

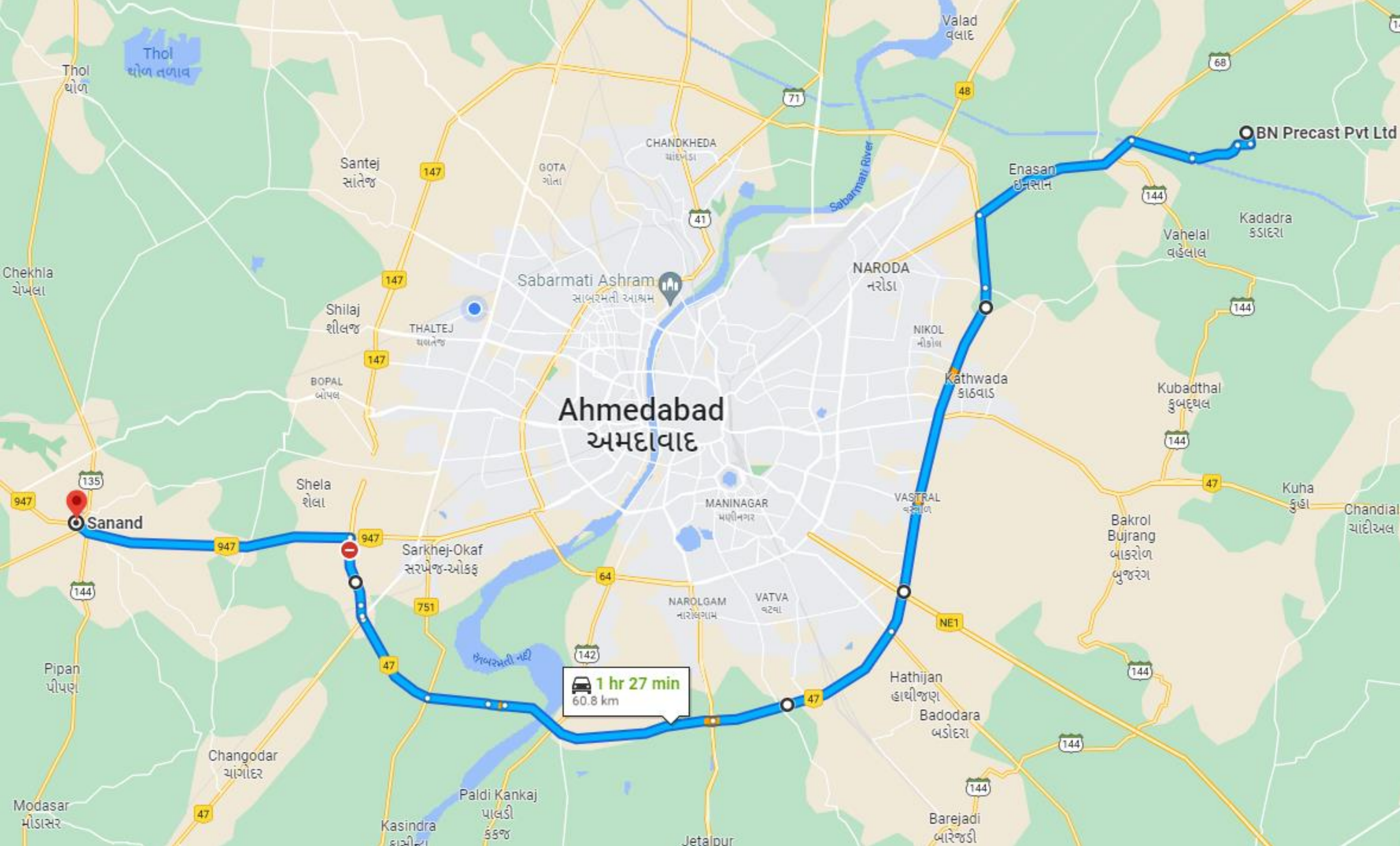


Precast of Industrial Structure | Case Study

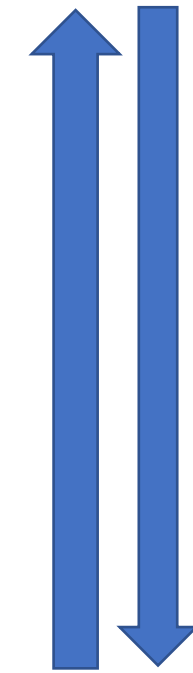


BN PRECAST
bnprecast@gmail.com | www.bnprecast.com

PRECAST EPC CONTRACTOR



Factory : Jalundra
Mota, Dehgam road.



Site : Sanand, Gujarat

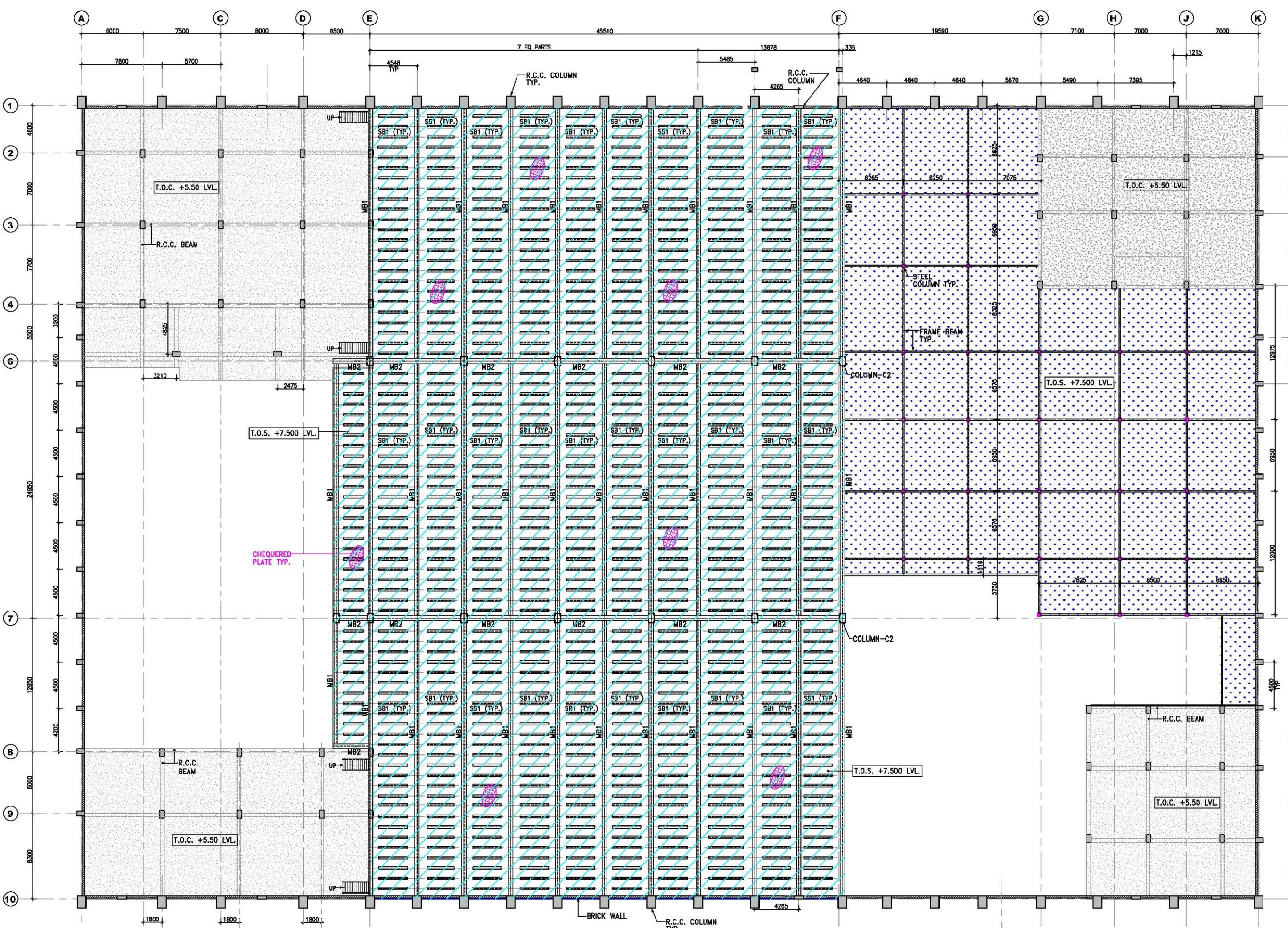
Location of Site and Factory

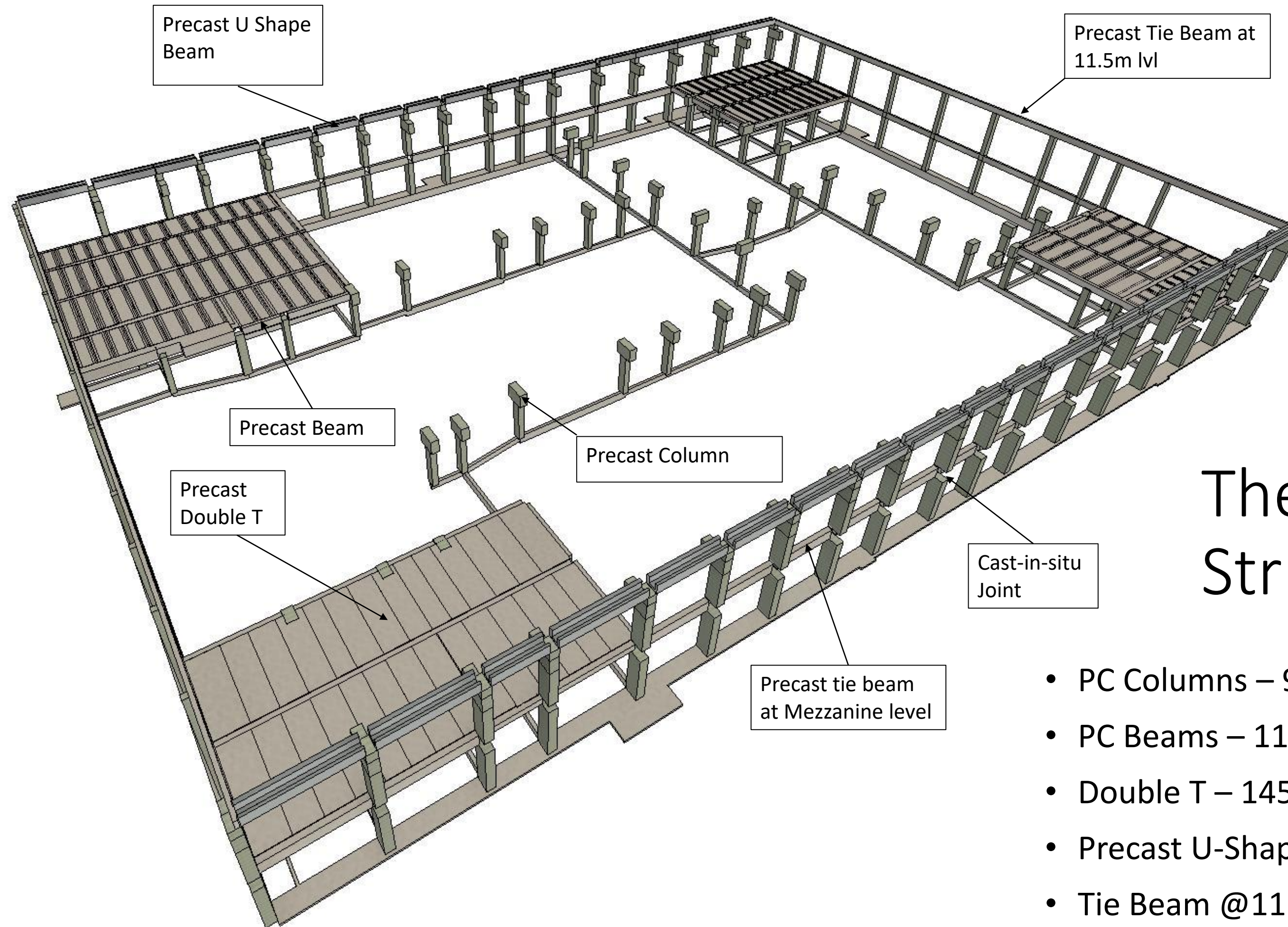


Key Feature

- Total area of $115 \times 77 = 8855\text{m}^2$
- Eave Height – 12m
- Ridge Height – 16.5m
- 4 Mezzanine @ 5.95m lvl
- HVAC & Machinery Floor @ 7.5m lvl
- U shape beam for water down take and resting of Facade wall
- Facade of height 4.5m above the Eave
- 7 free standing staircase

- Original Proposed Plan with
 - 22nos of Rafter
 - 12nos of Mezzanine Beam @7.5m lvl
 - 16 Gable End columns

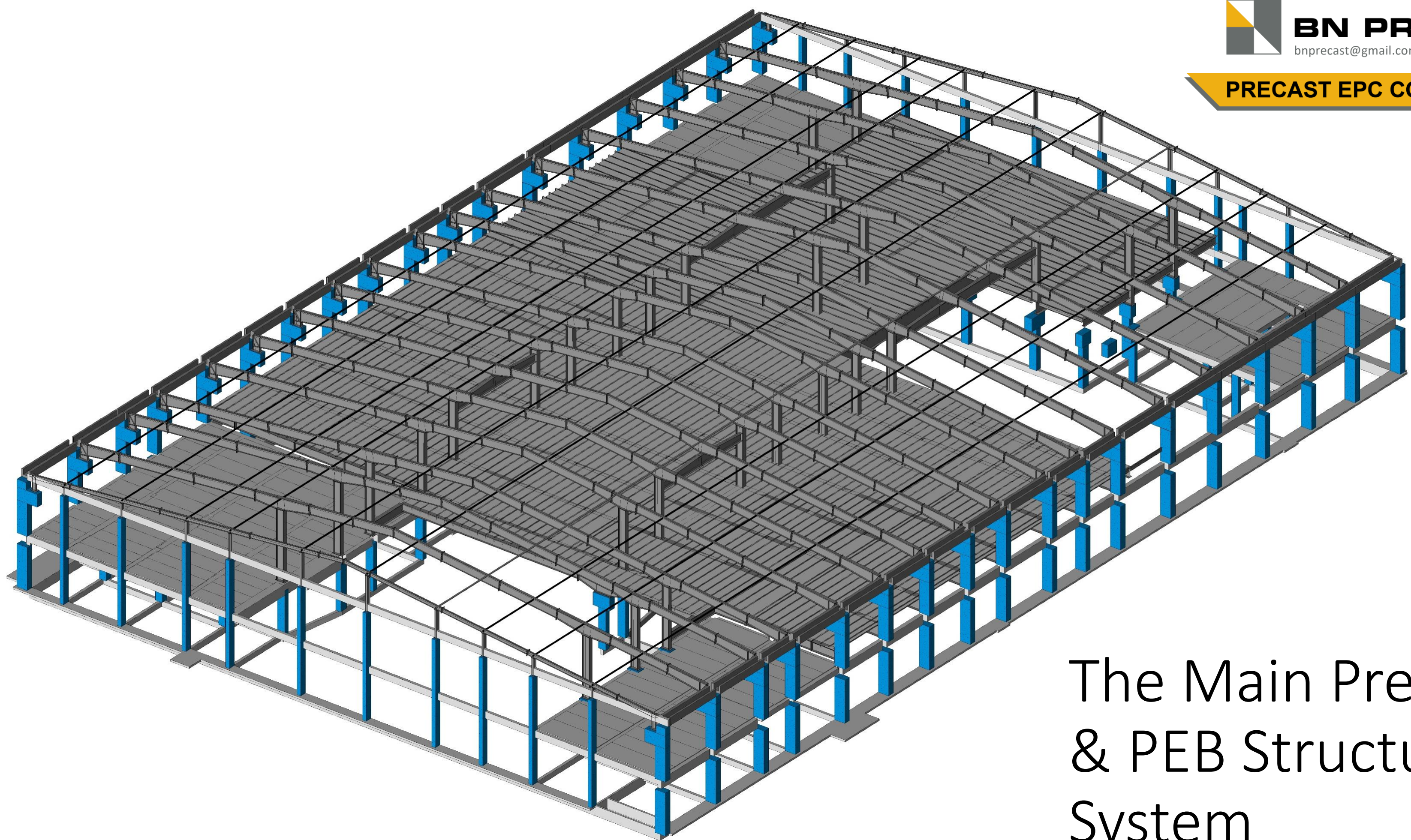




- Final Proposed Plan with
 - 18 nos of Rafter
 - 9 nos of Mezzanine Beam @7.5m lvl
 - 12 Gable End columns

The Main Precast Structural System

- PC Columns – 97(PC-G) + 39(PC-R) = 136
- PC Beams – 113
- Double T – 145
- Precast U-Shape beam – 34
- Tie Beam @11.5m - 23



The Main Precast
& PEB Structural
System

Design Criteria

1. Introduction

1.1. Project Description

Name of the Project / Building	
Location of the Building	Sanand, Gujarat
Purpose & applicability of the building	Factory Building

1.2. Dimension of the building

Maximum plan dimension in either direction	: 114200 x 77000 mm
No. of Floors	: GF + Mezzanine + Rafter
Maximum height of building	: 17000 mm

