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DISTRICT / MUNICIPALITY / CITY

**LAND USE AND ZONING**

APPROVED DATE

**LINE AND GRADE**

APPROVED DATE

**ARCHITECTURAL**

APPROVED DATE

**SANITARY**

APPROVED DATE

**STRUCTURAL**

APPROVED DATE

**ELECTRICAL**

APPROVED DATE

**MECHANICAL**

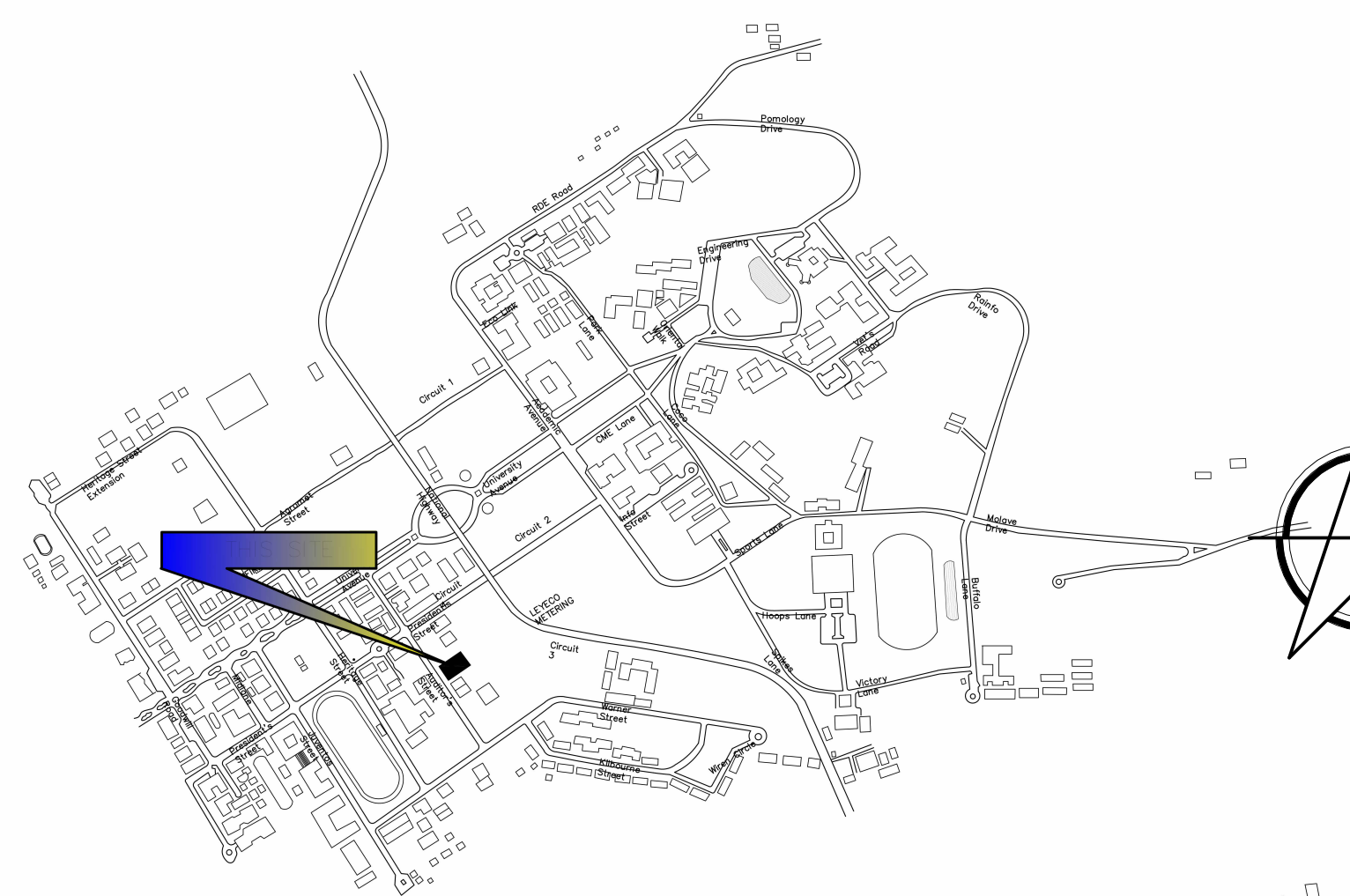
APPROVED DATE

**FIRE DEPARTMENT**

APPROVED DATE



**PERSPECTIVE**  
1 : 500

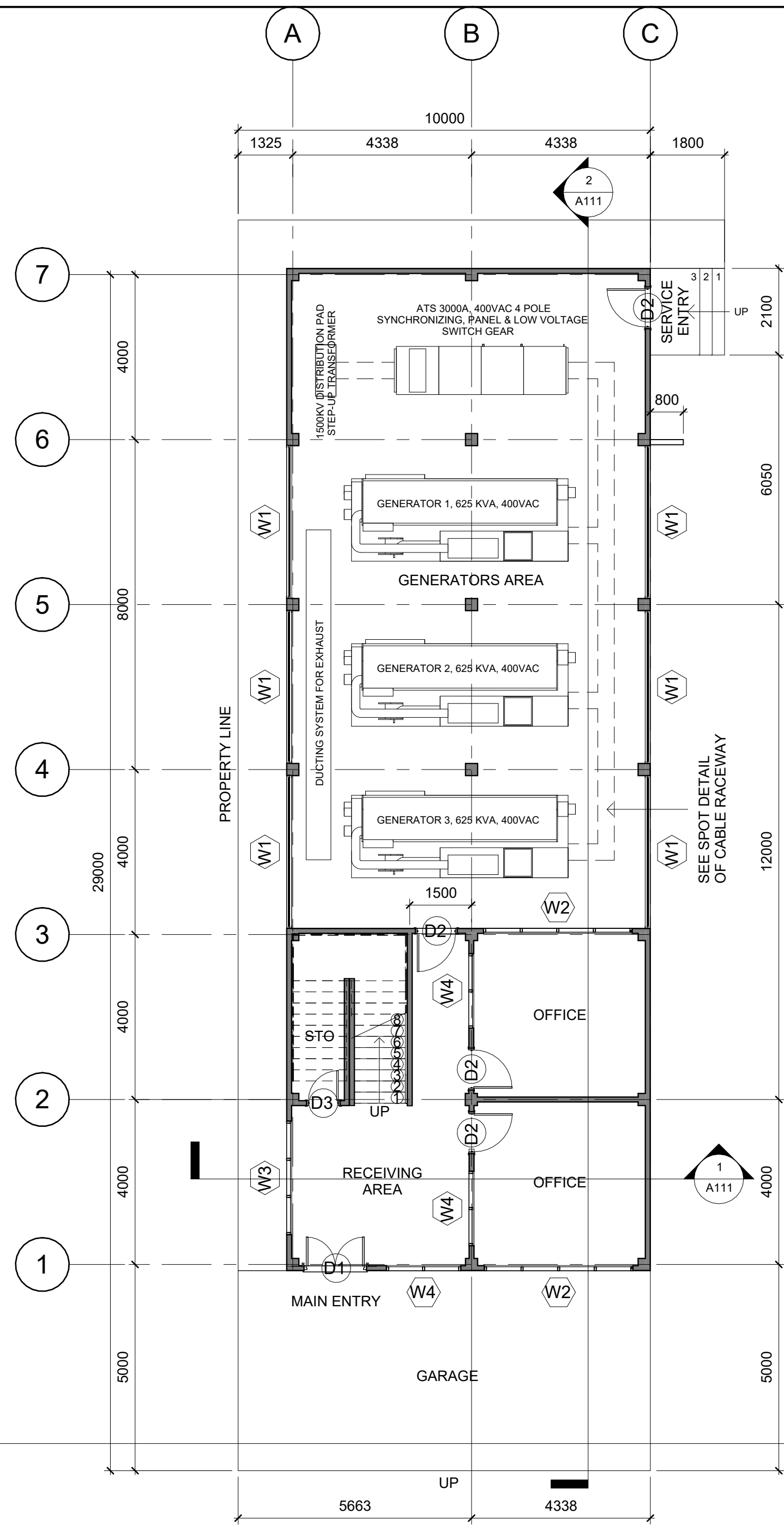


**VICINITY MAP**  
1 : 1000




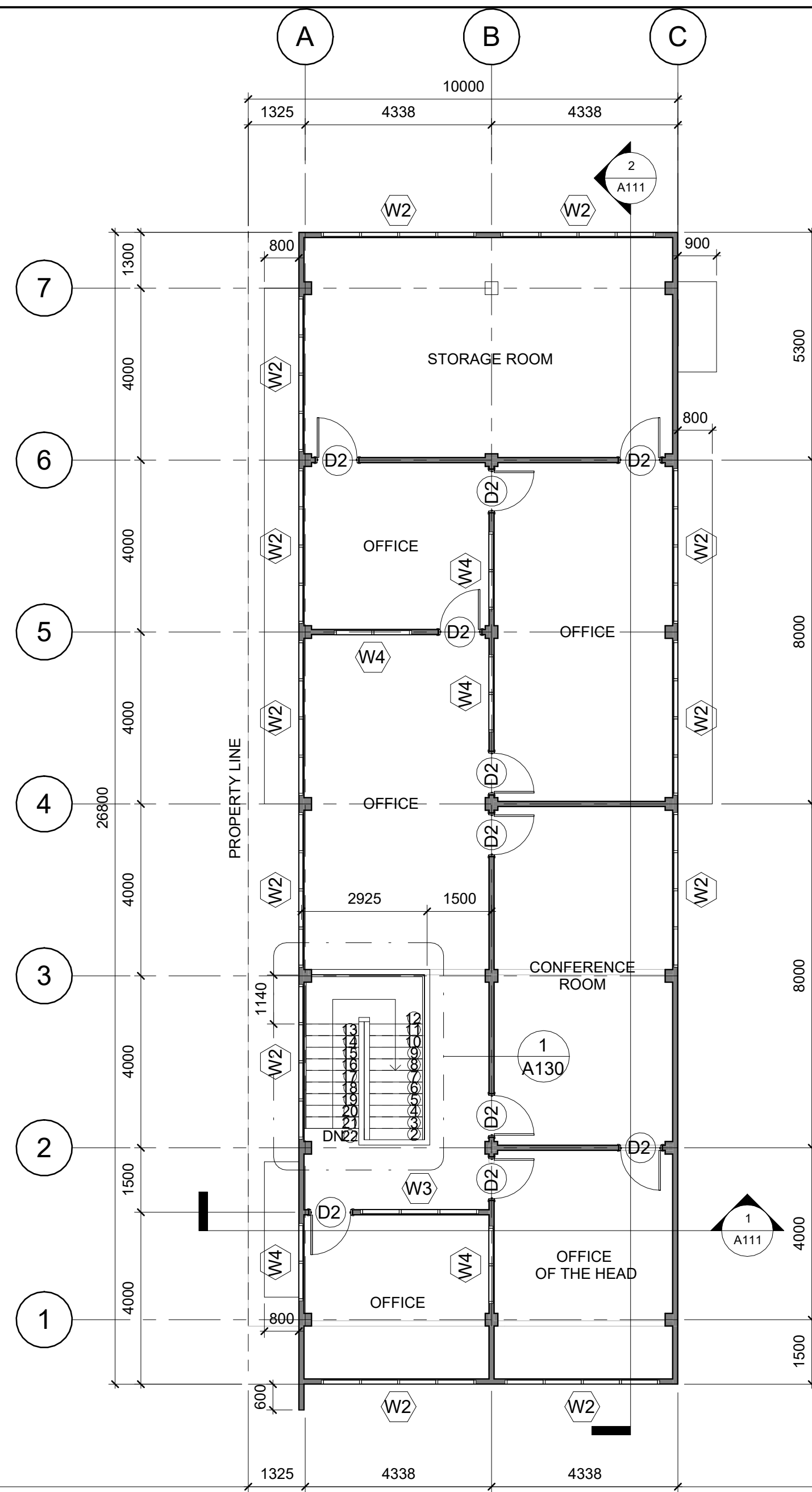
**SITE DEVELOPMENT PLAN**  
1 : 399

|  |        |                      |   |                                |                                  |                      |  |              |       |
|--|--------|----------------------|---|--------------------------------|----------------------------------|----------------------|--|--------------|-------|
|  | TIN:   | APPROVED BY:         | PROJECT TITLE:  | CHECKED / APPROVED BY:         | CONFORMED / APPROVED BY:         | APPROVED BY:         | SHEET CONTENT:                                       | DESIGNED BY: | A8 01 |
|  | PRC:   |                      | <b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b>                     | ENGR. MARIO LILIO P. VALENZONA | DR. DANIEL LESLIE S. TAN         | DR. EDGARDO E. TULIN | PERSPECTIVE<br>VICINITY MAP<br>SITE DEVELOPMENT PLAN | CADD BY:     |       |
|  | PTR:   |                      | LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A | DIRECTOR, PPO                  | VP OF ADMINISTRATIVE AND FINANCE | VSU PRESIDENT        |  | STARTED:     | 01 27 |
|  | DATE:  |                      |   |                                |                                  |                      |  | FINISHED:    |       |
|  | PLACE: | ARCHITECT OF RECORD: |   |                                |                                  |                      |  | PLACE:       |       |



**1 FIRST FLOOR PLAN**  
1 : 100

|   |                     |                                |  |                        |                          |              |                                    |              |  |    |    |           |  |    |    |        |  |
|---|---------------------|--------------------------------|--|------------------------|--------------------------|--------------|------------------------------------|--------------|--|----|----|-----------|--|----|----|--------|--|
|  | TIN:                | APPROVED BY:                   | PROJECT TITLE:<br><b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b><br>LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A | CHECKED / APPROVED BY: | CONFORMED / APPROVED BY: | APPROVED BY: | SHEET CONTENT:<br>FIRST FLOOR PLAN | DESIGNED BY: | <table border="1"> <tr> <td>A8</td> <td>02</td> </tr> <tr> <td colspan="2">SHEET NO.</td> </tr> <tr> <td>02</td> <td>27</td> </tr> <tr> <td colspan="2">PLACE:</td> </tr> </table> | A8 | 02 | SHEET NO. |  | 02 | 27 | PLACE: |  |
|   | A8                  | 02                             |  |                        |                          |              |                                    |              |  |    |    |           |  |    |    |        |  |
|   | SHEET NO.           |                                |  |                        |                          |              |                                    |              |  |    |    |           |  |    |    |        |  |
|   | 02                  | 27                             |  |                        |                          |              |                                    |              |  |    |    |           |  |    |    |        |  |
| PLACE:  |                     |                                |  |                        |                          |              |                                    |              |  |    |    |           |  |    |    |        |  |
| PRC:  |                     | ENGR. MARIO LILIO P. VALENZONA | DR. DANIEL LESLIE S. TAN   | DR. EDGARDO E. TULIN   |                          |              |                                    |              |  |    |    |           |  |    |    |        |  |
| PTR:  |                     | DIRECTOR, PPO                  | VP OF ADMINISTRATIVE AND FINANCE   | VSU PRESIDENT          |                          |              |                                    |              |  |    |    |           |  |    |    |        |  |
| DATE:   |                     |                                |  |                        |                          |              |                                    |              |  |    |    |           |  |    |    |        |  |
| PLACE:  | ARCHITECT OF RECORD |                                |  |                        |                          |              |                                    |              |  |    |    |           |  |    |    |        |  |



**1 SECOND FLOOR PLAN**  
1 : 100



|        |                     |
|--------|---------------------|
| TIN:   | APPROVED BY:        |
| PRC:   |                     |
| PTR:   |                     |
| DATE:  |                     |
| PLACE: | ARCHITECT OF RECORD |

1. SEE PLANS AND SPECIFICATIONS FOR DIMENSIONS AND NOTES.  
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.  
3. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.  
4. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES.  
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES AND STRUCTURES TO REMAIN.  
6. THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT ALL TIMES.

|                |   |
|----------------|---|
| PROJECT TITLE: | CONSTRUCTION OF VSU POWER PLANT BUILDING                  |
| LOCATION:      | VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A |

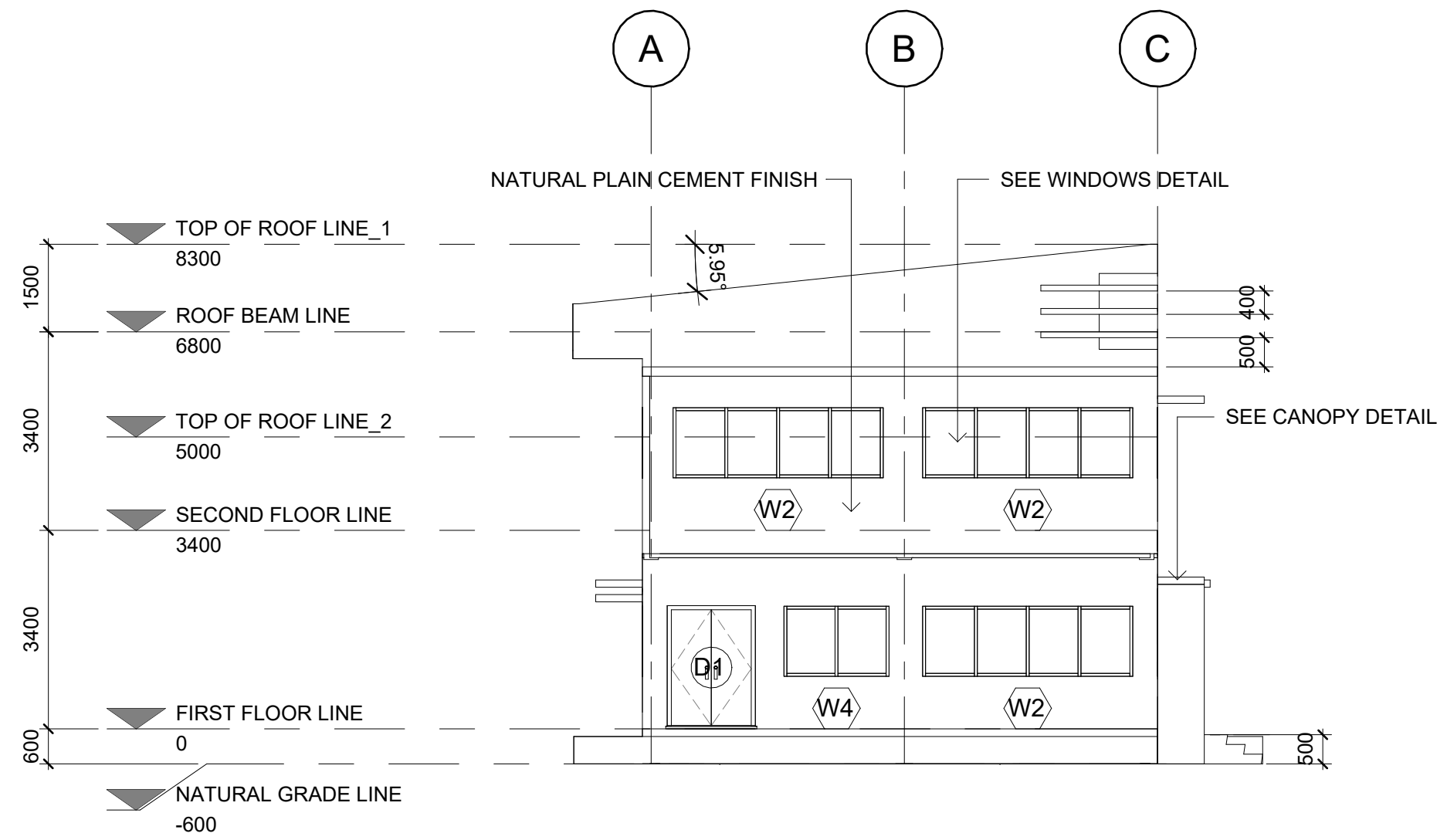
|                        |                                |
|------------------------|--------------------------------|
| CHECKED / APPROVED BY: | ENGR. MARIO LILIO P. VALENZONA |
|                        | DIRECTOR, PPO                  |

|                          |                                  |
|--------------------------|----------------------------------|
| CONFORMED / APPROVED BY: | DR. DANIEL LESLIE S. TAN         |
|                          | VP OF ADMINISTRATIVE AND FINANCE |

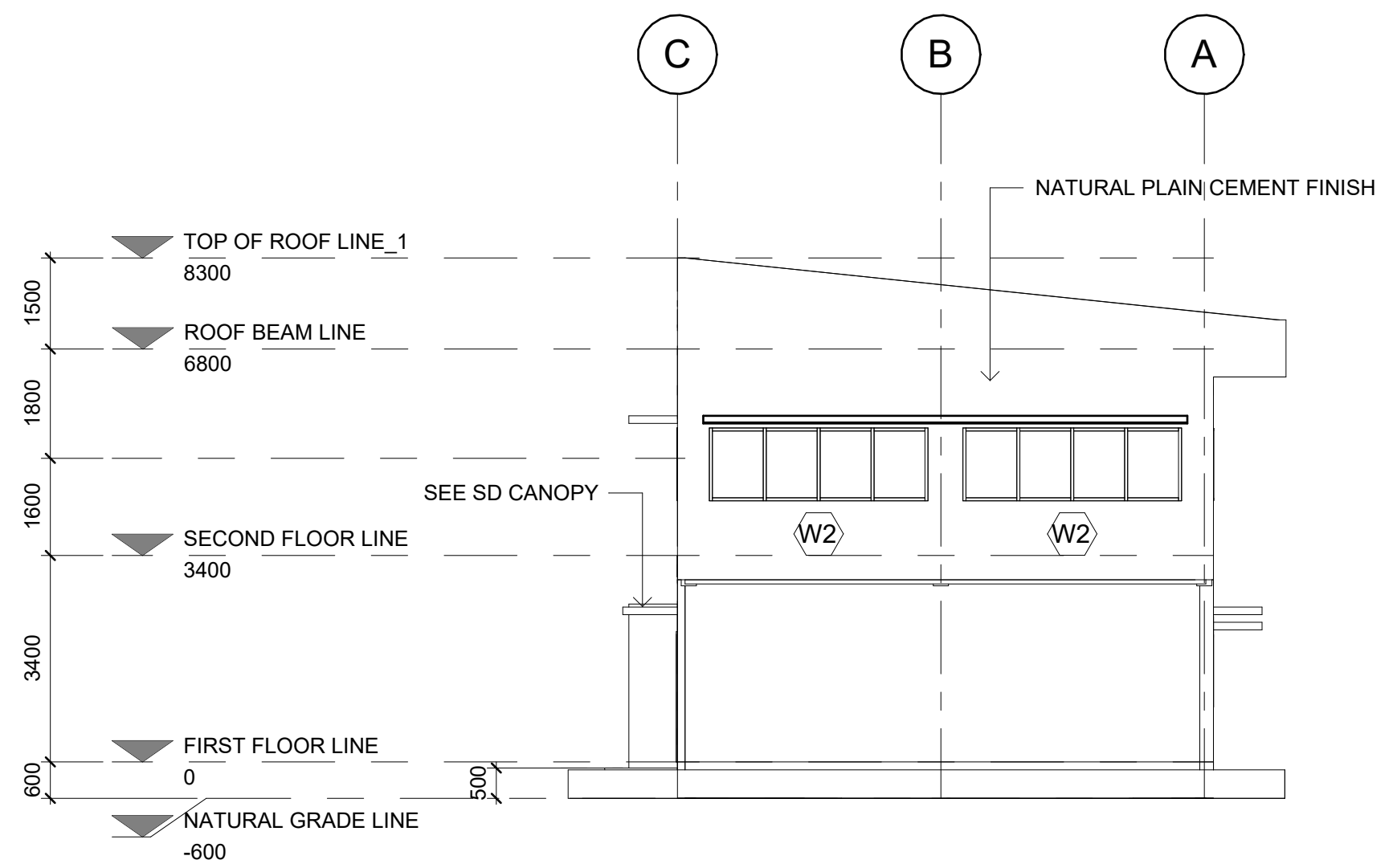
|              |                      |
|--------------|----------------------|
| APPROVED BY: | DR. EDGARDO E. TULIN |
|              | VSU PRESIDENT        |

|                |                   |
|----------------|-------------------|
| SHEET CONTENT: | SECOND FLOOR PLAN |
|----------------|-------------------|


|              |           |
|--------------|-----------|
| DESIGNED BY: | A8 03     |
| CADD BY:     | SHEET NO. |
| STARTED:     | 03 27     |
| FINISHED:    |           |
| PLACE:       |           |

