
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

07/08/2013

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

RAI NO.: NO. 658-5130 REVISION 1
SRP SECTION: 03.08.04 – Other Seismic Category I Structure
APPLICATION SECTION: 3.8.4
DATE OF RAI ISSUE: 11/15/2010

QUESTION NO. 03.08.04-48:

In the response to question 03.08.04-40, MHI states that boundary elements are not used because the aspect ratio of the wall is less than 2 as permitted by ACI 349-06 Section 21.7.6.1. The staff reviewed the ACI 349-06 Section 21.7.6.1 and concurs with the Applicant. However, MHI is requested to provide additional data to support their statement. Specifically, the Applicant is requested to provide a table that lists the aspect ratio, h_w/l_w defined in ACI 349-06 Section 21.7.6.1, for all of the shear walls.

ANSWER:

This response replaces the previous response submitted via MHI letter UAP-HF-10352, dated December 28, 2010 (ML110040155).

Attachment 1 contains a table and wall identification maps for both the East Power Source Building (PS/B) and West PS/B. The table shows all the wall height to length ratios (h/L) of the East PS/B and West PS/B. Please note that there are four wall elements (WPE_4, WPE_54, WPE_72, and WPW_26) that have h/L ratios greater than 2.0. These four wall elements will not use boundary elements because they are all short walls in length that are adjacent to doorways. They are not considered shear walls nor do they provide any structural strength to the lateral force resisting system.

Impact on DCD

There is no impact on the DCD.

Impact on R-COLA

There is no impact on the R-COLA.

Impact on PRA

There is no impact on the PRA.

Impact on Technical/Topical Report

There is no impact on the Technical/Topical Report.

Table 1: Wall height to length ratio for the East PS/B and West PS/B

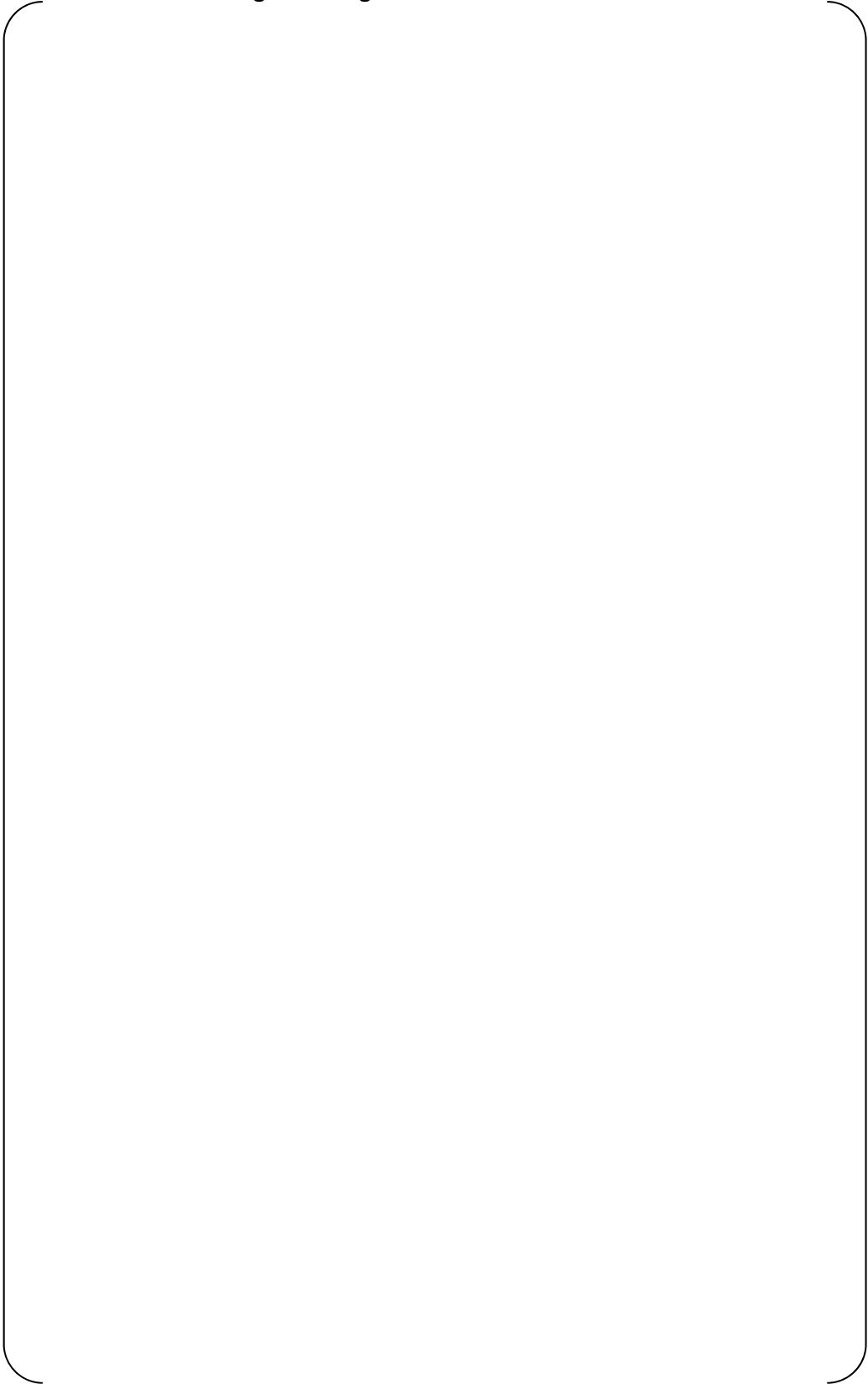


Table 1: Wall height to length ratio for the East PS/B and West PS/B (cont.)