1.3. Structural System

SN	Specification	Detail
1.	TYPE	RCC Column/Beam/Slab, PEB RAFTER SYSTEM Symmetrical Frame / Ridge clear span. Mezzanine beam rest on RCC column at internal location
2.	FUTURE EXPANSION	Future Expansion of building is considered on grid no 12.
3.	WIDTH	77.0 meter C/C of Steel Column/RCC COLUMNS
4.	LENGTH	114.200 meter C/C of Steel Column/RCC COLUMNS
5.	CLEAR HEIGHT	11.500 meter
6.	ROOF SLOPE	1:10
7.	BAY SPACING	1 @ 7.82MC/C + 1 @ 7.483MC/C+1 @ 6.187MC/C + 1 @ 6.38MC/C + 1 @ 6.871MC/C +2 @ 6.285MC/C + 1 @ 5.652MC/C + 1 @ 7.17MC/C +1 @ 5.17MC/C + 1 @ 5.528MC/C + 1 @ 7.7MC/C +1 @ 7.234MC/C + 1 @ 7.467MC/C + 1 @ 7.192MC/C + 1 @ 6.778MC/C + 1 @ 7.0MC/C
8.	INTERNAL COLUMN GRID SPACING	1 @ 27.25M C/C + 1 @ 25.275M C/C
9.	END WALL COLUMN GRID SPACING	AS PER PROPOSAL DRAWING
10.	ROOF SHEETING	30 mm PUFF PANEL with Top & bottom 0.5mm Color coated galvalume sheet.
11.	WALL	As Suggested in Proposed Plan
12.	Periphery Sheeting	N/A
18.	ADDITIONAL LOAD	FOR FALSE CEILING FROM RAFTER & BELOW MEZZANINE.
19.	WIND LOAD	AS PER IS 875 (Part-3) 2015

1.4. Structural System for PEB

SN	Specification	Detail
1.	Response Reduction Factor	5
2.	Importance Factor	1
3.	Damping	5%
4.	TYPE OF FRAME	OMF
5.	WEBS & FLANG	SEMI COMPACTED CONSIDERED.
		0.99 STRESS RATIO MENTIONED
6.	SLENDERNESS RATIO FOR BRACING	350
7.	BRACING TYPE	TUBE/PIPE
8.	CONNECTION DESIGN	ACTUAL MOMENT AT SPLICE LOCATION CONDIDERED.
9.	MEZZANINE CHEQURED PLATE	6mm
10.	MEZZANINE LL + Hanging load	800 kg/m2
11.	MEZZANINE CHEQURED PLATE PLATFORM LVL	7.5m TOP.
12.	MEZZANINE BEAM & JOIST TAPERED	Yes
13.	WALL SHEETING,FRAME OPENING,CANOPY.	No

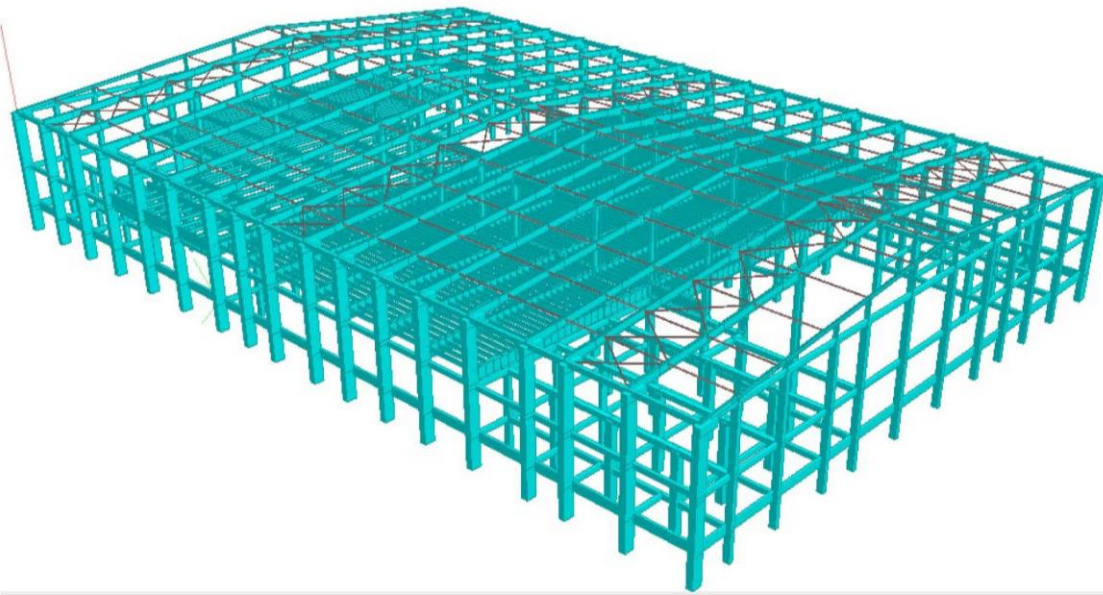


Fig- 1Schematic 3D View of Whole Structure

2. MATERIAL SPECIFICATION

2.1. Concrete for Cast in Place (CIP) Sub-structure

The specified concrete shall have a minimum cement content of 373 kg/m³, Ordinary Port- land cement and a maximum water to cement ratio of 0.5. The concrete grade shall be M25 with maximum 20 mm coarse aggregates. The compressive strength (fck) at 28 days shall be 25N/mm² based on 150 mm cube crushing strength.

2.2. Concrete for Precast Sub-structure & Precast Super-structure

The specified concrete shall have a minimum cement content of 360 kg/m³, Ordinary Port- land cement and a maximum water to cement ratio of 0.45. The concrete grade shall be M40 with maximum 20 mm coarse aggregates. The compressive strength (fck) at 28 days shall be 40N/mm² based on 150 mm cube crushing strength.

2.3. Reinforcement Bar

Reinforcement steel shall be high yield strength hot rolled or cold worked deformed bars with characteristic strength fy= 500 N/mm². The minimum diameter of used reinforcement will be T8 and the largest size used will be T32.

2.4. Fabricated Structure

- Primary member : 345Mpa Gr-50
- Secondary CF : 275GSM, 345Mpa.
- Hardware : HSFG Black Bolts
- Chequered Plate : With Paint & Full Welding
- Roof sheet : 30mm PUFF PANEL with Top & bottom 0.5mm Color coated galvalume sheet.

Material Design Parameters

Description	Value
Ec = 5000vfck (M40)	31662.8 N/mm ²
Poisson's ratio (concrete)	0.2
Elastic modulus of steel, Es	200000 N/mm ²
Poisson's ratio (steel)	0.3

Chequered plate = 50 kg/m²

Wall load from Plinth to Tie level (250mm thick wall including plaster) = 5.5 x 0.25 x 20 = 27.5 kN/m

Wall load at Elevation level (250mm thick wall including plaster) = 4 x 0.25 x 20 = 20 kN/m

Wall load from tie to Eave height (250mm thick wall including plaster) = 6.6 x 0.25 x 20 = 33 kN/m

Screed Weight on slab (Included in double T beam design) = 0.06 x 25 = 1.6kN/m²

SIDL (Floor finish) (Included in double T beam design) = 3 kN/m²

3.2. Live load & Collateral Load (Ref: Table 1 IS: 875 (Part 2) – 1987)

Typical Floor areas = 8 kN/m²

Canteen Area = 3 kN/m²

Roof Live load = 0.6 kN/m²

Non-walkable ceiling load = 7.65 x 0.5 = 3.825 kN/m

Cable tray load = 40 kg/m²

Load on rafter = 3 kN/m

Pipe Rack load = 5 kN/m

Machinery load =

3.3. Seismic Load

Seismic loads calculated in accordance with IS 1893 and analysis is performed using the codal Equivalent Static Lateral Force Method.

Seismic Load Parameter

Description	Nomenclature	Value	Reference
Zone Factor	III	0.16	IS: 1893
Soil Type	Medium	II	IS: 1893
Importance Factor	I	1	IS: 1893
Response Reduction Factor (Table 7)	R	5	IS: 1893

Seismic dead weight will be in accordance with IS 1893:2016.

3. Loads

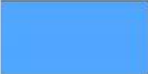

3.1. Dead Load

Self-weight of Double Tee PC Slab = 5.65 kN/m²

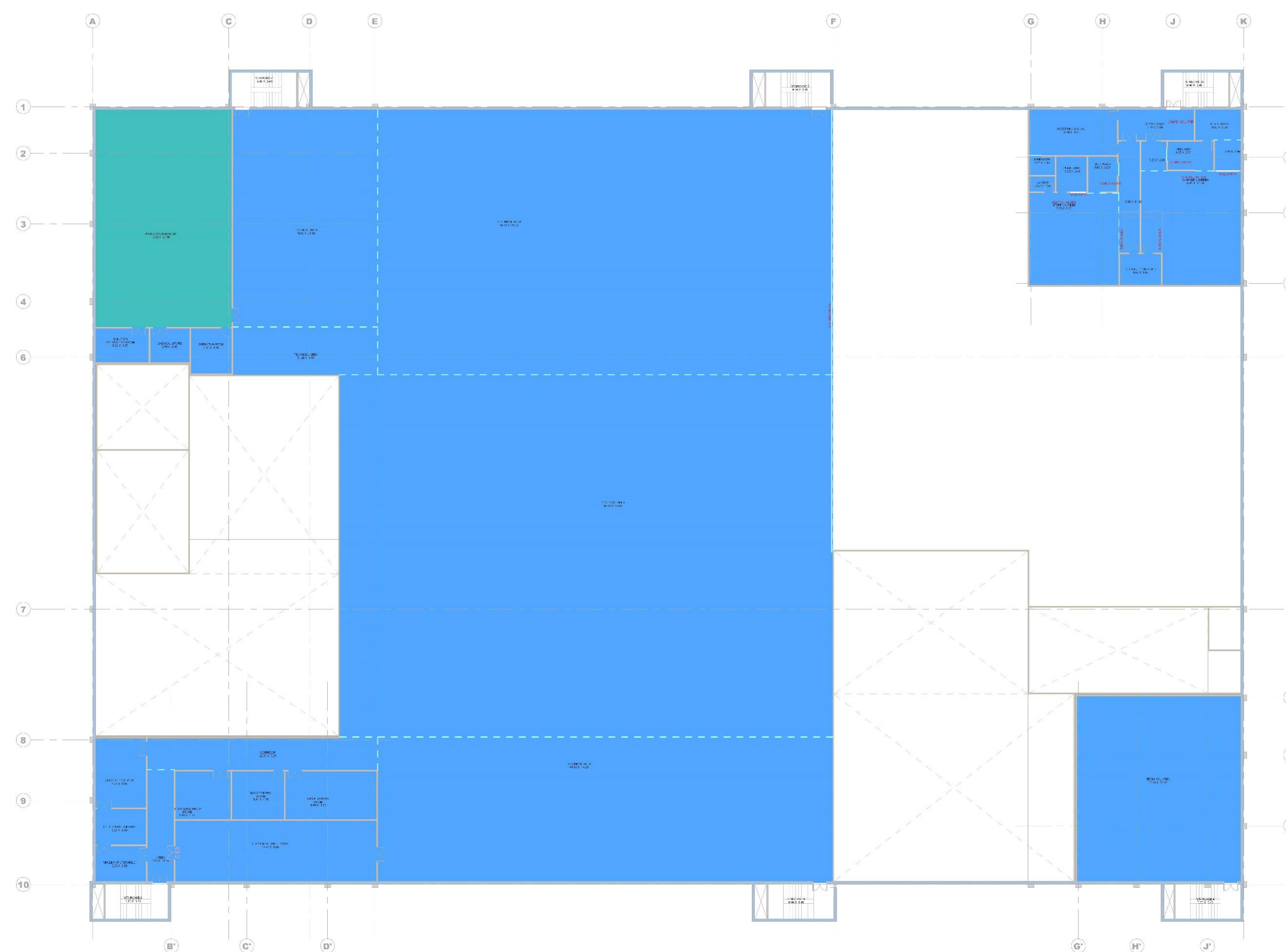
Dead load on Roof rafter = 0.1x7.65 = 0.765 kN/m

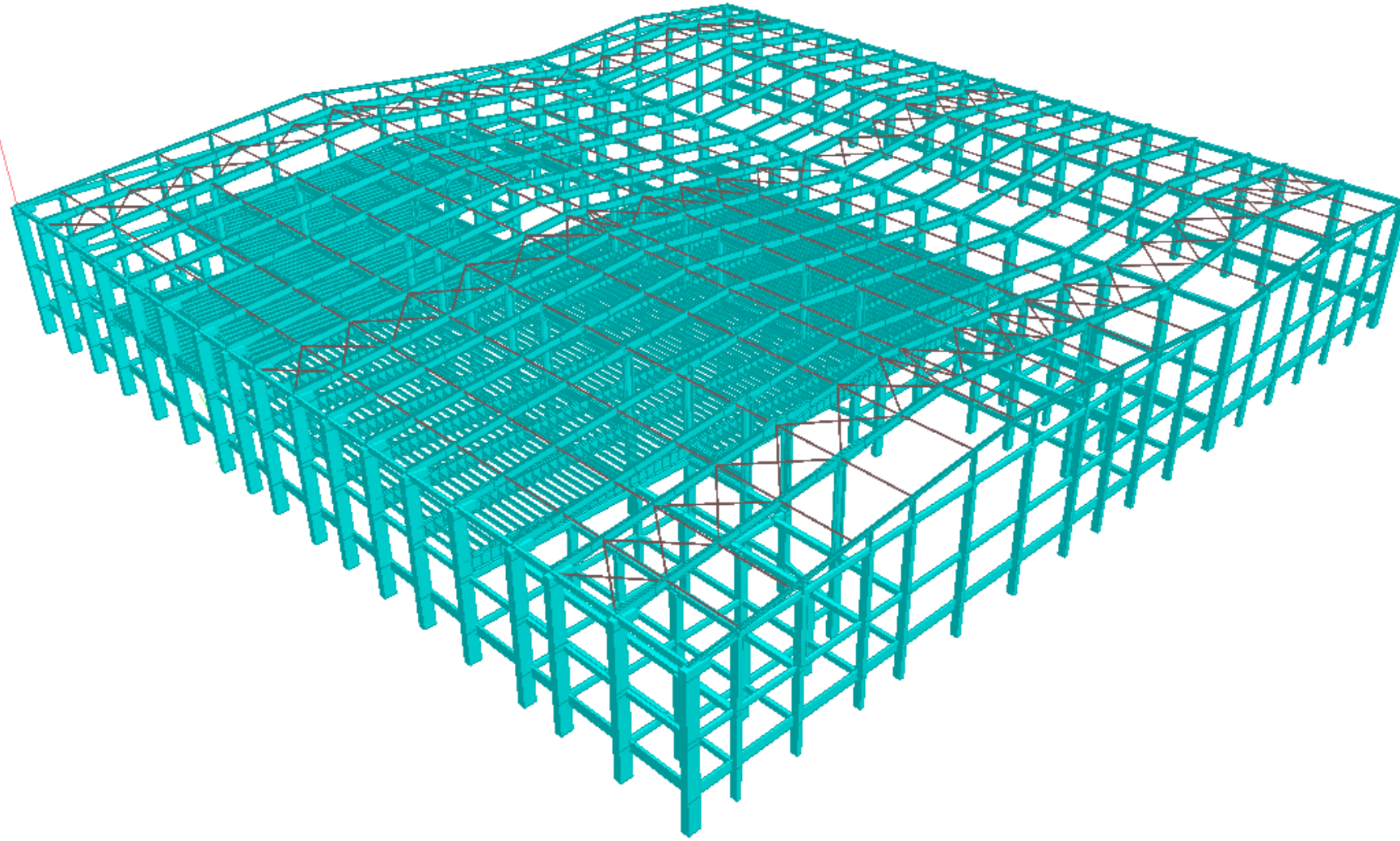
Loading Data

Slab Load Leagend

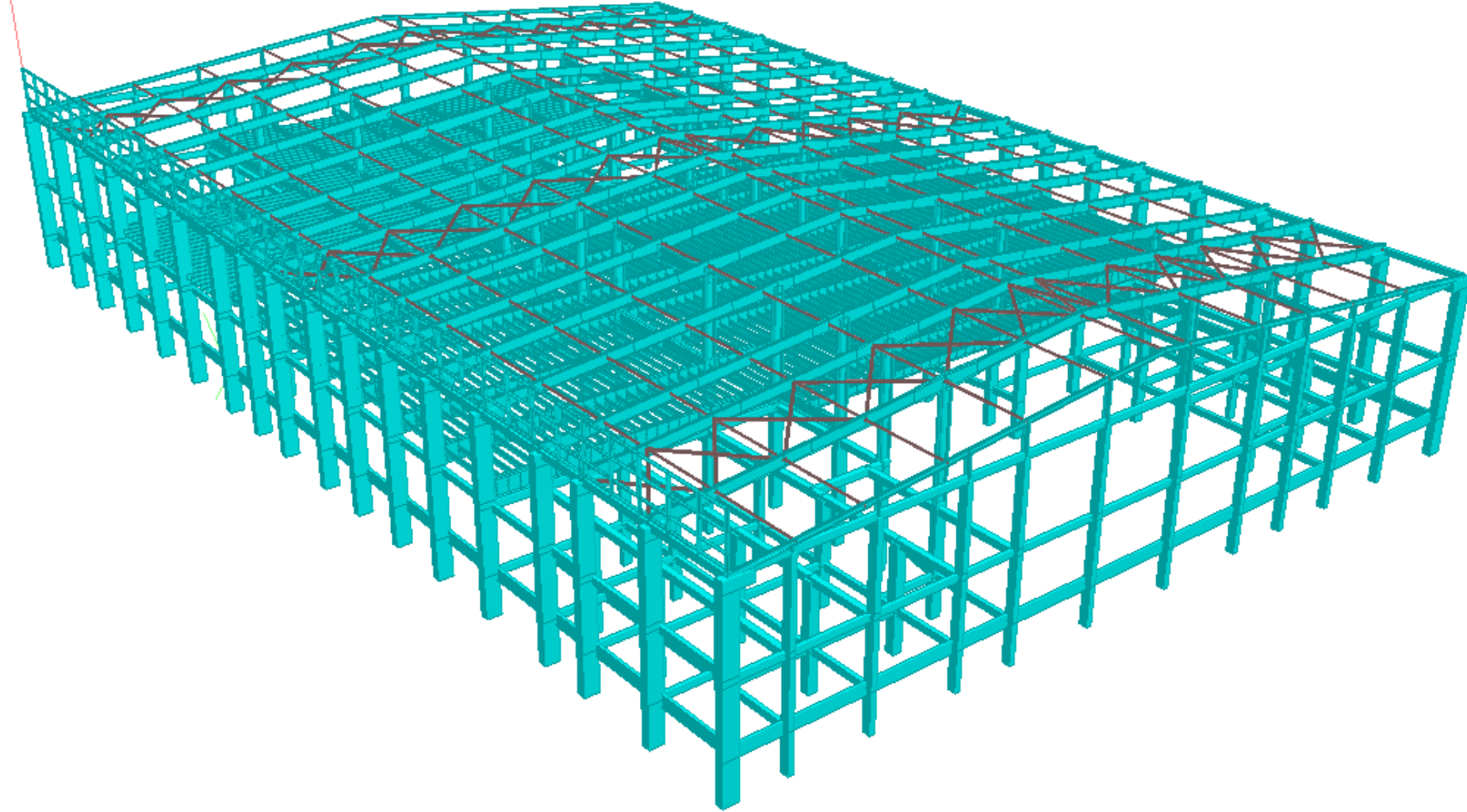
	800 KG PER SQUAER METER
	5000 KG PER SQUARE METER