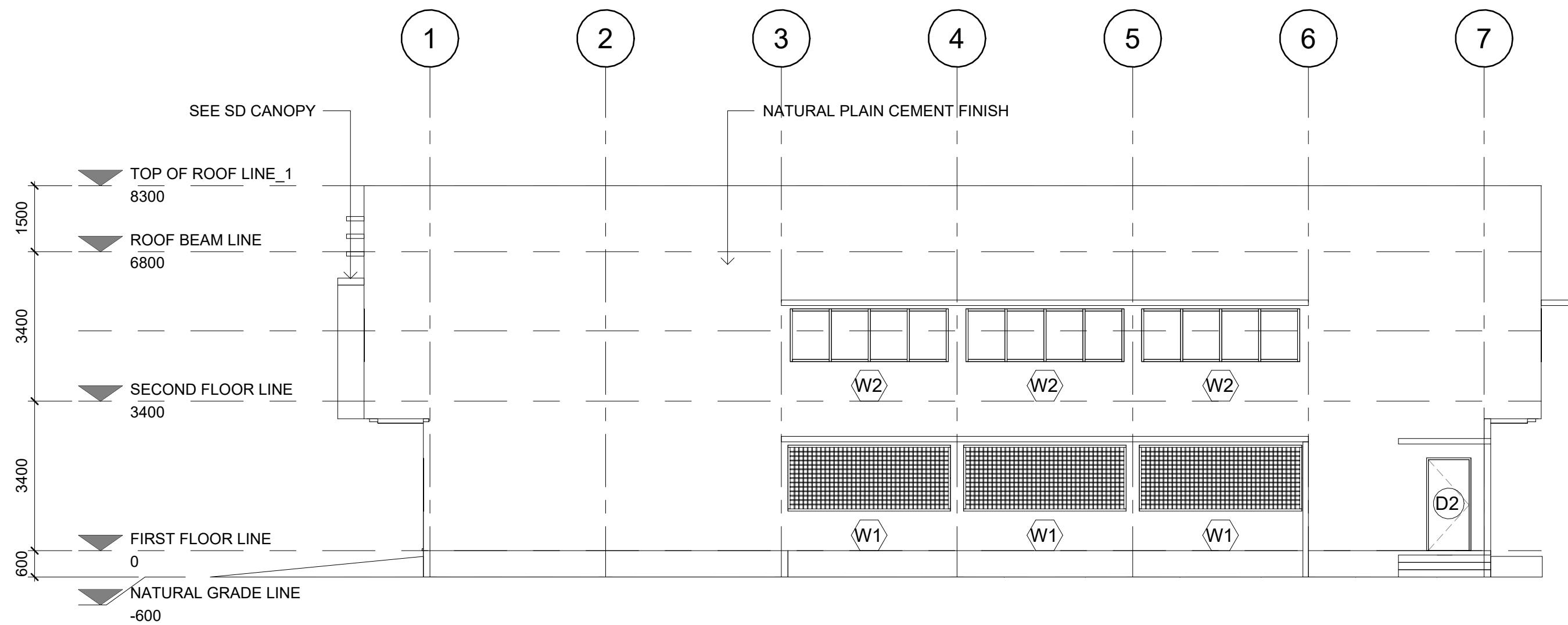


**1 FRONT ELEVATION**  
1 : 100

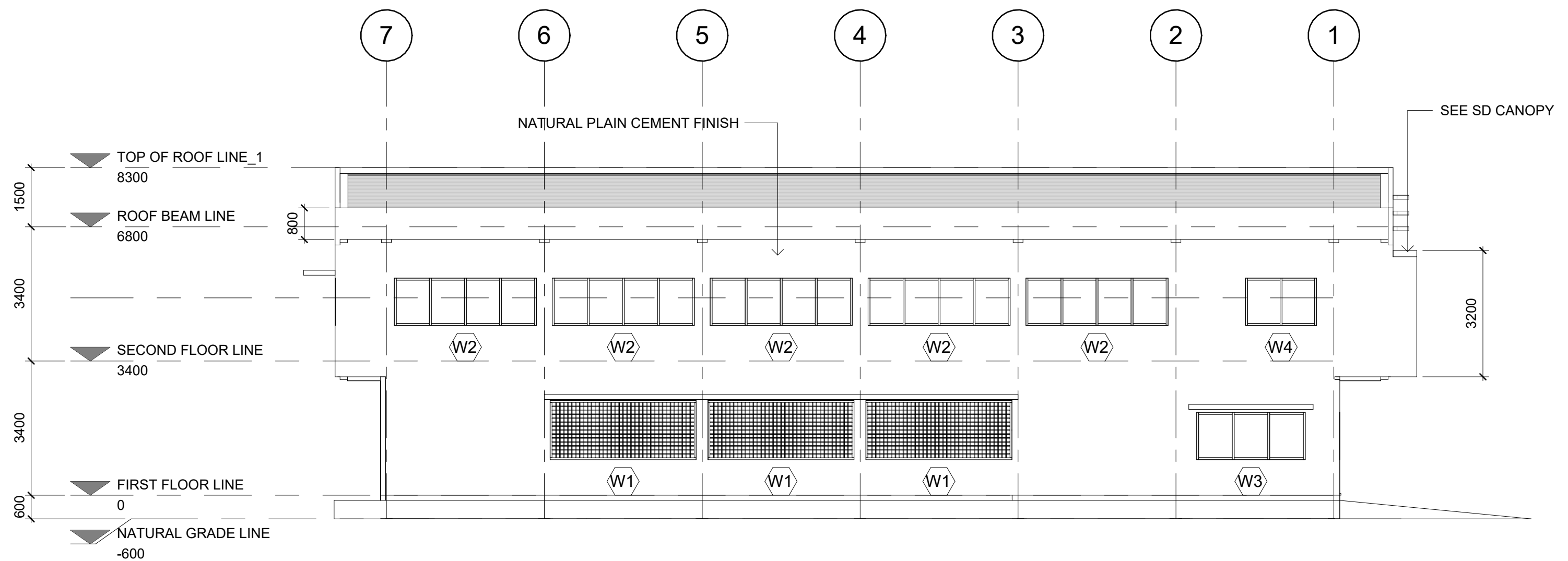


**2 REAR ELEVATION**  
1 : 100


|   |                     |   |   |                                  |                        |                                   |              |                |              |  |    |    |           |  |    |    |        |  |
|---|---------------------|---|---|----------------------------------|------------------------|-----------------------------------|--------------|----------------|--------------|--|----|----|-----------|--|----|----|--------|--|
|  | TIN:                | APPROVED BY:  | <small>         1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.<br/>         2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.<br/>         3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.<br/>         4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.       </small> | PROJECT TITLE:                   | CHECKED / APPROVED BY: | CONFORMED / APPROVED BY:          | APPROVED BY: | SHEET CONTENT: | DESIGNED BY: | <table border="1"> <tr> <td>A8</td> <td>04</td> </tr> <tr> <td colspan="2">SHEET NO.</td> </tr> <tr> <td>04</td> <td>27</td> </tr> <tr> <td colspan="2">PLACE:</td> </tr> </table> | A8 | 04 | SHEET NO. |  | 04 | 27 | PLACE: |  |
|   | A8                  | 04  |   |                                  |                        |                                   |              |                |              |  |    |    |           |  |    |    |        |  |
|   | SHEET NO.           |   |   |                                  |                        |                                   |              |                |              |  |    |    |           |  |    |    |        |  |
|   | 04                  | 27  |   |                                  |                        |                                   |              |                |              |  |    |    |           |  |    |    |        |  |
|   | PLACE:              |   |   |                                  |                        |                                   |              |                |              |  |    |    |           |  |    |    |        |  |
| PRC:  |                     | <b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b>                     | ENGR. MARIO LILIO P. VALENZONA  | DR. DANIEL LESLIE S. TAN         | DR. EDGARDO E. TULIN   | FRONT ELEVATION<br>REAR ELEVATION | CADD BY:     |                |              |  |    |    |           |  |    |    |        |  |
| PTR:  |                     | LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A | DIRECTOR, PPO   | VP OF ADMINISTRATIVE AND FINANCE | VSU PRESIDENT          | STARTED:                          | FINISHED:    |                |              |  |    |    |           |  |    |    |        |  |
| DATE:   |                     |   |   |                                  |                        | PLACE:                            |              |                |              |  |    |    |           |  |    |    |        |  |
| PLACE:  | ARCHITECT OF RECORD |   |   |                                  |                        |                                   |              |                |              |  |    |    |           |  |    |    |        |  |

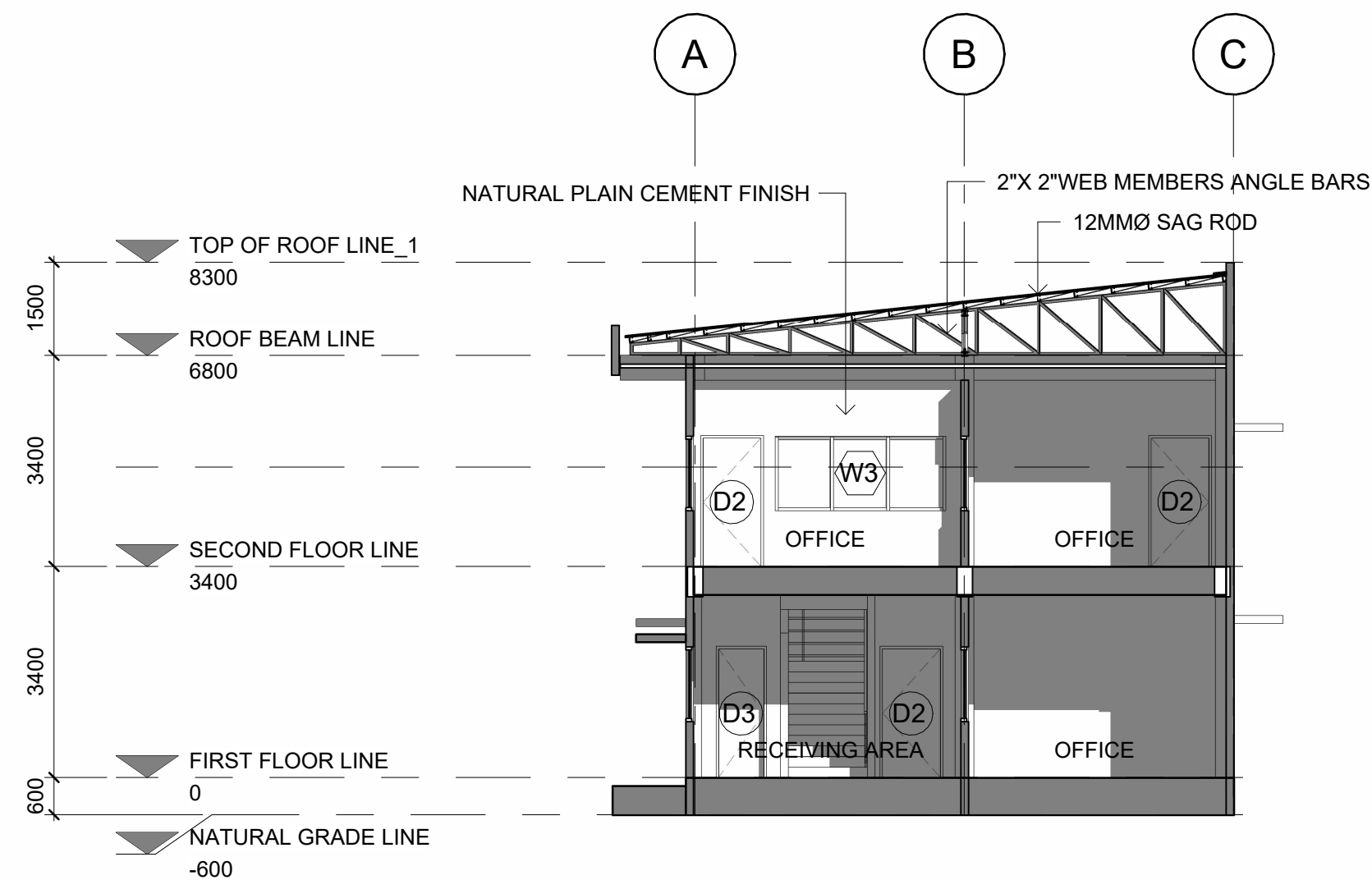


**1 RIGHT SIDE ELEVATION**  
1 : 100

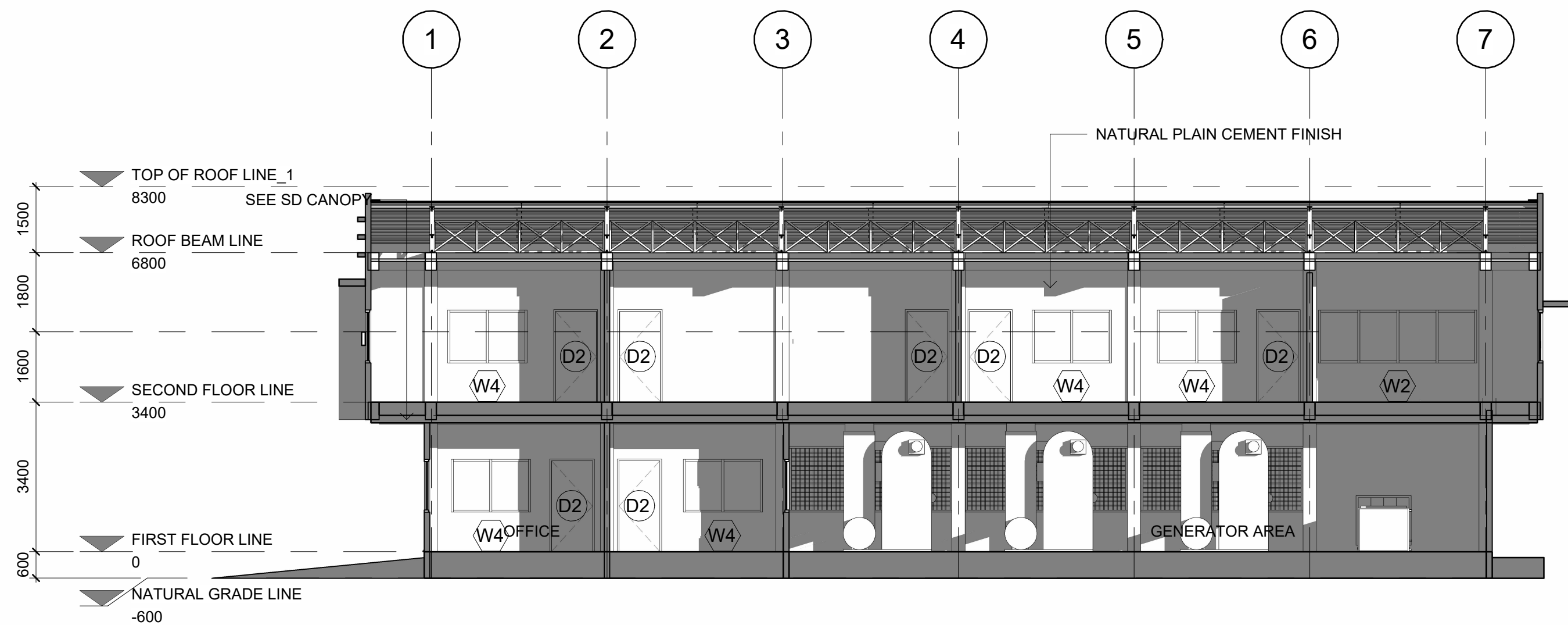


**2 LEFT SIDE ELEVATION**  
1 : 100


|   |                     |   |  |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |
|---|---------------------|---|--|----------------------------------|------------------------|---|--------------|----------------|--------------|--|----|----|-----------|--|----|----|--------|--|
|  | TIN:                | APPROVED BY:  | <small>         1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.<br/>         2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.<br/>         3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.<br/>         4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.<br/>         5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.       </small> | PROJECT TITLE:                   | CHECKED / APPROVED BY: | CONFORMED / APPROVED BY:                    | APPROVED BY: | SHEET CONTENT: | DESIGNED BY: | <table border="1"> <tr> <td>A8</td> <td>05</td> </tr> <tr> <td colspan="2">SHEET NO.</td> </tr> <tr> <td>05</td> <td>27</td> </tr> <tr> <td colspan="2">PLACE:</td> </tr> </table> | A8 | 05 | SHEET NO. |  | 05 | 27 | PLACE: |  |
|   | A8                  | 05  |  |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |
|   | SHEET NO.           |   |  |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |
|   | 05                  | 27  |  |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |
| PLACE:  |                     |   |  |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |
| PRC:  |                     | <b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b>                     | ENGR. MARIO LILIO P. VALENZONA   | DR. DANIEL LESLIE S. TAN         | DR. EDGARDO E. TULIN   | RIGHT SIDE ELEVATION<br>LEFT SIDE ELEVATION | CADD BY:     |                |              |  |    |    |           |  |    |    |        |  |
| PTR:  |                     | LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A | DIRECTOR, PPO  | VP OF ADMINISTRATIVE AND FINANCE | VSU PRESIDENT          | STARTED:                                    | PLACE:       |                |              |  |    |    |           |  |    |    |        |  |
| DATE:   |                     |   |  |                                  |                        | FINISHED:                                   |              |                |              |  |    |    |           |  |    |    |        |  |
| PLACE:  | ARCHITECT OF RECORD |   |  |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |

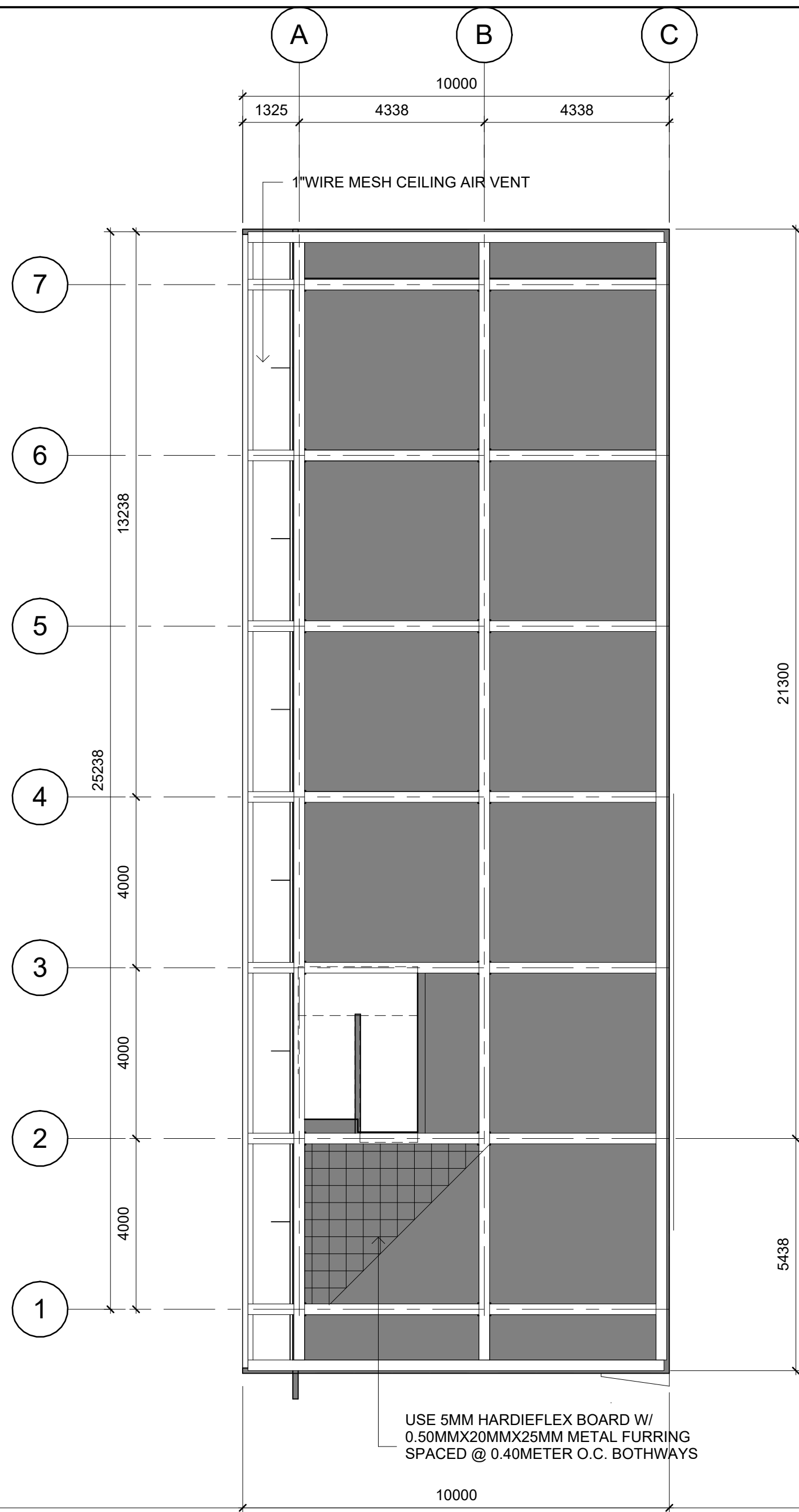


**1** CROSS SECTIONAL - XX  
1 : 100



**2** LONGITUDINAL SECTION - YY  
1 : 100

|   |                     |   |   |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |
|---|---------------------|---|---|----------------------------------|------------------------|---|--------------|----------------|--------------|--|----|----|-----------|--|----|----|--------|--|
|  | TIN:                | APPROVED BY:  | <small>         1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.<br/>         2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.<br/>         3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.<br/>         4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.       </small> | PROJECT TITLE:                   | CHECKED / APPROVED BY: | CONFORMED / APPROVED BY:                          | APPROVED BY: | SHEET CONTENT: | DESIGNED BY: | <table border="1"> <tr> <td>A8</td> <td>06</td> </tr> <tr> <td colspan="2">SHEET NO.</td> </tr> <tr> <td>06</td> <td>27</td> </tr> <tr> <td colspan="2">PLACE:</td> </tr> </table> | A8 | 06 | SHEET NO. |  | 06 | 27 | PLACE: |  |
|   | A8                  | 06  |   |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |
|   | SHEET NO.           |   |   |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |
|   | 06                  | 27  |   |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |
|   | PLACE:              |   |   |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |
| PRC:  |                     | <b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b>                     | ENGR. MARIO LILIO P. VALENZONA  | DR. DANIEL LESLIE S. TAN         | DR. EDGARDO E. TULIN   | CROSS SECTIONAL - XX<br>LONGITUDINAL SECTION - YY | CADD BY:     |                |              |  |    |    |           |  |    |    |        |  |
| PTR:  |                     | LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A | DIRECTOR, PPO   | VP OF ADMINISTRATIVE AND FINANCE | VSU PRESIDENT          | STARTED:  | FINISHED:    |                |              |  |    |    |           |  |    |    |        |  |
| DATE:   |                     |   |   |                                  |                        | PLACE:  |              |                |              |  |    |    |           |  |    |    |        |  |
| PLACE:  | ARCHITECT OF RECORD |   |   |                                  |                        |   |              |                |              |  |    |    |           |  |    |    |        |  |



**1 REFLECTED CEILING PLAN**  
1 : 100



|        |                     |
|--------|---------------------|
| TIN:   | APPROVED BY:        |
| PRC:   |                     |
| PTR:   |                     |
| DATE:  |                     |
| PLACE: | ARCHITECT OF RECORD |

1. THE ENGINEER OR ARCHITECT SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS PLAN AND FOR THE PROTECTION OF THE PUBLIC INTEREST. 2. THE ENGINEER OR ARCHITECT SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PUBLIC INTEREST. 3. THE ENGINEER OR ARCHITECT SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PUBLIC INTEREST.

