



United Nations Development Programme (UNDP)

Civil Work for A7 and A8 Buildings inside UNCAF

UNCAF , Sana'a, Yemen

24 December 2020

CONSTRUCTION NOTES

1. GENERAL
1.1 THESE NOTES PROVIDE ALL SPECIFICATION REQUIRED FOR CONSTRUCTION. ENGINEER'S APPROVAL MUST BE SECURED FOR ALL SUBSTITUTIONS
1.2 ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN FIELD BEFORE PROCEEDING WITH CONSTRUCTION.
1.3 THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED DEMOLITION AND REPLACEMENT OF BUILDING FINISHES THAT MAY BE REQUIRED TO ACCESS STRUCTURAL COMPONENTS.
1.4 ALL CABLE CATCHMENT SYSTEMS ARE TO BE PROPOERLY ANCHORED TO CONCRETE SUBTRATE AS DESCRIBED IN THESE DRAWINGS. ANCHORAGE INTO DIFFERENT SUBSTRATE MUST BE REVIEWED AND APPROVED BY THE ENGINEER.

2. BUILDING STABILITY DURING CONSTRUCTION
2.1 THESE DRAWINGS ILLUSTRATE THE COMPLETED CONSTRUCTION WITH ALL ELEMENTS IN THEIR FINAL POSITION.
2.2 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS.
2.3 CONTRACTOR, IN PROPER SEQUENCE, SHALL PROVIDE SHORING, BRACING AND PROTECTION OF BUILDING ELEMENTS THAT MAY BE REQUIRED DURING CONSTRUCTION.
2.4 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY ISSUES AS MANDATED BY ALL LAWS AND REGULATIONS.

3. SPECIAL INSPECTIONS
3.1 AFTER THE INSTALLATION OF THE CABLE CATCHMENT SYSTEM, AND BEFORE WALL/FLOOR/CELIING FINISHES ARE APPLIED, EACH SYSTEM MUST BE TESTED BY PULLING THE CABLES TO CONFIRM IT IS PROPOERLY TENSED AND ANCHORED.

4. CONCRETE.
4.1 WHERE REQURIED, CONCRETE MUST PROVIDE A MINIMUM COMPRESSION STRENGTH OF 30MPA (4,000PSI) AT 28 DAYS. REINFORCEMENT REBAR MUST FOLLOW ASTM A616(S) GRADE 60.
4.2 GROUTING OF UNREINFORCED MASONRY UNITS MUST BE PERFORMED BEFORE INSTALLATION OF ANY CONCRETE ANCHOR INTO MASONRY UNITS. GROUT MUST BE PROVIDED TO THE MASONRY CELL HOLDING ANCHORS AND THE CELLS ABOVE AND BELOW.

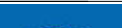


5. ANCHORS
5.1 ALL ANCHORS TO BE HILTI KWIK BOLT TZ-TS OR SIMILAR WITH DIAMETER AS SPECIFICED IN THE DRAWINGS.
5.2 PROVIDE THE MINIMUM EMBEDED LENGTH AND EDGE DISTANCE AS SPECIFIED BY MANUFACTURER.
5.3 INSTALLATION MUST FOLLO MANUFACTURER RECOMMENDATIONS.

6. STEEL
6.1 ALL STEEL SHALL BE AT LEAST EN S275 (ASTM A36).
6.2 WHERE REQUIRED, WELDS MUST BE FULL PENETRATION UNLESS OTHERWISE NOTED.
6.3 WELD ELECTRODES TO FOLLOW AWS E70XX OR EQUIVALENT.
6.4 FILLING THE HOLES WITH EMBEDMENT MATERIALS LIKE MASTER FLOW 932 AN(EPOXY) OR (MASTER BRACE ADH 2200 PART A + MASTER BRACE ADH 2200 PART B)
6.5 MEASUREMENT METHOD WOULD BE CALCULATED BASED ON WALL AREA ONLY WITH DEDUCTION THE WINDOW, DOOR OPENINGS

7. CABLES
7.1 ALL CABLES TO BE 6MM (1/4-IN) 7X7 OR 7X19 AIRCRAFT WIRE ROPE WITH NO LESS THAN 26KN (6,000LBS) BREAKING STRENGTH.
7.2 CABLE ENDS MUST BE SECURED PROPOERLY USING A MINIMUM OF 3 U-BOLT CLIPS SPACED NO LESS THAN 75MM OR AS SPECIFIED BY MANUFACTURER. TOTAL WIRE ROPE RETURN LENGTH MUST BE EQUAL OR LARGER THAN 200MM.
7.3 PROPER HEAVY DUTY WIRE ROPE THIMBLES MUST BE INSTALLED AT BOTH ENDS OF THE CABLE.
7.4 FILLING THE HOLES WITH EMBEDMENT MATERIALS LIKE MASTER FLOW 932 AN(EPOXY) OR (MASTER BRACE ADH 2200 PART A + MASTER BRACE ADH 2200 PART B)
7.5 MEASUREMENT METHOD WOULD BE CALCULATED BASED ON CABLE-TO-CABLE DISTANCE IN WIDTH

8. SECURITY FILM
8.1 SECURITY FILM MUST BE INSTALLED IN ALL EXTERIOR AND INTERIOS GLASS ON THE PROTECTED SIDE OF THE WINDOW AS DAYLIGHT APPLICATION.
8.2 SECURITY FILM TO BE AT LIST 8MIL.