Mezzanine Floor
Plan @ 5.95m lvl



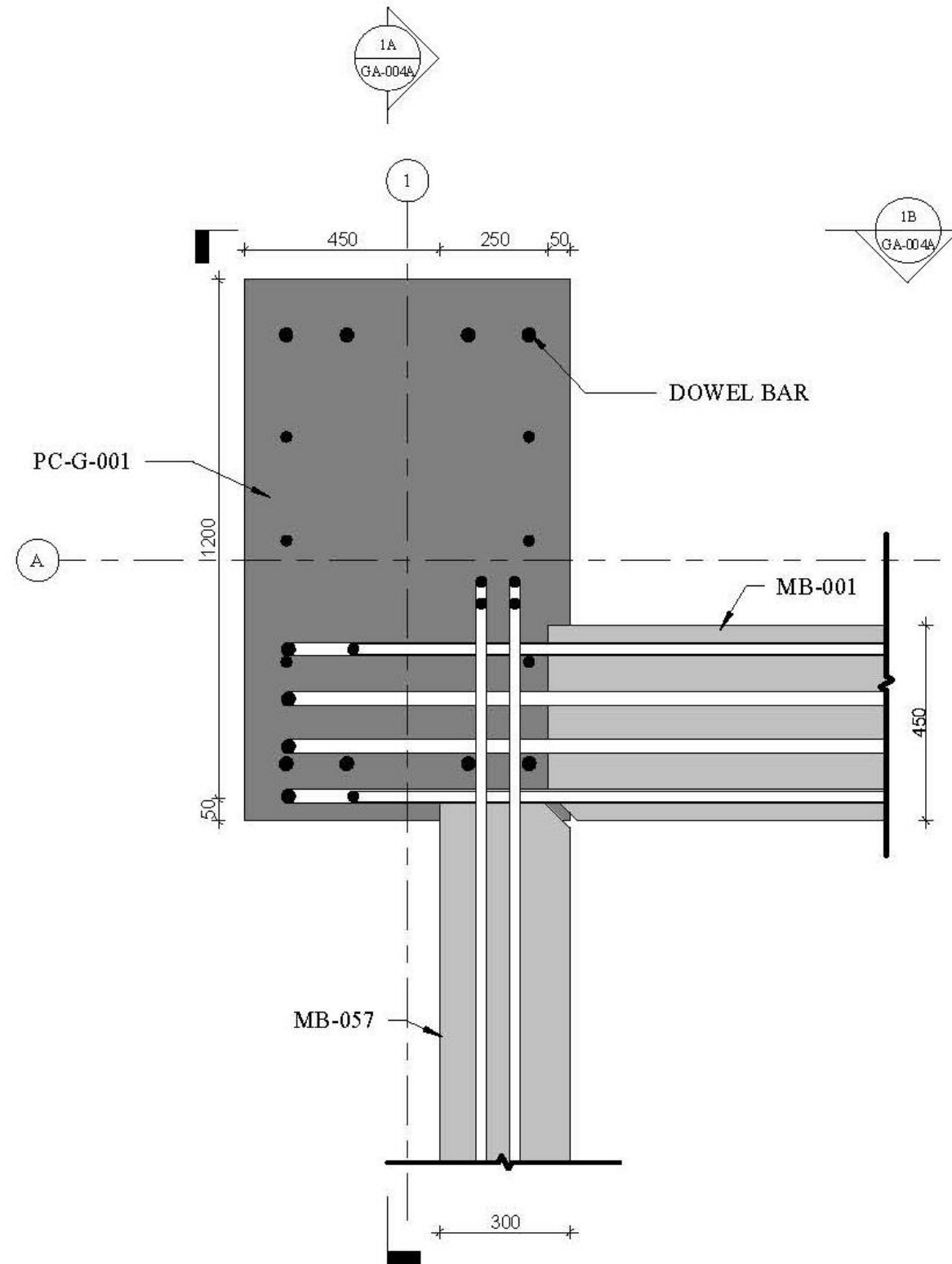


- Initially Main building and future expansion building were connected to each other.
- Building has been designed as per picture shown above.

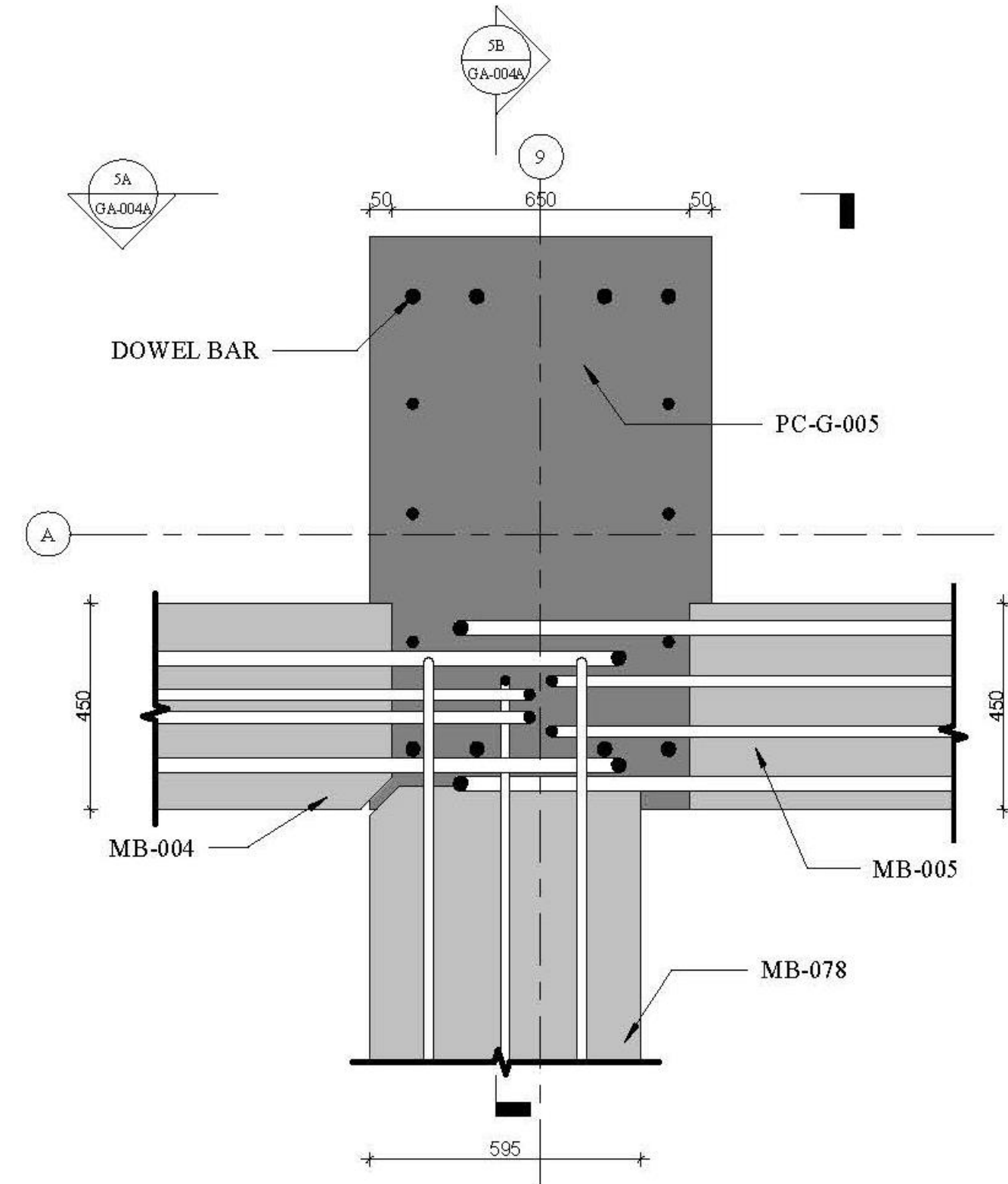


- But Building is executed as per picture shown above.