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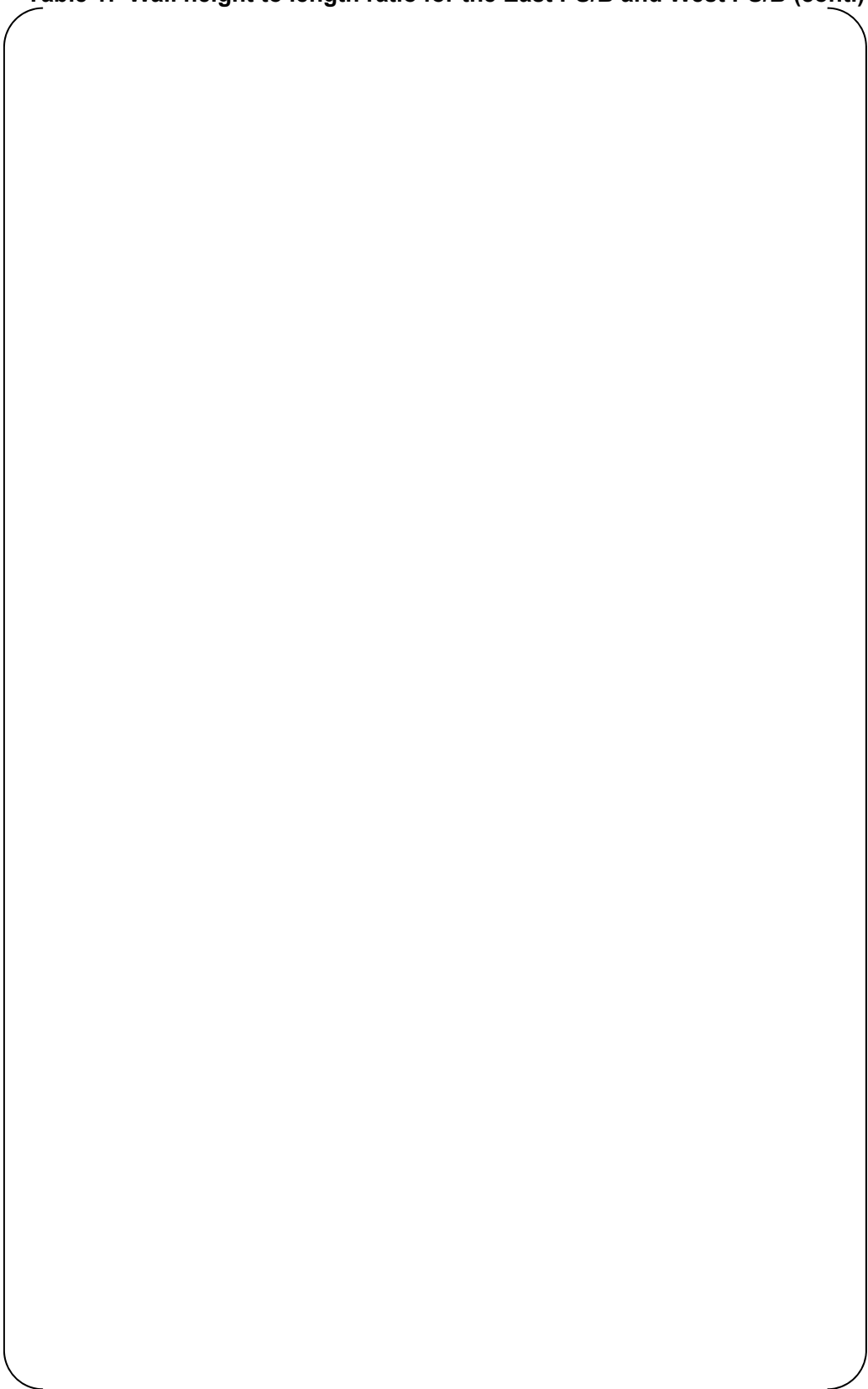


Table 1: Wall height to length ratio for the East PS/B and West PS/B (cont.)



