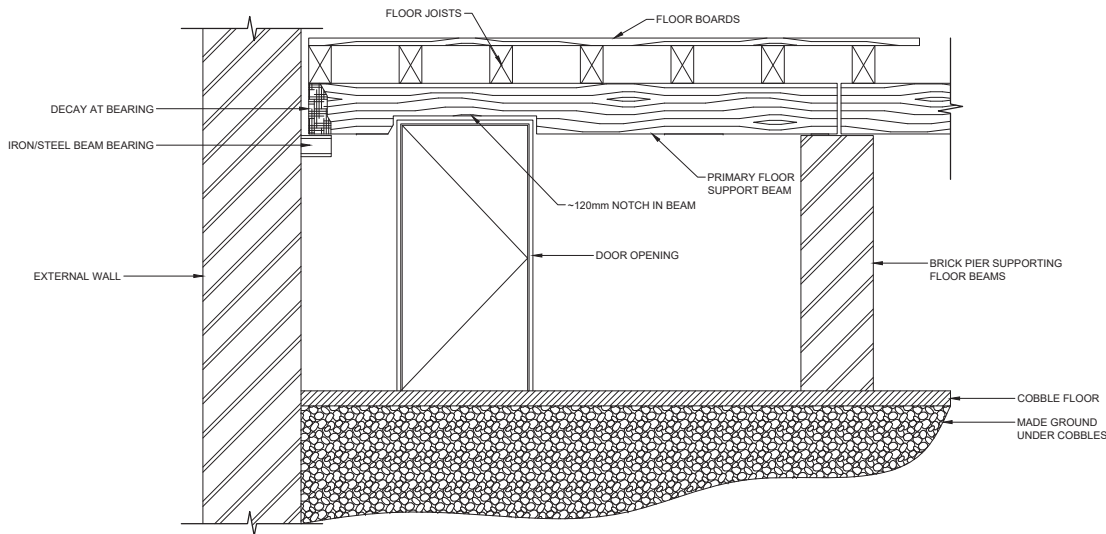
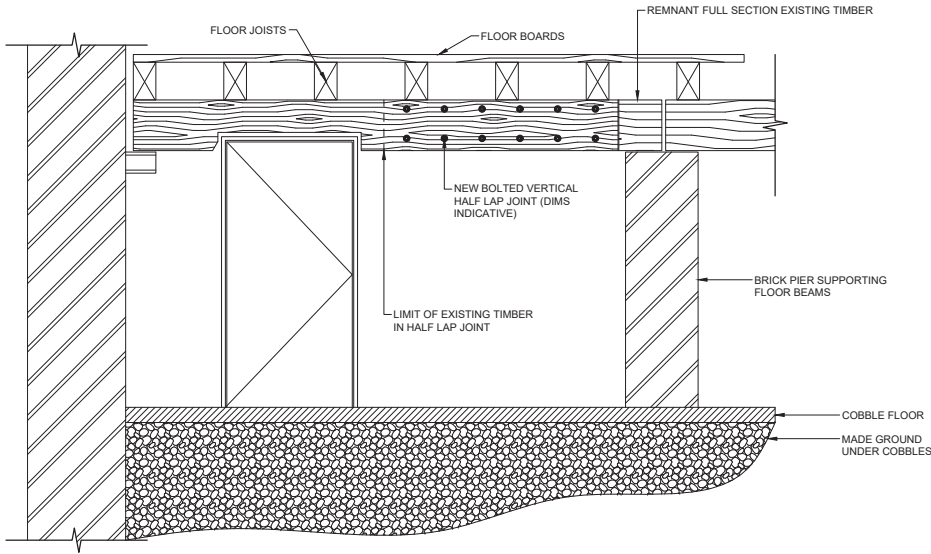