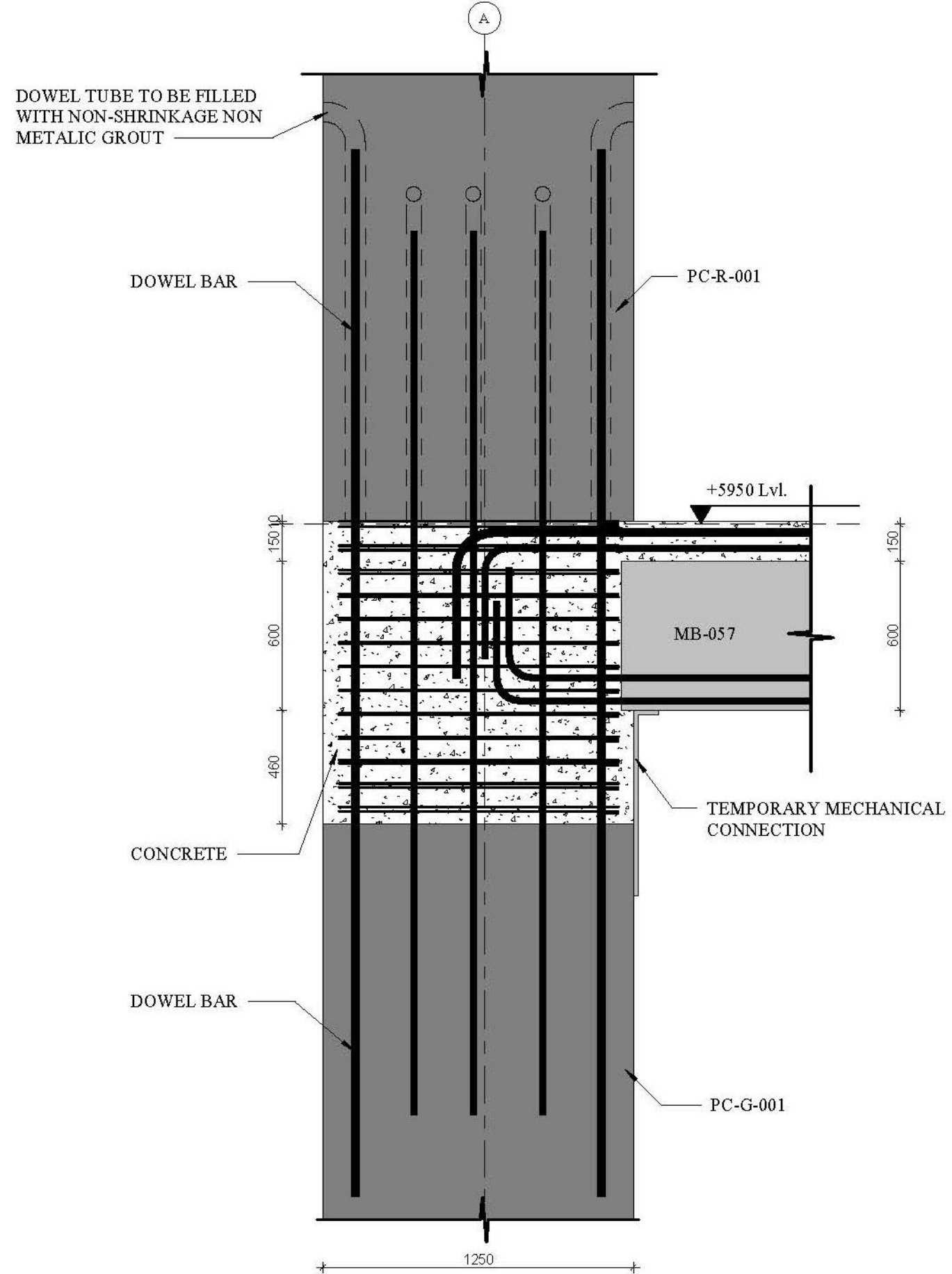
Structural Connection



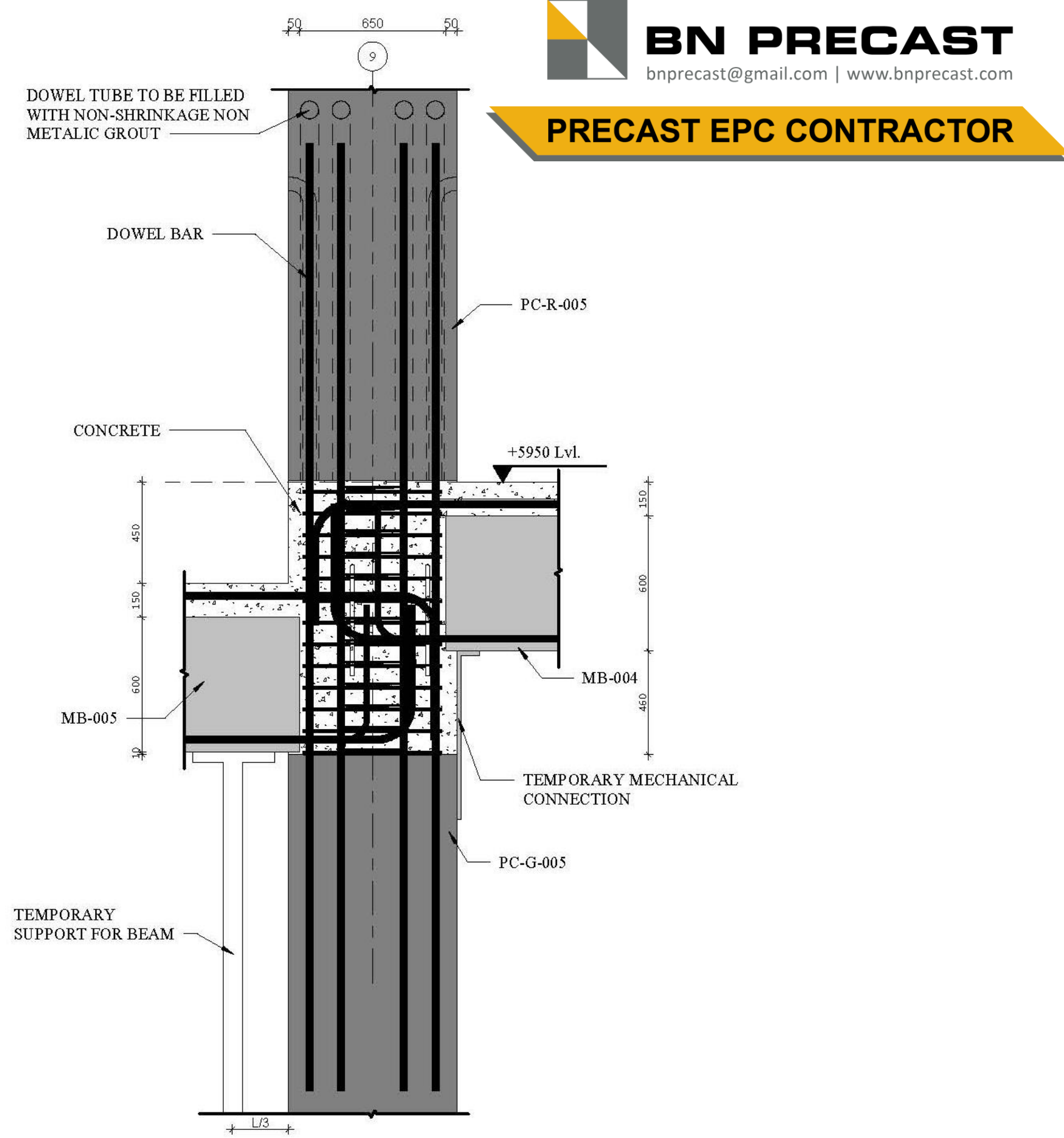
2 beam to Column Connection Plan



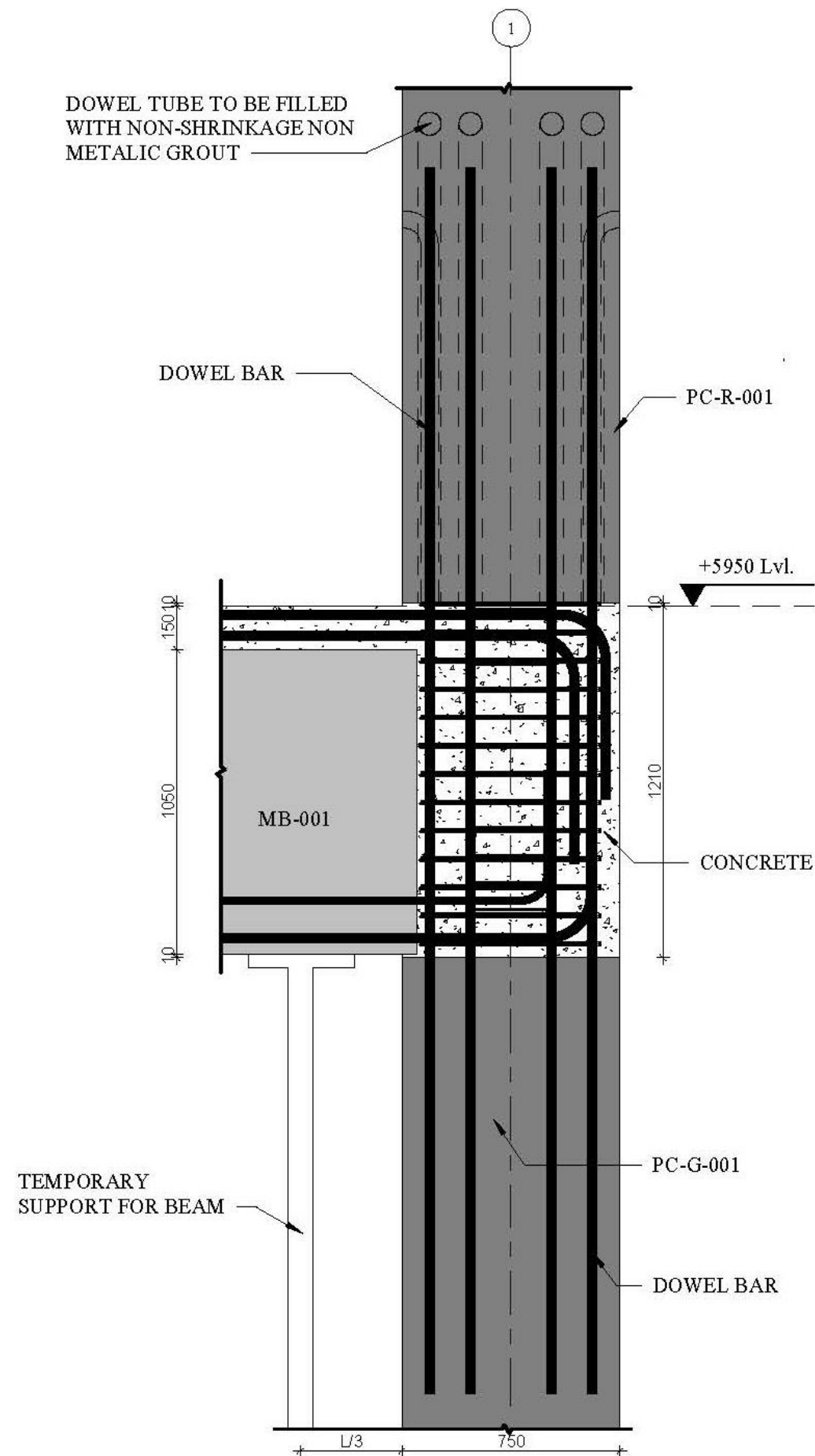
3 beam to Column Connection Plan



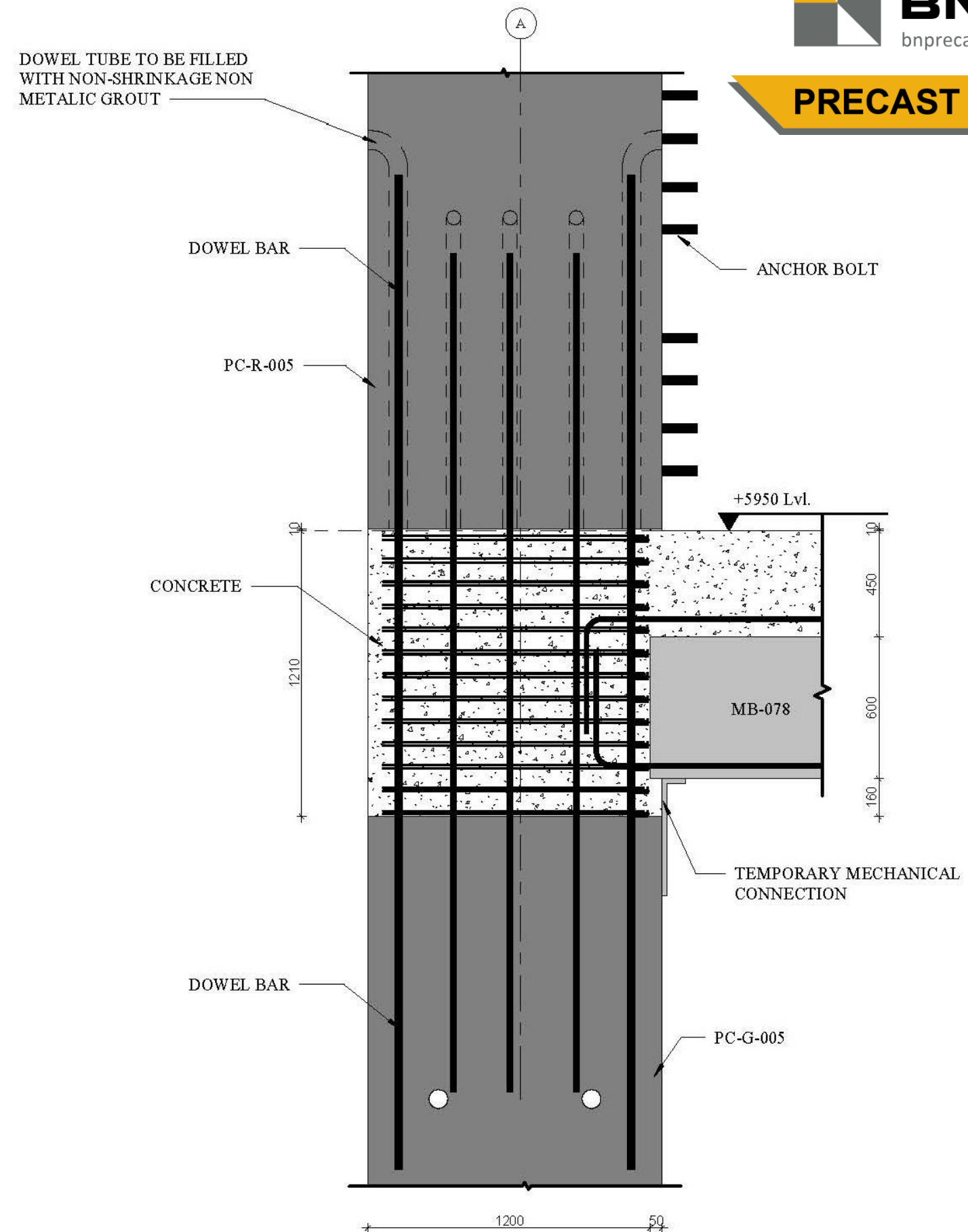
1 beam to Column Connection Section



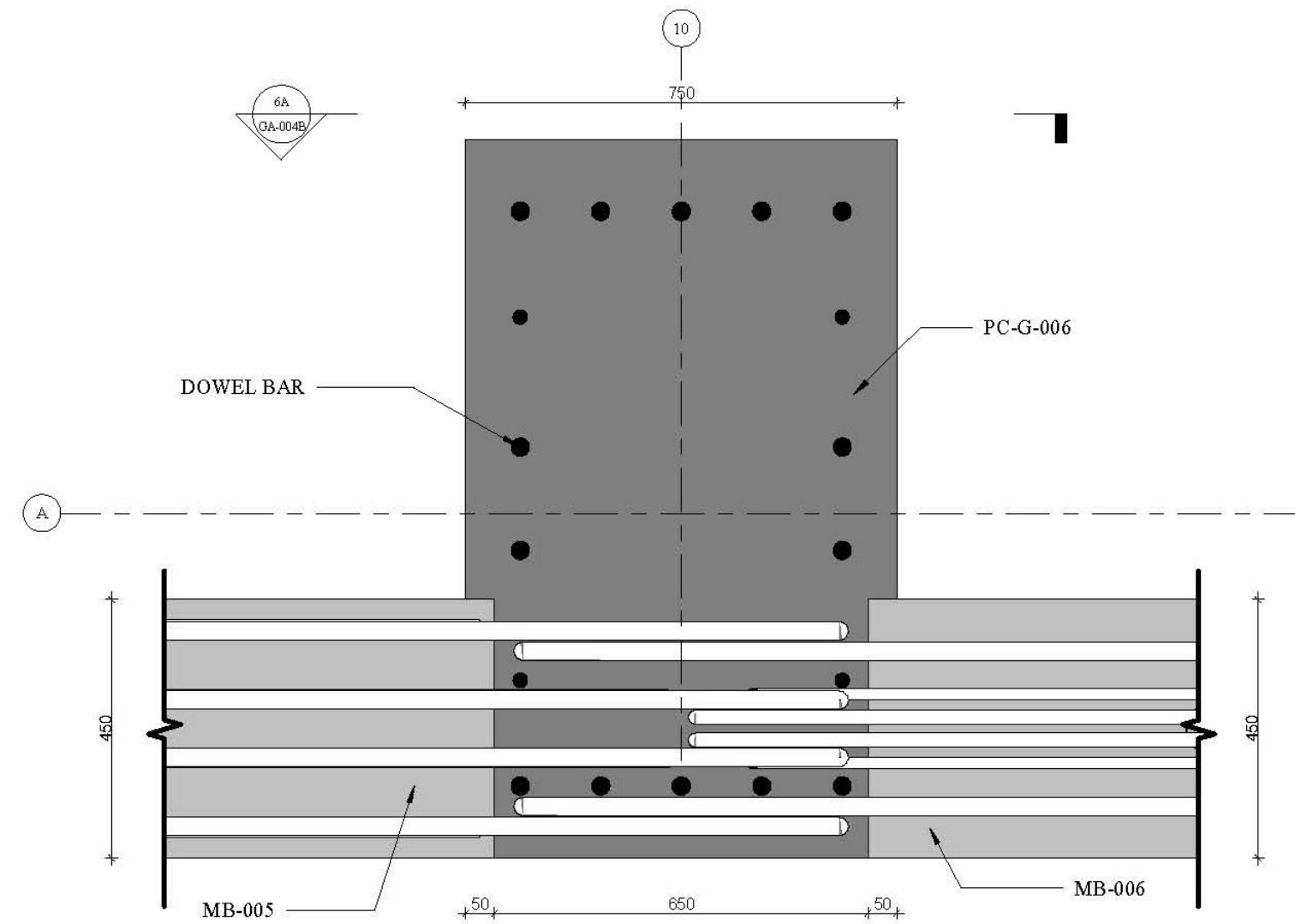
2 beam to Column Connection Section