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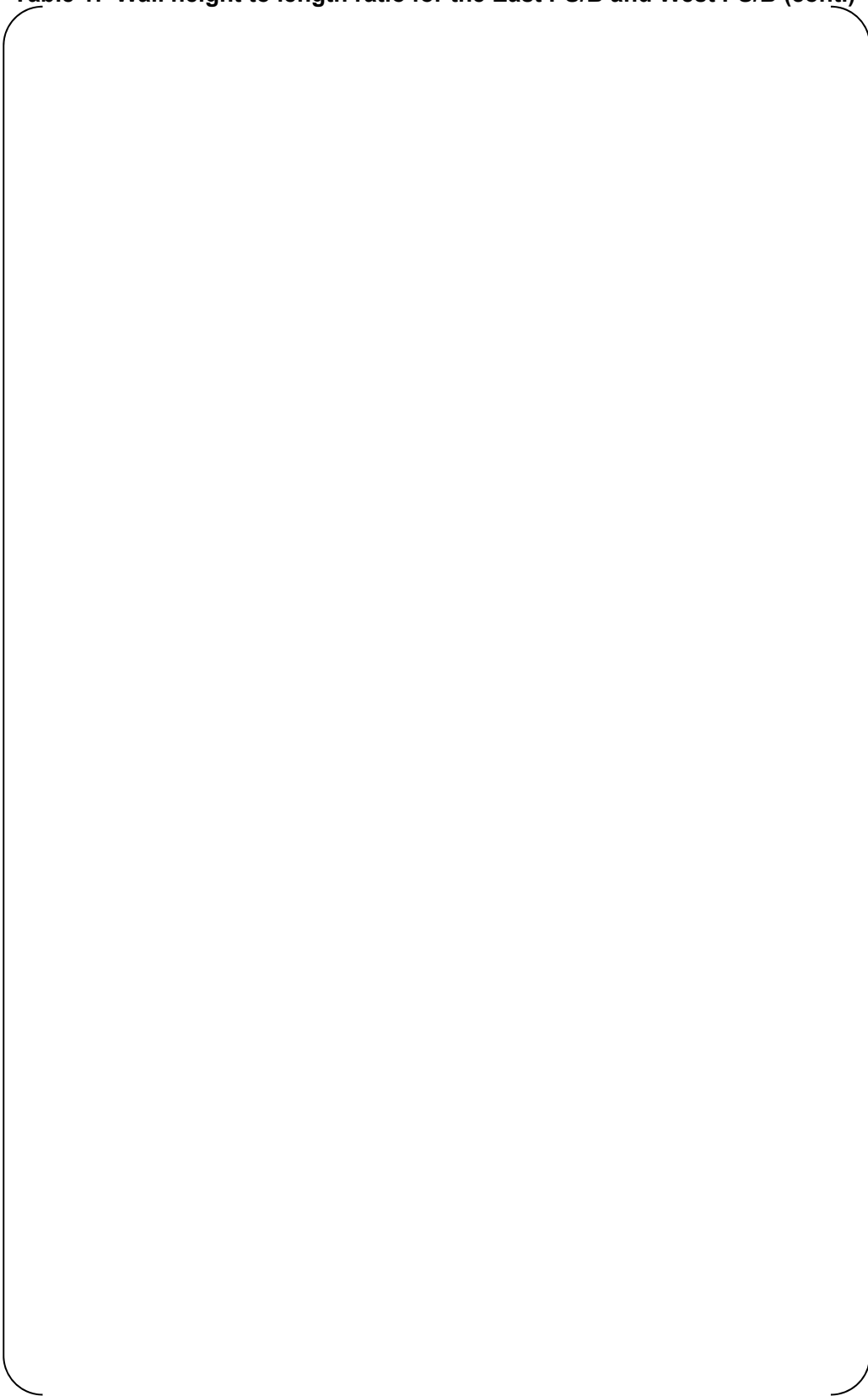
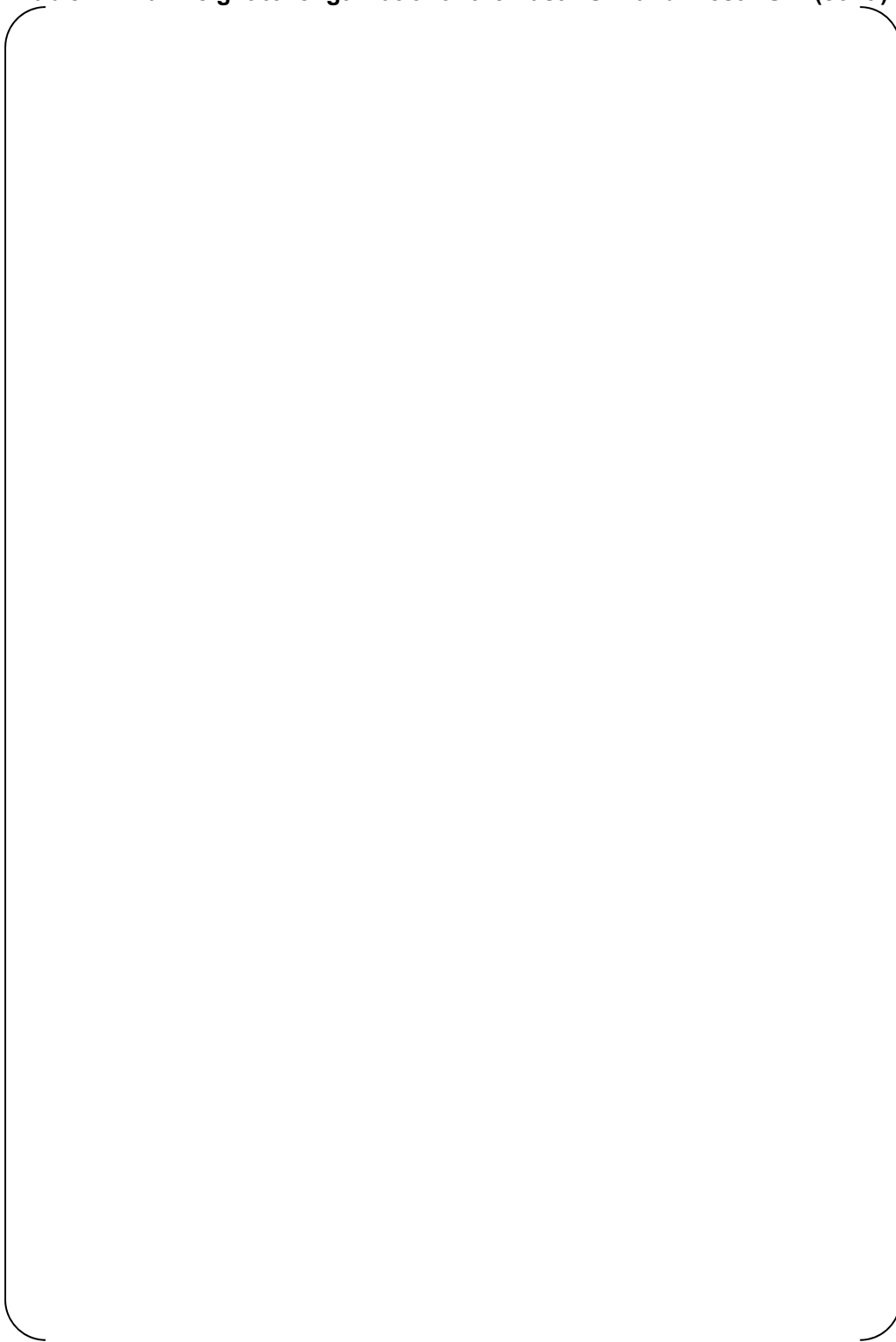


Table 1: Wall height to length ratio for the East PS/B and West PS/B (cont.)



