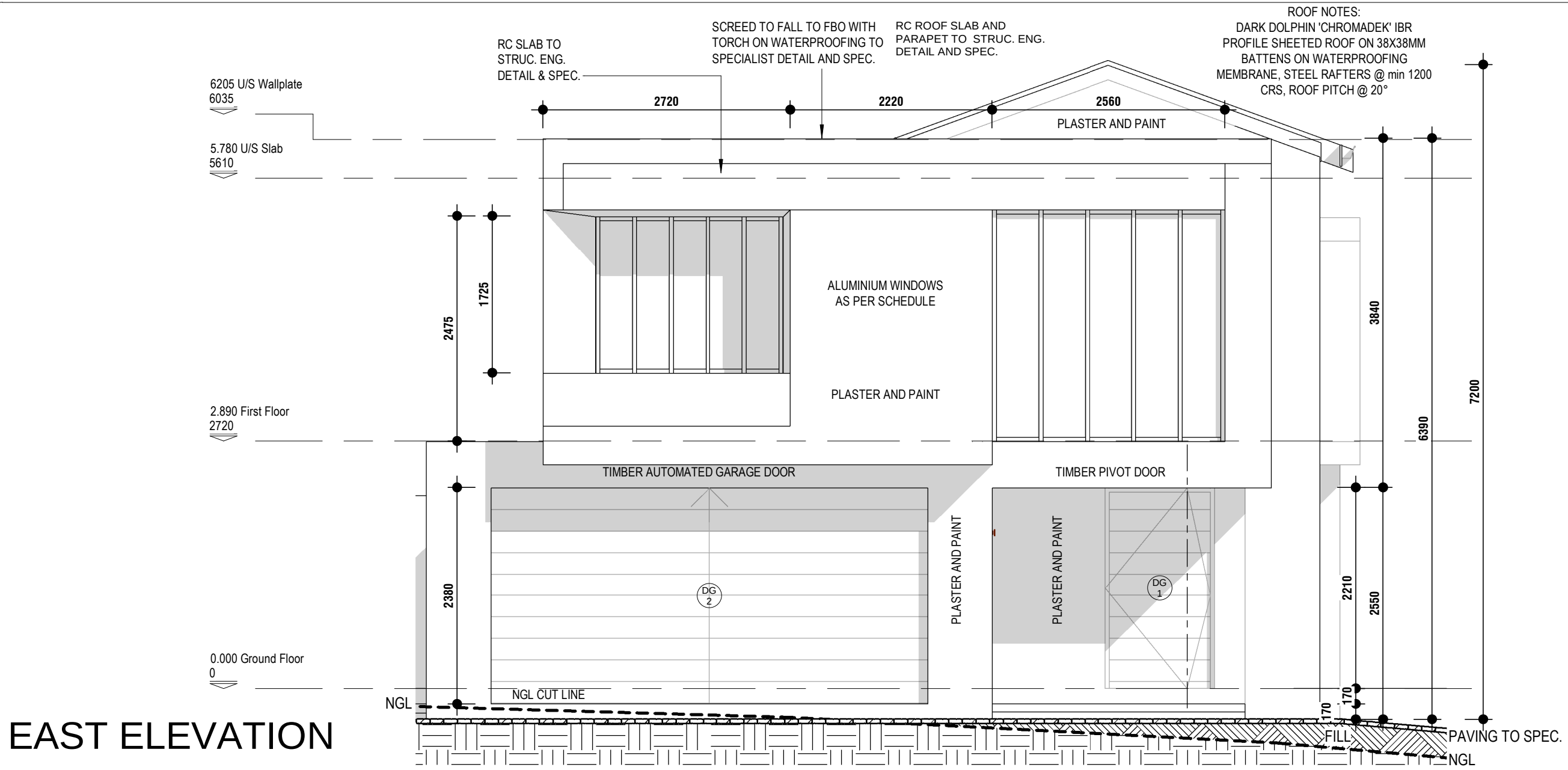
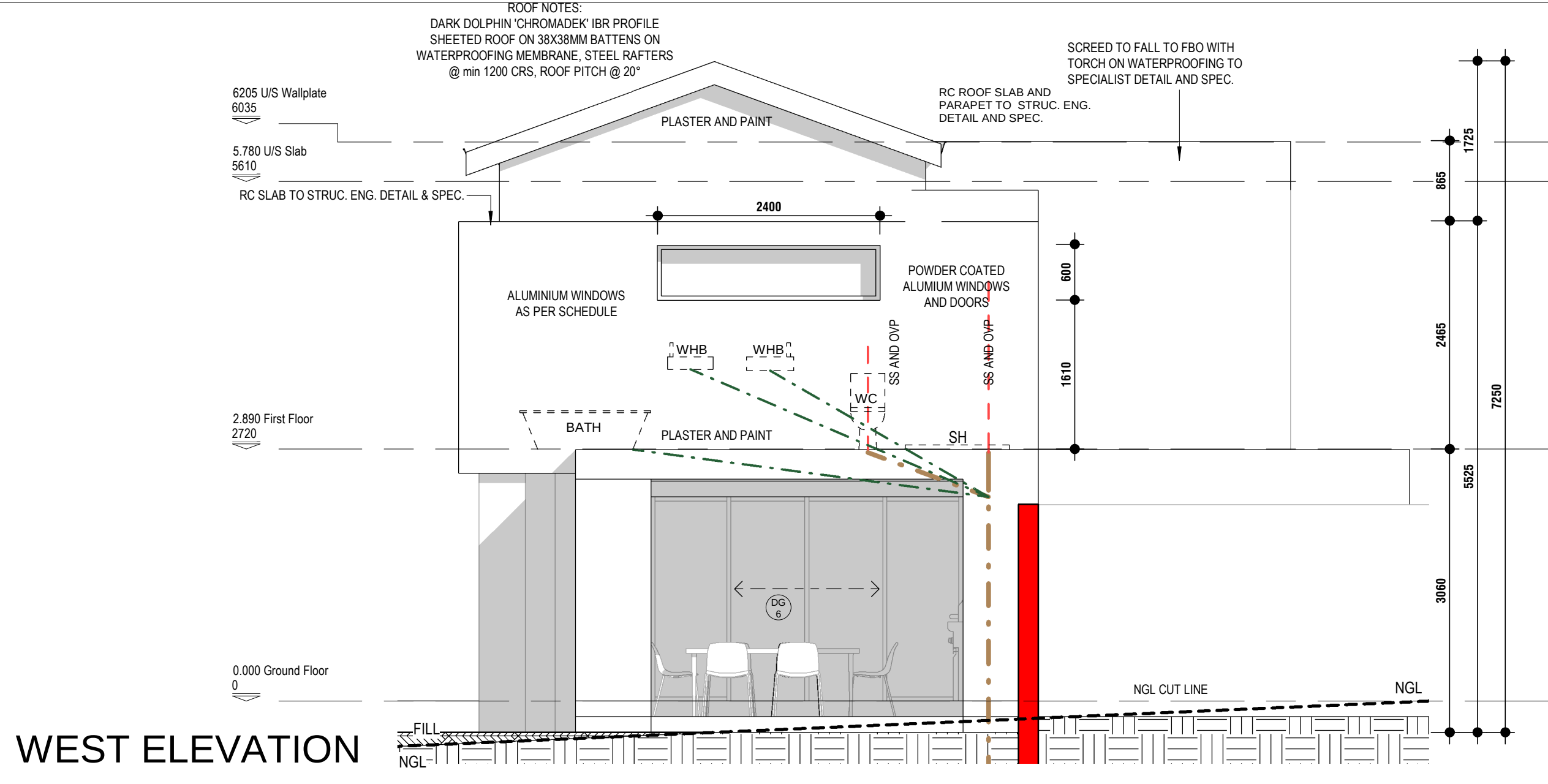






