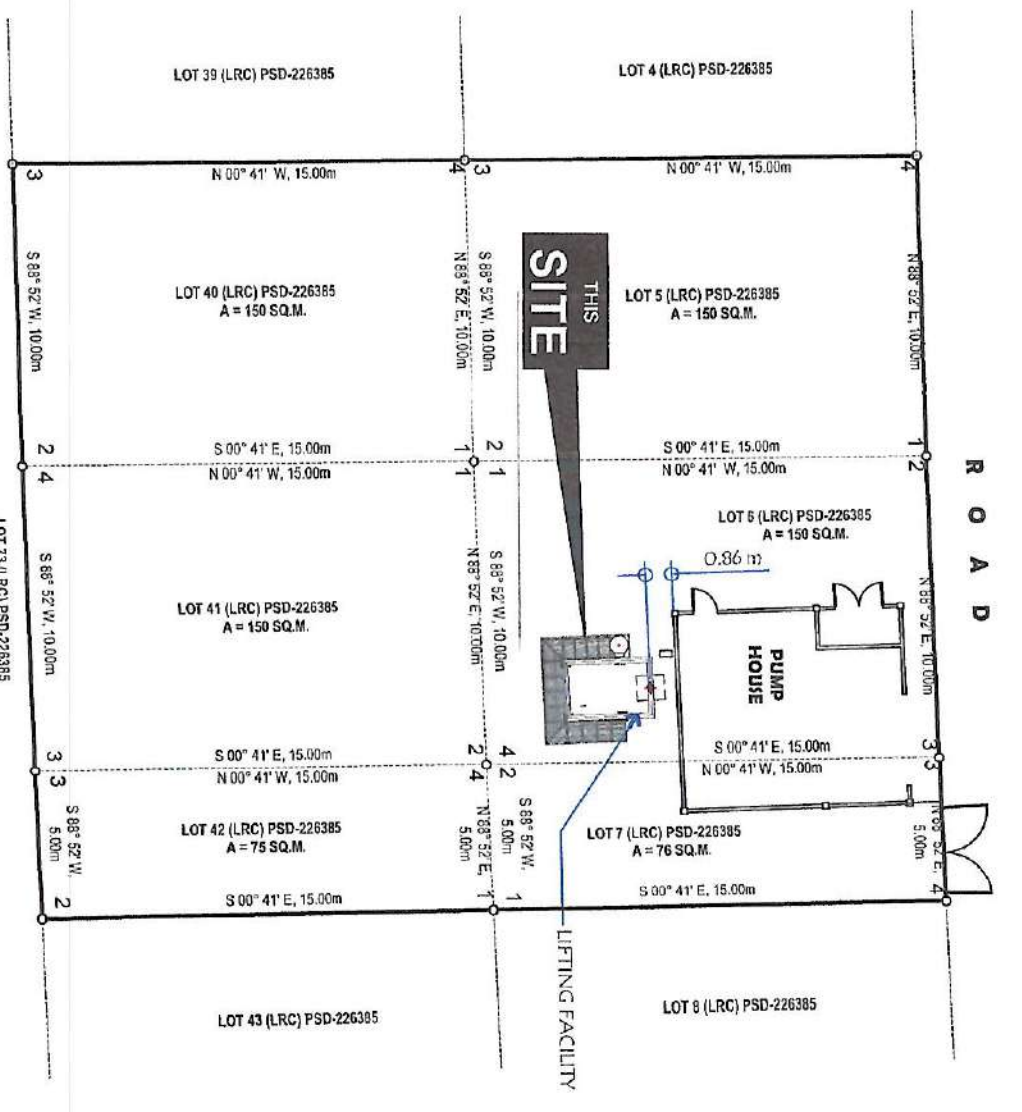
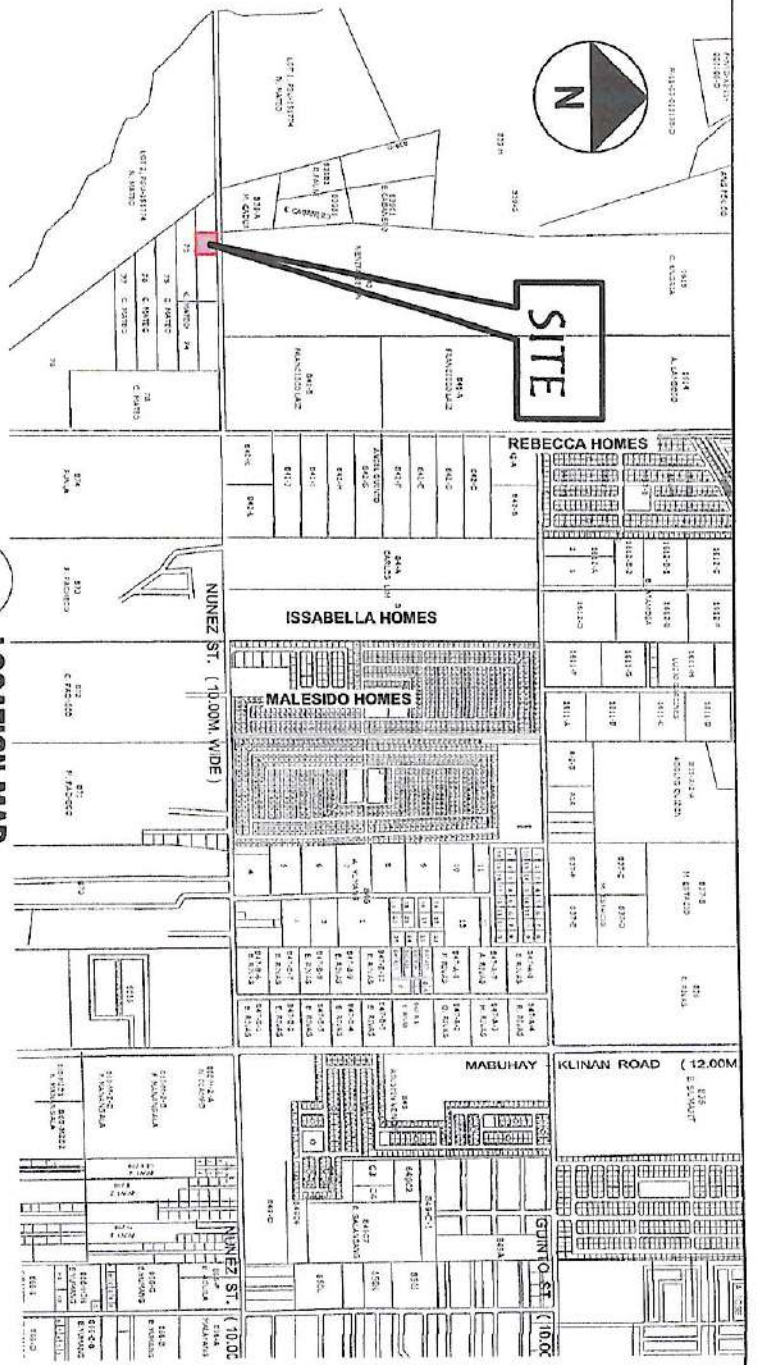


P E R S P E C T I V E
 NOT TO SCALE



GENERAL SANTOS CITY WATER DISTRICT
 E. FERNANDEZ STREET, BRGY. LISIAG, GEN. SANTOS CITY
 ENGINEERING & CONSTRUCTION DEPARTMENT
 PLANNING AND DESIGN DIVISION
 TEL. NO.: (083) 552-3824

