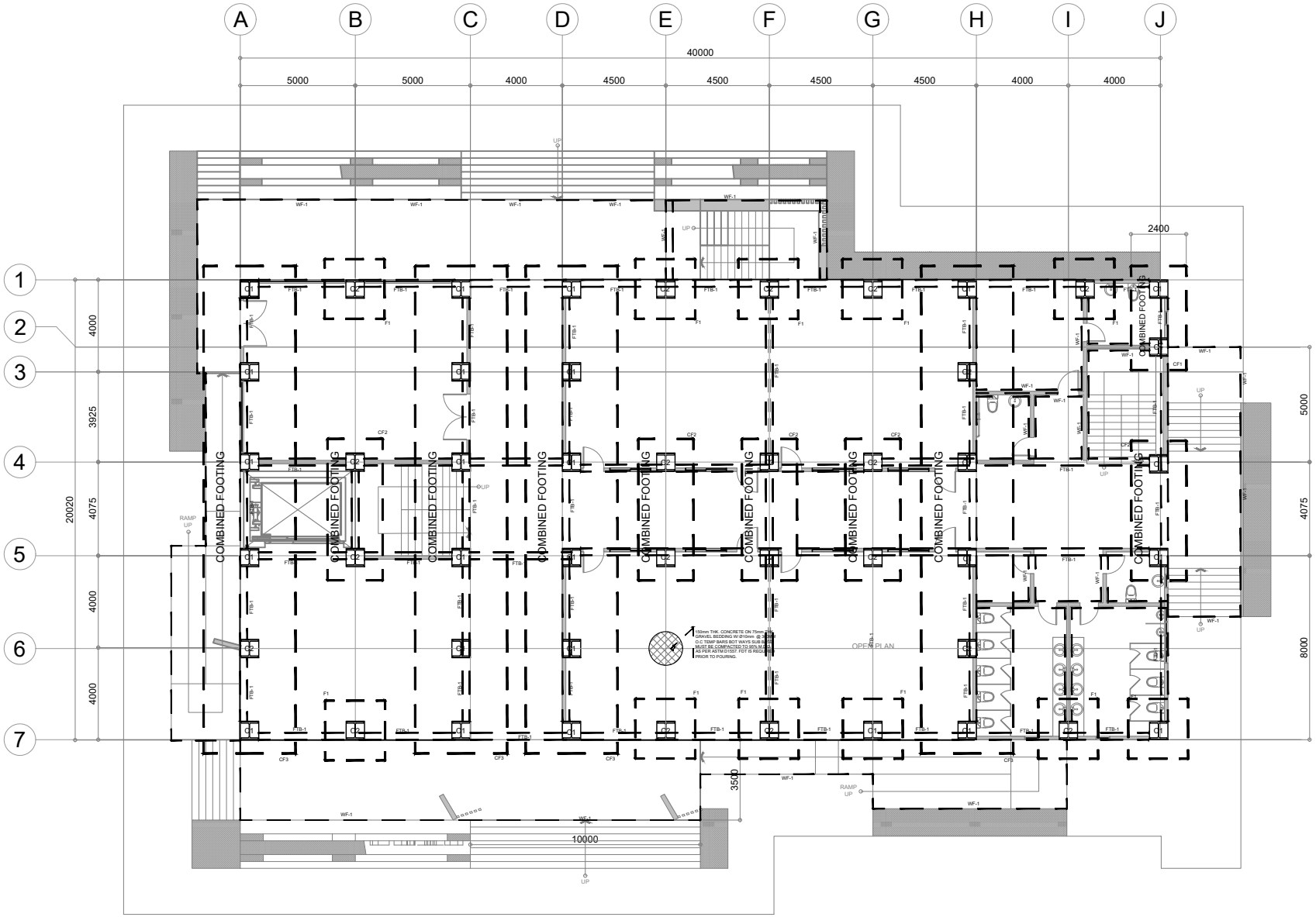
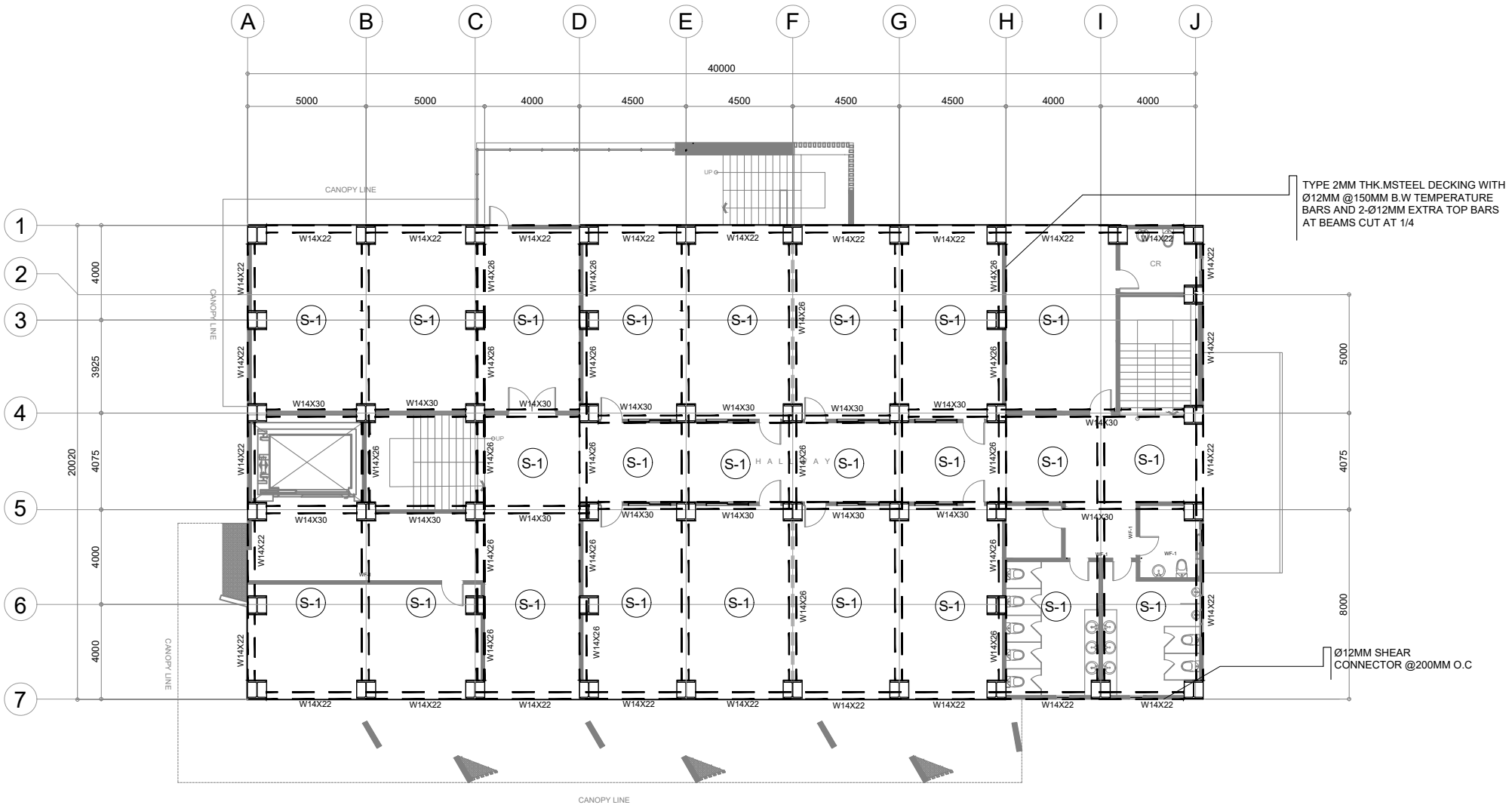


FOUNDATION PLAN

SCALE 1:180

REP. ACT 9266 SEC. 33 DRAWINGS AND COPIES THEREOF, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF THE ARCHITECT, WHETHER THE WORK FOR WHICH THEY ARE MADE BE EXECUTED OR NOT, AND NOT TO BE REPRODUCED OR USED ON OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH THE ARCHITECT.	**ARCHITECT:** Architect PRC REG. No. : Validity : PTR No. : Date : Place : TIN :	**PROJECT TITLE:** CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING **LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS**	**PREPARED BY:** FAYE MICHELLE A. BANIAGO AutoCAD Operator **CHECKED BY:** ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	**REVIEWED BY:** ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO **APPROVED BY:** MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President	**SHEET CONTENT:** AS SHOWN	**SHEET NO:**
		REV.:				

