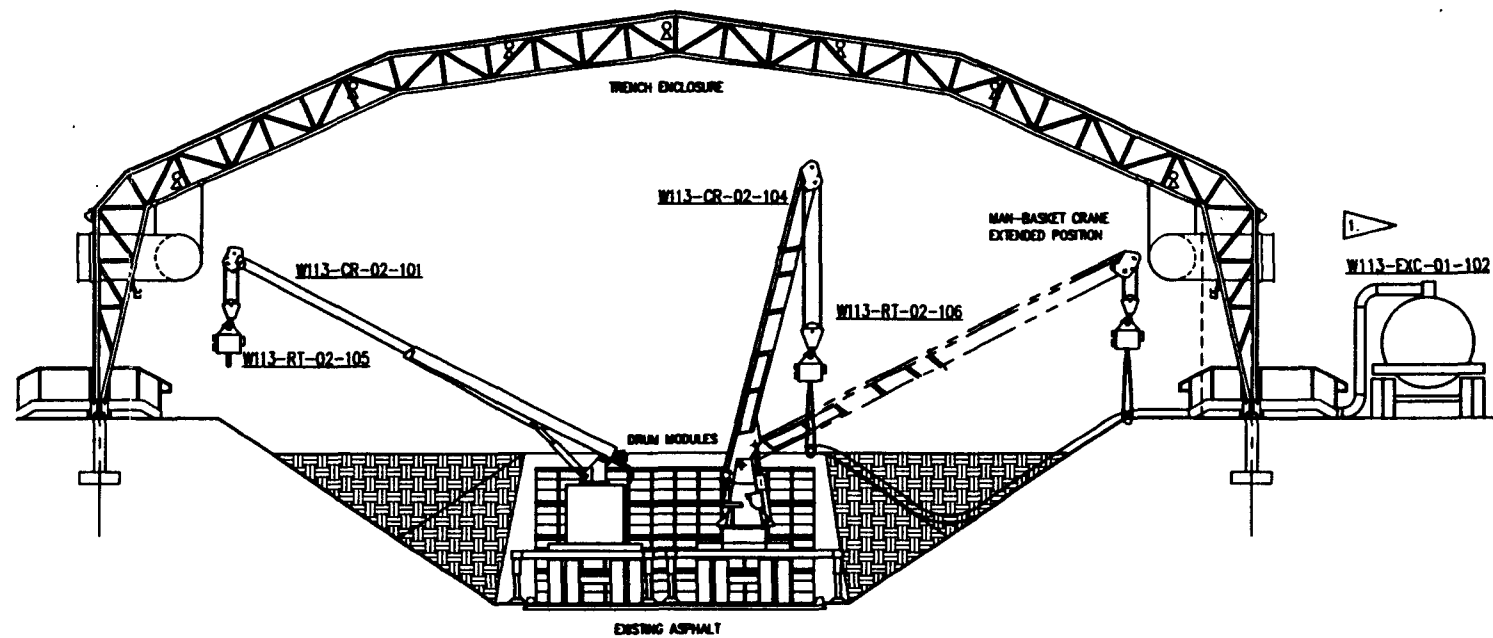
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**COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED**

DATE PLOTTED: 07/10/85  
DRAWN BY: K. BOSE  
CHECKED BY: M. FURMAN  
DATE: 07/10/85  
SCALE: AS SHOWN  
PROJECT NO.: 094-000  
SHEET 1 OF 2