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Attachment 1

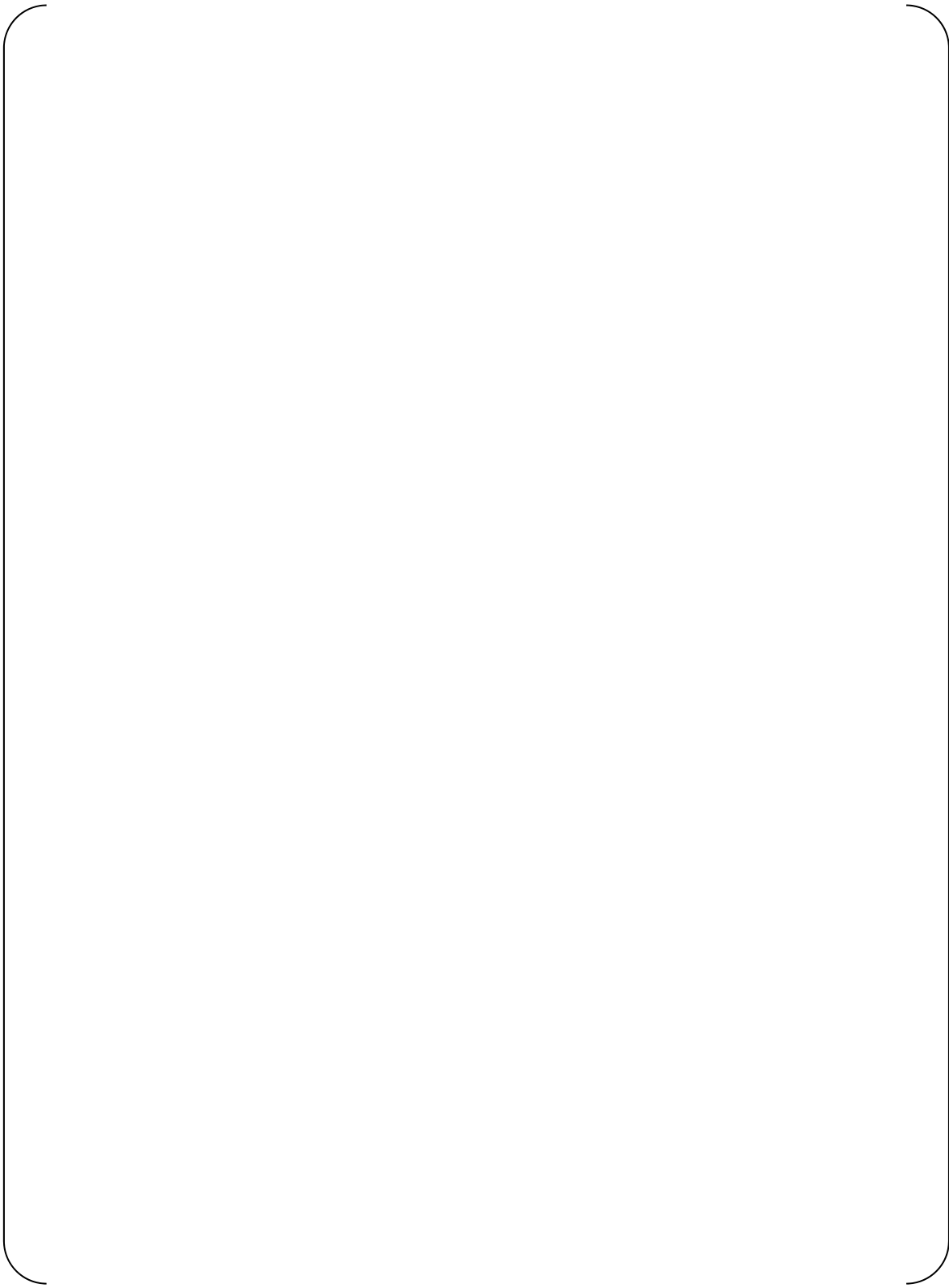


Figure 1: East PS/B Elev -26'-4"