9. PLEXIGLASS
9.1 ALL PLEXIGLASS TO MEET ASTM D-4802 WITH A MINIMUM THICKNESS OF 10MM.
9.2 FILLING THE HOLES WITH EMBEDMENT MATERIALS LIKE MASTER FLOW 932 AN(EPOXY) OR (MASTER BRACE ADH 2200 PART A + MASTER BRACE ADH 2200 PART B)
9.3 MEASUREMENT METHOD WOULD BE CALCULATED BASED ON PLEXIGLASS WIDTH AND HEIGHT

| | | | | | | | |
|---|---|---|-----------------------|---|-----------------------|-----------------------|-------------|
| United Nations Development Programme (UNDP) | |  | Drawing Title |  | Drawing Type | Design By | Drawing No. |
| Location | UNCAF. Sana'a, Yemen |  | General Specification | | Architectural Drawing | UNDP ENGINEERING UNIT | |
| Project | Civil Work for A7 and A8 Buildings inside UNCAF | | | Date | Status | | |
| | | 24 December 2020 | Draft | 1 | | | |

1. Dismantling work then reinstall it again.
2. Polycarbonate Hardening the windows with 10 mm thickness as shown in detail as shown in detail 2.
3. Installation of frame catcher windows as shown in detail 3.
4. Polycarbonate Hardening the windows with 10 mm thickness as shown in detail as shown in detail 4.
5. Dismantling the existing windows glass ther replaced it with polycarbonate with 10 mm thickness.
6. Renewal the painting

Wall catcher as shown in detail 1

.Windows Schedule

| | .DIM | | | No | REMARKS |
|----|------|-----|-------|----|---------|
| | W | H | S.W.B | | |
| w1 | 175 | 200 | 90 | 2 | |
| w2 | 200 | 205 | 15 | 2 | |
| w3 | 140 | 120 | 100 | 6 | |
| w4 | 60 | 60 | 160 | 2 | |
| w5 | 40 | 60 | 140 | 3 | |
| | | | | | |
| | | | | | |

.Doors Schedule

| | .DIM | | No | REMARKS |
|----|------|-----|----|---------|
| | W | H | | |
| D1 | 100 | 200 | 1 | |
| D2 | 100 | 200 | 4 | |
| D3 | 80 | 200 | 1 | |
| D4 | 80 | 200 | 1 | Armored |
| D5 | 205 | 200 | 2 | |
| D6 | 200 | 200 | 1 | Armored |

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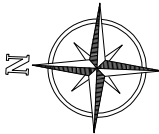


Location UNCAF. Sana'a, Yemen

Project Civil Work for A7 and A8 Buildings inside UNCAF

Drawing Title

Work in Ground Floor



Drawing Type

Architectural Drawing

Date

24 December 2020

Design By

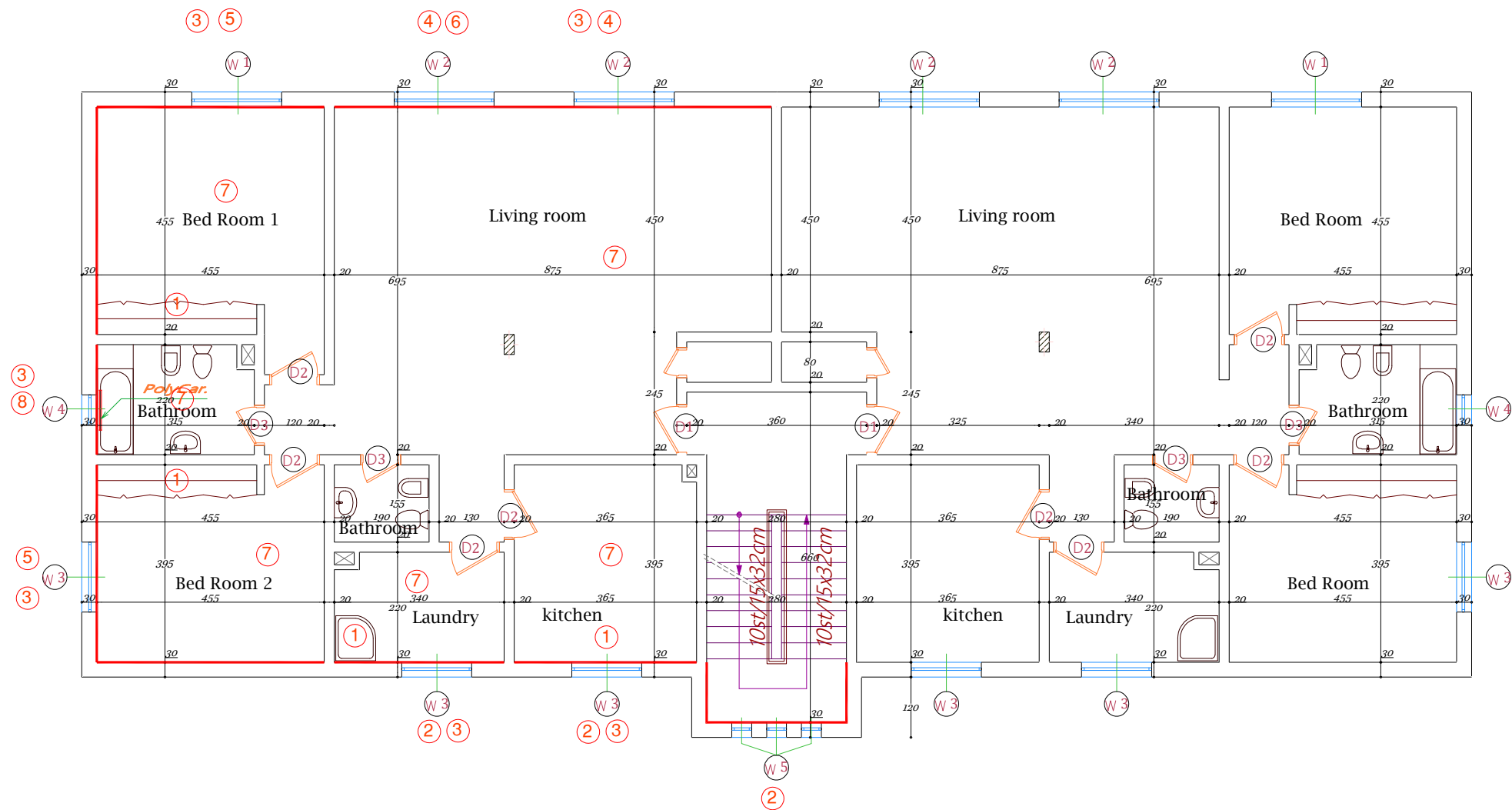
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Status

Draft

Drawing No.

