BASED ON THE POTENTIAL LIQUEFACTION RISK INSTALLATION OF UC COLUMN STRONG-BACKS MAY BE NECESSARY TO STABILISE THE PRECAST RETAINING WALLESTUDIES REGARDING CIVIC SQUARE BY OTHERS ONGOING, HOWEVER AT THIS STAGE STRENGTHENING OF RETAINING WALLS IS NOT CONSIDERED NECESSARY FOR THE BASE CASE SOLUTION. (IF REQUIRED REFERENCE SK-BC-22)

STABILITY OF EXISTING SLAB-ON-GRADE IN REGARDS TO POTENTIAL LIQUEFACTION UNKNOWN.
(STUDIES REGARDING CIVIC SQUARE BY OTHERS ONGOING, HOWEVER UNLIKELY TO BE SIGNIFICANT FOR BASE CASE SOLUTION)

Note:
- Allowance to be made for the seismic restraint to Existing and New services, ceilings, partitions etc. All restraints to comply with the current Standards for new installations.
**Wellington Central Library**

**Concept Strengthening for Pricing – BC Solution**

**Ground Floor Plan**

- **T. Holden**
- **253267**
- **NTS 10-02-2020**

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**Hollowcore Support**

(100x6 SHS - REFER SK-BC-24)

**Alpha-Slab Support**

(250UC89/410UB59 + 100x6SHS - REFER SK-BC-25)

**Double-T Seating Support**

(200x150x9RHS)

**Column Restraint Tie**

(RB32 Reid Bar - REFER SK-BC-23)

**Diaphragm strengthening**

Tyfo SCH-41 FRP

- 2 layers long. dir
- 2 layers trans. dir
- 4 layers long. dir
- 1 layer trans. dir
- 1 layer long. dir
- 1 layer trans. dir

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**Note:**

- Allowance to be made for the seismic restraint to Existing and New services, ceilings, partitions etc. All restraints to comply with the current Standards for new installations.
- Where required rebate floor 12mm to allow FRP sheet installation. Contractor to apply levelling compound to meet existing levels.

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**CONCEPT – FOR PRICING**

**KEY**

- Hollowcore Support
- Alpha-Slab Support
- Double-T Seating Support
- Column Restraint Tie
- Diaphragm strengthening
- Tyfo SCH-41 FRP

**2 layers long. dir**
- 2 layers trans. dir
- 4 layers long. dir
- 1 layer trans. dir
- 1 layer long. dir
- 1 layer trans. dir

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**Base Case Solution**

**LONGITUDINAL**

**TRANSVERSE**

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**PROJECT**

Wellington Central Library

**TITLE**

Concept Strengthening for Pricing – BC Solution

Ground Floor Plan

- **DESIGNED:** T. Holden
- **DRAWN:** T. Holden
- **PROJECT No.:** 253267
- **SCALE:** NTS
- **DATE:** 10-02-2020
- **SKETCH No.:** SK-BC-03
- **REV:** A
Note:
• Allowance to be made for the seismic restraint to Existing and New services, ceilings, partitions etc. All restraints to comply with the current Standards for new installations.
Wellington Central Library

Concept Strengthening for Pricing – BC Solution

1st Floor Plan

T. Holden - A253267

NTS 10-02-2020

T. Holden

SK-BC-05

CONCEPT – FOR PRICING

Hollowcore Support
(100x6 SHS - REFER SK-BC-24)

Alpha-Slab Support
(250UC89/410UB59 + 100x6SHS - REFER SK-BC-25)

Double-T Seating Support
(200x150x9RHS)

Column Restraint Tie
(RB32 Reid Bar - REFER SK-BC-23)

KEY

Note:

• Allowance to be made for the seismic restraint to Existing and New services, ceilings, partitions etc. All restraints to comply with the current Standards for new installations.

Base Case Solution
**KEY**

- Hollowcore Support (100x6 SHS - REFER SK-BC-24)
- Alpha-Slab Support (250UC89/410UB59 + 100x6SHS - REFER SK-BC-25)
- Double-T Seating Support (200x150x9RHS)
- Column Restraint Tie (RB32 Reid Bar - REFER SK-BC-23)

**Note:**
- Allowance to be made for the seismic restraint to Existing and New services, ceilings, partitions etc. All restraints to comply with the current Standards for new installations.
KEY

- Hollowcore Support (100x6 SHS - REFER SK-BC-24)
- Alpha-Slab Support (250UC89/410UB59 + 100x6SHS - REFER SK-BC-25)
- Double-T Seating Support (200x150x9RHS)
- Column Restraint Tie (RB32 Reid Bar - REFER SK-BC-23)

Note:
- Allowance to be made for the seismic restraint to Existing and New services, ceilings, partitions etc. All restraints to comply with the current Standards for new installations.
Note:
• Allowance to be made for the seismic restraint to Existing and New services, ceilings, partitions etc. All restraints to comply with the current Standards for new installations.
CONCEPT – FOR PRICING

Hollowcore Support (100x6 SHS - REFER SK-BC-24)

Alpha-Slab Support (250UC89/410UB59 + 100x6SHS - REFER SK-BC-25)

Double-T Seating Support (200x150x9RHS)

Column Restraint Tie (RB32 Reid Bar - REFER SK-BC-23)

Note:
• Allowance to be made for the seismic restraint to Existing and New services, ceilings, partitions etc. All restraints to comply with the current Standards for new installations.
Based on the potential liquefaction risk, installation of UC column strong-backs may be necessary to stabilise the precast retaining walls. At this stage, strengthening of retaining walls is not considered likely for the base case solution.
200mm WIDE 12mm THICK PLATE, BOTH SIDES OF EXISTING BEAM. w/ 2-M20 EPOXY ANCHORS. FERRO SCAN TO LOCATE EXISTING BEAM REINFORCING.

2 No. BRACKETS @ 900 CENTRES PER DYCORE UNIT.

100x100 SHS

10mm GAP SPANNING BETWEEN BRACKETS. 1200mm LONG. 10mm GAP TO SLAB SOFFIT ABOVE.
SECTION - OPTION

10mm GAP

250UC89 OR 410UB59
SUPPORT BEAM

CONCEPT – FOR PRICING

PROJECT
Wellington Central Library

TITLE
Concept Strengthening for Pricing – BC Solution
Alpha Slab Catch-Frame Detail

DESIGNED
T. Holden

DRAWN
T. Holden

PROJECT No.
253207

SCALE
NTS

DATE
10-02-2020

SKETCH No.
SK-BC-25

REV
A