

DELHI PRECAST

Manufacturer of Precast Pre stress Concrete Boundary Wall

A Unit of TNT

- **MANUFACTURING**
- **SUPPLY &**
- **INSTALLATION**

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9th Edition : Year 2022

INTRODUCTION

Precast Pres Stress Concrete Boundary Wall's Ready to Install – Precast – Prefabricated Wall

- **Low Cost (comparison to brick/stone)**
- **Fast to Install**
- **Longer Life**
- **No Maintenance**
- **Weather proof**
- **RE-Usable**
- **Aesthetically attractive**
- **Eco Friendly**



Types of Wall's Available

Clear Height (Minimum 1500 MM , Max 3750 MM)

50 to 65 MM THICK PRE-STRESS PANEL

1. COLUMN 150 X 150 MM | PANEL 50 MM THICK , SIZE 2010 X 300 X 50 MM
2. COLUMN 150 X 150 MM | PANEL 52 MM THICK , SIZE 1800 X 300 X 52 MM
3. COLUMN 175 X 175 MM | PANEL 65 MM THICK , SIZE 2290 X 300 X 65 MM

70 to 100 MM THICK PRE-STRESS PANEL

1. COLUMN 200 X 150 MM | PANEL 70 MM THICK , SIZE 2010 X 300 X 70 MM
2. COLUMN 270 X 200 MM | PANEL 95 MM THICK , SIZE 2400 X 600 X 95 MM
3. COLUMN 300 X 270 MM | PANEL 100 MM THICK , SIZE 2400 X 600 X 100 MM

PANELS ARE AVAILABLE IN PLANE | BRICK PATTERN & BLOCK PATTERN ON BOTH SIDE

STANDARDS TO FOLLOW

Frequently used as block or brick work replacement Delhi Precast's Heavy Duty Horizontal + Vertical Precast Concrete Wall Panels have fast and simple installation on site.

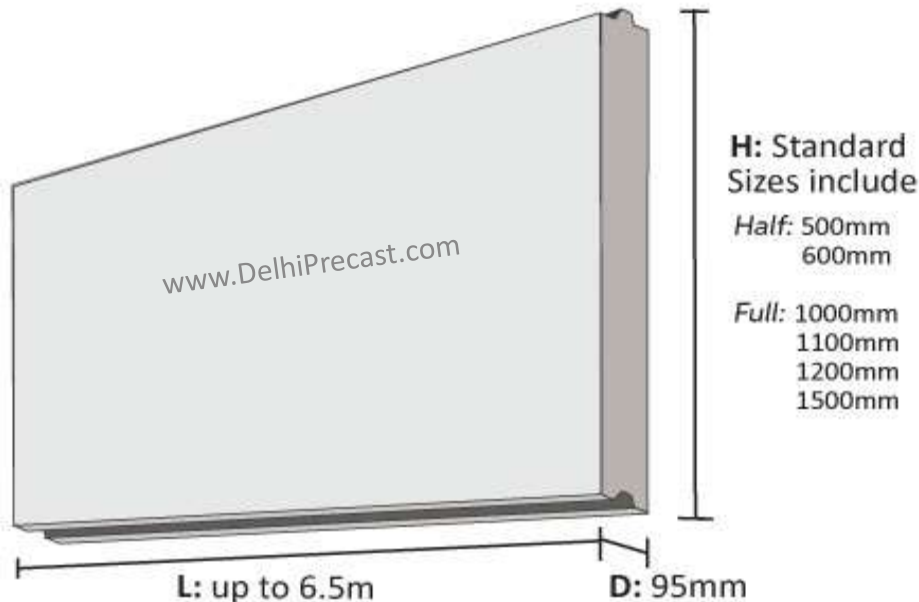
They are made to measure and designed to the structures frame or steel support columns to give foundation free walls.

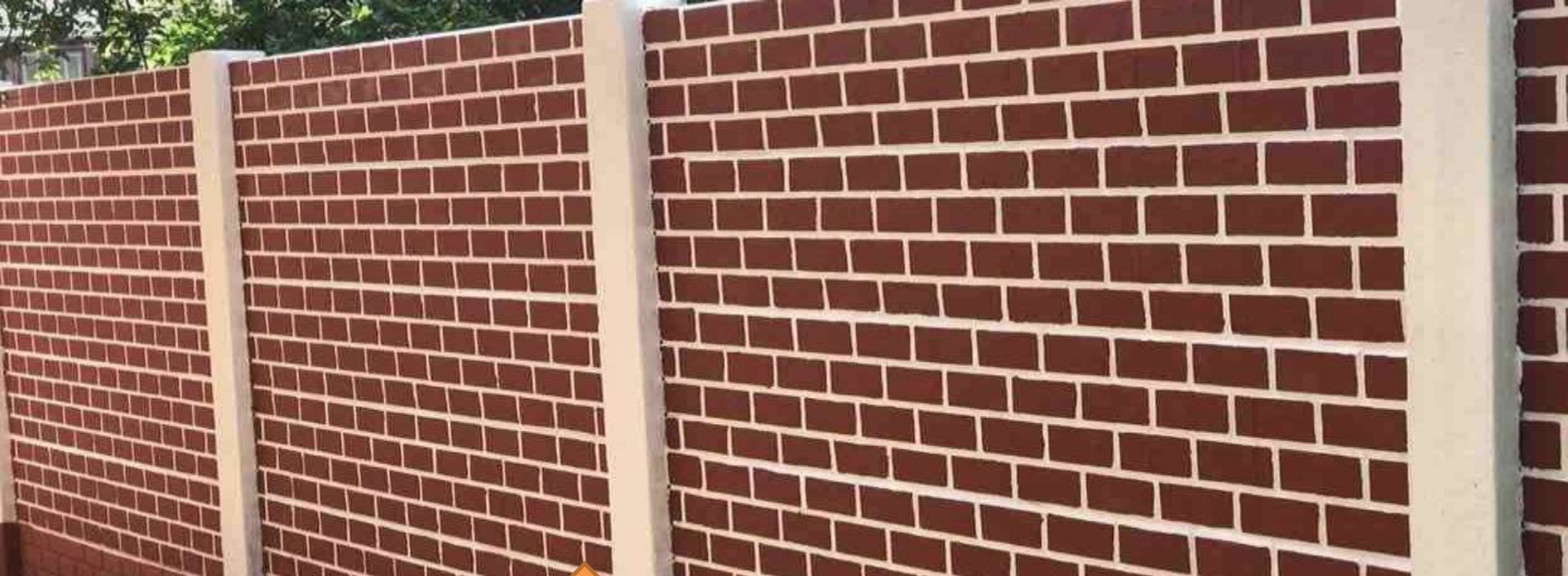
Light weight with a slim 95mm thickness designed for non-load bearing applications, pre-stressing gives the concrete far greater strength than its size would suggest meaning that these panels provide a wall that is equivalent to a 9" reinforced wall.