2



1. Dismantling work then reinstall it again.
2. Polycarbonate Hardening the windows with 10 mm thickness as shown in detail as shown in detail 2.
3. Installation of frame catcher windows as shown in detail 3.
4. Polycarbonate Hardening the windows with 10 mm thickness as shown in detail as shown in detail 4.
5. Dismantling the existing polycarbonate then Enhance it with plate 20 cm width and 10 mm thickness around the window.
6. Dismantling the existing frame cable then Enhance it the same new design.
7. Renewal the painting
8. Dismantling the existing windows glass ther replaced it with polycarbonate with 10 mm thickness.

Wall catcher as shown in detail 1

.Windows Schedule

| | DIM | | | No | REMARKS |
|----|-----|-----|-------|----|---------|
| | W | H | S.W.B | | |
| w1 | 180 | 110 | 90 | 2 | |
| w2 | 200 | 200 | 15 | 2 | |
| w3 | 140 | 120 | 100 | 6 | |
| w4 | 60 | 60 | 160 | 2 | |
| w5 | 40 | 60 | 140 | 3 | |
| | | | | | |
| | | | | | |

.Doors Schedule

| | DIM | | No | REMARKS |
|----|-----|-----|----|---------|
| | W | H | | |
| D1 | 100 | 200 | 1 | |
| D2 | 100 | 200 | 4 | |
| D3 | 80 | 200 | 1 | |
| D4 | 80 | 200 | 1 | Armored |
| D5 | 200 | 200 | 2 | |
| D6 | 200 | 200 | 1 | Armored |

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Programme (UNDP)

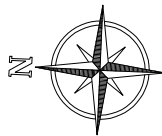


Location UNCAF. Sana'a, Yemen

Project Civil Work for A7 and
A8 Buildings inside UNCAF

Drawing Title

Work in First floor



Drawing Type

Architectural Drawing

Date

24 December 2020

Design By

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Status

Draft

Drawing No.

3

1. Dismantling work then reinstall it again.
2. Polycarbonate Hardening the windows with 10 mm thickness as shown in detail as shown in detail 2.
3. Installation of frame catcher windows as shown in detail 3.
4. Polycarbonate Hardening the windows with 10 mm thickness as shown in detail as shown in detail 4.
5. Dismantling the existing polycarbonate then Enhance it with plate 20 cm width and 10 mm thickness around the window.
6. Dismantling the existing frame cable then Enhance it the same new design.
7. Renewal the painting.
8. Dismantling the existing windows glass ther replaced it with polycarbonate with 10 mm thickness.