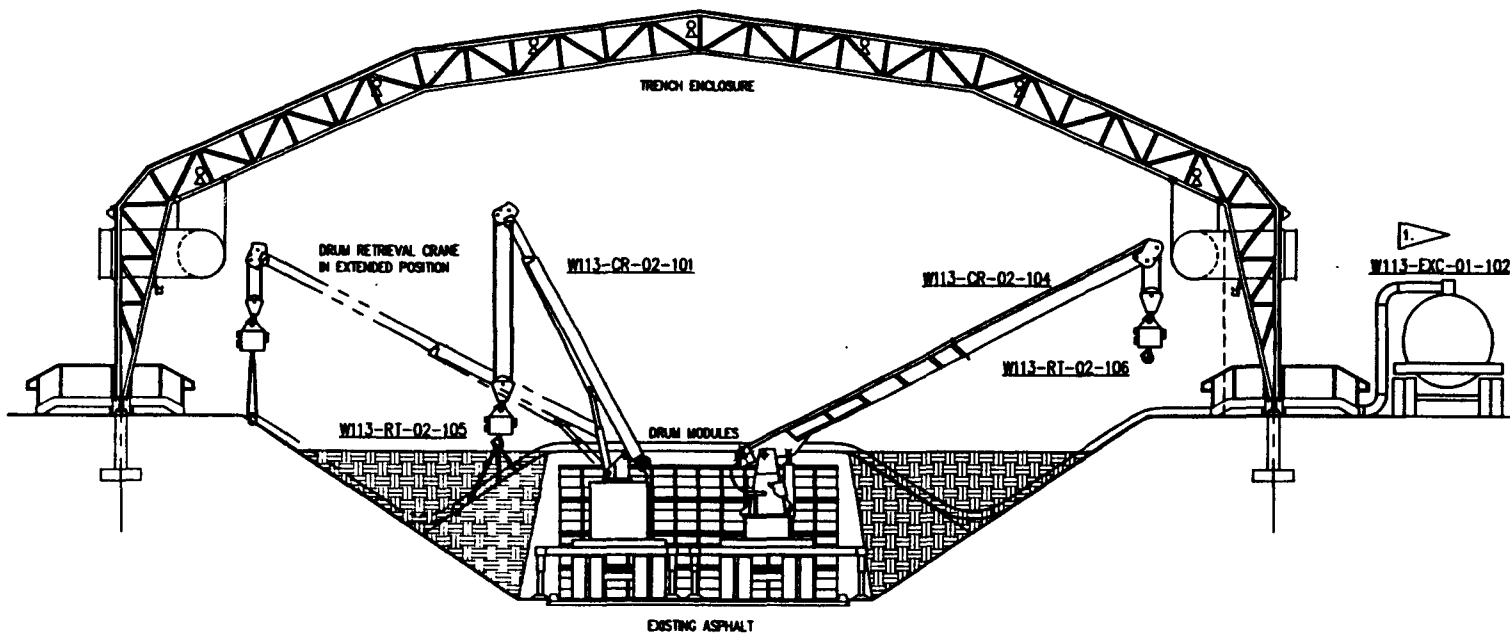


**A SECTION**  
H-2-823307 SHT 1



**B SECTION**  
H-2-823307 SHT 1

- NOTES:**
- VACUUM TRUCK CAN ACCESS BOTH NORTH AND SOUTH SIDES OF TRENCH ENCLOSURE.
  - CRANES CONTROLLED BY REMOTE PORTABLE HAND SET.
  - THIS DRAWING IS TYPICAL FOR VACUUMING OPERATIONS OF ALL MODULES.



**C SECTION**  
H-2-823307 SHT 1

**ALARA NOTE:**  
PREDICTED OPERATOR RADIATION DOSES ARE BASED ON MAINTAINING EQUIPMENT CONFIGURATIONS/LOCATIONS SHOWN AND OPERATING PARAMETERS (TIME/DISTANCE/SEQUENCE) DESCRIBED IN THE DETAILED DESIGN REPORT (W113-SD-W113-FDR-001, REV 0).

W113-SD-W113-FDR-001  
REV 0 PAGE 196

**Raytheon**  
Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE  
WESTINGHOUSE HANFORD COMPANY

SWOC W113  
EQUIPMENT LAYOUT  
TRENCH  
VACUUMING OPERATION

BY	DATE
DESIGNED J. BROW	87-10-05
DRAWN K. ROSE	87-10-05
CHECKED H. PERICH	88-10-05
LEAD ENGR D. BRUNER	9-28-95
ENR. MGR J. BUCKLE	9-28-95
PROJ. MGR K. MERRIN	9-28-95
G.A. & TRUST	1/22/05