All our Pre-stressed concrete wall panels are designed and manufactured to IS 1343 : Code of practice of Pre-stressed Concrete IS 1343:2012 with industry standards and quality.



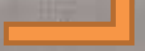
95mm wall thickness (H95)





BRICK PATTERN BOTH SIDE 



BLOCK PATTERN BOTH SIDE 

PRE-STRESS CONCRETE GRADES AVAILABLE

Concrete Grade	Mix Ratio (cement : sand : aggregates)	Compressive Strength	
		MPa (N/mm ²)	psi
Grades of Concrete			
Standard Grade of Concrete			
M25	1 : 1 : 2	25 MPa	3625 psi
M30	Design Mix	30 MPa	4350 psi
M35	Design Mix	35 MPa	5075 psi
M40	Design Mix	40 MPa	5800 psi
M45	Design Mix	45 MPa	6525 psi
High Strength Concrete Grades			
M50	Design Mix	50 MPa	7250 psi
M55	Design Mix	55 MPa	7975 psi
M60	Design Mix	60 MPa	8700 psi

PRESTRESS CONCRETE

Prestressed concrete is used in a wide range of building and civil structures where its improved performance can allow for longer spans, reduced structural thicknesses, and material savings compared with simple reinforced concrete.

Pre-tensioned concrete is a variant of pre-stressed concrete where the wires are tensioned *prior* to the concrete being cast. The concrete bonds to the Wires as it cures, following which the end-anchoring of the wires is released, and the wires tension forces are transferred to the concrete as compression by static friction. This force is invisible like in guitars. If we tensioned the wires it will make sound.

Otherwise its a Piece of wood.

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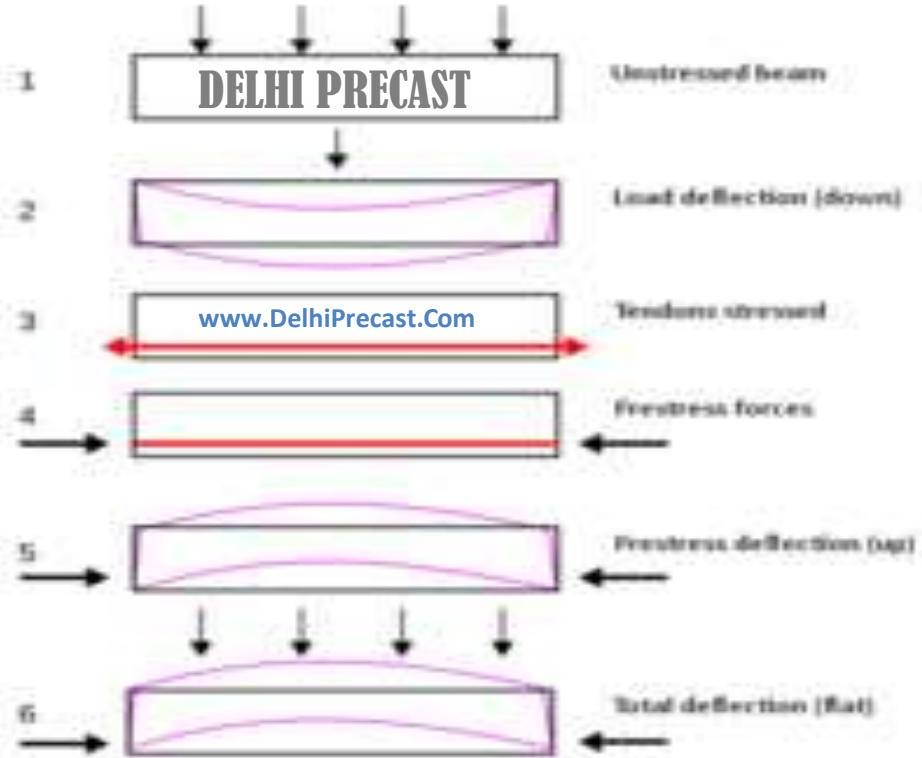


GUITAR PRINCIPLE

Comparison of Non-Prestressed Beam (top) & Prestressed Concrete Beam (bottom) under Load

This compression is produced by the tensioning of high-strength "Wires" located within or adjacent to the concrete and is done to improve the performance of the concrete in service

- 1. Non-prestressed Panel without load
- 2. Non-prestressed Panel with load
- 3. Before concrete solidifies, Wires embedded in concrete are tensioned
- 4. After concrete solidifies, wires apply compressive stress to concrete
- 5. Prestressed Panel without load
- 6. Prestressed Panel with load



MANUFACTURING



We have our Manufacturing Units in which we have [BOX Design Moulds](#) in which all the precast Wall Material (Column & Panels) is been casted.

9

We use [Pencil Needle Vibrator](#) in moulds having a opening of 2 inches from top. Due to this our product has both side natural finishing & zero honey combing.