DANILO M. DELA ROSA, JR.
 CIVIL ENGINEER
 REG. NO. 019795
 T.N. NO. 291-941-997
 DATE: 01/03/2024

PROJECT AND LOCATION
 PROPOSED CONSTRUCTION OF
 LIFTING STRUCTURE FRAME

CHECKED & REVIEWED:
 ENGR. MARIA CELIA N. DAVDAN
 OIC PWD

RECOMMENDATION/PROVAL:
 ENGR. ROGELIO A. BEBANA, JR.
 AGM OPERATIONS & TECHNICAL SERVICES

APPROVED:
 FRANCISCO R. ALONSO, CPA, CEBE
 ALIVING GENERAL MANAGER

SHEET CONTENTS	SHEET NO.
MECHANICAL	01
ELECTRICAL	02
ELECTRONICS	03
SANITARY	04
STRUCTURAL	05
ARCHITECTURAL	06
LINE AND GRADE	07
LAND USE & ZONING	08
AS SHOWN	05

REPUBLIC OF THE PHILIPPINES
 CITY OF GENERAL SANTOS
 OFFICE OF THE CITY ENGINEER
 OFFICE OF THE BUILDING OFFICIAL

DANILO M. BERLADOR, JR.
 CIVIL ENGINEER
 REG. NO. 010795
 TIN. NO. 291,941,997
 DATE: 01/03/2024

PROJECT AND LOCATION
 PROPOSED CONSTRUCTION OF
 LIFTING STRUCTURE FRAME
 LOCATION: LOT 6, THE M&S, FLOOD REVERSE, SANISERVA, G52

CHECKED & REVIEWED:
 ENGR. MARICA CELIAN DANDAN
 OIC, PDD

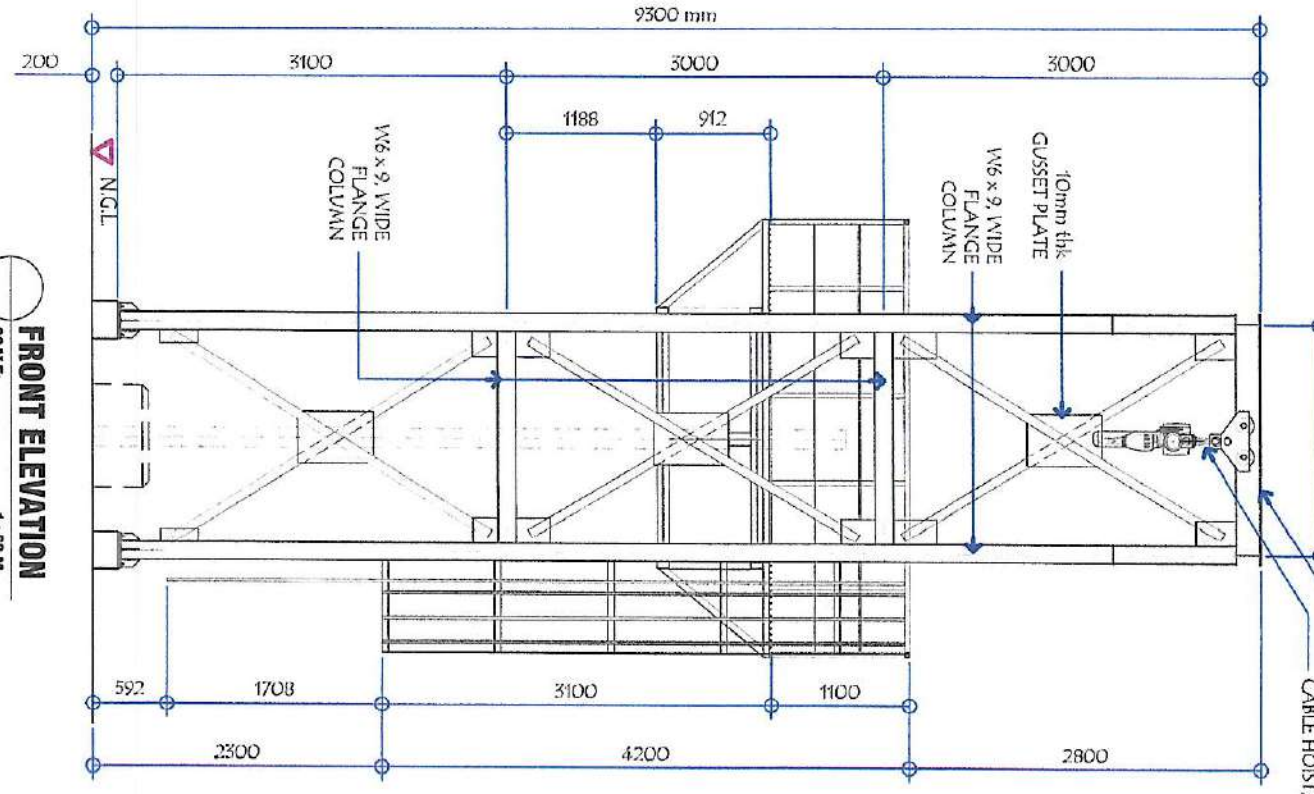
RECOMMEND APPROVAL:
 ENGR. REGELLO A. BEBANA, JR.
 ACTG OPERATIONS & TECHNICAL SERVICES

APPROVED:
 FRANCISCO R. ALONSO, CPA
 ACTG GENERAL MANAGER

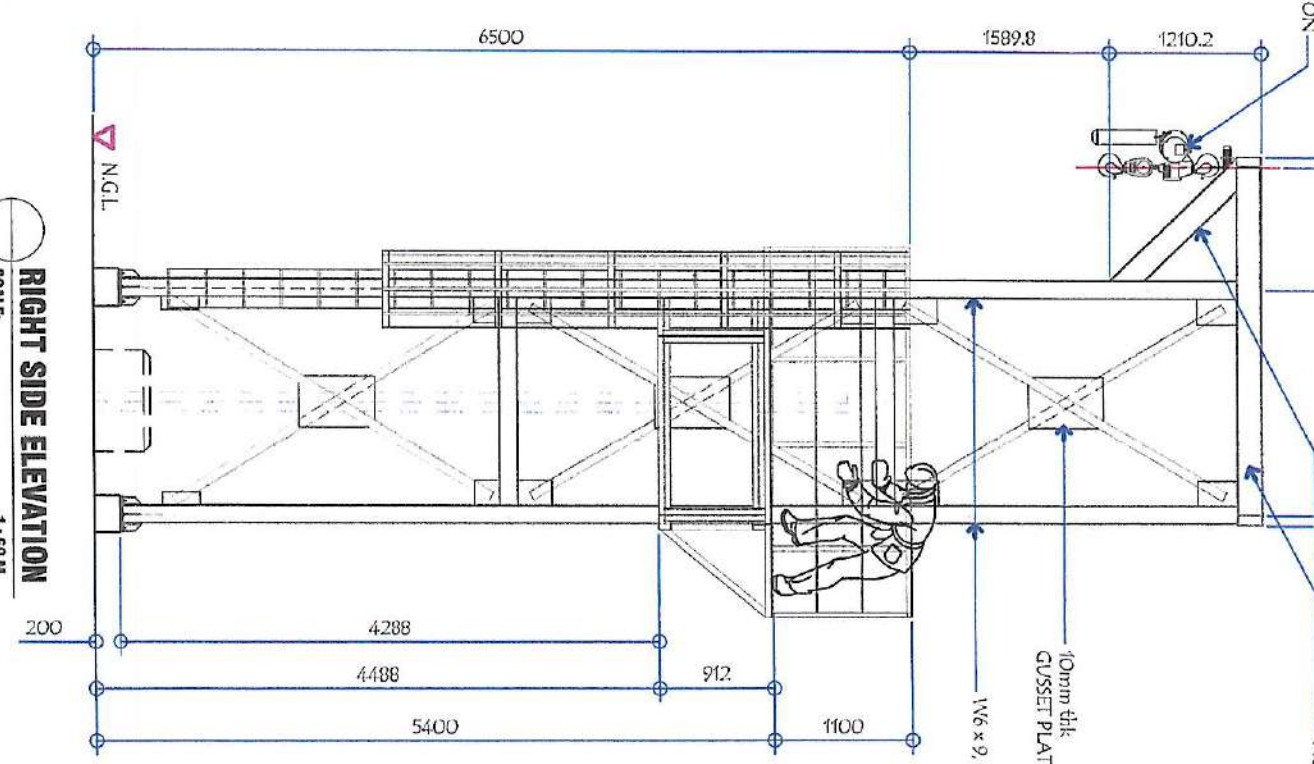
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 REV. NO. [Blank]
 DATE: FEB. 2024