|                |   |
|----------------|---|
| PROJECT TITLE: | <b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b>           |
| LOCATION:      | VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A |

|                        |                                       |
|------------------------|---------------------------------------|
| CHECKED / APPROVED BY: | <b>ENGR. MARIO LILIO P. VALENZONA</b> |
|                        | DIRECTOR, PPO                         |

|                          |                                  |
|--------------------------|----------------------------------|
| CONFORMED / APPROVED BY: | <b>DR. DANIEL LESLIE S. TAN</b>  |
|                          | VP OF ADMINISTRATIVE AND FINANCE |

|              |                             |
|--------------|-----------------------------|
| APPROVED BY: | <b>DR. EDGARDO E. TULIN</b> |
|              | VSU PRESIDENT               |

|                |                                  |
|----------------|----------------------------------|
| SHEET CONTENT: | 2ND FLOOR REFLECTED CEILING PLAN |
|----------------|----------------------------------|

|              |              |
|--------------|--------------|
| DESIGNED BY: | <b>A8 07</b> |
| CADD BY:     |              |
| STARTED:     | SHEET NO.    |
| FINISHED:    | <b>07 27</b> |
| PLACE:       |              |

| SCHEDULE OF DOORS |  |  |  |
|-------------------|--|--|--|
| NO.OF DOORS       | D1   | D2   | D3   |
| FRONT ELEVATION   |  |  |  |
| NO.OF SETS        | 1  | 15   | 1  |
| REMARKS           | TWO PANEL W/ TWO - SWING GLASS DOOR W/ 2"x 5" ALUMINUM FRAME | SINGLE PANEL SWING FLUSH DOOR W/ CLEAR GLASS SEE THRU W/ 2"x 5" WOODEN DOOR JAMB | SINGLE PANEL SWING FLUSH DOOR W/ CLEAR GLASS SEE THRU W/ 2"x 5" WOODEN DOOR JAMB |

## DOOR LEGEND

1 : 50

| SCHEDULE OF WINDOWS |   |   |   |   |
|---------------------|---|---|---|---|
| NO.OF WINDOWS       | W1  | W2  | W2  | W3  |
| FRONT ELEVATION     |   |   |   |   |
| NO.OF SETS          | 6   | 12  | 2   | 8   |
| SILL HEIGHT         | 0.90METERS ABOVE FLOOR LEVEL  | 0.90METERS ABOVE FLOOR LEVEL                          | 0.90METERS ABOVE FLOOR LEVEL                          | 0.90METERS ABOVE FLR. LEVEL                           |
| REMARKS             | 8MMØ ROUND BARS WELDED WIRE MESH SPCD. @ 2" W/ 2"x 2" ANGLE BAR FRAME | 4 PANEL SLIDING ALUM. FRAME W/ 1/4" THICK CLEAR GLASS | 3 PANEL SLIDING ALUM. FRAME W/ 1/4" THICK CLEAR GLASS | 2 PANEL SLIDING ALUM. FRAME W/ 1/4" THICK CLEAR GLASS |

## WINDOW LEGEND

1 : 50

|  |        |                     |   |   |  |                                       |  |   |                             |
|--|--------|---------------------|---|---|--|---------------------------------------|--|---|-----------------------------|
|  | TIN:   | APPROVED BY:        | PROJECT TITLE:<br><b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b>   | CHECKED / APPROVED BY:                          | CONFORMED / APPROVED BY:                                     | APPROVED BY:                          | SHEET CONTENT:<br>SCHEDULE OF DOORS<br>SCHEDULE OF WINDOWS | DESIGNED BY:                                | A8 08<br>SHEET NO.<br>08 27 |
|  | PRC:   |                     |   | ENGR. MARIO LILIO P. VALENZONA<br>DIRECTOR, PPO | DR. DANIEL LESLIE S. TAN<br>VP OF ADMINISTRATIVE AND FINANCE | DR. EDGARDO E. TULIN<br>VSU PRESIDENT |  | CADD BY:<br>STARTED:<br>FINISHED:<br>PLACE: |                             |
|  | PTR:   |                     | LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A |   |  |                                       |  |   |                             |
|  | DATE:  |                     |   |   |  |                                       |  |   |                             |
|  | PLACE: | ARCHITECT OF RECORD |   |   |  |                                       |  |   |                             |



**GENERAL NOTES**

**1 WORKING DRAWINGS**

THIS "GENERAL NOTES FOR STRUCTURAL WORKS " SHALL FORM A PART OF THE STRUCTURAL WORKING DRAWING.

IN THE INTERPRETATION OF THIS DRAWING, INDICATED DIMENSIONS SHALL GOVERN AND DISTANCE OR SIZES SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.

IN CASES OF CONFLICT IN DETAILS AND DIMENSIONS BETWEEN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS, REFER TO THE ARCHITECT OR HIS AUTHORIZED REPRESENTATIVE FOR FINAL DECISION.

IN CASES OF CONFLICT BETWEEN THE DRAWINGS, GENERAL NOTES AND SPECIFICATIONS, THE WORKING DRAWING SHALL GOVERN.

IN CASES OF CONFLICT BETWEEN THIS GENERAL NOTES AND SPECIFICATIONS, THE GENERAL NOTES SHALL GOVERN.

**DESIGN LOADS**

**1 DEAD LOADS**

THE DESIGN DEAD LOAD UNLESS OTHERWISE SPECIFIED IN THE STRUCTURAL PLANS ARE AS FOLLOWS:

|                                  |                        |
|----------------------------------|------------------------|
| FLOOR MORTAR FINISH              | = 10 psf OF FLOOR AREA |
| FLOOR ARCHITECTURAL FINISH       | = 10 psf OF FLOOR AREA |
| CEILING AND UTILITIES            | = 5 psf OF FLOOR AREA  |
| DRYWALL PARTITIONS               | = 20 psf OF FLOOR AREA |
| WATERPROOFING AND CONCRETE COVER | = 25 psf OF FLOOR AREA |

THE ARCHITECTURAL AND BUILDING CONTRACTOR SHALL GET THE APPROVAL OF THE STRUCTURAL ENGINEER OF ANY LOADING DIFFERENT FROM OR EXCEEDING THE DESIGN LOADS.

**2 LIVE LOADS**

THE DESIGN LIVE LOAD UNLESS OTHERWISE SPECIFIED IN THE PLANS ARE AS FOLLOWS :

|                            |           |
|----------------------------|-----------|
| TYPICAL FLOOR              | = 100 psf |
| MECHANICAL & ELECTRICAL    | = 250 psf |
| ROOF DECK                  | = 100 psf |
| ROOF DECK (NON-ACCESSIBLE) | = 30 psf  |

THESE DESIGN LIVE LOADS SHALL NEVER BE EXCEEDED AT ANY TIME DURING THE LIFE OF THE STRUCTURE WITHOUT THE WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE BUILDING TO GET THE APPROVAL OF THE STRUCTURAL ENGINEER OF ANY LIVE LOAD WHICH WILL BE IMPOSED ON AN AREA OF THE BUILDING DIFFERENT FROM AND OR EXCEEDING THE DESIGN LIVE LOADS SPECIFIED HEREIN.

NO PORTION OF THE BUILDING SHALL BE USED AS TEMPORARY STORAGE OF CONSTRUCTION MATERIALS IN EXCESS OF THE DESIGN LIVE LOADS WITHOUT THE CONSENT OF THE STRUCTURAL ENGINEER.

**3 EARTHQUAKE LOADS**

THE DESIGN EATHQUAKE LOADS ARE AS PER NATIONAL STRUCTURAL CODE OF THE PHILIPPINES 2001 EDITION

**4 WIND LOADS**

THE DESIGN WIND LOADS ARE AS PER NATIONAL STRUCTURAL CODE OF THE PHILIPPINES 2001 EDITION

**5 EQUIPMENT LOADING**

EQUIPMENT NOT INDICATED IN THE PLANS SHALL NOT BE INSTALLED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER. THE MANUFACTURER SHALL SUBMIT EQUIPMENT DATA SPECIFYING THE WEIGHT, AND ITS REACTION AT THE BASE, AND ITS VIBRATION CHARACTERISTICS.

**REINFORCED CONCRETE CONSTRUCTION**

**1 CEMENT SHALL CONFORM TO PORTLAND CEMENT ASTM C150.**

**2 CONCRETE AGGREGATE SHALL CONFORM TO ASTM C33 EXCEPT THAT AGGREGATES FAILING TO MEET THOSE SPECIFICATION BUT WHICH HAVE PRODUCED CONCRETE OF ADEQUATE STRENGTH AND DURABILITY MAYBE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.**

**3 WATER USED IN MIXING CONCRETE SHALL BE CLEAN AND FREE FROM INJURIOUS AMOUNT OF OILS, ACIDS, ALKALIS, SALTS, ORGANIC MATERIALS OR OTHER SUBSTANCES DELETERIOUS TO CONCRETE AND STEEL.**

**4 REINFORCING BARS SHALL CONFORM TO ASTM A615.**

**5 ADMIXTURES TO BE USED IN CONCRETE SHALL BE SUBJECT TO PRIOR APPROVAL BY THE STRUCTURAL ENGINEER.**

**6 CEMENT AND AGGREGATES SHALL BE STORED IN SUCH A MANNER AS TO PREVENT THEIR DETERIORATION OR THE INTRUSION OF FOREIGN MATTER.**

**7 CONCRETE CYLINDER SAMPLES FOR STRENGTH TESTS OF EACH CLASS OR CONCRETE SHALL BE TAKEN NOT LESS THAN TWICE A DAY OR NOR LESS THAN ONCE FOR EACH 50 CU. m. OF CONCRETE PLACE.**

**8 THE CYLINDER SAMPLES FOR STRENGTH TESTS SHALL BE TAKEN CURED AND TESTED IN ACCORDANCE WITH ASTM C172, ASTM C31, ASTM C39.**

**9 ACCEPTANCE OF CONCRETE. CONCRETE POURED WILL BE CONSIDERED SATISFACTORY IF THE AVERAGES OF ALL SETS OF THREE CONSECUTIVE STRENGTH TEST RESULTS EQUAL OR EXCEED THE REQUIRED  $f_c'$  AND NO INDIVIDUAL STRENGTH TEST RESULTS FALL BELOW THE REQUIRED  $f_c'$  BY MORE THAN 500 psi.**

**10 CORE TESTS AND LOAD TESTS. IF INDIVIDUAL TESTS OF LABORATORY CURED CYLINDER SAMPLES PRODUCED STRENGTH MORE THAN 500 psi BELOW  $f_c'$  CORE TESTS MAY BE RESORTED SUBJECT TO THE APPROVAL BY THE STRUCTURAL ENGINEER.**

**11 MIXING OF CONCRETE. ALL CONCRETE SHALL BE MIXED UNTIL THERE IS UNIFORM DISTRIBUTION OF THE MATERIALS AND SHALL BE DISCHARGED COMPLETELY BEFORE THE MIXER IS RECHARGED.**

**12 CONVEYING OF CONCRETE. CONCRETE SHALL BE CONVEYED FROM THE MIXER TO THE PLACE OF FINAL DEPOSIT BY METHODS WHICH WILL PREVENT THE SEPARATION OR LOSS OF MATERIALS.**

**13 DEPOSITING OF CONCRETE. CONCRETE SHALL BE DEPOSITED AS NEARLY AS PRACTICABLE IN ITS FINAL POSITION TO AVOID SEGREGATION DUE TO REHANDLING OR FLOWING.**

**14 CURING. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR AT LEAST 7 DAYS AFTER PLACING. WET BURLAP MAYBE LAYED OVER THE SLAB CONSTANTLY APPLIED WITH WATER.**

**CONCRETE MIXES**

UNLESS OTHERWISE INDICATED IN THE DRAWINGS, THE MINIMUM 28-DAYS CYLINDER COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:

**A. FOUNDATION, CONCRETE WALLS, COLUMNS, UNDERGROUND TANKS, SUSPENDED BEAMS AND SLABS**

$f_c' = 4,000$  psi

**B. SLAB ON GRADE**

$f_c' = 3,000$  psi

**FOOTINGS**

- 1 THE ALLOWABLE SOIL BEARING PRESSURE IS 6,000 PSF
- 2 EXCAVATION FOR FOOTINGS SHALL BE CARRIED TO A DEPTH AS SPECIFIED IN THE PLANS.
- 3 EXISTING UNDERGROUND PIPES, TUNNELS, ETC. SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR EVALUATION.
- 4 ALL EARTH FILL SUPPORTING BASEMENT SLABS FOR FLOORING, PARKING, SIDEWALK, ETC. SHALL BE COMPACTED TO 95% PROCTOR UNLESS OTHERWISE SPECIFIED BY THE STRUCTURAL ENGINEER.

**REINFORCED CONCRETE BEAMS**

- 1 UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS CAMBER ALL RC BEAMS AT LEAST 6 mm FOR EVERY 4.5 m. OF SPAN EXCEPT CANTILEVERS WHICH SHALL BE 18 mm FOR EVERY 3.0 m. SPAN.
- 2 IF THERE ARE TWO OR MORE LAYERS OF REINFORCING BARS, USE 25# SEPARATORS SPACED AT 1200 mm O.C.
- 3 IF BEAMS REINFORCING BARS ENDS IN A WALL, THE CLEAR DISTANCE FROM THE BAR TO THE FARTHER FACE OF THE WALL SHALL BE NOT LESS THAN 5 DIAMETERS. THE REINFORCING BARS SHALL TERMINATE ON A STANDARD OF 90° HOOK.
- 4 SPLICES FOR TOP BARS SHALL BE LOCATED AT MID-SPAN AND BOTTOM BARS SHALL BE SPLICED AT THE DISTANCE OF TWICE THE MEMBER DEPTH FROM THE FACE OF THE COLUMN. LENGTH OF SPLICE SHALL BE HELD TO PROVIDE A MINIMUM OF TWO STIRRUPS TIES AT SPLICE. SPLICES INDICATE MAYBE STAGGERED A DISTANCE OF AT LEAST 40 BARS DIAMETER. A MAXIMUM OF 50% OF TOP OR BOTTOM BAR MAY BE SPLICED AT ANY ONE LOCATION.

**REINFORCED CONCRETE SLABS**

- 1 UNLESS OTHERWISE NOTED IN PLANS OR SPECIFICATIONS, CAMBER ALL R.C. SLABS 3 mm PER 3.0 m. OF SHORTER SPAN.
- 2 IF SLABS ARE REINFORCED BOTH WAYS, THE SHORTER SPAN REBAR SHALL BE THE BOTTOM BARS.
- 3 CONCRETE COVERING SHALL BE 19 mm FOR TOP AND FOR BOTTOM BARS.
- 4 UNLESS OTHERWISE SPECIFIED BY THE ENGINEER BAR CHAIRS SHALL BE PROVIDED AT LEAST 0.90 m. EACH WAY TO SUPPORT TOP AND BOTTOM SLAB SEPARATELY.

**REINFORCED CONCRETE COLUMNS**

- 1 CONSTRUCTION JOINTS IN COLUMNS SHALL BE LOCATED AT MIDHEIGHT OF COLUMN ( BETWEEN FLOOR LINE. )
- 2 ALL TIES SHALL BE FASTENED TO COLUMN VERTICAL REINFORCEMENT BY MEANS OF WIRES AT ALL INTERSECTION POINTS OF TIES AND COLUMN REBARS.
- 3 NOT MORE THAN ONE-THIRD (1/3) OF THE TOTAL NUMBER OF BARS SHALL BE SPLICED AT THE SAME LEVEL. THE LAP SPLICE SHALL BE 1.2  $L_d$ . WHERE  $L_d$  IS THE DEVELOPMENT LENGTH AS TABULATED IN THE STANDARD DETAILS. SPLICES SHALL BE STAGGERED A DISTANCE OF AT LEAST  $L_d$ .
- 4 CONFINEMENT TIES SHALL BE PROVIDED ON ALL COLUMNS AT BEAM COLUMN INTERSECTIONS AS SHOWN IN STANDARD DETAILS.

**REINFORCED CONCRETE WALLS**

- 1 UNLESS OTHERWISE INDICATED IN THE PLANS THE R.C. WALL HORIZONTAL BARS SHALL ENCLOSE THE VERTICAL BARS.
- 2 CONCRETE CLEARANCES FOR REINFORCING BARS - ( SEE ITEM 12 ) FOR 100 mm WALL OR LESS REINFORCING BARS SHALL BE AT THE CENTER.
- 3 CARRY VERTICAL BARS 0.60 m. ABOVE FLOOR LEVEL TO PROVIDE FOR SPLICES WHEN NECESSARY. ELSEWHERE STOP AT 50 mm BELOW THE TOP OF THE SLAB. THE BAR SHALL TERMINATE ON STANDARD 90° DEGREE HOOK.
- 4 HORIZONTAL AND VERTICAL BARS CONFORMING TO ASTM A615 SHALL BE SPLICED BY LAPPING AND WIRED WITH NO.16 G.I. WIRE AND CONFORMING SECTION 1 PROVIDED THAT SPLICES IN ADJACENT BARS ARE STAGGERED AT LEAST 1.50 m. O.C. NOT MORE THAN ONE-HALF (1/2) OF THE TOTAL NUMBER OF BARS SHALL BE SPLICED AT THE SAME LINE.
- 5 ALL OPENINGS ON WALL OR SLABS LESS THAN 200 mm. THICK SHALL BE REINFORCED AS SHOWN IN THE STANDARD DETAILS.

**CHB WALLS**

- 1 UNLESS OTHERWISE INDICATED THE VERTICAL AND HORIZONTAL REINFORCEMENTS FOR C.H.B. SHALL BE 10 mm. AT 600 O.C. FOR 0.15 m. THICK BLOCKS. MINIMUM LAP SPLICE SHALL BE 300 mm. ( REFER TO ARCHITECTURAL FLOOR PLAN FOR LOCATION OF C.H.B. WALLS ).
- 2 LINTEL BEAMS TO BE USED SHALL BE ( T X 0.40 m. ) REINFORCED BY 4-16 mm WITH 10 mm AT 250 TIES WHERE "T" IS THE CHB WALL THICKNESS. (UNLESS OTHERWISE SPECIFIED ON DETAILS).
- 3 LINTEL BEAMS SHALL BE PROVIDED AT TOP OF CHB WALL OPENINGS IT SHALL BE EXTENDED AT LEAST 0.20 m. BEYOND THE OPENINGS.
- 4 FOR HIGH WALLS, LINTEL BEAMS INTERVAL SHALL BE PROVIDED AT 3.0 m. 3.0 m. VERTICAL
- 5 FOR LONG WALLS, LINTEL BEAMS ACTING AS COLUMN SHALL BE PROVIDED EVERY 6 METERS
- 6 WHERE CHB WALLS ADJOIN R.C. COLUMNS AND BEAMS, PROVIDE DOWELS ON R.C. COLUMN AND BEAMS PRIOR TO POURING TO MATCH CHB WALL REINFORCEMENT.
- 7 WHERE THE TOP OF A CHB WALL ADJOIN A BEAM OR SLAB, REBARS AS REQUIRED IN 10.6 SHALL BE RETAINED FOR STABILITY. (SEE STANDARD DETAIL)
- 8 WHERE SIDES OF A CHB WALL ADJOIN A COLUMN OR RC WALL - SEE CONTROL JOINT DETAIL AT STANDARD DETAILS. REBARS AS REQUIRED IN 10.6 SHALL BE RETAINED FOR STABILITY.
- 9 FOR HIGH WALLS, LINTEL BEAMS INTERVAL SHALL BE PROVIDED AT 3.0 m.
- 9 NO CHIPPING OFF OF CONCRETE COLUMNS AND BEAMS ARE ALLOWED UNLESS OTHERWISE PERMITTED BY THE ENGINEER WHERE COLUMNS AND BEAMS HAVE BEEN POURED WITHOUT DOWELS FOR THE CHB WALL PROVIDE 12# DRILLED DOWELS @ 600mm O.C. WITH EPOXY GROUT

**STRUCTURAL TOLERANCES**

UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, THE FOLLOWING ARE THE ACCEPTABLE STRUCTURAL TOLERANCES FOR CAST-IN-PLACE CONCRETE CONSTRUCTION.

|    |   |   |                     |
|----|---|---|---------------------|
| A. | CROSS SECTIONAL DIMENSIONS AND LOCATION TO REINFORCEMENT. |   |                     |
|    | DIMENSION LESS THAN 200 mm TO 600 mm                      | = | ± 6 mm              |
|    | OVER 600 mm   | = | ± 9 mm              |
| B. | MEMBER LENGTH OR HEIGHT                                   | = | ± 12 mm             |
|    | (MAXIMUM LIMITATION = 12 mm)                              |   |                     |
| C. | DEVIATION FROM STRAIGHT LINE (SWEEP AND OR PLUMBNESS)     | = | 6 mm PER 3.0 METERS |
| D. | LOCATION OF BAR CUT-OFFS OR BENDS                         | = | ± 50 mm             |

**CONCRETE PROTECTION FOR REINFORCEMENT**

THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING BARS. FOR BAR BUNDLES THE MINIMUM COVER SHALL EQUAL THE EQUIVALENT DIAMETER OF THE BUNDLE. BUT NEED NOT BE MORE THAN 50 mm ON THE TABULATED MINIMUM WHICHEVER IS GREATER.

- 1 CAST-IN-PLACE CONCRETE (REINFORCED CONCRETE CONSTRUCTION.)

|    |  |               |       |
|----|--|---------------|-------|
| A. | CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH                                | MINIMUM COVER | 75 mm |
| B. | EXPOSED TO EARTH OR WEATHER  |               |       |
|    | 20# AND LARGER   |               | 50 mm |
|    | 16# AND SMALLER  |               | 40 mm |
| C. | NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND SLABS, WALL AND JOISTS      |               |       |
|    | 16# AND SMALLER  |               | 20 mm |
|    | BEAMS, GIRDERS AND COLUMNS PRINCIPAL REINFORCEMENT, TIES STIRRUPS OR SPIRALS |               | 40 mm |

**REINFORCING BARS**

- 1 ALL MAIN REINFORCING BARS SHALL BE DEFORMED CONFORMING TO ASTM A615-68
- 2 UNLESS OTHERWISE NOTED IN THE PLANS THE MINIMUM YIELD STRENGTH OF THE MAIN REINFORCING BARS SHALL BE AS FOLLOWS:  
12# mm AND SMALLER  $f_y = 40,000$  psi  
16# mm AND LARGER  $f_y = 60,000$  psi
- 3 IN STANDARD DETAILS.

**STANDARD HOOK**

- 1 A STANDARD HOOK FOR REBARS IF REQUIRED SHALL BE EITHER OF THE FOLLOWING:  
A. A SEMI-CIRCULAR TURN PLUS AN EXTENSION OF AT LEAST 4 DIAMETER BUT NOT LESS THAN 62 mm AT THE FREE END OF THE BAR.  
B. A 90° TURN PLUS EXTENSION OF AT LEAST 12 BAR DIAMETERS AT THE FREE END OF THE BAR.  
= 6 BAR DIAMETERS  
= 8 BAR DIAMETERS
- 2 MINIMUM DIAMETERS OF BEND MEASURED ON THE INSIDE OF THE BAR TO THE FREE END OF THE BAR.  
10 mm TO 25 mm  
28 mm TO 36 mm

**CONSTRUCTION JOINTS**

- 1 CONSTRUCTION JOINTS SHALL BE LOCATED NEAR THE MIDDLE OF SPAN OF SLABS, BEAMS OR GIRDER.
- 2 AT BEAM-GIRDER INTERSECTION, THE CONSTRUCTION JOINT ON THE GIRDER SHALL BE OFFSET A DISTANCE EQUAL TO TWICE THE WIDTH OF THE BEAM. DIAGONAL BARS SHALL BE PROVIDED TO RESIST 100 % SHEAR AT THE CONSTRUCTION JOINT.

THE TOTAL LENGTH OF THE DIAGONAL BAR SHALL BE AT LEAST TWICE THE DEVELOPMENT LENGTH REQUIRED FOR THE BAR. THE ENDS OF THE BAR SHALL BE HOOKED.

- 3 WHERE A JOINT IS TO BE MADE THE SURFACE OF THE CONCRETE SHALL BE THOROUGHLY CLEANED AND ALL LAITANCE AND STANDING WATER REMOVED. VERTICAL COATED WITH NEAT CEMENT GROUT IMMEDIATELY BEFORE PLACING OF NEW CONCRETE.