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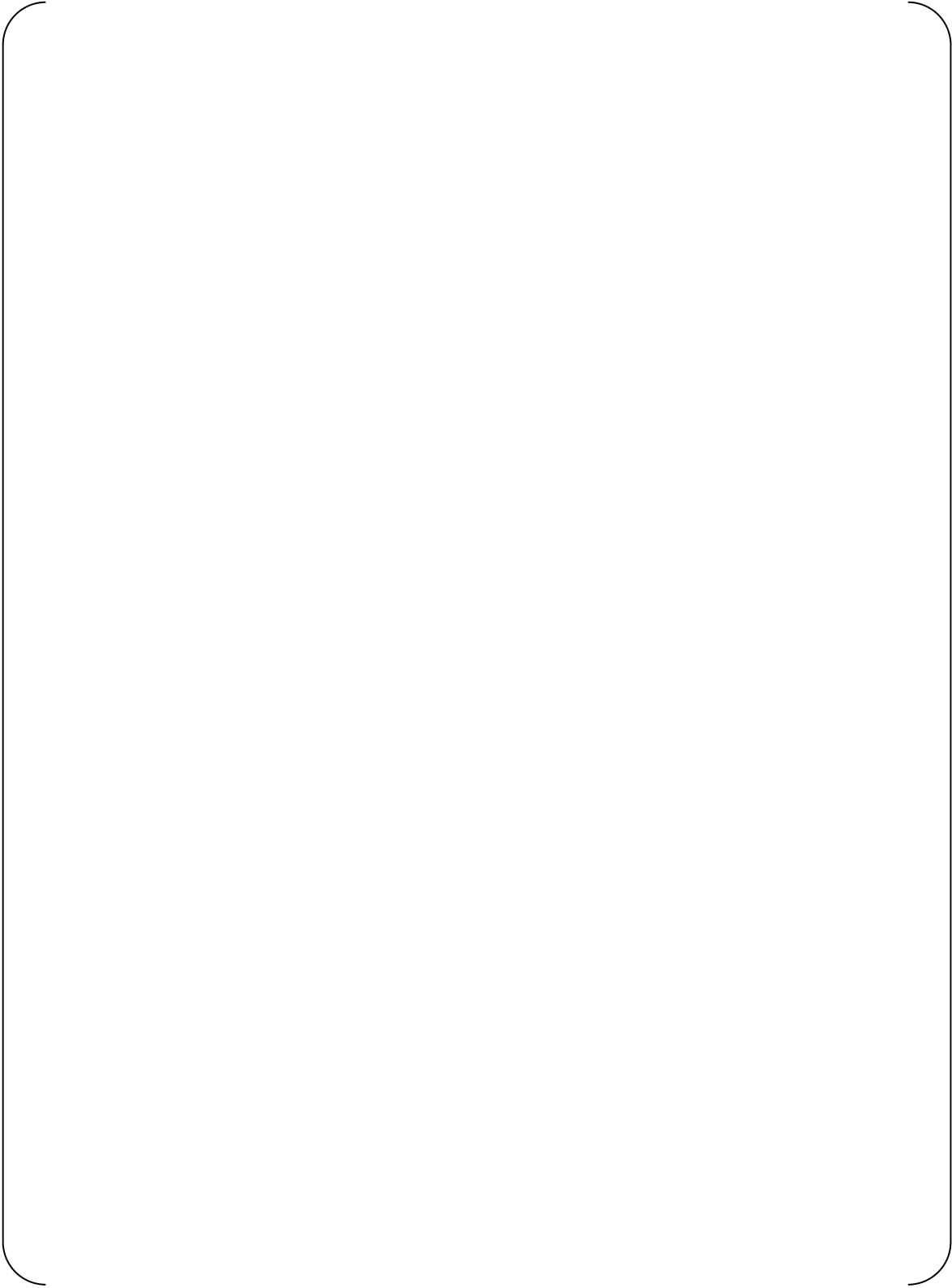


Figure 2: East PS/B Elev -14'-2"