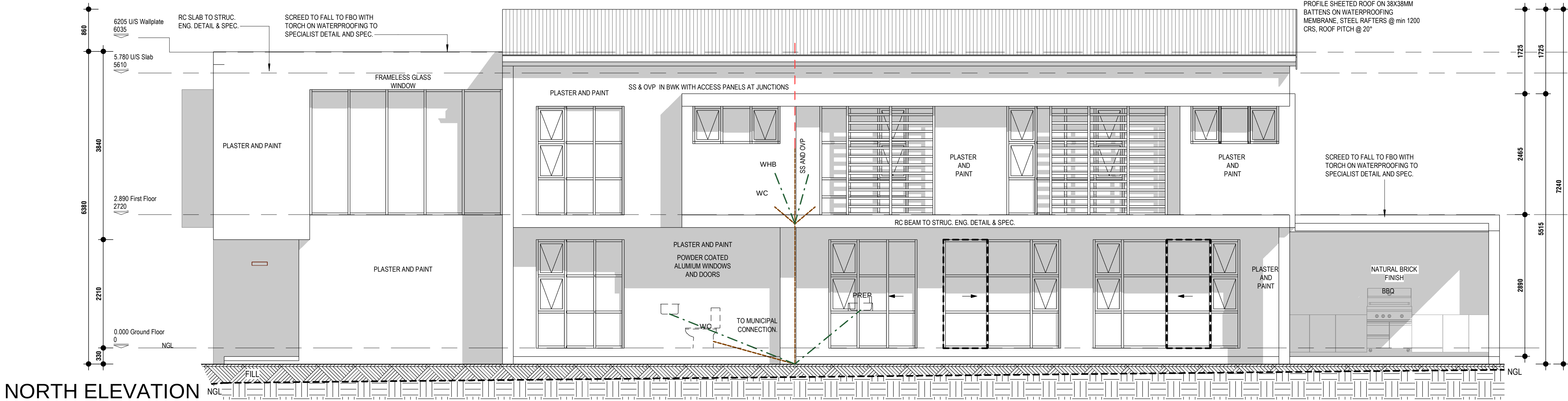
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SCALE @A1 1 : 50  
SCALE @A3 1 : 100



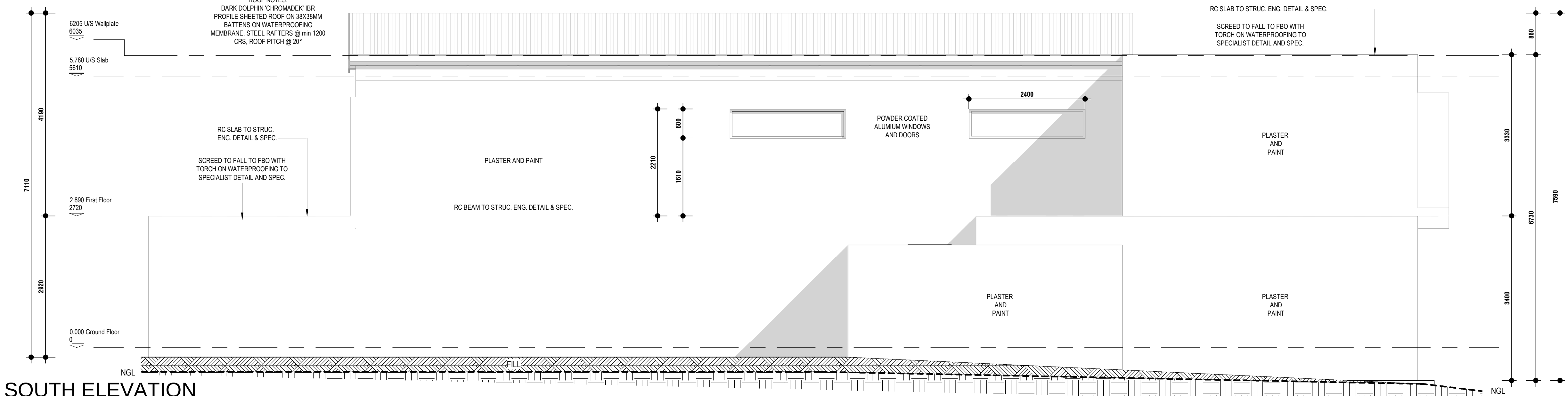
WEST ELEVATION

SCALE @A1 1 : 50  
SCALE @A3 1 : 100



NORTH ELEVATION

SCALE @A1 1 : 50  
SCALE @A3 1 : 100



SOUTH ELEVATION

SCALE @A1 1 : 50  
SCALE @A3 1 : 100

**GENERAL NOTES:**

ALL WORK TO COMPLY WITH THE NATIONAL BUILDING REGULATION & BUILDING STANDARDS ACT SANS 10400 LOCAL COUNCIL REQUIREMENTS & ALL RELEVANT SPECIFICATIONS AND CODES.

ALL DOORS TO THE EXTERIOR THAT OPEN OUTWARD ARE TO HAVE A 10MM STEP UP ALONG THE LONGITUDINAL CENTER LINE OF THE DOOR LEAF & BRASS OR ALUMINUM STRIP IS TO BE INSTALLED TO THE THRESHOLD. ALL REINFORCED CONCRETE TO BE TO STRUCTURAL ENGINEERS CERTIFICATE & DETAIL TO BE SUBMITTED.

FINAL GRADING LEVELS TO BE DISCUSSED WITH ARCHITECT PRIOR TO ANY EXCAVATION ON SITE.

**DIMENSIONS:**

ALL DIMENSIONS OF ANY ROOM OR SPACE, HEIGHTS & AREAS ARE IN ACCORDANCE WITH REQUIREMENTS OF PART C OF SANS 10400. FIGURED DIMENSIONS TO TAKE PRECEDENCE TO SCALING. OVERALL DIMENSIONS (EXTERNAL) TAKE PRECEDENCE. ALL TO BE CHECKED ON SITE & DISCREPANCIES TO BE REPORTED TO ARCHITECT BEFORE WORK COMMENCES.

**PUBLIC SAFETY:**

ALL CHANGES IN LEVELS, RAMPS, DRIVEWAYS & BALUSTRADES TO BE IN ACCORDANCE WITH PART D OF SANS 10400.

GLASS BALUSTRADES TO BE BAG TESTED TO INDUSTRY STANDARDS.

**SITE OPERATIONS:**

ALL SITE OPERATIONS WILL BE IN ACCORDANCE WITH PART F OF SANS 10400. ONLY DRAWINGS THAT REFLECT THE LATEST REVISIONS TO BE USED ON SITE. SITE AND WORKS TO BE KEPT CLEAN, NEAT, SECURE AND SAFE AT ALL TIMES.

**ROOFS:**

ROOF ASSEMBLY TO COMPLY WITH PART XA OF SANS 10400 & SANS 204. IN ACCORDANCE WITH CALCULATIONS PROVIDED. ALL INSULATION TO MEET TRASA STANDARDS & REGULATIONS. ROOF COVERINGS & WATERPROOFING SYSTEMS, SLOPE, GUTTERS & DOWN PIPES TO COMPLY WITH PART I OF SANS 10400 & TO SPECIALIST SPEC & DETAIL.

**STARWAYS:**

ALL STARWAYS TO COMPLY WITH ALL DIMENSIONAL, STRUCTURAL & SAFETY REQUIREMENTS OF PART M OF SANS 10400.

**FENESTRATION & GLAZING:**

REFER TO ATTACHED CALCULATIONS FOR REQUIREMENTS TO COMPLY WITH PART XA OF SANS 10400 & SANS 204.

GLAZING TO COMPLY WITH PART XA OF SANS 10400 & SANS 204. IN ACCORDANCE WITH CALCULATIONS PROVIDED. ALL ALUMINUM TO COMPLY WITH ANSARA STANDARDS & REGULATIONS.