**ELECTRICAL CONDUITS**

- 1 ELECTRICAL CONDUITS MAY BE PLACED BETWEEN THE TOP AND BOTTOM REINFORCEMENT IN SLABS AND R.C. WALLS.
- 2 THE SPACING OF THESE CONDUITS SHALL BE NOT CLOSER THAN 3 BARS DIAMETER

**PIPES EMBEDDED IN CONCRETE**

- 1 PIPES TO BE EMBEDDED ON COLUMNS SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER.
- 2 NO VERTICAL PIPES ARE ALLOWED TO PUNCH THROUGH A BEAM OR GIRDER.
- 3 HORIZONTAL PIPES MAY PUNCH THROUGH A BEAM OR GIRDER SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER.

THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE ACTUAL LOCATION WHERE PIPES CROSS A BEAM OR GIRDER, WHERE PERMITTED BY THE ENGINEER PROVIDE AT LEAST 16 mm (600 mm LONG) U-BARS TO ENCLOSE THE PIPE AT THE POINT OF INTERSECTION AT EACH FACE OF THE BEAM.


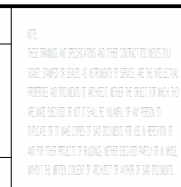
- 4 PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN CONCRETE.
- 5 CONCRETE COVER FOR PIPES SHALL BE AT LEAST 38 mm FOR CONCRETE SURFACE EXPOSED TO THE WEATHER OR IN CONTACT WITH THE GROUND 18 mm FOR CONCRETE SURFACE NOT EXPOSED TO THE GROUND OR WEATHER.

**REMOVAL OF FORMS AND SHORES**

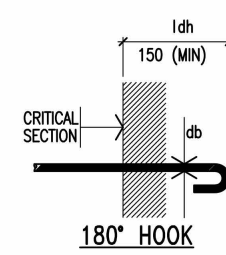
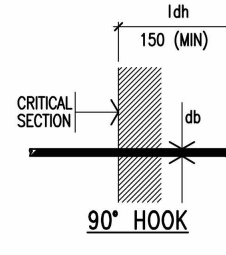
- 1 FORMS SHALL BE REMOVED IN SUCH MANNER AS TO ENSURE COMPLETE SAFETY OF THE STRUCTURE.
- 2 UNLESS OTHERWISE SPECIFIED BY THE STRUCTURAL ENGINEER THE FOLLOWING SHALL BE THE BASIS OF FORMS AND SHORINGS REMOVAL FOR REINFORCED CONCRETE (R.C.) CONSTRUCTION.  
BEAM SIDE FORMS 2 DAYS  
COLUMN SIDE FORMS 2 DAYS  
SLAB BOTTOM FORMS 5 DAYS  
BEAM SHORING 8 DAYS  
SLAB SHORING 8 DAYS

# STRUCTURAL SPECIFICATIONS

1 : 200

|   |           |   |   |                                  |                             |                           |              |                |              |  |     |    |           |  |    |    |
|---|-----------|---|---|----------------------------------|-----------------------------|---------------------------|--------------|----------------|--------------|--|-----|----|-----------|--|----|----|
|  | TIN:      | APPROVED BY:  |  | PROJECT TITLE:                   | CHECKED / APPROVED BY:      | CONFORMED / APPROVED BY:  | APPROVED BY: | SHEET CONTENT: | DESIGNED BY: | <table border="1"> <tr> <td>S10</td> <td>01</td> </tr> <tr> <td colspan="2">SHEET NO.</td> </tr> <tr> <td>09</td> <td>27</td> </tr> </table> | S10 | 01 | SHEET NO. |  | 09 | 27 |
|   | S10       | 01  |   |                                  |                             |                           |              |                |              |  |     |    |           |  |    |    |
|   | SHEET NO. |   |   |                                  |                             |                           |              |                |              |  |     |    |           |  |    |    |
|   | 09        | 27  |   |                                  |                             |                           |              |                |              |  |     |    |           |  |    |    |
| PRC:  |           | <b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b>                     | <b>ENGR. MARIO LILIO P. VALENZONA</b>   | <b>DR. DANIEL LESLIE S. TAN</b>  | <b>DR. EDGARDO E. TULIN</b> | STRUCTURAL SPECIFICATIONS | CADD BY:     |                |              |  |     |    |           |  |    |    |
| PTR:  |           | LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A | DIRECTOR, PPO   | VP OF ADMINISTRATIVE AND FINANCE | VSU PRESIDENT               | STARTED:                  | FINISHED:    |                |              |  |     |    |           |  |    |    |
| DATE:   |           |   |   |                                  |                             | PLACE:                    |              |                |              |  |     |    |           |  |    |    |

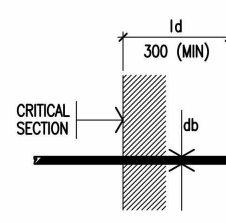
| BAR DIAMETER (mm) | BAR GRADE (MPa) | BASIC DEVELOPMENT LENGTH, $l_{db}$ (mm) |     |                            |      |
|-------------------|-----------------|---|-----|----------------------------|------|
|                   |                 | $f'_c=20.7$ MPa (3,000psi)              |     | $f'_c=27.6$ MPa (4,000psi) |      |
| 10                | 275.80          | 150                                     | 150 | 190                        | 190  |
|                   | 413.70          | 219                                     | 219 | 282                        | 282  |
| 12                | 275.80          | 175                                     | 175 | 228                        | 228  |
|                   | 413.70          | 263                                     | 263 | 351                        | 351  |
| 16                | 275.80          | 234                                     | 234 | 304                        | 304  |
|                   | 413.70          | 351                                     | 351 | 474                        | 474  |
| 20                | 275.80          | 292                                     | 292 | 379                        | 379  |
|                   | 413.70          | 438                                     | 438 | 607                        | 607  |
| 25                | 275.80          | 365                                     | 365 | 455                        | 455  |
|                   | 413.70          | 548                                     | 548 | 789                        | 789  |
| 28                | 275.80          | 409                                     | 409 | 511                        | 511  |
|                   | 413.70          | 613                                     | 613 | 883                        | 883  |
| 32                | 275.80          | 467                                     | 467 | 607                        | 607  |
|                   | 413.70          | 701                                     | 701 | 1011                       | 1011 |
| 36                | 275.80          | 526                                     | 526 | 683                        | 683  |
|                   | 413.70          | 789                                     | 789 | 1143                       | 1143 |



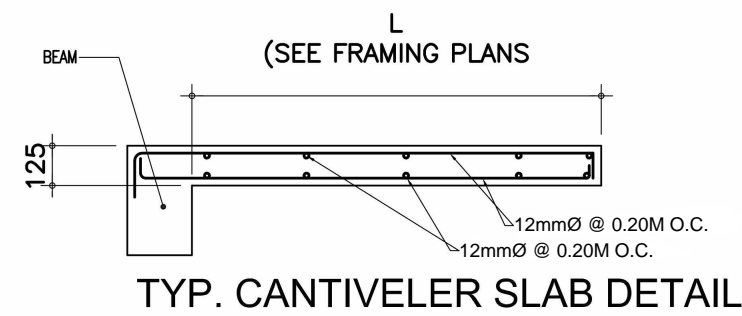
- DEVELOPMENT LENGTH,  $l_{db}$  SHALL BE AS FOLLOWS:
- FOR BARS W/ SIDE COVER (NORMAL TO PLANE HOOK) NOT LESS THAN 65mm AND FOR 90° HOOK, COVER ON BAR EXTENSION BEYOND HOOK NOT LESS THAN 50mm, USE 0.7  $l_{db}$ .
  - FOR BARS W/ HOOK ENCLOSED VERTICALLY OR OR HORIZONTALLY W/IN TIES OR STIRRUP TIES SPACED ALONG THE FULL DEVELOPMENT LENGTH  $l_{db}$  NOT GREATER THAN 3 $l_{db}$ , USE 0.8  $l_{db}$ .
  - FOR BARS NOT INCLUDED IN (a) & (b), USE 1.0  $l_{db}$ .

### DEVELOPMENT LENGTH OF HOOKED BARS

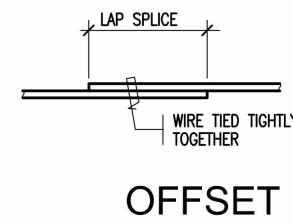
| BAR DIAMETER (mm) | BAR GRADE (MPa) | MINIMUM DEVELOPMENT LENGTH $l_d$ (mm) |            |                            |            |
|-------------------|-----------------|---------------------------------------|------------|----------------------------|------------|
|                   |                 | $f'_c=20.7$ MPa (3,000psi)            |            | $f'_c=27.6$ MPa (4,000psi) |            |
|                   |                 | TOP BARS                              | OTHER BARS | TOP BARS                   | OTHER BARS |
| 10                | 275.80          | 300                                   | 300        | 300                        | 300        |
|                   | 413.70          | 427                                   | 329        | 370                        | 300        |
| 12                | 275.80          | 342                                   | 300        | 300                        | 300        |
|                   | 413.70          | 513                                   | 394        | 444                        | 342        |
| 16                | 275.80          | 456                                   | 351        | 395                        | 304        |
|                   | 413.70          | 684                                   | 526        | 592                        | 455        |
| 20                | 275.80          | 570                                   | 438        | 493                        | 379        |
|                   | 413.70          | 854                                   | 657        | 740                        | 569        |
| 25                | 275.80          | 734                                   | 565        | 636                        | 489        |
|                   | 413.70          | 1101                                  | 847        | 953                        | 733        |
| 28                | 275.80          | 921                                   | 708        | 797                        | 613        |
|                   | 413.70          | 1381                                  | 1062       | 1196                       | 920        |
| 32                | 275.80          | 1202                                  | 925        | 1041                       | 801        |
|                   | 413.70          | 1804                                  | 1387       | 1562                       | 1202       |
| 36                | 275.80          | 1522                                  | 1171       | 1318                       | 1014       |
|                   | 413.70          | 2283                                  | 1756       | 1977                       | 1521       |



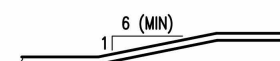
### DEVELOPMENT LENGTH OF STRAIGHT BARS



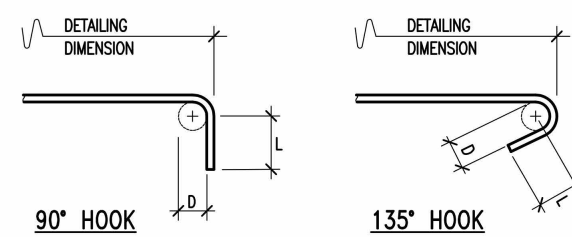
TYP. CANTILEVER SLAB DETAIL



OFFSET



OFFSET

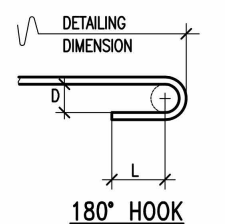
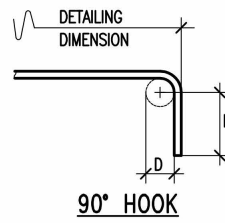


| BAR DIAMETER (mm) | D (mm) | L (mm)   |           |           |
|-------------------|--------|----------|-----------|-----------|
|                   |        | TYPE I   |           |           |
|                   |        | 90° HOOK | 135° HOOK | 135° HOOK |
| 10                | 40     | 60       | 60        | 75        |
| 12                | 48     | 72       | 72        | 75        |

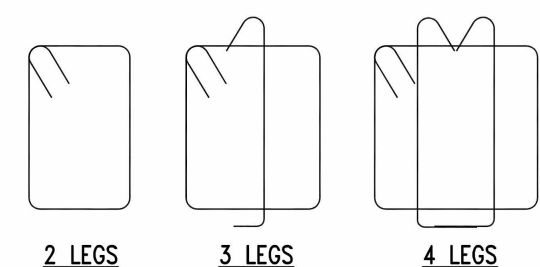
NOTE: TYPE I FOR GENERAL USE  
TYPE II FOR SEISMIC USE (FOR ALL COLUMNS AND ALL BEAMS CONNECTED TO COLUMNS)

### STIRRUPS AND TIE HOOK DIMENSIONS

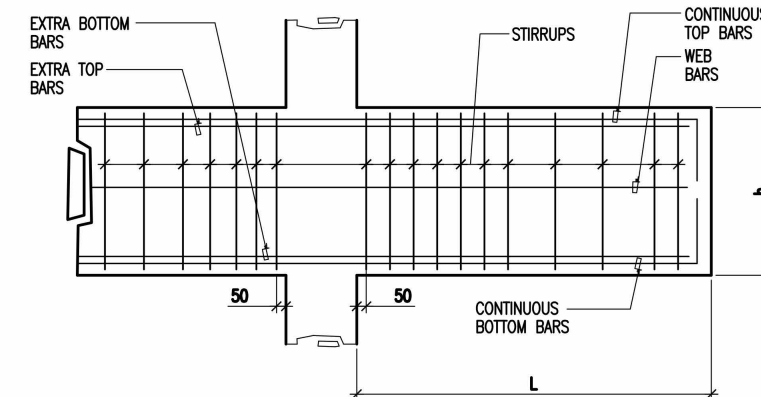
| BAR DIAMETER (mm) | D (mm) | L (mm)    |          |
|-------------------|--------|-----------|----------|
|                   |        | 180° HOOK | 90° HOOK |
| 10                | 60     | 65        | 120      |
| 12                | 72     | 65        | 145      |
| 16                | 96     | 65        | 192      |
| 20                | 120    | 80        | 240      |
| 25                | 150    | 100       | 305      |
| 28                | 225    | 115       | 335      |
| 32                | 255    | 130       | 385      |
| 36                | 288    | 144       | 432      |



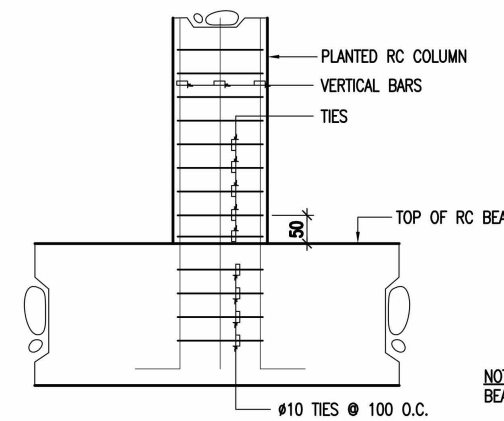
### STANDARD HOOK DIMENSIONS



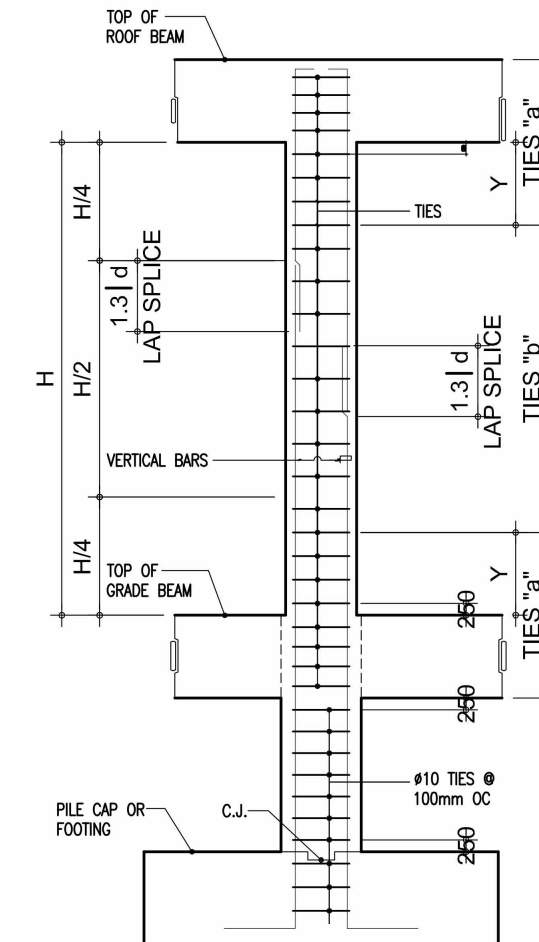
TYPICAL STIRRUPS DETAIL



TYPICAL CANTILEVER BEAM DETAIL



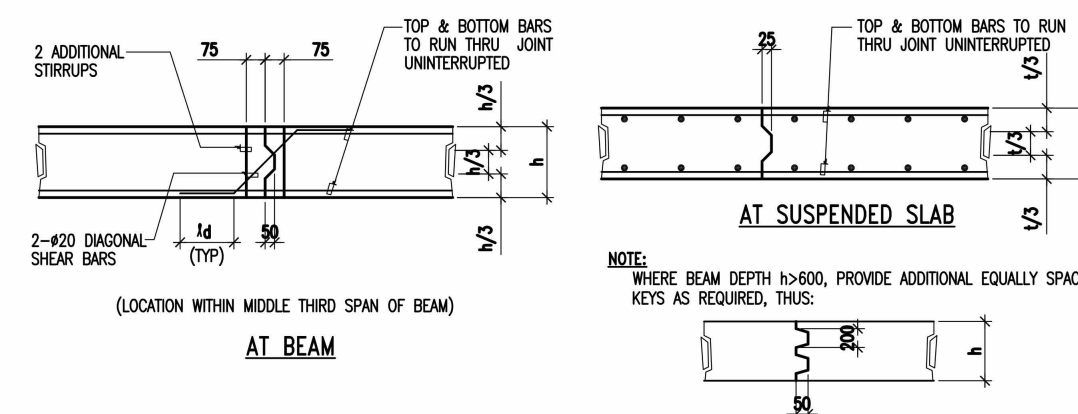
TYPICAL PLANTED RC COLUMN DETAIL



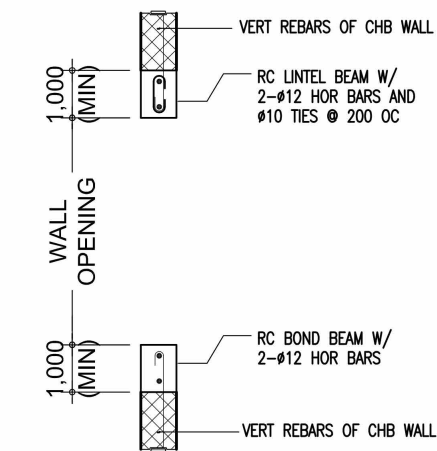
C.J. = CONSTRUCTION JOINT

- NOTES:
- Y-MAX OF THE FF:
    - H/6
    - 450 MM
    - MAXIMUM COLUMN DIMENSION
  - SPLICES ARE PERMITTED ONLY WITHIN THE CENTER HALF OF COLUMN HEIGHT (H)
  - STAGGER BAR SPLICES BY 600 MM OR MORE
  - PROMOTE TIES @ 100 MM O.C. (MAX) OVER THE FULL LAP SPlice LENGTH
  - SPECIAL TIES @ BEAM-COLUMN JOINT TO CONFORM TO THE SAME CONFIGURATION OF TIES AS INDICATED IN THE SCHEDULE OF COLUMNS

### TYPICAL RC COLUMN ELEVATION



TYPICAL CONSTRUCTION JOINT DETAILS



TYPICAL WALL OPENING DETAIL

# STRUCTURAL DETAILS

1 : 40



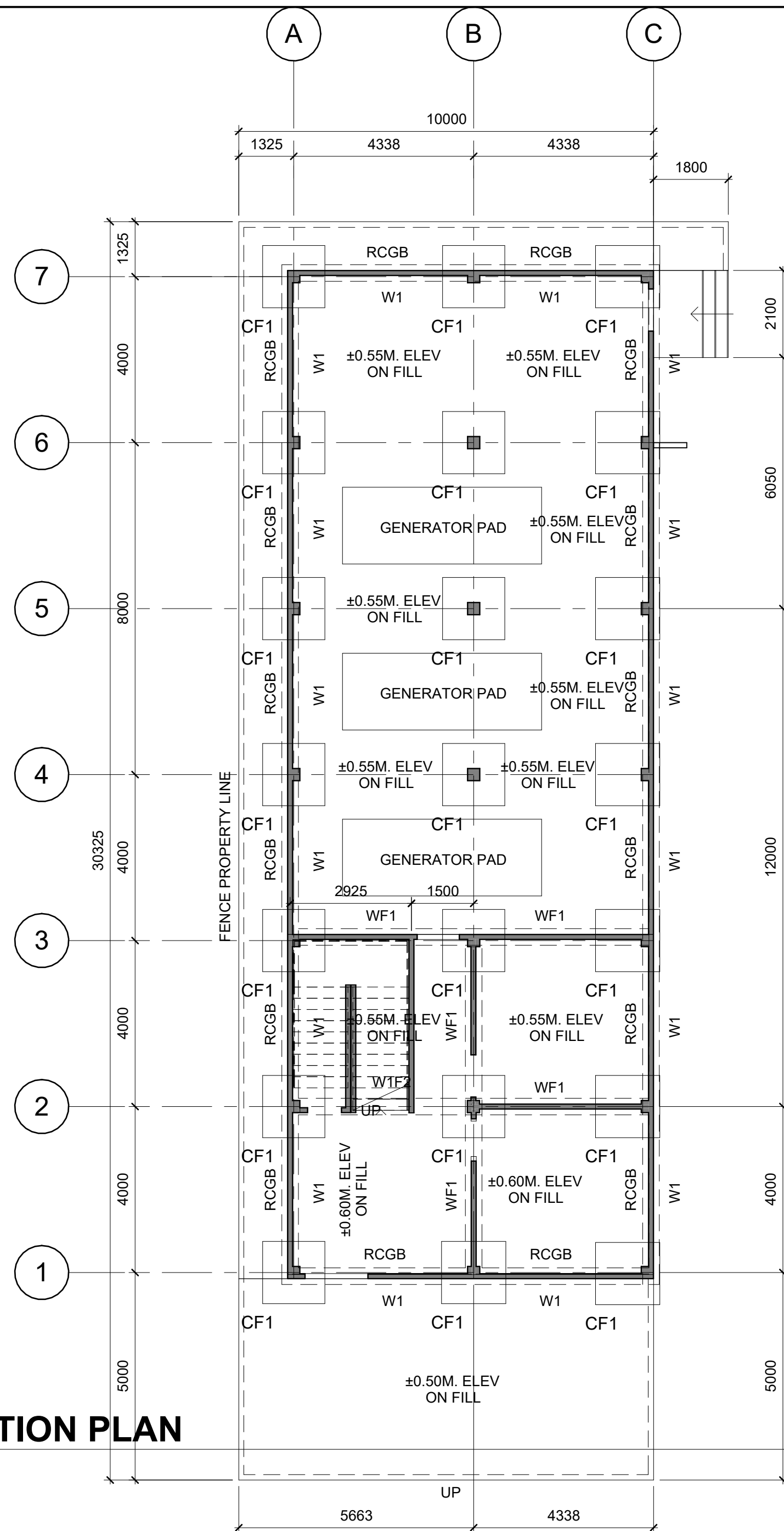
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|--------|---------------------|
| TIN:   | APPROVED BY:        |
| PRC:   |                     |
| PTR:   |                     |
| DATE:  |                     |
| PLACE: | STRUCTURAL ENGINEER |

|                |   |
|----------------|---|
| PROJECT TITLE: | CONSTRUCTION OF VSU POWER PLANT BUILDING                  |
| LOCATION:      | VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A |

|                          |                                |
|--------------------------|--------------------------------|
| CHECKED / APPROVED BY:   | ENGR. MARIO LILIO P. VALENZONA |
| CONFORMED / APPROVED BY: | DR. DANIEL LESLIE S. TAN       |
| APPROVED BY:             | DR. EDGARDO E. TULIN           |

|                |                    |
|----------------|--------------------|
| SHEET CONTENT: | STRUCTURAL DETAILS |
| DESIGNED BY:   | S10 02             |
| CADD BY:       | SHEET NO.          |
| STARTED:       | 10 27              |
| FINISHED:      |                    |
| PLACE:         |                    |

|                                   |                      |
|-----------------------------------|----------------------|
| APPROVED BY:                      | DR. EDGARDO E. TULIN |
| VP OF ADMINISTRATIVE AND FINANCE: | VSU PRESIDENT        |