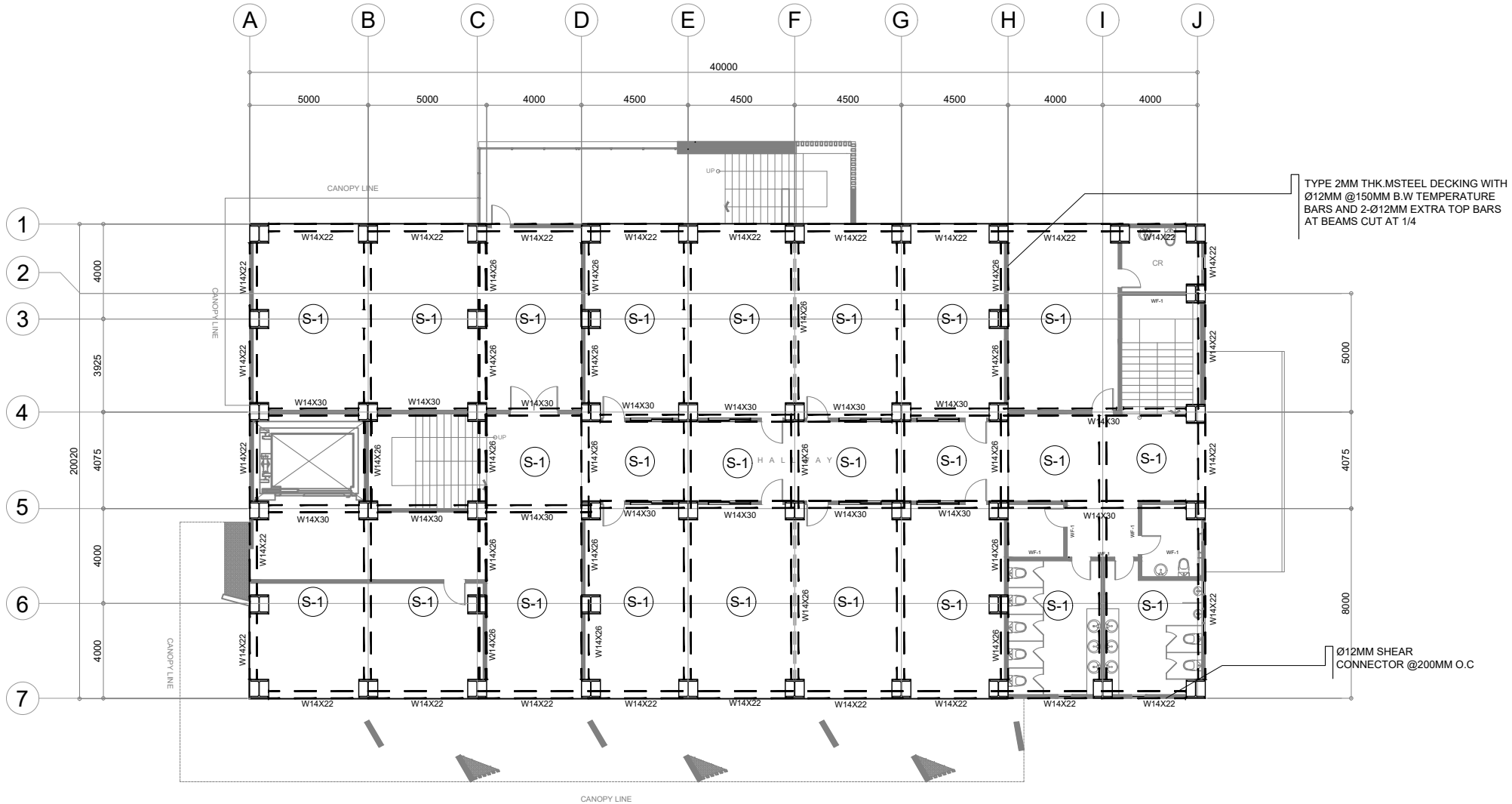


SECOND FLOOR FRAMING PLAN

SCALE 1:170

REP. ACT 9266 SEC. 33

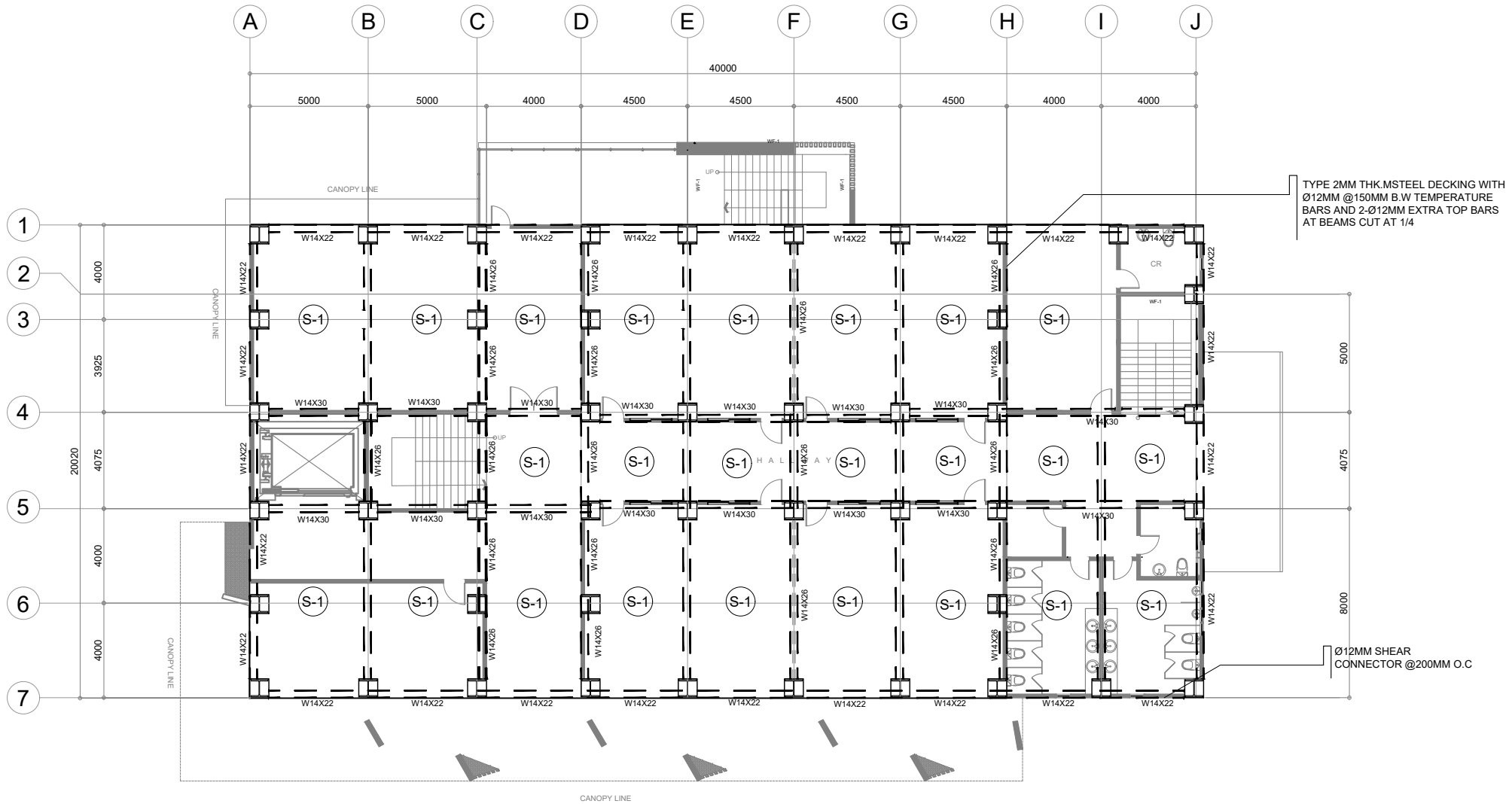
ARCHITECT:	PROJECT TITLE:	PREPARED BY:	REVIEWED BY:	SHEET CONTENT:	SHEET NO:
Architect	CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING	FAYE MICHELLE A. BANIAGO AutoCAD Operator	ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO	AS SHOWN	
PRC REG. No. : / Validity :		CHECKED BY:	APPROVED BY:		
PTR No. : / Date :	LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:	ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President		
Place : / TIN :					



THIRD FLOOR FRAMING PLAN

SCALE 1:170

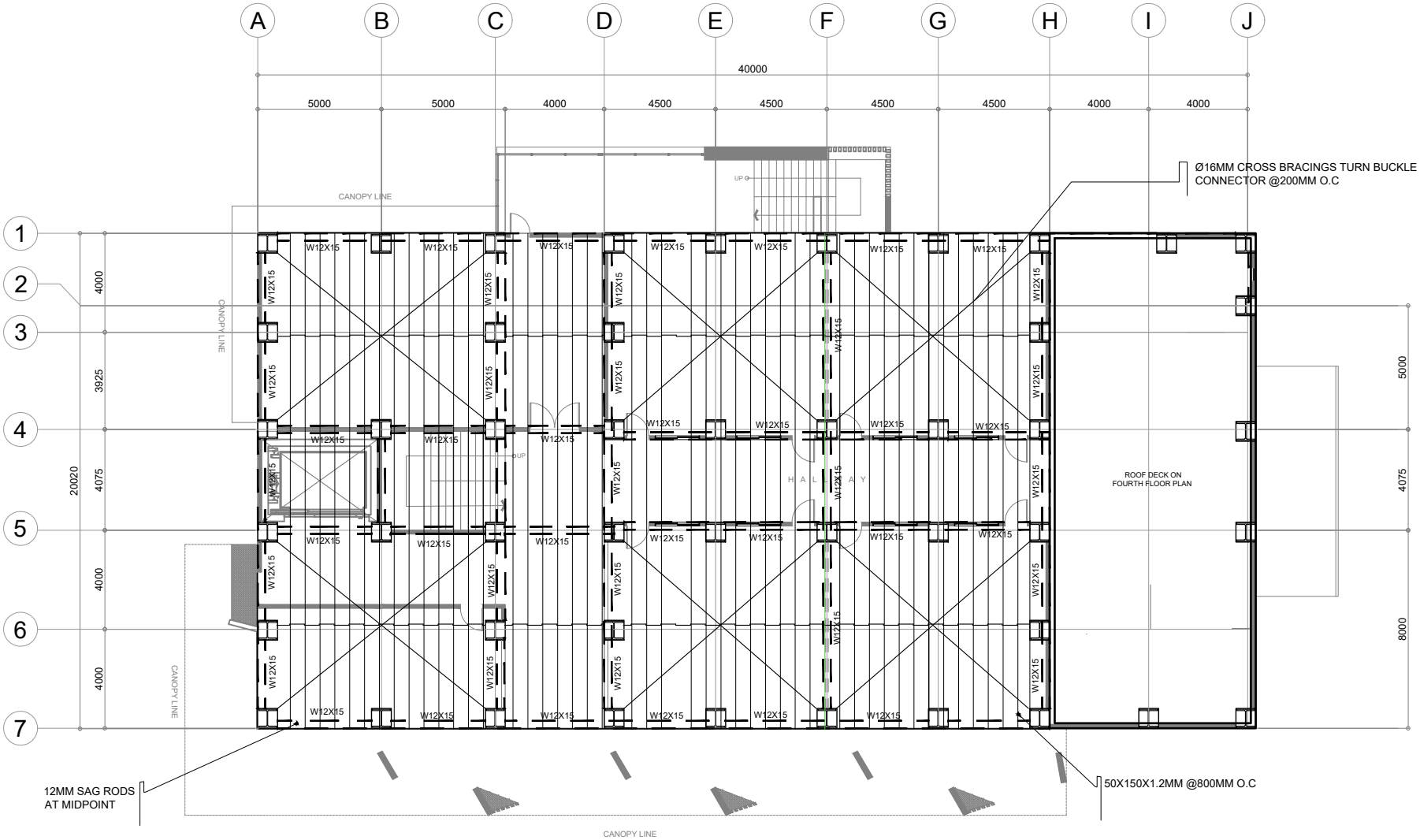
ARCHITECT:	PROJECT TITLE:	PREPARED BY:	REVIEWED BY:	SHEET CONTENT:	SHEET NO:
Architect	CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING	FAYE MICHELLE A. BANIAGO AutoCAD Operator	ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO	AS SHOWN	
PRC REG. No. : / Validity :		CHECKED BY:	APPROVED BY:		
PTR No. : / Date :	LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:	ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President		
Place : / TIN :					