EXISTING BEAM (ELEVATION)  
scale 1:25@A1



CONSENTED REPAIR METHOD - TRADITIONAL SPLICE  
scale 1:25@A1

**ADVANTAGES**

1. TRADITIONAL REPAIR METHOD

**DISADVANTAGES**

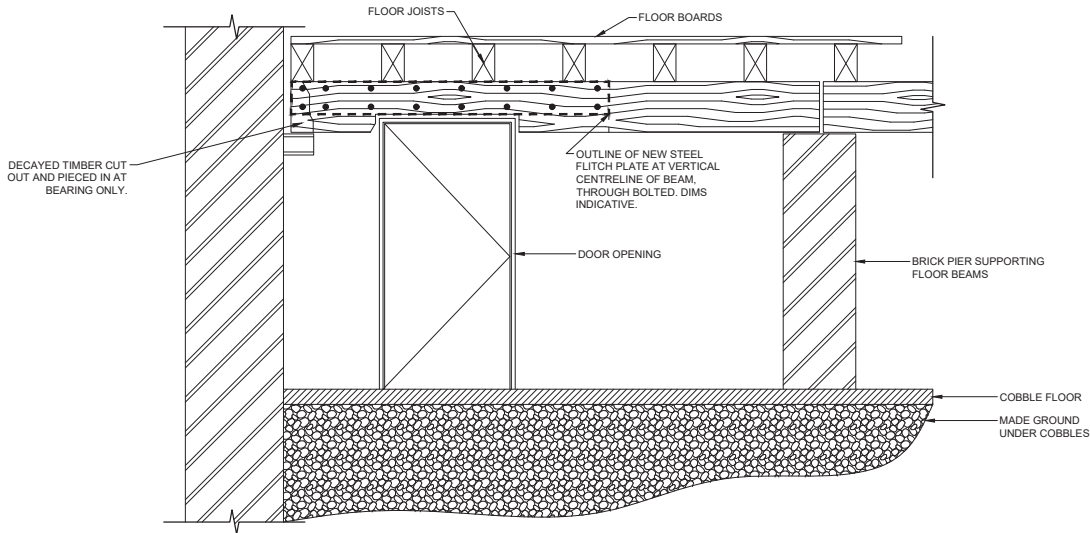
1. HIGHLY INVASIVE - MOST OF HISTORIC BALTIC PINE BEAM IS LOST.
2. DOES NOT ADDRESS LOSS OF STRUCTURAL CAPACITY AT NOTCH
3. COULD REQUIRE BOARD LIFTING AND DEMOUNTING OF M&E EQUIPMENT FOR INSTALLATION ACCESS
4. NOT REVERSIBLE

**GENERAL NOTES**

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND SPECIFICATIONS
2. DO NOT SCALE FROM THIS DRAWING IN EITHER PAPER OR DIGITAL FORM. USE WRITTEN DIMENSIONS ONLY.

**STRUCTURAL REPAIR NOTES**

1. TIMBER AT THE BEAM BEARING IS HEAVILY DECAYED. THE DECAY DOES NOT EXTEND BEYOND THE BEARING AREA (APPROX 200mm LENGTH).
2. THE BEAM HAS BEEN DEEPLY NOTCHED CLOSE TO THE BEARING FOR INSTALLATION OF A DOOR OPENING. THIS HAS REDUCED STRUCTURAL CAPACITY BELOW THAT EXPECTED FOR MUSEUM/GALLERY LOADING.
3. THE CONSENTED REPAIR APPROACH AS PER DR-S-4030 IS TO UNDERTAKE TRADITIONAL BOLTED SPLICE/LAP/SCARF JOINT REPAIRS.
4. IN THIS CASE THE PRESENCE OF THE NOTCH REQUIRES THE GENERIC CONSENTED REPAIR TYPE TO BE LOCATED IN THE FULL DEPTH BEAM SECTION BEYOND.
5. THE FLOOR LOADING NECESSITATES A LONG LAP IN THE REPAIR AND WOULD RESULT IN LOSS OF THE MAJORITY OF THE EXISTING HISTORIC BEAM AND NOT ADDRESS THE LOSS OF CAPACITY CREATED BY THE NOTCH.
6. FROM A CONSERVATION ENGINEERING PERSPECTIVE, AN ALTERNATIVE, LESS INVASIVE APPROACH IS MUCH PREFERRED.
7. ADVANTAGES AND DISADVANTAGES OF THE VARIOUS OPTIONS ARE SET OUT TO THE LEFT ADJACENT TO THE SKETCHES.
8. OUR PREFERENCE WOULD BE OPTION 2 TO INSTALL SUPPORT POSTS AS THIS HAS MINIMAL IMPACT ON EXISTING HISTORIC FABRIC IN THE TEMPORARY AND PERMANENT CONDITIONS, AND IS FULLY REVERSIBLE SHOULD THE NEED EVER ARISE.



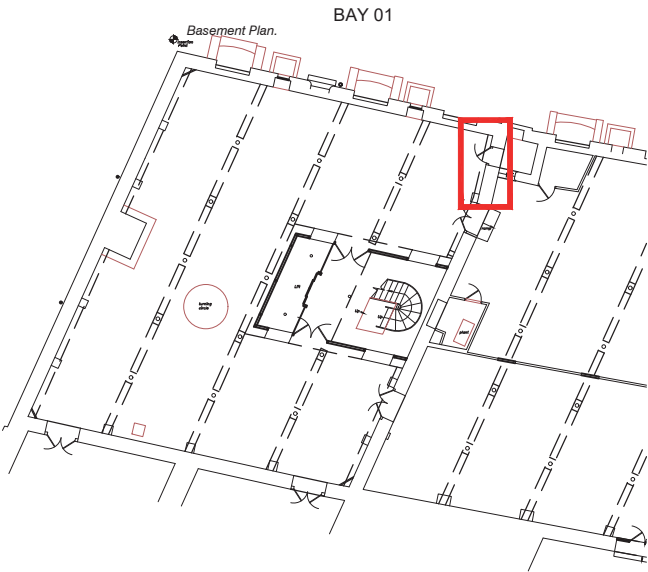
PROPOSED REPAIR OPTION 1 - FLITCH PLATE  
scale 1:25@A1