SHEET NO.
 02
 05

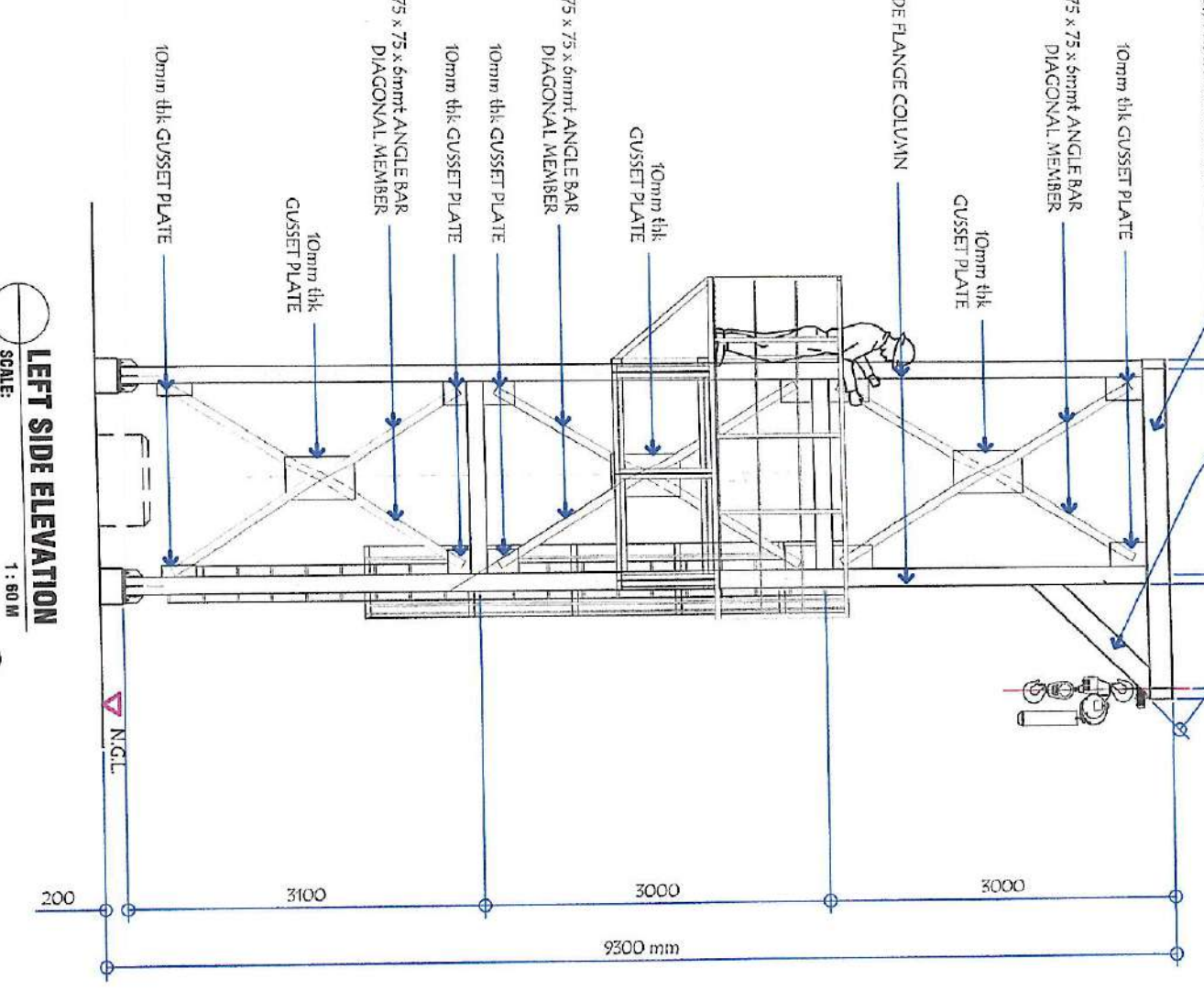
FRONT ELEVATION
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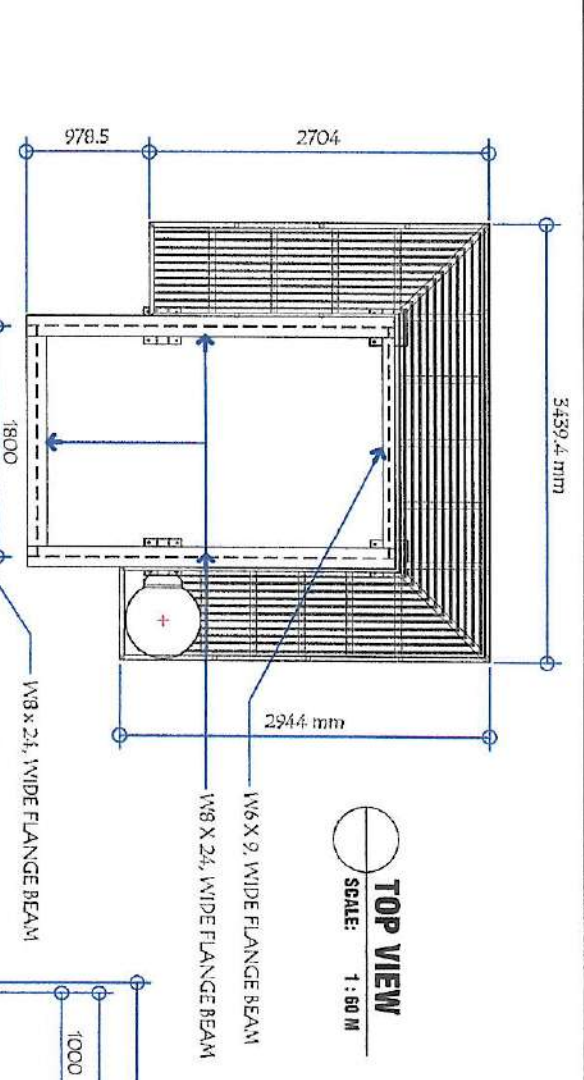
RIGHT SIDE ELEVATION
 SCALE: 1:80 M

