

Record of Letter Ballot Review by TC Chapter for Procedural Review

Region/Locale: **NA**

Global Technical Committee: **PIC**

TC Chapter Cochairs: **Stefan Radloff, Intel; Matt Fuller, Entegris**

Standards Staff: **Laura Nguyen**

	Scheduled in Background Statement	Actual
Date	07/13/2016	07/13/2016
Location	Marriott Marquis, San Francisco	Marriott Marquis, San Francisco
Reason for Change of Date and/or Location (if changed)		

Note: See *Regulations* ¶ 9.5 Exception for allowable reason to change.

I. Document Number and Title

Document Number 5817A	Document Title Revision to SEMI E72–0600 (Reapproved 0305), Specification and Guide for 300 mm Equipment Footprint, Height, and Weight with title change to: Specification and Guide for Equipment Footprint, Height, and Weight
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II. Tally

Standards staff to fill in.

Voting Tally: **As-cast tally after close of voting period**

Note: A minimum of 60% of the Voting Interests that have TC Members within the global technical committee that issued the Letter Ballot must return Votes. (*Regulations* ¶ 9.7.1.1)

Voting Tally (with example values):

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	41	÷	68	=	60.3%	≥60%
Intercommittee Ballot	34					
Voting Interest Reject(s)	2		Total Voters with Rejects		2	
Voting Interest Accept(s)	28					

Note: See Regulations § 3.2.1 for definition of Voting Interest.

III. Rejects

Voting Interest Reject 1 (Voting Interest Name: TEL)

Voter Reject 1 (Voter: Supika Mashiro, TEL)

Negative TEL1

Negative	Referenced Section/ Paragraph	*TF/TC Chapter to fill in, including text in the ballot if necessary.		
		5.4.2 <i>Recommendations</i> — Seismic loading should be considered also when designing equipment weight distribution.		
	Negative Text	Delete or reconsider the recommendation so that it is more useful for the user of this Standard. Justification: Without information about how 'seismic loading' (horizontal components or vertical components of load, relation to anchoring, etc.) in relation to 'M' this is not useful. NOTE: As this is not Editorially corrected I submit as Negative, but I am willing to withdraw conditioned this would be up for future consideration under a New Business		
TF input (optional)				
Withdrawal (check one)	<input type="checkbox"/>	No Negative withdrawal made by Voter.	GO TO "Related" subsection	
	<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO "Final" subsection → (A)	
Related	Motion and Reason (check one)	<input type="checkbox"/>	'Related' is mutually agreed upon. (Needs no motion.)	GO TO "Persuasive" subsection
		<input type="checkbox"/>	Negative is not related. (Needs ≥2/3 votes to pass.)	
		<input type="checkbox"/>	Reason	XXXX
	Motion by/ 2 nd by	Name (Company)/Name (Company)		
	Discussion			
	Result of Vote (check one)	XX Y-XX N; Motion passed/failed.		
		<input type="checkbox"/>	[Negative is not related.] < 2/3	GO TO "Persuasive" subsection
<input type="checkbox"/>		2/3 ≤ [Negative is not related.]	GO TO "Final" subsection → (B)	
Persuasive	Motion and Reason (check one)	<input type="checkbox"/>	Negative is related and persuasive. (Needs >1/3 votes to pass.)	
		<input checked="" type="checkbox"/>	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)	
		<input type="checkbox"/>	Reason	Although not necessary for this document, this sentence is merely intended to draw attention to an important area outside its scope. Anything more specific might verge on making it a Safety Document.
	Motion by/ 2 nd by	Larry Hartsough, UA Associates/Alan Crockett/Alan Crockett		

	Discussion		None.					
	Result of Vote (check one)		9 Y 0 N; Motion passed.					
			<input type="checkbox"/>	[Negative is related and persuasive.] > 1/3	Is a technical change recommended? (check one)	<input type="checkbox"/>	Y	GO TO "Address by Technical Change Option" subsection
			<input type="checkbox"/>	[Negative is related and not persuasive.] < 2/3		<input type="checkbox"/>	N	GO TO "Final" subsection → (E)
			<input type="checkbox"/>	2/3 ≤ [Negative is related and not persuasive.] < 90%	GO TO "Final" subsection → (C)			
<input checked="" type="checkbox"/>	90% ≤ [Negative is related and not persuasive.]	GO TO "Not Significant Finding Option" subsection						
Address by Technical Change Option	Technical Change Recommendations							
	Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.							
	Technical Changes	1	FROM: Section/Paragraph XXX					
			TO: Section/Paragraph xxx					
			Justification (If necessary)					
		2	FROM: Section/Paragraph XXX					
			TO: Section/Paragraph xxx					
			Justification (If necessary)					
	Motion		Negative is addressed by the technical change(s).					
	Motion by/2nd by		Name (Company)/Name (Company)					
	Discussion							
	Result of Vote (check one)		XX Y-XX N; Motion passed/failed.					
			<input type="checkbox"/>	2/3 ≤ [Negative is addressed by the technical change(s).]	GO TO "Incorporation of the Technical Change" subsection			
			<input type="checkbox"/>	[Negative is not addressed by the technical change(s).] < 2/3	GO TO "Final" subsection → (E)			
	Incorporation of the Technical Change	Motion		To incorporate the technical change(s).				
Motion by/2nd by		Name (Company)/Name (Company)						
Discussion								
Result of Vote (check one)		XX Y-XX N; Motion passed/failed.						
		<input type="checkbox"/>	90% ≤ [Agree to incorporate.]	GO TO "Final" subsection → (F)				
<input type="checkbox"/>	[Disagree to incorporate.] > 10%	GO TO "Final" subsection → (E)						

