R10319622

Mechanical Handling Data Sheet Top Running, Double Girder	CM	Data Sheet No 24590-LAW-M0D-LPH-00003	
		Plant Item No 24590-LAW-MJ-LPH-CRN-00002	Rev. 5

Project	RPP-WTP	Description	Top Running, Double Girder
Project No	24590	Supporting Calculation No.	24590-LAW-M0C-LRH-00001
Planning Area	3	Associated Drawing No	24590-LAW-M0-LPH-00014001, 24590-LAW-M0-LPH-00014002; 24590-LAW-M0-LPH-00014003; 24590-LAW-M7-LPH-00001004
System No.	LPH	Associated Specification No	24590-LAW-3PS-MJKG-T0001
Building No	20	Associated MR No.	24590-CM-MRA-MJKG-00003
Quality Level	Commercial		
Seismic Criteria	SC-III (UBC Zone 2B)		
Function	Transport ILAW Containers into/out of Buffer Storage		

ISSUED BY RPP WTP PDC
INIT DATE

DESIGN CRITERIA

Design Life	40 years	Safety Class	Non-Important To Safety

OPERATING ENVIRONMENT			In-Cave	Rm # L-B025C	Out-Cave	Rm # L-B019A	List All Special
			Min	Max	Min	Max	Conditions
Temperature		deg F	59	113	59	95	In-Cave temperature may be as high as 130 deg F Max
Relative Humidity		%	5	85	5	85	
Radiological Equip Dose	gamma	rad/ 40 yrs	3.5x10e3	3 5x10e4	875	3 5x10e3	
	neutron	rad/ 40 yrs	Negligible	Negligible	Negligible	Negligible	
Radiological Classification			R5	R5	R3	R3	
Contamination Classification			C5	R5	C3	C3	

CRANE REQUIREMENTS

Type of Crane	Top Running, Double Girder		
Service Information	CMAA-70: Class D		Capacity (tons)
Crane Operation Indoors?	Yes	Main Hoist	10
Material Handled	Filled ILAW Product Containers	Auxiliary Hoist	N/A
Class Information	CMAA-70, Class D	Bridge	10
ASCE Rail Type or Beam Size	104# CR [Buyer (CSA) supplied]		

Lifts	Symbol	(ft)	(in)		Quantity	Main Speed		Creep Speed	
Main Hoist Lift Height	A	15	5 5	Lifts/day	7	VAR 0-25	(ft/min)	N/A	(ft/min)
Aux. Hoist Lift Height	N/A	N/A	N/A	Lifts/day	N/A	N/A	(ft/min)	N/A	(ft/min)
Average Moves - Bridge	N/A	48	6	Moves/day	7	VAR 0-25	(ft/min)	N/A	(ft/min)
Average Moves - Trolley	N/A	10	0	Moves/day	14	VAR 0-25	(ft/min)	N/A	(ft/min)

Date	REV	Revisions	By	Checked	Supervisor	Approved
6/14/04	5	Incorporate 24590-WTP-SDDR-PROC-04-00414 and 24590-WTP-SDDR-PROC-04-00450	WA Frier	E. Szavay	L Harrison	Dave Wilsey
04/29/04	4	Revised hook approach in accordance with 24590-CM-POA-MJKG-00003-16-01. Revised motor control center rating in accordance with 24590-WTP-SDDR-PROC-04-00284. Editorial revision	WA Frier	E. Szavay	L Harrison	Dave Wilsey
09/09/03	3	Revised calc no., crane type & hook approach notation. Dose calculation based upon 24590-LAW-Z0C-W13T-00002, Rev A & CCN 068694. Revised dim 'F' Revised decon maint req'mt Clarified lighting requirements. Added note on configuration Added grapple profile & revised 'A' & 'B' dim in sketch	WA Frier	E. Szavay	J Weamer/Mark Johnson	Dave Wilsey
05/01/03	2	Note 1 changed to state 2 cameras required as close to each end truck as possible Template updated. Dimensions A and E improved based on Supplier information. Includes vendor information for motor sizing. Incorporates SDDR 24590-WTP-SDDR-PROC-03-0006	B Kempe	R. Leyva	J Weamer/Mark Johnson	Dave Wilsey
09/26/02	1	Issued for Procurement	B Kempe	C. Weddle	S Crow/J Weamer	Dave Wilsey
03/27/02	0	Issued for Procurement	M Meyer	Craig Keller	Mark Johnson	Dave Wilsey

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Rail Lengths	Symbol	(ft)	(in)
Runway Length	B	76	4
Hook Approach - bridge to north wall (Max)	C1	6	0
Hook Approach - bridge to south wall (Max)	C2	6	2
Span	D	18	10
Hook Approach - trolley to west Beam C/L (Max)	E1	2	10
Hook Approach - trolley to east Beam C/L (Max)	E2	3	3