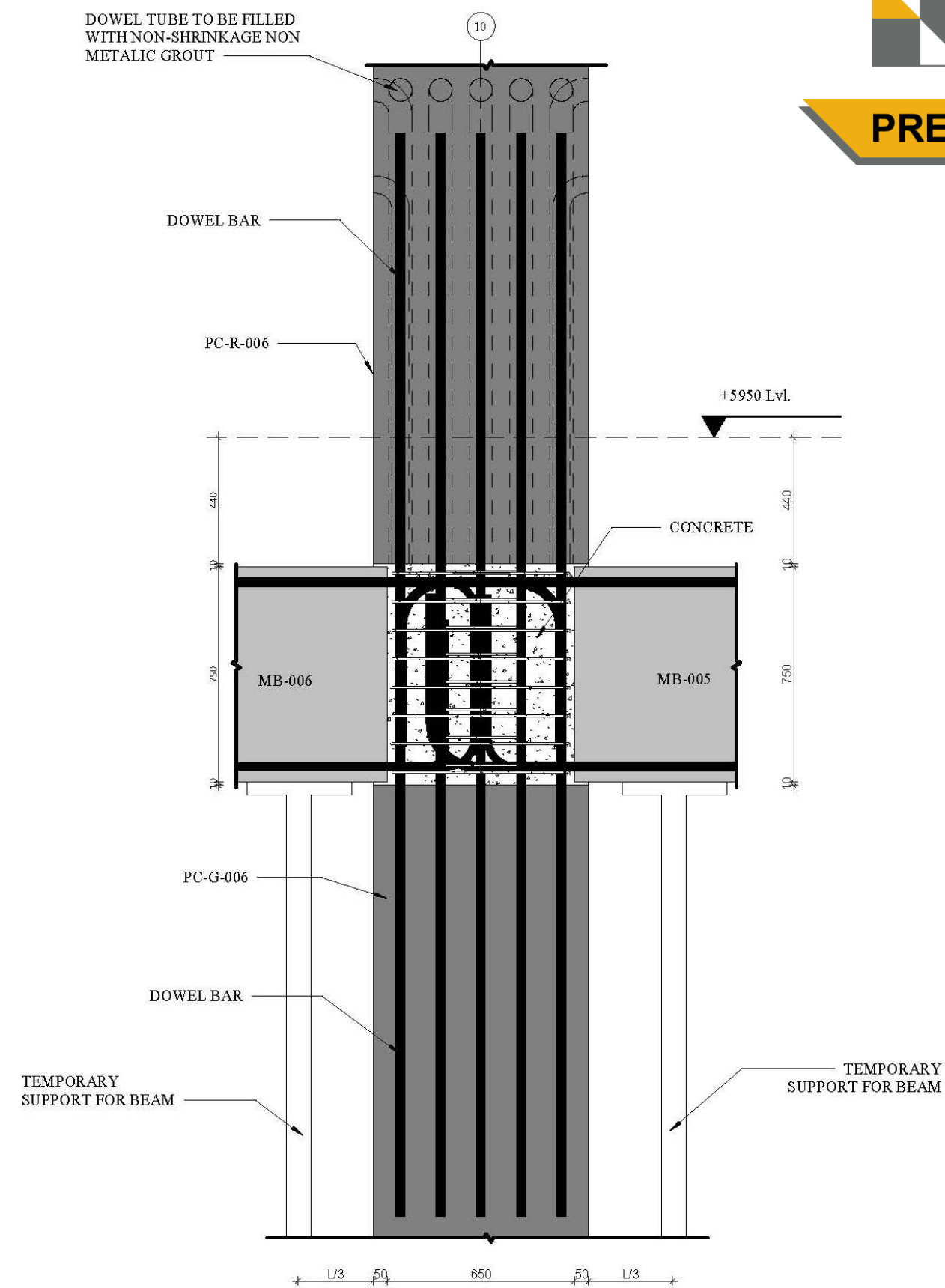
1 beam to Column Connection Section



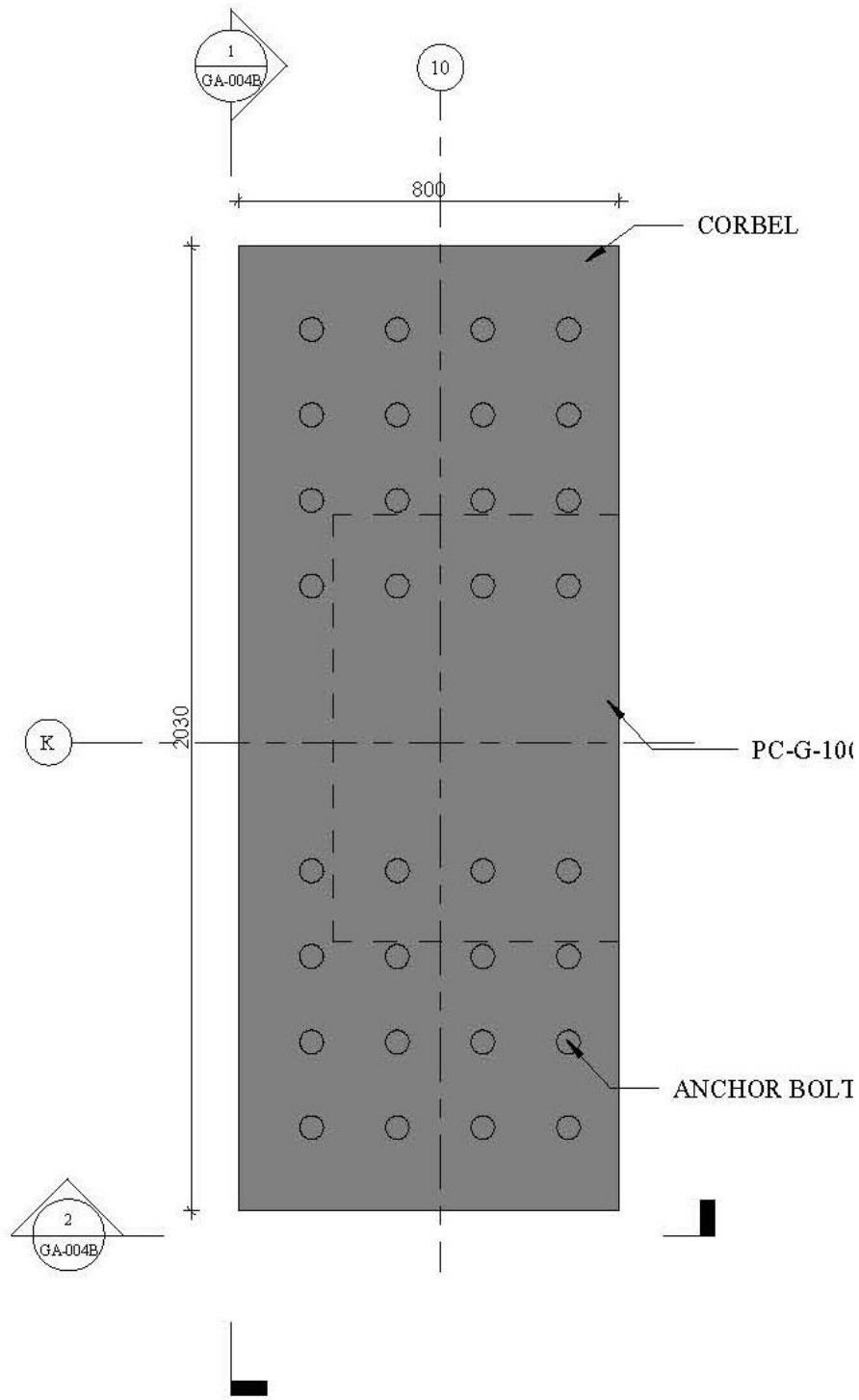
1 beam to Column Transverse Connection Section



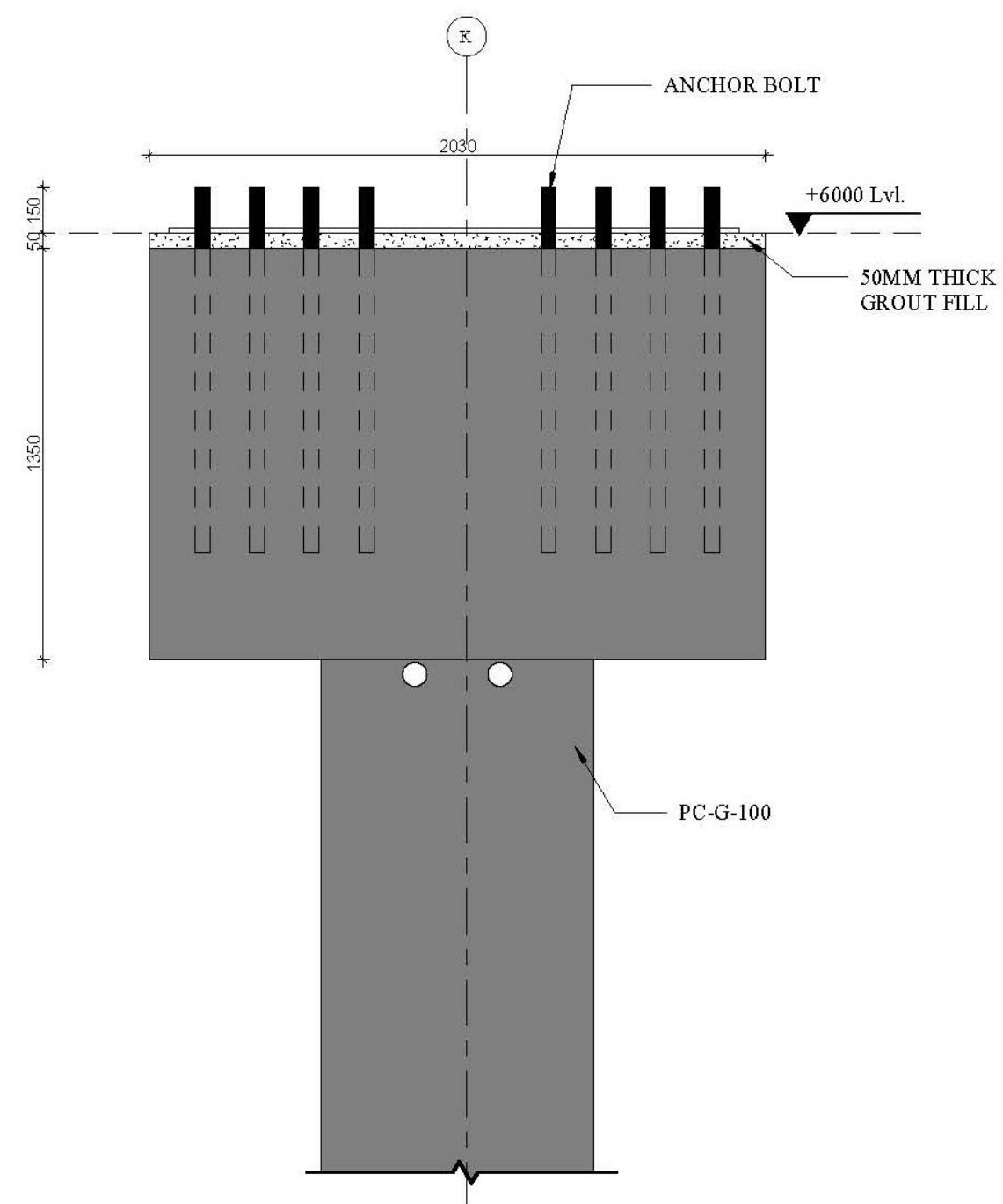
2 Consecutive beam to Column
Connection Plan Section



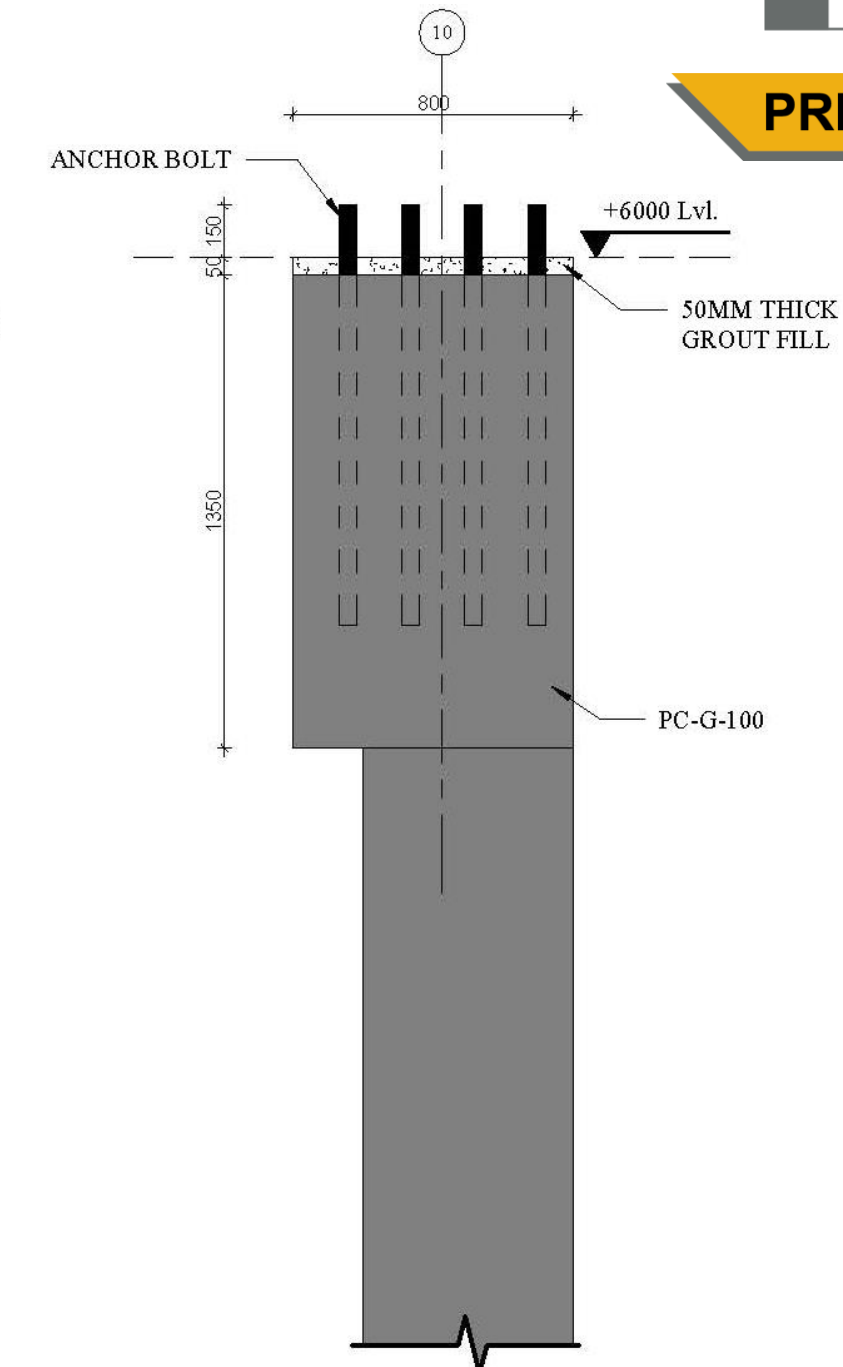
2 Consecutive beam to Column
Connection Vertical Section