FOURTH FLOOR FRAMING PLAN

SCALE 1:170

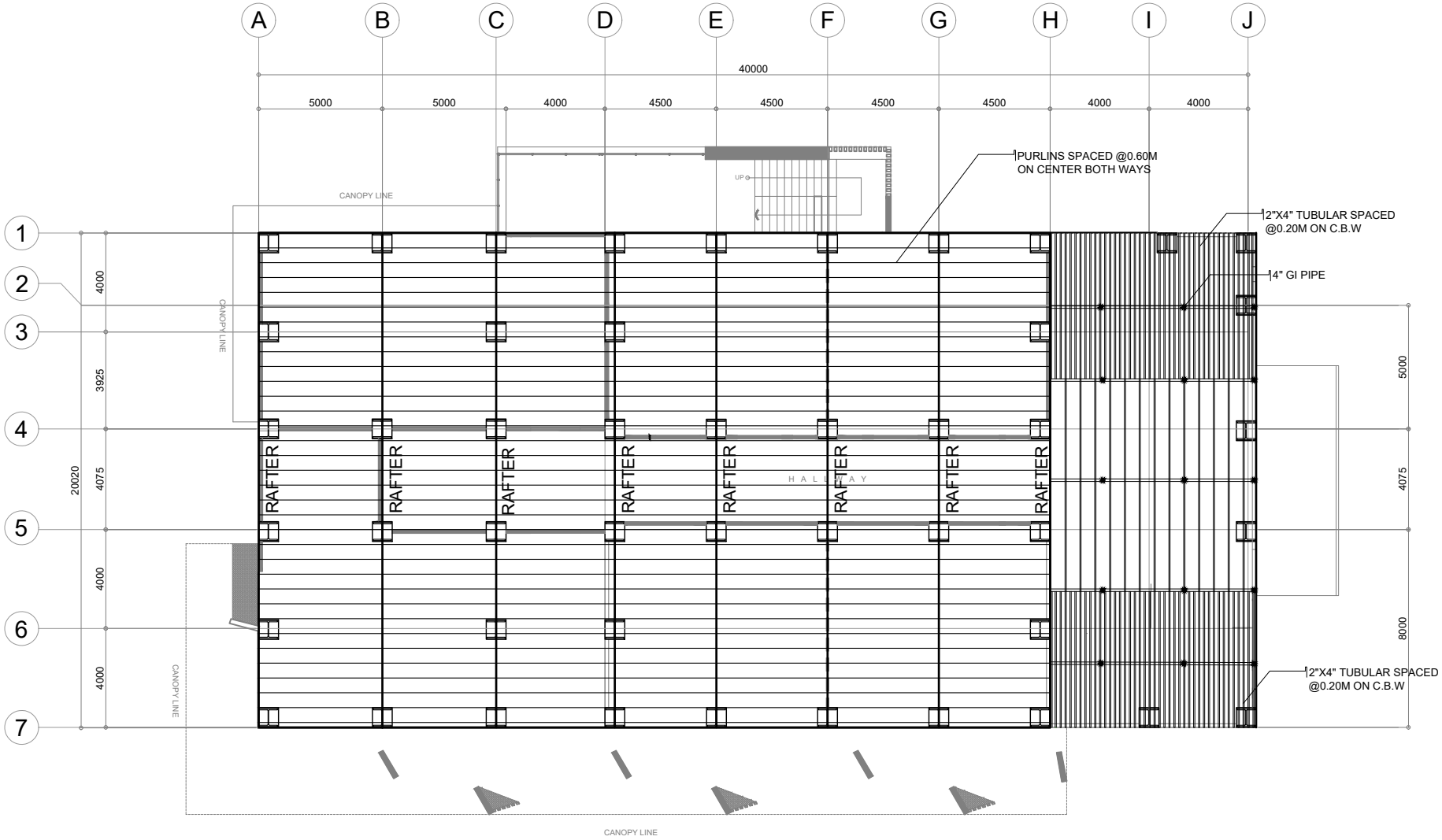
REP. ACT 9266 SEC. 33 DRAWINGS AND COPIES THEREOF, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF THE ARCHITECT, WHETHER THE WORK FOR WHICH THEY ARE MADE BE EXECUTED OR NOT, AND NOT TO BE REPRODUCED OR USED ON OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH THE ARCHITECT.	**ARCHITECT:** Architect PRC REG. No. : Validity : PTR No. : Date : Place : TIN :	**PROJECT TITLE:** CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:	**PREPARED BY:** FAYE MICHELLE A. BANIAGO AutoCAD Operator **CHECKED BY:** ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	**REVIEWED BY:** ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO **APPROVED BY:** MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President	**SHEET CONTENT:** AS SHOWN	**SHEET NO:**



ROOF BEAM FRAMING PLAN

SCALE 1:170

REP. ACT 9266 SEC. 33 DRAWINGS AND COPIES THEREOF, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF THE ARCHITECT, WHETHER THE WORK FOR WHICH THEY ARE MADE BE EXECUTED OR NOT, AND NOT TO BE REPRODUCED OR USED ON OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH THE ARCHITECT.	**ARCHITECT:** Architect PRC REG. No. : Validity : PTR No. : Date : Place : TIN :	**PROJECT TITLE:** CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:	**PREPARED BY:** FAYE MICHELLE A. BANIAGO AutoCAD Operator **CHECKED BY:** ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	**REVIEWED BY:** ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO **APPROVED BY:** MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President	**SHEET CONTENT:** AS SHOWN	**SHEET NO:**



ROOF FRAMING PLAN

SCALE 1:170

REP. ACT 9266 SEC. 33 DRAWINGS AND COPIES THEREOF, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF THE ARCHITECT, WHETHER THE WORK FOR WHICH THEY ARE MADE BE EXECUTED OR NOT, AND NOT TO BE REPRODUCED OR USED ON OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH THE ARCHITECT.	ARCHITECT: Architect PRC REG. No. : Validity : PTR No. : Date : Place : TIN :	PROJECT TITLE: CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:	PREPARED BY: FAYE MICHELLE A. BANIAGO AutoCAD Operator CHECKED BY: ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	REVIEWED BY: ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO APPROVED BY: MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President	SHEET CONTENT: AS SHOWN	SHEET NO:

A. DESIGN CRITERIA

1. DESIGN REFERENCES
   A. AMERICAN CONCRETE INSTITUTE (ACI PUBLICATIONS) :
      ACI 318–08M BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
      ACI DETAILING MANUAL 2004 FOR DETAILS AND DETAILING OF CONCRETE REINFORCEMENT
   B. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) PUBLICATION:
      MANUAL OF STEEL CONSTRUCTION, THIRTEENTH EDITION. "AISC 360–05"
   C. AMERICAN WELDING SOCIETY (AWS) PUBLICATION D.1.1–2000.
   D. AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM)
   E. NATIONAL STRUCTURAL CODE OF THE PHILIPPINES (NSCP 2015) VOL. 1, 6TH EDITION
   F. ASSOCIATION OF STRUCTURAL ENGINEERS OF THE PHILIPPINES
      (ASEP) HANDBOOK OF STRUCTURAL STEEL SHAPES AND SECTIONS, 1994
   G. UNIFORM BUILDING CODE (UBC), VOL. 2 1997 EDITION
2. DESIGN LOADS
   A. DEAD LOADS (DL) :

A.1	CONCRETE	24.00	kN/m^3
A.2	STRUCTURAL STEEL	77.00	kN/m^3
A.3	SOIL	18.00	kPa
A.4	CEILING	0.40	kPa
A.5	FLOOR FINISH	1.10	kPa
A.6	MOVABLE PARTITION	0.20	kPa
A.7	MECH/ELEC DUCT	0.20	kPa
A.8	PARITITION	0.50	kPa

   B. LIVE LOADS (LL) :

B.1	WARDS AND ROOMS	1.90	kPa
B.2	LAB. AND OPERATING ROOMS	2.90	kPa
B.3	CORRIDORS ABOVE GROUND FLOOR	3.80	kPa
B.4	OFFICE	2.40	kPa
B.5	COMFORT ROOM	2.40	kPa
B.6	LIGHT STORAFE	2.40	kPa
B.8	ROOF	1.00	kPa

   C. LATERAL LOADS :

   C.1 WIND LOAD (WL)
   THE WIND LOAD ON STRUCTURE AND BUILDING SHALL BE CALCULATED, BASED ON NATIONAL STRUCTURAL CODE OF THE PHILIPPINES, CONSIDERING BASIC WIND SPEED

BASIC WIND SPEED , V	=	270 kM/hour
OCCUPANCY CATEGORY	=	IV
IMPORTANCE FACTOR, Iw	=	1.0
EXPOSURE CATEGORY	=	B
VELOCITY PRESSURE AT HEIGHT 'Z', qz	=	47.3x10–6.Kz.Kzt.V2.Iw

   THIS VELOCITY PRESSURE SHALL BE USED ALONG WITH FORCE COEFFICIENTS TO CALCULATE WIND LOAD ON SPECIFIC STRUCTURE.

   C.2 SEISMIC LOAD , E
   SEISMIC LOADS FOR BUILDING STRUCTURES ARE CALCULATED BASED ON THE FOLLOWING:

$$E = \rho Eh + Ev$$
$$Em = Vo Eh$$

   WHERE:
   E = EARTHQUAKE LOAD ON THE STRUCTURE
   Eh = THE EARTHQUAKE LOAD DUE TO THE BASE SHEAR, V, OR THE DESIGN LATERAL FORCE Fp.
   Em = THE ESTIMATED MAXIMUM EARTHQUAKE FORCE THAT CAN BE DEVELOPED IN THE STRUCTURE.
   Ev = THE LOAD EFFECT RESULTING FROM THE VERTICAL COMPONENT OF THE EARTHQUAKE GROUND MOTION AND IS EQUAL TO AN ADDITIONAL OF 0.5 Ca I D TO THE DEAD LOAD EFFECT. D, FOR STRENGTH DESIGN, AND MAY BE TAKEN AS ZERO FOR ALLOWABLE STRESS DESIGN.

   Vo = THE SEISMIC FORCE AMPLIFICATION FACTOR THAT IS REQUIRED TO ACCOUNT FOR STRUCTURAL OVERSTRENGTH.
   ρ = RELIABILITY/REDUNDANCY FACTOR WHICH SHALL NOT BE TAKEN LESS THAN 1.0 AND GREATER THAN 1.5, IS GIVEN BY THE FOLLOWING FORMULA:

$$\rho = 2 - \frac{6.1}{rmax\sqrt{AB}}$$

   WHERE:
   rmax = THE MAXIMUM ELEMENT–STORY SHEAR RATIO. FOR A GIVEN DIRECTION OF LOADING, THE ELEMENT–STORY SHEAR RATIO IS THE RATIO OF THE DESIGN OF STORY SHEAR IN THE HEAVILY LOADED SINGLE ELEMENT DIVIDED BY THE TOTAL DESIGN STORY SHEAR.

   FOR MOMENT FRAMES, IT SHALL BE TAKEN AS THE MAXIMUM OF THE SUM OF THE SHEARS IN ANY TWO ADJACENT COLUMNS IN A MOMENT FRAME BAY DIVIDED BY THE STORY SHEAR. FOR COLUMNS COMMON TO TWO BAYS, 70 PERCENT OF THE SHEAR IN THAT COLUMN MAY BE USED IN THE COLUMN SHEAR SUMMATION.

   AB = THE GROUND FLOOR AREA OF THE STRUCTURE.