REV NO	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVALS/DATE

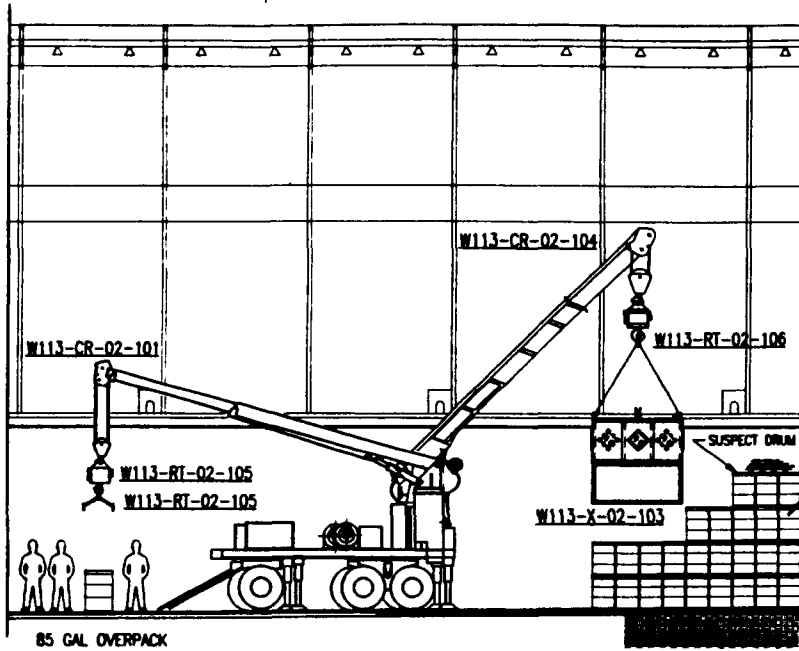
DRAWING TRACEABILITY LIST	NEXT USED ON: NONE	CADFILE: 823307B	CADCODE: DOS:6.2:ACD2:12:NN
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REV	BLDG NO.	INDEX NO.	DRAWING NUMBER
D	218 W478	1575	H-2-823307

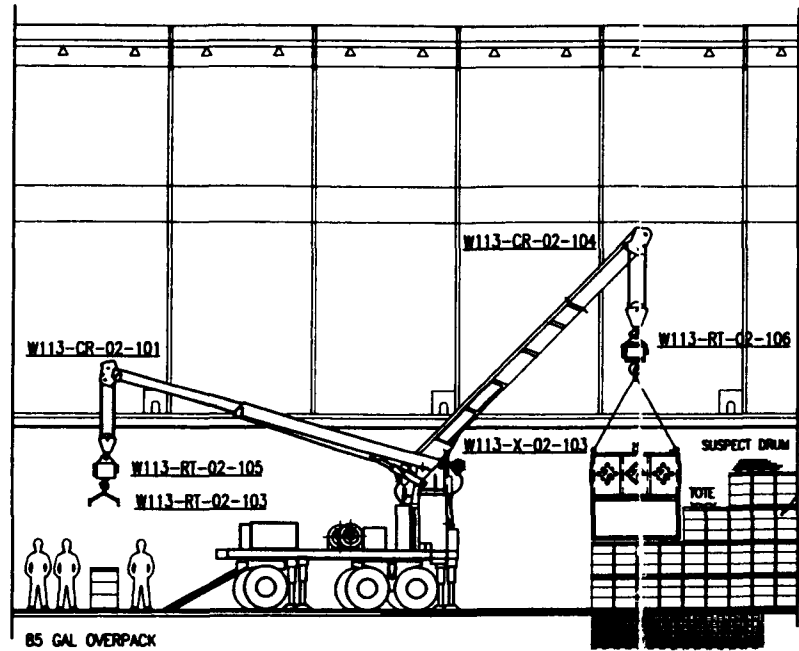
SCALE: 1/8"=1'-0"	PROJECT NO. 984.000	SHEET 2 OF 2
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COMPUTER GENERATED: NO MANUAL CHANGES ALLOWED

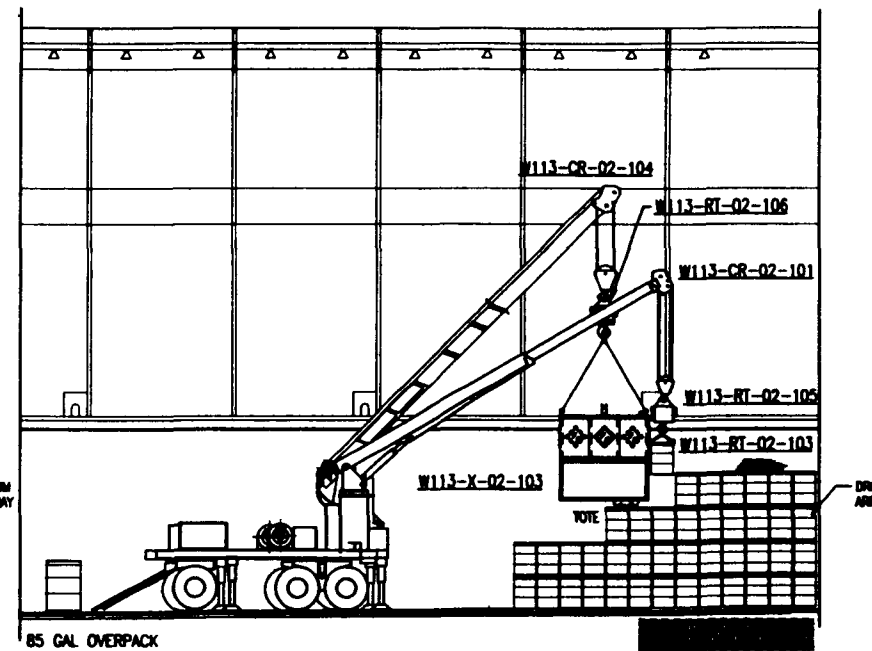
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COLOR FOR REVISIONS  
02/20/05 07:11  
FORM W113000