# FOUNDATION PLAN

1 : 100

## SCHEDULE OF R.C. COLUMNS

| FLOOR LEVEL        | C1          |                   |                                      |      | LC          |                   |                                      |      |
|--------------------|-------------|-------------------|--------------------------------------|------|-------------|-------------------|--------------------------------------|------|
|                    | COLUMN SIZE | MAIN BARS         | TIES                                 |      | COLUMN SIZE | MAIN BARS         | TIES                                 |      |
| ROOF LEVEL         | 200mmx300mm | BELOW BEAM SOFFIT | NO. OF TIE, DIA. & SPACING           | TYPE | 200mmx250mm | BELOW BEAM SOFFIT | NO. OF TIE, DIA. & SPACING           | TYPE |
|                    |             | MIDLEVEL          | 10# TIES @ 5-50mm, 8-100mm & 2-150mm | ☐    |             | MIDLEVEL          | 10# TIES @ 5-50mm, 3-100mm           | ☐    |
|                    |             | ABOVE BEAM        | 10# @ 200 mm                         | ☐    |             | ABOVE BEAM        | 10# @ 200 mm                         | ☐    |
| SECOND FLOOR LEVEL | 300mmx300mm | BELOW BEAM SOFFIT | NO. OF TIE, DIA. & SPACING           | TYPE | 250mmx300mm | BELOW BEAM SOFFIT | NO. OF TIE, DIA. & SPACING           | TYPE |
|                    |             | MIDLEVEL          | 10# TIES @ 5-50mm, 8-100mm & 2-150mm | ☐    |             | MIDLEVEL          | 10# TIES @ 5-50mm, 3-100mm & 1-150mm | ☐    |
|                    |             | ABOVE BEAM        | 10# @ 200 mm                         | ☐    |             | ABOVE BEAM        | 10# @ 200 mm                         | ☐    |
| GROUND FLOOR LEVEL | 300mmx300mm | BELOW BEAM SOFFIT | NO. OF TIE, DIA. & SPACING           | TYPE | /           |                   |                                      |      |
|                    |             | MIDLEVEL          | 10# TIES @ 5-50mm, 8-100mm           | ☐    |             |                   |                                      |      |
|                    |             | ABOVE BEAM        | 10# @ 150 mm                         | ☐    |             |                   |                                      |      |
| BELOW GROUND LEVEL | 300mmx300mm | BELOW BEAM SOFFIT | NO. OF TIE, DIA. & SPACING           | TYPE |             |                   |                                      |      |
|                    |             | MIDLEVEL          | 10# TIES @ 5-50mm, 8-100mm           | ☐    |             |                   |                                      |      |
|                    |             | ABOVE BEAM        | 10# @ 150 mm                         | ☐    |             |                   |                                      |      |

## SCHEDULE OF R.C. FOOTINGS

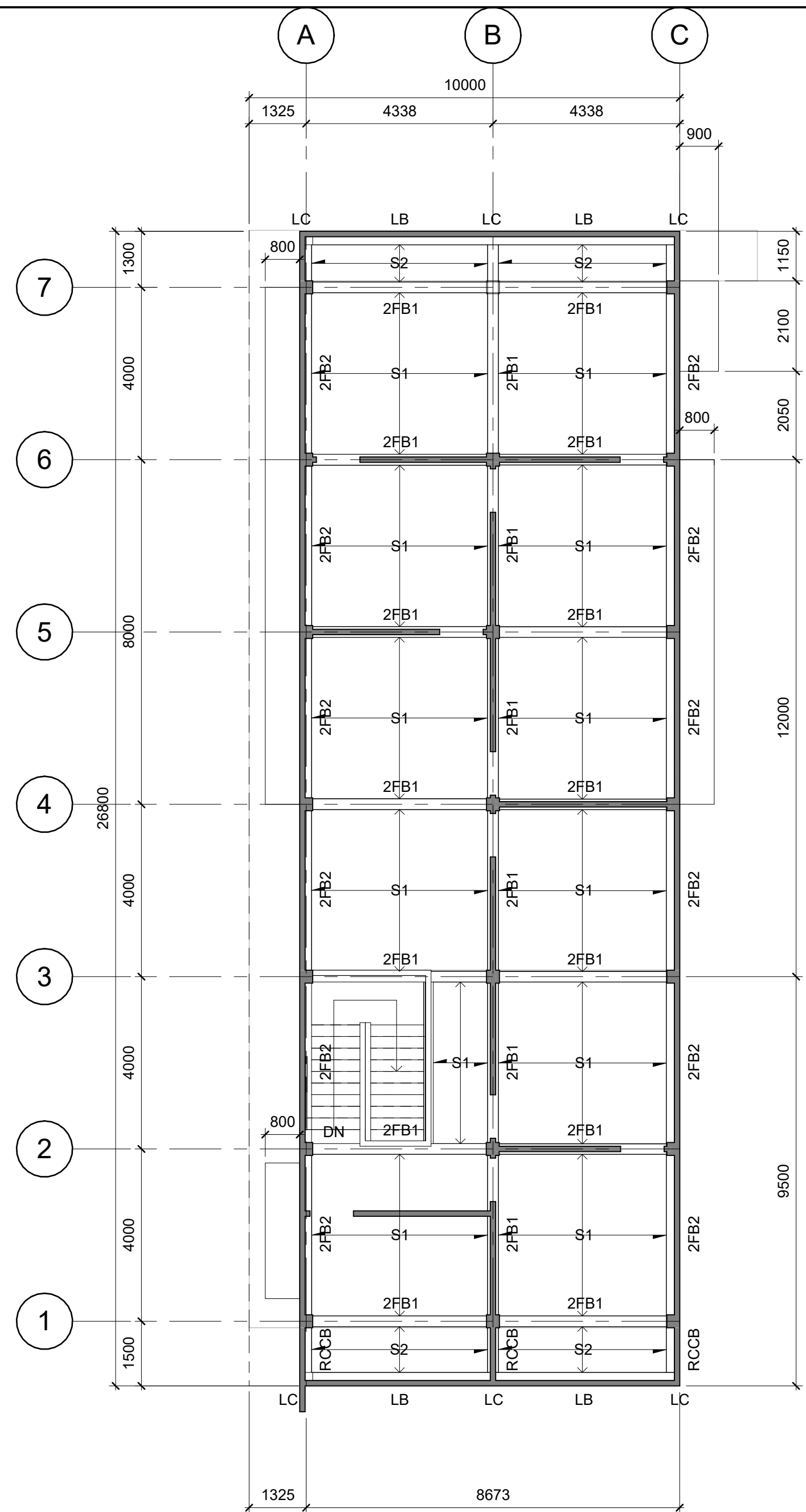
| F.MARK | SIZE (mm) | THICKNESS (mm) | REINFORCEMENTS |             |             | REMARKS                                   |
|--------|-----------|----------------|----------------|-------------|-------------|---|
|        |           |                | LOCATION       | X-DIRECTION | Y-DIRECTION |   |
| F1     | 1500X1500 | 250            | TOP            |             |             | 2.10M. DEPTH BELOW THE NATURAL GRADE LINE |
|        |           |                | BOTTOM         | 12-20Φ      | 12-20Φ      |   |

## SCHEDULE OF R.C. GROUND BEAM

| B.MARK | SECTION (mm) | REINFORCEMENTS |      |       |         |          | Side Bar | STIRRUPS              |                                    |                        |
|--------|--------------|----------------|------|-------|---------|----------|----------|-----------------------|------------------------------------|------------------------|
|        |              | LOCATION       | TYPE | CONT. | MIDSPAN | DISCONT. |          | NO. OF LEGS & BAR DIA | NUMBER & SPACING NEAR SUPPORT (mm) | SPACING @ MIDSPAN (mm) |
| RCGB   | 300X350      | TOP            | S    | 2-16Φ | 2-16Φ   | 2-16Φ    | 1-16Φ EF | 2L - 10Φ              | 4-50, 6-100                        | 200                    |
|        |              |                | E    |       | 1-16Φ   |          |          |                       |                                    |                        |
|        |              | BOTTOM         | S    | 2-16Φ | 2-16Φ   | 2-16Φ    |          |                       |                                    |                        |
|        |              |                | E    |       |         |          |          |                       |                                    |                        |

## SCHEDULE OF BEAM, COLUMNS & FOOTING

1 : 70



**SCHEDULE OF SECOND FLOOR BEAMS**

| B.MARK | SECTION (mm) | REINFORCEMENTS |      |       |         |         | Side Bar | STIRRUPS              |                                    |                        |
|--------|--------------|----------------|------|-------|---------|---------|----------|-----------------------|------------------------------------|------------------------|
|        |              | LOCATION       | TYPE | CONT. | MIDSPAN | DISCONT |          | NO. OF LEGS & BAR DIA | NUMBER & SPACING NEAR SUPPORT (mm) | SPACING @ MIDSPAN (mm) |
| 2FB1   | 500X300      | TOP            | S    | 2-20Φ | 2-20Φ   | 2-20Φ   | 1-16Φ EF | 2L - 10Φ              | 4-50, 4-100                        | 150                    |
|        |              |                | E    | 2-20Φ |         | 1-20Φ   |          |                       |                                    |                        |
|        |              | BOTTOM         | S    | 2-20Φ | 2-20Φ   | 2-20Φ   |          |                       |                                    |                        |
|        |              |                | E    |       | 2-20Φ   |         |          |                       |                                    |                        |
| 2FB2   | 400X300      | TOP            | S    | 2-20Φ | 2-20Φ   | 2-20Φ   | 1-16Φ EF | 2L - 10Φ              | 4-50, 4-100                        | 150                    |
|        |              |                | E    |       |         |         |          |                       |                                    |                        |
|        |              | BOTTOM         | S    | 2-20Φ | 2-20Φ   | 2-20Φ   |          |                       |                                    |                        |
|        |              |                | E    |       | 1-20Φ   |         |          |                       |                                    |                        |
| LB     | 300X200      | TOP            | S    | 2-20Φ | 2-20Φ   | 2-20Φ   | 1-16Φ EF | 2L - 10Φ              | 4-50, 4-100                        | 150                    |
|        |              |                | E    |       |         |         |          |                       |                                    |                        |
|        |              | BOTTOM         | S    | 2-16Φ | 2-16Φ   | 2-16Φ   |          |                       |                                    |                        |
|        |              |                | E    |       | 1-16Φ   |         |          |                       |                                    |                        |

**SCHEDULE OF SECOND FLOOR SLAB**

| S.MARK | THICKNESS (mm) | REINFORCEMENTS |                 |           |           |                                     |           | REMARKS   |            |
|--------|----------------|----------------|-----------------|-----------|-----------|-------------------------------------|-----------|-----------|------------|
|        |                | LOCATION       | SHORT DIRECTION |           |           | LONG DIRECTION                      |           |           |            |
|        |                |                | CONT            | MIDSPAN   | DISCON    | CONT                                | MIDSPAN   | DISCON    |            |
| S1     | 125            | TOP            | 12Φ @ 150       |           |           | 12Φ @ 200                           |           |           | TWO WAY    |
|        |                | BOTTOM         |                 | 12Φ @ 200 | 12Φ @ 200 |                                     | 12Φ @ 200 | 12Φ @ 200 |            |
| S2     | 125            | TOP            | 12Φ @ 125       |           |           | PROVIDE 10Φ @ 300 DISTRIBUTION BARS |           |           | ONEWAY     |
|        |                | BOTTOM         |                 | 12Φ @ 150 | 12Φ @ 150 |                                     |           |           |            |
| S3     | 150            | TOP            | 12Φ @ 100       |           |           | PROVIDE 10Φ @ 300 DISTRIBUTION BARS |           |           | CANTILEVER |
|        |                | BOTTOM         | 10Φ @ 300       |           |           |                                     |           |           |            |

**SCHEDULE OF FLOOR BEAMS & SLABS**

1 : 160

**1 SECOND FLOOR FRAMING PLAN**

1 : 100



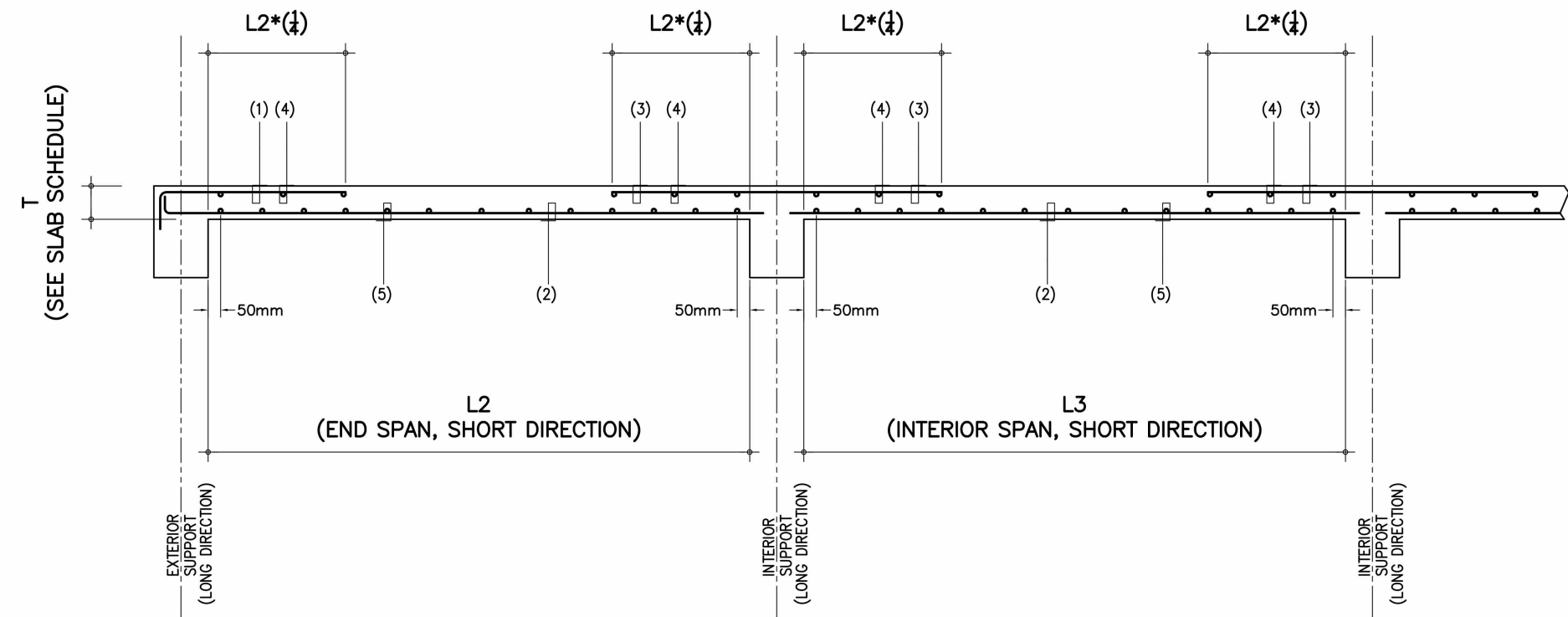
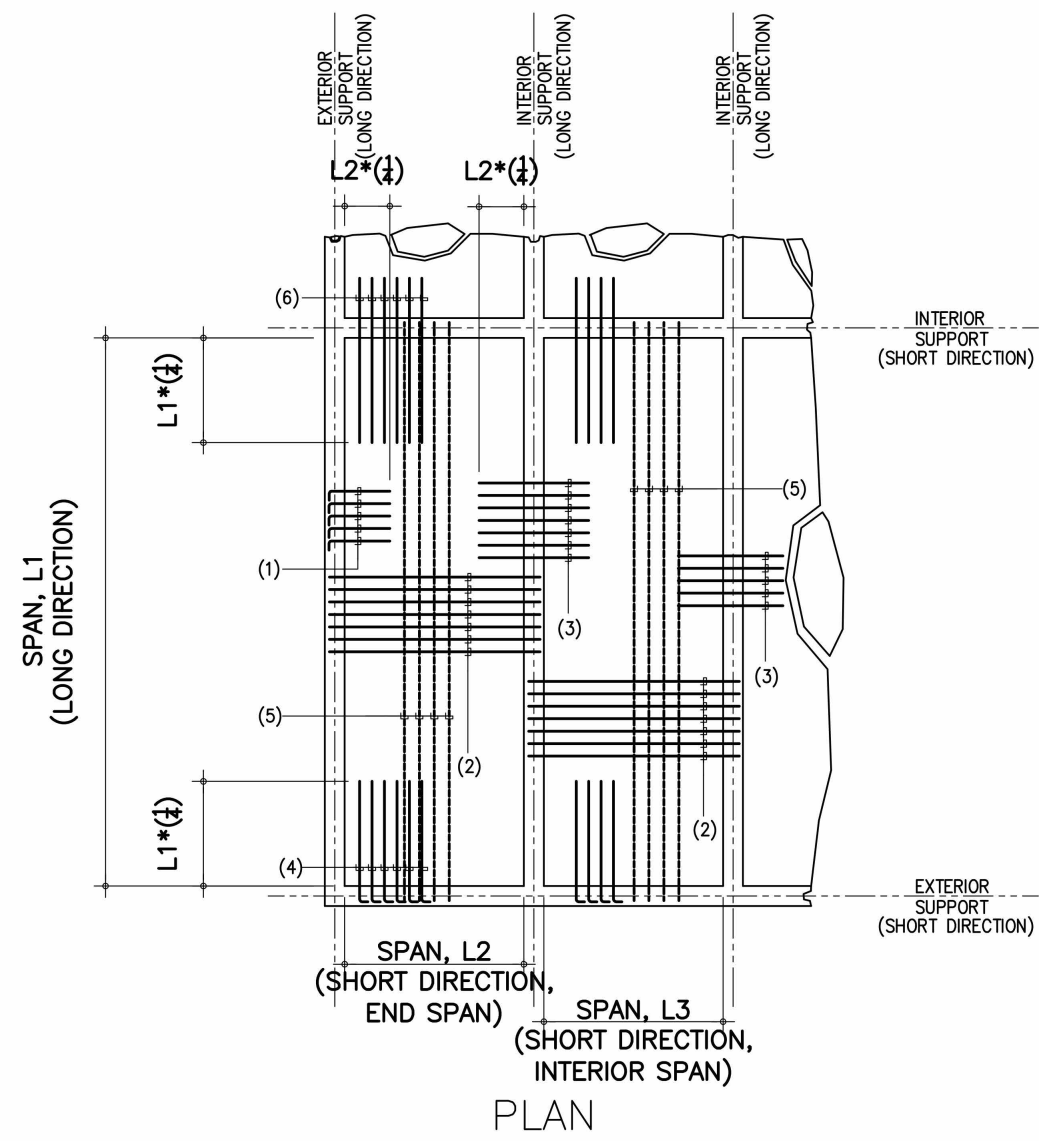
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|--------|---------------------|
| TIN:   | APPROVED BY:        |
| PRC:   |                     |
| PTR:   |                     |
| DATE:  |                     |
| PLACE: | STRUCTURAL ENGINEER |

|   |                                       |
|---|---------------------------------------|
| PROJECT TITLE:  | CHECKED / APPROVED BY:                |
| <b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b>                     | <b>ENGR. MARIO LILIO P. VALENZONA</b> |
| LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A | DIRECTOR, PPO                         |

|                                  |                             |
|----------------------------------|-----------------------------|
| CONFORMED / APPROVED BY:         | APPROVED BY:                |
| <b>DR. DANIEL LESLIE S. TAN</b>  | <b>DR. EDGARDO E. TULIN</b> |
| VP OF ADMINISTRATIVE AND FINANCE | VSU PRESIDENT               |

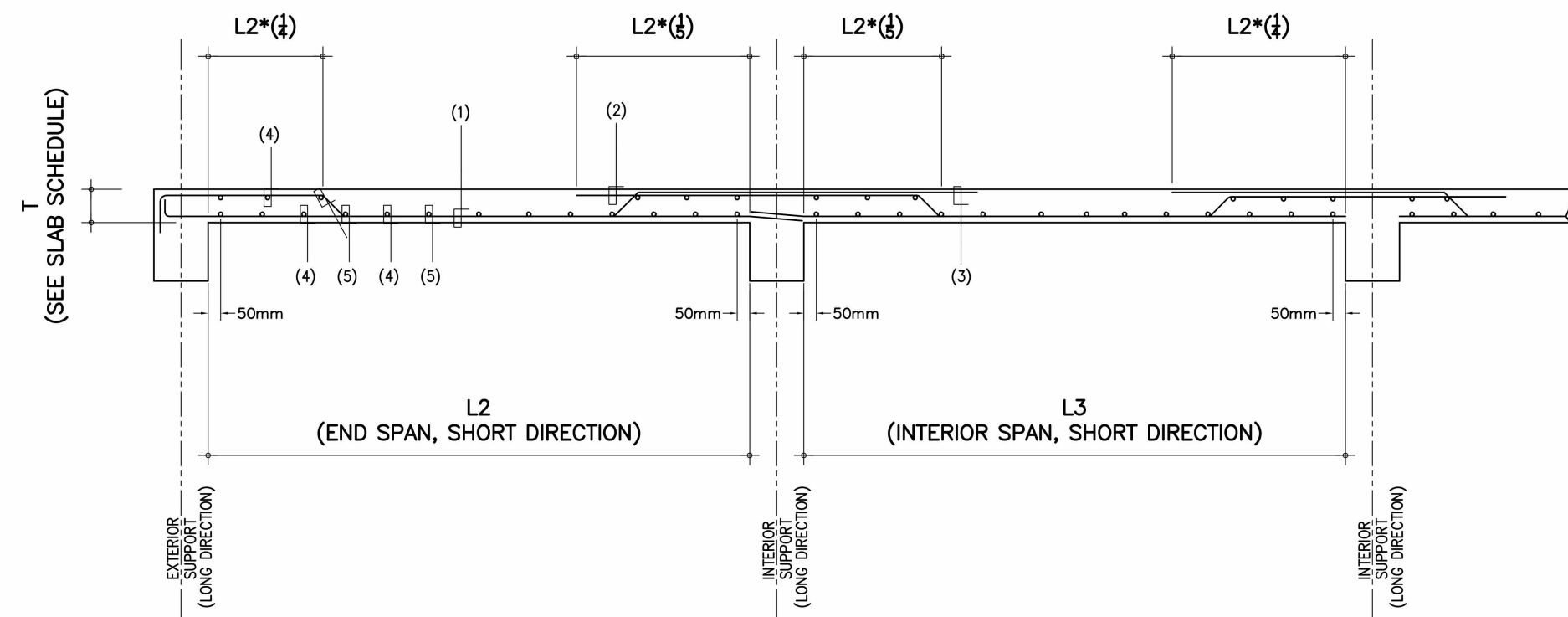
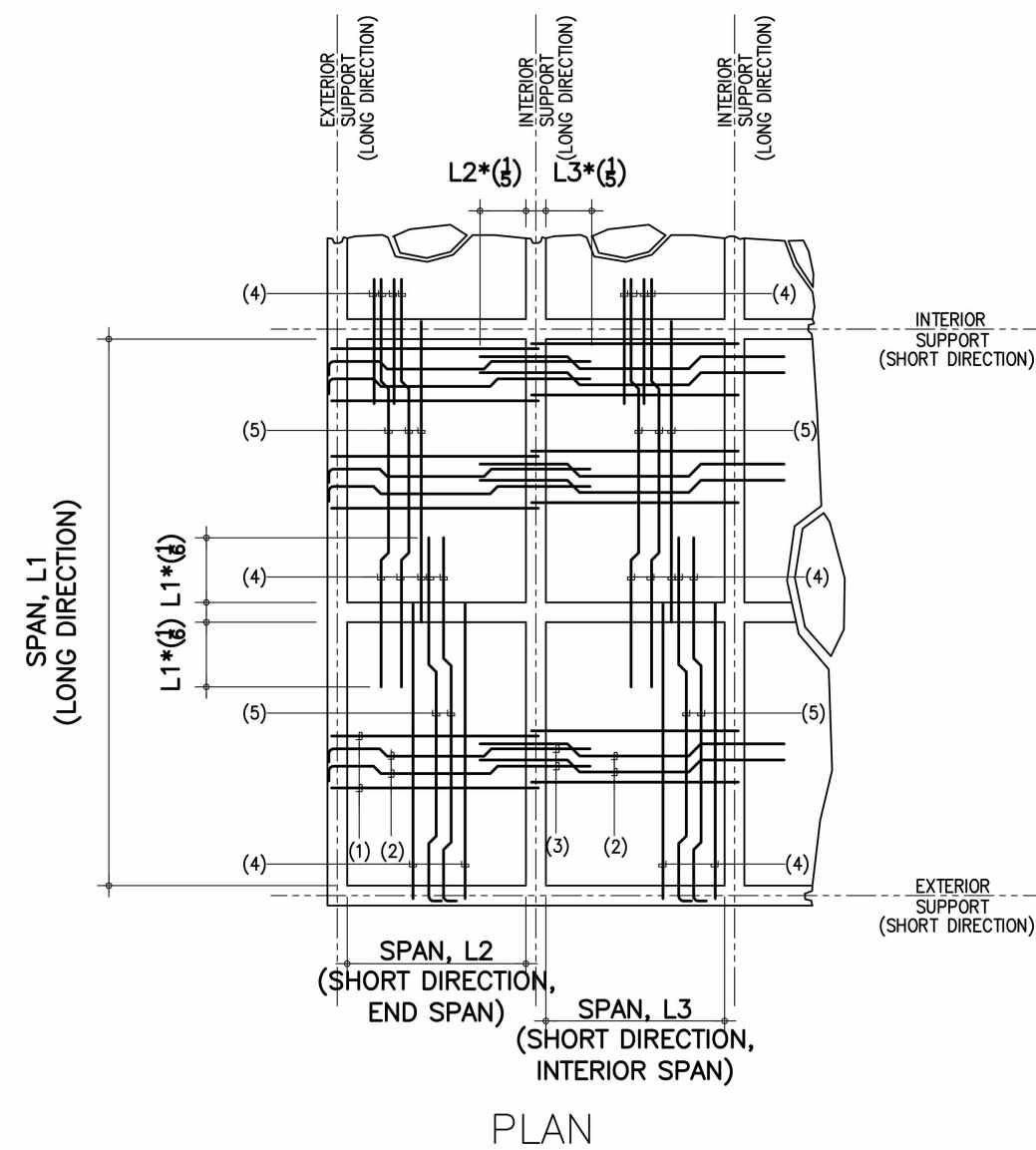
|  |              |
|--|--------------|
| SHEET CONTENT:   | DESIGNED BY: |
| 2ND FLOOR FRAMING PLAN<br>SCHEDULE OF R.C. FLOOR BEAMS<br>SCHEDULE OF R.C. SLABS | CADD BY:     |
|  | STARTED:     |
|  | FINISHED:    |
|  | PLACE:       |