   EARTHQUAKE BASE SHEAR, (V) THE TOTAL DESIGN BASE SHEAR IN A GIVEN DIRECTION SHALL BE DETERMINED FROM THE FOLLOWING FORMULA:

$$V = \frac{Cv\ I}{R\ T}(W)$$

   AND NEED NOT EXCEED THE FOLLOWING:

$$V = \frac{2.5\ Ca\ I}{R}(W)$$

   BUT SHALL NOT BE LESS THAN THE FOLLOWING:

$$V = 0.11\ Ca\ I\ W$$

   IN ADDITION FOR SEISMIC ZONE 4, THE TOTAL BASE SHALL NOT LESS ALSO BE THAN THE FOLLOWING:

$$V = \frac{8.5\ Z\ Nv\ I}{R}(W)$$

   WHERE:

SEISMIC ZONE FACTOR,	Z = 0.40
IMPORTANCE FACTOR	I = 1.5
GLOBAL DUCTILITY CAPACITY	R = 8.0 (SMRF)
SEISMIC FORCE OVERSTRENGTH FACTOR	Vo = 2.8
SEISMIC SOURCE TYPE	= A
NEAR – SOURCE FACTOR, Nv	= 1.072
NEAR – SOURCE TYPE, Na	= 1.00

B. GENERAL NOTES:

A. IN THE INTERPRETATION OF THESE DRAWINGS, INDICATED DIMENSIONS SHALL GOVERN AND DISTANCES OR SIZES SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.

B. THE CONTRACTOR SHALL COORDINATE WITH THE AR, ME, SE, EE, AND OTHER UTILITIES AND EQUIPMENT PLANS FOR THE EXACT SIZE, NUMBER AND LOCATIONS OF ALL EVES OR OPENINGS THRU FLOOR SLABS, SLE BEAMS AND WALLS AND ALSO BUILDING DIMENSIONS.

C. BUT LIMITED TO AND SHALL NOT VIOLATE ON THE REQUIREMENT OF THESE PLAN, SEE NOTES ON PIPE SLEEVES.

D. ALL REINFORCED CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH THE ACI–318–05 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.

E. ALL SLABS, BEAMS, GIRDERS AND OTHER STRUCTURAL ELEMENTS WHICH ARE NOT INDICATED, DETAILED, DESIGNATED OR INADVERTENTLY OMITTED BUT ARE NECESSARY TO BE COORDINATED WITH ARCHITECTURAL AND OTHER ALLIED ENGINEERING PLANS AS WELL AS TO COMPLETE THE STRUCTURAL WORKS IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT UP DURING PRE–BIDS/MEETINGS/ NEGOTIATIONS. IT IS UNDERSTOOD THAT THE CONTRACTOR HAS PROVIDED AND INCLUDED ALL THESE ITEMS IN THEIR BID.

C. NOTES ON CONCRETE MIXES AND PLACING

A. UNLESS OTHERWISE INDICATED IN PLANS OR NOTED IN THE SPECIFICATIONS THE MINIMUM 28–DAYS CYLINDER COMPRESSIVE STRENGTH OF CONCRETE f'c, SHALL BE AS FOLLOWS:

A. FOUNDATION, STP, CISTERN TANK	fc' = 3000 psi
B. COLUMNS, BEAMS, GIRDERS AND SUSPENDED SLAB, RC WALL	fc' = 3000 psi
C. SLAB ON GRADE	fc' = 3000 psi
D. RETAINING WALL	fc' = 3000 psi

B. CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION, RE–HANDLING OR FLOWING. PLACING SHALL BE DONE PREFERABLY WITH BUGGIES, BUCKETS OR WHEEL BARROWS. NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUGGIES, WHEEL BARROWS OR BUCKETS, IN WHICH CASE, THEY SHALL NOT EXCEED SIX THOUSAND (6000mm) IN AGGREGATE LENGTH. 3. NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER AND ONLY FOR UNUSUAL CONDITIONS WHERE VIBRATION IS EXTREMELY DIFFICULT TO ACCOMPLISH.

D. NOTES ON REINFORCING STEEL BARS

A. ALL REINFORCING STEEL BARS SHALL BE NEW BILLET, HOT ROLLED, WELDABLE,DEFORMED BARS CONFORMING TO THE SPECIFICATIONS OF PNS 49: 1986 (ASTM 615) WHOSE GRADE IS SHOWN ON TABLE 1.

TABLE–1

GRADE	BAR DIAMETER
GRADE 275 (Fy = 40 ksi)	12MM⌀ & BELOW
GRADE 275 (Fy = 40 ksi)	16MM⌀ & ABOVE

B. THE SUPPLEMENTARY REQUIREMENTS OF WELDABLE DEFORMED REINFORCING BARS SHALL BE AS FOLLOWS:

1. THE MAXIMUM YIELD STRENGTH OF WELDABLE BARS = 540 MPa.
2. THE TENSILE STRENGTH SHALL NOT BE LESS THAN 1.25 TIMES THE ACTUAL YIELD STRENGTH.

C. ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS, SECURED IN THE REQUIRED LOCATION IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE BUILDING CODE AND THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI – 315.

D. ALL REINFORCING BARS SHALL BE CLEANED THOROUGHLY OF ALL LOOSE RUST, SOIL OR OTHER MATERIAL IMMEDIATELY PRIOR TO PLACING CONCRETE.

E. THE REQUIRED LENGTH OF LAP FOR TENSION SPLICES IS BASED ON THE DEVELOPMENT LENGTH, LD, SHOWN IN TABLE 2 AND TABLE 3 FOR RC BEAMS AND GIRDERS, RESPECTIVELY AND ON THE FOLLOWING CLASSIFICATIONS:

TENSION SPLICE CLASSIFICATION	SPLICE LENGTH
CLASS A	1.0 Ld
CLASS B	1.3 Ld

TABLE–2
DEVELOPMENT LENGTH, Ld, in TENSION

BAR SIZE (mm)	f'c=20.7 MPa (3,000psi)		f'c=27.6 MPa (4,000psi)		f'c=34.5 MPa (5,000psi)		f'c=41.4 MPa (6,000psi)		f'c=55.2 MPa 8,000psi)		f'c=69.0 MPa (10,000psi)	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
10⌀	435	220	375	200	340	200	310	200	300	200	300	200
12⌀	520	265	450	230	405	215	370	215	320	215	300	215
16⌀	695	350	600	305	540	285	490	285	425	285	380	285
20⌀	1085	440	755	380	840	360	615	360	665	360	475	360
25⌀	1675	685	1450	595	1360	560	1185	560	1025	560	920	560
28⌀	1875	765	1625	665	1455	625	1325	625	1150	625	1030	625
32⌀	2145	875	1855	760	1660	715	1575	715	1315	715	1175	715
36⌀	2410	965	2090	855	1870	805	1705	805	1475	805	1320	805

F. TOP BARS ARE HORIZONTAL BARS WITH AT LEAST 300 mm OF CONCRETE CAST BELOW IT.

TABLE–3
SPLICE LENGTH, Lst, in TENSION

BAR SIZE (mm)	f'c=20.7 MPa (3,000psi)		f'c=27.6 MPa (4,000psi)		f'c=34.5 MPa (5,000psi)		f'c=41.4 MPa (6,000psi)		f'c=55.2 MPa 8,000psi)		f'c=69.0 MPa (10,000psi)	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
10⌀	390	300	490	300	440	300	400	300	390	300	390	300
12⌀	680	360	585	360	525	360	480	360	415	360	390	360
16⌀	905	480	785	480	700	480	640	480	555	480	495	480
20⌀	1130	600	980	600	1095	600	800	600	865	600	620	600
25⌀	1740	750	1885	1085	1685	1085	1540	1085	1335	1085	1195	1085
28⌀	1950	835	2110	1215	1890	1215	1725	1215	1495	1215	1335	1215
32⌀	2230	955	2410	1385	2160	1385	1970	1385	1205	1385	1525	1385
36⌀	2510	1075	2715	1560	2425	1560	2215	1560	1920	1560	1715	1560

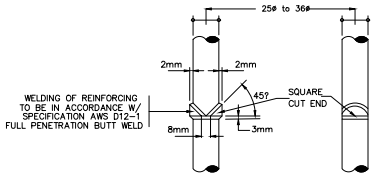
NOTE: FOR BUNDLE BARS (3 BUNDLE) MULTIPLY ABOVE TABLE BY 1.3

G. 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 (4,000psi)	f'c = 34.5 MPa (5,000psi)	f'c = 41.4 MPa (6,000psi)
16	320	320	320
20	600	600	600
25	750	750	750
28	820	820	820
32	950	950	950
36	1050	1050	1050

H. A FULL WELDED SPLICES SHALL HAVE BARS BUTTED AND WELDED TO DEVELOP IN TENSION AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH fy, OF THE BAR. (SEE FIGURE 1)



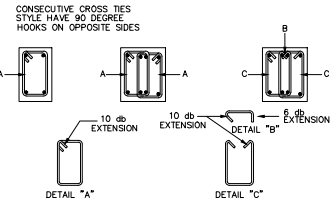
TYPICAL WELDED SPLICE DETAILS FOR BARS 25⌀ TO 36⌀

FIGURE 1

I. ALL WELDING OF REINFORCEMENT SHALL CONFORM TO THE PROVISIONS OF THE STRUCTURAL WELDINGCODE–REINFORCING STEEL, ANS D1.4

I. A FULL MECHANICAL CONNECTION (REBAR SPLICER) SHALL DEVELOP IN TENSION OR COMPRESSION,AS REQUIRED, 125 PERCENT OF THE SPECIFIED YIELD STRENGTH FY, OF THE BAR. IF USED, SUBMIT SAMPLE FOR APPROVAL OF THE STRUCTURAL ENGINEER.

K. CLEAR CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS:
   1) CONCRETE CAST AGAINST EARTH – 75 mm
   2) CONCRETE EXPOSED TO EARTH OR WEATHER–
      20 mm TO 36 mm BARS – 50 mm
      16 mm BARS AND SMALLER – 40 mm
   3) CONCRETE NOT EXPOSED TO EARTH OR WEATHER–
      SLABS, WALLS, JOINTS – 20 mm
      BEAMS AND COLUMNS – 40 mm



SINGLE – AND TWO – PIECE HOOPS

FIGURE 2

L. REBAR HOOKS
   A) HOOKS SHALL BE USED IN REBAR AT
      i) ALL THE ENDS OF SIMPLE BEAMS.
      ii) ALL THE ENDS OF TENSION REBAR AND CANTILEVER BEAMS.
   B) REBAR HOOKS MUST BE CONSTRUCTED USING COLD METHODS.
   C) HOOK SHAPES MUST BE ADJUSTED TO SUIT TABLE 5.

TABLE–5
HOOK SHAPES AT THE END OF REBAR.

ANGLE	SHAPE	STEEL ⌀ (mm)	⌀ OF INSIDE HOOK (d)	REBAR END LENGTH (A)
180 DEGREES		≤25	6d	4d OR 65 MINIMUM
		>25 AND ≤32	8d	
135 DEGREES (STIRRUPS & TIES)		≤16	4d	6d OR 75 MINIMUM
		>16 AND ≤25	6d	
90 DEGREES		≤25	6d	12d
		>25 AND ≤32	8d	

INSTALLATION AND SUPERVISION

A. EVERY REBAR INTERSECTION IS TO BE TIED WITH STEEL WIRE.
B. TO RETAIN THE DISTANCE BETWEEN REBARS, USE SPACER REBARS.
C. MIN. DISTANCE BETWEEN REBARS IS THE GREATER OF:
   1.5 x d OR – FOR COMPRESSION MEMBERS
   40mm
   1 x d OR – FOR OTHERS
   25mm
D. MAXIMUM DISTANCE BETWEEN REBAR IN WALLS AND SLAB:
   3 X MEMBER THICKNESS OR 450mm FOR BUNDLED BARS,
   REFER TO NSCP–2001.