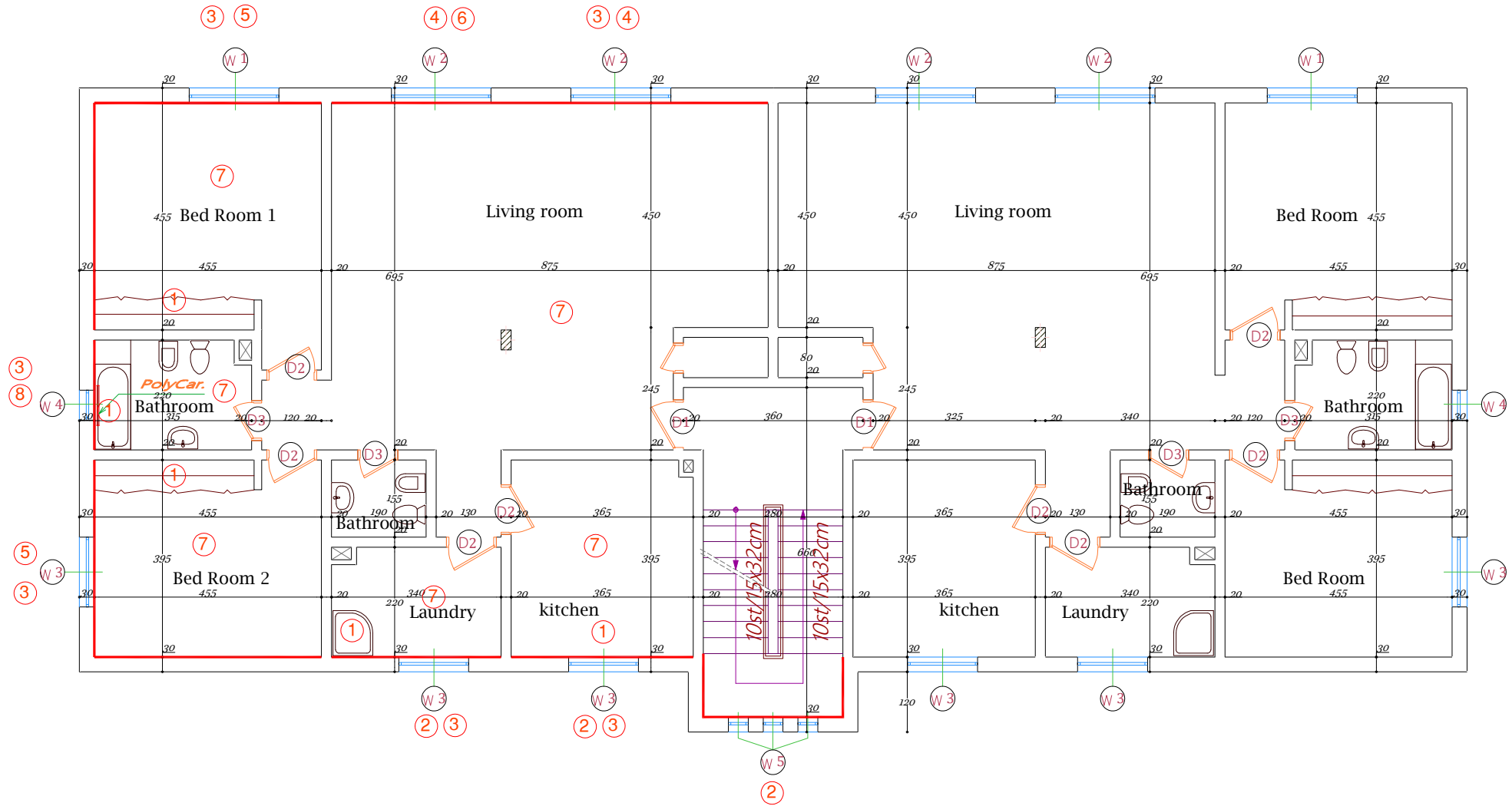
Wall catcher as shown in detail 1

.Windows Schedule

| | DIM | | | No | REMARKS |
|----|-----|-----|-------|----|---------|
| | W | H | S.W.B | | |
| w1 | 180 | 110 | 90 | 2 | |
| w2 | 200 | 200 | 15 | 2 | |
| w3 | 140 | 120 | 100 | 6 | |
| w4 | 60 | 60 | 160 | 2 | |
| w5 | 40 | 60 | 140 | 3 | |
| | | | | | |
| | | | | | |

.Doors Schedule

| | DIM | | No | REMARKS |
|----|-----|-----|----|---------|
| | W | H | | |
| D1 | 100 | 200 | 1 | |
| D2 | 100 | 200 | 4 | |
| D3 | 80 | 200 | 1 | |
| D4 | 80 | 200 | 1 | Armored |
| D5 | 200 | 200 | 2 | |
| D6 | 200 | 200 | 1 | Armored |



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Programme (UNDP)