GLAZING TO COMPLY WITH INSTALLATION & ALL OTHER REQUIREMENTS OF PART N OF SANS 10400.

**LIGHTING & VENTILATION:**

ALL LIGHTING & VENTILATION REQUIREMENTS TO COMPLY WITH PART O & N OF SANS 10400.

**STORMWATER:**

STORMWATER CONTROL & DISPOSAL, GUTTERS & DOWNPIPES TO COMPLY WITH PART R OF SANS 10400.

**FIRE INSTALLATION:**

ALL TO COMPLY WITH PART W OF SANS 10400.

**ENVIRONMENTAL SUSTAINABILITY & ENERGY USAGE:**

IN BUILDINGS (ALL TO COMPLY WITH PARTS X & XA OF SANS 10400 & SANS 204 WHERE APPLICABLE).

HOT WATER WILL BE PROVIDED FROM ON-SITE HEAT PUMP. ALL PIPES WILL BE INSULATED TO MIN R-VALUE OF 1 FOR PIPES GREATER THAN OR EQUAL TO 80MM & 1.5 FOR PIPES LESS THAN 80MM. TO BE INSTALLED TO MANUFACTURERS SPECIFICATION.

LIGHTING & POWER: REFER ATTACHED CALCULATIONS FOR REQUIREMENTS TO COMPLY WITH PART XA OF SANS 10400 & SANS 204. ALL BULBS, DOWNLIGHTS, WALL LIGHTS & STRIP LIGHTS TO BE LED CONFORMING TO CALCULATIONS ATTACHED.

**DRAINAGE:**

SINGLE STACK SYSTEM COMPLYING WITH THE NATIONAL BUILDING REGULATIONS AND THE REQUIREMENTS OF THE LOCAL AUTHORITY AND COMPRISING THE FOLLOWING:

1. 100/2 DISCHARGE STACKS OF APPROVED MATERIAL
2. 100/2 DRAINAGE OF APPROVED MATERIAL
3. 100/2 SOLID PIPES
4. 400 GWS WASTE PIPES
5. 100/2 STACK VENTS

THE DISCHARGE STACK WILL CONTINUE UPWARDS TO FORM THE STACK VENT. THE RADIUS AT THE CENTRE LINE OF THE BRANCH AT THE FOOT OF THE DISCHARGE STACK SHALL NOT BE LESS THAN 200MM.

EVERY WASTE FIXTURE SHALL BE EITHER A P-TRAP WITH A WATERSEAL NOT LESS THAN 75MM OR A RE-SEALING TRAP OF THE P-TYPE.

WHERE ANY WASTE BRANCH AND ANY OPPOSED SOLID BRANCH ARE CONNECTED TO A DISCHARGE STACK THE CENTRE LINES AT THEIR INTERSECTIONS SHALL NOT BE LESS THAN 200MM APART.

THE FIXTURE BRANCH OF ALL SANITARY FIXTURES IN THE SANITARY GROUP SHALL BE SEPARATELY CONNECTED TO THE DISCHARGE STACK. THERE IS ONLY ONE GROUP PER STOREY CONNECTED TO ONE STACK.

ACCESS TO THE DRAINAGE INSTALLATION TO BE PROVIDED BY ADEQUATELY MARKED AND PROTECTED AND PERMANENTLY ACCESSIBLE WALKING EYES AT:

1. ALL CHANGES OF DIRECTION
2. WITHIN 1.5M OF THE DRAIN CONNECTION TO THE SEWER
3. AT THE HIGHEST POINT OF THE DRAIN
4. AT 20M INTERVALS ALONG THE LINE OF THE DRAIN

PROVIDE INSPECTION EYES AT ALL BENDS AND JUNCTIONS. DRAINS UNDER BUILDINGS TO BE PROTECTED FROM IMPOSITION OF ANY LOADS.

**FLOORS:**

SURFACE BEDS TO HAVE 40MM THICK EPS INSULATION & WATERPROOF MEMBRANE BELOW, WITH MIN R-VALUE OF 1.0 TO COMPLY WITH PART XA OF SANS 10400 & SANS 204.

RC BEAMS & SLABS TO ENG. DETAIL & SPEC. WITH 100MM OR SIMILAR CRYSTALLINE INSULATION BELOW, WITH MIN R-VALUE OF 1.0 TO COMPLY WITH PART XA OF SANS 10400 & SANS 204.

FINISHED FLOOR LEVELS TO BE A MINIMUM OF 100MM ABOVE NATURAL GROUND LEVEL UNLESS OTHERWISE SHOWN.

**WALLS:**

WELL-BLUNT CLAY BRICKS OF MINIMUM 10MPa NOMINAL UNIT STRENGTH AND CLASS 2 MORTAR COMPLYING WITH THE NATIONAL BUILDING REGULATIONS.

ALL EXTERNAL WALLS TO BE MIN DOUBLE SKIN BRICK WALL TO COMPLY WITH PART XA OF SANS 10400 & SANS 204.

FIRE WALLS TO UNDERSIDE OF ROOF COVERING.

**STRUCTURAL ENGINEER:**

STRUCTURAL ENGINEER TO BE RESPONSIBLE FOR ALL STRUCTURAL WORK INCLUDING BOUNDARY WALL, FOUNDATIONS, SOIL CONDITIONS, SLABS, R.C. BEAMS, COLUMNS AND EXPANSION JOINTS.

The functional requirements of sub-regulation XA2 shall be satisfied when:

- 4.1.1 The population for which such building is designed is determined in accordance with Regulation A21.
- 4.1.2 The hot water demand is determined in accordance with Table 2 and Table 3 of SANS 10225:1200.
- 4.1.3 The storage requirement is based on maintenance of a hot water temperature of 60 °C.
- 4.1.4 Solar water heating systems shall comply with SANS 1307, SANS 10106 and SANS 10224 based on the thermal performance determined in accordance with the requirements of SANS 821-1 and SANS 821-2.
- 4.1.5 All exposed hot water service pipes (SANS 10252-1) shall be clad with insulation with a minimum R-value in accordance with SANS 204.
- 4.1.6 Thermal insulation, if any, shall be installed in accordance with the manufacturer's



| REVISIONS |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |



**PROJECT:**

**PORTION 12 OF ERF 328 WAVERLEY**

**CLIENT:** 3 DOT CONSTRUCTION

**DRAWING:** ELEVATIONS

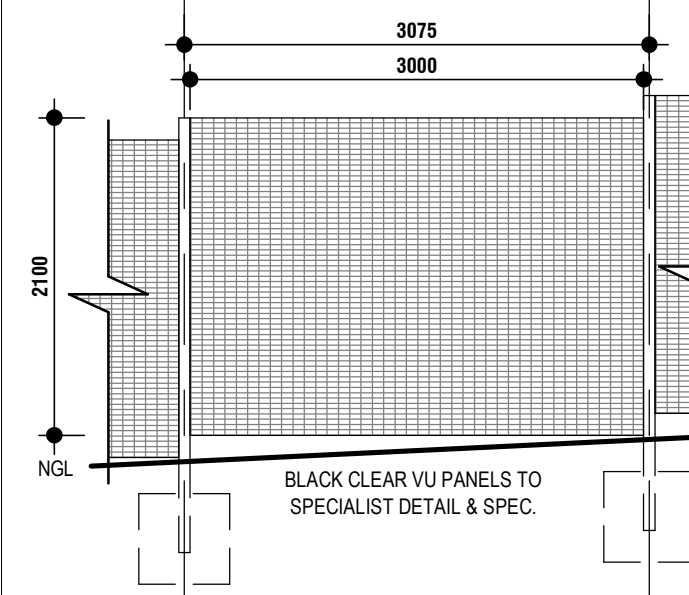
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|                        |                         |
|------------------------|-------------------------|
| DRAWN BY: E.T          | CHECKED BY: G.A         |
| DATE DRAWN: 2017-08-17 | DATE ISSUED: 2018-11-02 |
| DWG NO: 400            | REV:                    |

|              |               |
|--------------|---------------|
| SKETCH       | COUN / HERITA |
| CONSTRUCTION | COSTING       |