E. NOTES ON SLAB–ON–GRADE

A. THE SOIL SUBGRADE AND FILL LAYERS BELOW ALL SLABS ON GRADE, PAVING AND PIT SLABS SHALL BE MECHANICALLY COMPACTED IN LAYERS TO A MINIMUM OF 95 PERCENT OF THE MODIFIED PROCTOR DENSITY, PER ASTM D1557.

B. ALL SLABS–ON–GRADE SHALL BE PROVIDED WITH A MINIMUM OF 100MM THK. COMPACTED CLEAN COARSE GRAVEL BED.
   2.1 THE MAXIMUM YIELD STRENGTH OF WELDABLE BARS = 540 MPa.
   2.2 THE TENSILE STRENGTH SHALL NOT BE LESS THAN 1.25 TIMES THE ACTUAL YIELD STRENGTH.

C. UNLESS OTHERWISE NOTED, ALL BEDDED SLABS SHALL BE REINFORCED WITH 10MM BARS AT 250MM O.C. EACHWAY AT THE CENTER OF SLAB.

D. PLACE CONCRETE FOR ALL SLABS–ON–GRADE IN CHECKERBOARD FASHION BETWEEN CONSTRUCTION JOINTS IN AREAS NOT TO EXCEED 300 SQ. METERS WITH A MINIMUM OF 24 HOURS BETWEEN ADJACENT 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 DIRECTIONS) WITHIN 24 HOURS AFTER CASTING.

E. PROVIDE SAW–CUT & CONSTRUCTION JOINTS.

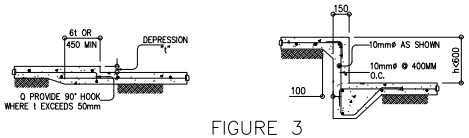
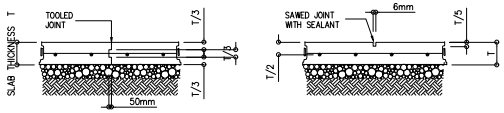


FIGURE 3



CONSTRUCTION JOINT (a)

WEAKENED PLANE JOINT (b)

NOTE:
1. CONTROL JOINTS CAN BE EITHER CONSTRUCTION JOINTS OR WEAKENED PLANE JOINTS.

FIGURE 4

F. NOTES ON FOUNDATION

A. SAFE BEARING CAPACITY (SBC) USED IN THE DESIGN = 90 KPA AT A MINIMUM DEPTH OF 2.0M FROM THE NATURAL GRADE LINE, AS REFERED TO THE OWNER,THE STRUCTURAL ENGINEER–OF–RECORD, UPON NOTIFICATION, SHALL CONDUCT A THOROUGH INSPECTION OF THE FOUNDATION WORKS AFTER EXCAVATION BEFORE FOOTINGS ARE COMPLETED. NO REINFORCING STEEL OR FORMWORKS SHALL BE PLACED PRIOR TO INSPECTION. CONCRETE POURING OF THE FOUNDATION SYSTEM SHALL NOT BE ALLOWED WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER–ON–RECORD.

B. FOUNDATIONS ARE DESIGNED BASED ON GEOTECHNICAL EVALUATION REPORT BY THE GEOTECHNICAL ENGINEER. CONTRACTOR SHALL REPORT TO ENGINEER ON RECORD THE ACTUAL SOIL CAPACITY PRIOR TO CONSTRUCTIONS.

C. STRUCTURAL COLUMN WILL REST ON SPREAD FOOTING REFER TO FOOTING SCHEDULE.

E. PROVIDE TEMPORARY REMOVAL OF WATER FROM ANY SOURCE DURING CONSTRUCTION.

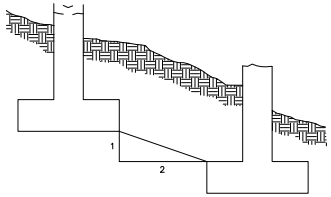
F. CONTRACTOR SHALL DESIGN, INSTALL AND MONITOR EXCAVATIONS RETENTION SYSTEMS, AS REQUIRED FOR PROTECTION OF ADJACENT PROPERTIES AND PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO MINIMIZE SETTLEMENT AND PREVENT DAMAGE TO ADJACENT EXISTING OR NEW CONSTRUCTION.

G. PREPARE CONDITIONS OF CONCRETE SUPPLY AND PLACEMENT OF THE COMPLETE FOUNDATION FOR THE FULL THICKNESS AS A CONTINUOUS MONOLITHIC CASTING.

H. DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL GROUND FLOOR SLABS HAVE BEEN PLACED AND THE CONCRETE HAS ATTAINED THE REQUIRED STRENGTH.

H. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL ELEVATOR DETAILS, REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING AND OTHER TRADES FOR SUBSOIL DRAINAGE SYSTEM, MACHINERY ANCHORS AND OTHER EMBEDDED ITEMS, DEPRESSIONS, FINISHES, DOWELS FOR MASONRY WALLS, CURBS, ETC.

J. SEE TYPICAL DETAIL OF LIMITING SLOPE OF ADJACENT FOOTING AT DIFFERENT ELEVATION (REFER TO FIGURE 5)



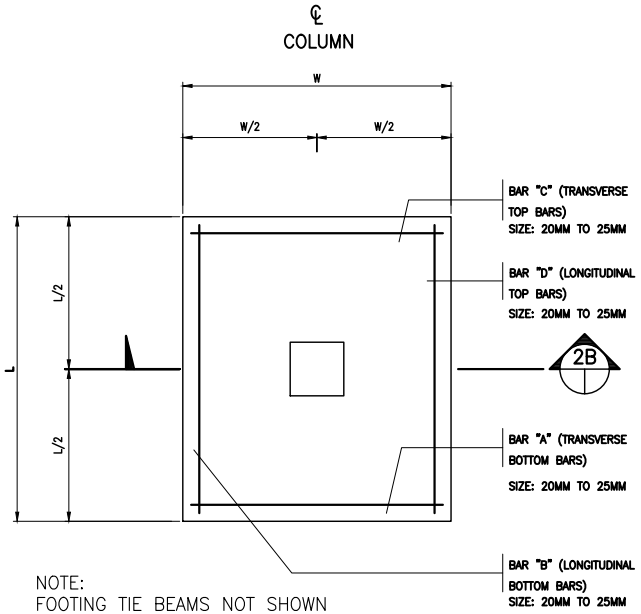
DETAIL OF LIMITING SLOPE OF ADJACENT FOOTINGS

FIGURE 5

INSTITUTIONAL AND PHYSICAL PLANNING AND DEVELOPMENT OFFICE – ROMBLON STATE UNIVERSITY	REP. ACT 9266 SEC. 33	ARCHITECT:	PROJECT TITLE:	PREPARED BY:	REVIEWED BY:	SHEET CONTENT:	SHEET NO:
	DRAWINGS AND COPIES THEREOF, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF THE ARCHITECT, WHETHER THE WORK FOR WHICH THEY ARE MADE BE EXECUTED OR NOT, AND NOT TO BE REPRODUCED OR USED ON OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH THE ARCHITECT.	Architect	CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING	FAYE MICHELLE A. BANIAGO AutoCAD Operator	ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO	AS SHOWN	
		PRC REG. No. : / Validity :		CHECKED BY:	APPROVED BY:		
		PTR No. : / Date :	LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:	ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President		
		Place : / TIN :					

SCHEDULE OF FOOTINGS

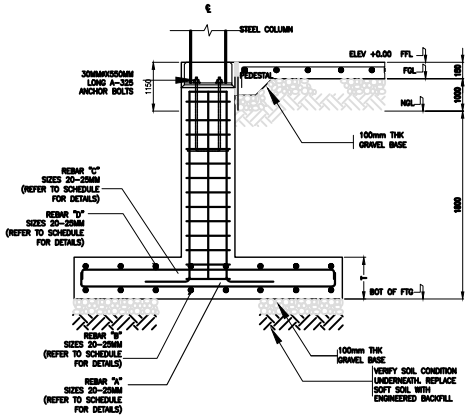
FOOTING DESIG.	DIMENSIONS (mm)				REINFORCEMENT (mm)					CANOPY LINE REMARKS
	D DEPTH	L LENGTH	W WIDTH	T THICKNESS	BAR "A"	BAR "B"	BAR "C"	BAR "D"		
F1	2500	2600	2600	500	20ø@230	20ø@230	20ø@230	20ø@230		ISOLATED
CF1	2500	4500	2400	500	20ø@230	20ø@230	20ø@230	20ø@230		COMBINED FOOTING
CF2	2500	6150	2400	500	20ø@245	20ø@245	20ø@245	20ø@245		COMBINED FOOTING
CF3	2500	21200	4000	500	20ø@125	20ø@125	20ø@245	20ø@245		COMBINED FOOTING