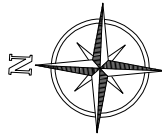


Location UNCAF. Sana'a, Yemen

Project Civil Work for A7 and
A8 Buildings inside UNCAF

Drawing Title

Work in Second Floor



Drawing Type

Architectural Drawing

Date

24 December 2020

Design By

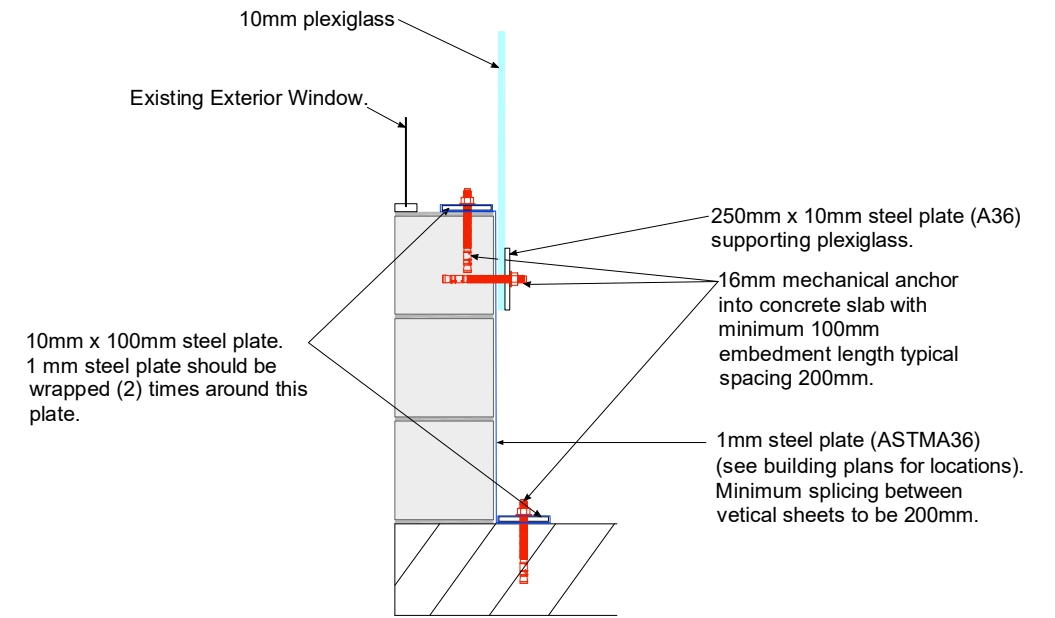
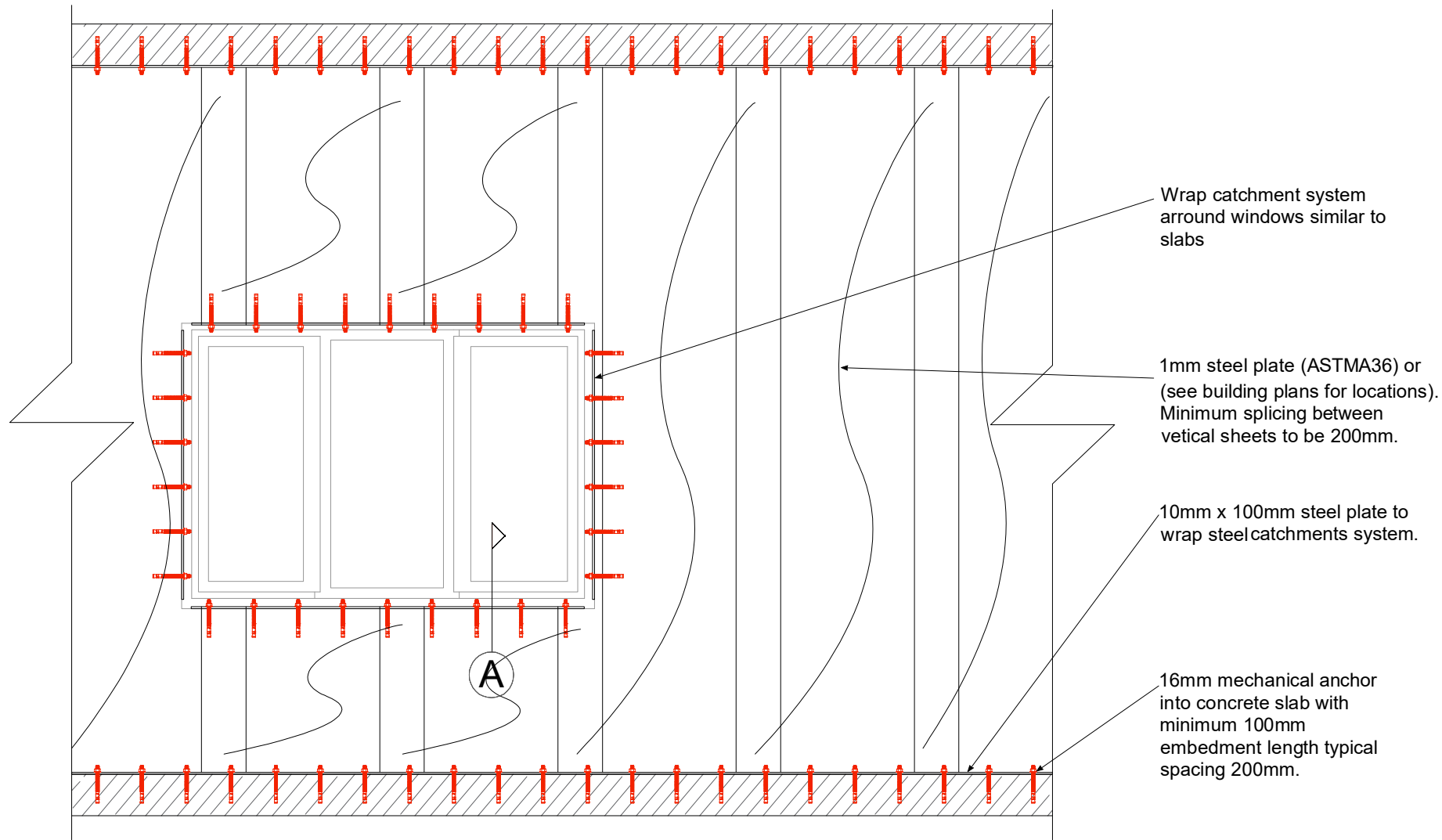
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Window Hardening with *Polycarbonate* and fixing wall catcher in the floor and windows

1

Wall Catchment System

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Programme (UNDP)

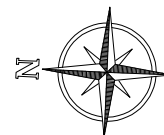


Location UNCAF. Sana'a, Yemen

Project Civil Work for A7 and A8 Buildings inside UNCAF

Drawing Title

Detail 1 Wall Catchments System



Drawing Type

Architectural Drawing

Date

24 December 2020

Design By

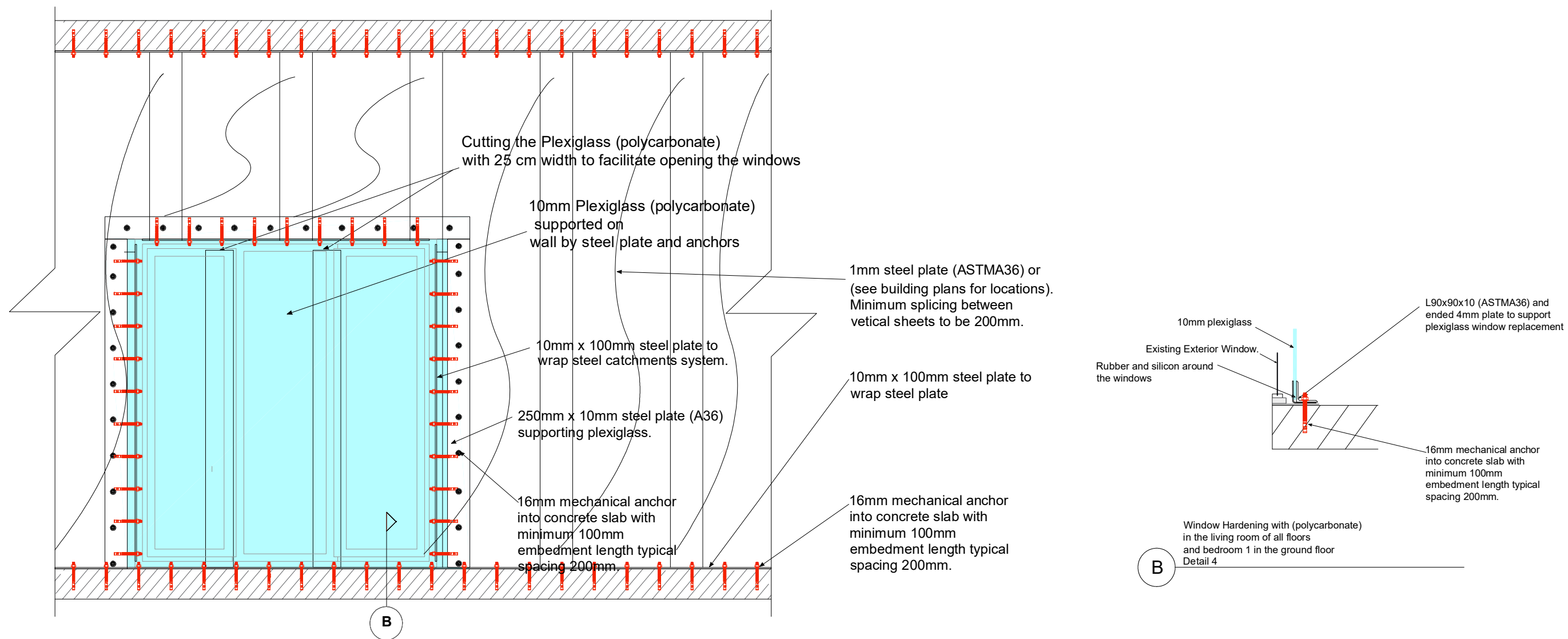
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1 Wall Catchment System