Not Significant Finding Option	This option can be used only “if the TC Chapter finds a Negative not persuasive by a vote equal to or greater than 90% of the persons voting on the action”. (Regulations ¶ 9.6.4.4.2)			
	Use of “Not significant finding option” (check one)	X	It is mutually agreed upon to term the Negative “not significant”. GO TO “Final” subsection → (D)	
			It is mutually agreed upon to term the Negative “significant”. GO TO “Final” subsection → (C)	
		Whether or not the Negative is “not significant” is decided by a vote.		
	Motion	The Negative is “not significant”.		
	Motion by/ 2 nd by	Name (Company)/Name (Company)		
	Vote		XX Y-XX N; Motion passed with simple majority	GO TO “Final” subsection → (D)
		XX Y-XX N; Motion failed with simple majority	GO TO “Final” subsection → (C)	
Final	(check if applicable)		(A)	Withdrawn (counted under h in disposition)
			(B)	Not related (counted under i in disposition)
			(C)	Related and not persuasive (significant)
		X	(D)	Not significant (counted under j in disposition)
			(E)	Related and persuasive and not addressed by technical change DOCUMENT FAILS
			(F)	Addressed by technical change (counted under k disposition)
	(check if applicable)		Comment generated. See Section V-(ii) Comment # X.	

This table is needed for each Negative.

Check only when the Document has not been failed.

1	Original number (#) of Negatives	(g)	
	Number of Negatives withdrawn	(h)	
	Number of Negatives found not related	(i)	
1	Number of Negatives found not significant	(j)	
	Number of Negatives addressed by technical change (Negative becomes not significant)	(k)	
Final	X	$g - (h + i + j + k) = 0$	Reject is Not Valid and is not included in the denominator of § VI. Approval Conditions Check
		$g - (h + i + j + k) > 0$	Reject is included in the denominator of § VI. Approval Conditions Check
		Reject without a Negative	Not Valid

Note: If all of the Negatives included with a Reject Vote are withdrawn, determined to be not related, or determined to be not significant, the Reject Vote is not valid. (Regulations ¶ 9.4.3.3)

Note: A Negative addressed by a technical change is automatically considered to be not significant. (Regulations ¶ 9.6.4.4.2)

Voting Interest Reject 2 (Voting Interest Name: Lam Research)

Voter Reject 1 (Voter: Sean Larsen, Lam)

Negative LMRC1

	Referenced Section/ Paragraph	*TF/TC Chapter to fill in, including text in the ballot if necessary.			
		<p>SECTION 5.2.1 Requirements</p> <p>5.2.1.1 Both the cost footprint rectangle area and the equipment footprint rectangle areas of the remote parts of any equipment in the subfab shall be less than or equal to the cost footprint and the equipment footprint rectangle areas (respectively) of the parts of that equipment in the main fab (<i>i.e.</i> the cleanroom including both bays and chases, if any).</p>			
Negative	Negative Text	<p>*Original complete Negative text (e.g., issue, justification, suggestion) should be copied.</p> <p>It is unclear why this section is written as compliance criteria. For highly configurable systems with significant remote modules (which are also likely configurable), the modules are the size that they are. Since the facility will install the equipment how they wish and can make it fit, I suggest reworking the section to design guidance such as</p> <p>Suggestion / Justification</p> <p>5.2.1 While historically, there has been a push to move parts of the system from fab level to sub-fab level, there are also limits to what can be placed in the subfab. The following is some general guidance for equipment that is intended to be in the subfab.</p> <p>5.2.2 As a practical matter, avoid designing the system to take more subfab cost footprint than the fab level equipment.</p> <p>5.2.3 Recommendations</p> <p>5.2.3.1 Because the subfab is likely to have more columns than the main fab, the remote parts of the equipment in the subfab should come in modules that can be arranged to accommodate a variety of layouts.</p> <p>5.2.3.2 Whenever possible, minimize the sides of the equipment that need access to allow the equipment to be placed back to back or up against other equipment or building features.</p> <p>5.2.3.3 Whenever possible, design the equipment to allow them to be varying routed distances from the fab level equipment. This could include</p> <ul style="list-style-type: none"> Designing the interconnect cables to be easy to make to the needed length or provide multiple length options Provide pump capability or options to allow them to work at longer horizontal and vertical distances from the main equipment <p>Design the system to minimize the need for complicated or costly interconnect design.</p>			
		<p>TF input (optional) Making the subfab footprint < main fab footprint optional has been proposed before, but was rejected by TF consensus.</p>			
	Withdrawal (check one)	<input type="checkbox"/>	No Negative withdrawal made by Voter.	GO TO "Related" subsection	
		<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO "Final" subsection → (A)	
Related	Motion and Reason (check one)	<input type="checkbox"/>	'Related' is mutually agreed upon. (Needs no motion.)		GO TO "Persuasive" subsection
		<input type="checkbox"/>	Negative is not related. (Needs ≥2/3 votes to pass.)		
		Reason	XXXX		
	Motion by/ 2 nd by	Name (Company)/Name (Company)			
	Discussion				