**SITE PLAN**  
SCALE @A1 1 : 150  
SCALE @A3 1 : 300



**LANDSCAPE LEGEND**

- EXISTING TREES TO BE REMOVED
- EXISTING TREES TO REMAIN
- ACACIA XANTHOPHLOEA (FEVER TREE)
- COMBRETUM ERYTHROPHYLLUM (RIVER BUSHWILLOW)
- ALOE PETRICOLA (PETRICOLA)
- POMPOM TREE (DAIS COTINIFOLIA)
- STENOTAPHRUM SECUNDATUM (BUFFALO)
- PENNISETUM CLANDESTINUM (KIKUYU)



**LOCALITY PLAN**  
SCALE @A1 1 : 2000  
SCALE @A3 1 : 4000

| CIRCULATION LIST               |                                 |                              |
|--------------------------------|---------------------------------|------------------------------|
| Johannesburg Roads Agency      | Pikup                           | Johannesburg Water (Pty) Ltd |
| Date : _/ _/ _                 | Date : _/ _/ _                  | Date : _/ _/ _               |
| Environmental Management       | City parks & Urban Conservation | Transportation               |
| Date : _/ _/ _                 | Date : _/ _/ _                  | Date : _/ _/ _               |
| City Power                     | Environmental Health            | Fire Department              |
| Date : _/ _/ _                 | Date : _/ _/ _                  | Date : _/ _/ _               |
| Other such as ESKOM or as reqd | LAND USE MANAGEMENT             |                              |
| Date : _/ _/ _                 |                                 |                              |

| SCHEDULE OF RIGHTS                                 |                                               |                   |
|----------------------------------------------------|-----------------------------------------------|-------------------|
| PROPERTY DESCRIPTION                               |                                               |                   |
| ERF/PORTION                                        | PIN 12/328                                    |                   |
| SITE AREA                                          | 3 172 m²                                      |                   |
| TOWNSHIP                                           | WAVERLEY                                      |                   |
| TITLE DEED NO.                                     |                                               |                   |
| SERVITUDES                                         | N/A                                           |                   |
| ZONING INFORMATION                                 |                                               |                   |
| TOWN PLANNING SCHEME                               | JOHANNESBURG TOWN PLANNING SCHEME 1979        |                   |
| AMENDMENT SCHEME NO.                               |                                               |                   |
| USE ZONE                                           | RESIDENTIAL 2                                 |                   |
| ANNEXURE NO.                                       |                                               |                   |
| DEVELOPMENT CONTROL MEASURES                       |                                               |                   |
| CONTROL                                            | PERMISSABLE                                   | ACTUAL            |
| HEIGHT ZONE                                        | HEIGHT ZONE 8                                 | HEIGHT ZONE 8     |
| HEIGHT OF BUILDINGS                                | 2 STOREYS                                     | 2 STOREY          |
| COVERAGE                                           | 40% - 1 268.8m²                               | 29.5% - 935.70m²  |
| FLOOR ARE RATION                                   | 0.5 - 1 586m²                                 | 0.34 - 1 093.50m² |
| FLOOR AREA                                         | 1 586m²                                       | 1 093.50m²        |
| DENSITY                                            | 20 UNITS PER HECTARE<br>0.3172 X 20 = 6 UNITS | 5 UNITS           |
| PARKING                                            |                                               |                   |
| PARKING RATIO PER USE                              | PARKING BAYS REQUIRED                         |                   |
| 1 BAYS/UNIT + 1 BAY FOR EVERY 3 UNITS FOR VISITORS |                                               |                   |
| TOTAL BAYS REQUIRED                                | 8                                             |                   |
| TOTAL BAYS PROVIDED (10 COVERED + 20 UNCOVERED)    | 30                                            |                   |
| <b>SURPLUS</b> / DEFICIT OF BAYS                   | 22                                            |                   |

**F.A.R. AREA SCHEDULE**

|                       |           |
|-----------------------|-----------|
| UNIT A - GROUND FLOOR | 131.80m²  |
| UNIT A - FIRST FLOOR  | 106.13m²  |
| UNIT A - TOTAL        | 237.93m²  |
| UNIT B - GROUND FLOOR | 86.29m²   |
| UNIT B - FIRST FLOOR  | 131.69m²  |
| UNIT B - TOTAL        | 217.98m²  |
| UNIT C - GROUND FLOOR | 93.03m²   |
| UNIT C - FIRST FLOOR  | 116.14m²  |
| UNIT C - TOTAL        | 209.17m²  |
| UNIT C x 3 - TOTAL    | 627.51m²  |
| GUARD HOUSE           | 10.48m²   |
| TOTAL BUILDINGS       | 1093.50m² |

**COVERAGE AREA SCHEDULE**

|                |          |
|----------------|----------|
| UNIT A         | 195.12m² |
| UNIT B         | 184.40m² |
| UNIT C         | 181.87m² |
| UNIT C - 3 OFF | 545.61m² |
| GUARD HOUSE    | 10.48m²  |
| TOTAL COVERAGE | 935.70m² |

**SOURCE OF INFO**

STEVE SCHOEMAN SURVEYS  
ADD: 453 HUGO STREET, PRETORIA, SOUTH AFRICA  
TEL: 082 412 2037  
EMAIL: SURVEY101@MWEB.CO.ZA

**REFUSE AREA CALCULATIONS**

$f(g) \times FA / 100 = \text{volume (m}^3\text{) / week}$   
Flats Generation Factor  $f(g)$  0.1425  
Floor Area (FA) 1 093.50m²  
 $(0.1425 \times 1 093.50\text{m}^2) / 100\text{m}^2$  1.5582375  
 $1.5582375 \times 4 \text{ bins}$  6.23295  
**Therefore required refuse yard size ± 6m²**  
**EACH UNIT TO HAVE ITS OWN BIN, TO BE BROUGHT TO CURB SUDE ON COLLECTION DAY**