**ADVANTAGES**

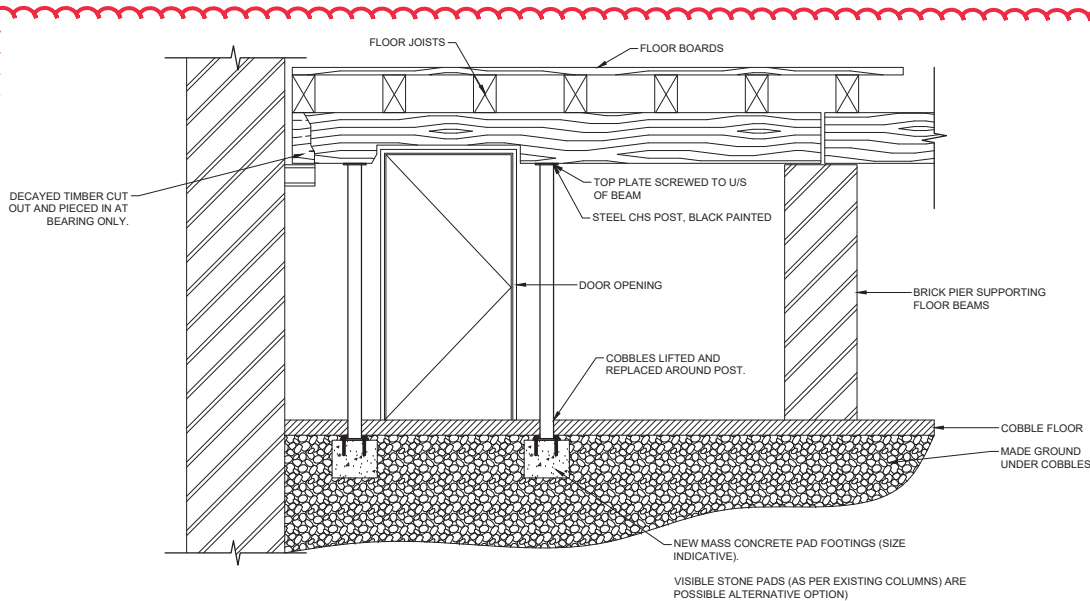
1. LOW HISTORIC TIMBER LOSS
2. RELATIVELY INCONSPICUOUS
3. ADDRESSES LOSS OF STRUCTURAL CAPACITY AT NOTCH

**DISADVANTAGES**

1. DIFFICULT TO INSTALL - ACCESS FOR BOLTING IS VERY RESTRICTED
2. COULD REQUIRE BOARD LIFTING AND DEMOUNTING OF M&E EQUIPMENT FOR INSTALLATION ACCESS
3. NOT FULLY REVERSIBLE



BASEMENT PART PLAN - REPAIR LOCATION  
scale 1:200@A1



PROPOSED REPAIR OPTION 2 - SUPPORTING POSTS  
scale 1:25@A1

**ADVANTAGES**

1. MINIMAL HISTORIC TIMBER LOSS
2. NO CHANGE IN APPEARANCE OF BEAM
3. ADDRESSES LOSS OF STRUCTURAL CAPACITY AT NOTCH
4. POSTS HAVE VISUAL SIMILARITY TO EXISTING COLUMNS
5. FULLY REVERSIBLE, NO SIGNIFICANT CHANGE TO COBBLES OR TIMBER.

**DISADVANTAGES**

1. REQUIRES LIFTING AND REINSTATEMENT OF SMALL AREA OF COBBLES
2. POSTS ARE VISIBLE (BUT NOT OUT OF KEEPING)

Preferred Approach

**NOT FOR CONSTRUCTION**

|     |          |                   |       |       |
|-----|----------|-------------------|-------|-------|
| P1  | 24.05.21 | PRELIMINARY ISSUE | SW    | SW    |
| Rev | Date     | Description       | Drawn | Check |

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|                |                                                  |
|----------------|--------------------------------------------------|
| Drawing Status | PRELIMINARY                                      |
| Project        | SCIENCE & INDUSTRY MUSEUM<br>1830 WAREHOUSE URW  |
| Title          | 1830 WAREHOUSE (BASEMENT)<br>PRIMARY BEAM REPAIR |
| Drawing No     | 180426-CON-1830-XX-DR-S-4033                     |
| Date           | MAY 2021                                         |
| Scale          | SW                                               |
| Drawn          | SW                                               |
| Engineer       |                                                  |
| Project No     | 180426                                           |
| Revision       | P1                                               |