		XX Y-XX N; Motion passed/failed.				
	Result of Vote (check one)	<input type="checkbox"/>	[Negative is not related.] < 2/3		GO TO "Persuasive" subsection	
		<input type="checkbox"/>	2/3 ≤ [Negative is not related.]		GO TO "Final" subsection → (B)	
Persuasive	Motion and Reason (check one)	<input type="checkbox"/>	Negative is related and persuasive. (Needs >1/3 votes to pass.)			
		<input checked="" type="checkbox"/>	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)			
		<input type="checkbox"/>	Changing the requirement in to a suggestion makes it impractical to design a factory. Optimal layout places equipment according to process flow, not to what fits. On a previous ballot, the Committee did not agree to enlarge the sub-fab area.			
	Motion by/ 2 nd by	Larry Hartsough, UA Associates/Alan Crockett/Alan Crockett				
	Discussion	None.				
	Result of Vote (check one)	10 Y 0 N; Motion passed.				
		<input type="checkbox"/>	[Negative is related and persuasive.] > 1/3	Is a technical change recommended? (check one)	<input type="checkbox"/>	Y
<input type="checkbox"/>		[Negative is related and not persuasive.] < 2/3	<input type="checkbox"/>		N	GO TO "Final" subsection → (E)
<input type="checkbox"/>		2/3 ≤ [Negative is related and not persuasive.] < 90%	GO TO "Final" subsection → (C)			
<input checked="" type="checkbox"/>		90% ≤ [Negative is related and not persuasive.]	GO TO "Not Significant Finding Option" subsection			
Address by Technical Change Option	Technical Change Recommendations					
	Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.					
	Technical Changes	1	FROM: Section/Paragraph XXX			
			TO: Section/Paragraph xxx			
			Justification (If necessary)			
		2	FROM: Section/Paragraph XXX			
			TO: Section/Paragraph xxx			
			Justification (If necessary)			
	Motion		Negative is addressed by the technical change(s).			
	Motion by/2 nd by		Name (Company)/Name (Company)			
Discussion						

	Result of Vote (check one)		XX Y-XX N; Motion passed/failed.		
			<input type="checkbox"/> 2/3 ≤ [Negative is addressed by the technical change(s).]	GO TO "Incorporation of the Technical Change" subsection	
			<input type="checkbox"/> [Negative is not addressed by the technical change(s).] < 2/3	GO TO "Final" subsection → (E)	
	Incorporation of the Technical Change	Motion	To incorporate the technical change(s).		
		Motion by/2 nd by	Name (Company)/Name (Company)		
Discussion					
Result of Vote (check one)		XX Y-XX N; Motion passed/failed.			
		<input type="checkbox"/> 90% ≤ [Agree to incorporate.]	GO TO "Final" subsection → (F)		
		<input type="checkbox"/> [Disagree to incorporate.] > 10%	GO TO "Final" subsection → (E)		
Not Significant Finding Option	This option can be used only "if the TC Chapter finds a Negative not persuasive by a vote equal to or greater than 90% of the persons voting on the action". (Regulations ¶ 9.6.4.4.2)				
	Use of "Not significant finding option" (check one)	<input checked="" type="checkbox"/>	It is mutually agreed upon to term the Negative "not significant".	GO TO "Final" subsection → (D)	
		<input type="checkbox"/>	It is mutually agreed upon to term the Negative "significant".	GO TO "Final" subsection → (C)	
		<input type="checkbox"/>	Whether or not the Negative is "not significant" is decided by a vote.		
	Motion	The Negative is "not significant".			
	Motion by/ 2 nd by	Name (Company)/Name (Company)			
	Vote	<input type="checkbox"/>	XX Y-XX N; Motion passed with simple majority	GO TO "Final" subsection → (D)	
<input type="checkbox"/>		XX Y-XX N; Motion failed with simple majority	GO TO "Final" subsection → (C)		
Final	(check if applicable)	<input type="checkbox"/>	(A)	Withdrawn (counted under h in disposition)	
		<input type="checkbox"/>	(B)	Not related (counted under i in disposition)	
		<input type="checkbox"/>	(C)	Related and not persuasive (significant)	
		<input checked="" type="checkbox"/>	(D)	Not significant (counted under j in disposition)	
		<input type="checkbox"/>	(E)	Related and persuasive and not addressed by technical change	DOCUMENT FAILS
		<input type="checkbox"/>	(F)	Addressed by technical change (counted under k disposition)	
	(check if applicable)	<input type="checkbox"/>	Comment generated. See Section V-(ii) Comment # X.		