CURING OF MATERIAL

Curing duration : 22 to 28 Days (Minimum)

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Precast Boundary Wall Curing begins immediately after placement in Stock

Precast Boundary Wall : Material Curing

- **Curing** is the maintaining of an adequate moisture content and temperature in **concrete** Boundary Wall at early ages so that it can develop properties the mixture was designed to achieve. Precast Boundary Wall **Curing** begins immediately after placement and finishing so that the **concrete** may develop the desired strength and durability.

Importance of Curing of Precast Boundary Wall Material

- **Curing** plays an **important** role on strength development and durability of **Precast Boundary Wall**. **Curing** takes place immediately after **concrete** placing and finishing, and involves maintenance of desired moisture and temperature conditions, both at depth and near the surface, for extended periods of time

Material Testing

Testing the actual concrete for its durability, permeability, strength, and hardness is important to know for reasons of safety. Testing concrete of Precast Boundary Wall is an incredibly important part of Manufacturing out of this material. Also we can know that 'when is our material ready for dispatch'.

Strength of Concrete
"Compressive"
We Manufacture..

1. *M25 Grade*
2. *M30 Grade*
3. *M35 Grade*
4. *M40 Grade*
5. *M45 Grade*



Material Transportation to Site



Precast Boundary Wall Material is Transported from Factory to Sites all over India & the process of erection of Wall starts there.



Is Manufacturing + Transportation Cheaper than Casting on Site ?

ANSWER : YES.....

We manufacture approx 400+ Running Meter Precast Wall per day & we have a setup of machinery & moulds with skilled labour working day & night to provide best quality of material with quantity.

In Comparison

Bulk Manufacturing require less labour..

Also ,

Raw Material is cheaper at manufacturing units.



SITE VISIT & MEASUREMENT

For better understanding with the client & accuracy in work we offer site visit

FREE OF COST

before finalization of any work

Why Site Visit is Important ?

- To know the site conditions.
- To get approx measurement.
- Soil quality & testing(If Required)
- Water logging conditions at site.
- To know the Path for Material truck to reach the site.
- And many more reasons as per location..depending upon site conditions and availability of the resources.



Wall Installation Process

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- 1. Unloading of Material**
- 2. Excavation of Column Foundation**
- 3. Erection of Column**
- 4. Sliding of Panels in Between 2 Columns**
- 5. Levelling of Columns & Panels**
- 6. Grouting of Column Foundation with Concrete**
- 7. Final Levelling of Wall.**

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@ Jaipur International Airport



@ OPPO & VIVO WH , G.NOIDA



→ Concertina Barbed Wire Ring

→ Y-Angel 50x50x6

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→ Precast Prestress Panel
Size 2010x300x50 MM

→ Precast Prestress Column
Size 150x150 MM

TNT

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AMAZON WAREHOUSE GURUGRAM



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BRICK PATTERN PRECAST WALL

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BOTH SIDE BRICK PATTERN PRECAST PRE-STRESS CONCRETE WALL

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RESIDENTIAL TOWNSHIP SONIPAT



PLOTS & COLONIES..

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Precast Wall @ MARRIAGE GARDENS & PARKS

With Paint , Railing & Lights on it.....



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BLOCK PATTERN DESIGN WALL

**BOTH
SIDE
DESIGN**

Railing on Top



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BEAM →

M35 GRADE

PANEL SIZE : 1800 X 300 X 50 MM

This Wall Pattern has both side "BLOCK DESIGN"
& have Natural Finishing

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Brick Design Wall with & without Paint



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FARM HOUSE PRECAST WALL

Precast RCC Panel
50 MM Thick

2 Meter

Precast Rcc Column
6inch x 6 inch or
(150x150 MM) Thick

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CALL : 9999-89-6179

PRECAST PRE-STRESS RCC BOUNDARY WALL
8 feet Height Wall , 10 Feet Column
2 feet Foundation

**Both Column & Panels are Reinforced
with High Carbon HTPS Steel Wires**

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SECURITY PRECAST WALL



L-Angle : 50x50x5

G.I Barbed Wire

2 Meter Wide

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**Solar Plants, Industries , Storage Yards & Units,
Manufacturing Plants, Farmhouses, Play Grounds
, Parks , Schools & Universities, Police Academy
Grounds , Residential Colonies & More..**