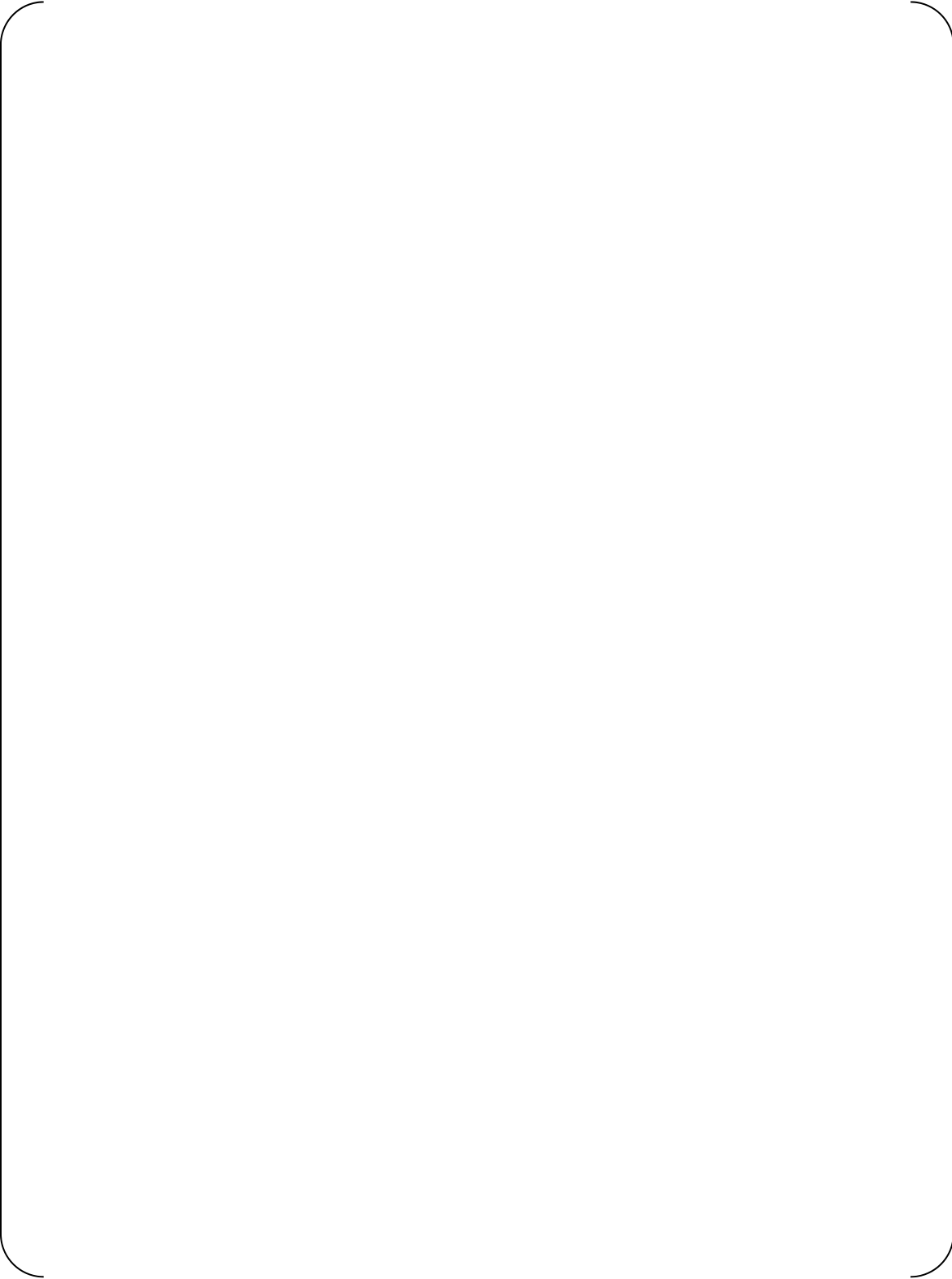


Figure 3: East PS/B Elev 3'-7"



Figure 4: East PS/B Elev 26'-11"

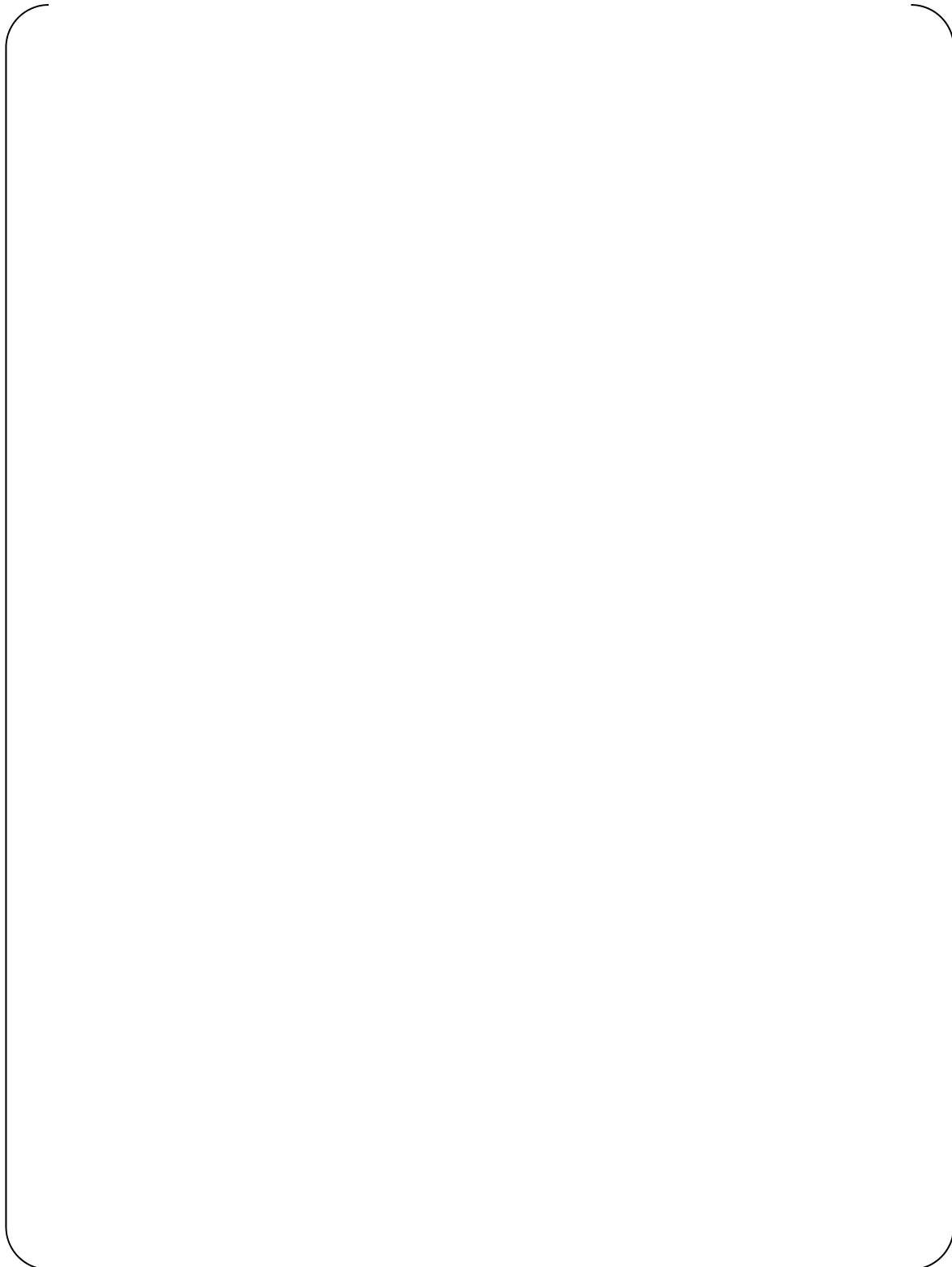


Figure 5: East PS/B Elev 39'-6"