Negative LMRC2

Negative	Referenced Section/ Paragraph	*TF/TC Chapter to fill in, including text in the ballot if necessary.
		5.4.2
	Negative Text	*Original complete Negative text (e.g., issue, justification, suggestion) should be copied.

		Seismic loading of what should be considered when design equipment weight distribution? Suggestion / Justification It is unclear if you are referring to the seismic requirements of Section 19 in the S2 review, or the loading of the facility, which is not able to be evaluated during the equipment design.					
TF input (optional)							
Withdrawal (check one)		<input type="checkbox"/>	No Negative withdrawal made by Voter.			GO TO "Related" subsection	
		<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.			GO TO "Final" subsection → (A)	
Related	Motion and Reason (check one)	<input type="checkbox"/>	'Related' is mutually agreed upon. (Needs no motion.)				GO TO "Persuasive" subsection
		<input type="checkbox"/>	Negative is not related. (Needs ≥2/3 votes to pass.)				
		<input type="checkbox"/>	Reason	XXXX			
	Motion by/ 2nd by	Name (Company)/Name (Company)					
	Discussion						
	Result of Vote (check one)	XX Y-XX N; Motion passed/failed.					
		<input type="checkbox"/>	[Negative is not related.] < 2/3			GO TO "Persuasive" subsection	
<input type="checkbox"/>		2/3 ≤ [Negative is not related.]			GO TO "Final" subsection → (B)		
Persuasive	Motion and Reason (check one)	<input type="checkbox"/>	Negative is related and persuasive. (Needs >1/3 votes to pass.)				
		<input checked="" type="checkbox"/>	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)				
		<input type="checkbox"/>	Reason	Although not necessary for this document, this sentence is merely intended to draw attention to an important area outside its scope. Anything more specific might verge on making it a Safety Document.			
	Motion by/ 2nd by	Larry Hartsough, UA Associates/Alan Crockett, Alan Crockett					
	Discussion	None.					
	Result of Vote (check one)	9 Y-0 N; Motion passed.					
		<input type="checkbox"/>	[Negative is related and persuasive.] > 1/3	Is a technical change recommended? (check one)	<input type="checkbox"/>	Y	GO TO "Address by Technical Change Option" subsection
		<input type="checkbox"/>	[Negative is related and not persuasive.] < 2/3		<input type="checkbox"/>	N	GO TO "Final" subsection → (E)
<input type="checkbox"/>		2/3 ≤ [Negative is related and not persuasive.] < 90%	GO TO "Final" subsection → (C)				
<input checked="" type="checkbox"/>		90% ≤ [Negative is related and not persuasive.]	GO TO "Not Significant Finding Option" subsection				

Address by Technical Change Option	Technical Change Recommendations			
	Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.			
	Technical Changes	1	FROM: Section/Paragraph XXX	
			TO: Section/Paragraph xxx	
			Justification (if necessary)	
		2	FROM: Section/Paragraph XXX	
			TO: Section/Paragraph xxx	
			Justification (if necessary)	
	Motion		Negative is addressed by the technical change(s).	
	Motion by/2 nd by		Name (Company)/Name (Company)	
	Discussion			
	Result of Vote (check one)		XX Y-XX N; Motion passed/failed.	
			<input type="checkbox"/> 2/3 ≤ [Negative is addressed by the technical change(s).]	GO TO "Incorporation of the Technical Change" subsection
			<input type="checkbox"/> [Negative is not addressed by the technical change(s).] < 2/3	GO TO "Final" subsection → (E)
	Incorporation of the Technical Change	Motion		To incorporate the technical change(s).
Motion by/2 nd by		Name (Company)/Name (Company)		
Discussion				
Result of Vote (check one)		XX Y-XX N; Motion passed/failed.		
		<input type="checkbox"/> 90% ≤ [Agree to incorporate.]	GO TO "Final" subsection → (F)	
		<input type="checkbox"/> [Disagree to incorporate.] > 10%	GO TO "Final" subsection → (E)	
Not Significant Finding Option	This option can be used only "if the TC Chapter finds a Negative not persuasive by a vote equal to or greater than 90% of the persons voting on the action". (Regulations ¶ 9.6.4.4.2)			
	Use of "Not significant finding option" (check one)	<input checked="" type="checkbox"/>	It is mutually agreed upon to term the Negative "not significant".	GO TO "Final" subsection → (D)
		<input type="checkbox"/>	It is mutually agreed upon to term the Negative "significant".	GO TO "Final" subsection → (C)
		<input type="checkbox"/>	Whether or not the Negative is "not significant" is decided by a vote.	
	Motion		The Negative is "not significant".	
	Motion by/2 nd by		Name (Company)/Name (Company)	
Vote		<input type="checkbox"/> XX Y-XX N; Motion passed with simple majority	GO TO "Final" subsection → (D)	

			XX Y-XX N; Motion failed with simple majority		GO TO “Final” subsection → (C)
Final	(check if applicable)		(A)	Withdrawn (counted under h in disposition)	
			(B)	Not related (counted under i in disposition)	
			(C)	Related and not persuasive (significant)	
		X	(D)	Not significant (counted under j in disposition)	
			(E)	Related and persuasive and not addressed by technical change	DOCUMENT FAILS
			(F)	Addressed by technical change (counted under k disposition)	
	(check if applicable)		Comment generated. See Section V-(ii) Comment # X.		