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SOLAR PLANT WALL

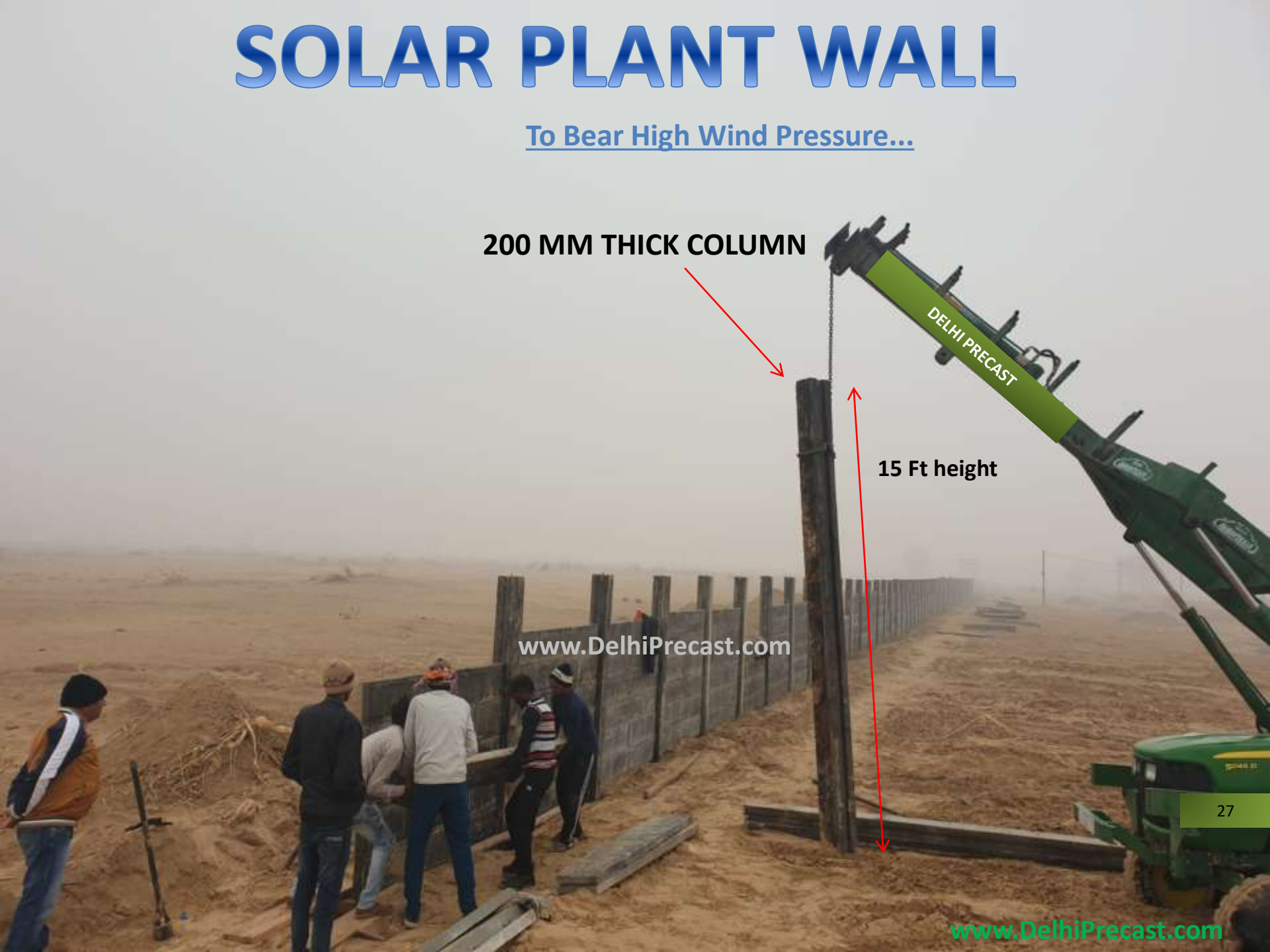
To Bear High Wind Pressure...

200 MM THICK COLUMN

15 Ft height

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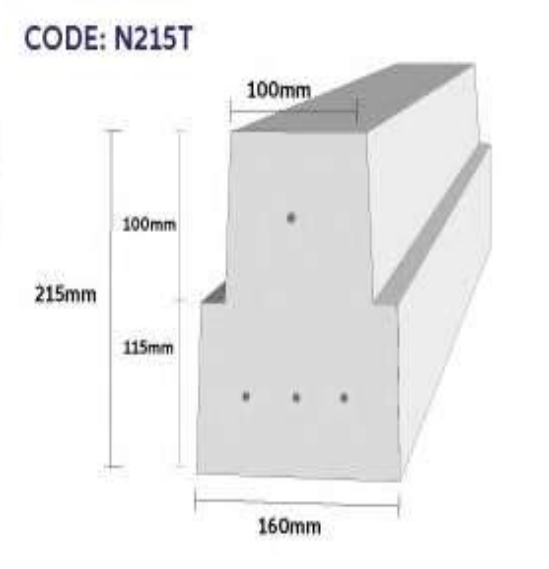
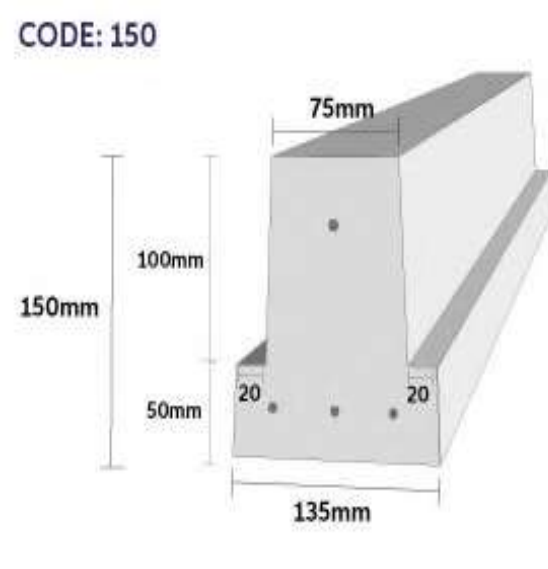
PRECAST WALL @ AGRICULTURE LAND

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RETAINING CONCRETE WALLS

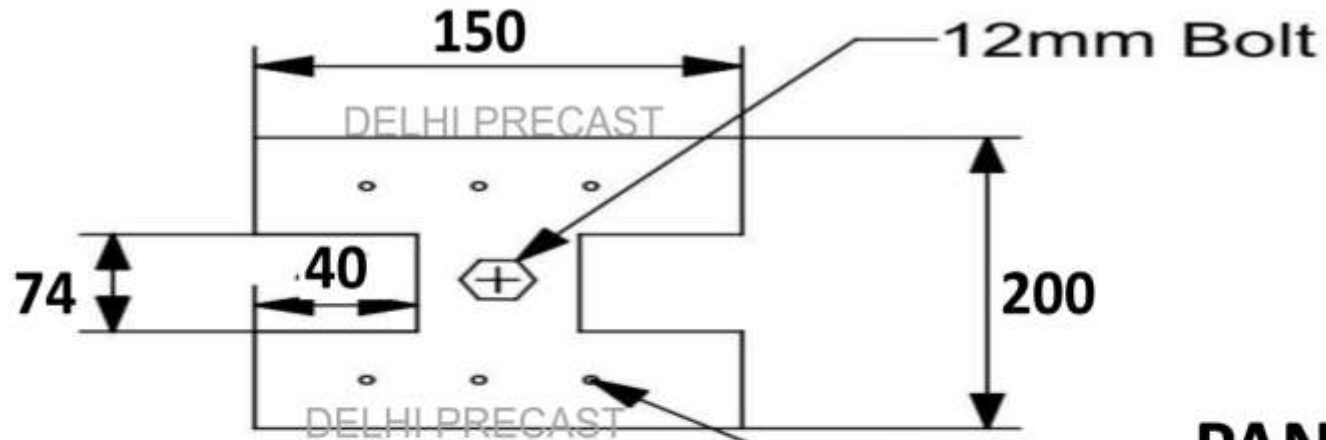


Now.....