|           |    |
|-----------|----|
| S10       | 04 |
| SHEET NO. |    |
| 12        | 27 |



TYPICAL ONE-WAY SLAB DETAIL

SCALE: NTS



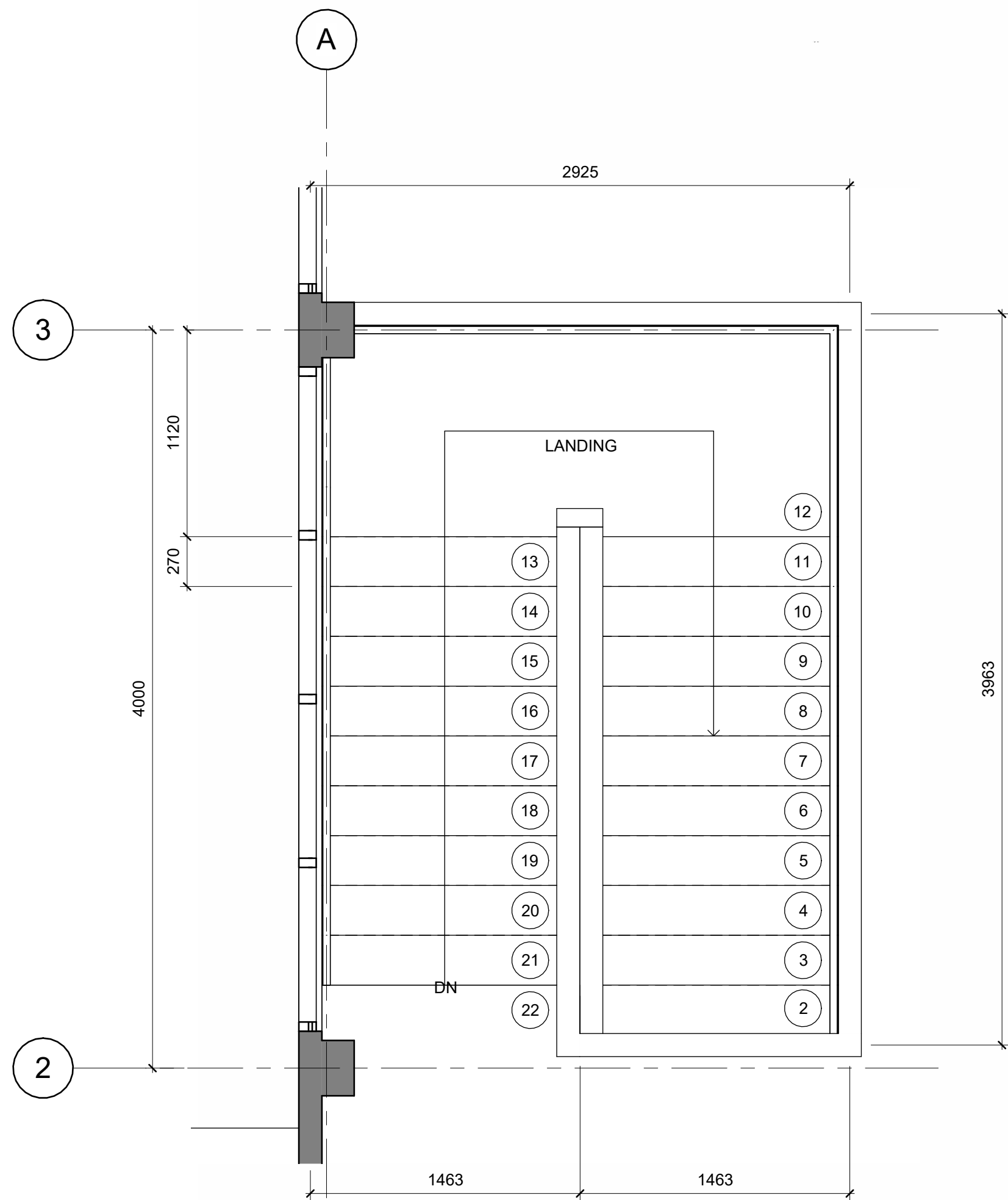
TYPICAL TWO-WAY SLAB DETAIL

SCALE: NTS

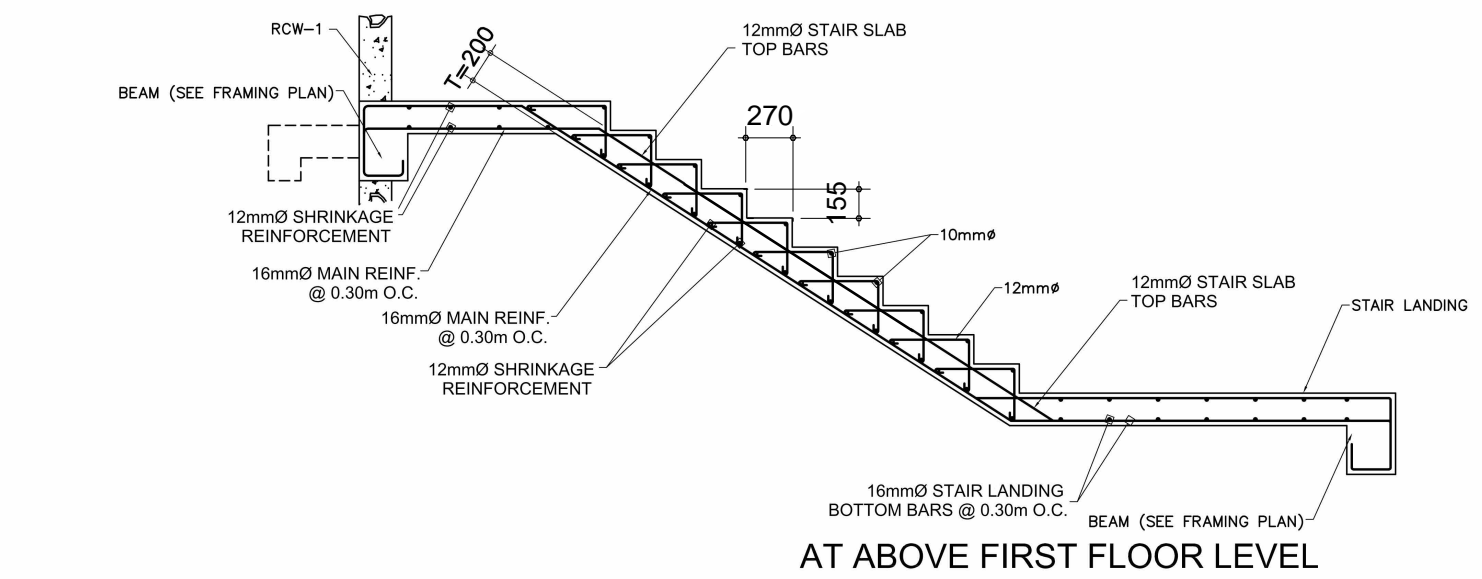
**DETAIL OF R.C. SLABS**

1 : 40

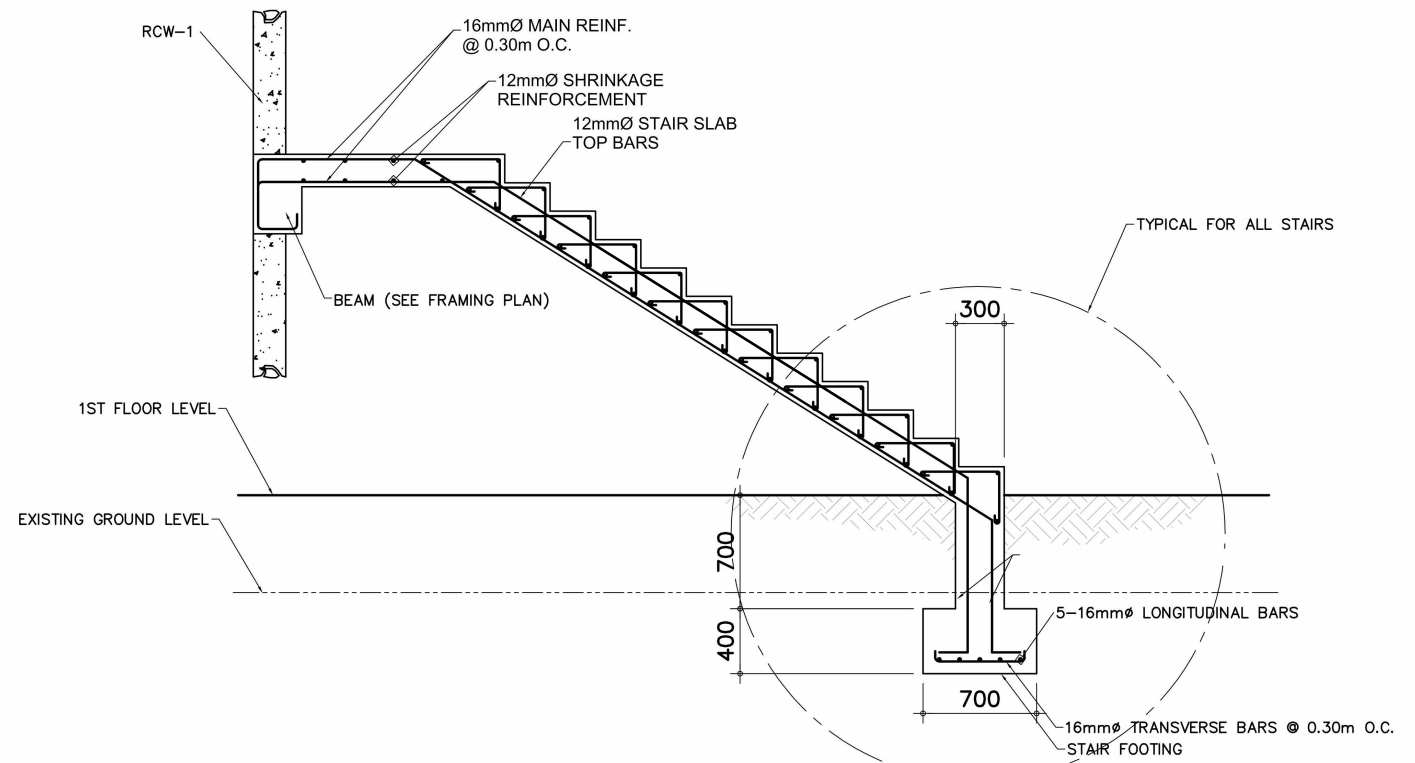
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|--------|---------------------|---|---|------------------------|--------------------------|--------------|--|--------------|---|-----|----|-----------|--|----|----|--------|--|
|        | TIN:                | APPROVED BY:  | PROJECT TITLE:<br><b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b> | CHECKED / APPROVED BY: | CONFORMED / APPROVED BY: | APPROVED BY: | SHEET CONTENT:<br>DETAIL OF R.C. FLOOR SLABS | DESIGNED BY: | <table border="1"> <tr> <td>S10</td> <td>05</td> </tr> <tr> <td colspan="2">SHEET NO.</td> </tr> <tr> <td>13</td> <td>27</td> </tr> <tr> <td colspan="2">PLACE:</td> </tr> </table> | S10 | 05 | SHEET NO. |  | 13 | 27 | PLACE: |  |
|        | S10                 | 05  |   |                        |                          |              |  |              |   |     |    |           |  |    |    |        |  |
|        | SHEET NO.           |   |   |                        |                          |              |  |              |   |     |    |           |  |    |    |        |  |
|        | 13                  | 27  |   |                        |                          |              |  |              |   |     |    |           |  |    |    |        |  |
| PLACE: |                     |   |   |                        |                          |              |  |              |   |     |    |           |  |    |    |        |  |
| PRC:   |                     | ENGR. MARIO LILIO P. VALENZONA                                      | DR. DANIEL LESLIE S. TAN  | DR. EDGARDO E. TULIN   |                          |              |  |              |   |     |    |           |  |    |    |        |  |
| PTR:   |                     | DIRECTOR, PPO   | VP OF ADMINISTRATIVE AND FINANCE                                  | VSU PRESIDENT          |                          |              |  |              |   |     |    |           |  |    |    |        |  |
| DATE:  |                     | LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A |   |                        |                          |              |  |              |   |     |    |           |  |    |    |        |  |
| PLACE: | STRUCTURAL ENGINEER |   |   |                        |                          |              |  |              |   |     |    |           |  |    |    |        |  |



**1** **DETAIL OF R.C. STAIRS**  
1 : 25



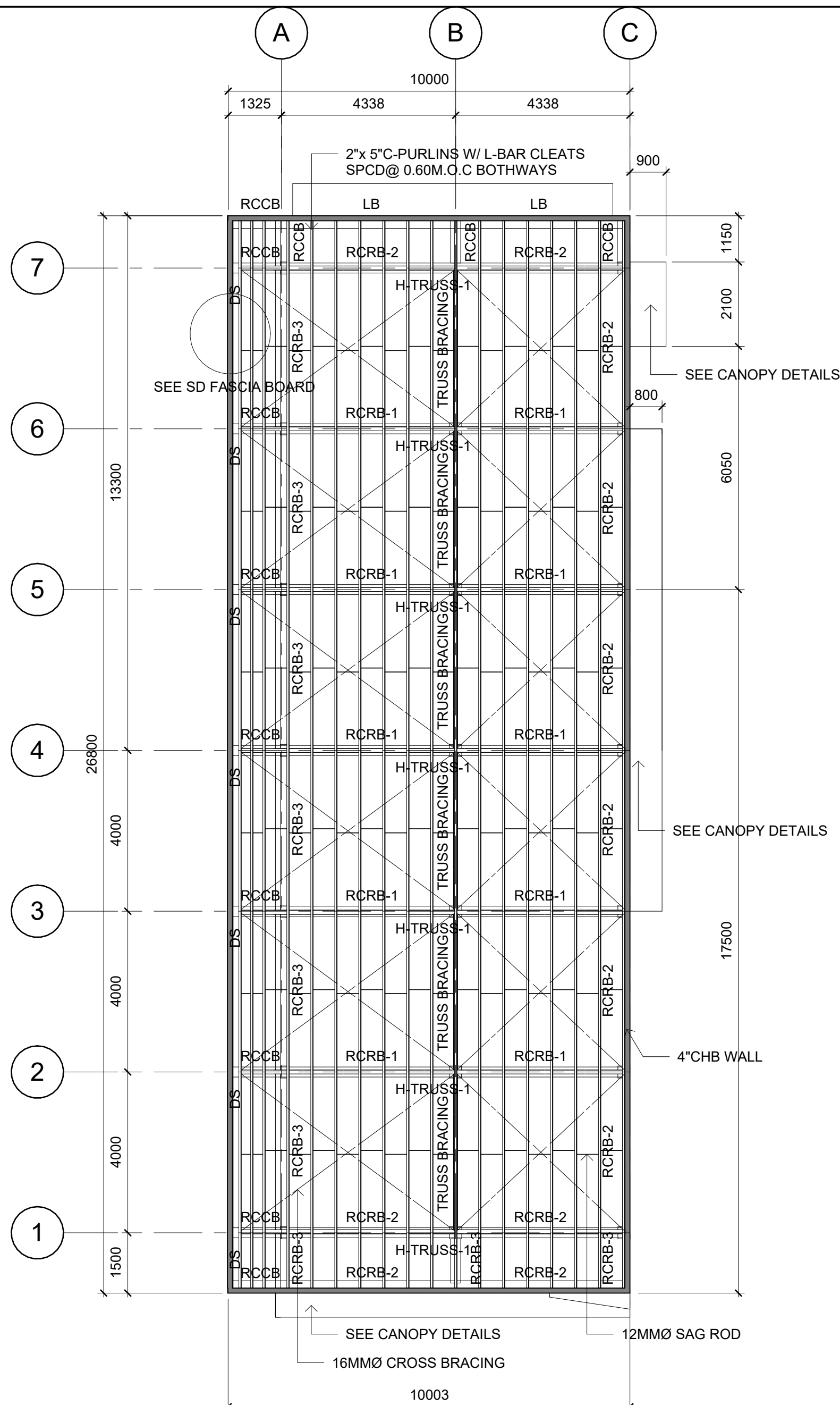
**AT ABOVE FIRST FLOOR LEVEL**



**AT GROUND LEVEL**

**SECTION OF R.C. STAIRS**  
1 : 40

|        |                     |                                |  |                        |                                  |               |   |              |   |     |    |           |  |    |    |        |  |
|--------|---------------------|--------------------------------|--|------------------------|----------------------------------|---------------|---|--------------|---|-----|----|-----------|--|----|----|--------|--|
|        | TIN:                | APPROVED BY:                   | PROJECT TITLE:<br><b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b><br>LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A | CHECKED / APPROVED BY: | CONFORMED / APPROVED BY:         | APPROVED BY:  | SHEET CONTENT:<br>DETAIL OF R.C. STAIRS<br>SECTION OF R.C. STAIRS | DESIGNED BY: | <table border="1"> <tr> <td>S10</td> <td>06</td> </tr> <tr> <td colspan="2">SHEET NO.</td> </tr> <tr> <td>14</td> <td>27</td> </tr> <tr> <td colspan="2">PLACE:</td> </tr> </table> | S10 | 06 | SHEET NO. |  | 14 | 27 | PLACE: |  |
|        | S10                 | 06                             |  |                        |                                  |               |   |              |   |     |    |           |  |    |    |        |  |
|        | SHEET NO.           |                                |  |                        |                                  |               |   |              |   |     |    |           |  |    |    |        |  |
|        | 14                  | 27                             |  |                        |                                  |               |   |              |   |     |    |           |  |    |    |        |  |
| PLACE: |                     |                                |  |                        |                                  |               |   |              |   |     |    |           |  |    |    |        |  |
| PRC:   |                     | ENGR. MARIO LILIO P. VALENZONA | DR. DANIEL LESLIE S. TAN   | DR. EDGARDO E. TULIN   |                                  |               |   |              |   |     |    |           |  |    |    |        |  |
| PTR:   |                     |                                |  |                        |                                  |               |   |              |   |     |    |           |  |    |    |        |  |
| DATE:  |                     |                                |  |                        |                                  |               |   |              |   |     |    |           |  |    |    |        |  |
| PLACE: | STRUCTURAL ENGINEER |                                |  | DIRECTOR, PPO          | VP OF ADMINISTRATIVE AND FINANCE | VSU PRESIDENT |   |              |   |     |    |           |  |    |    |        |  |