Negative LMRC3

Negative	Referenced Section/ Paragraph	*TF/TC Chapter to fill in, including text in the ballot if necessary.			
		R1-4 Equipment that conforms to the limits given in this Standard may be too large or heavy to fit into buildings that were originally designed for equipment that processes smaller wafers.			
	Negative Text	*Original complete Negative text (e.g., issue, justification, suggestion) should be copied.			
		This statement is more appropriate for a limitations section that hidden back in an RI. Suggestion / Justification Create a limitations section and move this statement there.			
TF input (optional)					
Withdrawal (check one)		No Negative withdrawal made by Voter.	GO TO “Related” subsection		
		Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO “Final” subsection → (A)		
Related	Motion and Reason (check one)		‘Related’ is mutually agreed upon. (Needs no motion.)		GO TO “Persuasive” subsection
			Negative is not related. (Needs ≥2/3 votes to pass.)		
		Reason	XXXX		
	Motion by/ 2 nd by	Name (Company)/Name (Company)			
	Discussion				
	Result of Vote (check one)	XX Y-XX N; Motion passed/failed.			
			[Negative is not related.] < 2/3	GO TO “Persuasive” subsection	
			2/3 ≤ [Negative is not related.]	GO TO “Final” subsection → (B)	
Persuasive	Motion and Reason (check one)		Negative is related and persuasive. (Needs >1/3 votes to pass.)		
		x	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)		

		Reason	The statement mentions possible limitations of a facility. Thus, it is not a limitation on the applicability of the Scope of this specification.				
	Motion by/ 2 nd by	Larry Hartsough, UA Associates/ Alan Crockett, Alan Crockett					
	Discussion	None.					
	Result of Vote (check one)	9Y0N; Motion passed.					
		<input type="checkbox"/>	[Negative is related and persuasive.] > 1/3	Is a technical change recommended? (check one)	<input type="checkbox"/>	Y	GO TO "Address by Technical Change Option" subsection
		<input type="checkbox"/>	[Negative is related and not persuasive.] < 2/3		<input type="checkbox"/>	N	GO TO "Final" subsection → (E)
		<input type="checkbox"/>	2/3 ≤ [Negative is related and not persuasive.] < 90%	GO TO "Final" subsection → (C)			
	<input checked="" type="checkbox"/>	90% ≤ [Negative is related and not persuasive.]	GO TO "Not Significant Finding Option" subsection				
Address by Technical Change Option	Technical Change Recommendations						
	Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.						
	Technical Changes	1	FROM: Section/Paragraph XXX				
			TO: Section/Paragraph xxx				
			Justification (if necessary)				
		2	FROM: Section/Paragraph XXX				
			TO: Section/Paragraph xxx				
			Justification (if necessary)				
	Motion		Negative is addressed by the technical change(s).				
	Motion by/2 nd by		Name (Company)/Name (Company)				
Discussion							
Result of Vote (check one)		XX Y-XX N; Motion passed/failed.					
		<input type="checkbox"/>	2/3 ≤ [Negative is addressed by the technical change(s).]	GO TO "Incorporation of the Technical Change" subsection			
		<input type="checkbox"/>	[Negative is not addressed by the technical change(s).] < 2/3	GO TO "Final" subsection → (E)			
Incorporation of the	Motion		To incorporate the technical change(s).				
	Motion by/2 nd by		Name (Company)/Name (Company)				
	Discussion						
			XX Y-XX N; Motion passed/failed.				

		Result of Vote (check one)	<input type="checkbox"/> 90% ≤ [Agree to incorporate.]	GO TO “Final” subsection → (F)	
			<input type="checkbox"/> [Disagree to incorporate.] > 10%	GO TO “Final” subsection → (E)	
Not Significant Finding Option	This option can be used only “if the TC Chapter finds a Negative not persuasive by a vote equal to or greater than 90% of the persons voting on the action”. (<i>Regulations</i> ¶ 9.6.4.4.2)				
	Use of “Not significant finding option” (check one)	<input checked="" type="checkbox"/>	It is mutually agreed upon to term the Negative “not significant”.	GO TO “Final” subsection → (D)	
		<input type="checkbox"/>	It is mutually agreed upon to term the Negative “significant”.	GO TO “Final” subsection → (C)	
		<input type="checkbox"/>	Whether or not the Negative is “not significant” is decided by a vote.		
	Motion	The Negative is “not significant”.			
	Motion by/ 2 nd by	Name (Company)/Name (Company)			
	Vote	<input type="checkbox"/>	XX Y-XX N; Motion passed with simple majority	GO TO “Final” subsection → (D)	
<input type="checkbox"/>		XX Y-XX N; Motion failed with simple majority	GO TO “Final” subsection → (C)		
Final	(check if applicable)	<input type="checkbox"/>	(A)	Withdrawn (counted under h in disposition)	
		<input type="checkbox"/>	(B)	Not related (counted under i in disposition)	
		<input type="checkbox"/>	(C)	Related and not persuasive (significant)	
		<input checked="" type="checkbox"/>	(D)	Not significant (counted under j in disposition)	
		<input type="checkbox"/>	(E)	Related and persuasive and not addressed by technical change	DOCUMENT FAILS
		<input type="checkbox"/>	(F)	Addressed by technical change (counted under k disposition)	
	(check if applicable)	<input type="checkbox"/>	Comment generated. See Section V-(ii) Comment # X.		