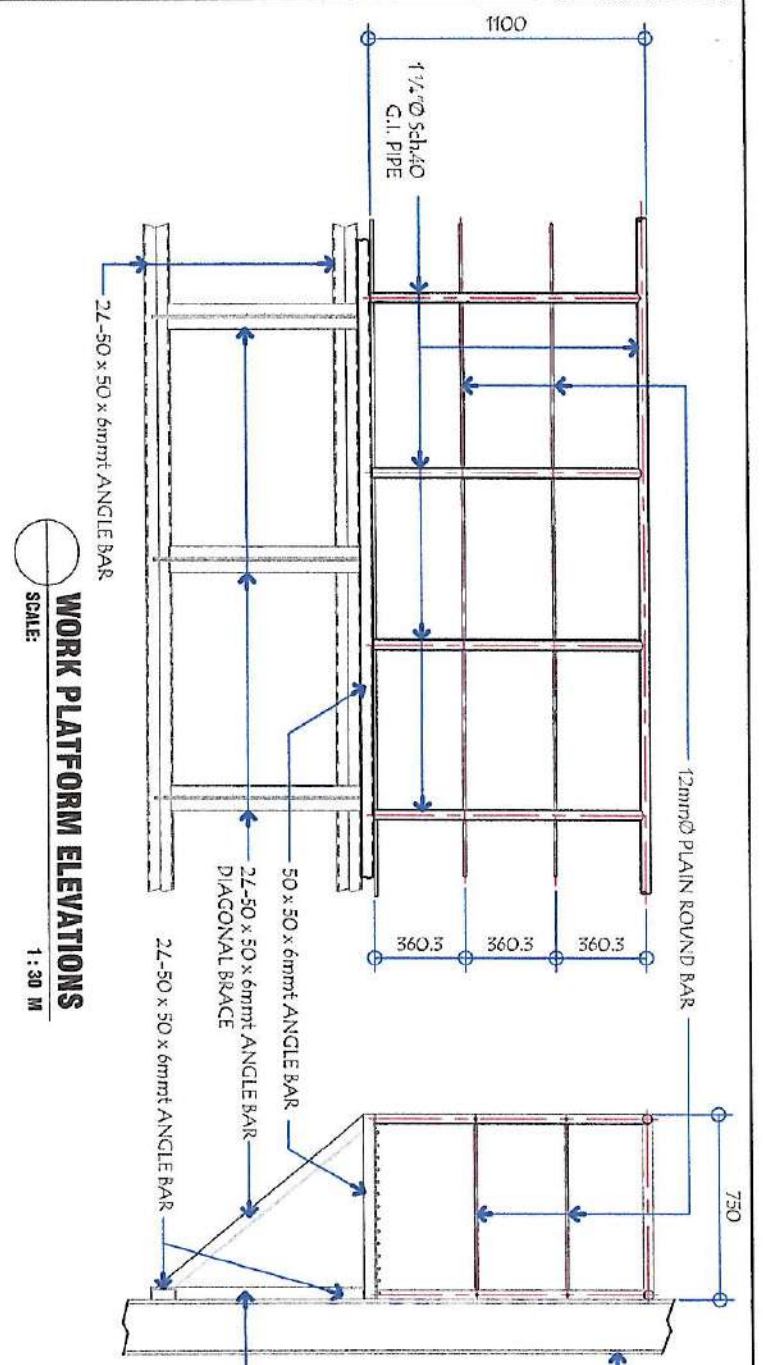


LEFT SIDE ELEVATION
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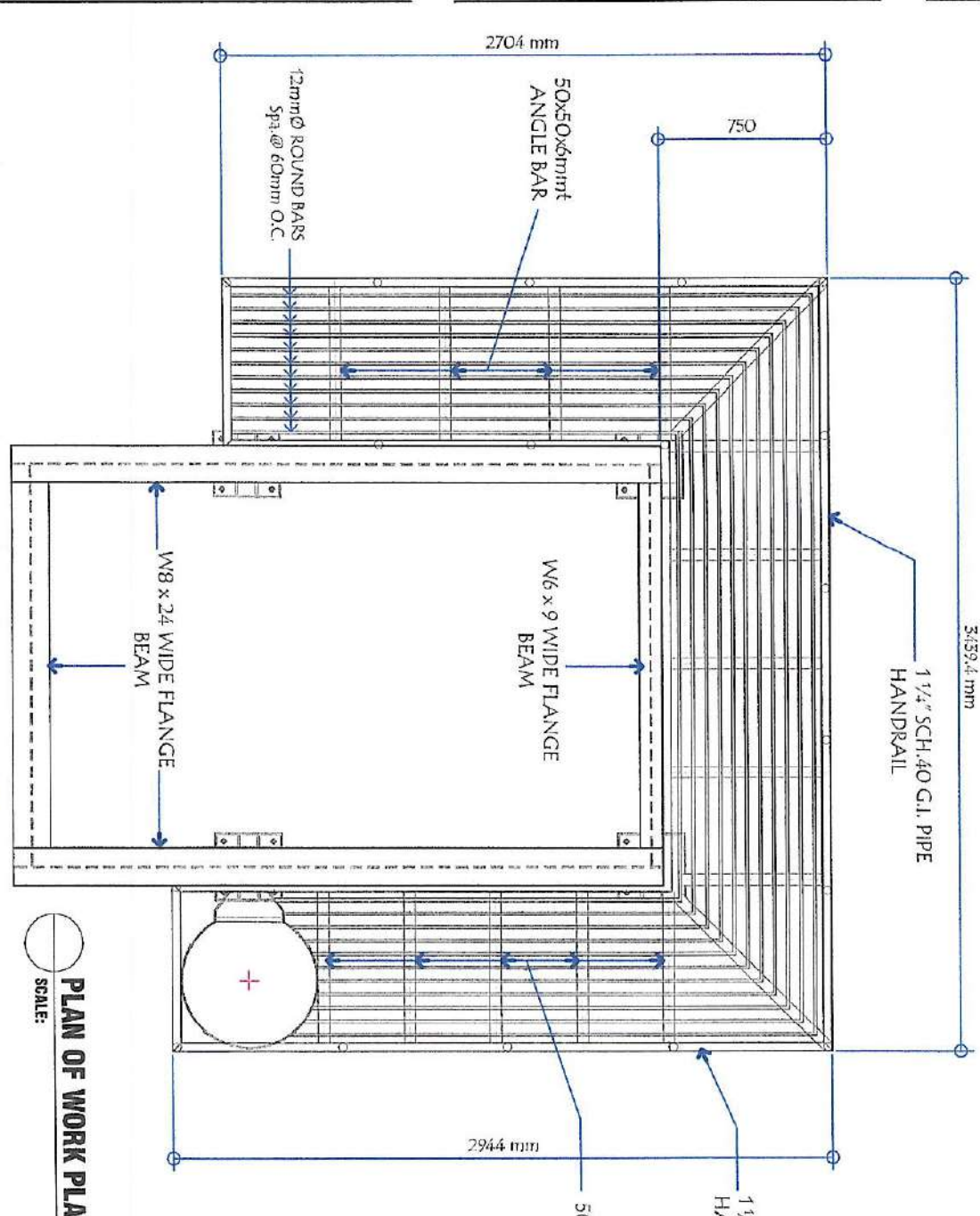
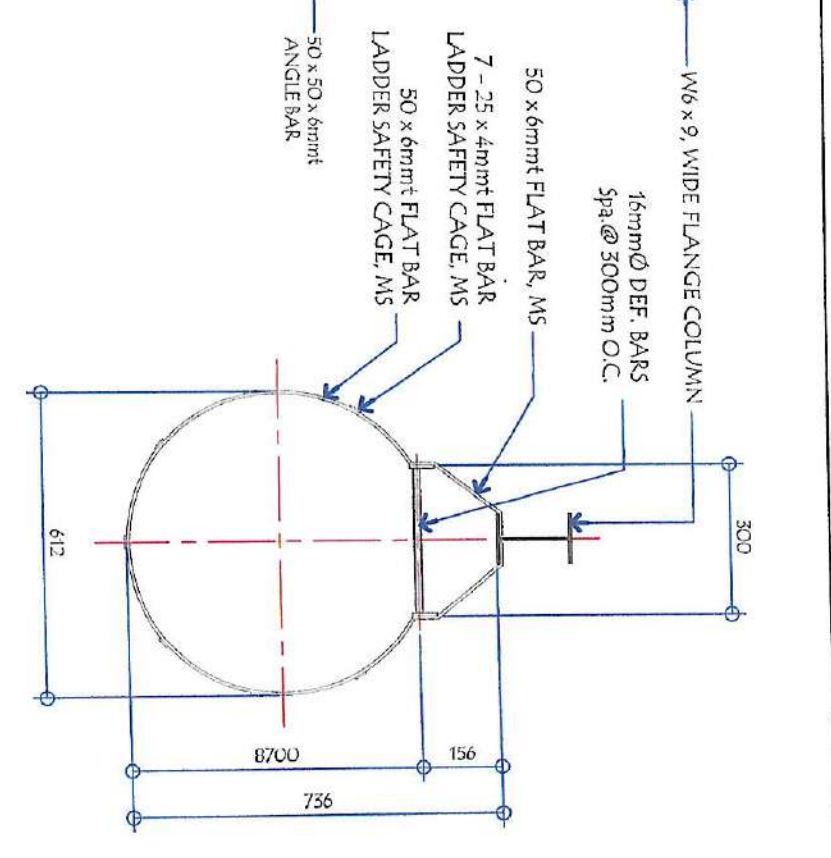