NOTE:
FOOTING TIE BEAMS NOT SHOWN

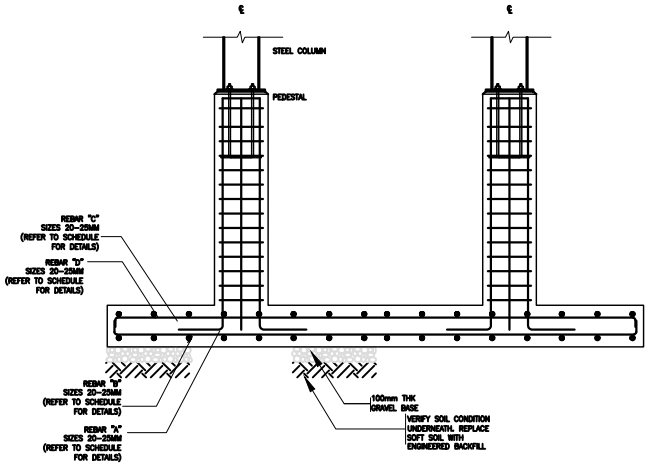
TYP. FOOTING PLAN

NO TO SCALE



TYP. FOOTING SECTION

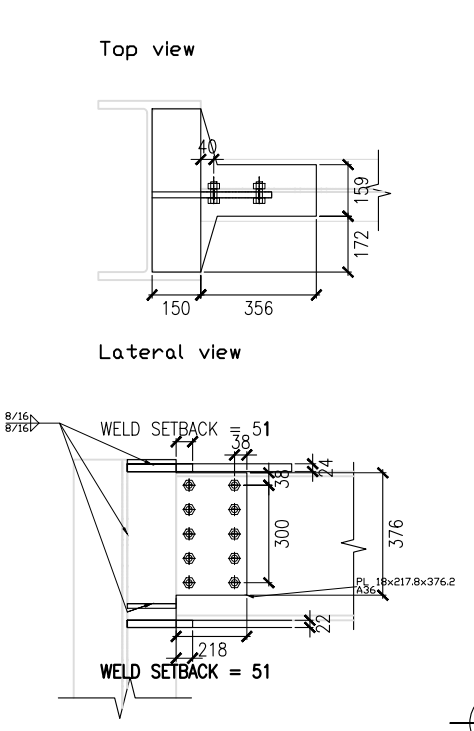
NO TO SCALE

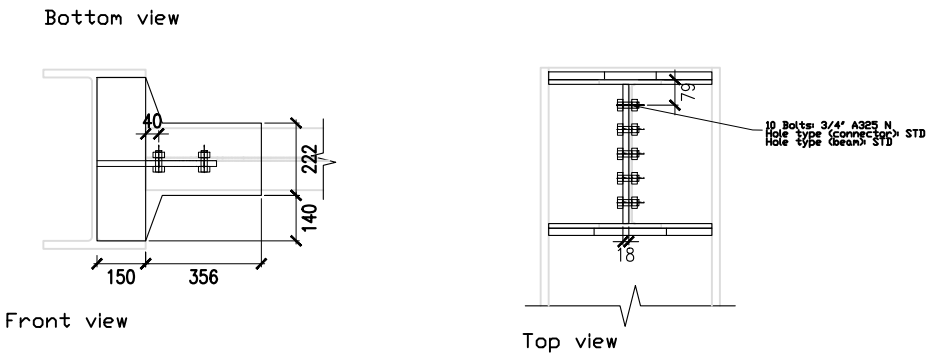


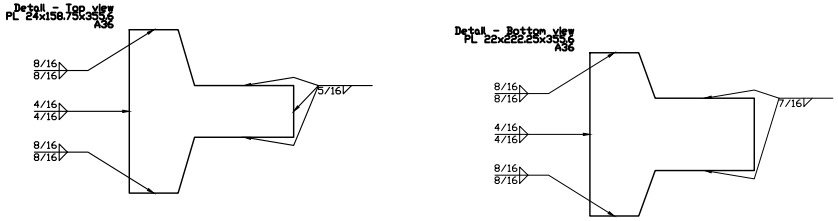
TYP. COMBINED FOOTING SECTION

NO TO SCALE

REP. ACT 9266 SEC. 33 DRAWINGS AND COPIES THEREOF, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF THE ARCHITECT, WHETHER THE WORK FOR WHICH THEY ARE MADE BE EXECUTED OR NOT, AND NOT TO BE REPRODUCED OR USED ON OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH THE ARCHITECT.	ARCHITECT: Architect PRC REG. No. : Validity : PTR No. : Date : Place : TIN :	PROJECT TITLE: CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:	PREPARED BY: FAYE MICHELLE A. BANIAGO AutoCAD Operator CHECKED BY: ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	REVIEWED BY: ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO APPROVED BY: MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President	SHEET CONTENT: AS SHOWN	SHEET NO:

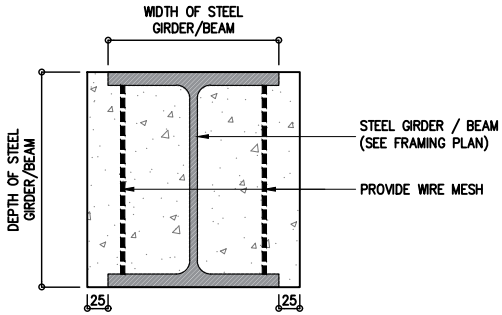






BEAM COLUMN WEB CONNECTION

NO TO SCALE



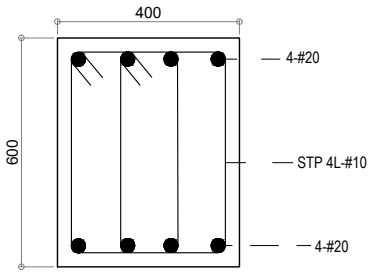
TYP. COMPOSITE/BEAM DETAILS

NTS

SCHEDULE OF BEAMS

(C28:Fy414)

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT			TOP REINFORCEMENT			SHEAR STIRRUPS			SFR	DIAGONAL	REMARKS
	B	D	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT	-	-	-
FTB - 1	400	600	4-#20	4-#20	4-#20	4-#20	4-#20	4-#20	4L-#10@120C/C	-	4L-#10@120C/C	-	-	-



FTB-1

REP. ACT 9266 SEC. 33

ARCHITECT:

Architect

PRC REG. No. : Validity :

PTR No. : Date :

Place : TIN :

PROJECT TITLE:

CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING

LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:

PREPARED BY:

FAYE MICHELLE A. BANIAGO
AutoCAD Operator

CHECKED BY:

ENGR. NOEL M. TIANGA JR.
Unit Head, PPDU-IPPDO

REVIEWED BY:

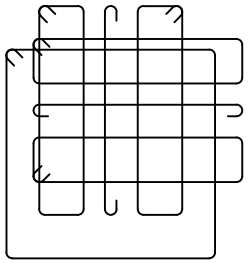
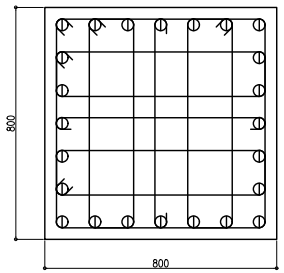
ARCH. HANNAH FAITH P. MORTA, uap
Director, IPPDO

APPROVED BY:

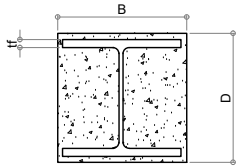
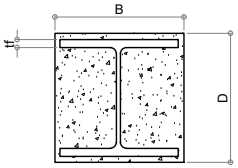
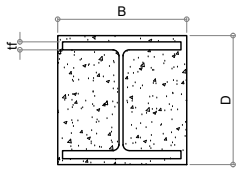
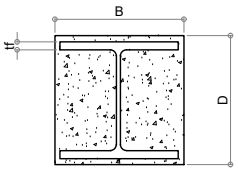
MERIAN P. CATAJAY-MANI Ed. D., CESE
Romblon State University President

SHEET CONTENT: AS SHOWN

SHEET NO:

0M	C28 : Fy414 , COVER = 40MM CONFINING ZONE = FULL HEIGHT
TO	
1.8M	Z1 MAIN LINK: #10 @ 100 Z1 OTHERS: #10 @ 100 Z2 LINKS: ---
COLUMN MARKED	 ⊕ #20 24-#20 C1 - C2

SCHEDULE OF STEEL COLUMNS

LOCATION	C - 1				C - 2			
FOUNDATION TO SECOND	 W14X43				 W14X48			
	D (in)	B (in)	tf (in)	tw (in)	D (in)	B (in)	tf (in)	tw (in)
	13.9	9.99	0.645	0.375	13.8	8.03	0.595	0.34
SECOND TO ROOF	 W14X43				 W14X48			
	D (in)	B (in)	tf (in)	tw (in)	D (in)	B (in)	tf (in)	tw (in)
	13.8	8.03	0.595	0.34	14	6.75	0.455	0.285

COLUMN AND WALL SCHEDULE

(SCALE 1:25)

NOTES:

1. BE = BOUNDARY ELEMENT AS PER ACI 318. PROVIDE CONFINING REINFORCEMENT ACROSS ENTIRE HEIGHT OF WALL IN THE BOUNDARY ELEMENT
2. Z1 = SPECIAL CONFINING ZONE AS PER ACI 318, Z2 = REMAINING ZONES AS PER ACI 318

ARCHITECT: Architect

PRC REG. No. : | Validity :
PTR No. : | Date :
Place : | TIN :

PROJECT TITLE: CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING

LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:

PREPARED BY: FAYE MICHELLE A. BANIAGO, AutoCAD Operator

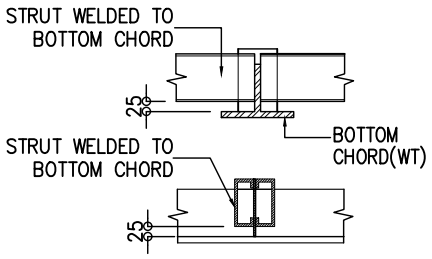
CHECKED BY: ENGR. NOEL M. TIANGA JR., Unit Head, PPDU-IPPDO

REVIEWED BY: ARCH. HANNAH FAITH P. MORTA, uap, Director, IPPDO

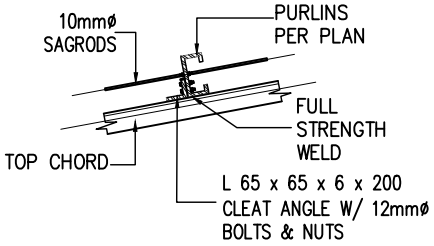
APPROVED BY: MERIAN P. CATAJAY-MANI Ed. D., CESE, Romblon State University President

SHEET CONTENT: AS SHOWN

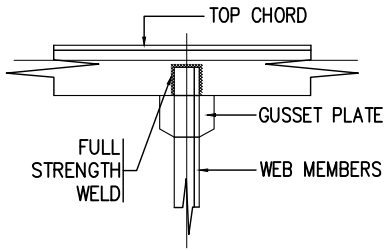
SHEET NO:



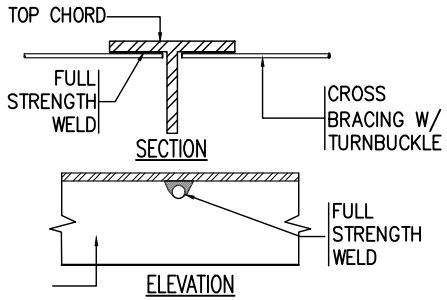
TYPICAL CONNECTION DETAIL



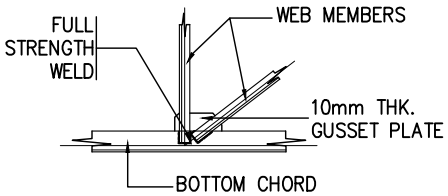
TYPICAL CONNECTION DETAIL



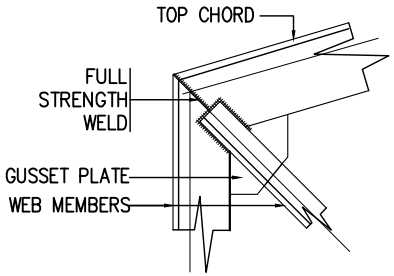
TYPICAL CONNECTION DETAIL



TYPICAL TURN BUCKLE DETAIL



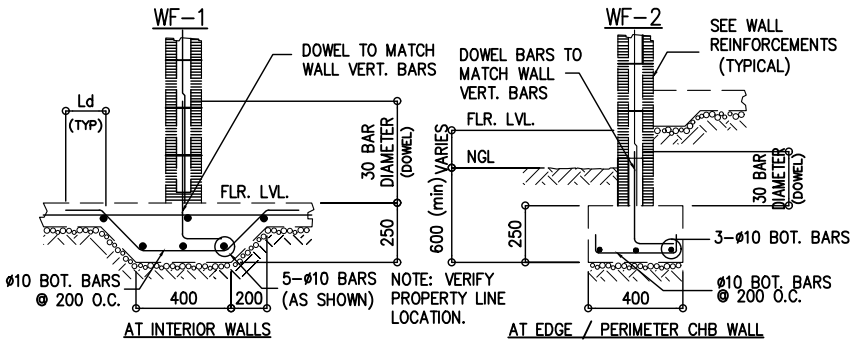
TYPICAL CONNECTION DETAIL



TYPICAL CONNECTION DETAIL

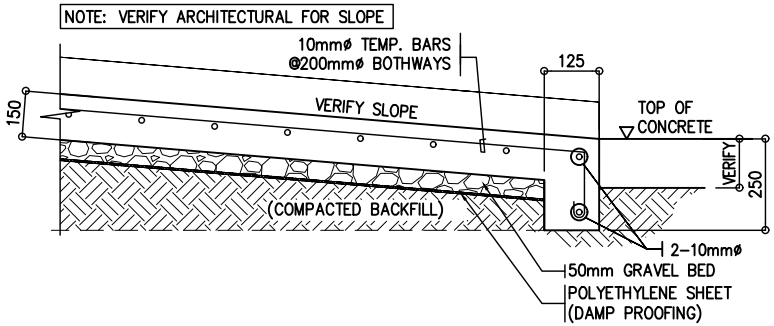
TYP. CONNECTION DETAILS

NTS



WALL FOOTING DETAILS

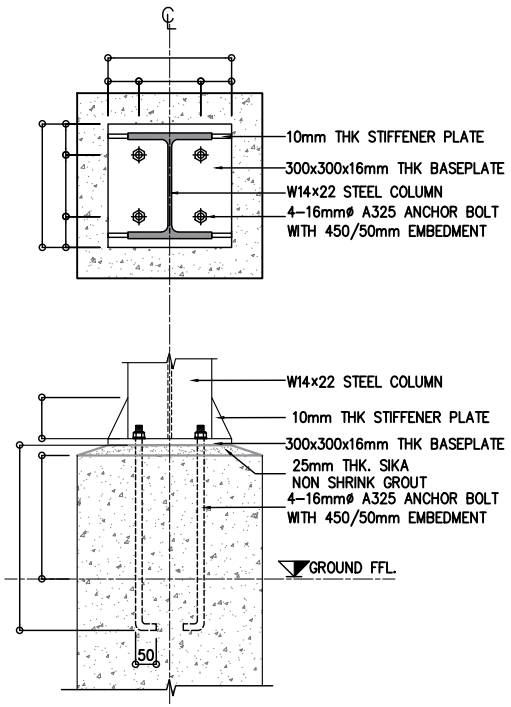
NTS



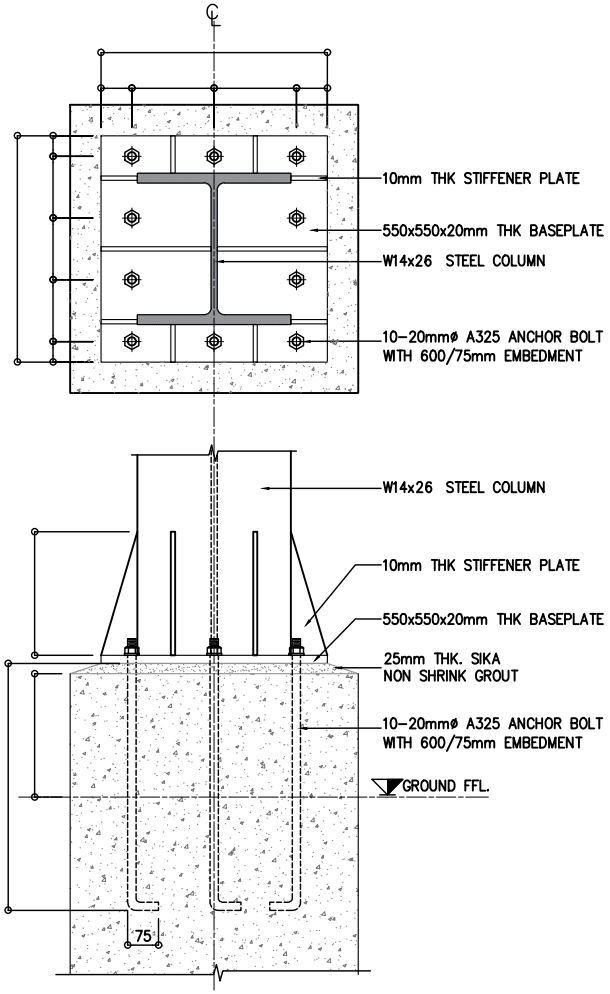
RAMP DETAILS

NTS

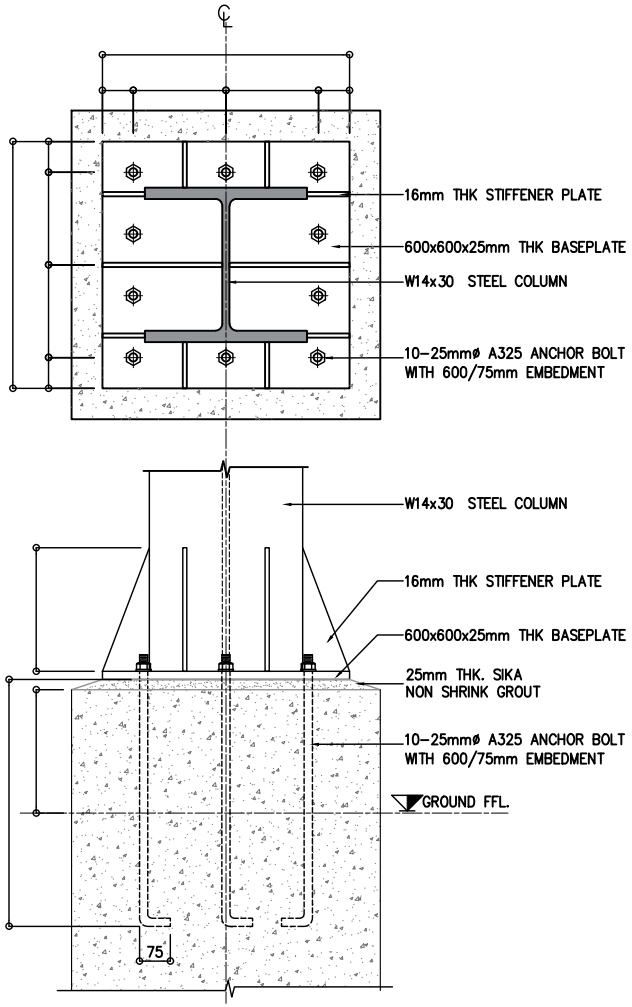
REP. ACT 9266 SEC. 33 DRAWINGS AND COPIES THEREOF, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF THE ARCHITECT, WHETHER THE WORK FOR WHICH THEY ARE MADE BE EXECUTED OR NOT, AND NOT TO BE REPRODUCED OR USED ON OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH THE ARCHITECT.	ARCHITECT: Architect PRC REG. No. : Validity : PTR No. : Date : Place : TIN :	PROJECT TITLE: CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:	PREPARED BY: FAYE MICHELLE A. BANIAGO AutoCAD Operator CHECKED BY: ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	REVIEWED BY: ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO APPROVED BY: MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President	SHEET CONTENT: AS SHOWN	SHEET NO:



BP-1
CONNECTION DETAILS
NTS



BP-2
CONNECTION DETAILS
NTS



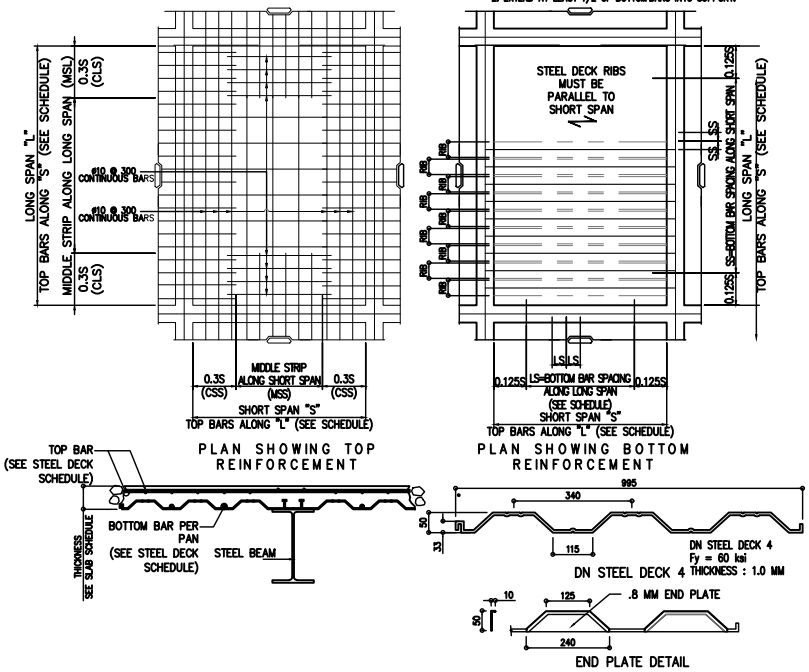
BP-3
CONNECTION DETAILS
NTS

REP. ACT 9266 SEC. 33

ARCHITECT:	PROJECT TITLE:	PREPARED BY:	REVIEWED BY:	SHEET CONTENT:	SHEET NO:
Architect	CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING	FAYE MICHELLE A. BANIAGO AutoCAD Operator	ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO	AS SHOWN	
PRC REG. No. : / Validity :		CHECKED BY:	APPROVED BY:		
PTR No. : / Date :	LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:	ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President		
Place : / TIN :					

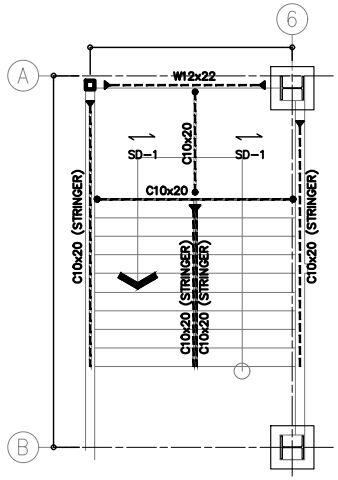
TYPICAL METAL DECK SLAB DETAILS

NOTES:
1. IF TOP BARS OF ADJACENT SLABS DIFFER AT THEIR COMMON SUPPORT, THE SMALLER SPACING SHALL GOVERN.
2. EXTEND AT LEAST 1/2 OF BOTTOM BARS INTO SUPPORT.