**GENERAL NOTES:**  
ALL WORK TO COMPLY WITH THE NATIONAL BUILDING REGULATION & BUILDING STANDARDS ACT SANS 10400. LOCAL COUNCIL REQUIREMENTS & ALL RELEVANT SPECIFICATIONS AND CODES.  
ALL DOORS TO THE EXTERIOR THAT OPEN OUTWARDS ARE TO HAVE A 10MM STEP UP ALONG THE LONGITUDINAL CENTER LINE OF THE DOOR LEAF. A BRASS OR ALUMINUM STRIP IS TO BE INSTALLED TO THE THRESHOLD. ALL REINFORCED CONCRETE TO BE TO STRUCTURAL ENGINEERS CERTIFICATE A DETAIL TO BE SUBMITTED.  
VERTICAL TANKING TO ALL LEVEL CHANGES TO BE IN STRICT ACCORDANCE WITH ENGINEERS DETAIL AND SPECIALIST SPECIFICATION.  
FINAL GROUND LEVELS TO BE DISCUSSED WITH ARCHITECT PRIOR TO ANY EXCAVATION ON SITE.  
DIMENSIONS:  
ALL DIMENSIONS OF ANY ROOM OR SPACE, HEIGHTS & AREAS ARE IN ACCORDANCE WITH REQUIREMENTS OF PART 2 OF SANS 10400. FIGURED DIMENSIONS TO TAKE PREFERENCE TO SCALING. OVERALL DIMENSIONS (EXTERNAL) TAKE PRECEDENCE. ALL TO BE CHECKED ON SITE & DISCREPANCIES TO BE REPORTED TO ARCHITECT BEFORE WORK COMMENCES.  
PUBLIC SAFETY:  
ALL CHANGES IN LEVELS, RAMPS, DRIVEWAYS & BALUSTRADES TO BE IN ACCORDANCE WITH PART D OF SANS 10400.  
GLASS BALUSTRADES TO BE BAG TESTED TO INDUSTRY STANDARDS.  
SITE OPERATIONS:  
ALL SITE OPERATIONS WILL BE IN ACCORDANCE WITH PART F OF SANS 10400. ONLY DRAWINGS THAT REFLECT THE LATEST REVISIONS TO BE USED ON SITE. SITE AND WORKS TO BE KEPT CLEAN, NEAT, SECURE AND SAFE AT ALL TIMES.  
ROOFS:  
ROOF ASSEMBLY TO COMPLY WITH PART XX OF SANS 10400 & SANS 204. IN ACCORDANCE WITH CALCULATIONS PROVIDED ALL INSULATION TO MEET TASA STANDARDS & REGULATIONS. ROOF COVERINGS & WATERPROOFING SYSTEMS, SLOPE, GUTTERS & DOWNPIPES TO COMPLY WITH PART L OF SANS 10400 & TO SPECIALIST SPEC & DETAIL.  
STAIRWAYS:  
ALL STAIRWAYS TO COMPLY WITH ALL DIMENSIONAL, STRUCTURAL & SAFETY REQUIREMENTS OF PART M OF SANS 10400.  
FENESTRATION & GLAZING:  
REFER TO ATTACHED CALCULATIONS FOR REQUIREMENTS TO COMPLY WITH PART XX OF SANS 10400 & SANS 204.  
GLAZING TO COMPLY WITH PART XX OF SANS 10400 & SANS 204. IN ACCORDANCE WITH CALCULATIONS PROVIDED ALL ALUMINUM TO COMPLY WITH TASA STANDARDS & REGULATIONS.  
GLAZING TO COMPLY WITH INSTALLATION ALL OTHER REQUIREMENTS OF PART N OF SANS 10400.  
LIGHTING & VENTILATION:  
ALL LIGHTING & VENTILATION REQUIREMENTS TO COMPLY WITH PART O & P OF SANS 10400.  
STORMWATER:  
STORMWATER CONTROL & DISPOSAL, GUTTERS & DOWNPIPES TO COMPLY WITH PART L OF SANS 10400.  
FIRE INSTALLATION:  
ALL TO COMPLY WITH PART W OF SANS 10400.  
ENVIRONMENTAL, SUSTAINABILITY & ENERGY USAGE IN BUILDINGS (ALL TO COMPLY WITH PARTS X & XX OF SANS 10400 & SANS 204 WHERE APPLICABLE).  
HOT WATER WILL BE PROVIDED FROM ON-SITE HEAT PUMP. ALL PIPES WILL BE INSULATED TO A MINIMUM VALUE OF 100MM FOR PIPES GREATER THAN OR EQUAL TO 25MM & 150MM FOR PIPES LESS THAN 25MM. TO BE INSTALLED TO MANUFACTURER'S SPECIFICATION.  
LIGHTING & POWER: REFER ATTACHED CALCULATIONS FOR REQUIREMENTS TO COMPLY WITH PART XX OF SANS 10400 & SANS 204. ALL BULBS, DOWNLIGHTS, WALL LIGHTS & STRIP LIGHTS TO BE LED CONFORMING TO CALCULATIONS ATTACHED.  
DRAINAGE:  
SINGLE STACK SYSTEM COMPLYING WITH THE NATIONAL BUILDING REGULATIONS AND THE REQUIREMENTS OF THE LOCAL AUTHORITY AND COMPRISING THE FOLLOWING:  
1. 100% DISCHARGE STACKS OF APPROVED MATERIAL.  
2. 100% DRAINS OF APPROVED MATERIAL.  
3. 100% SOIL PIPES.  
4. 400mm DRAIN WASTE PIPES.  
5. 100% STACK VENTS.  
THE DISCHARGE STACK WILL CONTINUE UPWARDS TO FORM THE STACK VENT. THE RADIIUS AT THE CENTRE LINE OF THE BEND AT THE FOOT OF THE DISCHARGE STACK SHALL NOT BE LESS THAN 300MM.  
EVERY WASTE FIXTURE SHALL BE EITHER A P-TRAP WITH A WATERSEAL NOT LESS THAN 75MM OR A RE-SEALING TRAP OF THE P-TYPE.  
WHERE ANY WASTE BRANCH AND ANY OPPOSED SOIL BRANCH ARE CONNECTED TO A DISCHARGE STACK, THE CENTRE LINES AT THEIR INTERSECTIONS SHALL NOT BE LESS THAN 200MM APART.  
THE FIXTURE BRANCH OF ALL SANITARY FIXTURES IN THE SANITARY GROUP SHALL BE SEPARATELY CONNECTED TO THE DISCHARGE STACK. THERE IS ONLY ONE GROUP PER STACK CONNECTED TO THE STACK.  
ACCESS TO THE DRAINAGE INSTALLATION TO BE PROVIDED BY ADEQUATELY MARKED AND PROTECTED AND PERMANENTLY ACCESSIBLE ROODING EYES AT:  
1. ALL CHANGES OF DIRECTION.  
2. WITHIN 1.5M OF THE DRAIN CONNECTION TO THE SEWER.  
3. AT THE HIGHEST POINT OF THE DRAIN.  
4. AT 25M INTERVALS ALONG THE LINE OF THE DRAIN.  
PROVIDE INSPECTION EYES AT ALL BENDS AND JUNCTIONS. DRAINS UNDER BUILDINGS TO BE PROTECTED FROM IMPOSITION OF ANY LOADS.  
FLOORS:  
SURFACE BEDS TO HAVE 60MM THICK EPS INSULATION & WATERPROOF MEMBRANE BELOW, WITH MIN. R-VALUE OF 1.0 TO COMPLY WITH PART XX OF SANS 10400 & SANS 204.  
RC BEAMS & SLAB TO ENDS DETAIL & SPEC. WITH 'PENETRON' OR SIMILAR CRYSTALLINE INSULATION BELOW, WITH MIN R-VALUE OF 1.0 TO COMPLY WITH PART XX OF SANS 10400 & SANS 204.  
FINISHED FLOOR LEVELS TO BE A MINIMUM OF 150MM ABOVE NATURAL GROUND LEVEL UNLESS OTHERWISE SHOWN.  
WALLS:  
WELL-BURNT CLAY BRICKS OF MINIMUM 10MPa NOMINAL UNIT STRENGTH AND CLASS 5 MORTAR COMPLYING WITH THE NATIONAL BUILDING REGULATIONS.  
ALL EXTERNAL WALLS TO BE MINIMUM 200MM BRICK WALL TO COMPLY WITH PART XX OF SANS 10400 & SANS 204.  
FIREWALLS TO UNDERSIDE OF ROOF COVERING.  
STRUCTURAL ENGINEER:  
STRUCTURAL ENGINEER TO BE RESPONSIBLE FOR ALL STRUCTURAL WORK INCLUDING BOUNDARY WALL, FOUNDATIONS, SOIL CONDITIONS, SLABS, R.C. BEAMS, COLUMNS AND EXPANSION JOINTS.  
The structural requirements of sub-regulation X22 shall be satisfied when:  
4.1.1 The population for which such building is designed is determined in accordance with Regulation X21.  
4.1.2 The hot water demand is determined in accordance with table 2 and table 3 of SANS 10252:1-2004.  
4.1.3 The storage requirement is based on maintenance of a hot water temperature of 60°C.  
4.1.4 60mm water heating systems shall comply with SANS 1307, SANS 10056 and SANS 10254 based on the thermal performance determined in accordance with the requirements of SANS 6211-1 and SANS 6211-2.  
4.1.5 All exposed hot water service pipes (SANS 10252:1 shall be clad with insulation with a minimum R-value in accordance with SANS 204.  
4.1.6 Thermal insulation, if any, shall be installed in accordance with the manufacturer's instructions.