Plan of Column Corbel



Longitudinal Elevation of Column Corbel



Transverse Elevation of Column Corbel

Site Photos

Excavation
for Footing
July 2021

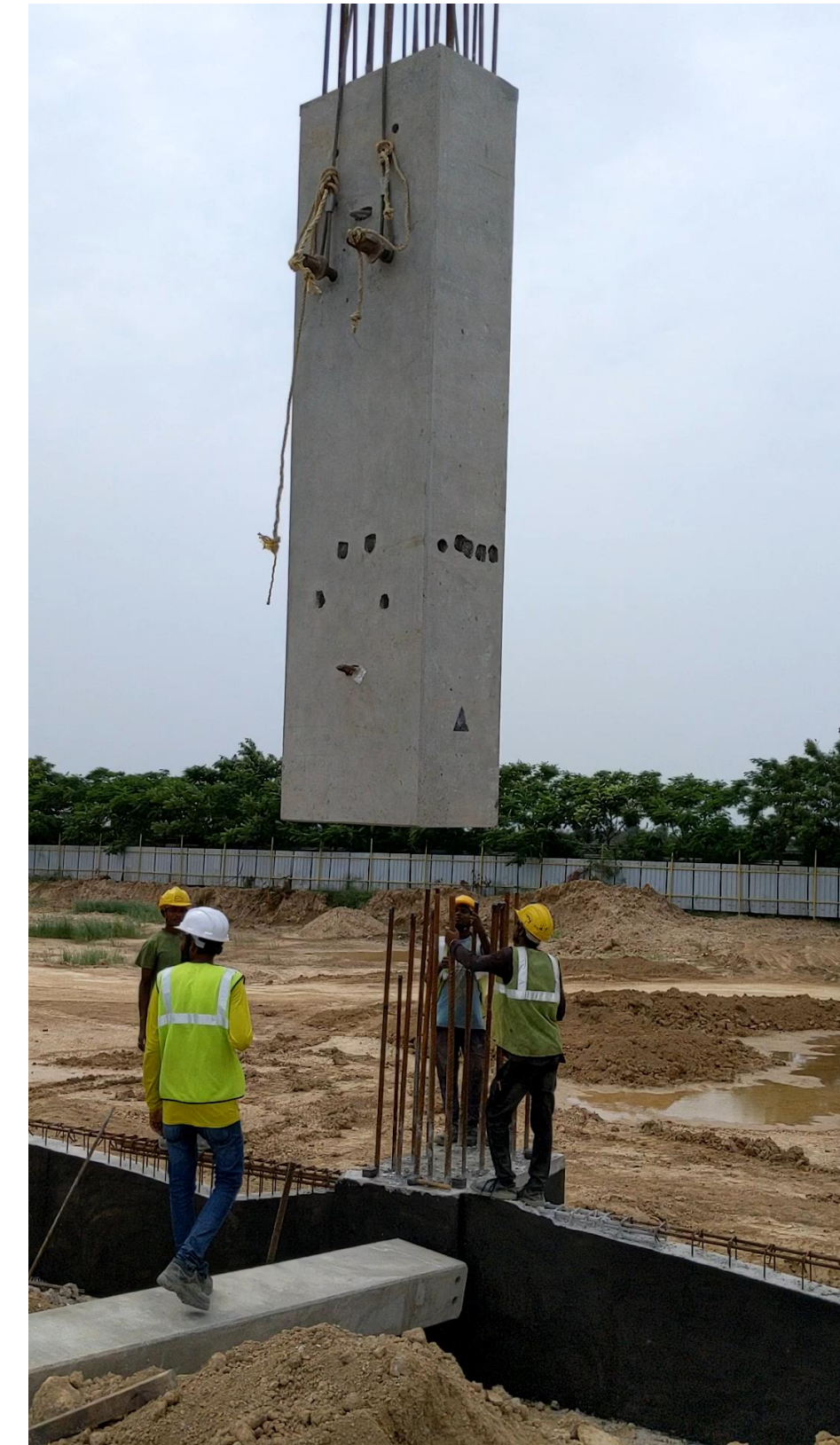




March 2022



Erection of Column



Alignment of Column



Erection of upper level column

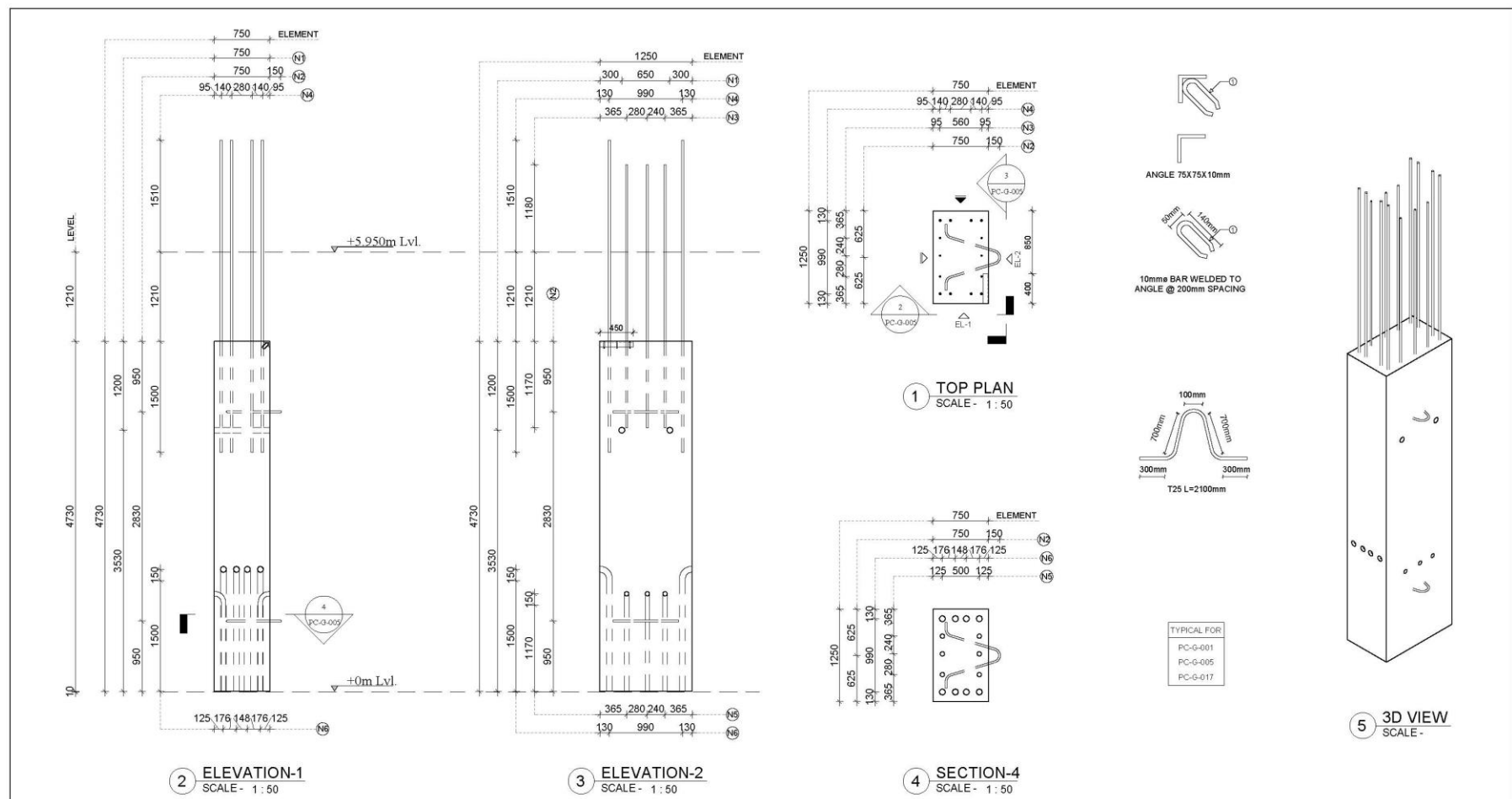


Installed Double T Slab



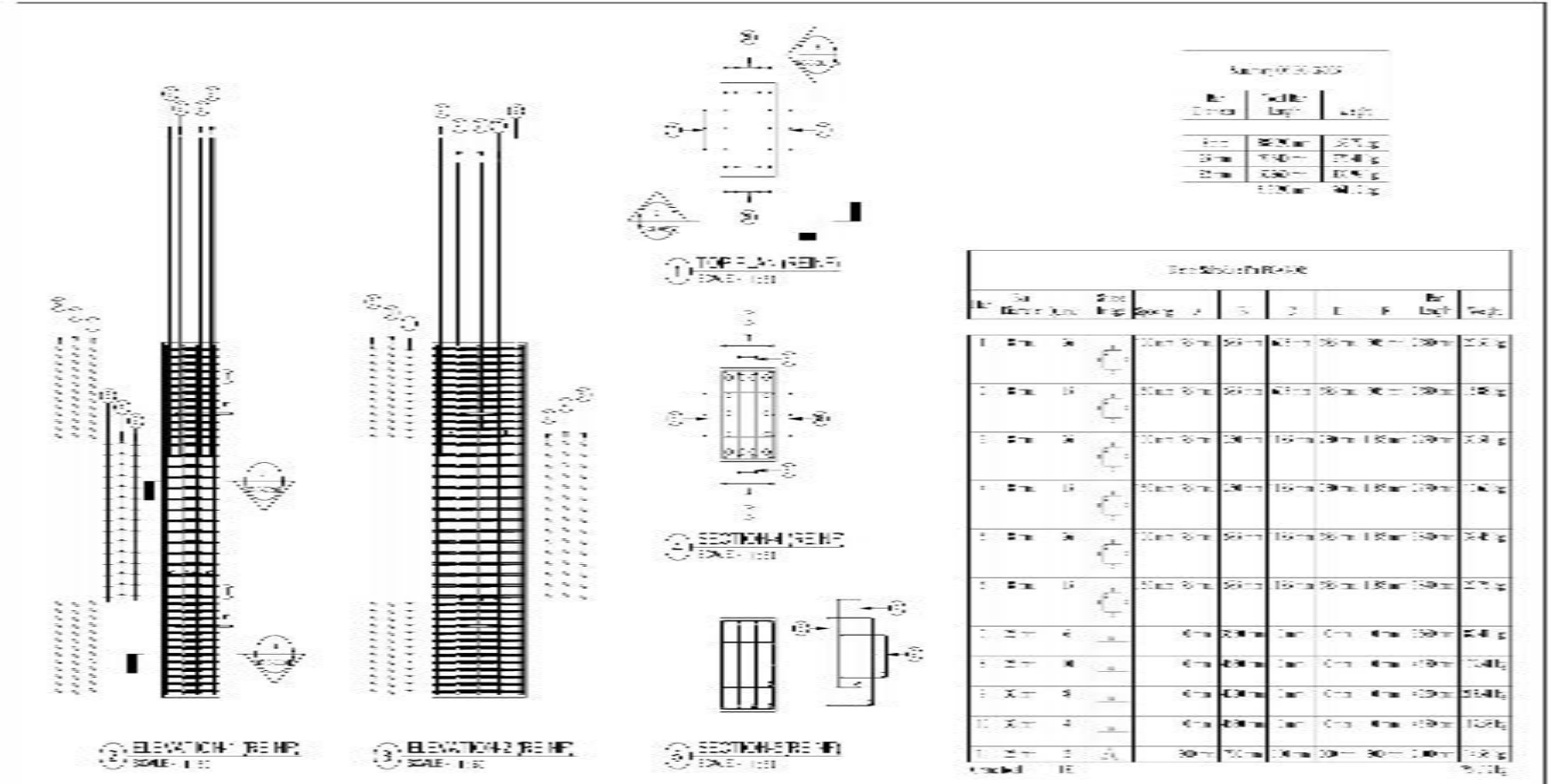
Installation of U-Shape Beam



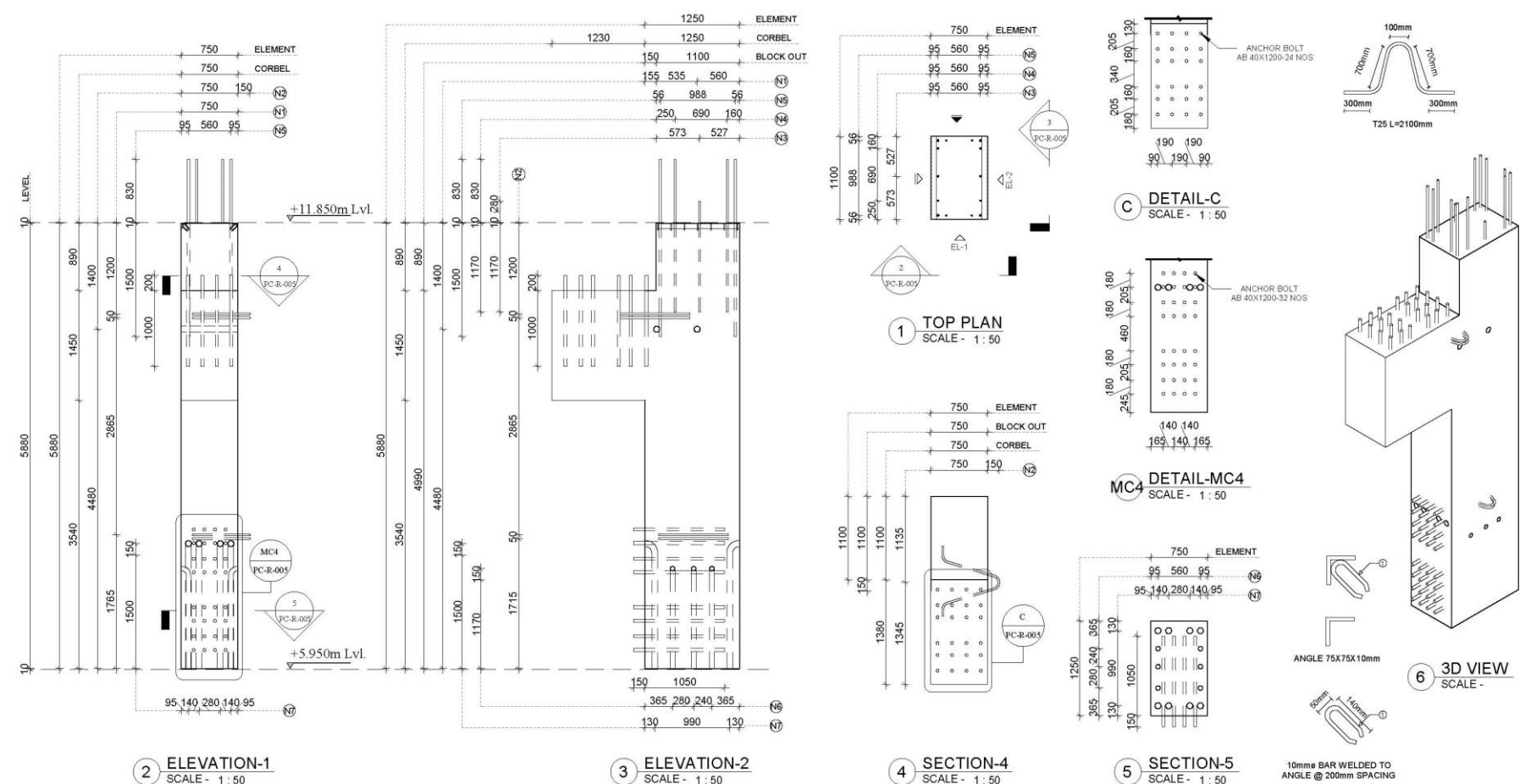


LEGEND & ABBR:	SPECIFICATIONS	ALL DIMENSIONS ARE IN 'MM'	INSTALLATION PARTS / MATERIAL CATALOGUE	GENERAL NOTES	PROJECT CODE	BN-ST-21-004	STRUCTURAL DESIGNER
S.F - SIDE FACE	VOLUME	4.33 M ³	ITEM MATERIAL CODE / DESCRIPTION QTY.	1. DO NOT SCALE FROM THE DRAWING USE FIGURED DIMENSION ONLY	DRAWING NO	PC-G-005	BN PRECAST PVT. LTD.
B.F - BOTH FACE	WEIGHT	10.83 TON	N1 80MM Ø HOLE FOR LIFTING 2	2. ALL LEVELS ARE SHOWN IN MILLIMETER & DIMENSIONS ARE IN MILLIMETERS UNLESS MENTIONED OTHERWISE	ELEMENT ID	PC-G-005	
BO - BLOCK OUT	GRADE OF CONCRETE	M60	N2 T25MM DEMOULDING ANCHOR L=2100 2	3. REINFORCEMENT DETAILS SHOULD BE APPROVED BY THE ENGINEER BEFORE WORK COMMENCES	QUANTITY	03	
ER - ERECTION MARKING	MINIMUM COVER	40mm	N3 T25MM DOWEL BAR L=3560 6	4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT ARCHITECTURAL, STRUCTURAL, MEP DRAWINGS AND ALL RELEVANT SECTIONS OF THE SPECIFICATIONS	REVISION SCHEDULE		PROJECT NAME: NEW INJECTABLE FACILITY AT VIROCHANNAGAR, AHMEDABAD
EM - ELEVATION MARKING	MOULD TYPE	FLAT BED	N4 T32MM DOWEL BAR L=4220 8	5. PRODUCTION TOLERANCE: LENGTH ± 5 TO 10MM WIDTH ± 5 TO 10MM AS PER IS 456:2000 AND IS 1332:2014	REV DESCRIPTION DWN BY DATE		DRAWING NAME: PRECAST COLUMN SHOP DRAWING
MO - MOULD FACE	GRADE OF STEEL	DEFORMED OR TMT OF Fe500	N5 80Ø DOWEL TUBE L=1320 6	6. ERECTION TOLERANCE SHALL BE PROVIDED ± 5 TO 10MM RESPECT TO GRID LINE AS PER DRAWING	0 APPROVAL JEY 22-07-21		CLIENT NAME:
NF - NEAR FACE			N6 80Ø DOWEL TUBE L=1650 8				CONTRACTOR: BN PRECAST PVT. LTD.
FF - FAR FACE			N7				DATE DWN BY CHK BY APP'D BY SHEET SIZE SCALE REV
RE - RECESS			N8				22-07-2021 JEY RK SP A3 As Indicate 0
C10 - CHAMBER 10X10			N9				

Column Lower Level

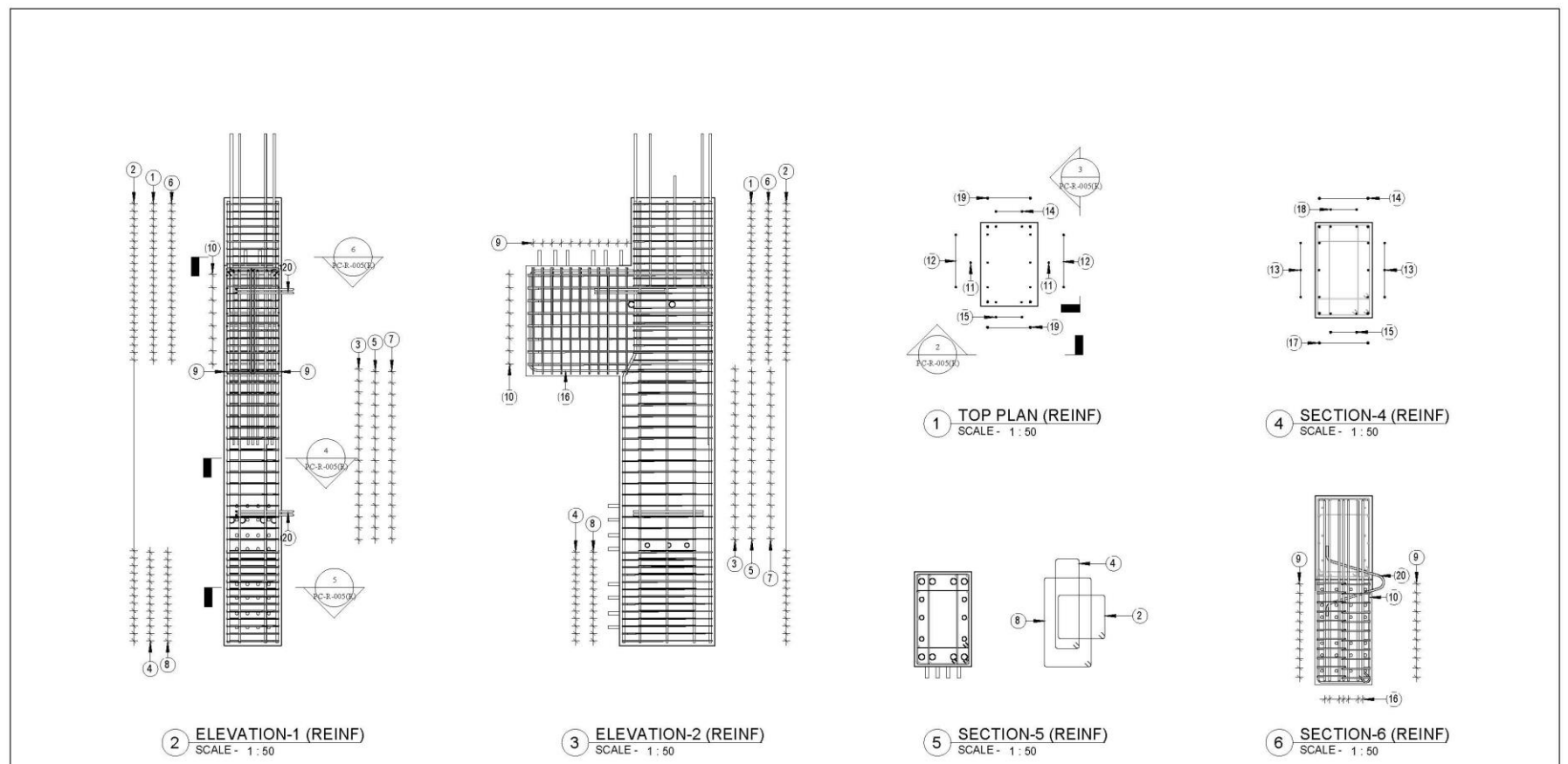


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S.F - SIDE FACE	VOLUME	4.33 M ³	ITEM MATERIAL CODE / DESCRIPTION QTY.	1. DO NOT SCALE FROM THE DRAWING USE FIGURED DIMENSION ONLY	DRAWING NO	PC-G-005	BN PRECAST PVT. LTD.
B.F - BOTH FACE	WEIGHT	10.83 TON	N1 80MM Ø HOLE FOR LIFTING 2	2. ALL LEVELS ARE SHOWN IN MILLIMETER & DIMENSIONS ARE IN MILLIMETERS UNLESS MENTIONED OTHERWISE	ELEMENT ID	PC-G-005	
BO - BLOCK OUT	GRADE OF CONCRETE	M60	N2 T25MM DEMOULDING ANCHOR L=2100 2	3. REINFORCEMENT DETAILS SHOULD BE APPROVED BY THE ENGINEER BEFORE WORK COMMENCES	QUANTITY	03	
ER - ERECTION MARKING	MINIMUM COVER	40mm	N3 T25MM DOWEL BAR L=3560 6	4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT ARCHITECTURAL, STRUCTURAL, MEP DRAWINGS AND ALL RELEVANT SECTIONS OF THE SPECIFICATIONS	REVISION SCHEDULE		PROJECT NAME: NEW INJECTABLE FACILITY AT VIROCHANNAGAR, AHMEDABAD
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MO - MOULD FACE	GRADE OF STEEL	DEFORMED OR TMT OF Fe500	N5 80Ø DOWEL TUBE L=1320 6	6. ERECTION TOLERANCE SHALL BE PROVIDED ± 5 TO 10MM RESPECT TO GRID LINE AS PER DRAWING	0 APPROVAL JEY 22-07-21		CLIENT NAME:
NF - NEAR FACE			N6 80Ø DOWEL TUBE L=1650 8				CONTRACTOR: BN PRECAST PVT. LTD.
FF - FAR FACE			N7				DATE DWN BY CHK BY APP'D BY SHEET SIZE SCALE REV
RE - RECESS			N8				22-07-2021 JEY RK SP A3 As Indicate 0
C10 - CHAMBER 10X10			N9				