TOP VIEW
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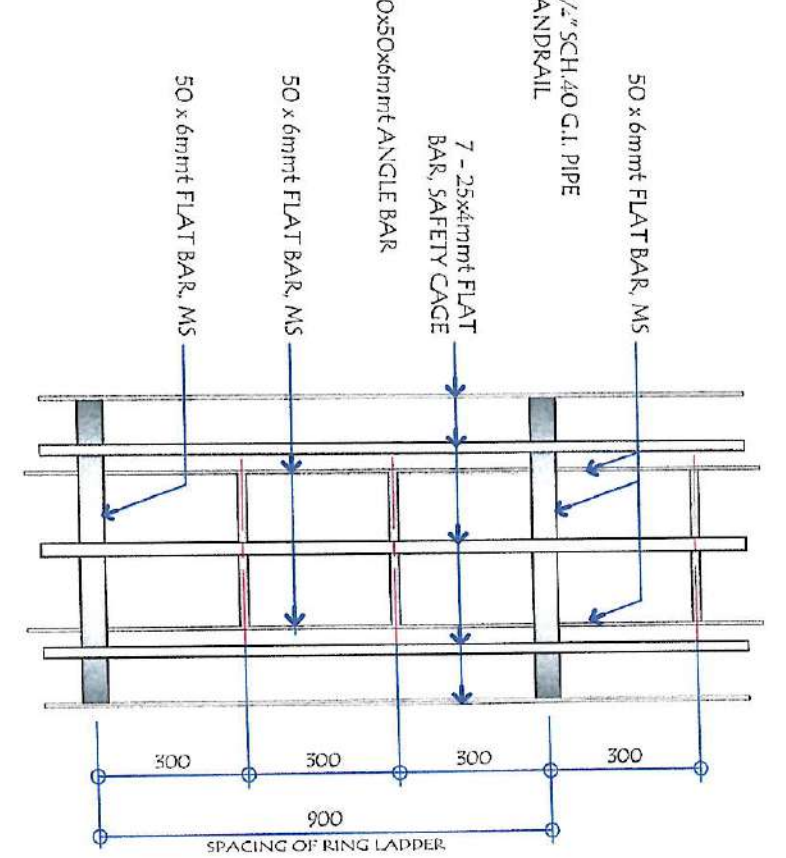