|                              |                               |
|------------------------------|-------------------------------|
| ENGINEER'S SIGNATURE & DATE: | ARCHITECT'S SIGNATURE & DATE: |
| OWNER'S SIGNATURE & DATE     |                               |

| REVISIONS |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |

**ANSARA**  
ARCHITECTURE  
Drawings are for information purposes only and are the intellectual property of the author.  
GERARD ALEXANDER ANSARA  
BACH WILFRID ROAD 8842 (SACAP)  
SUITE 4 1ST FLOOR, ATHEL SQUARE, CORNER WINDA ROAD AND  
KATHERINE DRIVE, EAST SANDOWN, SANDTON, 207002031.  
WWW.ANSARA.CO.ZA

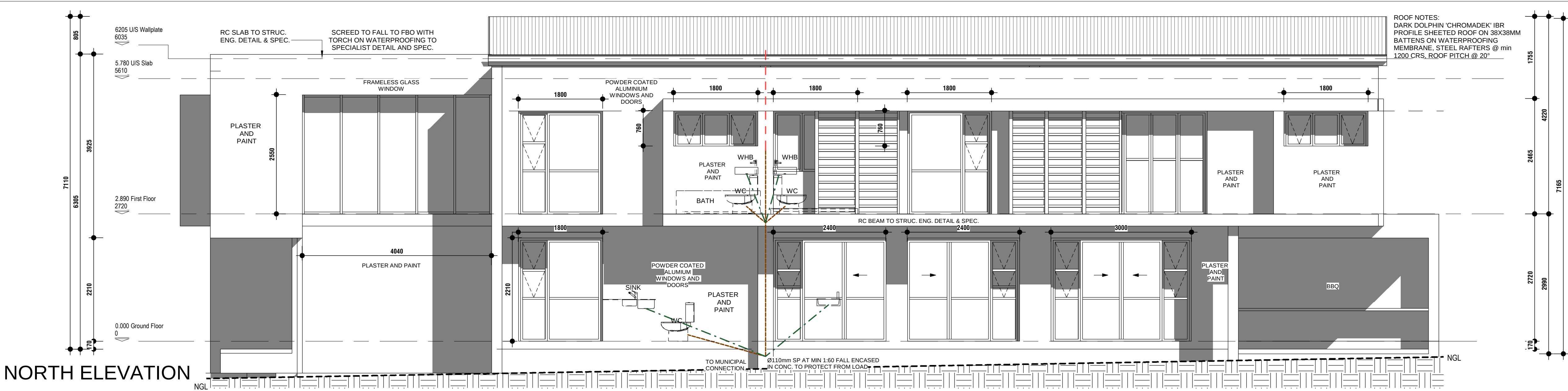
**PROJECT:**  
**PORTION 12 OF ERF 328 WAVERLEY**

**CLIENT:** 3 DOT CONSTRUCTION

**DRAWING: SITE DEVELOPMENT PLAN**

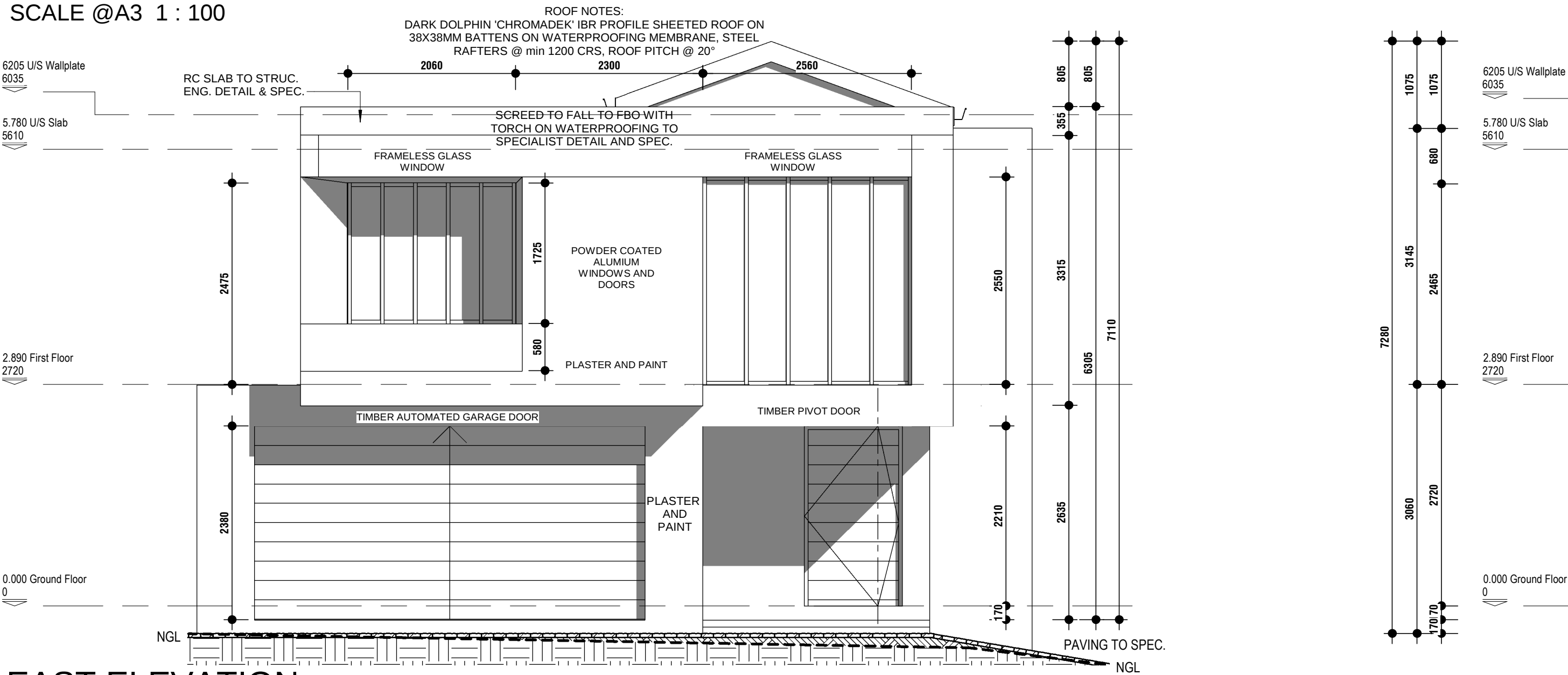
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**DATE DRAWN:** 2017-08-17  
**DWG NO:** 102  
**CHECKED BY:** GA  
**DATE ISSUED:** 2019-01-27  
**REV:**