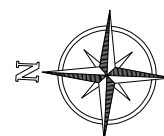
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Programme (UNDP)



Location UNCAF. Sana'a, Yemen
Project Civil Work for A7 and A8 Buildings inside UNCAF

Drawing Title

Detail 1 Wall Catchments System



Drawing Type

Architectural Drawing

Date

24 December 2020

Design By

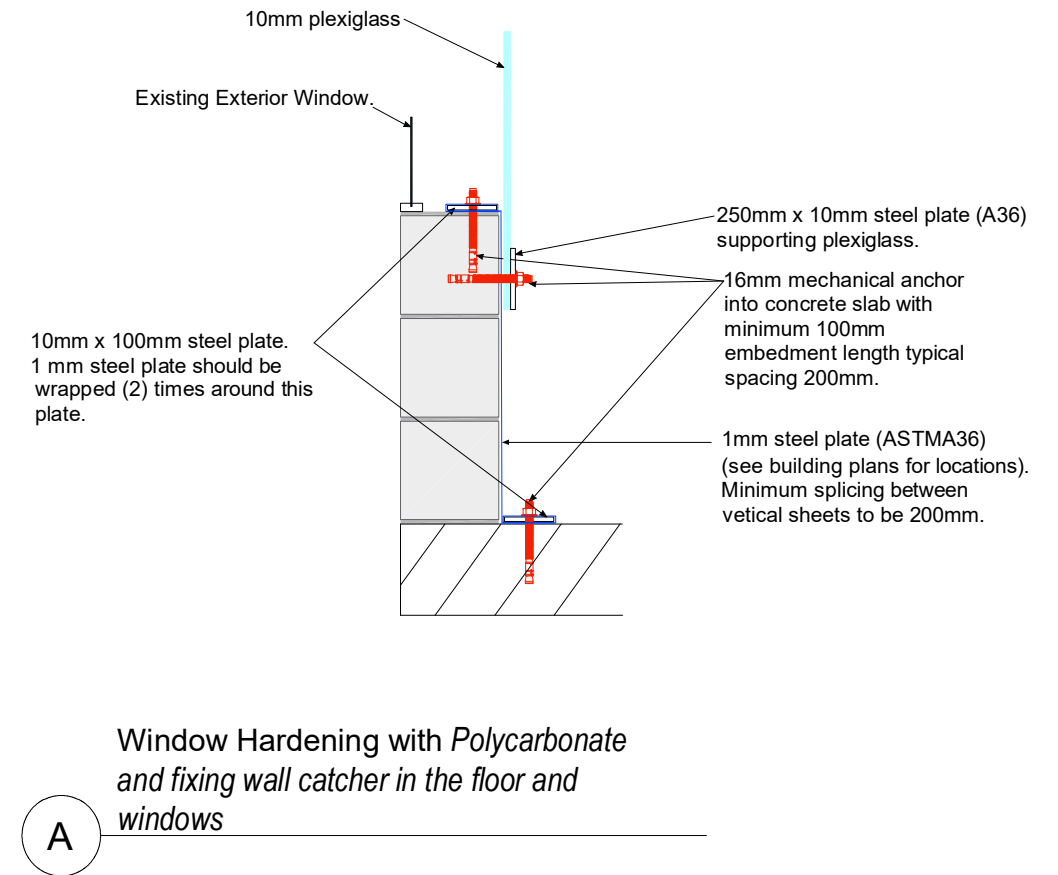
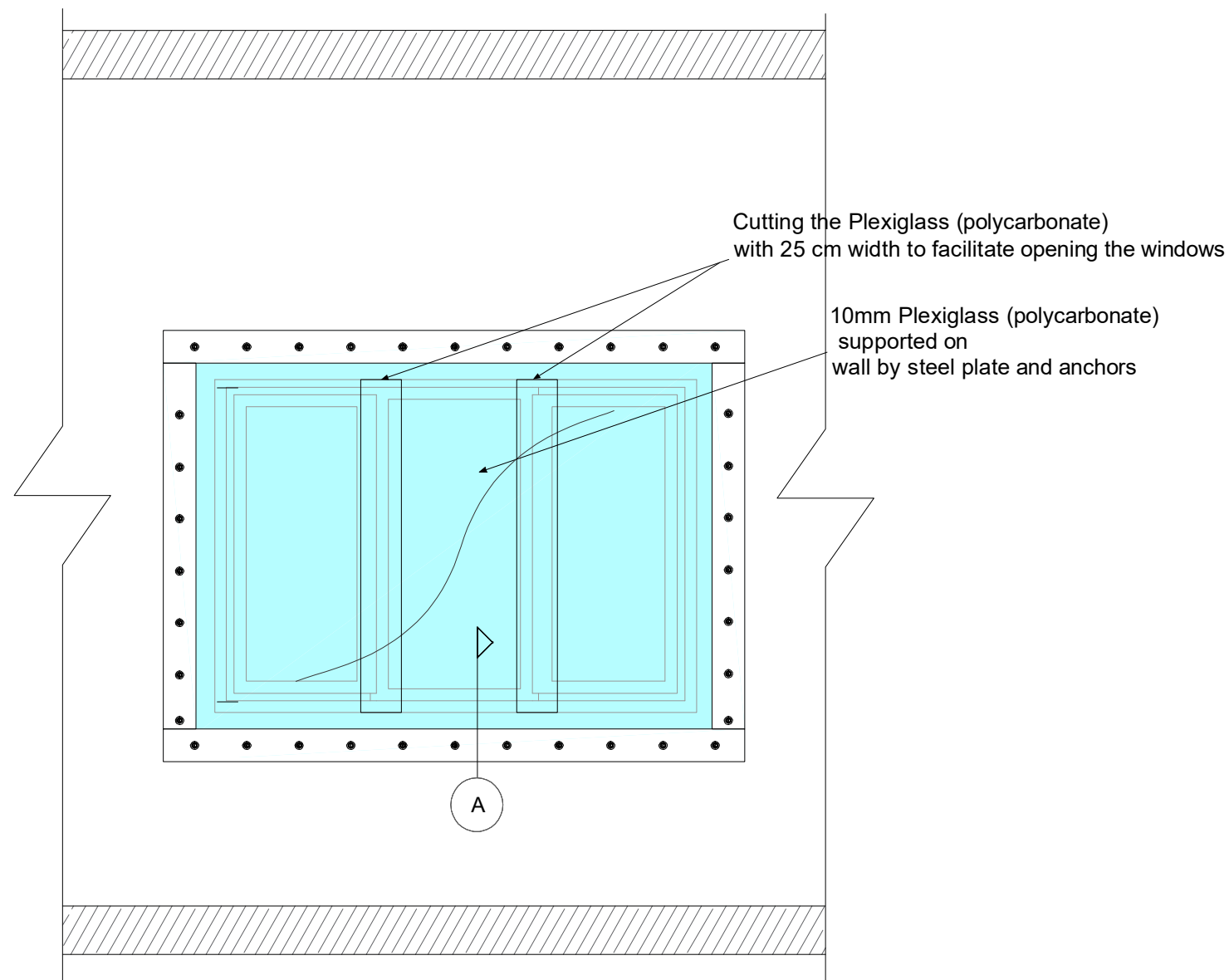
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2 Window Plexiglass Upgrade.