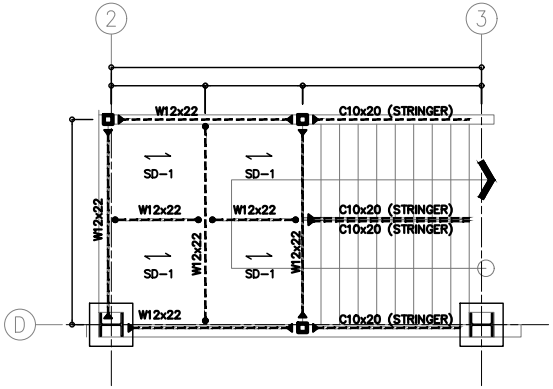


SLAB SCHEDULE					
NAME	TOTAL THK	CONTINOUS TOP BARS	ADDITIONAL TOP BARS	BOT BARS PER SPAN	REMARKS
SD-1	125	#10mm @ 200mm	6-#10mm PER SPAN (2,2,2)	1-#10mm PER CONTINOUS	TYPICAL

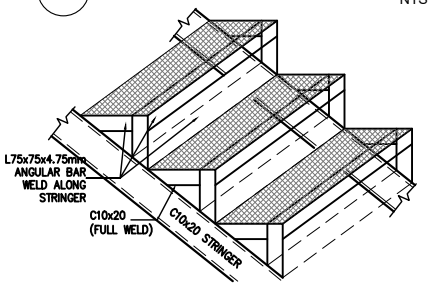
STEEL DECK DETAILS
NTS



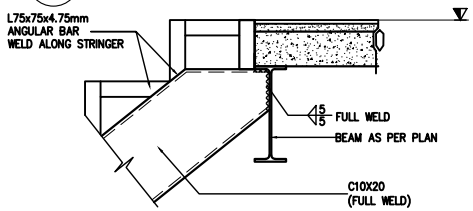
STAIR PLAN VIEW DETAILS
NTS



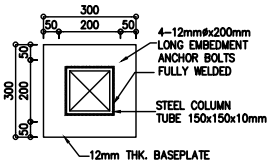
STAIR PLAN VIEW DETAILS
NTS



SPOT DETAILS
NTS

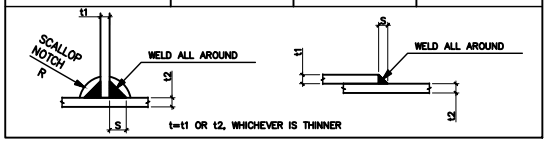


SPOT DETAILS
NTS

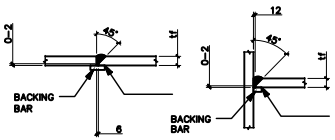


BASEPLATE

FILLET WELD TABLE			
PLATE THICKNESS,t (MM)	WELD SIZE, S (MM)		SCALLOP NOTCH (MM)
	T JOINTS	LAP JOINTS	R
LESS THAN 6	S = t	S = t	25
6 TO 8	6	4	25
9 TO 11	6	6	25
12 TO 15	9	9	35
16 TO 18	9	9	35
19 OR OVER	12	12	35

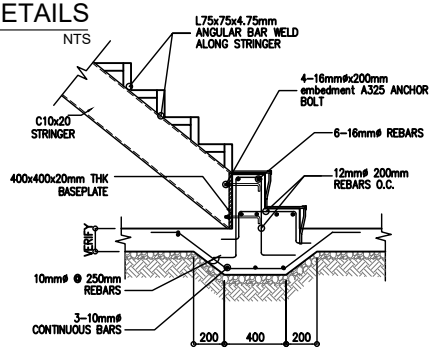


NOTE:
UNLESS OTHERWISE SPECIFIED, SIZE OF FILLET WELDS SHALL BE PROVIDED AS SHOWN ABOVE. THE WELD SIZE NEED NOT EXCEED THE THICKNESS OF THE THINNER MATERIAL BEING JOINT.

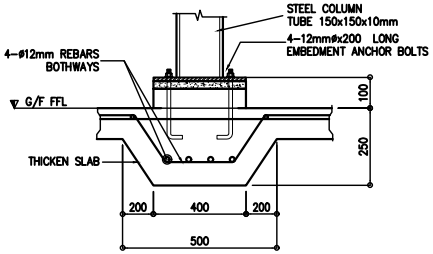


WELD TABLE
NTS

NOTE:
* ALL WELDED STUDS SHALL BE 20MMø.
* WELDED STUDS ARE EQUALLY SPACED UNLESS OTHERWISE NOTED ON PLANS. IF EQUAL SPACING IS NOT POSSIBLE DUE TO DECK CONFIGURATION, THE STRUCTURAL ENGINEER MUST BE NOTIFIED.
* ALL SHEAR STUDS SHALL CONFORM TO ASTM A108, AND BE EQUAL TO NELSON

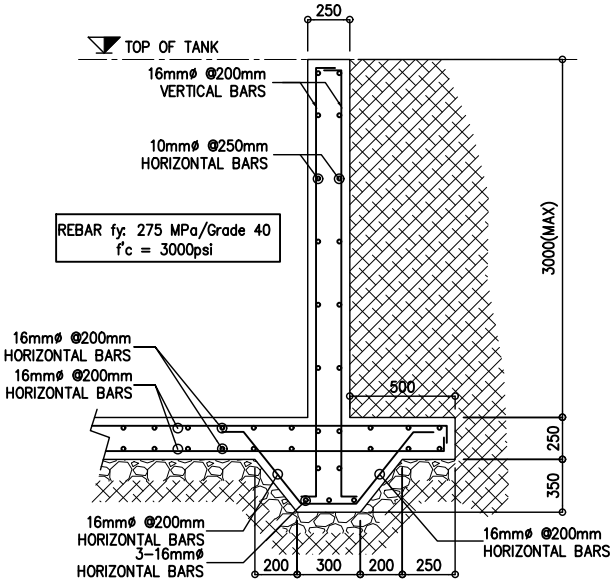


SPOT DETAILS
NTS

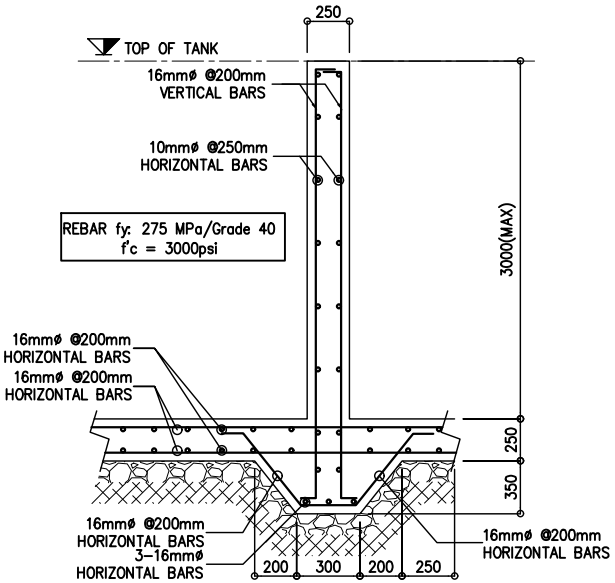


STAIR COLUMN TO CONCRETE
CONNECTION DETAILS
NTS

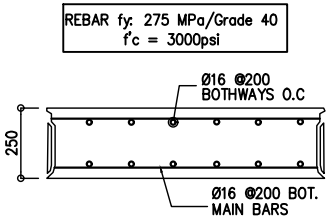
REP. ACT 9266 SEC. 33 DRAWINGS AND COPIES THEREOF, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF THE ARCHITECT, WHETHER THE WORK FOR WHICH THEY ARE MADE BE EXECUTED OR NOT, AND NOT TO BE REPRODUCED OR USED ON OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH THE ARCHITECT.	ARCHITECT: Architect PRC REG. No. : Validity : PTR No. : Date : Place : TIN :	PROJECT TITLE: CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:	PREPARED BY: FAYE MICHELLE A. BANIAGO AutoCAD Operator CHECKED BY: ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	REVIEWED BY: ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO APPROVED BY: MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President	SHEET CONTENT: AS SHOWN	SHEET NO:



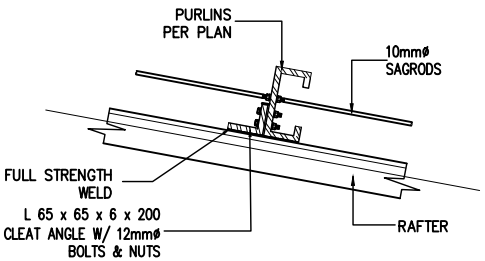
SPOT DETAILS
NTS



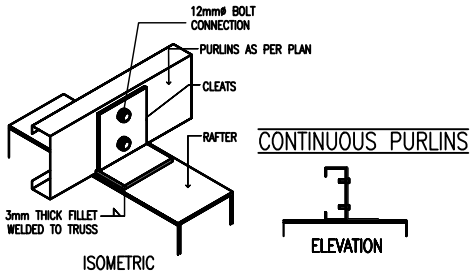
SPOT DETAILS
NTS



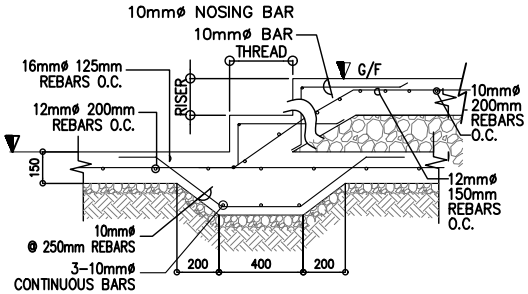
FOOTING
TANK SLAB DETAILS
NTS



SAGROD TO PURLINS
CONNECTION DETAILS
NTS



PURLIN TO RAFTER DETAILS
NTS



STAIRS ON
GROUND DETAILS
NTS

REP. ACT 9266 SEC. 33 DRAWINGS AND COPIES THEREOF, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF THE ARCHITECT, WHETHER THE WORK FOR WHICH THEY ARE MADE BE EXECUTED OR NOT, AND NOT TO BE REPRODUCED OR USED ON OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH THE ARCHITECT.	**ARCHITECT:** Architect PRC REG. No. : Validity : PTR No. : Date : Place : TIN :	**PROJECT TITLE:** CONSTRUCTION OF COLLEGE OF BUSINESS,ACCOUNTANCY AND TECHNOPRENEURSHIP BUILDING LOCATION: ROMBLON STATE UNIVERSITY-MAIN CAMPUS REV.:	**PREPARED BY:** FAYE MICHELLE A. BANIAGO AutoCAD Operator **CHECKED BY:** ENGR. NOEL M. TIANGA JR. Unit Head, PPDU-IPPDO	**REVIEWED BY:** ARCH. HANNAH FAITH P. MORTA, uap Director, IPPDO **APPROVED BY:** MERIAN P. CATAJAY-MANI Ed. D., CESE Romblon State University President	**SHEET CONTENT:** AS SHOWN	**SHEET NO:**