**STAGE 1 - DRUM IS IDENTIFIED AS HAVING SUSPECT STRUCTURAL INTEGRITY BY VISUAL AND ULTRASONIC TESTING.**

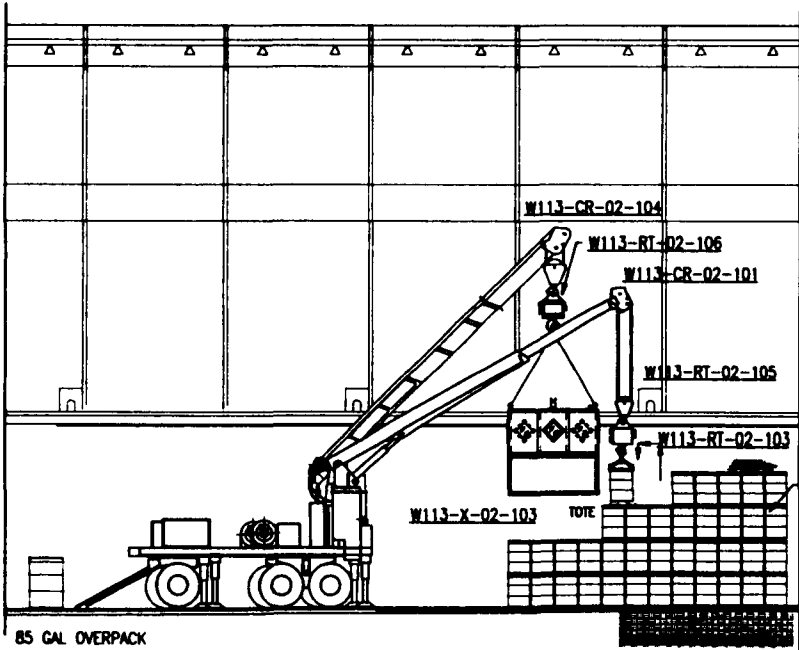


**STAGE 2 - SUSPECT DRUM TRANSFER TOTE IS MANUALLY PLACED NEXT TO SUSPECT DRUM ON DRUM ARRAY.**

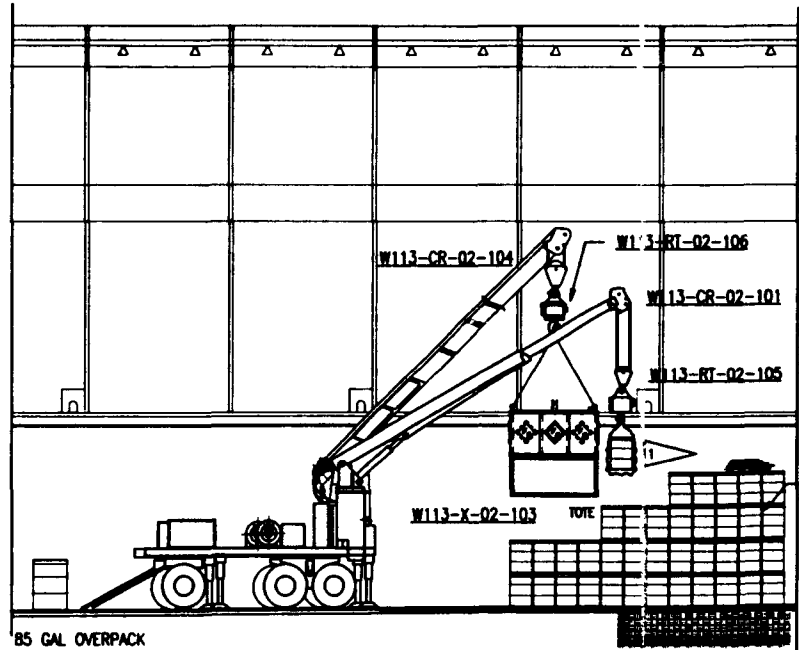


**STAGE 3 - MANUALLY ATTACH DRUM GRAPPLE TO SUSPECT DRUM.**

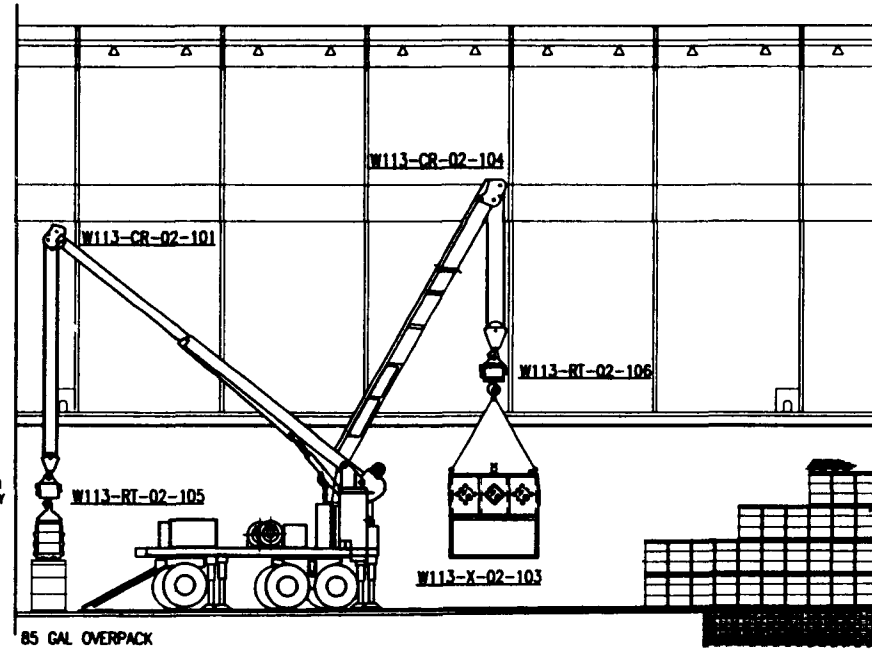
**NOTES**  
 1. DRUM GRAPPLE MUST BE REMOVED FROM THE CRANE IN ORDER FOR THE TOTE TO BE ATTACHED TO THE CRANE HOOK.



**STAGE 4 - TRANSFER SUSPECT DRUM ONTO TOTE USING DRUM GRAPPLE.**



**STAGE 5 - WRAP TOTE AROUND DRUM AND HOOK UP CRANE TO TOTE.**



**STAGE 6 - LOAD TOTE AND SUSPECT DRUM INTO 85 GALLON OVERPACK DRUM.**

SWC-80-W113-FRM-001  
 REV 0 PAGE 197

**Raytheon**  
 Engineers & Constructors

U.S. DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE  
 WESTHOUSE HANFORD COMPANY  
 SWOC W113  
 SUSPECT DRUM  
 RETRIEVAL SCHEMATIC

BY	DATE
DESIGNED A. SHOFF	05-22-05
DRAWN E. ROSE	05-22-05
CHECKED S. PERCIVAL	05-19-05
LEAD ENGINEER B. BENDER	7-21-05
DRG. MGR. A. BUCKLE	9-26-05
PROJ. MGR. E. BENDER	7-21-05
APP. FOR IMPLEMENTATION BY	
DATE	

REV	BLDG NO.	INDEX NO.	DRAWING NUMBER	REV
D	218	1575	H-2-823310	0
SCALE 1/8" = 1'-0"				
PROJECT NO. 0504800 SHEET 1 OF 1				

REV NO.	DESCRIPTION	REV BY/DATE	CHK BY/DATE	APPROVAL/DATE

DRAWING TRACEABILITY LIST	NEXT USED ON : NONE	REFERENCE DRAWINGS	REVISIONS	CADFILE: 823310A	CADCODE: DOS. 6.2: ACD2:12:NN
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