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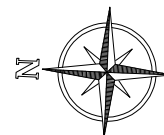


Location UNCAF. Sana'a, Yemen

Project Civil Work for A7 and A8 Buildings inside UNCAF

Drawing Title

Detail 2 Hardening the Windows



Drawing Type

Architectural Drawing

Date

24 December 2020

Design By

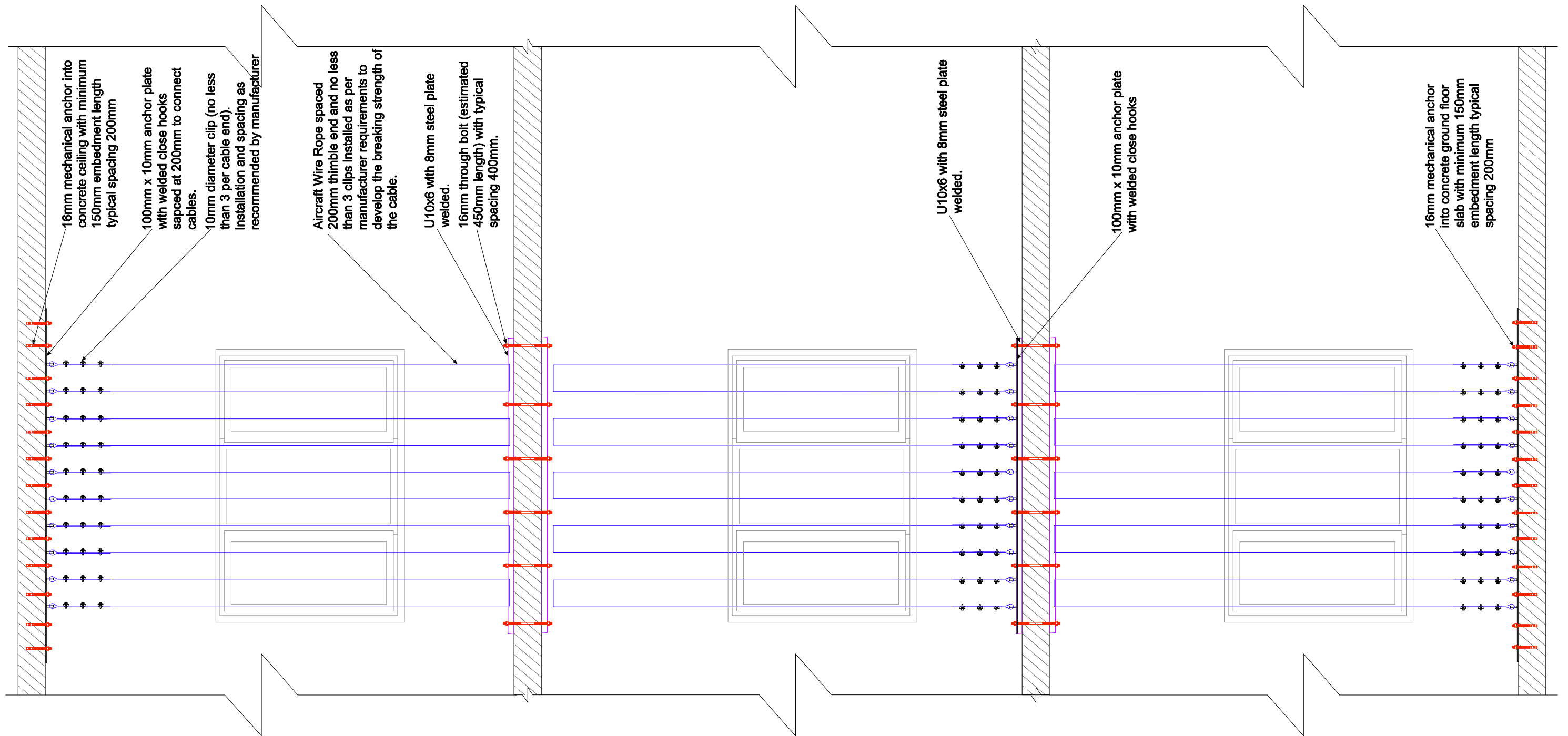
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Drawing No.