Negative LMRC4

Negative	Referenced Section/ Paragraph	*TF/TC Chapter to fill in, including text in the ballot if necessary.		
		<p>4.2.6 easement area — the area immediately adjacent to equipment that is required for service or maintenance access.</p> <p>4.2.6.1 Discussion — This easement area includes safety aisles, ergonomic maintenance access space, component removal space, and room for doors to swing out, but does not extend in front of the load face plane (see Figure 1).</p>		
	Negative Text	<p>*Original complete Negative text (e.g., issue, justification, suggestion) should be copied.</p> <p>The concept of the easement area and what is considered within it should be better explained either in this document or referenced elsewhere where the topic is better covered.</p> <p>Suggestion / Justification Without this clarification, section 5.2 largely becomes meaningless.</p>		
TF input (optional)				
Withdrawal (check one)	<input type="checkbox"/>	No Negative withdrawal made by Voter.		GO TO “Related” subsection
	<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.		GO TO “Final” subsection → (A)

Related	Motion and Reason (check one)	<input type="checkbox"/>	‘Related’ is mutually agreed upon. (Needs no motion.)		GO TO “Persuasive” subsection		
		<input type="checkbox"/>	Negative is not related. (Needs ≥2/3 votes to pass.)				
		<input type="checkbox"/>	Reason	XXXX			
	Motion by/ 2 nd by	Name (Company)/Name (Company)					
	Discussion						
	Result of Vote (check one)	XX Y-XX N; Motion passed/failed.					
<input type="checkbox"/>		[Negative is not related.] < 2/3			GO TO “Persuasive” subsection		
<input type="checkbox"/>		2/3 ≤ [Negative is not related.]			GO TO “Final” subsection → (B)		
Persuasive	Motion and Reason (check one)	<input type="checkbox"/>	Negative is related and persuasive. (Needs >1/3 votes to pass.)				
		<input checked="" type="checkbox"/>	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)				
		<input type="checkbox"/>	Reason	The discussion in 4.2.6.1 sufficiently explains what is to be included in the easement area, for an equipment supplier to determine it.			
	Motion by/ 2 nd by	Larry Hartsough, UA Associates/ Alan Crockett, Alan Crockett					
	Discussion	None.					
	Result of Vote (check one)	9 Y 0 N; Motion passed.					
		<input type="checkbox"/>	[Negative is related and persuasive.] > 1/3	Is a technical change recommended? (check one)	<input type="checkbox"/>	Y	GO TO “Address by Technical Change Option” subsection
		<input type="checkbox"/>	[Negative is related and not persuasive.] < 2/3		<input type="checkbox"/>	N	GO TO “Final” subsection → (E)
		<input type="checkbox"/>	2/3 ≤ [Negative is related and not persuasive.] < 90%		GO TO “Final” subsection → (C)		
		<input checked="" type="checkbox"/>	90% ≤ [Negative is related and not persuasive.]	GO TO “Not Significant Finding Option” subsection			
Address by Technical Change Option	Technical Change Recommendations						
	Original section/paragraph number and at least one full sentence are required in “FROM” and “TO” fields.						
	1	FROM: Section/Paragraph XXX					
		TO: Section/Paragraph xxx					
		Justification (If necessary)					
2	FROM: Section/Paragraph XXX						