Rail Positions	Symbol	(ft)	(in)
Top of Rail to Ceiling	F	6	6
Floor to Top of Rail	G	16	0
Rail Centerline to side wall	H	0	10
Top of Rail to Lowest Obstruction	J	4	11

Drives	Volts	Phase	Hz	Control Type
Main Hoist Drive Type	460	3	60	ICN
Aux. Hoist Drive Type	N/A	N/A	N/A	N/A
Bridge Drive Type	460	3	60	ICN
Trolley Drive Type	460	3	60	ICN

CONDUCTOR TYPE

Bridge	Cable Track
Trolley	Cable Track

CONTROLS

Method of Control	Combination of Automation/Semi Automatic/manual - Through Integrated Control Network (ICN)
Location of Control	Facility Control Room HMI/ (CMA) Controller
Type of Control Enclosure	NEMA 1 for Motor Control Center
Main Hoist	ICN, flux vector drive 0-25 ft/min
Auxiliary Hoist	N/A
Bridge	ICN, variable frequency drive 0-25 ft/min
Trolley	ICN, variable frequency drive 0-25 ft/min

MATERIALS

Item	Material	Grade/Type
N/A	N/A	N/A
N/A	N/A	N/A

ELECTRICAL REQUIREMENTS

Item	HP		HP		HP		HP
Motor Main Hoist	20	Aux. Hoist	N/A	Bridge	(4) 1.75	Trolley	(2) 1 75

Special Wiring Conditions or Codes	National Electrical Code

MAINTENANCE REQUIREMENTS

Retrieval	Crane must be retrievable including hoist, bridge drive, and trolley drive Grapple sequence requires a lower-raise-lower to release
Decontamination	Cranes shall be decontaminated by hands on contact.

ADDITIONAL REQUIREMENTS

1. Two crane mounted cameras capable of pan, zoom and tilt. One camera mounted as close to each end truck as possible. (Buyer supplied).
2. Four crane mounted lights mounted to underside of bridge beam - capable of 40-60 foot candle at7.5 ft from floor level
3. Room maximum operational temp is 113 degrees F. Peak temperature may be as high as 130 degrees F.
4. Deleted
5. Hoist shall have a load cell, as shown in 24590-LAW-M7-LPH-00001004.

Please note that source, special nuclear, and byproduct materials, as defined in the Atomic Energy Act of 1954 (AEA) are regulated at the U. S. Department of Energy (DOE) facilities exclusively by DOE acting pursuant to its AEA authority. DOE asserts that pursuant to AEA, it has sole and exclusive responsibility and authority to regulate source, special nuclear, and byproduct materials at DOE-owned nuclear facilities. Information contained herein on radionuclides is provided for process description purposes only.