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3 Window Cable Catchment System

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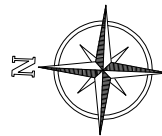


Location UNCAF. Sana'a, Yemen

Project Civil Work for A7 and A8 Buildings inside UNCAF

Drawing Title

Detail 3 Frame catcher cable



Drawing Type

Architectural Drawing

Date

24 December 2020

Design By

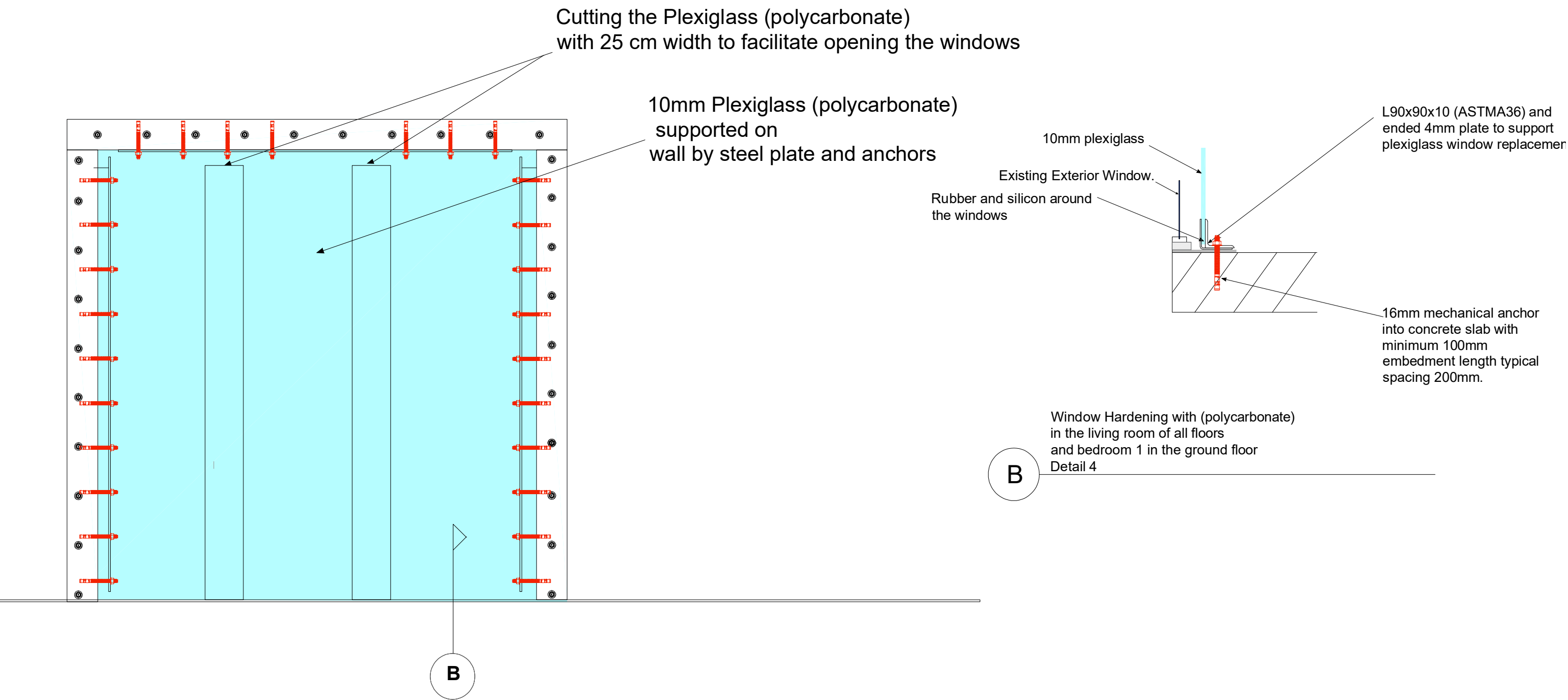
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Drawing No.

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|---|---|--|--------------------------------|---|-----------------------|-----------------------|-------------|
| United Nations Development Programme (UNDP) | |   | Drawing Title |  | Drawing Type | Design By | Drawing No. |
| Location | UNCAF. Sana'a, Yemen | | Detail 4 Hardening the Windows | | Architectural Drawing | UNDP ENGINEERING UNIT | |
| Project | Civil Work for A7 and A8 Buildings inside UNCAF | | | | Date | Status | |
| | | | | | 24 December 2020 | Draft | 9 |