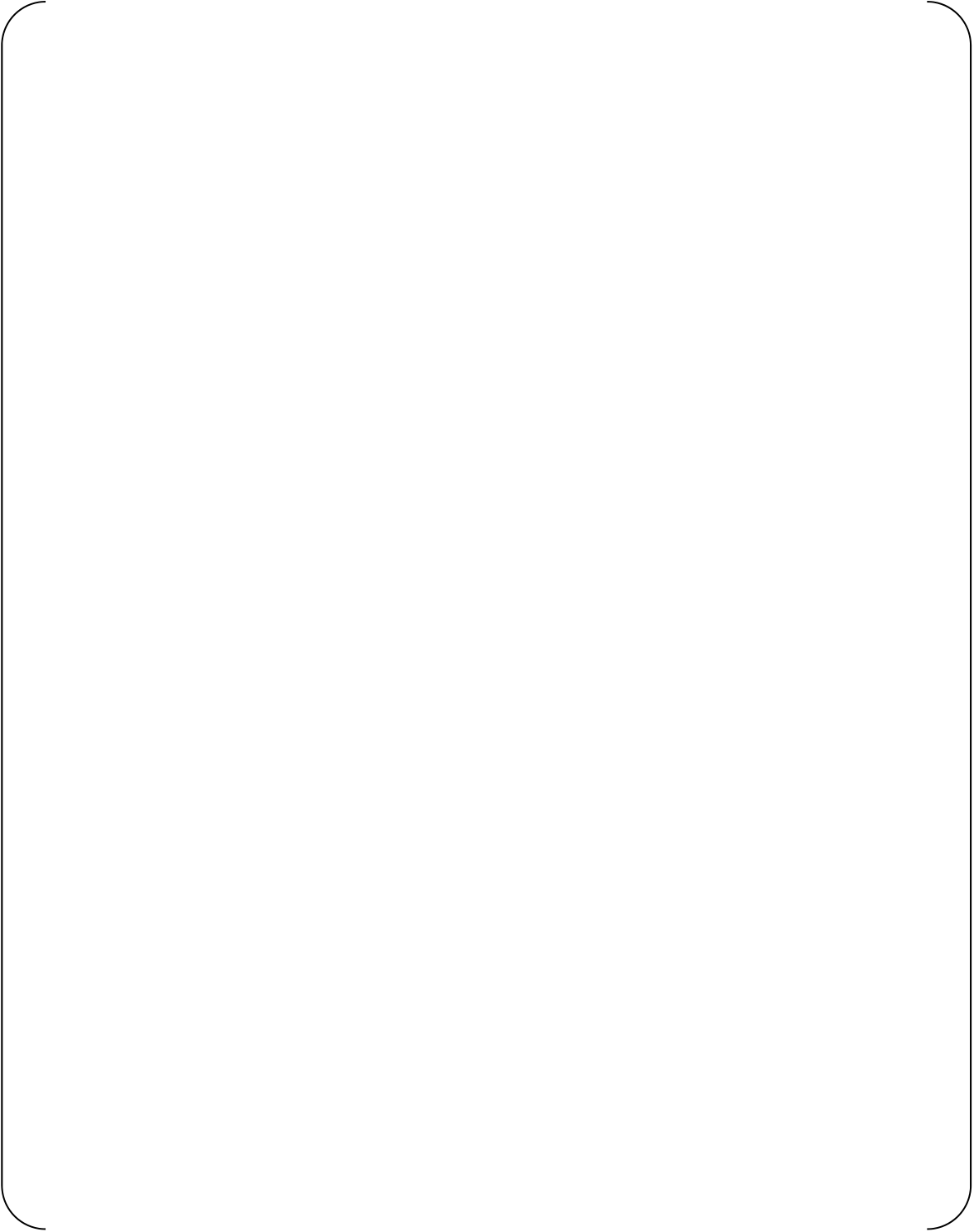


Figure 6: West PS/B Elev -26'-4"

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Attachment 1



Figure 7: West PS/B Elev -14'-2"