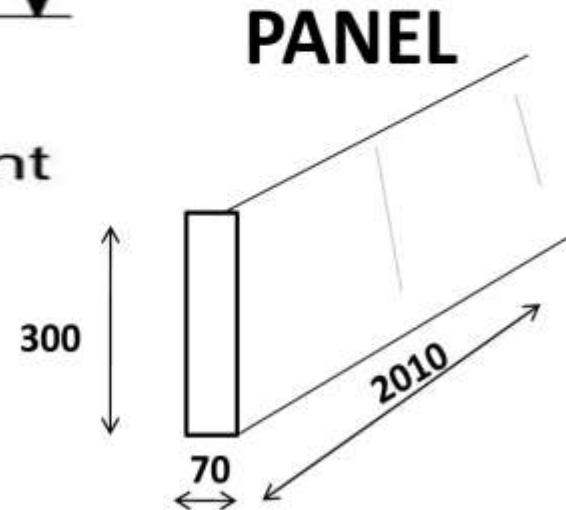
TECHNICAL SPECIFICATION OF PRECAST BOUNDARY WALL



Column 150x200 MM



7 X \varnothing 4mm @ HTPS
Prestress Reinforcement

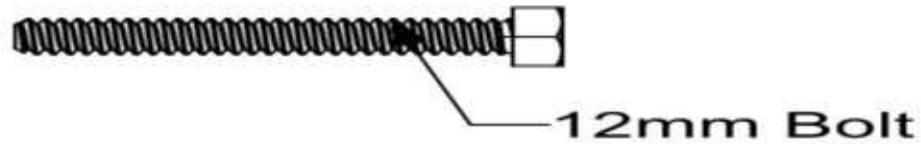


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For Y-Angle on Top

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COLUMN 150x150 MM



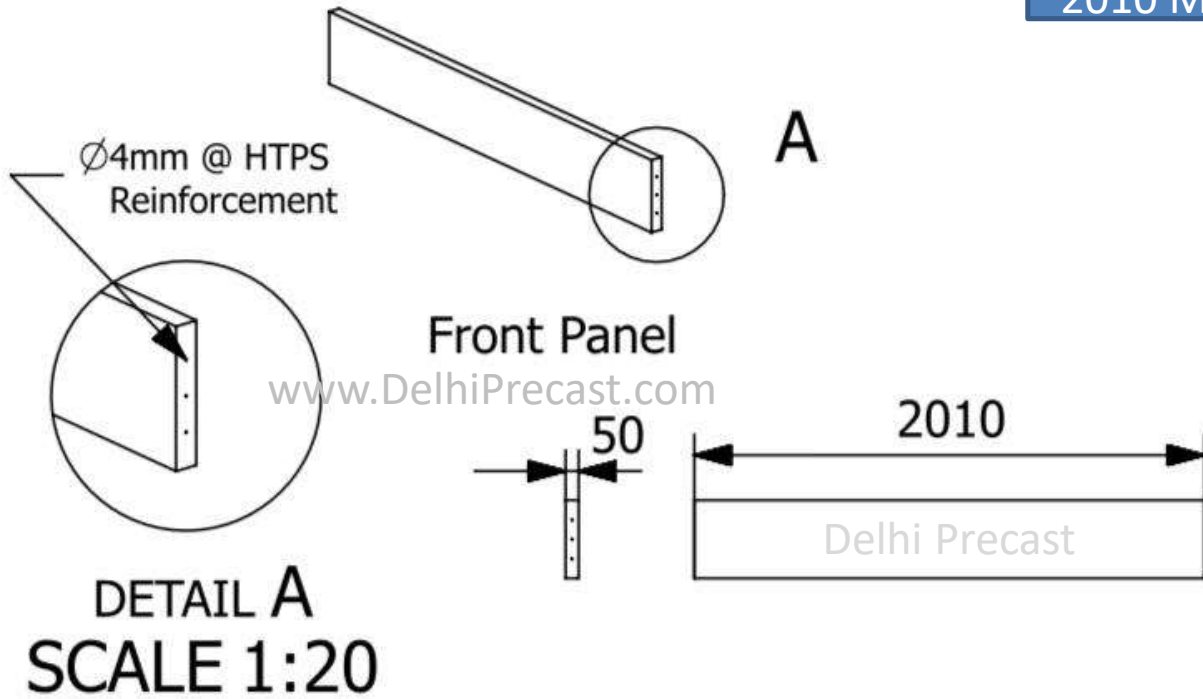
PANEL 2010x300x50 or 70 MM



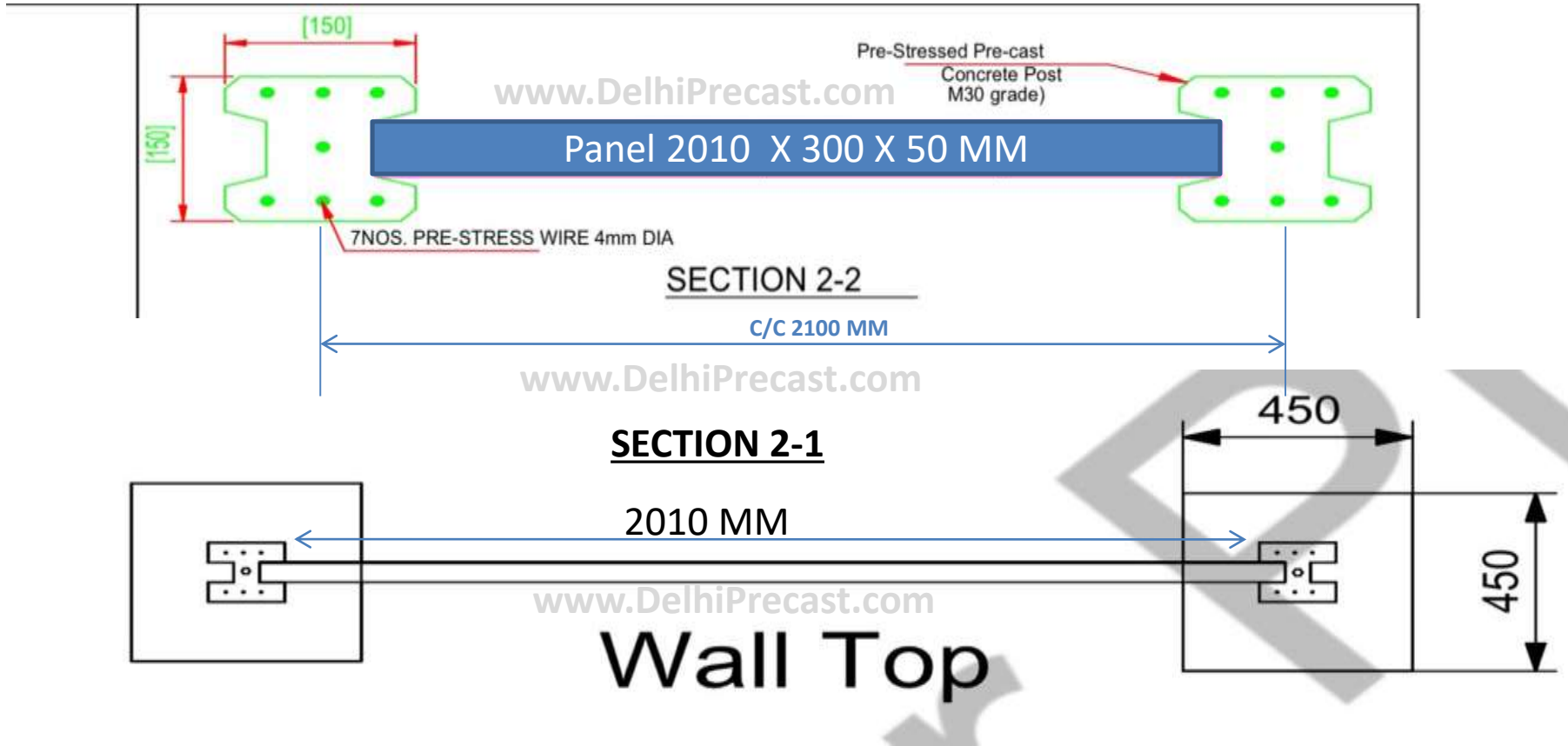
Reinforcement : Prestress
High Carbon HTPS Wires of 4mm Dia each

Panel Section

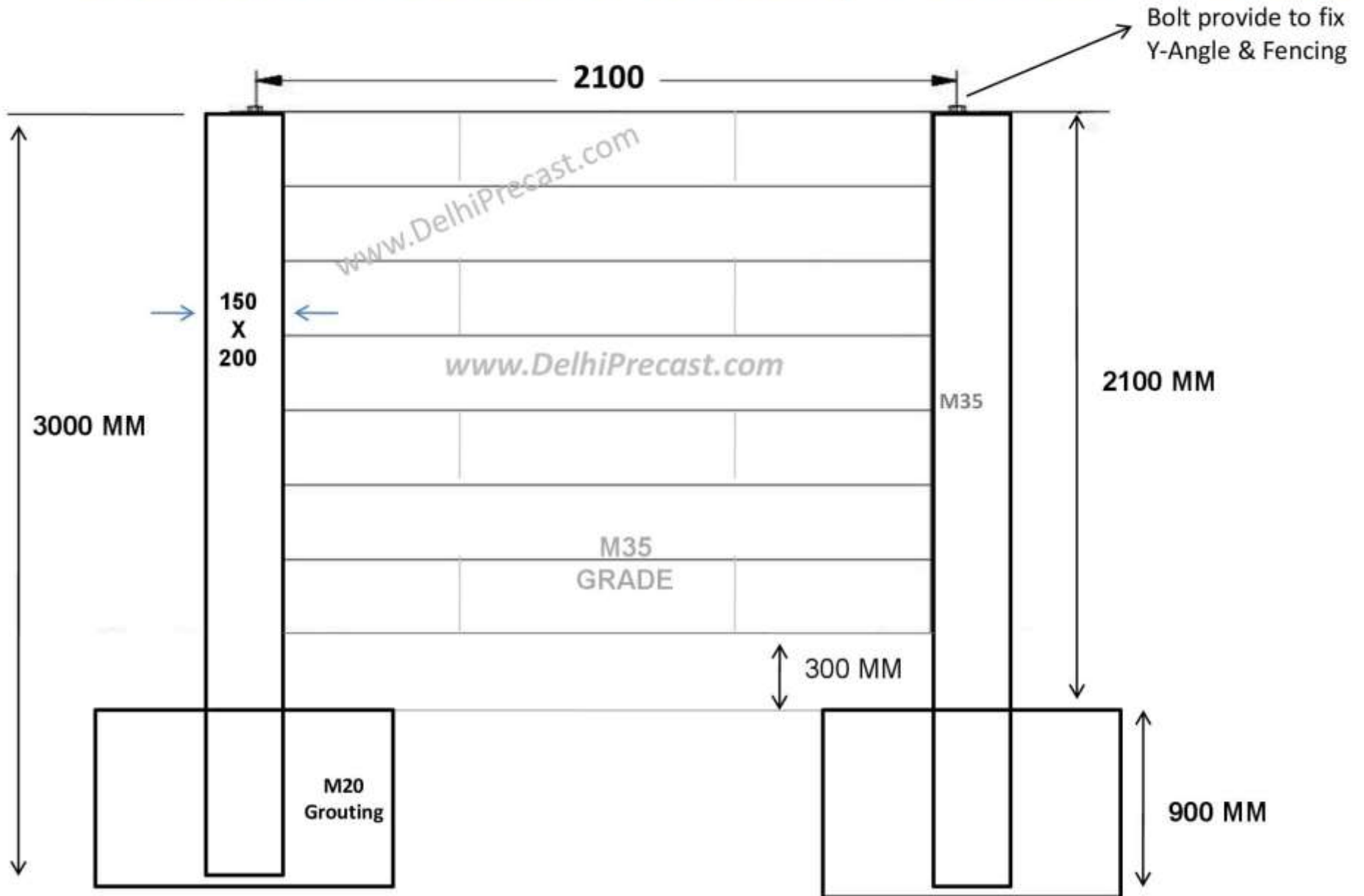
2010 MM



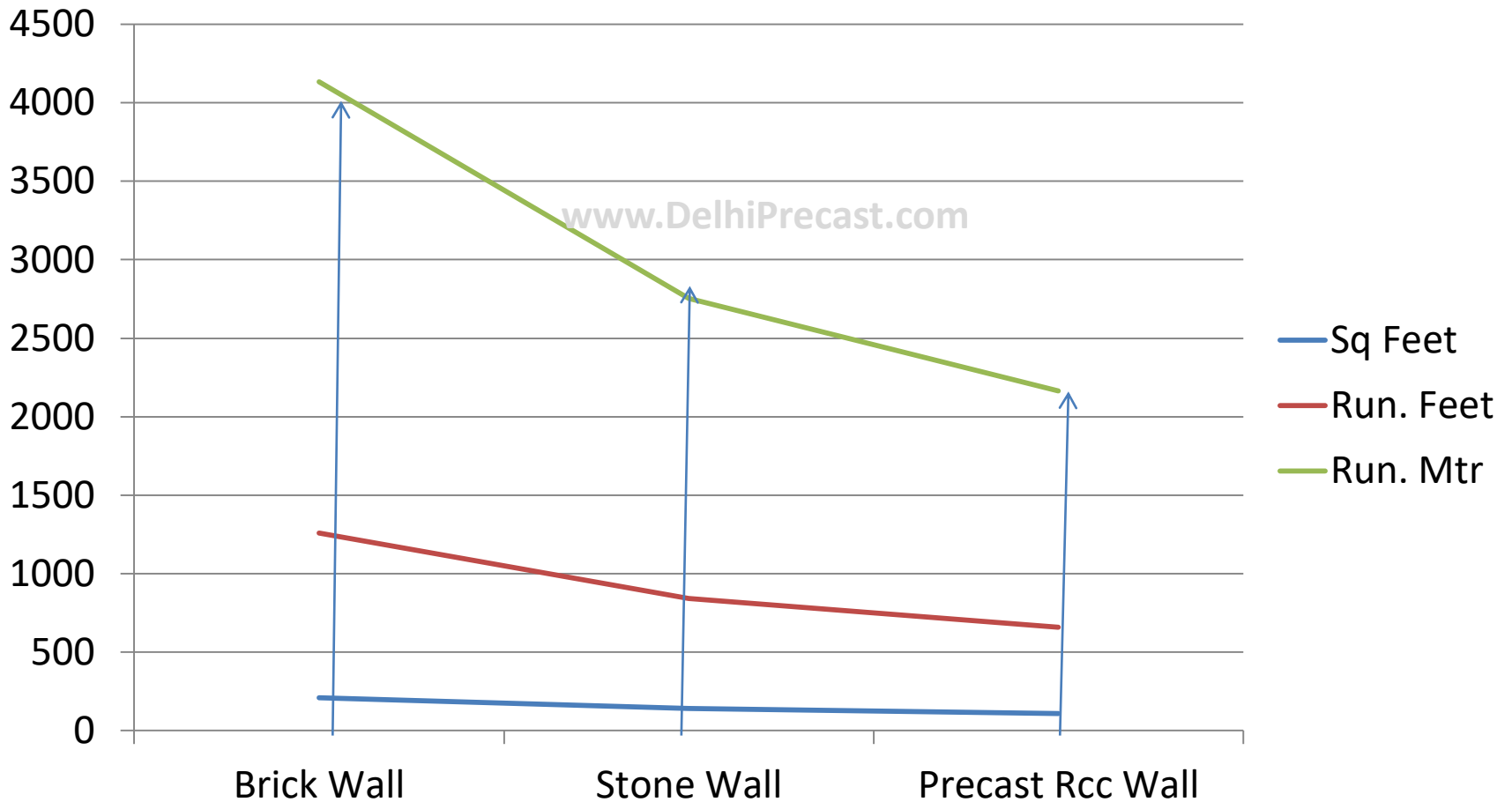
TOP VIEW OF WALL



2.1 MTR HEIGHT WALL | 70 MM PANEL

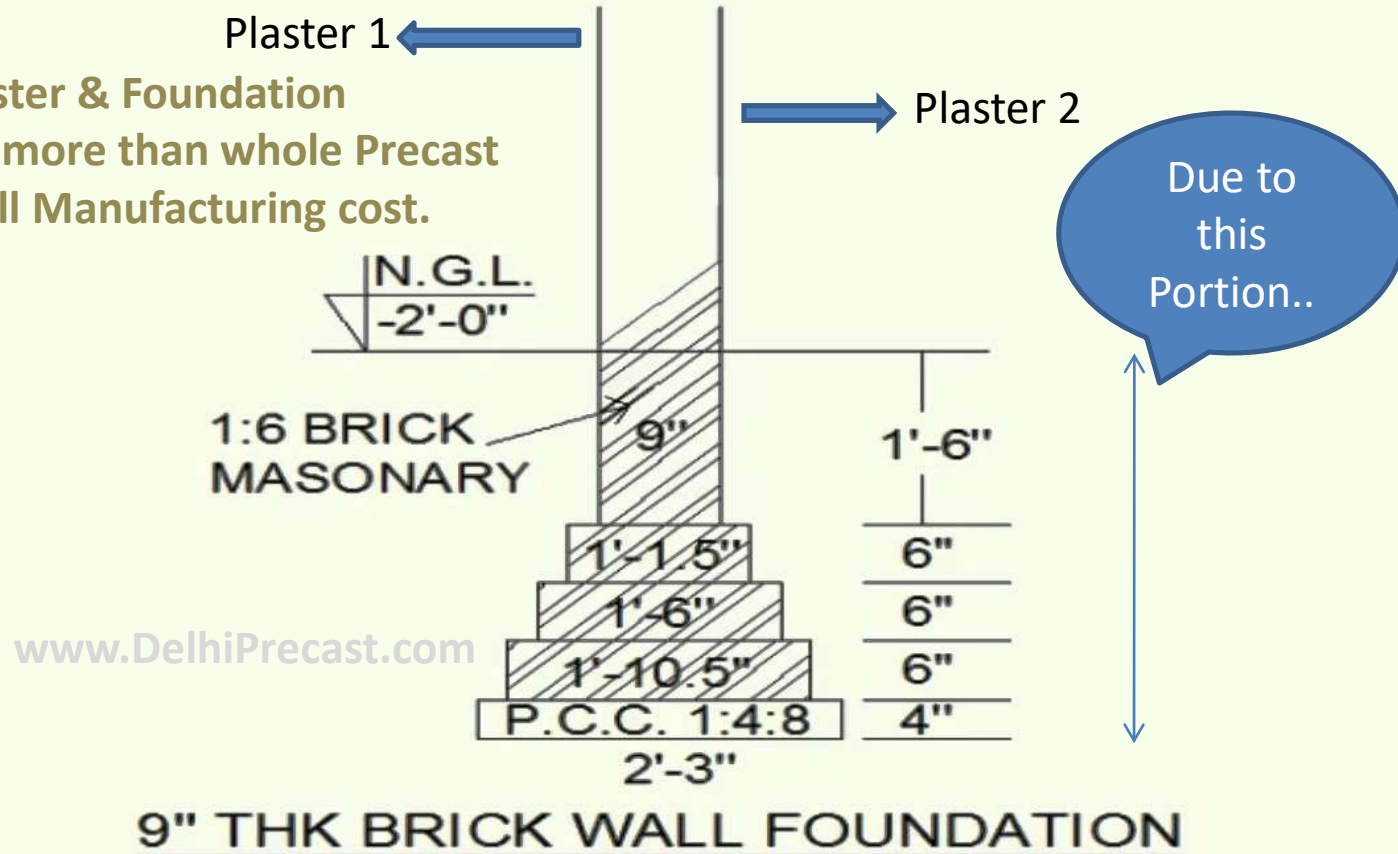


COMPARISION IN COSTING



Why Brick Wall is Costly .. ?

Both Side Plaster & Foundation together cost more than whole Precast Boundary Wall Manufacturing cost.



Benefits of Precast Wall

- 
- Cheaper & Re-Usable
 - Fast Installation
 - Longer Life (50+ Years) without maintenance
 - No Plaster Needed (Plaster is the 2nd most costly item)
 - No Expansion Joints / Cracks
 - Even Look
 - Eco Friendly / No pollution in Installation & Manufacturing

PRECAST WALL HIGH STRENGTH

HIGH STRENGTH LOAD BEARING WALL

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T.N.T

Column : 200x150 MM

Panel : 1500x200x80 MM

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BEFORE & AFTER



PRECAST WALL @ AIRPORT



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PRECAST WALL IGI AIRPORT EXT. DELHI



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RCC PRECAST BOUNDARY WALL

With G.I Barbed Wire



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WALL HEIGHT AVAILABLE

MINIMUM : 5 FEET ABOVE GROUND
MAXIMUM : 12 FEET ABOVE GROUND



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PRE-STRESS CONCRETE MATERIAL

COLUMN : 150 x 150 MM

Size = 6 inch x 6 inch

Panel : 2010 x 300 x 50 MM

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BRICK PATTERN BOUNDARY WALL

150
MM



BRICK PATTERN



6 feet

50 MM Thick

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PRE-STRESS CONCRETE

Precast Boundary Wall
8 Feet Height above
ground

PATTERN : BRICK DESIGN

Y-Angle and Concertina
Coil at top

Y-Angle = 50 x 50 x 6 Size
G.I Concertina Coil
Size = 600 MM Dia

JAIPUR INT. AIRPORT EXT PH-III WALL

Y-Angle 50x50x6 Size ,
800 MM Height

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Motion Sensor

2 Meter Wide

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Height of Wall : 9 Feet above NGL

Foundation : 3 Feet below NGL

Column : 150 x 150 MM

Panel : 2010x300x50 MM

Concrete : M40 Grade

Wall Brand : DELHI PRECAST

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PRECAST COTTAGE | ROOM



Delhi NCR Rajasthan Haryana Punjab Uttar Pradesh Madhya Pradesh Maharashtra



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RCC PRECAST PRESTRESS BOUNDARY WALL FARMHOUSE

LOW COST | HIGHER STRENGTH | LIFE 50+ YEARS

M35 Grade

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RCC PRECAST BOUNDARY WALL With G.I Concertina Coil

DELHI PRECAST

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Our 3 C Rule

- Communicate with clarity
- Commitment to provide quality
- Complete with satisfaction

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SUPPLY & INSTALLATION BY DELHI PRECAST**

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RAJASTHAN | PUNJAB | M.P | U.K & More..

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