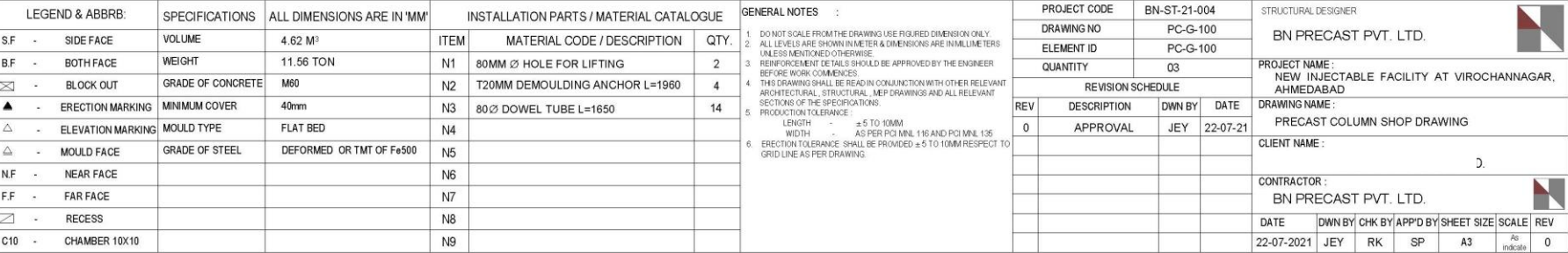


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S.F - SIDE FACE	VOLUME	6.66 M ³	ITEM MATERIAL CODE / DESCRIPTION QTY.	1. DO NOT SCALE FROM THE DRAWING USE FIGURED DIMENSION ONLY.	DRAWING NO	PC-R-005	BN PRECAST PVT. LTD.
B.F - BOTH FACE	WEIGHT	16.65 TON	N1 80MM Ø HOLE FOR LIFTING 2	2. ALL LEVELS ARE SHOWN IN METER & DIMENSIONS ARE IN MILLIMETERS UNLESS MENTIONED OTHERWISE.	ELEMENT ID	PC-G-005	
☒ - BLOCK OUT	GRADE OF CONCRETE	M60	N2 T25MM DEMOULDING ANCHOR L=2100 4	3. REINFORCEMENT DETAILS SHOULD BE APPROVED BY THE ENGINEER BEFORE WORK COMMENCES.	QUANTITY	01	PROJECT NAME: NEW INJECTABLE FACILITY AT VIROCHANNAGAR, AHMEDABAD
▲ - ERECTION MARKING	MINIMUM COVER	40mm	N3 T25MM PROJECTION BAR L=1460 2	4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT ARCHITECTURAL, STRUCTURAL, MEP DRAWINGS AND ALL RELEVANT SECTIONS OF THE SPECIFICATIONS.	REVISION SCHEDULE		DRAWING NAME: PRECAST COLUMN SHOP DRAWING
△ - ELEVATION MARKING	MOULD TYPE	FLAT BED	N4 T25MM PROJECTION BAR L=2010 4	5. PRODUCTION TOLERANCE: LENGTH ± 5 TO 10MM WIDTH AS PER PCI MNL 116 AND PCI MNL 135	REV DESCRIPTION DWN BY DATE		CLIENT NAME:
△ - MOULD FACE	GRADE OF STEEL	DEFORMED OR TMT OF Fe500	N5 T32MM PROJECTION BAR L=2340 4	6. ERECTION TOLERANCE SHALL BE PROVIDED ± 5 TO 10MM RESPECT TO GRID LINE AS PER DRAWING.	0 APPROVAL JEY 26-07-21		CONTRACTOR: BN PRECAST PVT. LTD.
N.F - NEAR FACE			N6 60Ø DOWEL TUBE L=1320 6				DATE DWN BY CHK BY APPD BY SHEET SIZE SCALE REV
F.F - FAR FACE			N7 80Ø DOWEL TUBE L=1650 8				26-07-2021 JEY RK SP A3 As indicate 0
☒ - RECESS			N8				
C10 - CHAMBER 10X10			N9				

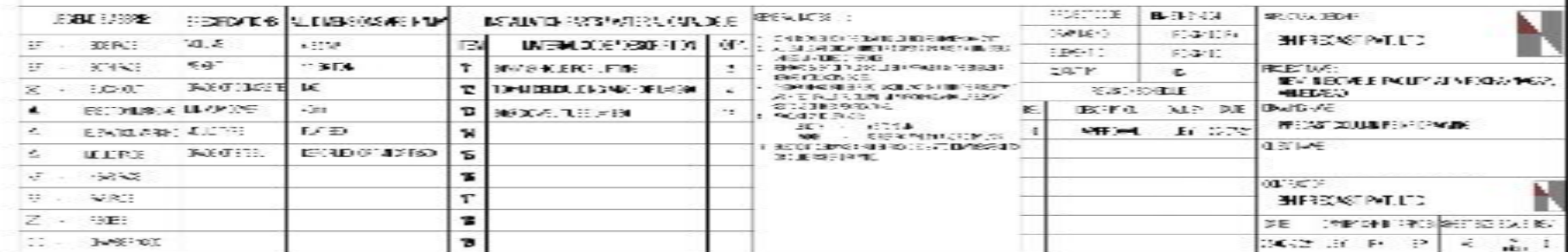
Column Upper Level



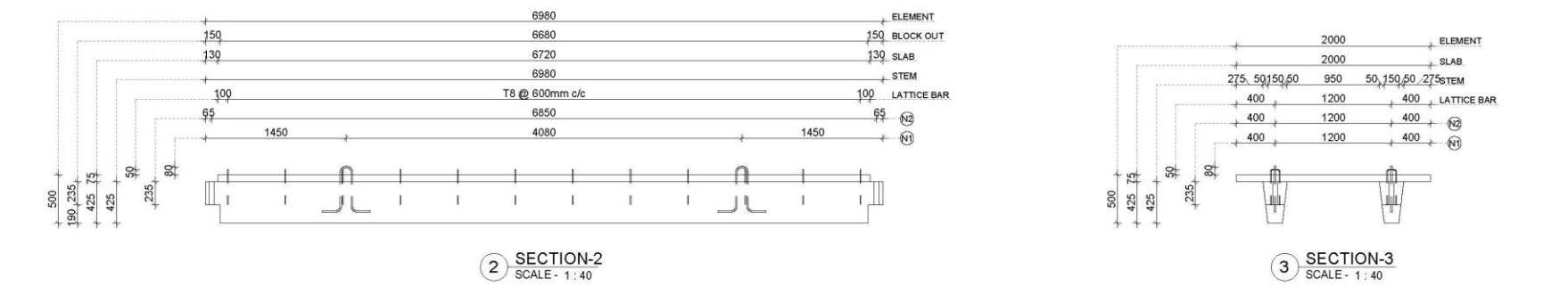
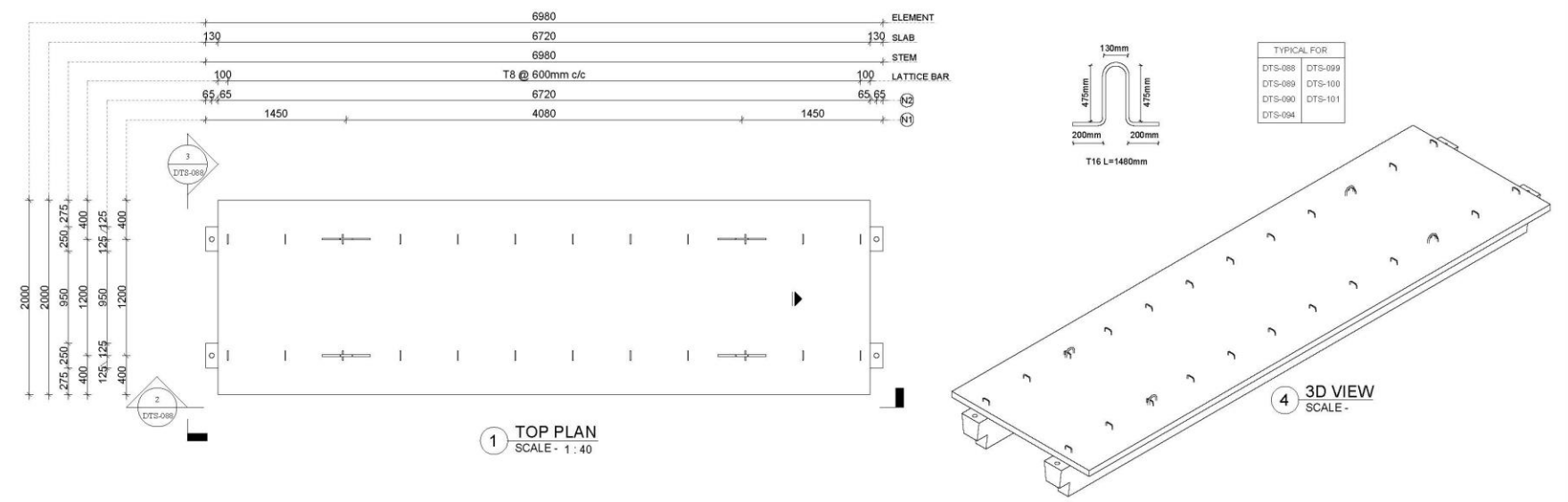
LEGEND & ABBRB:	SPECIFICATIONS	ALL DIMENSIONS ARE IN 'MM'	INSTALLATION PARTS / MATERIAL CATALOGUE	GENERAL NOTES	PROJECT CODE	BN-ST-21-004	STRUCTURAL DESIGNER
S.F - SIDE FACE	VOLUME	6.66 M ³	ITEM MATERIAL CODE / DESCRIPTION QTY.	1. DO NOT SCALE FROM THE DRAWING USE FIGURED DIMENSION ONLY.	DRAWING NO	PC-R-005(R)	BN PRECAST PVT. LTD.
B.F - BOTH FACE	WEIGHT	16.65 TON	N1 80MM Ø HOLE FOR LIFTING 2	2. ALL LEVELS ARE SHOWN IN METER & DIMENSIONS ARE IN MILLIMETERS UNLESS MENTIONED OTHERWISE.	ELEMENT ID	PC-G-005	
☒ - BLOCK OUT	GRADE OF CONCRETE	M60	N2 T25MM DEMOULDING ANCHOR L=2100 4	3. REINFORCEMENT DETAILS SHOULD BE APPROVED BY THE ENGINEER BEFORE WORK COMMENCES.	QUANTITY	01	PROJECT NAME: NEW INJECTABLE FACILITY AT VIROCHANNAGAR, AHMEDABAD
▲ - ERECTION MARKING	MINIMUM COVER	40mm	N3 T25MM PROJECTION BAR L=1460 2	4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT ARCHITECTURAL, STRUCTURAL, MEP DRAWINGS AND ALL RELEVANT SECTIONS OF THE SPECIFICATIONS.	REVISION SCHEDULE		DRAWING NAME: PRECAST COLUMN REINF DRAWING
△ - ELEVATION MARKING	MOULD TYPE	FLAT BED	N4 T25MM PROJECTION BAR L=2010 4	5. PRODUCTION TOLERANCE: LENGTH ± 5 TO 10MM WIDTH AS PER PCI MNL 116 AND PCI MNL 135	REV DESCRIPTION DWN BY DATE		CLIENT NAME:
△ - MOULD FACE	GRADE OF STEEL	DEFORMED OR TMT OF Fe500	N5 T32MM PROJECTION BAR L=2340 4	6. ERECTION TOLERANCE SHALL BE PROVIDED ± 5 TO 10MM RESPECT TO GRID LINE AS PER DRAWING.	0 APPROVAL JEY 26-07-21		CONTRACTOR: BN PRECAST PVT. LTD.
N.F - NEAR FACE			N6 60Ø DOWEL TUBE L=1320 6				DATE DWN BY CHK BY APPD BY SHEET SIZE SCALE REV
F.F - FAR FACE			N7 80Ø DOWEL TUBE L=1650 8				26-07-2021 JEY RK SP A3 As indicate 0
☒ - RECESS			N8				
C10 - CHAMBER 10X10			N9				



Column Lower Column



PRECAST EPC CONTRACTOR



LEGEND & ABBRE:	SPECIFICATIONS	ALL DIMENSIONS ARE IN MM	INSTALLATION PARTS / MATERIAL CATALOGUE	GENERAL NOTES :	PROJECT CODE	BN-ST-21-004	STRUCTURAL DESIGNER
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BO - BLOCK OUT	GRADE OF CONCRETE	M40	N2	50 Ø DOWEL TUBE L=235	4		
ER - ERECTION MARKING	MINIMUM COVER	20mm	N3				
EM - ELEVATION MARKING	MOULD TYPE	FLAT BED	N4				
MF - MOULD FACE	GRADE OF STEEL	DEFORMED OR TMT OF Fe500	N5				
NF - NEAR FACE			N6				
FF - FAR FACE			N7				
RE - RECESS			N8				
C10 - CHAMBER 10X10			N9				

1. DO NOT SCALE FROM THE DRAWING USE FIGURED DIMENSION ONLY.

2. ALL LEVELS ARE SHOWN IN METER & DIMENSIONS ARE IN MILLIMETERS UNLESS MENTIONED OTHERWISE.

3. REINFORCEMENT DETAILS SHOULD BE APPROVED BY THE ENGINEER BEFORE WORK COMMENCES.

4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT ARCHITECTURAL, STRUCTURAL, MEP DRAWINGS AND ALL RELEVANT SECTIONS OF THE SPECIFICATIONS.

5. PRODUCTION TOLERANCE:
LENGTH ± 5 TO 10MM
WIDTH ± 5 PER PO MINL 116 AND PO MINL 135

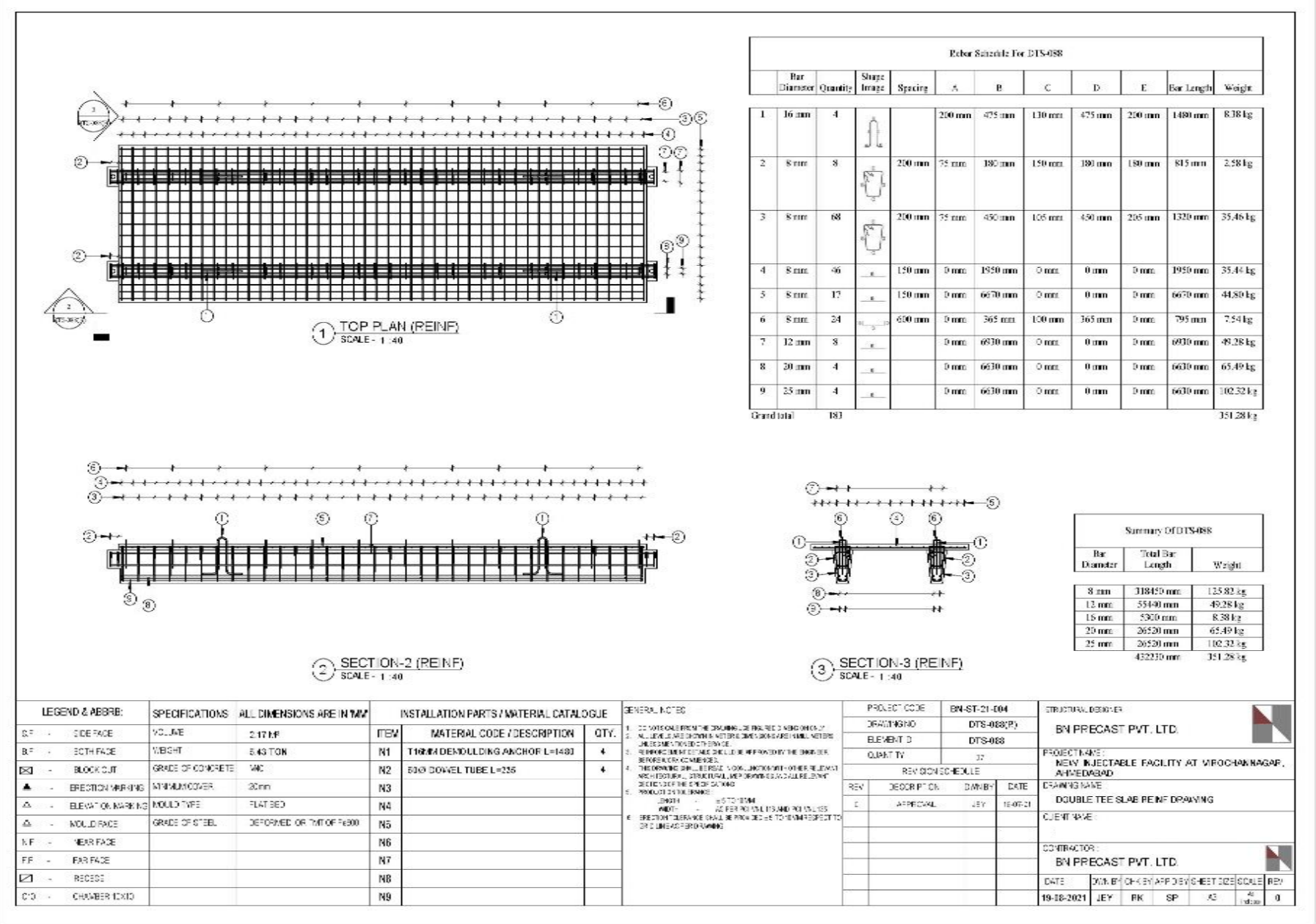
6. ERECTION TOLERANCE SHALL BE PROVIDED ± 5 TO 10MM RESPECT TO GRID LINE AS PER DRAWING.