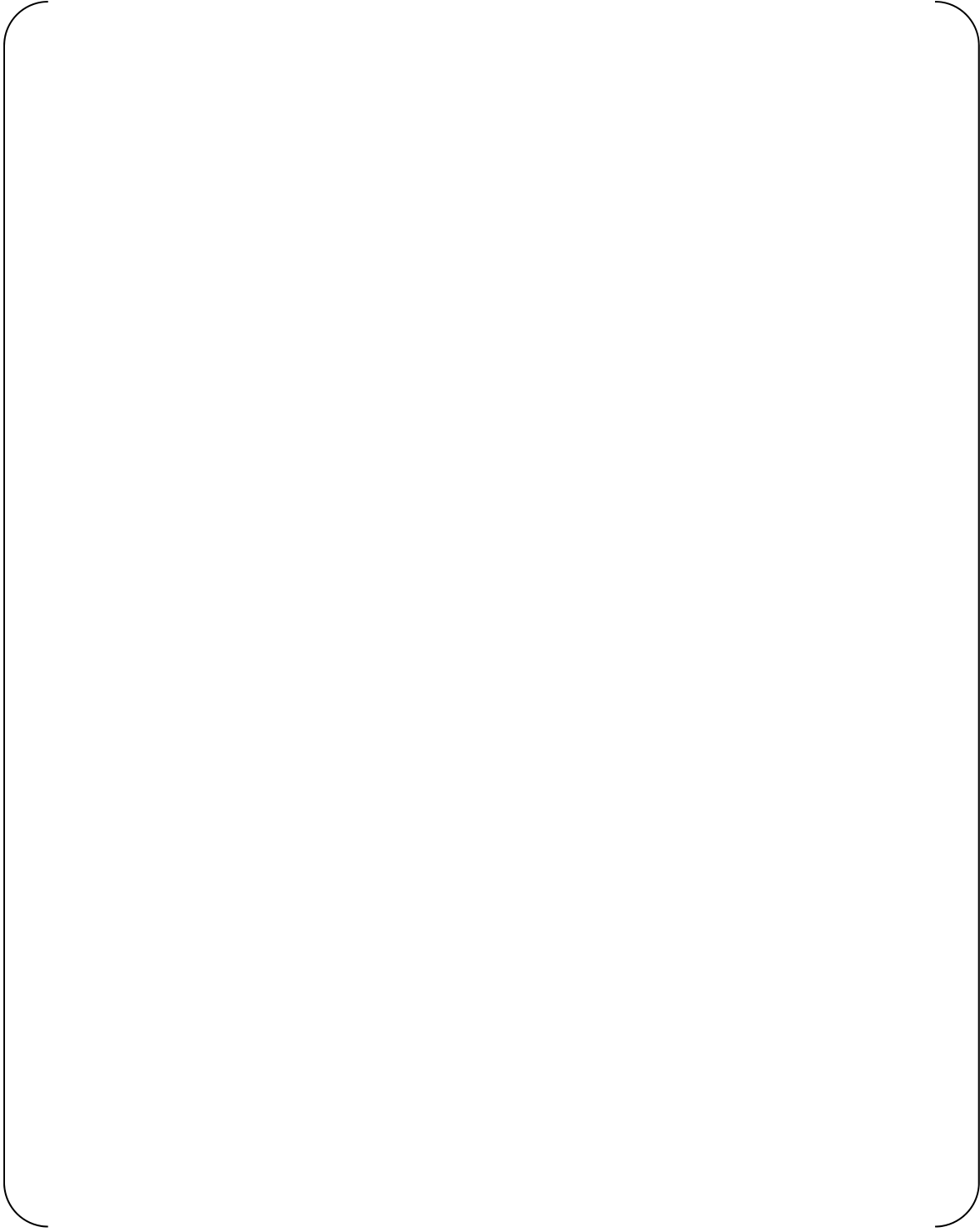


Figure 8: West PS/B Elev 3'-7" and Elev 24'-2"

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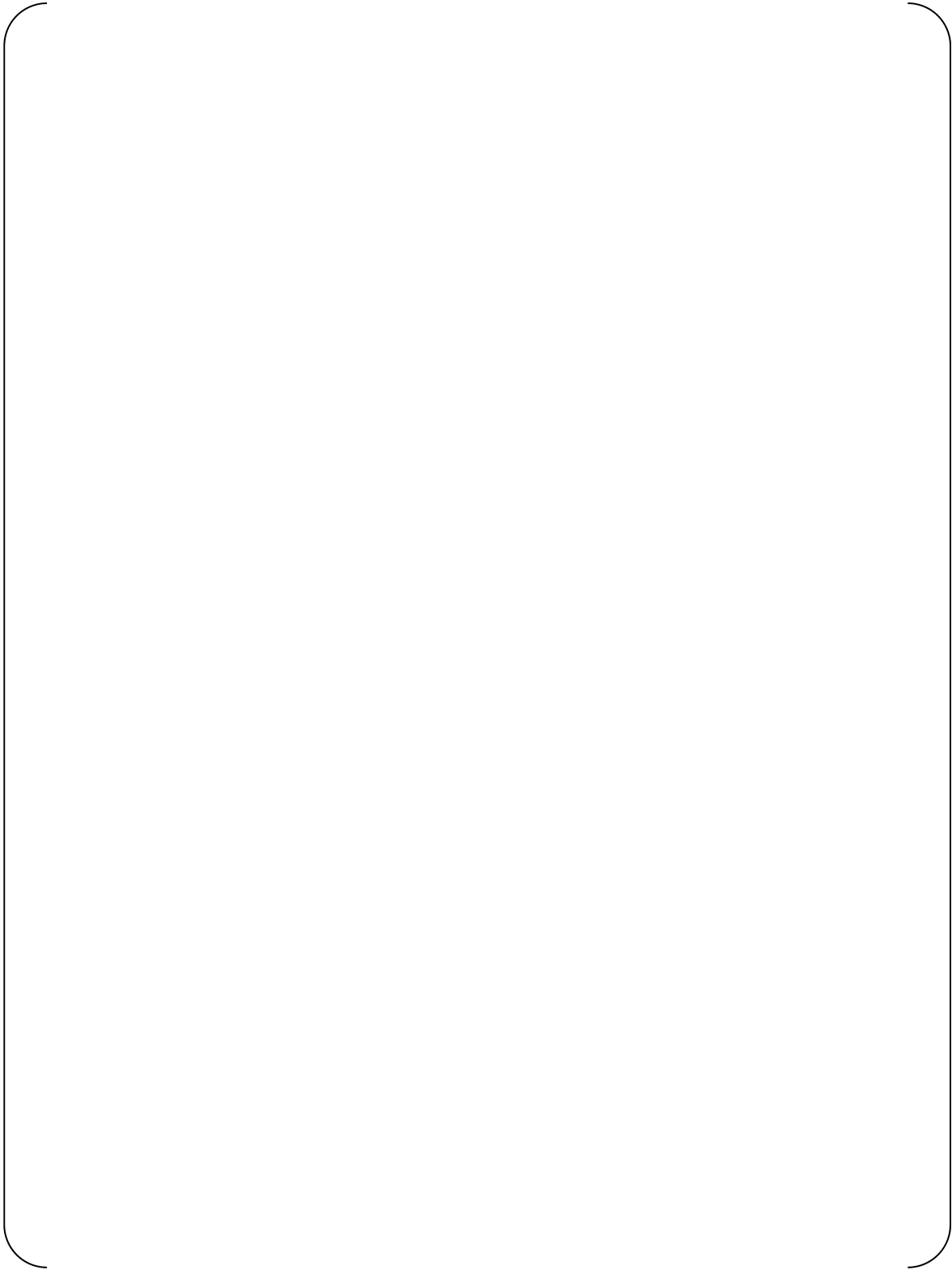


Figure 9: West PS/B Elev 39'-6"

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Attachment 1

This completes MHI's response to the NRC's question.