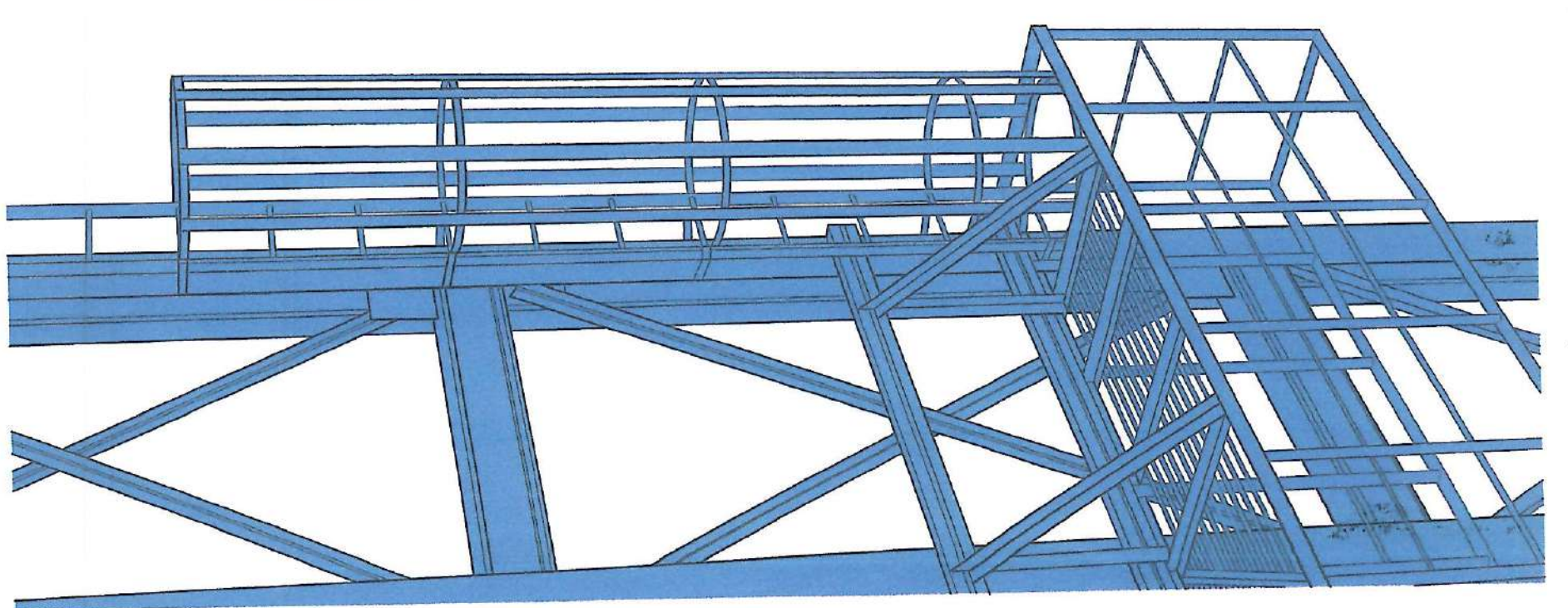
WORK PLATFORM ELEVATIONS
SCALE: 1:30 M



PLAN OF WORK PLATFORM
SCALE: 1:30 M



DETAIL OF RING LADDER
SCALE: 1:15 M



<p>GENERAL SANTOS CITY WATER DISTRICT E. FERNANDEZ STREET, BRGY. LAGAO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO. : (093) 592 - 9824</p>	<p>DANILO M. HORRADOR, JR. CIVIL ENGINEER</p>	<p>PROPOSED CONSTRUCTION OF LIFTING STRUCTURE FRAME</p>	<p>ENGR. MARLA CELIA N. DANDAN OIC, PWD</p>	<p>ENGR. ROGELIO A. BEBANA, JR. RSM OR RSM & TECHNICAL SERVICES</p>	<p>AS SHOWN</p>	<p>03</p>
	<p>REG. NO. 0107545 P.R. NO. 1000000A</p>	<p>TIN. NO. 291-961-997 DATE: 01/07/2024</p>	<p>CHECKED & REVIEWED:</p>	<p>RECOMMEND APPROVAL:</p>	<p>APPROVED:</p>	<p>DRAWN BY: DNM-202 DATE: FEB. 2024</p>

PROJECT AND LOCATION

GENERAL SANTOS CITY WATER DISTRICT

PROPOSED CONSTRUCTION OF LIFTING STRUCTURE FRAME

CHECKED & REVIEWED:

RECOMMEND APPROVAL:

APPROVED:

SHEET CONTENTS

CONSTRUCTION NOTES

A. GENERAL NOTES

1. IN THE INTERPRETATION OF THESE DRAWINGS INDICATED DIMENSIONS SHALL GOVERN AND DISTANCES OR SIZES SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.
2. THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER FOR THE EXACT SIZE, NUMBER AND LOCATIONS OF ALL CONCRETE PILES AND OTHER STRUCTURE AND ALSO DIMENSIONS.
3. ALL REINFORCED CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH THE ACI-318-95 BUILDING CODE AND ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS (LATEST EDITION) IN SO FAR AS THEY DO NOT CONFLICT WITH THE LOCAL BUILDING CODE REQUIREMENTS.
4. ALL WORKS BUT NOT LIMITED TO STRUCTURAL, MASONRY, STEEL AND OTHER WHICH ARE NOT INDICATED, DETAILED, DESIGNATED OR INADVERTENTLY OMITTED BUT ARE NECESSARY TO BE COORDINATED TO COMPLETE THE WORKS IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS, IT IS UNDERSTOOD THAT THE CONTRACTOR SHALL PROVIDE AND INCLUDE AS IF DEEMED NECESSARY FOR THE COMPLETION OF THE PROJECT.

B. NOTES ON CONCRETE MIX AND PLACING

1. UNLESS OTHERWISE INDICATED IN PLANS OR NOTED IN THE SPECIFICATIONS, THE MINIMUM 28 DAYS CYLINDER COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE AS FOLLOWS:
 - 11. FOUNDATION 21.00 MPa (3000 psi)
 - 12. RETAINING WALLS 21.00 MPa (3000 psi)
 - 13. PEDESTAL, COLUMNS, RC WALLS 21.00 MPa (3000 psi)
 - 14. FLOOR SLABS, BEAMS & GIRDER 21.00 MPa (3000 psi)
 - 15. PARAPET WALLS AND OTHER STRUCTURAL ELEMENTS 21.00 MPa (3000 psi)
 - 16. LEAN CONCRETE 10.00 MPa (1500 psi)

C. NOTES ON REINFORCING STEEL BARS

1. ALL REINFORCING STEEL BARS SHALL BE NEW BILLET, HOT ROLLED, WELDABLE DEFORMED BARS CONFORMING TO THE SPECIFICATIONS OF PNS 49: 1986 (ASTM 616)
2. THE SUPPLEMENTARY REQUIREMENTS OF WELDABLE DEFORMED REINFORCING BARS SHALL BE AS FOLLOWS:
 - 2.1. THE MAXIMUM YIELD STRENGTH OF WELDABLE BARS = 540 MPa (FOR GRADE 4).
 - 2.2. THE TENSILE STRENGTH SHALL NOT BE LESS THAN 1.25 TIMES THE ACTUAL YIELD STRENGTH.
3. NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED IN WRITINGS BY THE STRUCTURAL ENGINEER AND ONLY FOR USUAL CONDITIONS WHERE VIBRATION IS EXTREMELY DIFFICULT TO ACCOMPLISH.
4. ALL REINFORCING BARS SHALL BE CLEANED THOROUGHLY OF ALL LOOSE RUST, SOIL OR OTHER MATERIAL IMMEDIATELY PRIOR TO PLACING CONCRETE.
5. THE REQUIRED LENGTH OF LAP FOR TENSION SPLICES IS BASED ON THE DEVELOPMENT LENGTH, Ld, SHOWN IN THE TABLE 2 AND 3 FOR RC BEAMS AND GIRDER, RESPECTIVELY AND ON THE FOLLOWING CLASSIFICATIONS:

TENSION SPLICES CLASSIFICATION				SPICE LENGTH	
				10Ld	13Ld
CLASS A					
CLASS B					

D. NOTES ON FOUNDATION

1. FOOTING ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 1200 PSF (67.5 kPa) AT A MINIMUM DEPTH OF 2.0 METERS FROM THE NATURAL GRADE LINE. CONTRACTOR SHALL REPORT IN WRITING TO THE STRUCTURAL ENGINEER ON THE ACTUAL SOIL CONDITIONS UNCOVERED AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL BEFORE DEPOSITING CONCRETE.
2. NO FOOTING SHALL REST ON FILL FOOTINGS FOR CHB WALLS AND OTHER MINOR STRUCTURES SHALL BE EMBEDDED AT LEAST 750 mm FROM THE NATURAL GRADE LEVEL.
3. PROVIDE TEMPORARY REMOVAL OF WATER FROM ANY SOURCE DURING CONSTRUCTION DEWATERING SHALL BE CAREFULLY AND PROPERLY REFORMED TO AVOID DISTURBING THE FOUNDATIONS AND SLAB BEARING SURFACES.

E. NOTES ON SLAB-ON-GRADE

1. THE SOIL SUBGRADE AND FILL LAYERS BELOW ALL SLABS ON GRADE, PAVING AND PIT SLAB SHALL BE MECHANICALLY COMPACTED TO A MINIMUM 95 PERCENT OF THE MODIFIED PROCTOR DENSITY, PER ASTM D1557.
2. ALL SLABS-ON-GRADE SHALL BE PROVIDED WITH A MINIMUM OF 100mm THICK COMPACTED CLEAN COARSE SAND BED.
3. UNLESS OTHERWISE NOTED, ALL BEDDED SLABS SHALL BE REINFORCED WITH 10mm BARS AT 250mm O.C. EACHWAYS AT THE CENTER OF SLAB.
4. PLACE CONCRETE FOR ALL SLABS-ON-GRADE IN CHECKERBOARD FASHION BETWEEN CONSTRUCTION JOINTS IN AREAS OF PLACEMENT. CONSTRUCTION JOINTS SHALL NOT BE FARTHER APART THAN 8.00 METERS IN ANY DIRECTION. ALL SLABS-ON-GRADE SHALL BE SAW CUT ON EACH GRID LINE AND MID BAY LINE (IN BOTH DIRECTION) WITHIN 24 HOURS AFTER CASTING.