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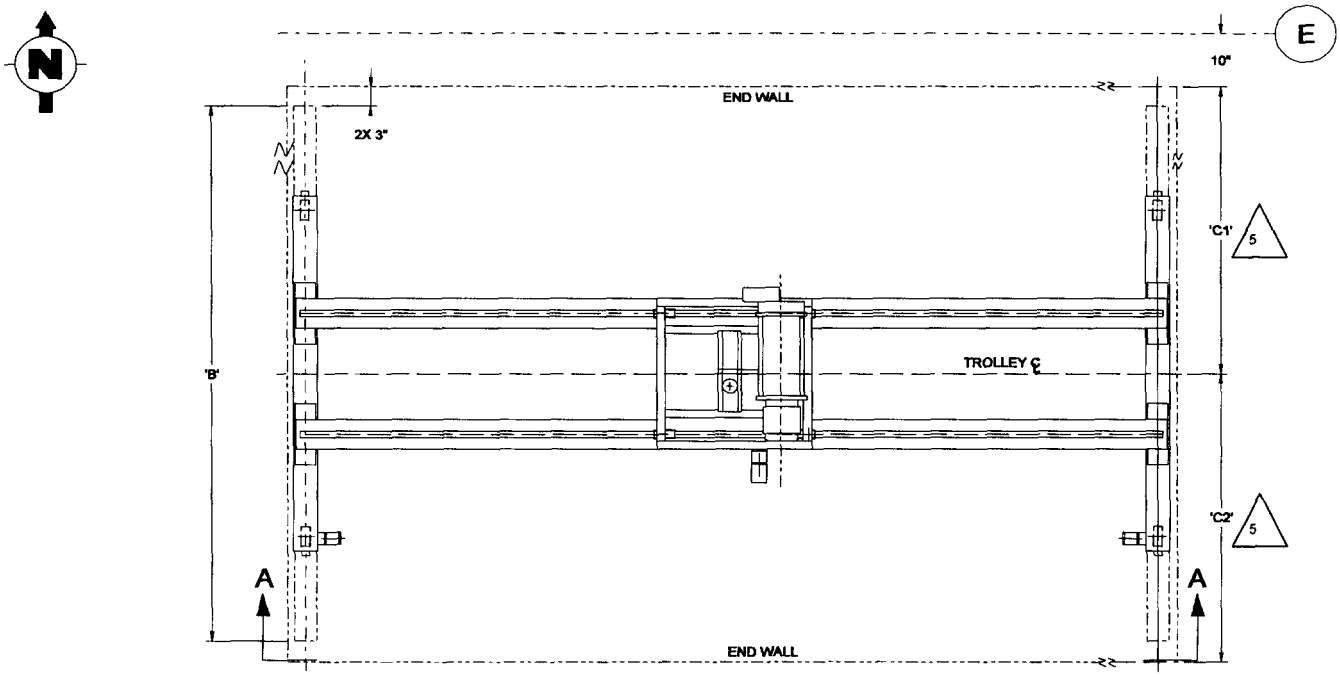
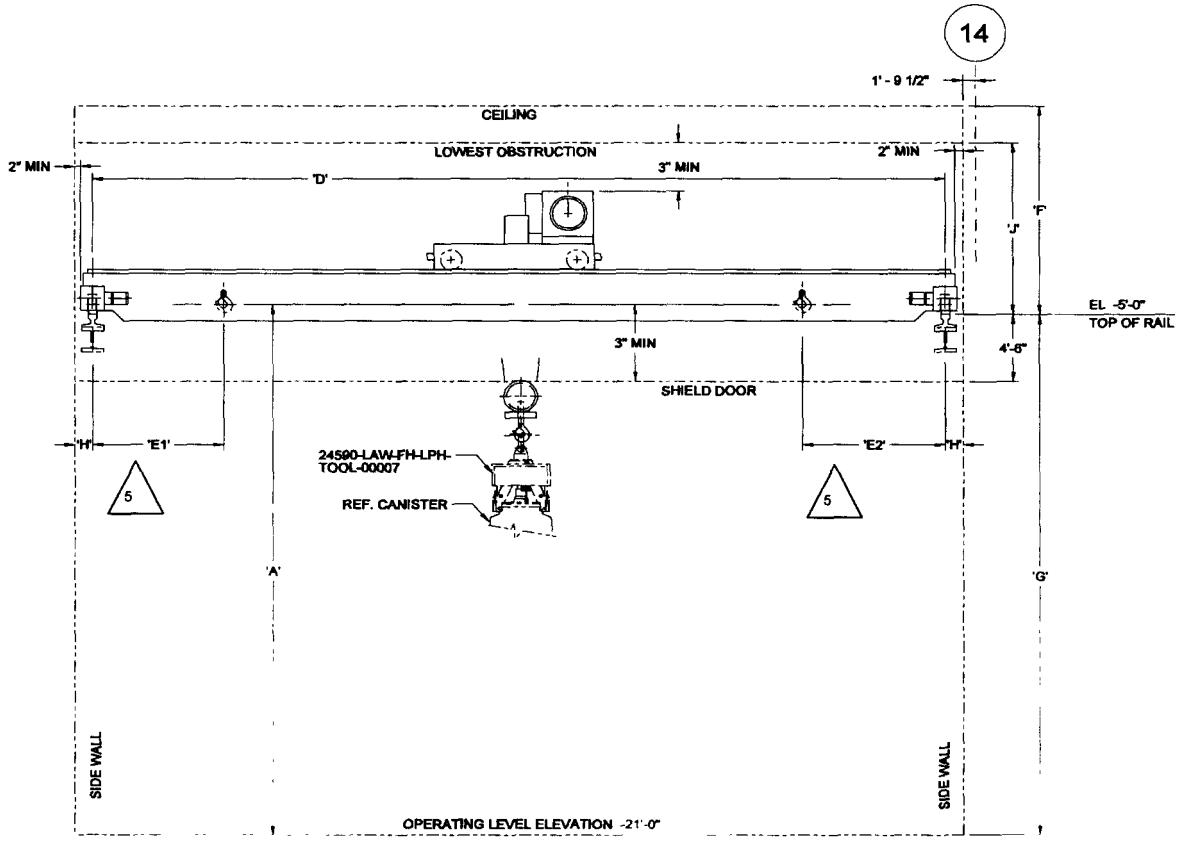
THIS DRAWING PROVIDES BASIC OUTLINES, DESIGN OBJECTIVES, AND BOUNDING DIMENSIONS TO CONTRACTED DESIGN OR FABRICATION SUPPLIER(S) AND SHALL NOT BE USED TO CONFIRM THE AS BUILT WTP STRUCTURE, SYSTEM OR COMPONENT IDENTIFIED HEREIN. SEE VENDOR INFORMATION FOR FINAL CONFIGURATION PROVIDED IN CONFORMANCE TO PURCHASE ORDER 24590-CM-POA-MJKG-00003.



PLAN VIEW AT ELEV. -5'-0"



VIEW A-A