		TO: Section/Paragraph xxx		
		Justification (If necessary)		
Motion		Negative is addressed by the technical change(s).		
Motion by/2 nd by		Name (Company)/Name (Company)		
Discussion				
Result of Vote (check one)		XX Y-XX N; Motion passed/failed.		
		<input type="checkbox"/> 2/3 ≤ [Negative is addressed by the technical change(s).]	GO TO “Incorporation of the Technical Change” subsection	
		<input type="checkbox"/> [Negative is not addressed by the technical change(s).] < 2/3	GO TO “Final” subsection → (E)	
Incorporation of the Technical Change	Motion	To incorporate the technical change(s).		
	Motion by/2 nd by	Name (Company)/Name (Company)		
	Discussion			
	Result of Vote (check one)	XX Y-XX N; Motion passed/failed.		
		<input type="checkbox"/> 90% ≤ [Agree to incorporate.]	GO TO “Final” subsection → (F)	
<input type="checkbox"/> [Disagree to incorporate.] > 10%		GO TO “Final” subsection → (E)		
Not Significant Finding Option	This option can be used only “if the TC Chapter finds a Negative not persuasive by a vote equal to or greater than 90% of the persons voting on the action”. (Regulations ¶ 9.6.4.4.2)			
	Use of “Not significant finding option” (check one)	<input checked="" type="checkbox"/> It is mutually agreed upon to term the Negative “not significant”.	GO TO “Final” subsection → (D)	
		<input type="checkbox"/> It is mutually agreed upon to term the Negative “significant”.	GO TO “Final” subsection → (C)	
		<input type="checkbox"/> Whether or not the Negative is “not significant” is decided by a vote.		
	Motion	The Negative is “not significant”.		
	Motion by/ 2 nd by	Name (Company)/Name (Company)		
	Vote	<input type="checkbox"/> XX Y-XX N; Motion passed with simple majority	GO TO “Final” subsection → (D)	
<input type="checkbox"/> XX Y-XX N; Motion failed with simple majority		GO TO “Final” subsection → (C)		
Final	(check if applicable)	<input type="checkbox"/> (A)	Withdrawn (counted under h in disposition)	
		<input type="checkbox"/> (B)	Not related (counted under i in disposition)	
		<input type="checkbox"/> (C)	Related and not persuasive (significant)	
		<input checked="" type="checkbox"/> (D)	Not significant (counted under j in disposition)	
		<input type="checkbox"/> (E)	Related and persuasive and not addressed by technical change	DOCUMENT FAILS
		<input type="checkbox"/> (F)	Addressed by technical change (counted under k disposition)	
	(check if applicable)	Comment generated. See Section V-(ii) Comment # X.		

This table is needed for each Negative.

Check only when the Document has not been failed.

4	Original number (#) of Negatives		(g)
	Number of Negatives withdrawn		(h)
	Number of Negatives found not related		(i)
4	Number of Negatives found not significant		(j)
	Number of Negatives addressed by technical change (Negative becomes not significant)		(k)
Final	X	$g - (h + i + j + k) = 0$	Reject is Not Valid and is not included in the denominator of § VI. Approval Conditions Check
		$g - (h + i + j + k) > 0$	Reject is included in the denominator of § VI. Approval Conditions Check
		Reject without a Negative	Not Valid

Note: If all of the Negatives included with a Reject Vote are withdrawn, determined to be not related, or determined to be not significant, the Reject Vote is not valid. (*Regulations* ¶ 9.4.3.3)

Note: A Negative addressed by a technical change is automatically considered to be not significant. (*Regulations* ¶ 9.6.4.4.2)

IV. Other Technical Issues

None.

V. Comments

V- (i) Voters' Comments

Commenter 1 (**Rafael Vargas-Bernal/Company**) - Comment 1

Comment	*TF/TC Chapter to fill in section/paragraph #, if necessary.		
	In subsections 5.5.1.5 and 5.3.1.1, '.' at the end is required.		
Action	The TC Chapter agreed to do one of the following actions.		
	*No motion is required in this step.		
		Already addressed by Commenter #, Comment #	
		No further action was taken by the TC Chapter.	
	x	Refer to the TF for more consideration.	
		New Business	
		Editorial Change	
	Options for editorial change		Case 1: No vote in this section:
			To be included and voted on as a group in § VI. <i>Editorial Changes Other than Those Voted on in § V.</i>
			Case 2: Voted in this section:

		(check one)	Original section number and at least one full sentence are required in "FROM" and "TO" fields.
Editorial Changes	1	FROM: Section/Paragraph xxx	
		TO: Section/Paragraph xxx	
		Justification (If necessary)	
	2	FROM: Section/Paragraph xxx	
		TO: Section/Paragraph xxx	
		Justification (If necessary)	
Motion		To approve above editorial change(s)	
Motion by/2 nd by		Name (Company)/Name (Company)	
Discussion		XXXX	
Vote		XX Y-XX N; Motion passed/failed.	

This table is needed for each Comment.

Commenter 2 (Sean Larsen, Lam Research) - Comment 1

Comment	*TF/TC Chapter to fill in section/paragraph #, if necessary.	
	<p>UNRELATED COMMENT</p> <p>There are some other topics that stretch the existing scope of this document, but that have a direct impact on either the perceived equipment size or the easement size and should be considered for inclusion or reference in this document:</p> <ul style="list-style-type: none"> Expected facility supportable system throughput for loadports without an equipment buffer/stocker Suggestions for a maximum size for a field replaceable unit (FRU) to the fab and subfab – could impact easement size and may be smaller than move in size due to facility acceptance Suggestions for tooling (lifts, service carts, etc.) and moveable ladder/platform sizes as part of first-in-fab and similar kits to support periodic system tasks <p>Suggestion / Justification</p> <p>All of these are periodically problematic and could use some standards guidance as they impact the perceived size of the equipment.</p>	
Action	The TC Chapter agreed to do one of the following actions.	
	*No motion is required in this step.	
		Already addressed by Commenter #, Comment #
	X	No further action was taken by the TC Chapter.
		Refer to the TF for more consideration.
	New Business	