REV	DESCRIPTION	DWN BY	DATE
0	APPROVAL	JEY	19-07-21

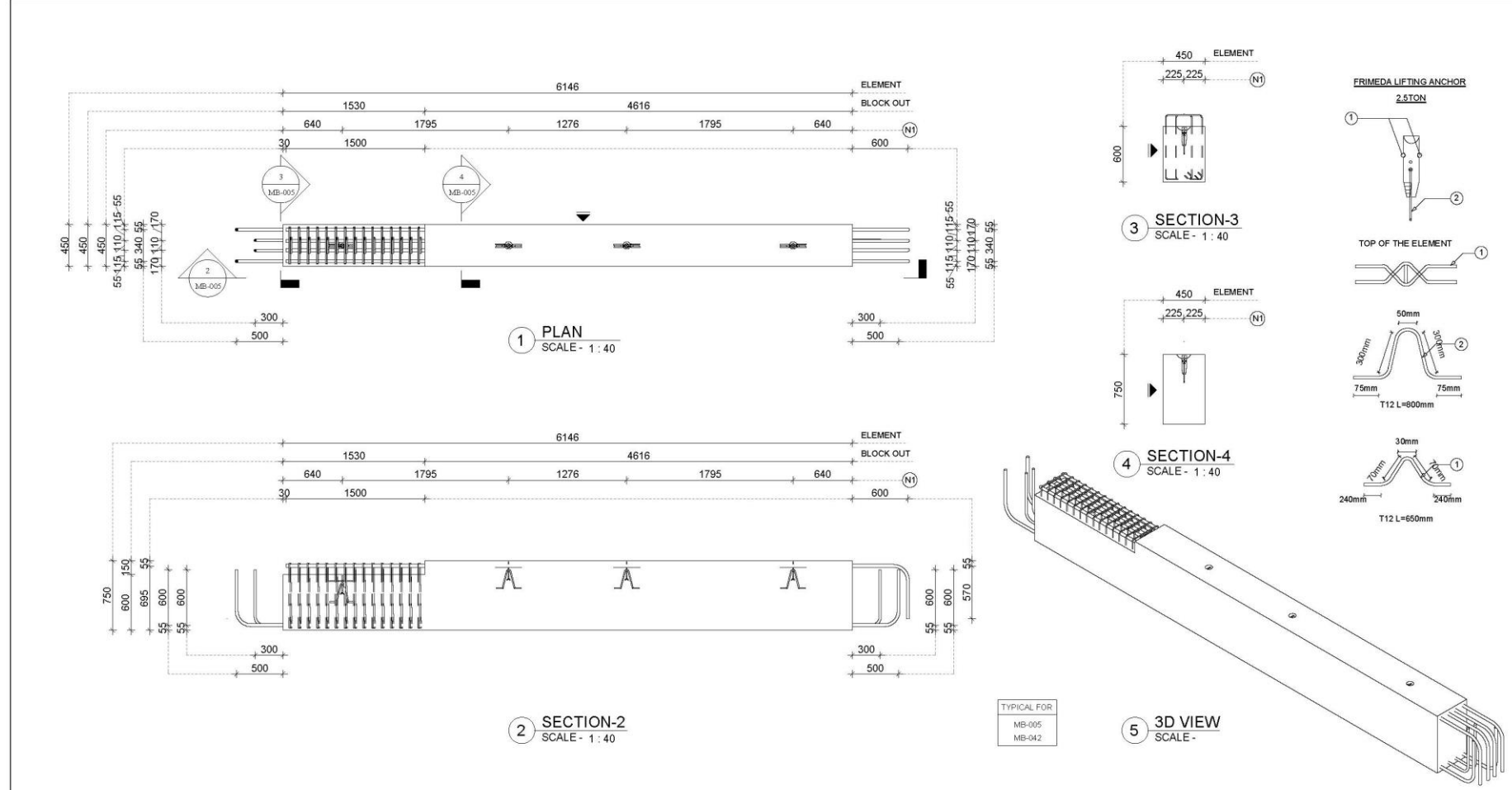
CONTRACTOR: BN PRECAST PVT. LTD.

DATE: 19-08-2021 DWN BY: JEY CHK BY: RK APPD BY: SP SHEET SIZE: A3 SCALE: As Indicate REV: 0

Double T

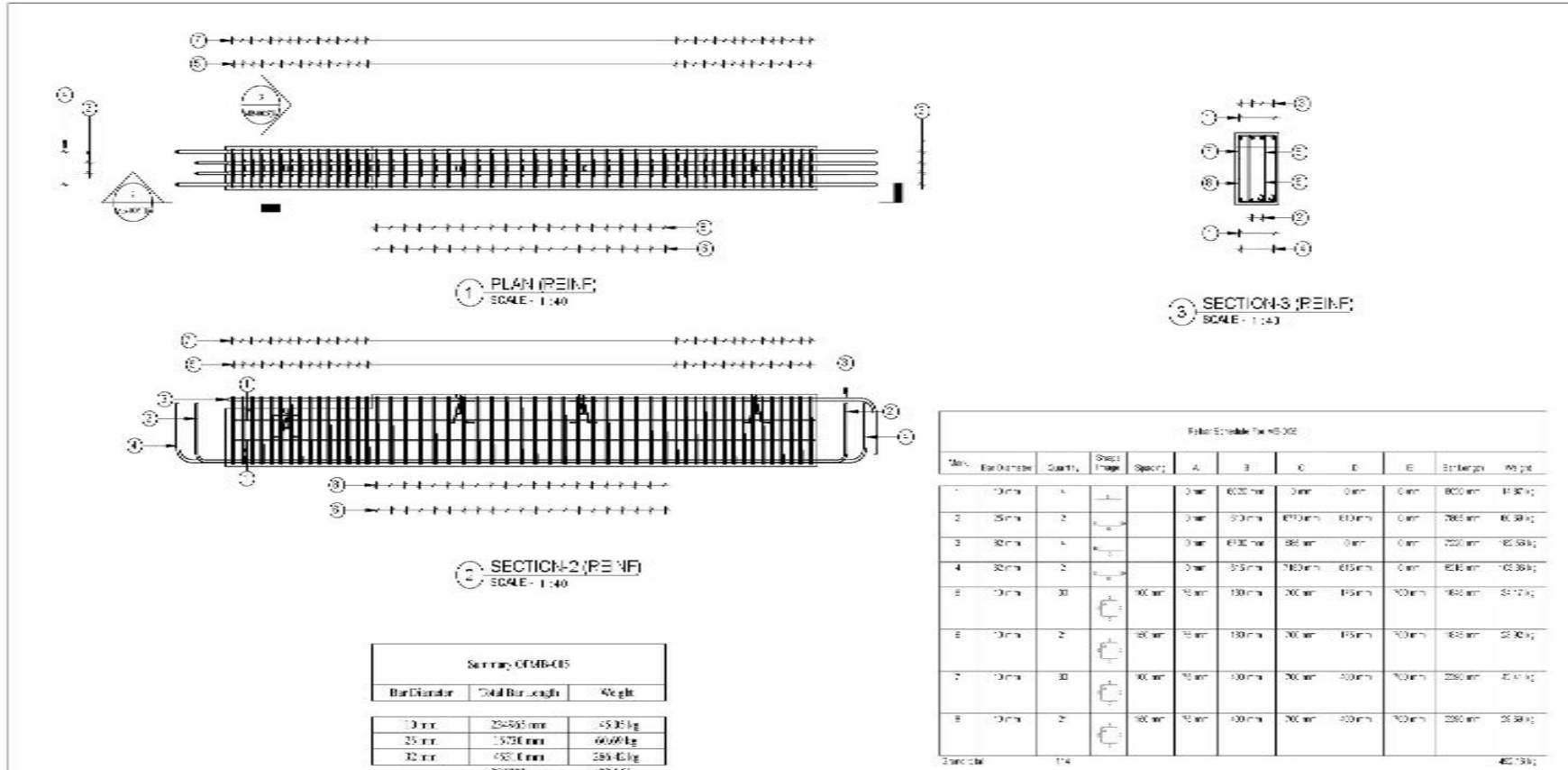


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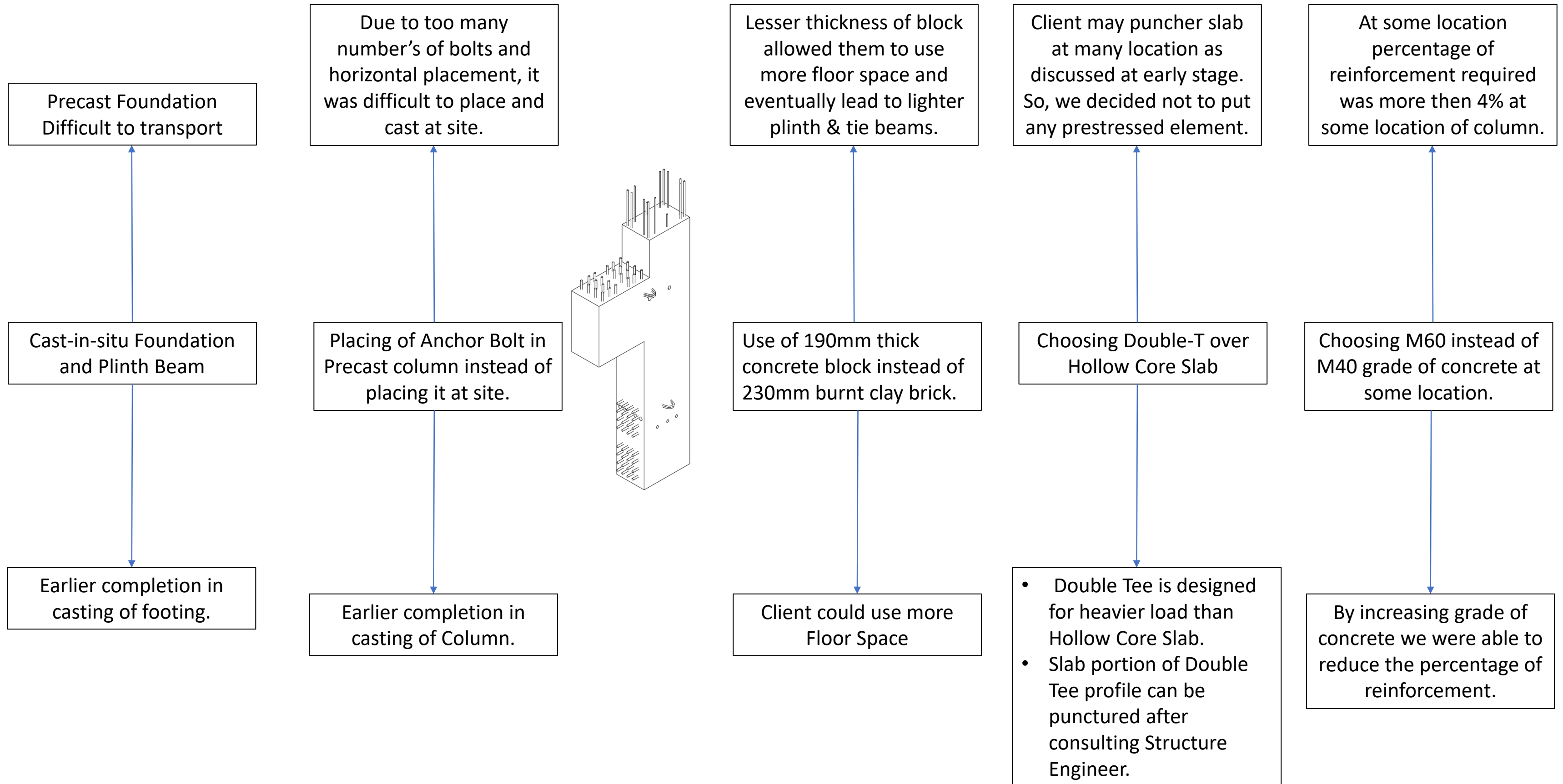
LEGEND & ABBR:	SPECIFICATIONS	ALL DIMENSIONS ARE IN 'MM'	INSTALLATION PARTS / MATERIAL CATALOGUE	GENERAL NOTES	PROJECT CODE	BN-ST-21-004	STRUCTURAL DESIGNER
S.F - SIDE FACE	VOLUME	1.97 M ³	ITEM	1. DO NOT SCALE FROM THE DRAWING USE FIGURED DIMENSION ONLY.	DRAWING NO	MB-005	BN PRECAST PVT. LTD.
B.F - BOTH FACE	WEIGHT	4.93 TON	N1	2. ALL LEVELS ARE SHOWN IN METER & DIMENSIONS ARE IN MILLIMETERS UNLESS MENTIONED OTHERWISE.	ELEMENT ID	MB-005	
⊠ - BLOCK OUT	GRADE OF CONCRETE	M40	N2	3. REINFORCEMENT DETAILS SHOULD BE APPROVED BY THE ENGINEER BEFORE WORK COMMENCES.	QUANTITY	02	PROJECT NAME:
▲ - ERECTION MARKING	MINIMUM COVER	25mm	N3	4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT ARCHITECTURAL, STRUCTURAL, MEP DRAWINGS AND ALL RELEVANT SECTIONS OF THE SPECIFICATIONS.	REV	0	NEW INJECTABLE FACILITY AT VIROCHANNAGAR, AHMEDABAD
△ - ELEVATION MARKING	MOULD TYPE	FLAT BED	N4	5. PRODUCTION TOLERANCE:	DESCRIPTION	APPROVAL	DRAWING NAME:
△ - MOULD FACE	GRADE OF STEEL	DEFORMED OR TMT OF Fe500	N5	LENGTH ± 5 TO 10MM	DWN BY	VVR	PRECAST BEAM SHOP DRAWING
N.F - NEAR FACE			N6	WIDTH ± 5 TO 10MM	DATE	28-07-21	CLIENT NAME:
F.F - FAR FACE			N7	AS PER IS 456:2000 & IS 1343:1993	CHK BY	SP	CONTRACTOR:
∇ - RECESS			N8	6. ERECTION TOLERANCE SHALL BE PROVIDED ± 5 TO 10MM RESPECT TO GRID LINE AS PER DRAWING.	APPD BY	AS	BN PRECAST PVT. LTD.
C10 - CHAMBER 10X10			N9		SCALE	1:40	DATE
					REV	0	28-07-2021

Beam



LEGEND & ABBR:	SPECIFICATIONS	ALL DIMENSIONS ARE IN 'MM'	INSTALLATION PARTS / MATERIAL CATALOGUE	GENERAL NOTES	PROJECT CODE	BN-ST-21-004	STRUCTURAL DESIGNER
S.F - SIDE FACE	VOLUME	1.97 M ³	ITEM	1. DO NOT SCALE FROM THE DRAWING USE FIGURED DIMENSION ONLY.	DRAWING NO	MB-005	BN PRECAST PVT. LTD.
B.F - BOTH FACE	WEIGHT	4.93 TON	N1	2. ALL LEVELS ARE SHOWN IN METER & DIMENSIONS ARE IN MILLIMETERS UNLESS MENTIONED OTHERWISE.	ELEMENT ID	MB-005	
⊠ - BLOCK OUT	GRADE OF CONCRETE	M40	N2	3. REINFORCEMENT DETAILS SHOULD BE APPROVED BY THE ENGINEER BEFORE WORK COMMENCES.	QUANTITY	02	PROJECT NAME:
▲ - ERECTION MARKING	MINIMUM COVER	25mm	N3	4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT ARCHITECTURAL, STRUCTURAL, MEP DRAWINGS AND ALL RELEVANT SECTIONS OF THE SPECIFICATIONS.	REV	0	NEW INJECTABLE FACILITY AT VIROCHANNAGAR, AHMEDABAD
△ - ELEVATION MARKING	MOULD TYPE	FLAT BED	N4	5. PRODUCTION TOLERANCE:	DESCRIPTION	APPROVAL	DRAWING NAME:
△ - MOULD FACE	GRADE OF STEEL	DEFORMED OR TMT OF Fe500	N5	LENGTH ± 5 TO 10MM	DWN BY	VVR	PRECAST BEAM SHOP DRAWING
N.F - NEAR FACE			N6	WIDTH ± 5 TO 10MM	DATE	28-07-21	CLIENT NAME:
F.F - FAR FACE			N7	AS PER IS 456:2000 & IS 1343:1993	CHK BY	SP	CONTRACTOR:
∇ - RECESS			N8	6. ERECTION TOLERANCE SHALL BE PROVIDED ± 5 TO 10MM RESPECT TO GRID LINE AS PER DRAWING.	APPD BY	AS	BN PRECAST PVT. LTD.
C10 - CHAMBER 10X10			N9		SCALE	1:40	DATE
					REV	0	28-07-2021

PRECAST EPC CONTRACTOR



Q&A

You may send your Questions to our
Mail Id : nishant.bnprecast@gmail.com