TABLE - 2 DEVELOPMENT LENGTH, Ld, IN TENSION

BAR SIZE (mm)	f _c = 28.0 MPa (4000 psi)		f _c = 34.5 MPa (5000 psi)		f _c = 21 MPa (3000 psi)	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
16Ø	350	300	380	300	360	275
20Ø	650	530	680	490	540	425
25Ø	1010	780	910	700	800	650
28Ø	1270	980	1140	870	1050	835

TABLE - 3 DEVELOPMENT LENGTH, Ld, IN TENSION FOR RC GIRDERS (SEISMATIC & NON-SEISMATIC)

BAR SIZE (mm)	f _c = 28 MPa		f _c = 35 MPa		f _c = 21 MPa	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
16Ø	350	300	350	350	350	275
20Ø	580	580	580	580	580	425
25Ø	1010	1010	910	910	830	650
28Ø	1270	1270	1140	1090	835	650
32Ø	1650	1650	1450	1450	1250	835
36Ø	2570	2570	2300	2300	2200	1250

NOTE: FOR BUNDLE BARS (3 BUNDLE) MULTIPLY ABOVE TABLE BY 1.3

7. THE REQUIRED LENGTH OF LAP FOR COMPRESSION SPLICES SHALL BE AS SHOWN IN TABLE 4.

TABLE - 4 LENGTH OF LAP COMPRESSION SPLICES (mm)

BAR SIZE (mm)	f _c = 28.0 MPa (4000 psi)		f _c = 34.5 MPa (5000 psi)		f _c = 21 MPa (3000 psi)	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
16Ø	320	320	320	320	320	320
20Ø	630	630	630	630	630	630
25Ø	750	750	750	750	750	750
28Ø	820	820	820	820	820	820
32Ø	950	950	950	950	950	950
36Ø	1050	1050	1050	1050	1050	1050

8. CLEAR CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS:
 1. CONCRETE CAST AGAINST EARTH - 75mm
 2. CONCRETE EXPOSED TO EARTH - 20mm to 35mm BARS and SMALLER
 3. CONCRETE NOT EXPOSED TO EARTH OR WEATHER - 50mm Slabs, Walls and Joints - 40mm Beams and Columns - 40mm