		Editorial Change	
	Options for editorial change (check one)		Case 1: No vote in this section: To be included and voted on as a group in § VI. <i>Editorial Changes Other than Those Voted on in § V.</i>
			Case 2: Voted in this section: Original section number and at least one full sentence are required in “FROM” and “TO” fields.
Editorial Changes	1	FROM: Section/Paragraph xxx	
		TO: Section/Paragraph xxx	
		Justification (If necessary)	
	2	FROM: Section/Paragraph xxx	
		TO: Section/Paragraph xxx	
		Justification (If necessary)	
Motion		To approve above editorial change(s)	
Motion by/2 nd by		Name (Company)/Name (Company)	
Discussion		XXXX	
Vote		XX Y-XX N; Motion passed/failed.	

V-(ii) Comments Created by Handling Negative None.

VI. Editorial Changes Other than Those Voted on in § V None.

VII. Approval Conditions Check

VII. - (i). Approval Rate

APPROVAL CONDITION 1: All Negatives have been discussed and were withdrawn, found not related, found not persuasive, or addressed by a technical change. (*Regulations ¶ 9.7.1.2*)

APPROVAL CONDITION 2: At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations ¶ 9.7.1.3*)

Note: If both approval conditions are not satisfied, the Document fails.

		Accepts		(Accepts + Valid Rejects)					
Approval Rate	=	28	/	28	=	100.0%		≥90%	

VII. – (ii) Approval Level (check one)

Note: See Regulations § 9.7.2 for further information.

☒

Globally Approved (No Ratification Ballot needed):

The Letter Ballot meets the Letter Ballot approval conditions for the global technical committee.

☐

Need a Ratification Ballot:

The Letter Ballot meets the Letter Ballot approval conditions for the TC Chapter and a Ratification Ballot will be issued to validate technical changes.

VIII. Safety Check

Note: See Regulations § 15 for further information.

Motion	<input checked="" type="checkbox"/>	This is not a Safety Document , when all safety-related information is removed, the Document is still technically sound and complete. (<i>Regulations ¶ 8.7.1</i>)
	<input type="checkbox"/>	This is a Safety Document , when all safety-related information is removed, the Document is not technically sound and complete. (<i>Regulations ¶ 8.7.2</i>)
	<input type="checkbox"/>	Safety Checklist (<i>Regulations ¶ 15.3</i>) is complete and has been included with the Document throughout the balloting process. (<i>Regulations ¶ 15.1.2</i>)
Motion by/2 nd by		Larry Hartsough, UA Associates / Alan Crockett, Alan Crockett
Discussion		None.
Vote		9 Y 0 N; Motion passed.

IX. Intellectual Property (IP) Check

Note: This Letter Ballot may cover all or part of a Standard or Safety Guideline. This IP check applies to the entire Standard or Safety Guideline. See Regulations § 16 for further information.

<input checked="" type="checkbox"/>	The TC Chapter meeting chair asked those participating, if they were aware of any potentially material patented technology or copyrighted items* in the Standard or Guideline. (<i>Regulations ¶ 8.8.1</i>)	
<input checked="" type="checkbox"/>	No potentially material patented technology or reproduction of copyrighted items is known.	GO TO SECTION X.

		Potentially material patented technology or reproduction of copyrighted items is known, but a Letter of Assurance (LOA) or copyright release letter for such items has been obtained or presented to the TC Chapter.	GO TO SECTION X.
		Potentially material patented technology or reproduction of copyrighted items is known and use of such materials is technically justified by the TC Chapter, but an LOA or copyright release letter for some of the item(s) has NOT been obtained or presented to the TC Chapter.	
Motion		Ask ISC for special permission to publish.	
		Quit activity.	
		Wait for LOA for patented technology or release of copyrighted items.	
	Motion by/2 nd by	Name (Company)/Name (Company)	
	Discussion	XXXX	
	Vote	XX Y-XX N	
Final Action		Motion passed	
		Motion failed	

* Note: Such potentially material patented technology or copyrighted items might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this Letter Ballot.

X. Action for This Document

Motion	X	This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
		This Document passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review.
		This Document passed TC Chapter review with technical changes and with or without editorial changes and will be forwarded to the ISC A&R SC for procedural review. A Ratification Ballot will be issued to verify the technical changes.
		This Document failed TC Chapter review and will be returned to the TF for rework.
		This Document failed TC Chapter review and work will be discontinued.
	Motion by/2 nd by	Larry Hartsough, UA Assoiciates / Alan Crockett, Alan Crockett
	Discussion	None
	Vote	8 Y0N
Final Action	X	Motion passed
		Motion failed

Standards staff to record the result of the A&R procedural review here:

A&R		Approved for publication
		Approved pending acceptance of the Ratification Ballot
		Not approved
		Reason: