

PROPOSED RESIDENCE
FOR
MR MITHUN
AT
MAHARAGAMA

Project No:THIITA/500Q/10/ST

STRUCTURAL DRAWINGS



A3

General Notes:

1. This Drawings is to be read in conjunction with all relevant Structural, Architectural, Services and other Specification drawings. Check all dimensions at site and report any major changes, obstructions and contradictions prior to construction.

2. Materials & Workmanship
All workmanships and materials shall be in accordance with ICTAD publication No. SCA/4/1.where not specified in this note

3. Concrete mixes
Lean concrete shall be of 15 N/mm2 (1:3:6)
Characteristic strength of concrete (fcu) for all other concrete shall be 25 N/mm2 (1:1 ½ :3).

4. Maximum Aggregate size
Nominal Maximum size of aggregate shall be 20mm (¾ ").

5. Construction joints to be chipped and use suitable bonding agent

6. Minimum Cement Content and Water cement ratio
Minimum cement content for all other mix shall be 300 kg/m3.
Water cement ratio of any mix shall not exceeded 0.6

7. Reinforcement
Main reinforcement: High Yield steel with Characteristic strength (fy) 460 N/mm2
Links: Mild steel with Characteristic strength (fy) 250 N/mm2.

8. Minimum clear cover to all reinforcement
Footings, Foundations & Tie Beams 40mm (1 ½ ")
Beams & Columns 25mm (1")
Slabs & Staircases 25mm. (1")

9. Provide proper cover blocks and spacers where necessary. Placing of timber pieces, metal or bricks will not be permitted.

10. Wall stiffeners :
Refer the detail.

11. Reinforcement bar notation.
Y - High Yield Steel. R - Mild Steel.
Y10 @8"B1 - 01 Indicates
Y-Type of Steel
10-Bar Diameter
@8"-Spacing
B1-Position
01-Bar Mark

12. Anchorage and Lap length
All laps to be staggered. Lap and Anchorage length to be = 50 x diameter of the smaller bar Where not shown in the drawings (refer detail for location).

13. All open terraces, balconies, flower troughs, bath rooms, ponds and outdoor staircases should be water proofed.

14. It's recommended to supervise the constructions by a qualified person.
- SPECIAL NOTE:

THIS DESIGN HAS UTILIZED LOAD BEARING WALLS AND LOAD REDUCTIONS ARE CONSIDERED FOR LARGE WINDOWS.

THEREFORE CHANGE OF FOLLOWING IS STRICTLY NOT ALLOWED WITHOUT PRIOR CONSULTATION OF THE STRUCTURAL ENGINEER

• WALL LOCATION

• WALL THICKNESS

• DOOR / WINDOW LOCATION

• AND DOOR / WINDOW SIZES

PROPOSED RESIDENCE FOR MR MITHUN AT
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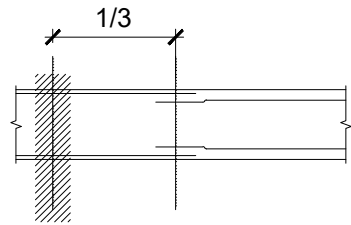
Designed
Thimira Abeyasinghe
BSc. (Hons) Civil,MSc. Civil, AMIESL, AMSSSEL
Drawn By
Chamitha

| | | |
|-------------------------------|-------------------|------------------------------------|
| Drawing Title GENERAL NOTE | | |
| Date 30/12/2020 | Scale As shown | Drawing No THIITA/500Q/10/ST/ 0 |

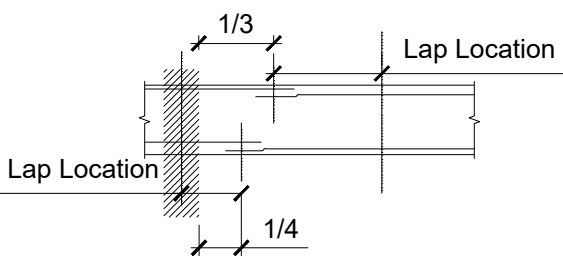
LAP LOCATIONS

Scale 2 feet :1 Inch

- (a). Columns - Laps must be staggered
- (b). Tie beams

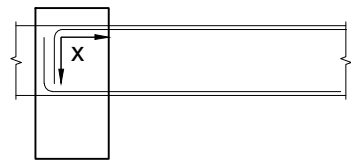


- (c). Beams & Slabs



BEAM AND COLUMN CONNECTION

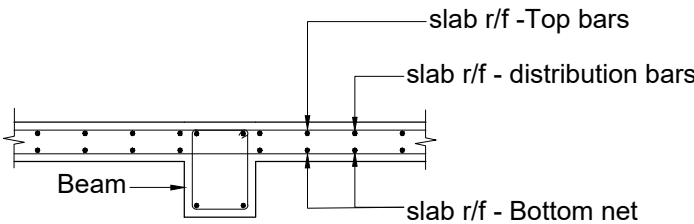
Scale 2 feet :1 Inch



Denoted length x is considered as the anchorage and is equal to 50D

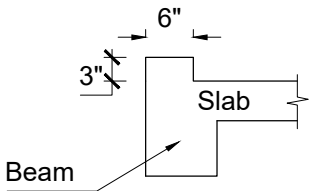
TYPICAL BEAM AND SLAB R/F

Scale 2 feet :1 Inch



CONCRETE LEDGE DETAIL AT HANDRAIL HAND RAIL

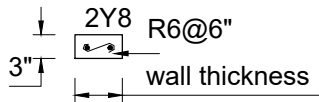
Scale 2 feet :1 Inch



Ledge detail to be used at edge beams at terrace areas and balconies (ledge to be cast together with beam, NOT later)

TYPICAL LINTEL DETAIL AT SILL LEVEL

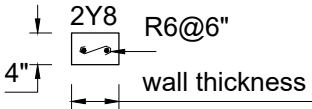
Scale 2 feet :1 Inch



Sill beam should extend to the column or should extend at least 1'-0" beyond the window edge

GUARD WALL LINTEL & STIFFENER COLUMN DETAIL

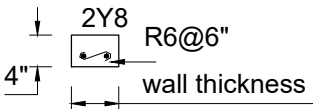
Scale 2 feet :1 Inch



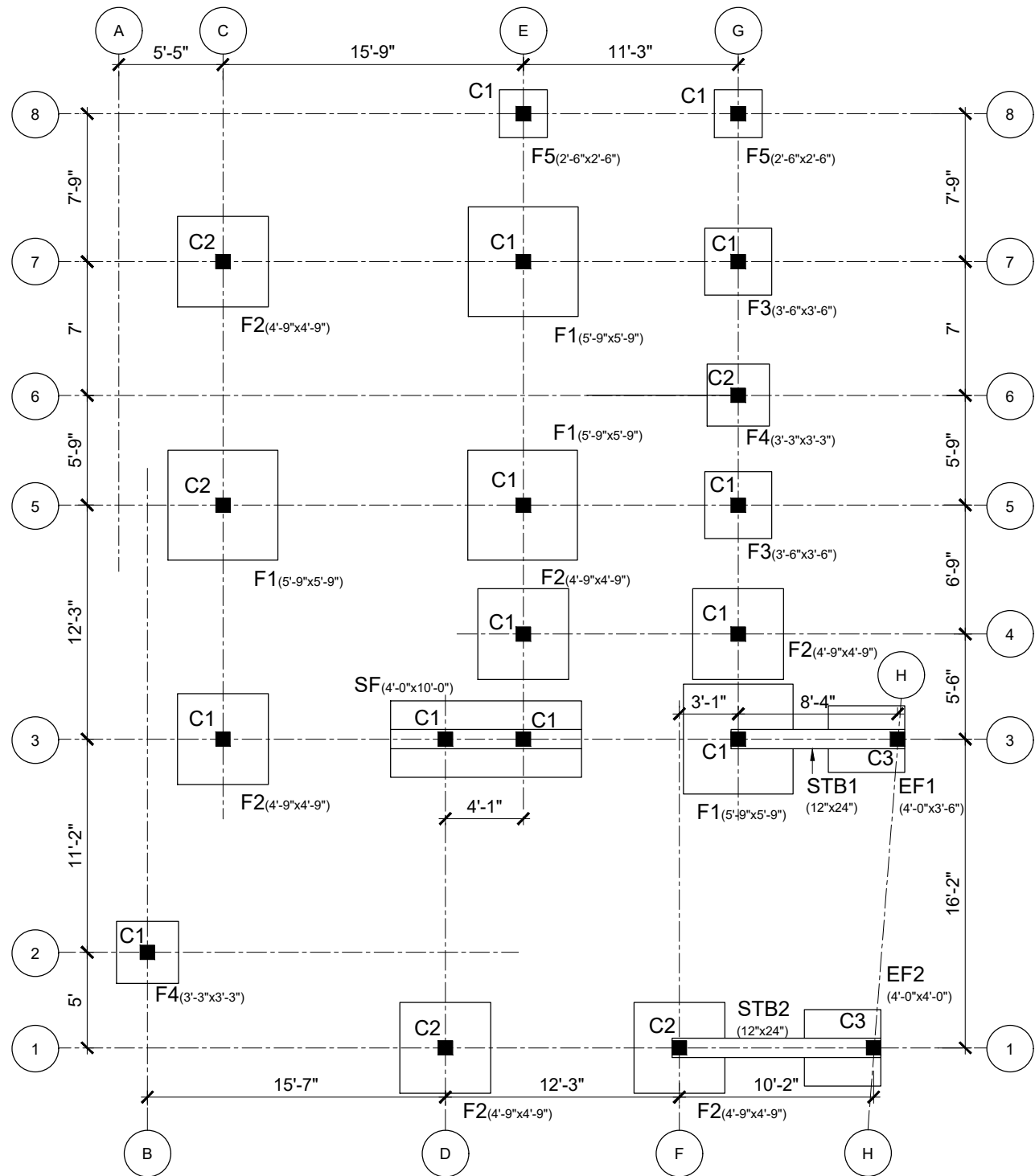
Stiffener columns to be provided at every 10'

TYPICAL LINTEL DETAIL

Scale 2 feet :1 Inch

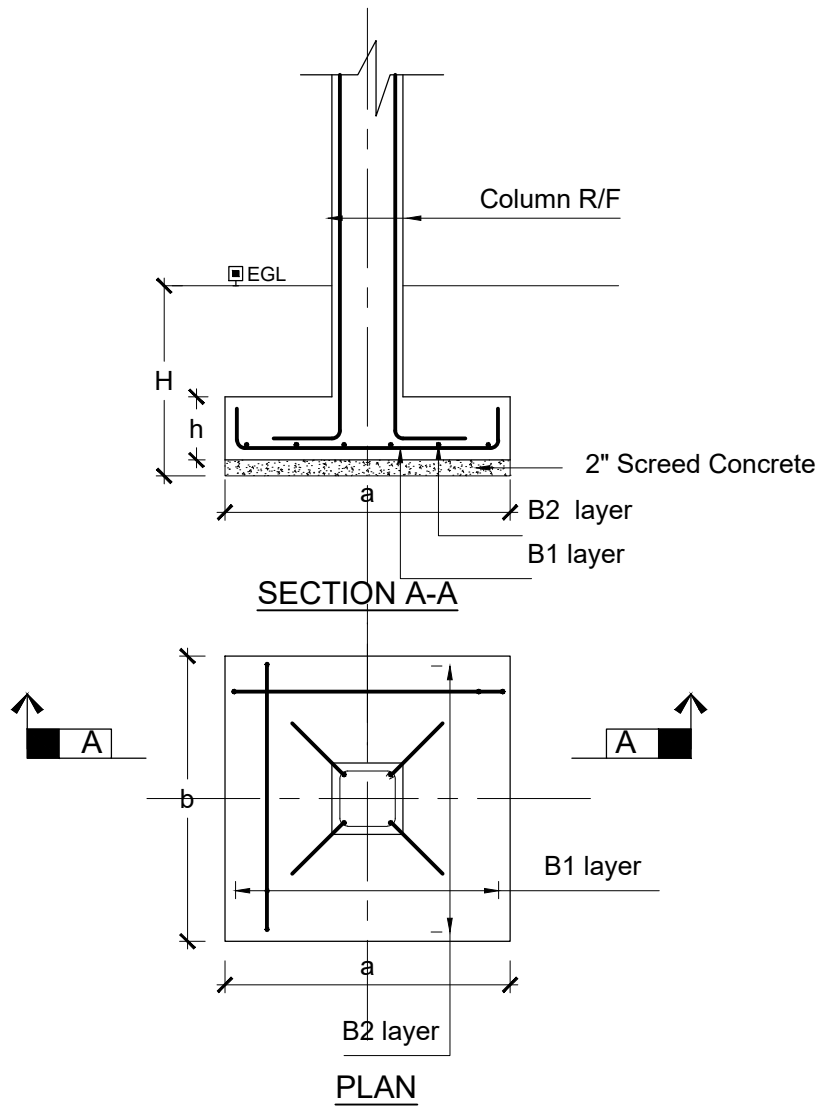


Lintel beam should extend to the column or should extend at least 1'-0" beyond the window edge



COLUMN AND FOOTING LAYOUT
Scale 8 feet :1 Inch

FOOTING DETAILS
Scale 2 feet :1 Inch



Concrete Cover = 1 1/2 inch
Concrete Mix = 1:1 1/2 :3 (Grade 25)

FOOTINGS SCHEDULE

| FOOTING | a | b | h | R/F For B1/B2 |
|---------|-------|-------|-----|---------------|
| F1 | 5' 9" | 5' 9" | 12" | Y10@6" |
| F2 | 4' 9" | 4' 9" | 10" | Y10@7" |
| F3 | 3' 6" | 3' 6" | 7" | Y10@8" |
| F4 | 3' 3" | 3' 3" | 7" | Y8@7" |
| F5 | 2' 6" | 2' 6" | 6" | Y8@7" |
| EF1 | 4' 0" | 3' 6" | 12" | Y10@8" |
| EF2 | 4' 0" | 4' 0" | 10" | Y10@9" |

H= 3'-0" FOR ALL FOOTINGS

Assumed bearing capacity of 140 kN/m2 at 3' below existing ground level should be confirmed at the site

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Drawn By
Chamitha

| | | |
|----------------------------------|-------------------|------------------------------------|
| Drawing Title FOOTING DETAILS | | |
| Date 30/12/2020 | Scale As shown | Drawing No THIITA/500Q/10/ST/ 2 |

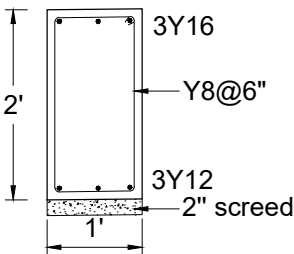
TYPICAL STRAP BEAM DETAIL

Scale 2 feet :1 Inch

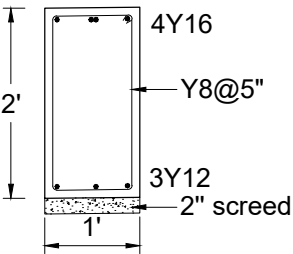
STRAP BEAM DETAIL

Scale 2 feet :1 Inch

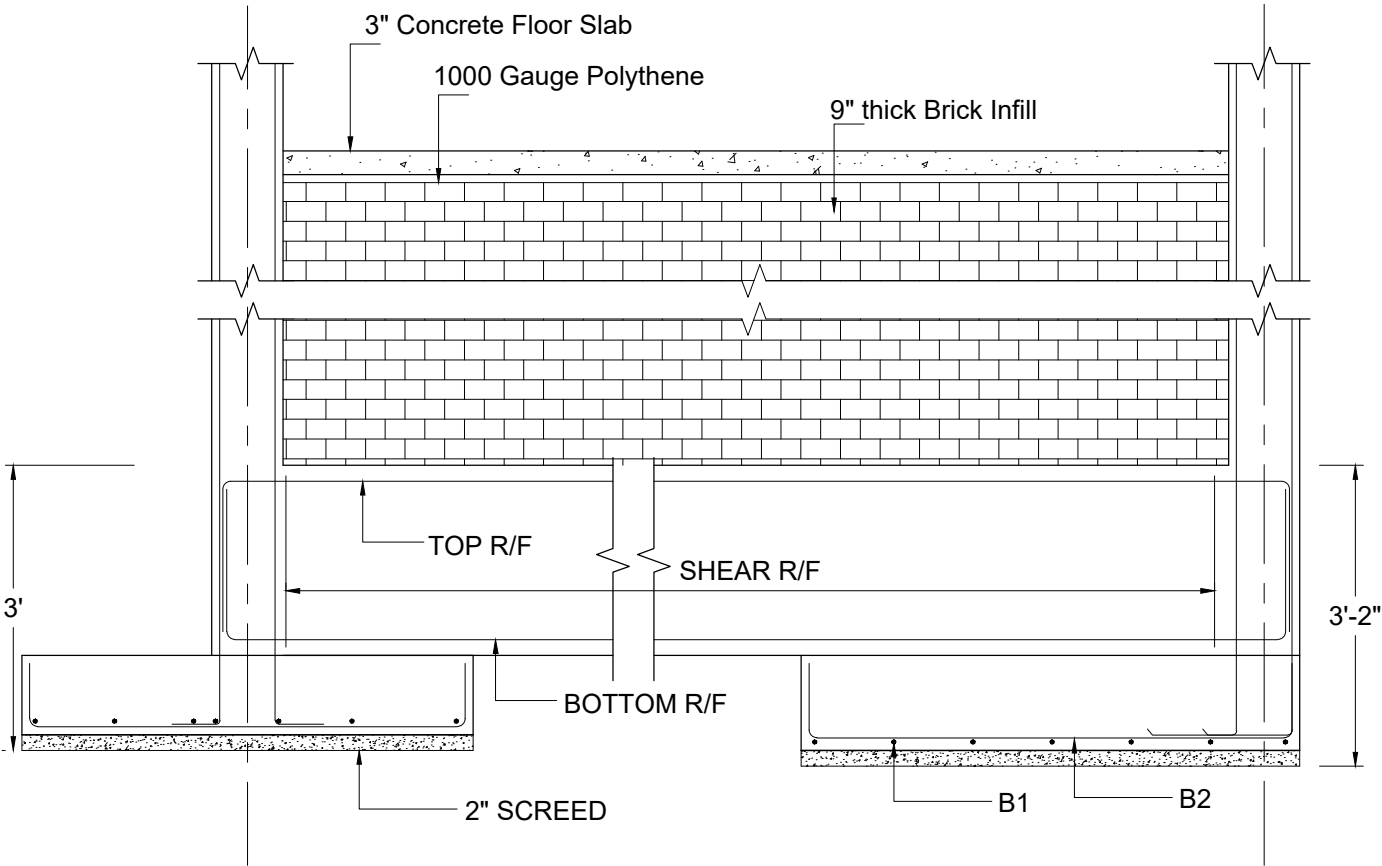
STB 01 (12" x 24")



STB 02 (12" x 24")



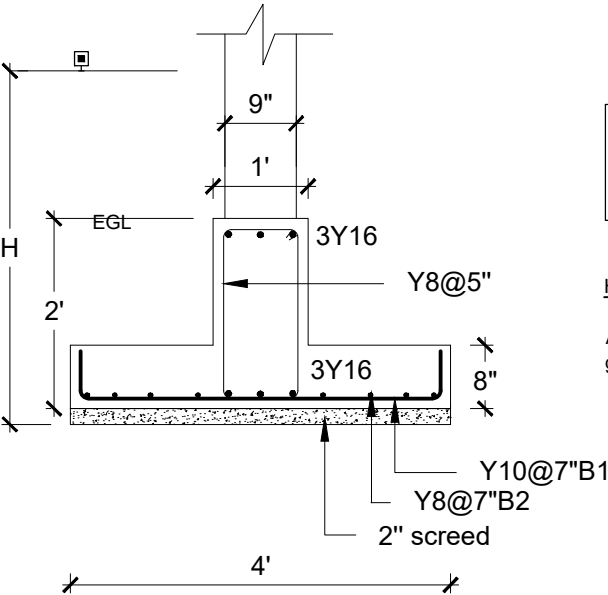
Screed to be applied where Footing is not present



SPECIAL NOTE:
No gap should be present between
eccentric footing and the strap beam

TYPICAL FOOTING DETAIL (SF) 4'-0" wide

Scale 2 feet :1 Inch



SPECIAL NOTE:
Gap between ground floor concrete
and Strip footing is to be filled with
9" thick brick fill

H= 3'-0" FOR ALL FOOTINGS

Assumed bearing capacity of 140 kN/m2 at 3' below existing
ground level should be confirmed at the site

Concrete Cover = 1 1/2"
Concrete Mix = 1:1 1/2 :3 (Grade 25)

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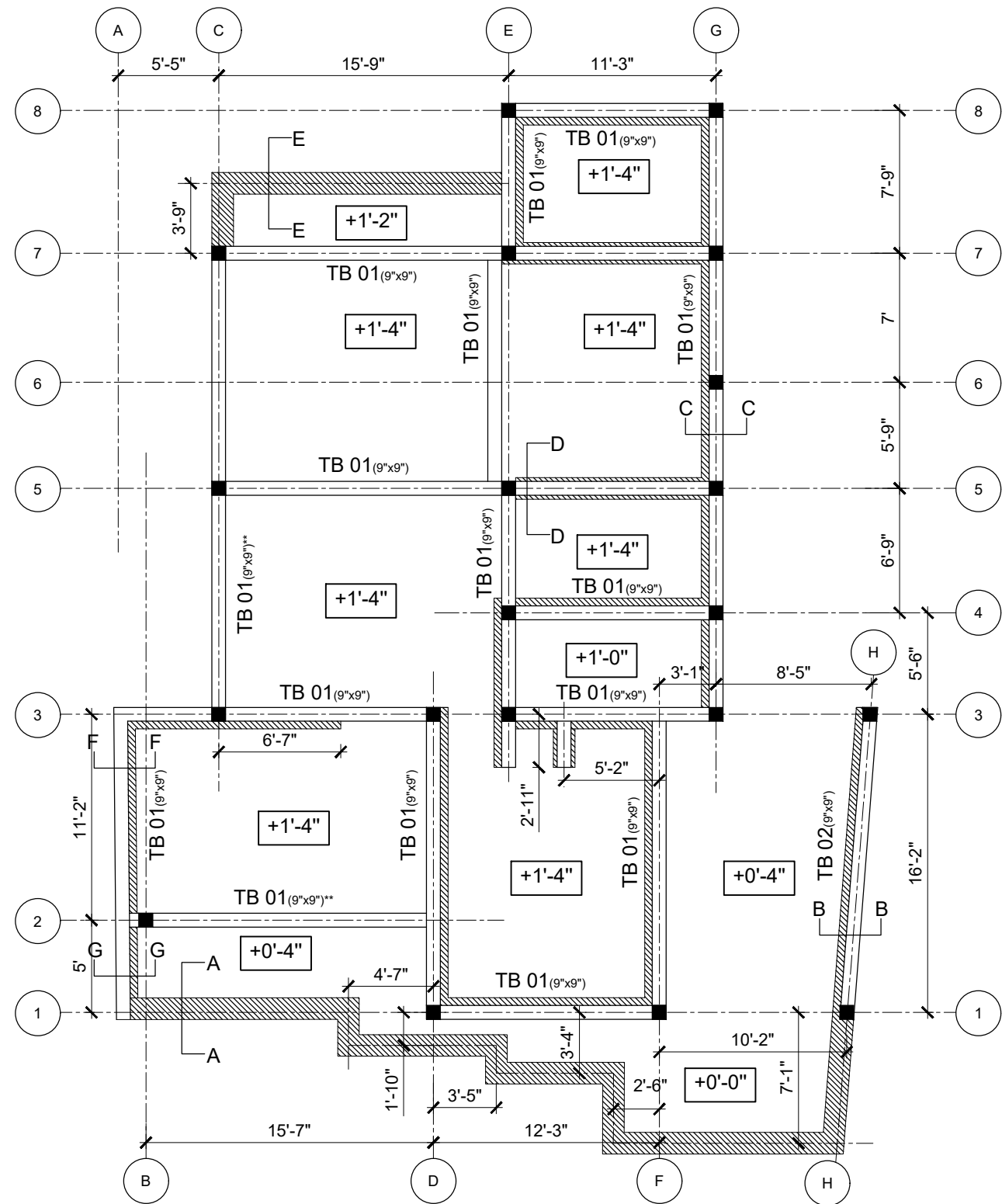
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Drawing Title
STRAP BEAM AND STRIP FOOTING DETAILS

| Date | Scale | Drawing No |
|------------|----------|----------------------|
| 30/12/2020 | As shown | THIITA/500Q/10/ST/ 3 |

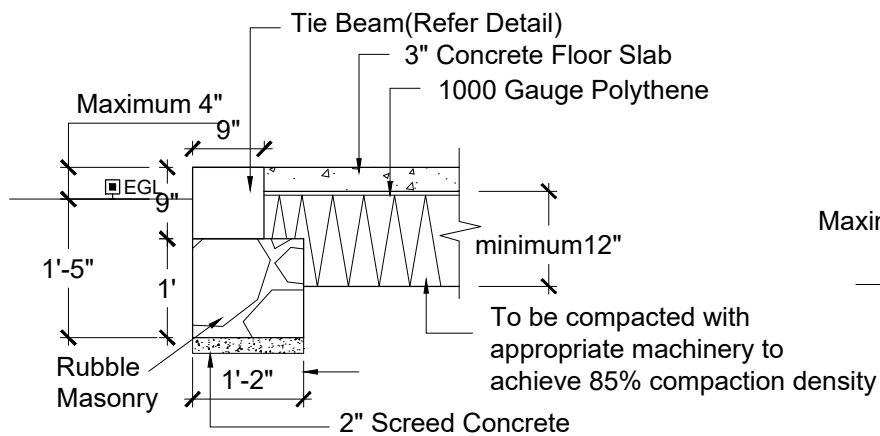


TIE BEAM AND RUBBLE FOUNDATION LAYOUT
Scale 8 feet :1 Inch

TYPICAL FOUNDATION

Scale 2 feet :1 Inch

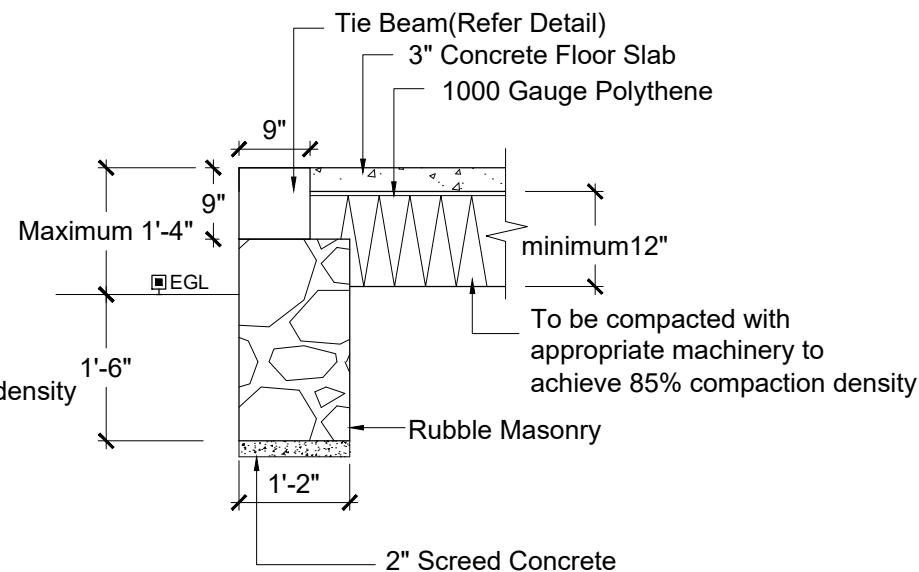
SECTION B-B



TYPICAL FOUNDATION

Scale 2 feet :1 Inch

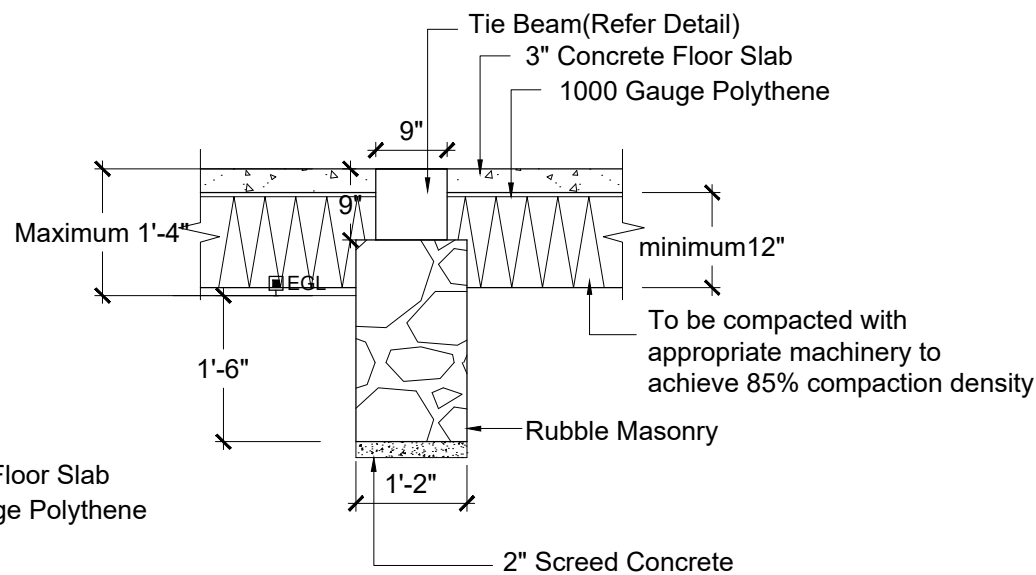
SECTION C-C



TYPICAL FOUNDATION

Scale 2 feet :1 Inch

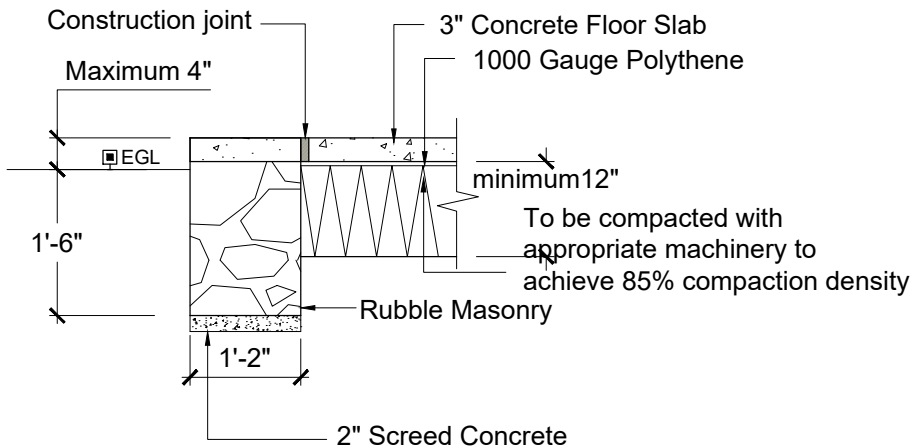
SECTION D-D



TYPICAL FOUNDATION

Scale 2 feet :1 Inch

SECTION A-A



Concrete Cover = $1\frac{1}{2}$ "
Concrete Mix = 1:1 $\frac{1}{2}$:3 (Grade 25)

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Drawn By
Chamitha

Drawing Title

FOUNDATION LAYOUT AND DETAILS

Date

30/12/2020

Scale

As shown

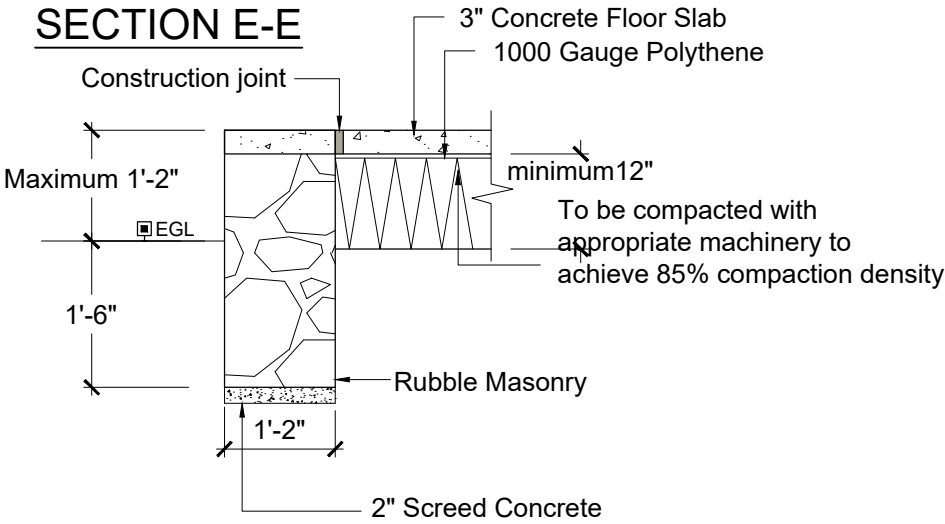
Drawing No

THIITA/500Q/10/ST/ 4

TYPICAL FOUNDATION

Scale 2 feet :1 Inch

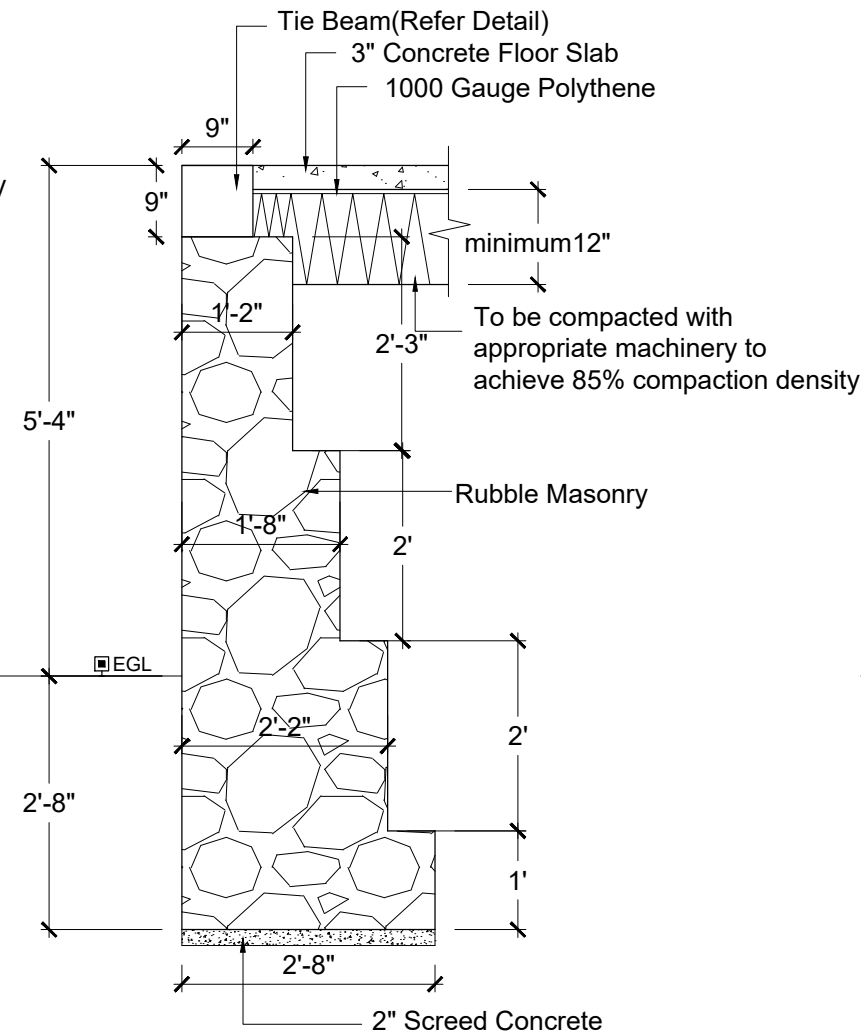
SECTION E-E



TYPICAL FOUNDATION

Scale 2 feet :1 Inch

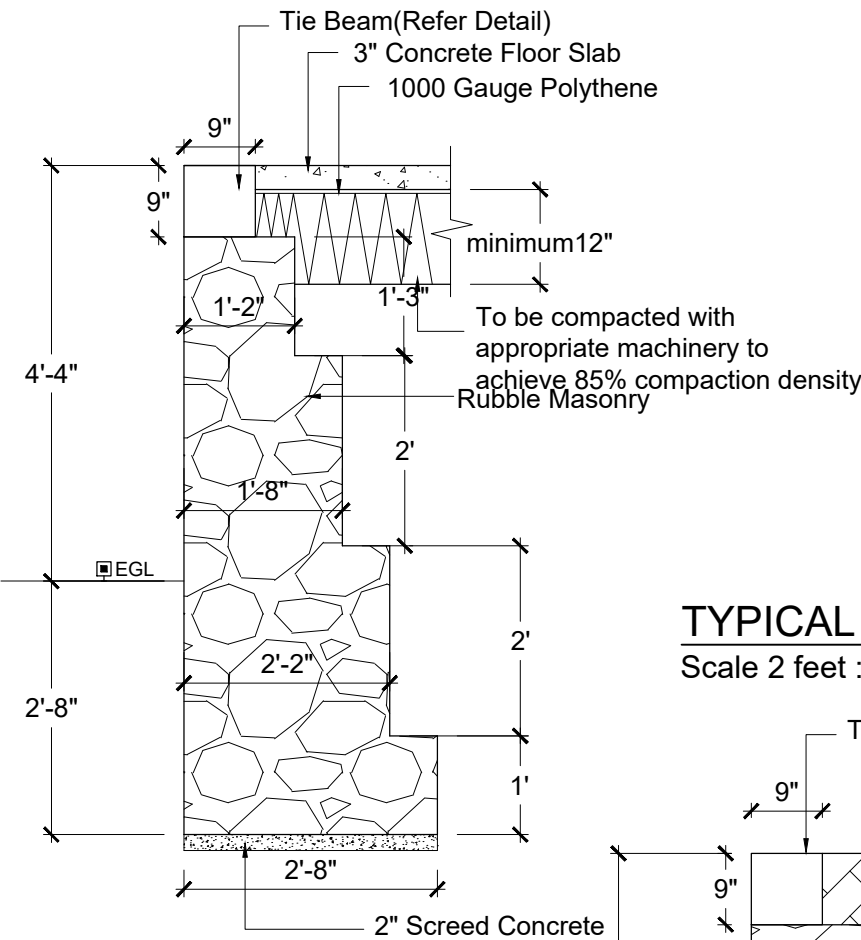
SECTION F-F



TYPICAL FOUNDATION

Scale 2 feet :1 Inch

SECTION G-G

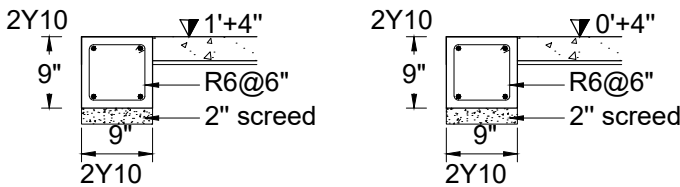


TIE BEAM DETAILS

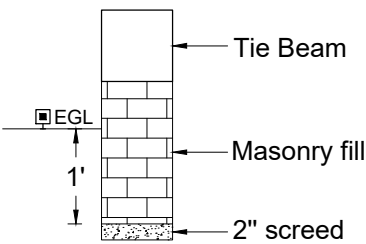
Scale 2 feet :1 Inch

TB01(9" x 9")

TB02(9" x 9")

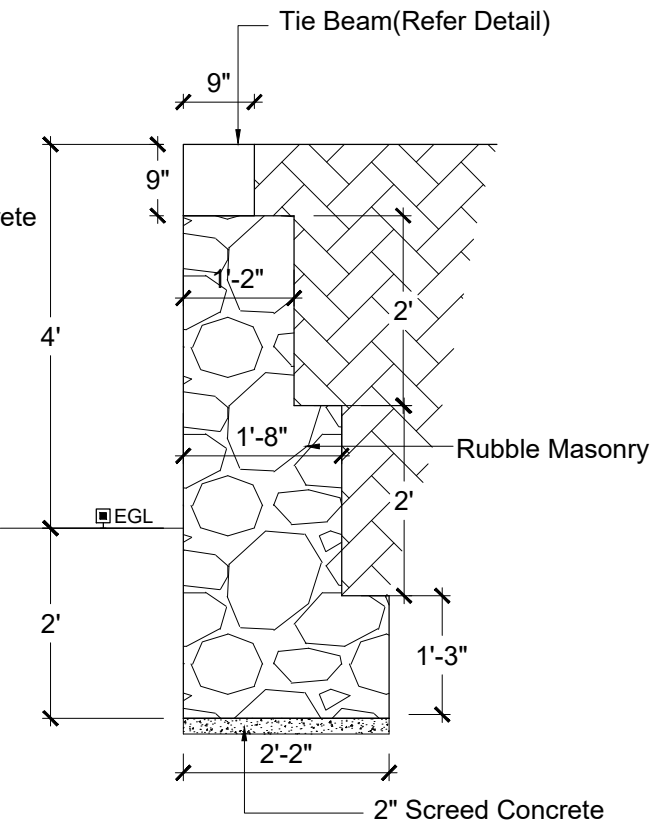


At TB with **



TYPICAL RETAINING WALL

Scale 2 feet :1 Inch



Concrete Cover = 1 1/2"
Concrete Mix = 1:1 1/2 :3 (Grade 25)

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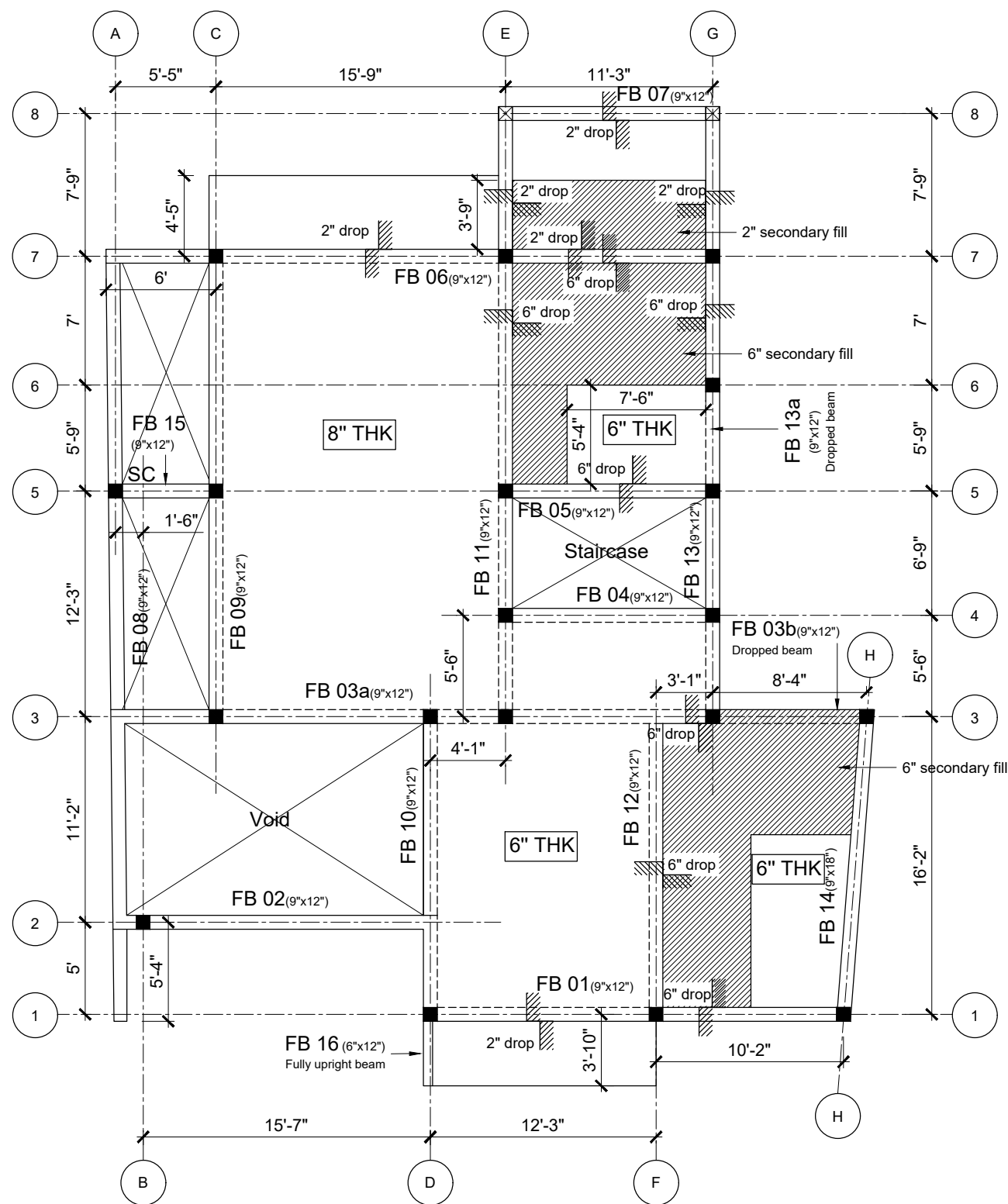


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Drawn By
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Drawing Title
FOUNDATION LAYOUT AND DETAILS
Date
30/12/2020
Scale
As shown
Drawing No
THIITA/500Q/10/ST/ 4b



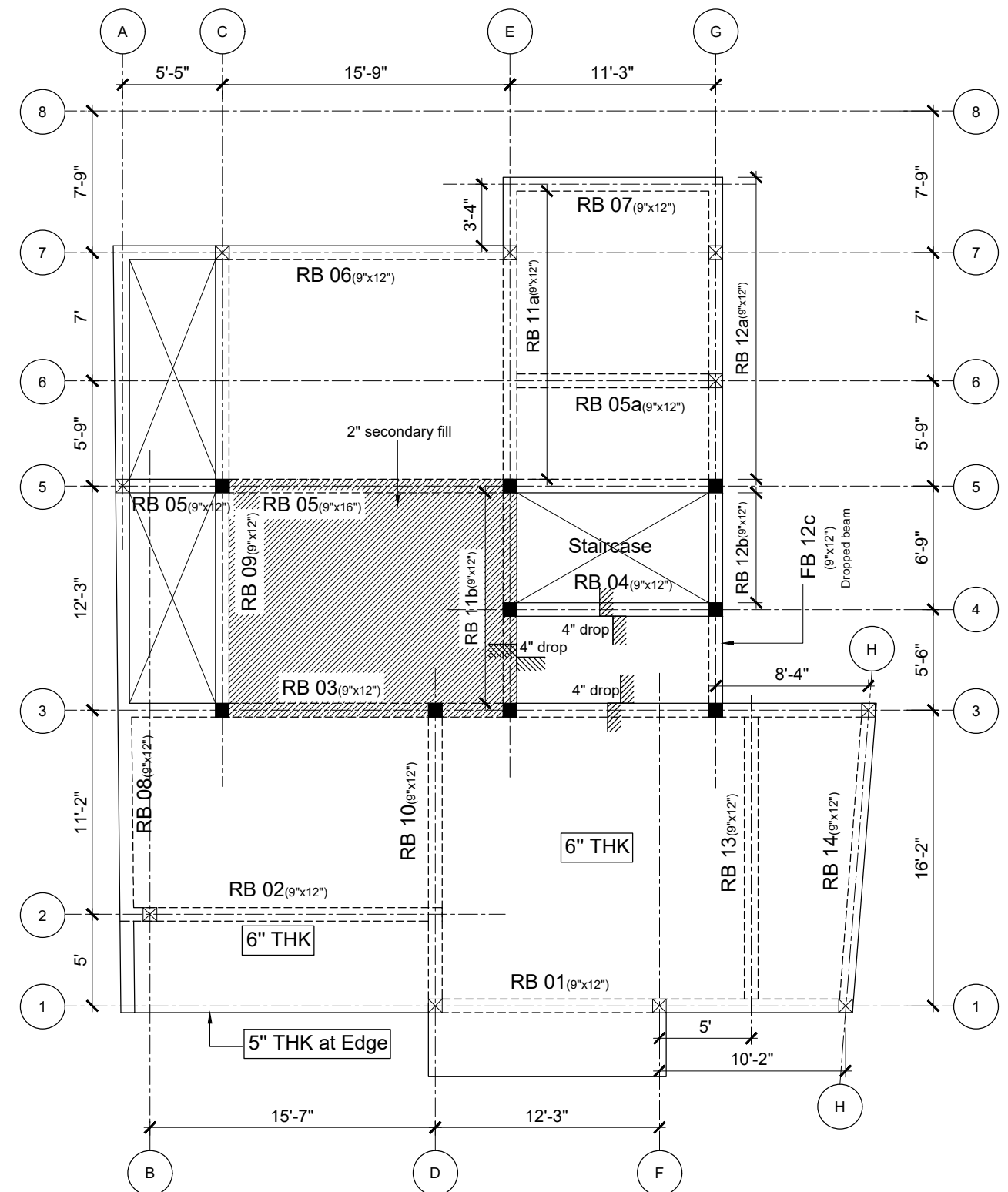
GENERAL ARRANGEMENT - FIRST FLOOR

Scale 8 feet : 1 Inch

Slab thickness where not shown = 5"

Concrete Cover = 1"

Concrete Mix = 1:1 1/2 : 3 (Grade 25)



GENERAL ARRANGEMENT - ROOF TERRACE

Scale 8 feet : 1 Inch

Slab thickness where not shown = 5"

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Drawing Title

GENERAL ARRANGEMENTS

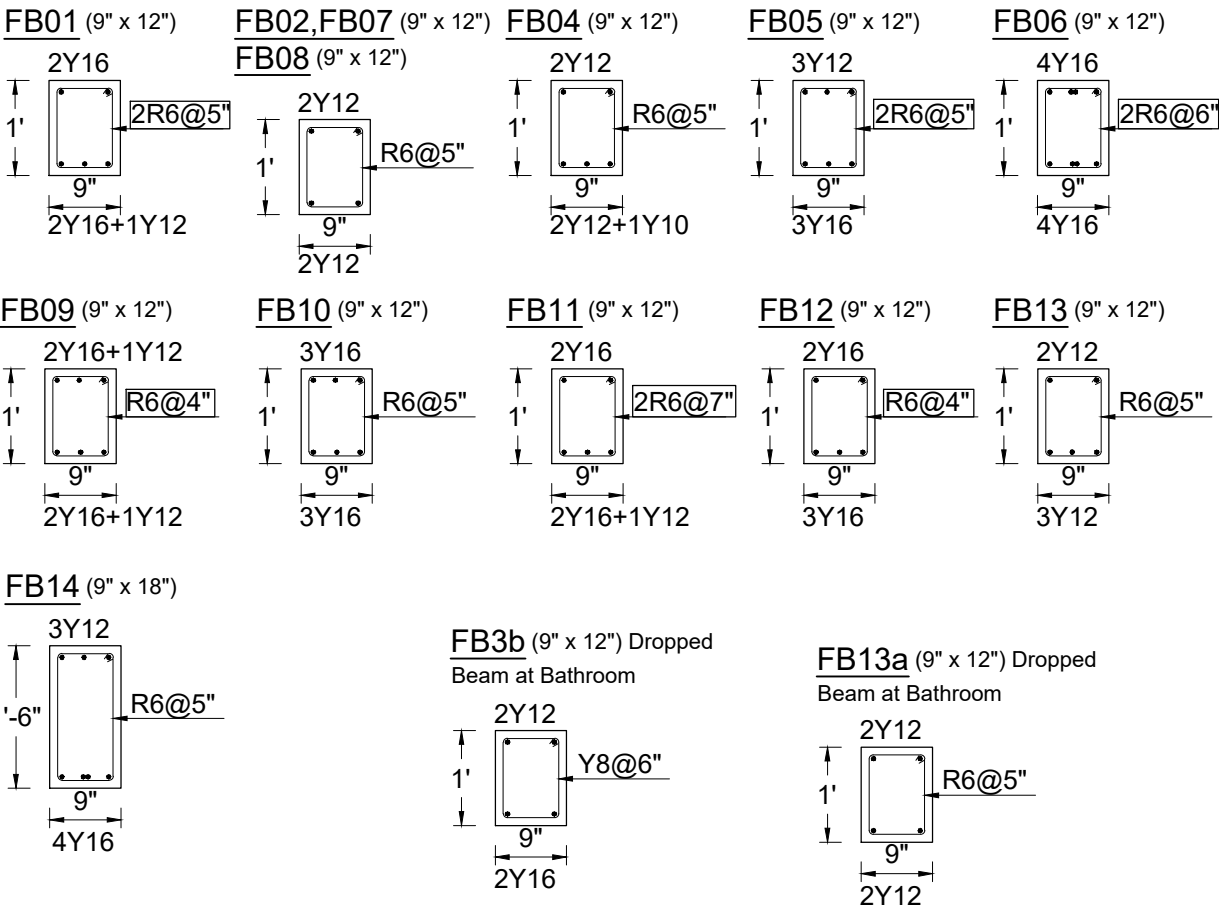
Date
30/12/2020

Scale
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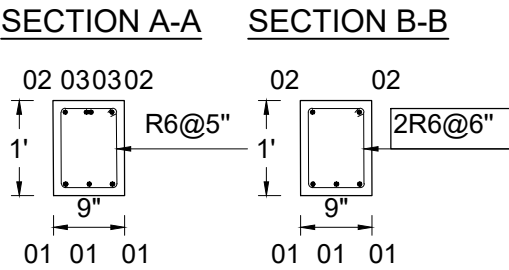
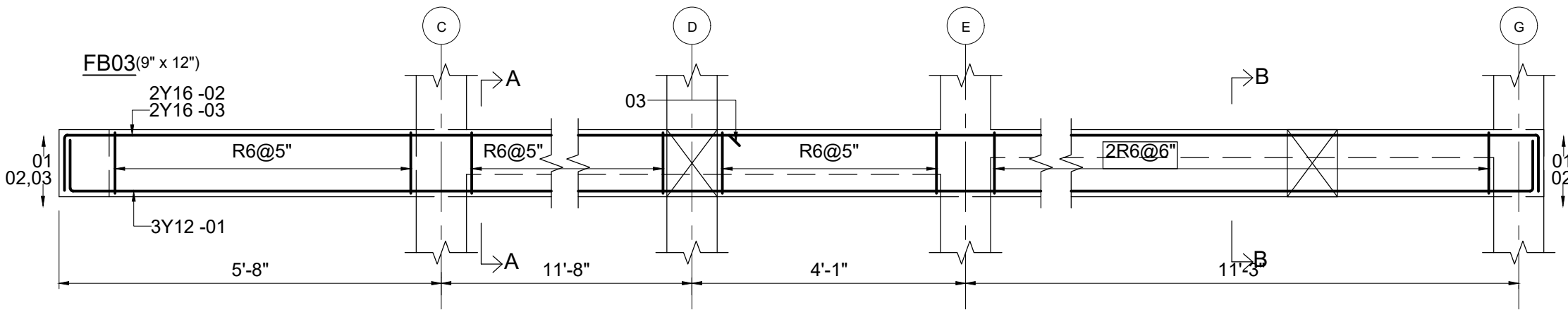
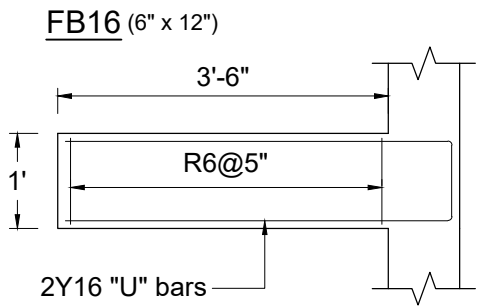
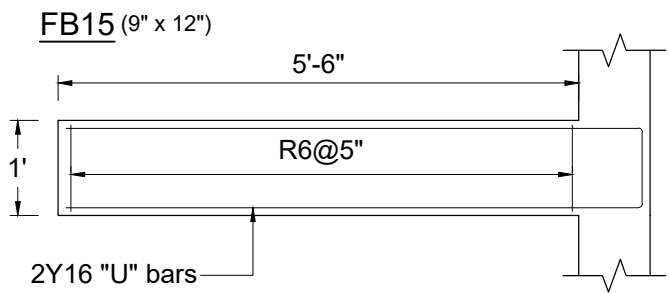
Drawing No
THIITA/500Q/10/ST/ 5

FIRST FLOOR BEAM DETAILS

Scale 2 feet :1 Inch



Concrete Cover = 1"
Concrete Mix = 1:1 1/2 :3 (Grade 25)



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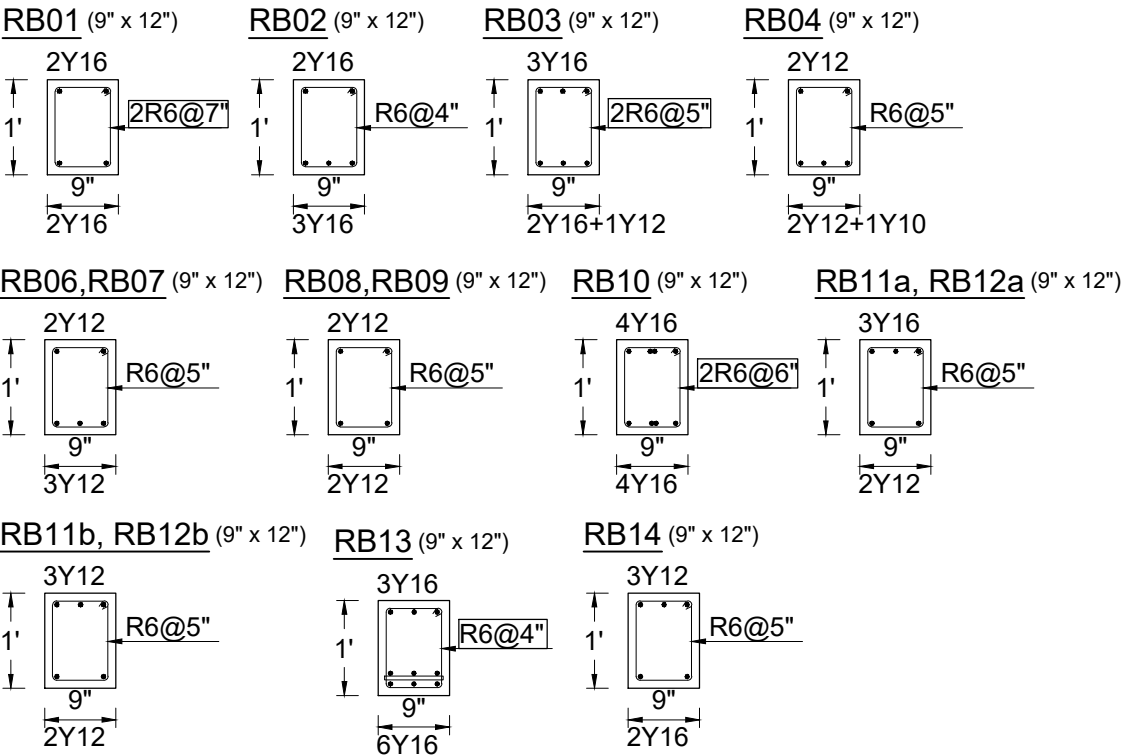
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Drawing Title
BEAM DETAILS - FIRST FLOOR

Date
30/12/2020
Scale
As shown
Drawing No
THIITA/500Q/10/ST/ 6

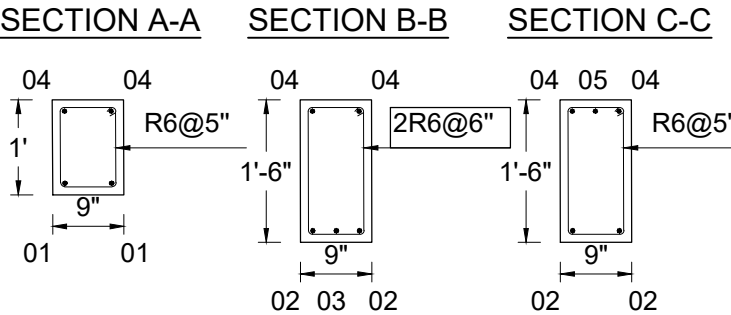
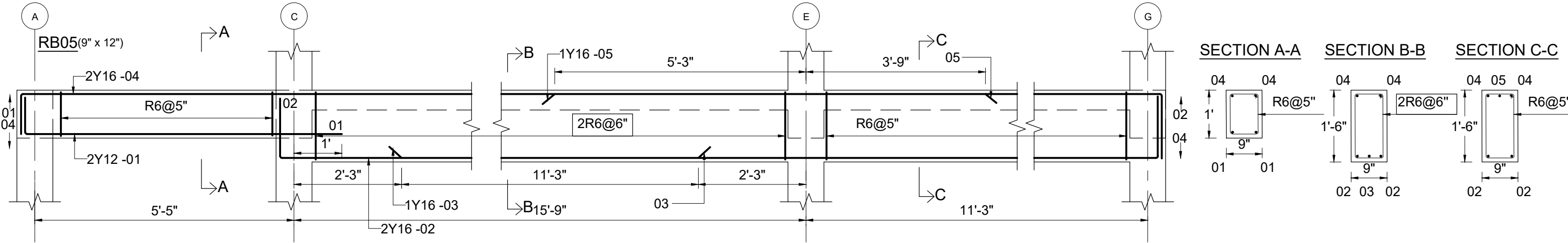
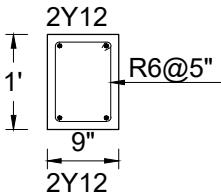
ROOF TERRACE BEAM DETAILS

Scale 2 feet :1 Inch



Concrete Cover = 1"
Concrete Mix = 1:1 1/2 :3 (Grade 25)

FB12c (9" x 12") Dropped
Beam at Bathroom



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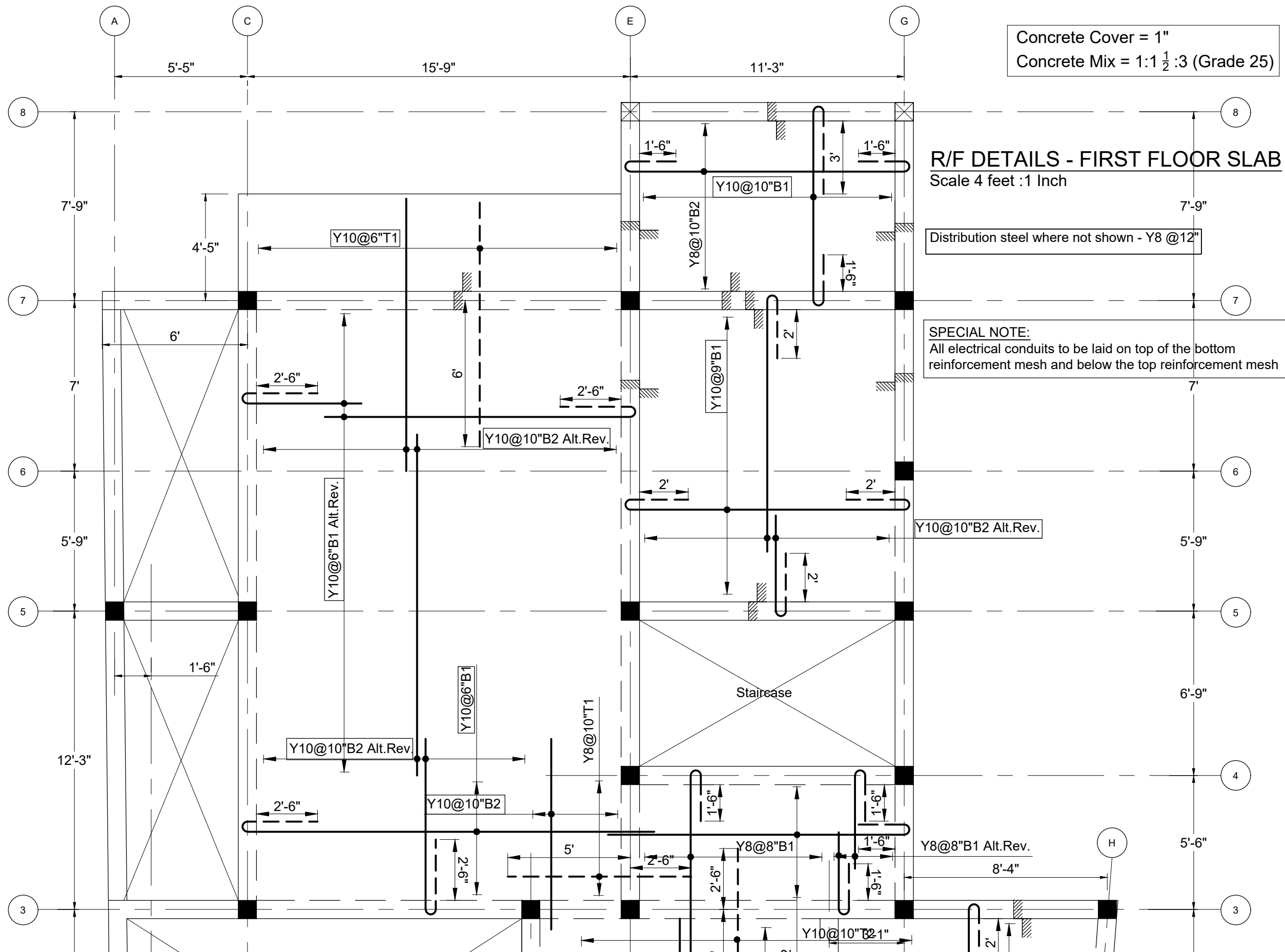
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Drawing Title
BEAM DETAILS - ROOF TERRACE

| | | |
|------------|----------|----------------------|
| Date | Scale | Drawing No |
| 30/12/2020 | As shown | THIITA/500Q/10/ST/ 7 |



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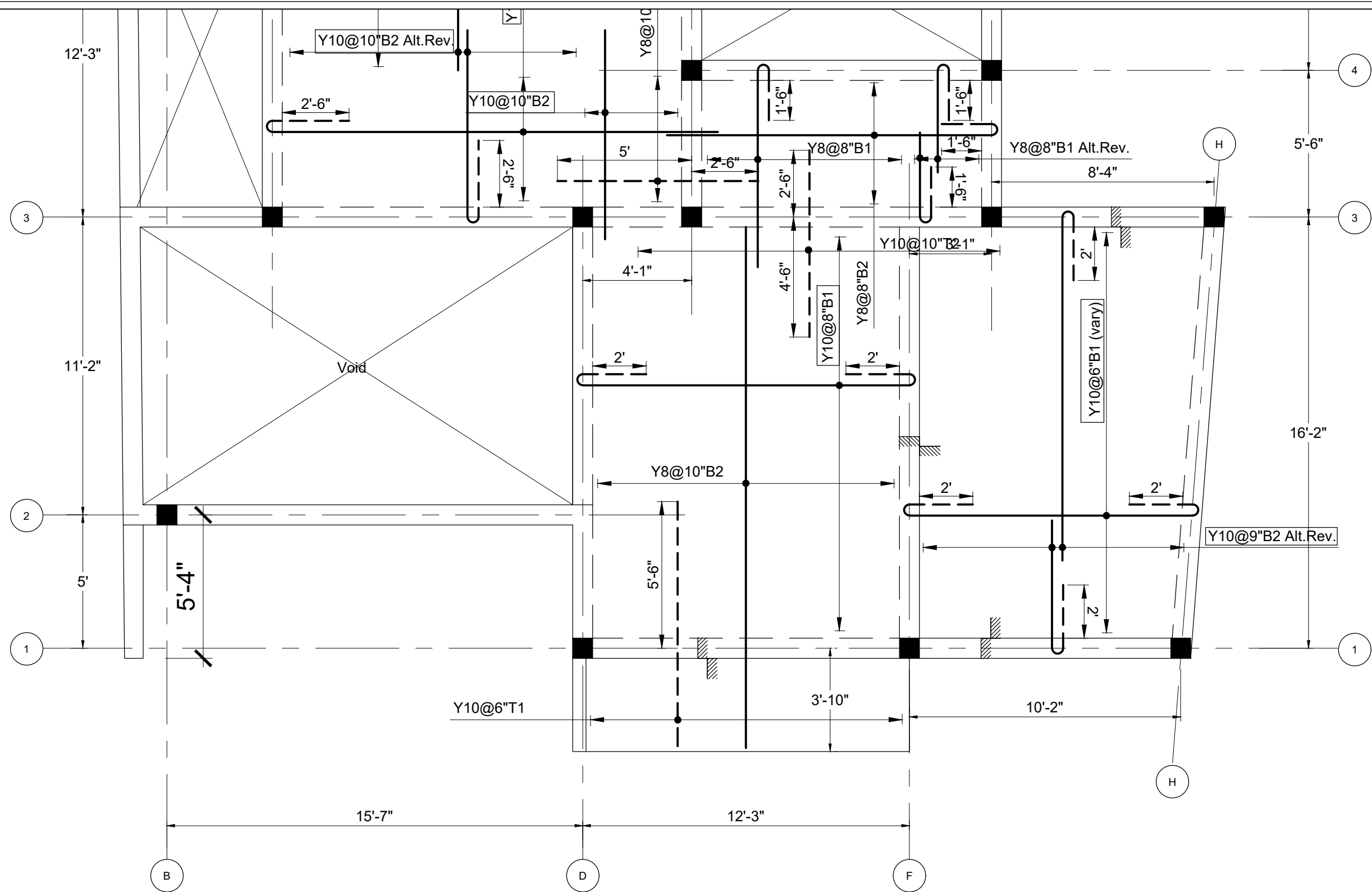
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Drawing Title
R/F DETAILS - FIRST FLOOR - SHEET 1

| Date | Scale | Drawing No |
|------------|----------|----------------------|
| 30/12/2020 | As shown | THIITA/500Q/10/ST/ 8 |



R/F DETAILS - FIRST FLOOR SLAB

Scale 4 feet : 1 Inch

Distribution steel where not shown - Y8 @12"

SPECIAL NOTE:

All electrical conduits to be laid on top of the bottom reinforcement mesh and below the top reinforcement mesh

Concrete Cover = 1"
Concrete Mix = 1:1 $\frac{1}{2}$:3 (Grade 25)

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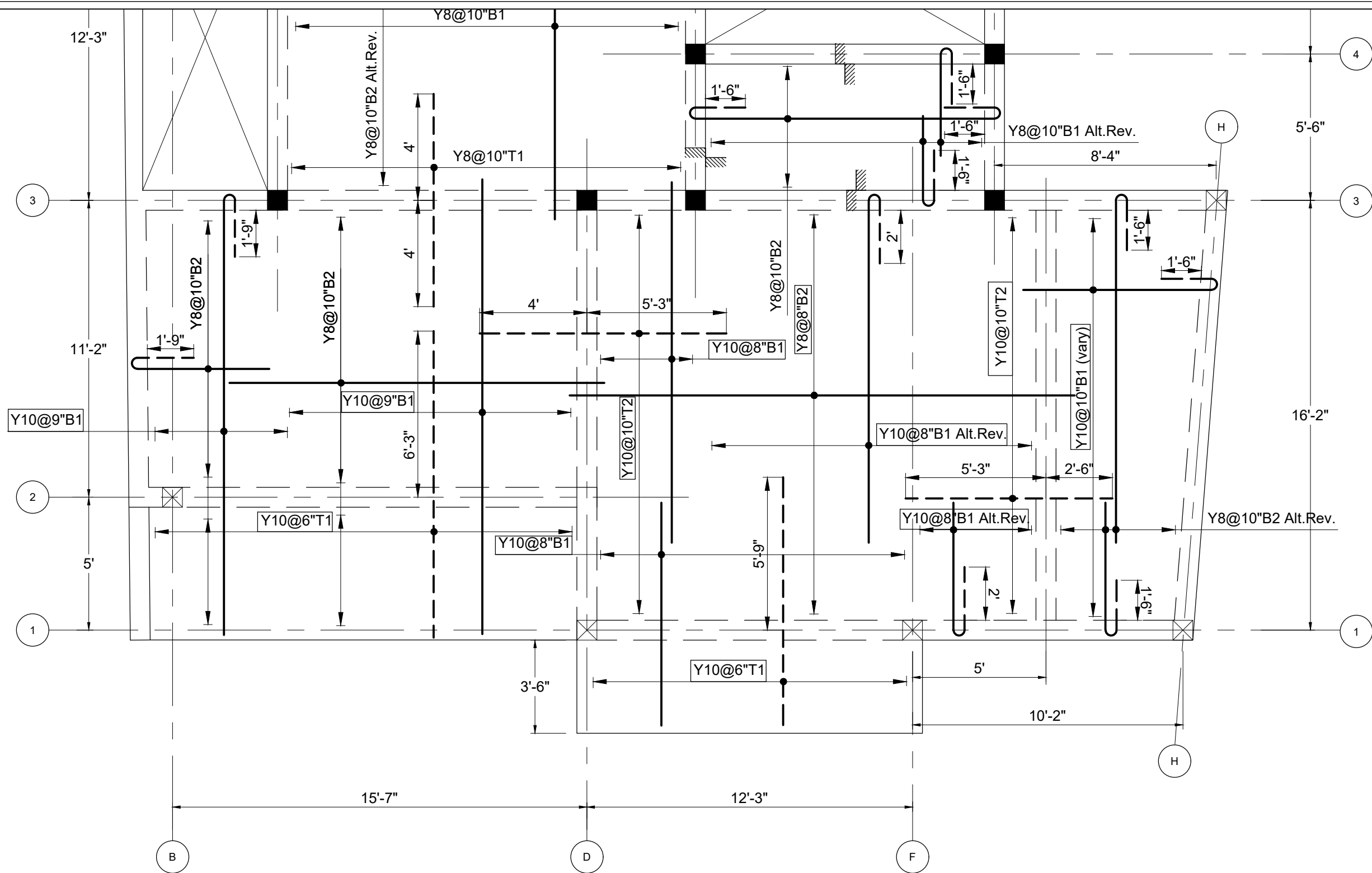
Drawing Title

R/F DETAILS - FIRST FLOOR - SHEET 2

Date
30/12/2020

Scale
As shown

Drawing No
THIITA/500Q/10/ST/ 9



R/F DETAILS - TERRACE FLOOR SLAB

Scale 4 feet : 1 Inch

Concrete Cover = 1"
Concrete Mix = 1:1 $\frac{1}{2}$: 3 (Grade 25)

Distribution steel where not shown - Y8 @ 12"

SPECIAL NOTE:
All electrical conduits to be laid on top of the bottom reinforcement mesh and below the top reinforcement mesh

Where top net is not present, full top net of Y8@10" to be used at terrace level

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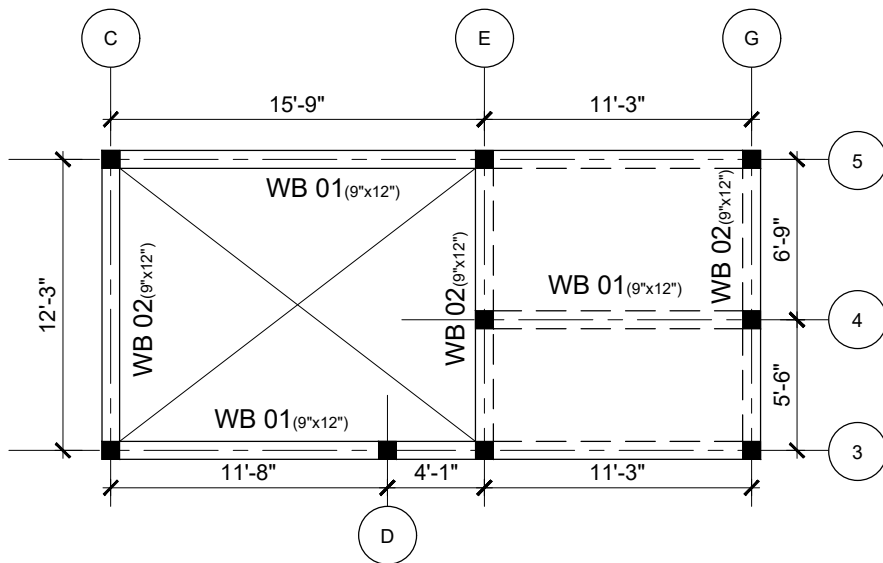
Drawing Title

R/F DETAILS - ROOF TERRACE - SHEET 2

Date
30/12/2020

Scale
As shown

Drawing No
THIITA/500Q/10/ST/ 11



GENERAL ARRANGEMENT - WATER TANK SLAB

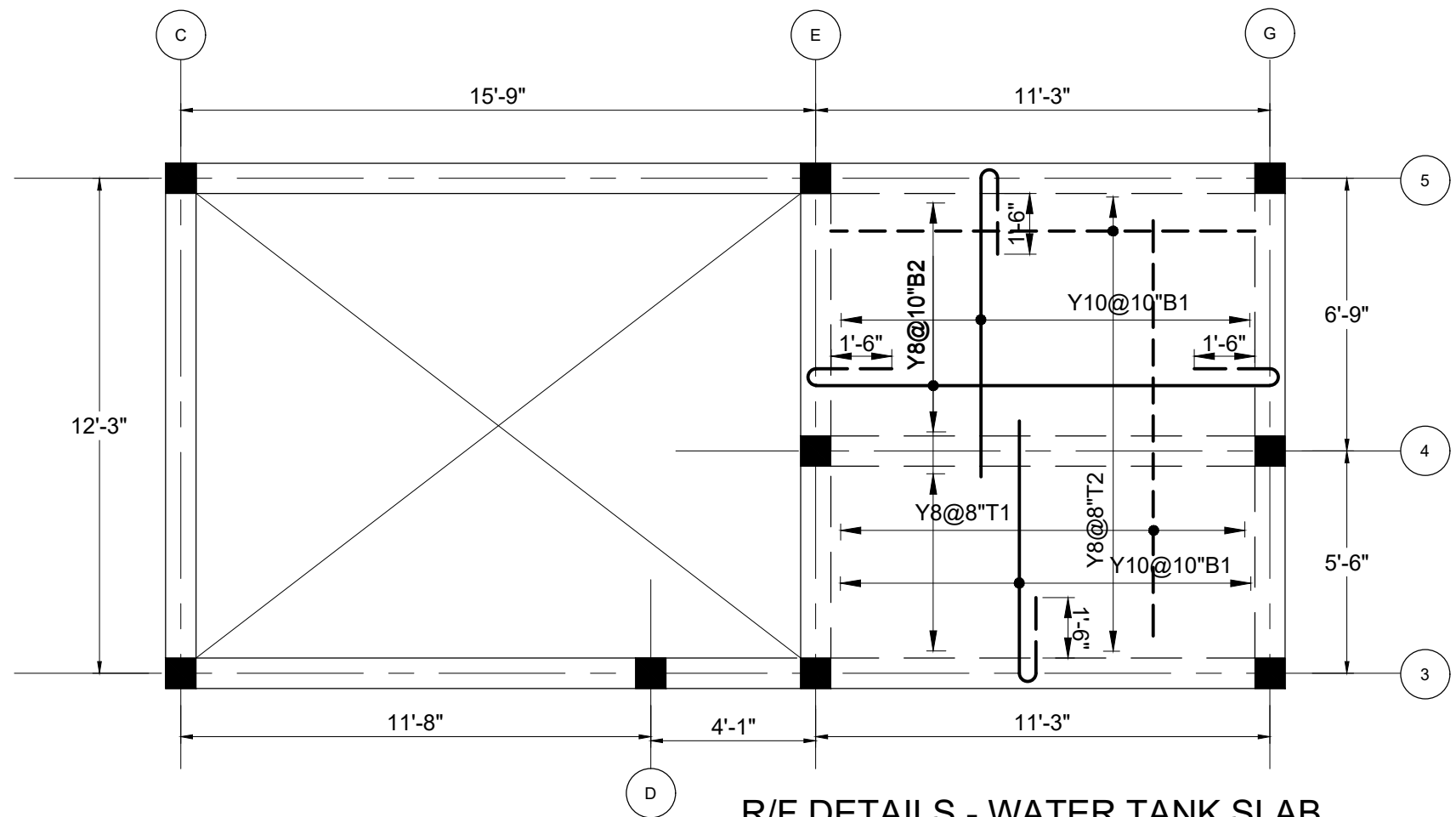
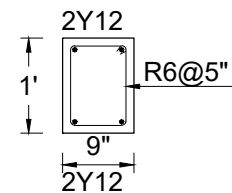
Scale 8 feet : 1 Inch

Slab thickness where not shown = 5"
2 of 1000L water tanks are allowed

WATER TANK SLAB LEVEL: BEAM DETAILS

Scale 2 feet : 1 Inch

WB01, WB02 (9" x 12")



R/F DETAILS - WATER TANK SLAB

Scale 4 feet : 1 Inch

Distribution steel where not shown - Y8 @12"

Concrete Cover = 1"

Concrete Mix = 1:1 $\frac{1}{2}$:3 (Grade 25)

PROPOSED RESIDENCE FOR MR MITHUN AT
MAHARAGAMA



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Designed

Thimira Abeyasinghe

BSc. (Hons) Civil, MSc. Civil, AMIESL, AMSSSEL

Drawn By

Chamitha

Drawing Title

WATER TANK SLAB DETAILS

Date

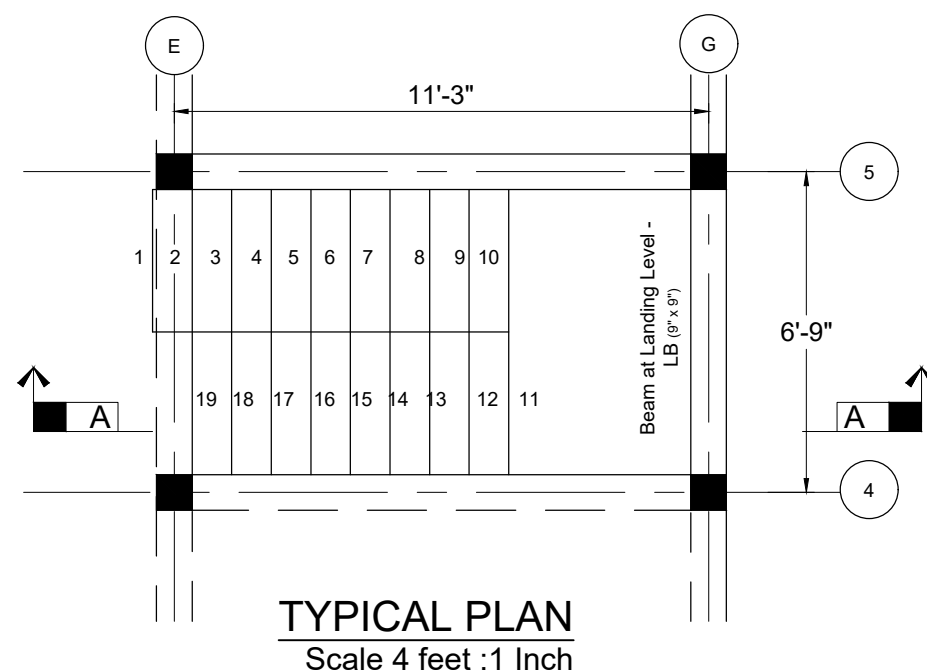
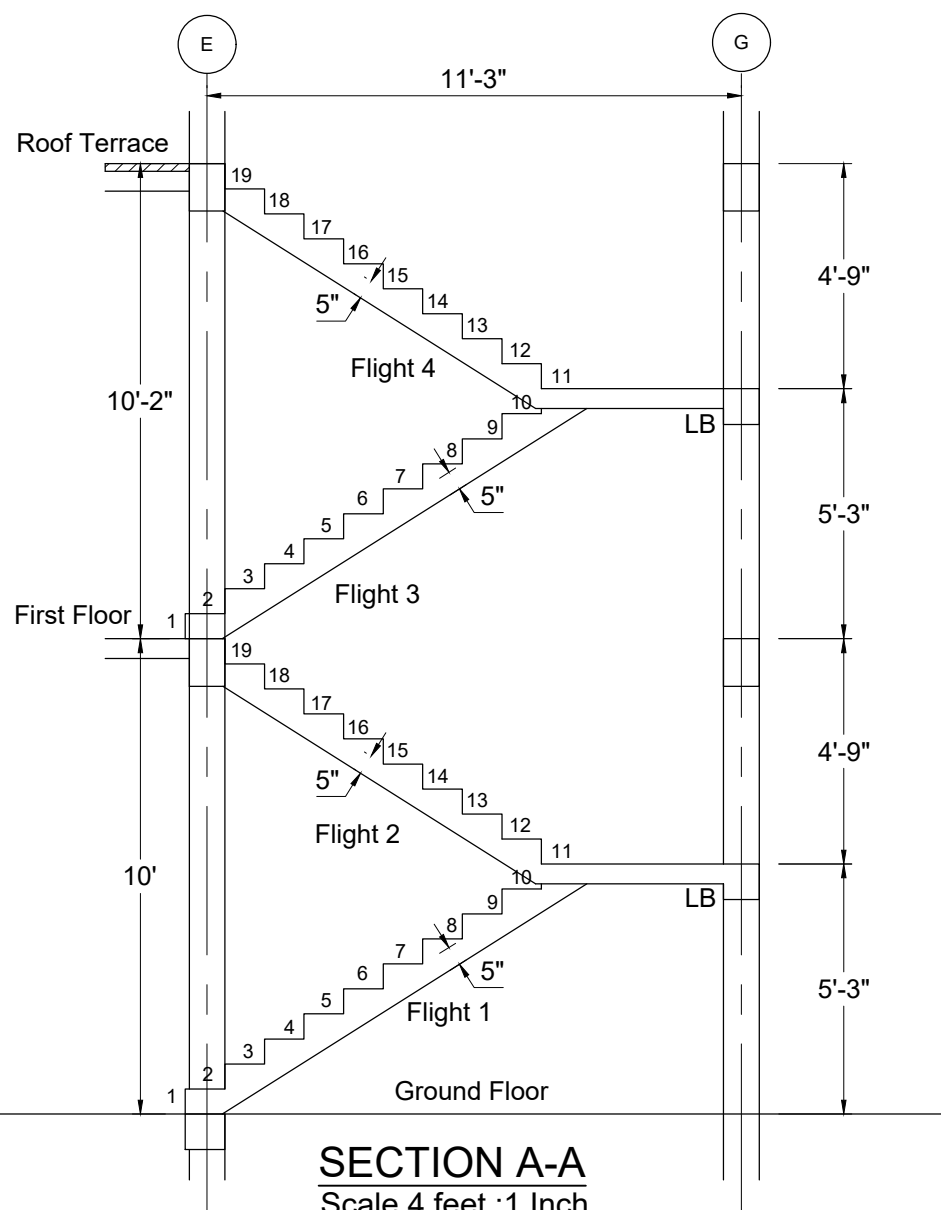
30/12/2020

Scale

As shown

Drawing No

THIITA/500Q/10/ST/ 12



Concrete Cover = 1"
Concrete Mix = 1:1 $\frac{1}{2}$:3 (Grade 25)

First Floor to Terrace

Tread 10"

Riser 6 $\frac{7}{16}$ " or 163.5mm

Ground to First floor

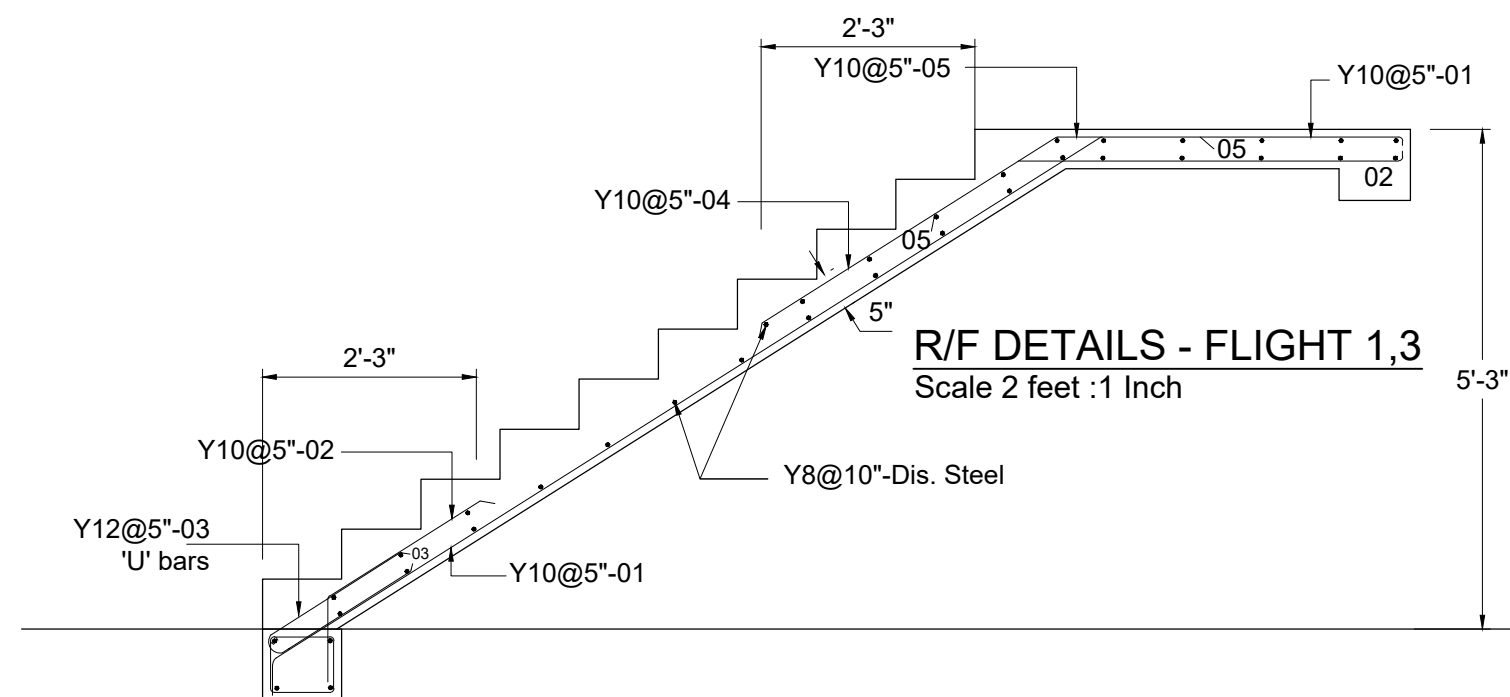
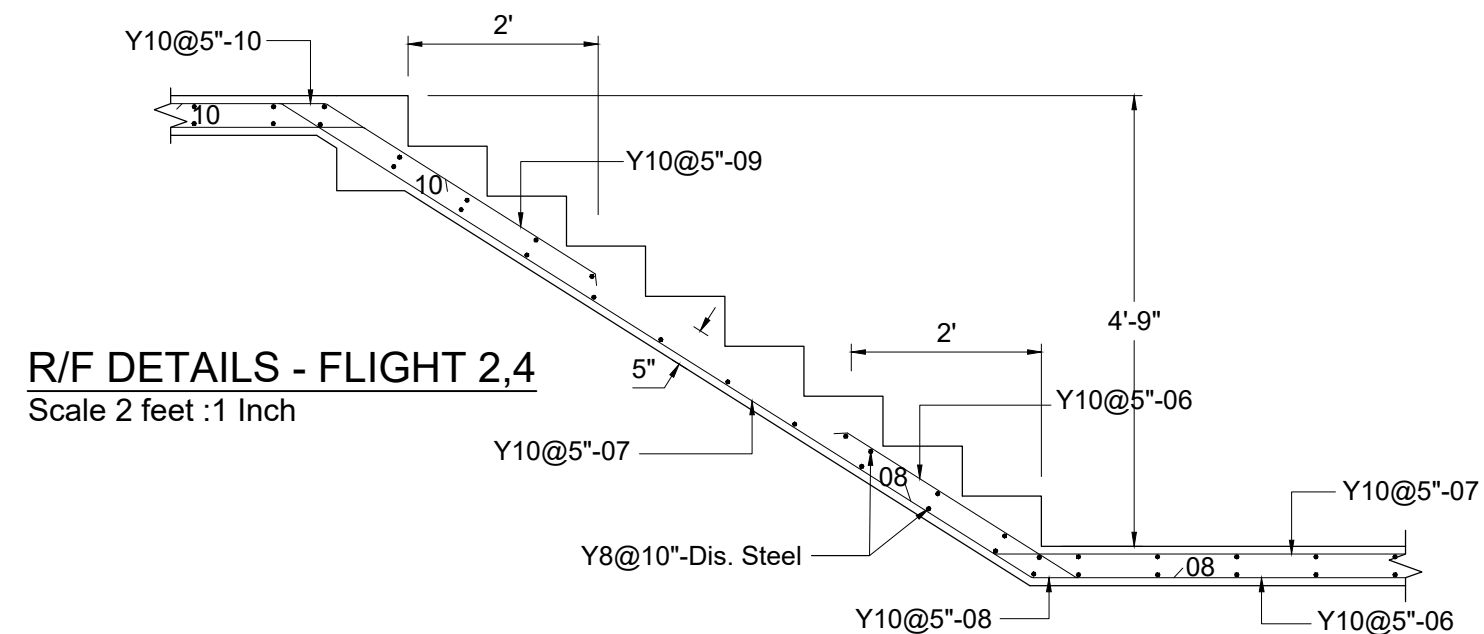
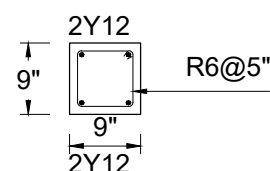
Tread 10"

Riser 6 $\frac{5}{16}$ " or 160mm

LANDING BEAM DETAILS

Scale 2 feet :1 Inch

LB(9" x 9")



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MAHARAGAMA



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Drawn By

Chamitha

Drawing Title

STAIRCASE DETAILS

Date

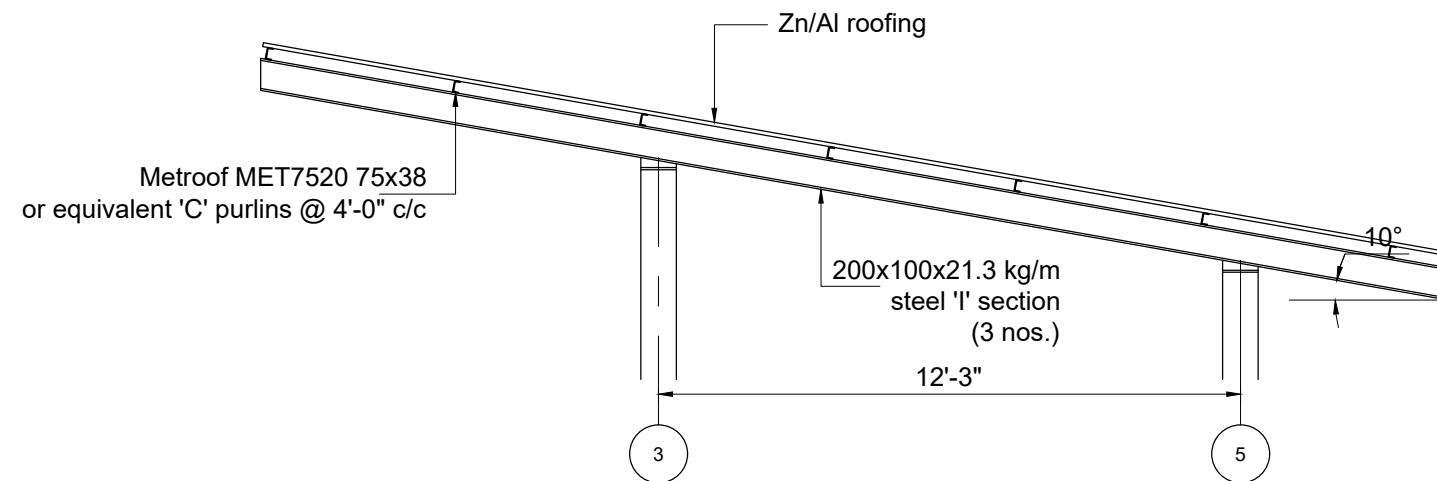
30/12/2020

Scale

As shown

Drawing No

THIITA/500Q/10/ST/ 13

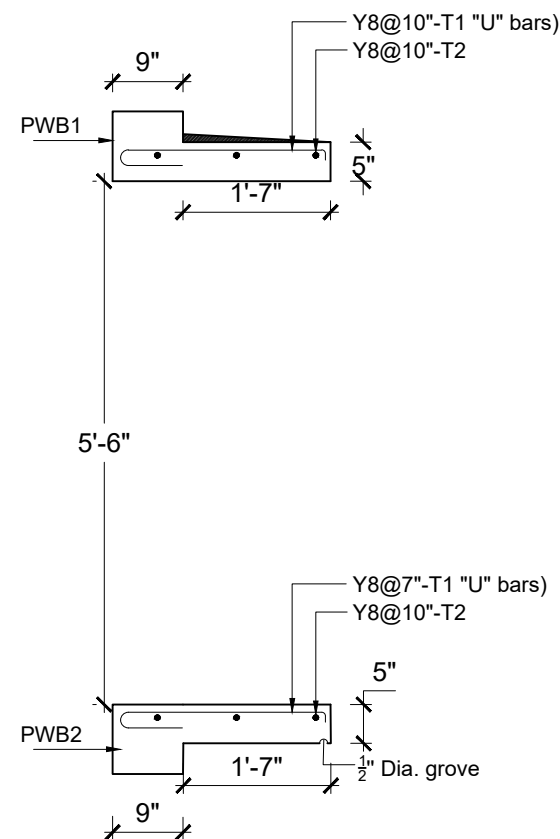


All bolts should be of grade 8.8

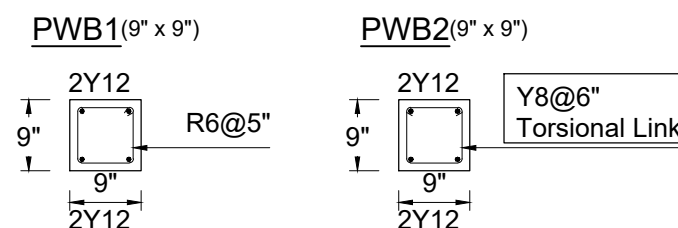
All welds are 6mm leg length fillet welds

TERRACE ROOF DETAILS
Scale 4 feet :1 Inch

TYPICAL DETAIL FOR WINDOW PW1
Scale 2 feet :1 Inch



BEAMS AT PW1
Scale 2 feet :1 Inch



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Drawn By
Chamitha

Drawing Title
STEEL ROOF AND PW1 DETAIL

| Date | Scale | Drawing No |
|------------|----------|-----------------------|
| 30/12/2020 | As shown | THIITA/500Q/10/ST/ 14 |