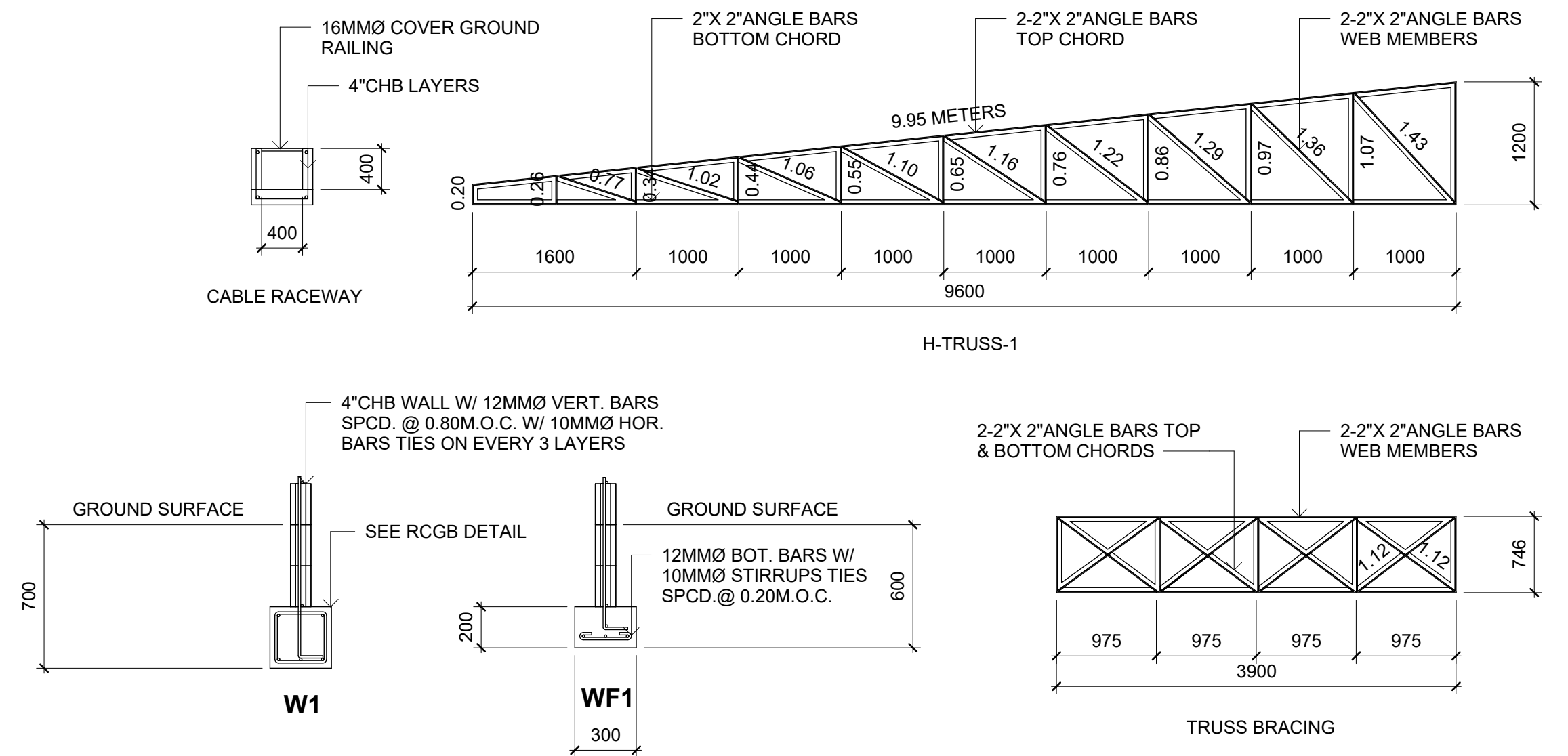


**SCHEDULE OF CANTILIVER, LINTEL & ROOF BEAM**

| BEAM MARK | SECTION (mm) | REINFORCEMENTS |      |       |         |         | Side Bar | STIRRUPS              |                                    |                        | REMARKS   |
|-----------|--------------|----------------|------|-------|---------|---------|----------|-----------------------|------------------------------------|------------------------|---|
|           |              | LOCATION       | TYPE | CONT. | MIDSPAN | DISCONT |          | NO. OF LEGS & BAR DIA | NUMBER & SPACING NEAR SUPPORT (mm) | SPACING @ MIDSPAN (mm) |   |
| RCRB-1    | 450X250      | TOP            | S    | 2-16Φ | 2-16Φ   | 2-16Φ   | 1-16Φ EF | 2L - 10Φ              | 4-50, 6-100                        | 200                    | USE #16 TIE WIRE AND SPECIFY THE STIRRUPS SPACING |
|           |              |                | E    |       | 1-16Φ   |         |          |                       |                                    |                        |   |
| RCRB-2    | 400X250      | TOP            | S    | 2-16Φ | 2-16Φ   | 2-16Φ   | 1-16Φ EF | 2L - 10Φ              | 4-50, 6-100                        | 200                    | USE #16 TIE WIRE AND SPECIFY THE STIRRUPS SPACING |
|           |              |                | E    |       | 1-16Φ   |         |          |                       |                                    |                        |   |
| RCRB-3    | 350X250      | TOP            | S    | 2-12Φ | 2-12Φ   | 2-12Φ   | 1-12Φ EF | 2L - 10Φ              | 4-50, 6-100                        | 200                    | USE #16 TIE WIRE AND SPECIFY THE STIRRUPS SPACING |
|           |              |                | E    |       | 2-12Φ   |         |          |                       |                                    |                        |   |
| RCCB      | 400X250      | TOP            | S    | 2-16Φ | 2-16Φ   | 2-16Φ   | 1-16Φ EF | 2L - 10Φ              | 4-50, 6-100                        | 200                    | USE #16 TIE WIRE AND SPECIFY THE STIRRUPS SPACING |
|           |              |                | E    |       | 2-16Φ   |         |          |                       |                                    |                        |   |
| LB        | 150X250      | TOP            | S    | 2-12Φ | 2-12Φ   | 2-12Φ   |          | 2L - 10Φ              | 3-50, 5-100                        | 200                    | USE #16 TIE WIRE AND SPECIFY THE STIRRUPS SPACING |
|           |              |                | E    |       | 2-12Φ   |         |          |                       |                                    |                        |   |

**SCHED. OF R.C. CANTILIVER, LINTEL & ROOF BEAMS**

1 : 140



**DETAIL OF WALL & FOOTINGS**

1 : 25

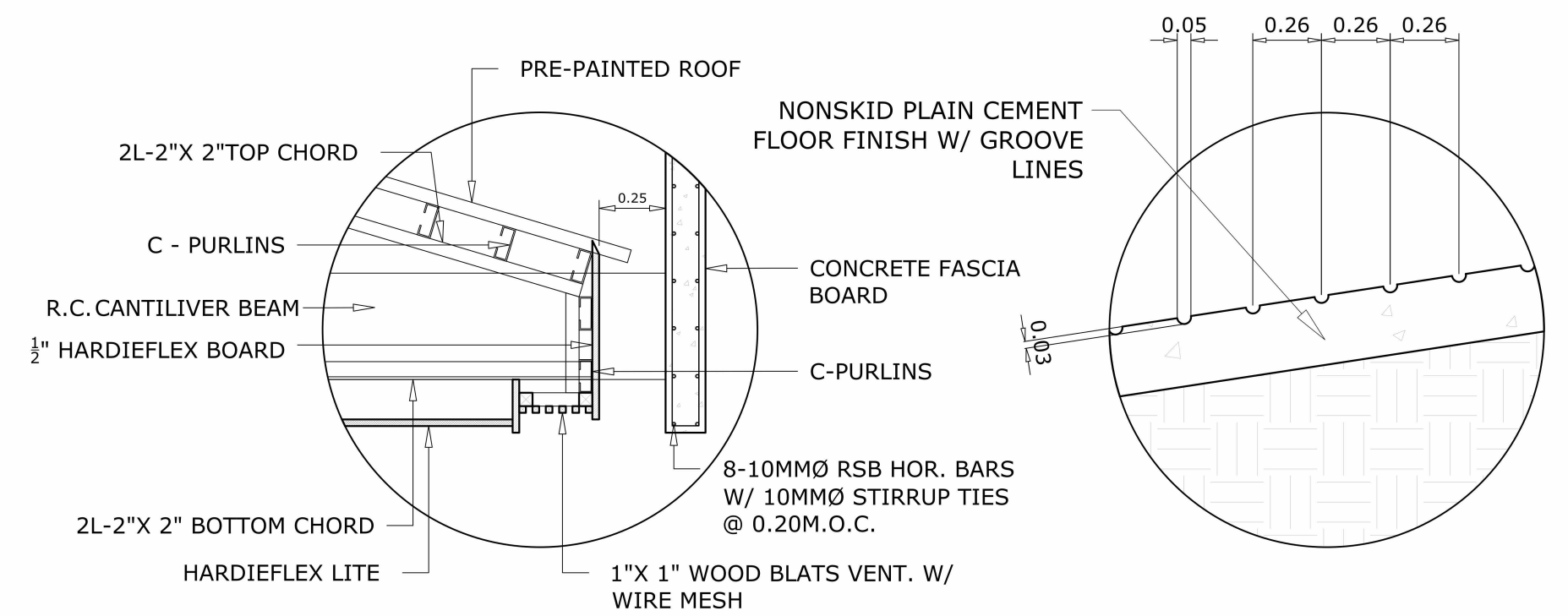
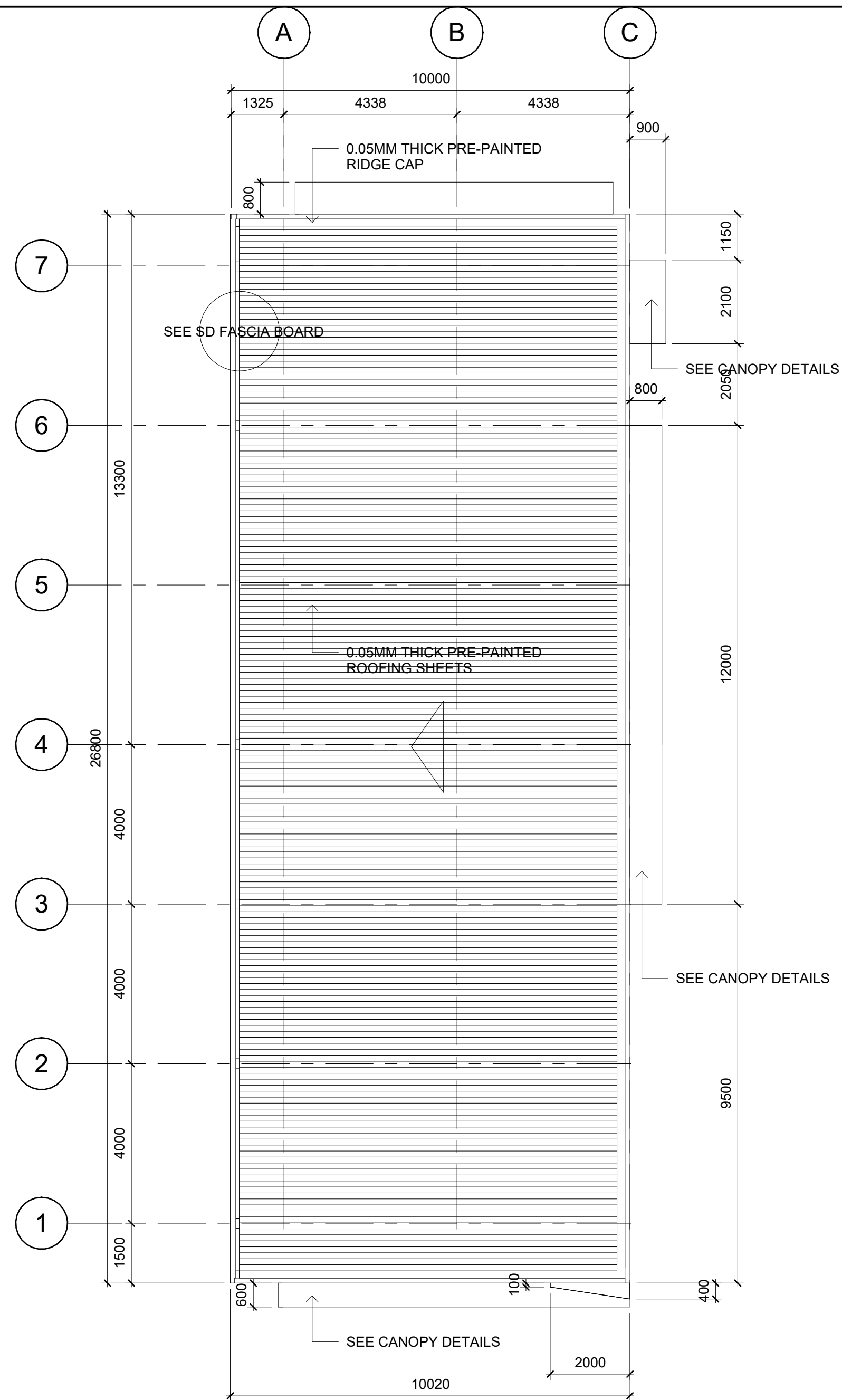
**DETAIL OF STEEL TRUSSES**

1 : 50

**1 SECOND FLOOR ROOF FRAMING PLAN**

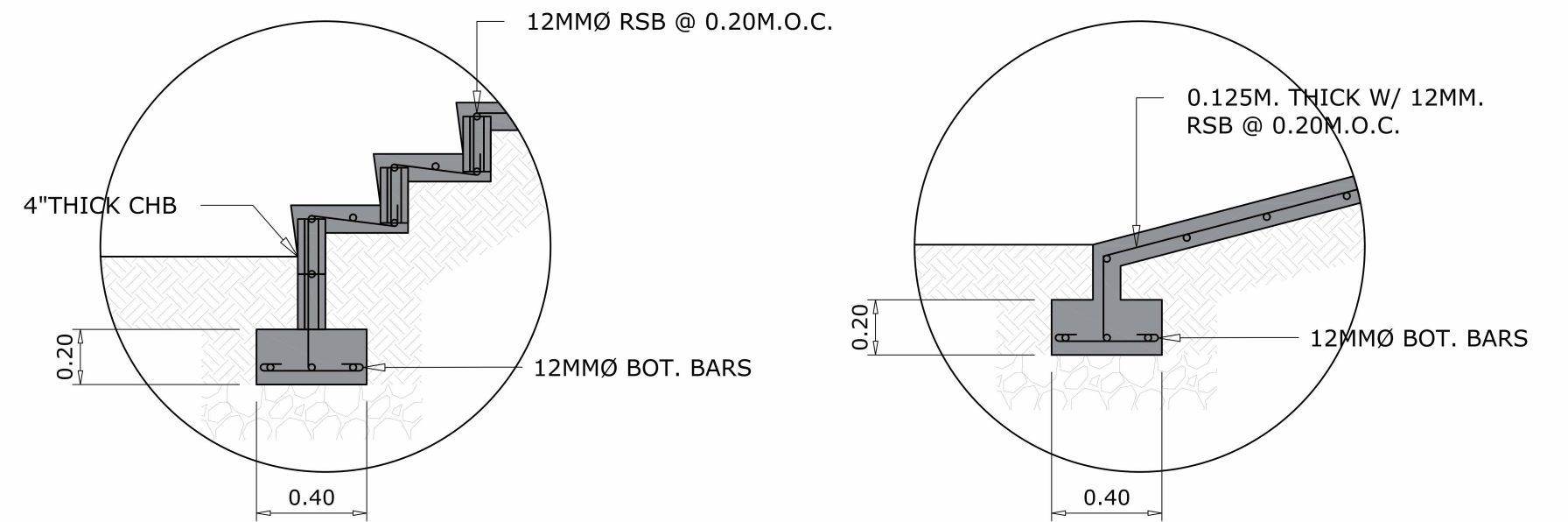
1 : 100

|        |                     |   |   |                                  |                          |  |                |              |   |     |    |           |  |    |    |        |  |
|--------|---------------------|---|---|----------------------------------|--------------------------|--|----------------|--------------|---|-----|----|-----------|--|----|----|--------|--|
|        | TIN:                | APPROVED BY:                                    | PROJECT TITLE:  | CHECKED / APPROVED BY:           | CONFORMED / APPROVED BY: | APPROVED BY:   | SHEET CONTENT: | DESIGNED BY: | <table border="1"> <tr> <td>S10</td> <td>07</td> </tr> <tr> <td colspan="2">SHEET NO.</td> </tr> <tr> <td>15</td> <td>27</td> </tr> <tr> <td colspan="2">PLACE:</td> </tr> </table> | S10 | 07 | SHEET NO. |  | 15 | 27 | PLACE: |  |
|        | S10                 | 07  |   |                                  |                          |  |                |              |   |     |    |           |  |    |    |        |  |
|        | SHEET NO.           |   |   |                                  |                          |  |                |              |   |     |    |           |  |    |    |        |  |
|        | 15                  | 27  |   |                                  |                          |  |                |              |   |     |    |           |  |    |    |        |  |
| PLACE: |                     |   |   |                                  |                          |  |                |              |   |     |    |           |  |    |    |        |  |
| PRC:   |                     | <b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b> | ENGR. MARIO LILIO P. VALENZONA                                      | DR. DANIEL LESLIE S. TAN         | DR. EDGARDO E. TULIN     | ROOF FRAMING PLAN<br>DETAIL OF R.C. H-TRUSSES<br>DETAIL OF R.C. WALL & FOOTING | CADD BY:       |              |   |     |    |           |  |    |    |        |  |
| PTR:   |                     |   | DIRECTOR, PPO   | VP OF ADMINISTRATIVE AND FINANCE | VSU PRESIDENT            |  | STARTED:       |              |   |     |    |           |  |    |    |        |  |
| DATE:  |                     |   |   |                                  |                          |  | FINISHED:      |              |   |     |    |           |  |    |    |        |  |
| PLACE: | STRUCTURAL ENGINEER |   | LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A |                                  |                          |  |                |              |   |     |    |           |  |    |    |        |  |



1 DETAIL OF R.C. FASCIA BOARD

2 DETAIL OF R.C. RAMP UP



3 DETAIL OF R.C. STAIRS

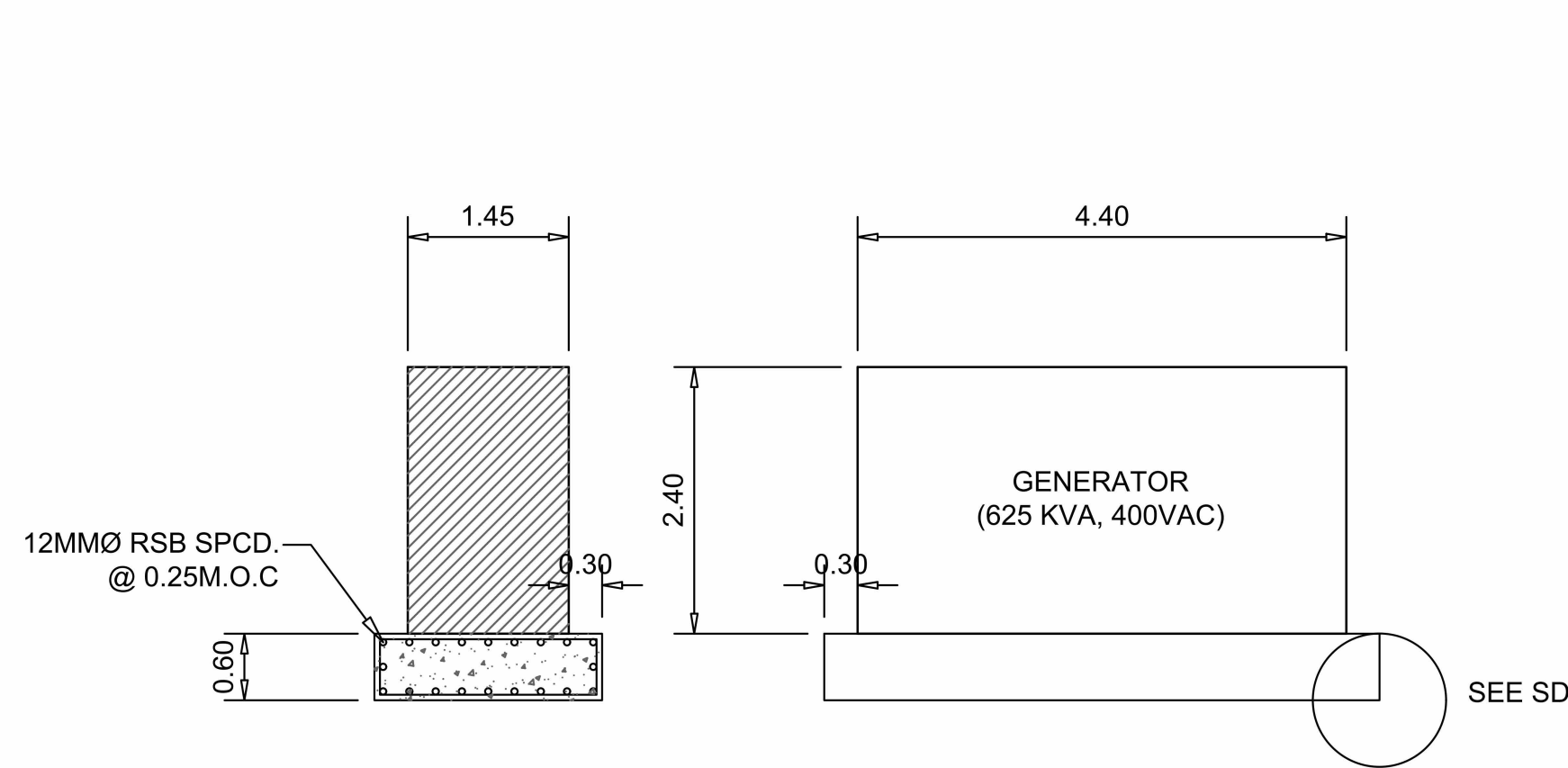
4 DETAIL OF R.C. RAMP

SPOT DETAILS  
1 : 60

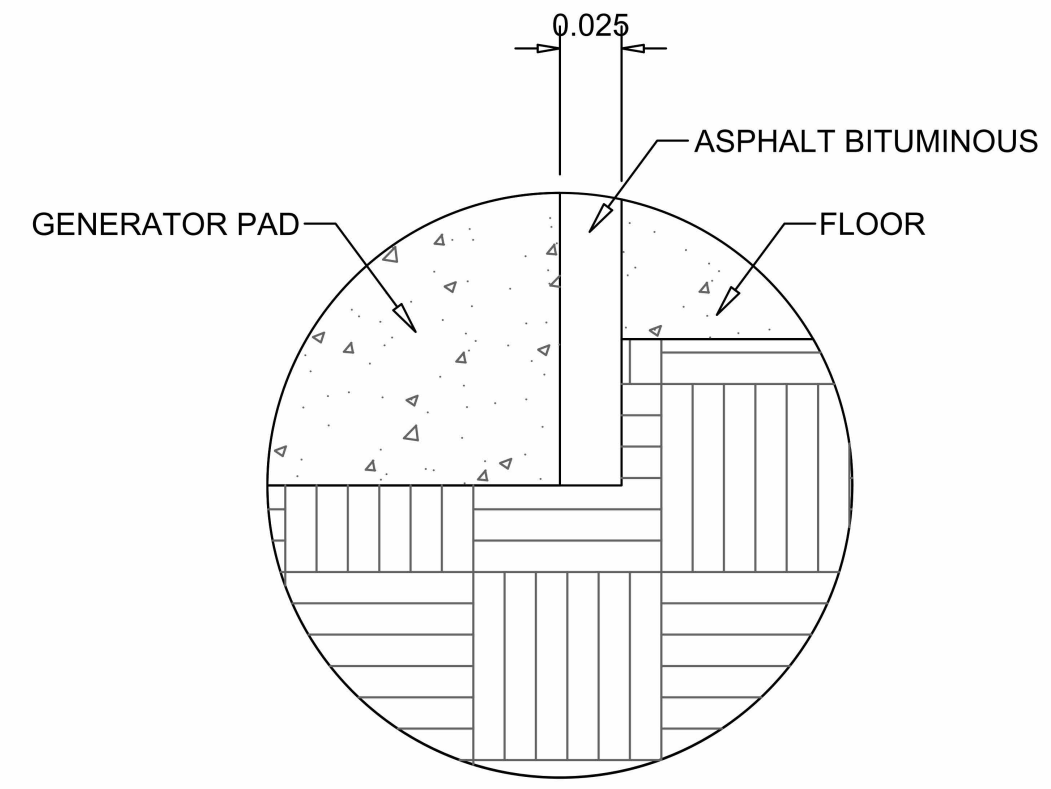
1 TOP OF ROOF PLAN  
1 : 100

|        |                     |                                |  |                        |                                  |               |                |              |   |     |    |           |  |    |    |        |  |
|--------|---------------------|--------------------------------|--|------------------------|----------------------------------|---------------|----------------|--------------|---|-----|----|-----------|--|----|----|--------|--|
|        | TIN:                | APPROVED BY:                   | PROJECT TITLE:<br><b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b><br>LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A | CHECKED / APPROVED BY: | CONFORMED / APPROVED BY:         | APPROVED BY:  | SHEET CONTENT: | DESIGNED BY: | <table border="1"> <tr> <td>S10</td> <td>08</td> </tr> <tr> <td colspan="2">SHEET NO.</td> </tr> <tr> <td>16</td> <td>27</td> </tr> <tr> <td colspan="2">PLACE:</td> </tr> </table> | S10 | 08 | SHEET NO. |  | 16 | 27 | PLACE: |  |
|        | S10                 | 08                             |  |                        |                                  |               |                |              |   |     |    |           |  |    |    |        |  |
|        | SHEET NO.           |                                |  |                        |                                  |               |                |              |   |     |    |           |  |    |    |        |  |
|        | 16                  | 27                             |  |                        |                                  |               |                |              |   |     |    |           |  |    |    |        |  |
| PLACE: |                     |                                |  |                        |                                  |               |                |              |   |     |    |           |  |    |    |        |  |
| PRC:   |                     | ENGR. MARIO LILIO P. VALENZONA | DR. DANIEL LESLIE S. TAN   | DR. EDGARDO E. TULIN   | TOP OF ROOF PLAN<br>SPOT DETAILS | CADD BY:      |                |              |   |     |    |           |  |    |    |        |  |
| PTR:   |                     |                                |  |                        | STARTED:                         | FINISHED:     |                |              |   |     |    |           |  |    |    |        |  |
| DATE:  |                     |                                |  |                        |                                  |               |                |              |   |     |    |           |  |    |    |        |  |
| PLACE: | STRUCTURAL ENGINEER |                                |  | DIRECTOR, PPO          | VP OF ADMINISTRATIVE AND FINANCE | VSU PRESIDENT |                |              |   |     |    |           |  |    |    |        |  |