|              |         |
|--------------|---------|
| SKETCH       | COUNCIL |
| CONSTRUCTION | COSTING |



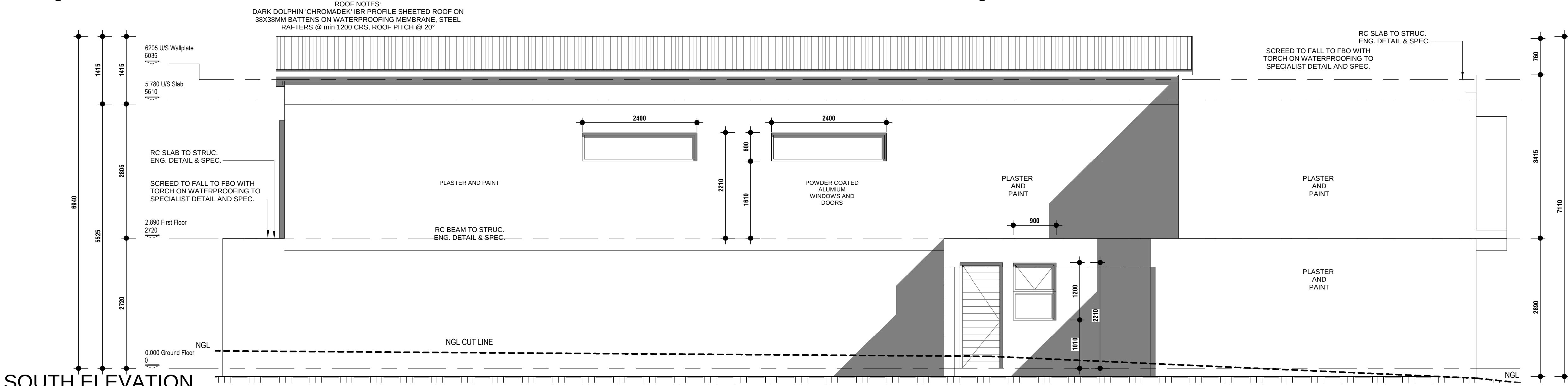
NORTH ELEVATION

SCALE @A1 1 : 50  
SCALE @A3 1 : 100



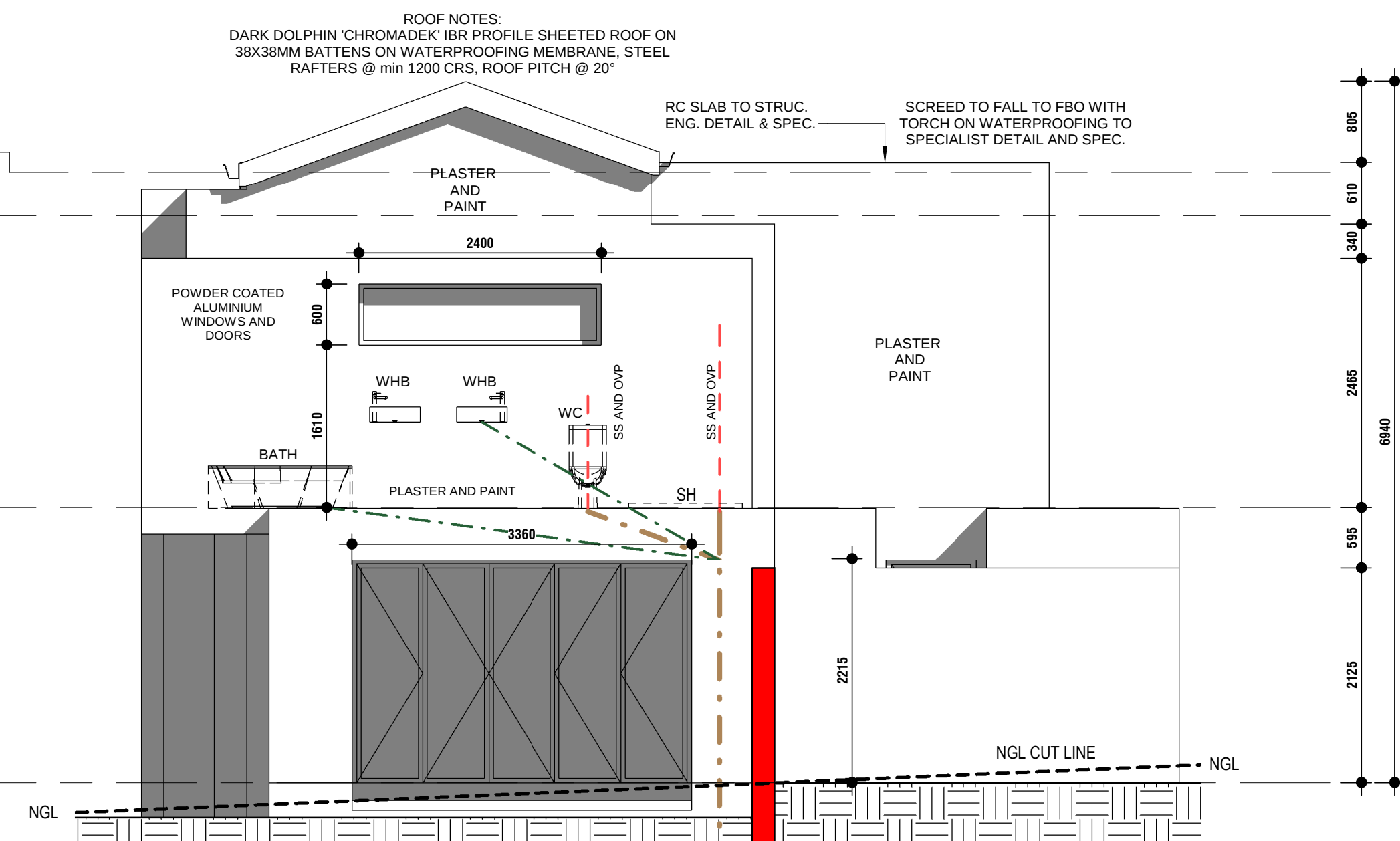
EAST ELEVATION

SCALE @A1 1 : 50  
SCALE @A3 1 : 100



SOUTH ELEVATION

SCALE @A1 1 : 50  
SCALE @A3 1 : 100



WEST ELEVATION

SCALE @A1 1 : 50  
SCALE @A3 1 : 100

GENERAL NOTES:

- ALL WORK TO COMPLY WITH THE NATIONAL BUILDING REGULATION & BUILDING STANDARDS ACT SANS 1040. LOCAL COUNCIL REQUIREMENTS & ALL RELEVANT SPECIFICATIONS AND CODES.
- ALL DOORS TO THE EXTERIOR THAT OPEN OUTWARD ARE TO HAVE A 10MM STEP UP ALONG THE CONDITIONAL CENTER LINE OF THE DOOR LEAF & BRASS OR ALUMINUM STEP TO BE INSTALLED TO THE THRESHOLD. ALL REINFORCED CONCRETE TO BE TO STRUCTURAL ENGINEERS CERTIFICATE & DETAIL TO BE SUBMITTED.
- VERTICAL TANKING TO ALL LEVEL CHANGES TO BE IN STRICT ACCORDANCE WITH ENGINEER DETAIL AND SPECIALIST SPECIFICATION.
- FINAL GROUND LEVELS TO BE DISCUSSED WITH ARCHITECT PRIOR TO ANY EXCAVATION ON SITE.
- DIMENSIONS:
- ALL DIMENSIONS OF ANY ROOM OR SPACE, HEIGHTS & AREAS ARE IN ACCORDANCE WITH REQUIREMENTS OF PART C OF SANS 1040. FIGURED DIMENSIONS TO TAKE PRECEDENCE TO SCALING. OVERALL DIMENSIONS (EXTERNAL) TAKE PRECEDENCE. ALL TO BE CHECKED ON SITE & DISCREPANCIES TO BE REPORTED TO ARCHITECT BEFORE WORK COMMENCES.
- PUBLIC SAFETY:
- ALL CHANGES IN LEVELS, RAMPS, DRIVEWAYS & BALUSTRADES TO BE IN ACCORDANCE WITH PART D OF SANS 1040.
- GLASS BALUSTRADES TO BE BAG TESTED TO INDUSTRY STANDARDS.
- SITE OPERATIONS:
- ALL SITE OPERATIONS WILL BE IN ACCORDANCE WITH PART F OF SANS 1040. ONLY DRAWINGS THAT REFLECT THE LATEST REVISIONS TO BE USED ON SITE. SITE AND WORKS TO BE KEPT CLEAN, NEAT, SECURE AND SAFE AT ALL TIMES.
- ROOFS:
- ROOF ASSEMBLY TO COMPLY WITH PART XX OF SANS 1040 & SANS 204. IN ACCORDANCE WITH CALCULATIONS PROVIDED. ALL INSULATION TO MEET TRASA STANDARDS & REGULATIONS. ROOF COVERINGS & WATERPROOFING SYSTEMS, SLOPE, GUTTERS & DOWNPIPES TO COMPLY WITH PART L OF SANS 1040, & TO SPECIALIST SPEC & DETAIL.
- STARWAYS:
- ALL STARWAYS TO COMPLY WITH ALL DIMENSIONAL, STRUCTURAL & SAFETY REQUIREMENTS OF PART M OF SANS 1040.
- FENESTRATION & GLAZING:
- REFER TO ATTACHED CALCULATIONS FOR REQUIREMENTS TO COMPLY WITH PART XX OF SANS 1040 & SANS 204.
- GLAZING TO COMPLY WITH PART XX OF SANS 1040 & SANS 204. IN ACCORDANCE WITH CALCULATIONS PROVIDED. ALL ALUMINUM TO COMPLY WITH AMCA STANDARDS & REGULATIONS.
- GLAZING TO COMPLY WITH INSTALLATION & ALL OTHER REQUIREMENTS OF PART N OF SANS 1040.
- LIGHTING & VENTILATION:
- ALL LIGHTING & VENTILATION REQUIREMENTS TO COMPLY WITH PART O & N OF SANS 1040.
- STORMWATER:
- STORMWATER CONTROL & DISPOSAL, GUTTERS & DOWNPIPES TO COMPLY WITH PART R OF SANS 1040.
- FIRE INSTALLATION:
- ALL TO COMPLY WITH PART W OF SANS 1040.
- ENVIRONMENTAL SUSTAINABILITY & ENERGY USAGE IN BUILDINGS (ALL TO COMPLY WITH PARTS X & XX OF SANS 1040 & SANS 204 WHERE APPLICABLE).
- HOT WATER WILL BE PROVIDED FROM ON-SITE HEAT PUMP. ALL PIPES WILL BE INSULATED TO MIN R-VALUE OF 1 FOR PIPES GREATER THAN OR EQUAL TO 80MM & 1.5 FOR PIPES LESS THAN 80MM. TO BE INSTALLED TO MANUFACTURERS SPECIFICATION.
- LIGHTING & POWER: REFER ATTACHED CALCULATIONS FOR REQUIREMENTS TO COMPLY WITH PART XX OF SANS 1040 & SANS 204. ALL BULBS, DOWNLIGHTS, WALL LIGHTS & STROPLIGHTS TO BE LED CONFORMING TO CALCULATIONS ATTACHED.
- DRAINAGE:
- SINGLE STACK SYSTEM COMPLYING WITH THE NATIONAL BUILDING REGULATIONS AND THE REQUIREMENTS OF THE LOCAL AUTHORITY AND COMPRISING THE FOLLOWING:
1. 100/0 DISCHARGE STACKS OF APPROVED MATERIAL
  2. 100/0 DRAINING OF APPROVED MATERIAL
  3. 100/0 SOL PIPES
  4. 400 GMS WASTE PIPES
  5. 100/0 STACK VENTS
- THE DISCHARGE STACK WILL CONTINUE UPWARDS TO FORM THE STACK VENT. THE RADIUS AT THE CENTRE LINE OF THE BRID AT THE FOOT OF THE DISCHARGE STACK SHALL NOT BE LESS THAN 200MM.
- EVERY WASTE FIXTURE SHALL BE EITHER A P-TRAP WITH A WATERSEAL NOT LESS THAN 75MM OR A RE-SEALING TRAP OF THE P-TYPE.
- WHERE ANY WASTE BRANCH AND ANY OPPOSED SOL BRANCH ARE CONNECTED TO A DISCHARGE STACK THE CENTRE LINES AT THEIR INTERSECTIONS SHALL NOT BE LESS THAN 200MM APART.
- THE FIXTURE BRANCH OF ALL SANITARY FIXTURES IN THE SANITARY GROUP SHALL BE SEPARATELY CONNECTED TO THE DISCHARGE STACK. THERE IS ONLY ONE GROUP PER STOREY CONNECTED TO ONE STACK.
- ACCESS TO THE DRAINAGE INSTALLATION TO BE PROVIDED BY ADEQUATELY MARKED AND PROTECTED AND PERMANENTLY ACCESSIBLE WALKING EYES AT:
1. ALL CHANGES OF DIRECTION
  2. WITHIN 1.5M OF THE DRAIN CONNECTION TO THE SEWER
  3. AT THE HIGHEST POINT OF THE DRAIN
  4. AT 20M INTERVALS ALONG THE LINE OF THE DRAIN
- PROVIDE INSPECTION EYES AT ALL BENDS AND JUNCTIONS. DRAINS UNDER BUILDINGS TO BE PROTECTED FROM IMPOSITION OF ANY LOADS.
- FLOORS:
- SURFACE BEDS TO HAVE 40MM THICK EPS INSULATION & WATERPROOFING MEMBRANE BELOW, WITH MIN R-VALUE OF 1.0 TO COMPLY WITH PART XX OF SANS 1040 & SANS 204.
- RC BEAMS & SLABS TO ENG. DETAIL & SPEC. WITH POLYETHYLENE OR SIMILAR CRYSTALLINE INSULATION BELOW, WITH MIN R-VALUE OF 1.0 TO COMPLY WITH PART XX OF SANS 1040 & SANS 204.
- FINISHED FLOOR LEVELS TO BE A MINIMUM OF 100MM ABOVE NATURAL GROUND LEVEL UNLESS OTHERWISE SHOWN.
- WALLS:
- WELL BUILT CLAY BRICKS OF MINIMUM 10MPa NOMINAL UNIT STRENGTH AND CLASS 2 MORTAR COMPLYING WITH THE NATIONAL BUILDING REGULATIONS.
- ALL EXTERNAL WALLS TO BE MIN DOUBLE SKIN BRICK WALL TO COMPLY WITH PART XX OF SANS 1040 & SANS 204.
- FIRE WALLS TO UNDERSIDE OF ROOF COVERING.
- STRUCTURAL ENGINEER:
- STRUCTURAL ENGINEER TO BE RESPONSIBLE FOR ALL STRUCTURAL WORK INCLUDING BOUNDARY WALL, FOUNDATIONS, SOIL CONDITIONS, SLABS, R.C. BEAMS, COLUMNS AND EXPANSION JOINTS.
- The functional requirements of sub-regulation XA2 shall be satisfied when:
- 4.1.1 The population for which such building is designed is determined in accordance with Regulation A21.
  - 4.1.2 The hot water demand is determined in accordance with table 2 and table 3 of SANS 10252:1200.
  - 4.1.3 The storage requirement is based on maintenance of a hot water temperature of 60 °C.
  - 4.1.4 Solar water heating systems shall comply with SANS 1307, SANS 10106 and SANS 10224 based on the thermal performance determined in accordance with the requirements of SANS 821-1 and SANS 821-2.
  - 4.1.5 All exposed hot water service pipes (SANS 10252-1) shall be clad with insulation with a minimum R-value in accordance with SANS 204.
  - 4.1.6 Thermal insulation, if any, shall be installed in accordance with the manufacturer's



REVISIONS

| No. | Description | Date |
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ANSARA  
ARCHITECTURE

Drawings are for information purposes only and are the intellectual property of the author.  
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PROJECT:

**PORTION 12 OF ERF 328 WAVERLEY**

CLIENT:

**3 DOT CONSTRUCTION**

DRAWING: ELEVATIONS

SCALES: 1 : 50

|                        |                         |
|------------------------|-------------------------|
| DRAWN BY: ARM          | CHECKED BY: GA          |
| DATE DRAWN: 2016/04/19 | DATE ISSUED: 2018/11/06 |
| DWG NO: <b>400</b>     | REV:                    |

SKETCH

COUN / HERITA

CONSTRUCTION

COSTING

1515 3 DOT CONSTRUCTION

ELEVATIONS

SCALE: 1 : 50

ERF 328  
WAVERLEY  
2019-02-15 (UNIT C)