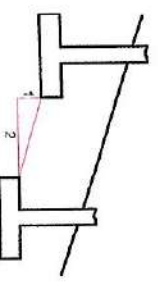

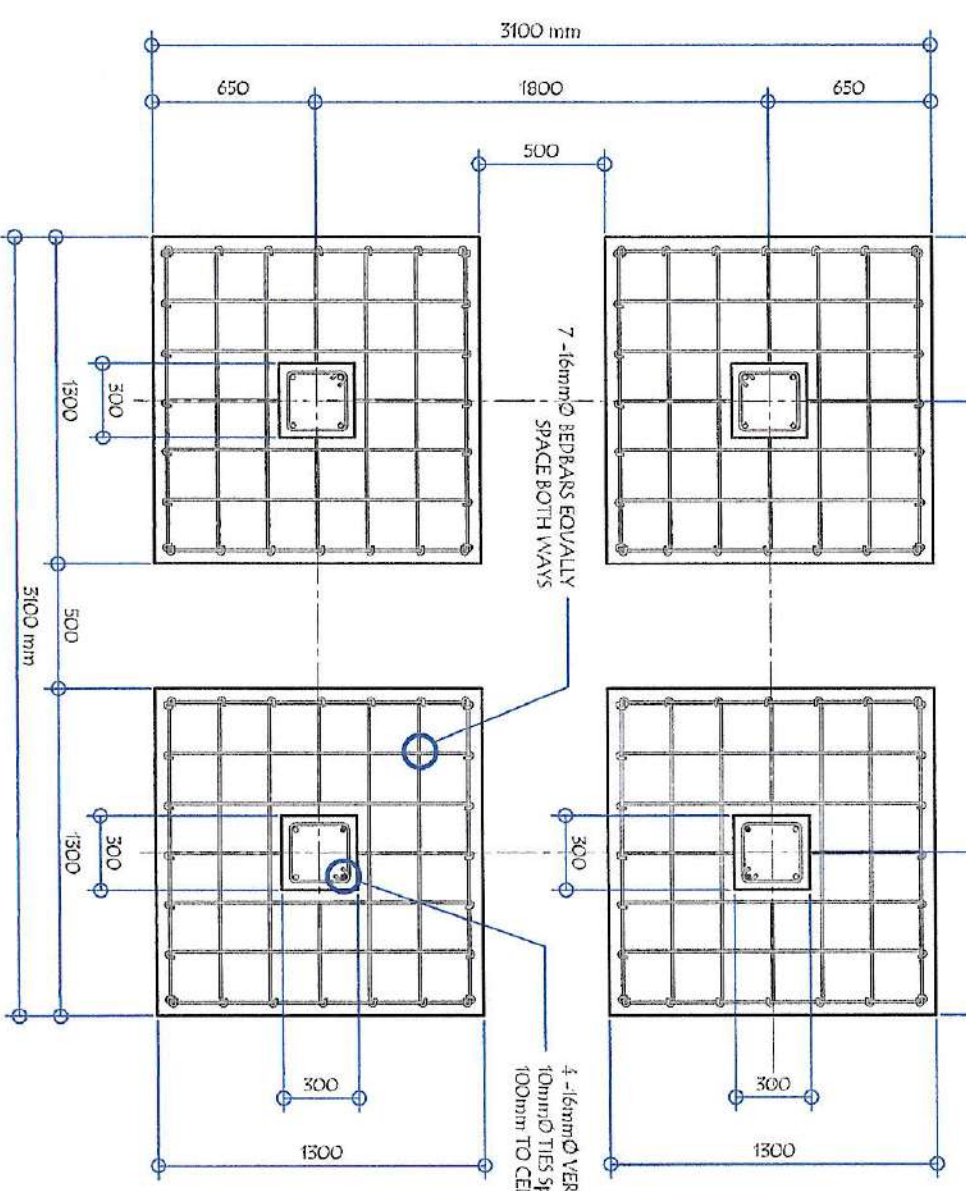


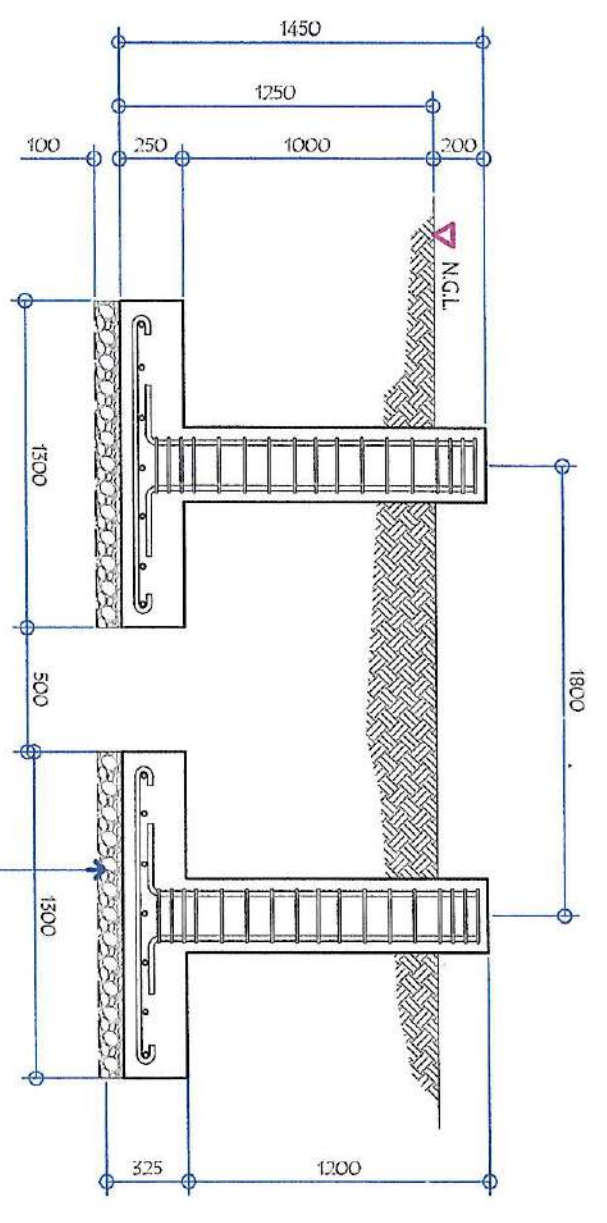
FIGURE 2. DETAIL OF LIMITING SLOPE OF ADJACENT FOOTINGS

 GENERAL SANTOS CITY WATER DISTRICT E. FERMINER STREET, BRGY. LARGO, GEN. SANTOS CITY ENGINEERING & CONSTRUCTION DEPARTMENT PLANNING AND DESIGN DIVISION TEL. NO. : (083) 552-3924	REG. NO. 0107545 CIVIL ENGINEER DANILO M. HOSADOR, JR. DATE: 01/07/2024	PROJECT AND LOCATION PROPOSED CONSTRUCTION OF LIFTING STRUCTURE FRAME	CHECKED & REVIEWED: ENGR. TRINELA CELIA N. DANDAN CIV. PBD
REG. NO. 10000000 DATE: 01/07/2024	TIN NO. 271-941-997 DATE: 01/07/2024	RECOMMEND APPROVAL: ENGR. ROGELIO A. BEBAYA, JR. AGM OPERATIONS & TECHNICAL SERVICES	APPROVED: ENGR. C.F.A. CESA DATE: FEB. 2024
SHEET CONTENTS AS SHOWN		SHEET NO. 04 / 05	

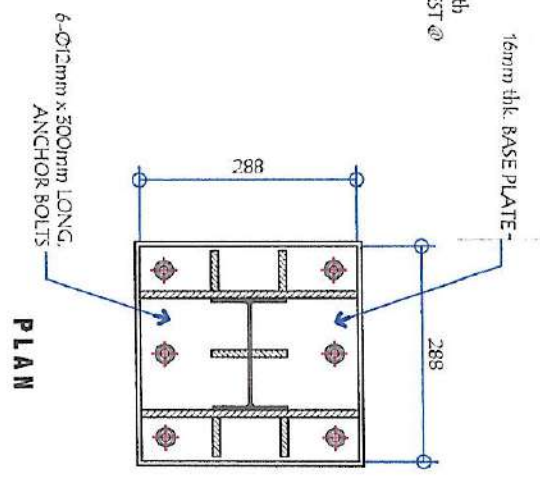
FOUNDATION PLAN
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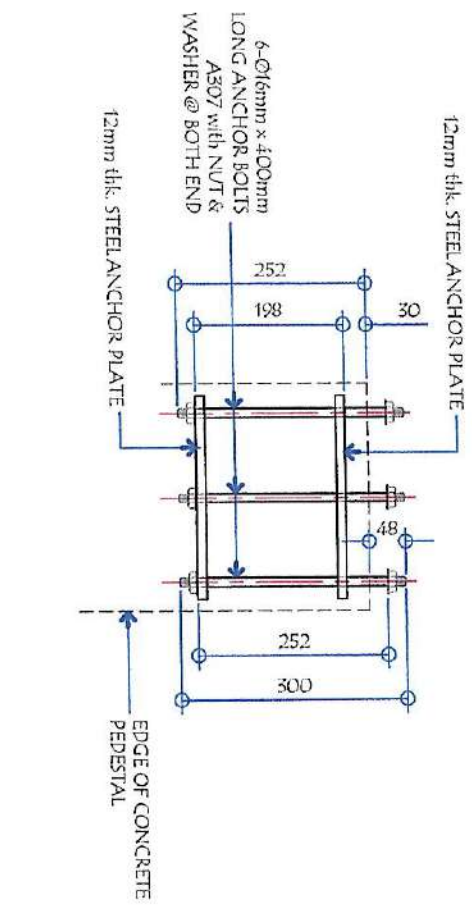
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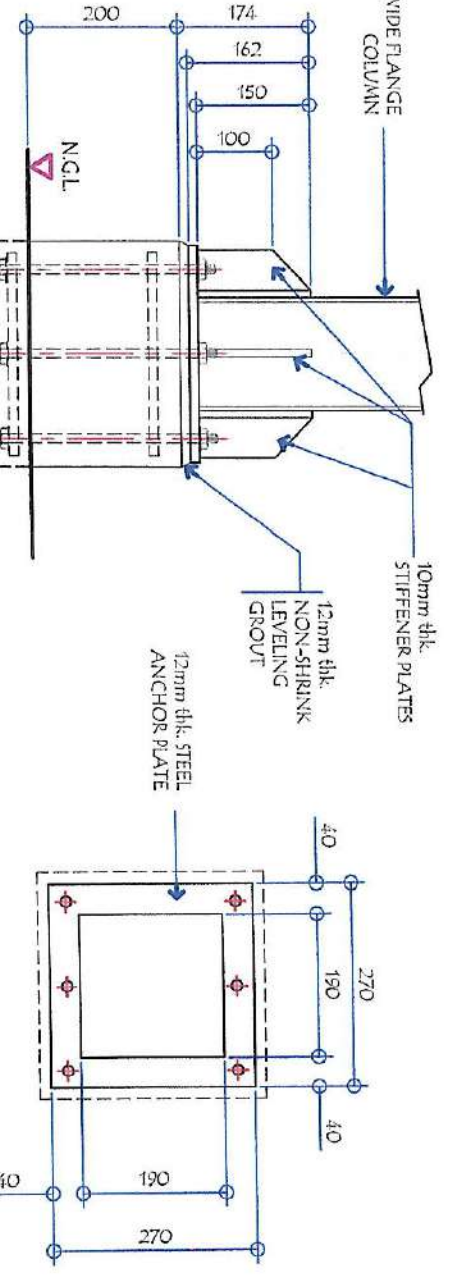
COLUMN BASE PLATE DETAIL
 SCALE: 1:10 M



ANCHOR BOLT DETAIL
 SCALE: 1:10 M



ANCHOR PLATE DETAIL
 SCALE: 1:10 M



PERSPECTIVE (BASE PLATE)