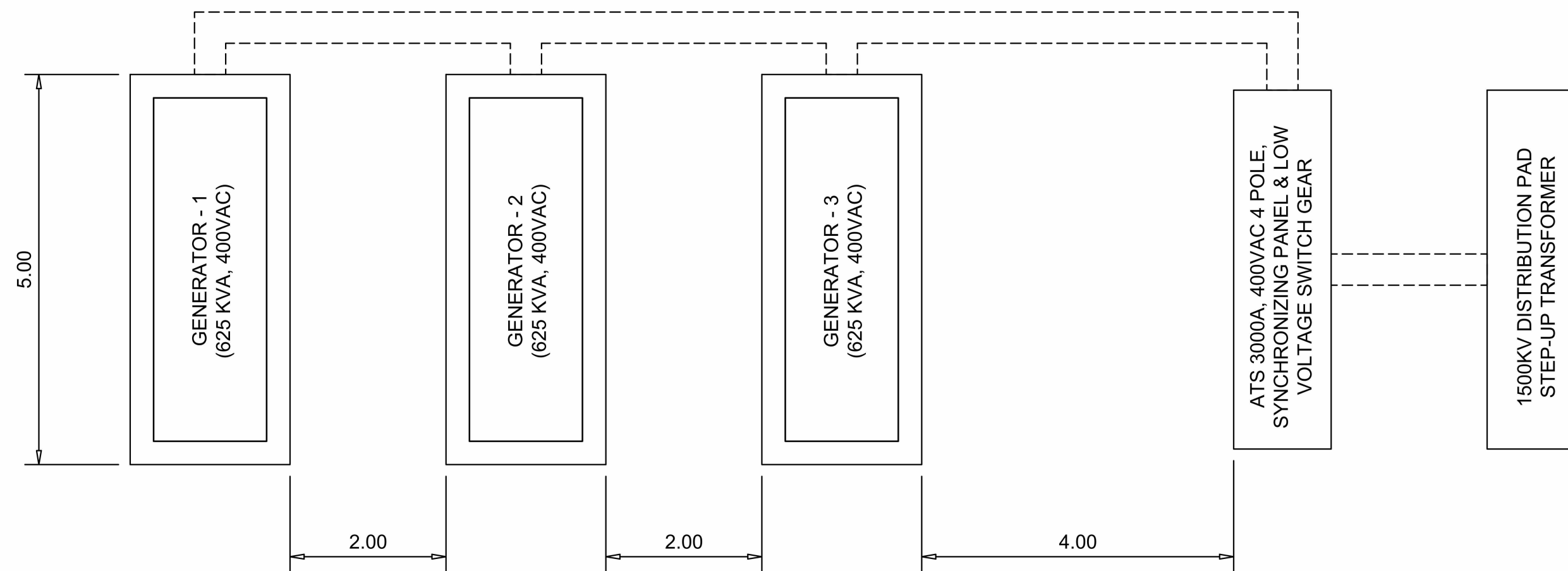




1 ELEVATION & SECTION



2 SPOT DETAIL

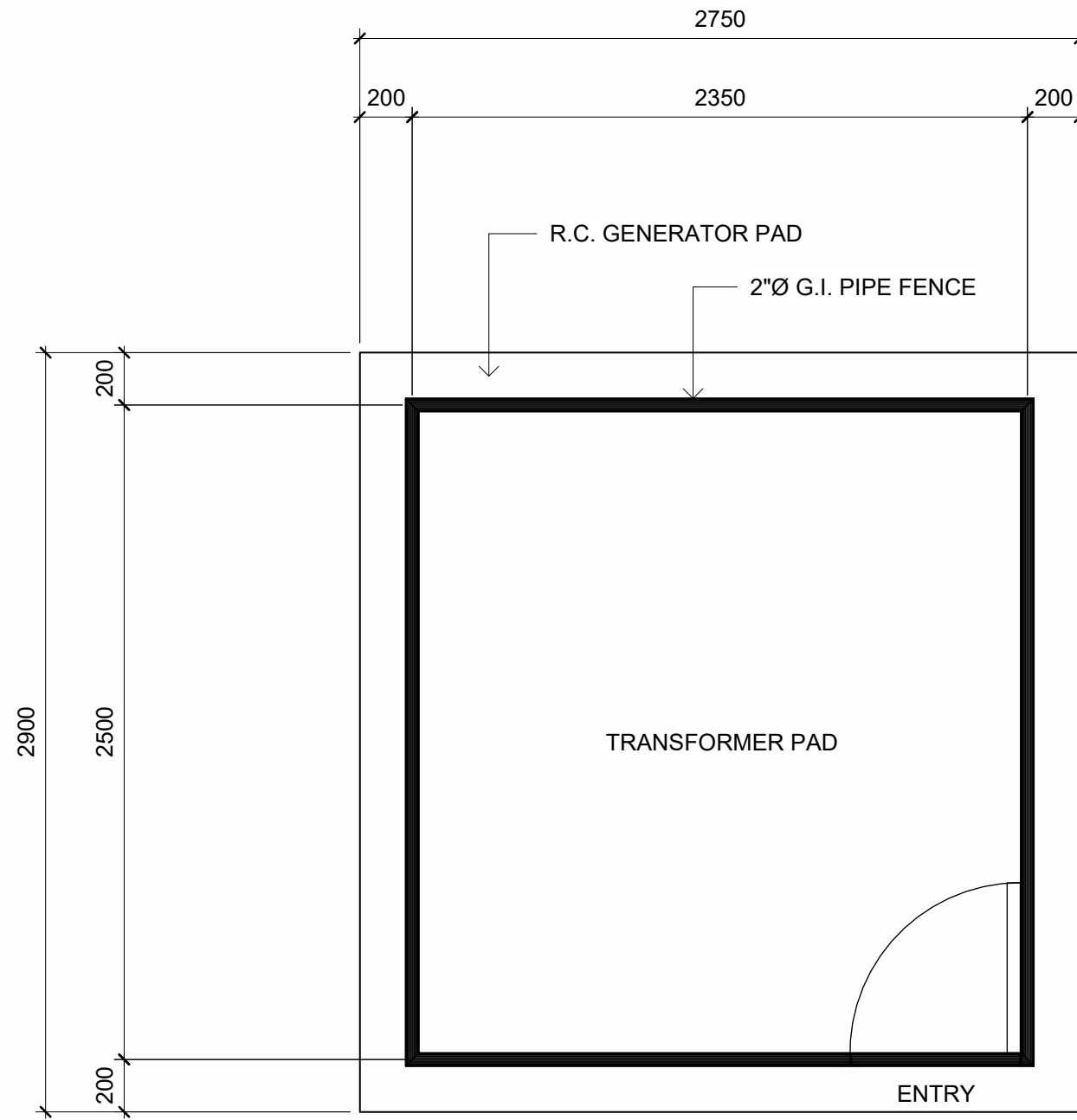


3 TOP VIEW

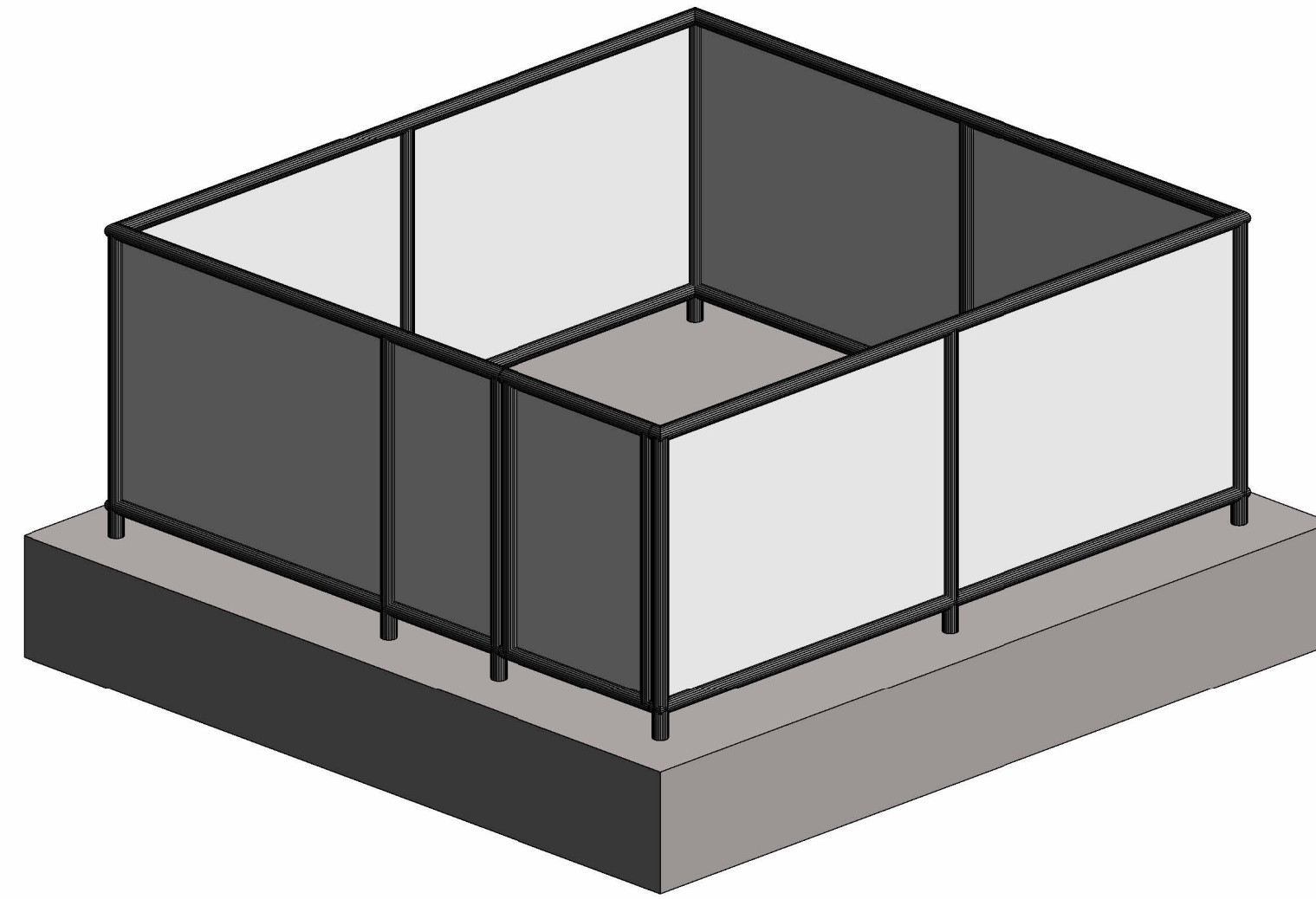
**DETAIL OF GENERATOR PAD**

1 : 50

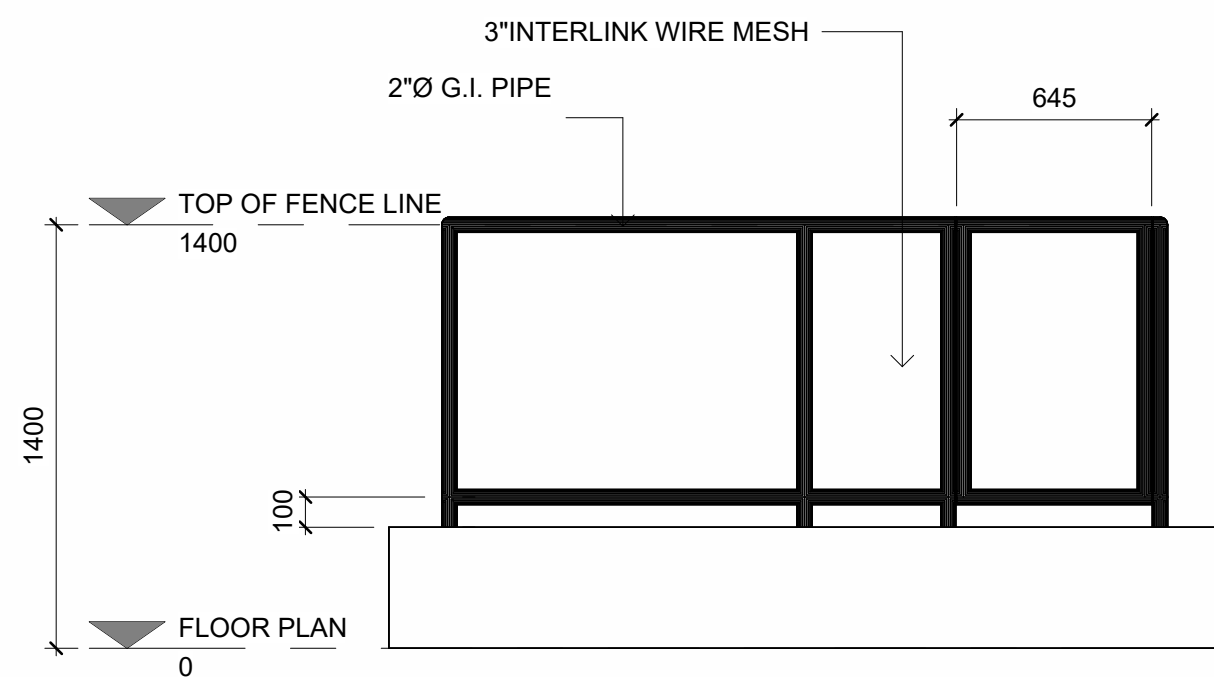
|        |                     |   |   |                                  |                        |                              |              |                |              |   |     |    |           |  |    |    |        |  |
|--------|---------------------|---|---|----------------------------------|------------------------|------------------------------|--------------|----------------|--------------|---|-----|----|-----------|--|----|----|--------|--|
|        | TIN:                | APPROVED BY:  | <small>REVISIONS</small><br>01. SEE DRAWING FOR REVISIONS AND COMMENTS.<br>02. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.<br>03. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.<br>04. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.<br>05. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. | PROJECT TITLE:                   | CHECKED / APPROVED BY: | CONFORMED / APPROVED BY:     | APPROVED BY: | SHEET CONTENT: | DESIGNED BY: | <table border="1"> <tr> <td>S10</td> <td>09</td> </tr> <tr> <td colspan="2">SHEET NO.</td> </tr> <tr> <td>17</td> <td>27</td> </tr> <tr> <td colspan="2">PLACE:</td> </tr> </table> | S10 | 09 | SHEET NO. |  | 17 | 27 | PLACE: |  |
|        | S10                 | 09  |   |                                  |                        |                              |              |                |              |   |     |    |           |  |    |    |        |  |
|        | SHEET NO.           |   |   |                                  |                        |                              |              |                |              |   |     |    |           |  |    |    |        |  |
|        | 17                  | 27  |   |                                  |                        |                              |              |                |              |   |     |    |           |  |    |    |        |  |
| PLACE: |                     |   |   |                                  |                        |                              |              |                |              |   |     |    |           |  |    |    |        |  |
| PRC:   |                     | <b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b>                     | ENGR. MARIO LILIO P. VALENZONA  | DR. DANIEL LESLIE S. TAN         | DR. EDGARDO E. TULIN   | DETAIL OF R.C. GENERATOR PAD | CADD BY:     |                |              |   |     |    |           |  |    |    |        |  |
| PTR:   |                     | LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A | DIRECTOR, PPO   | VP OF ADMINISTRATIVE AND FINANCE | VSU PRESIDENT          |                              | STARTED:     |                |              |   |     |    |           |  |    |    |        |  |
| DATE:  |                     |   |   |                                  |                        |                              | FINISHED:    |                |              |   |     |    |           |  |    |    |        |  |
| PLACE: | STRUCTURAL ENGINEER |   |   |                                  |                        |                              | PLACE:       |                |              |   |     |    |           |  |    |    |        |  |



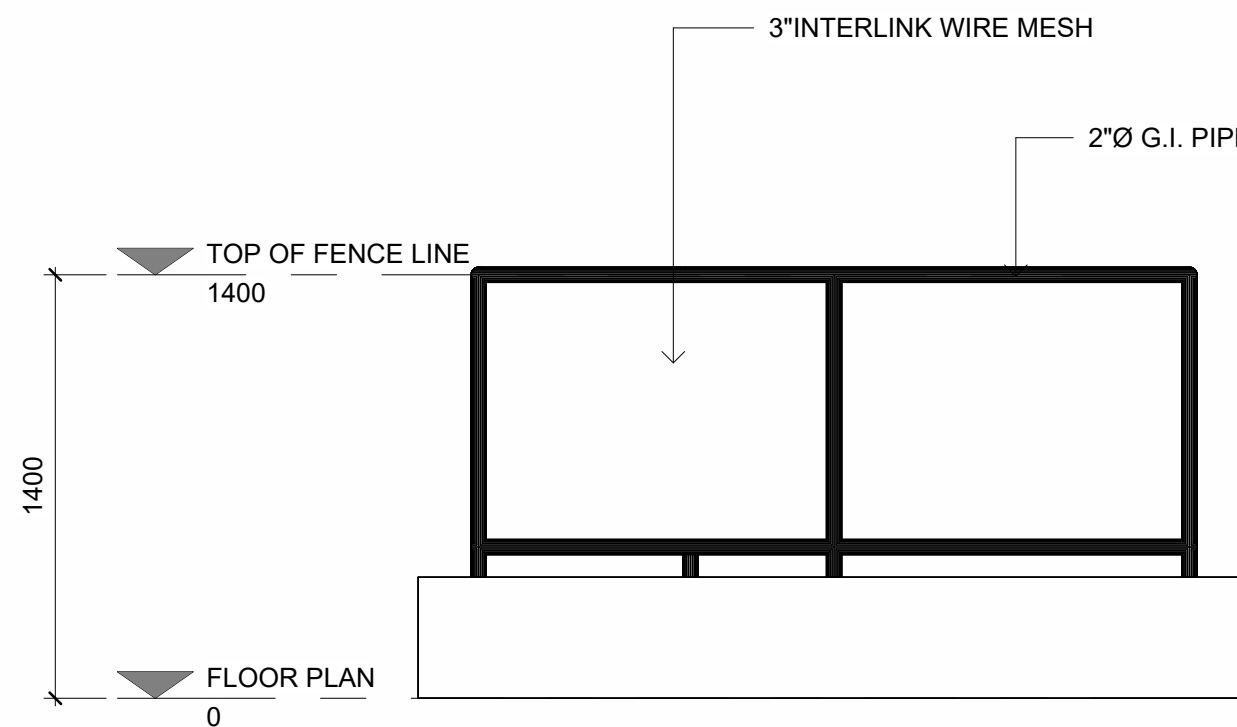
**1 FLOOR PLAN**  
1 : 25



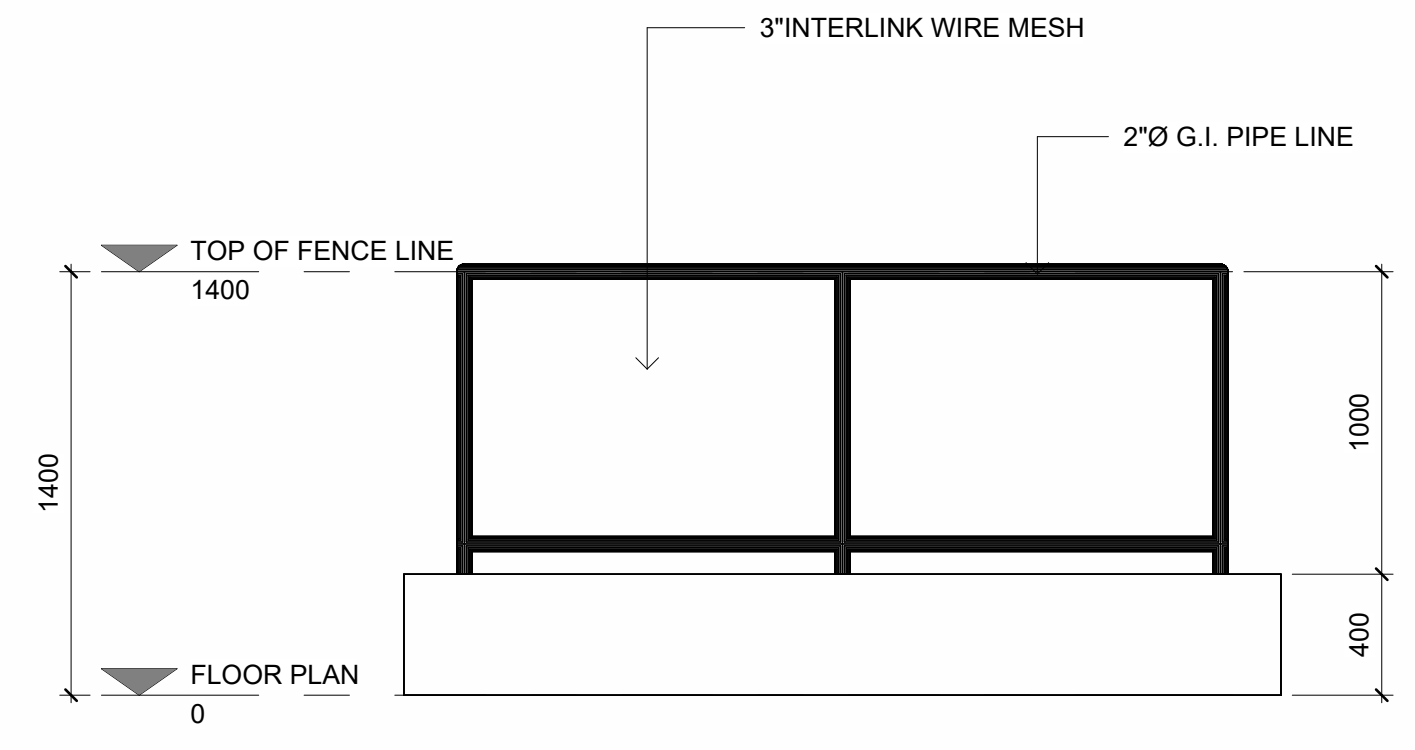
**5 3D\_TRANSFORMER PAD**



**3 FRONT ELEVATION**  
1 : 25



**4 REAR ELEVATION**  
1 : 25



**2 RIGHT & LEFT SIDE ELEVATION**  
1 : 25

|        |                     |                                |  |                        |                          |              |   |              |   |     |    |           |  |    |    |        |  |
|--------|---------------------|--------------------------------|--|------------------------|--------------------------|--------------|---|--------------|---|-----|----|-----------|--|----|----|--------|--|
|        | TIN:                | APPROVED BY:                   | PROJECT TITLE:<br><b>CONSTRUCTION OF VSU POWER PLANT BUILDING</b><br>LOCATION: VSU MAIN CAMPUS, BAYBAY CITY, LEYTE PHILIPPINES, 6521 - A | CHECKED / APPROVED BY: | CONFORMED / APPROVED BY: | APPROVED BY: | SHEET CONTENT:<br>DETAIL OF TRANSFORMER PAD | DESIGNED BY: | <table border="1"> <tr> <td>S10</td> <td>10</td> </tr> <tr> <td colspan="2">SHEET NO.</td> </tr> <tr> <td>18</td> <td>27</td> </tr> <tr> <td colspan="2">PLACE:</td> </tr> </table> | S10 | 10 | SHEET NO. |  | 18 | 27 | PLACE: |  |
|        | S10                 | 10                             |  |                        |                          |              |   |              |   |     |    |           |  |    |    |        |  |
|        | SHEET NO.           |                                |  |                        |                          |              |   |              |   |     |    |           |  |    |    |        |  |
|        | 18                  | 27                             |  |                        |                          |              |   |              |   |     |    |           |  |    |    |        |  |
| PLACE: |                     |                                |  |                        |                          |              |   |              |   |     |    |           |  |    |    |        |  |
| PRC:   |                     | ENGR. MARIO LILIO P. VALENZONA | DR. DANIEL LESLIE S. TAN   | DR. EDGARDO E. TULIN   |                          |              |   |              |   |     |    |           |  |    |    |        |  |
| PTR:   |                     | DIRECTOR, PPO                  | VP OF ADMINISTRATIVE AND FINANCE   | VSU PRESIDENT          |                          |              |   |              |   |     |    |           |  |    |    |        |  |
| DATE:  |                     |                                |  |                        |                          |              |   |              |   |     |    |           |  |    |    |        |  |
| PLACE: | STRUCTURAL ENGINEER |                                |  |                        |                          |              |   |              |   |     |    |           |  |    |    |        |  |