



Republic of the Philippines
DEPARTMENT OF TRANSPORTATION
AND
COMMUNICATIONS



JAPAN
INTERNATIONAL
COOPERATION
AGENCY

NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT

DRAWINGS

COMPONENT-4 Building Works (B)

Subcomponent-4-0 General (B0)



August 2013

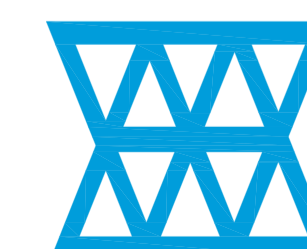
JICA DESIGN CONSULTANT JOINT VENTURE



JAPAN AIRPORT
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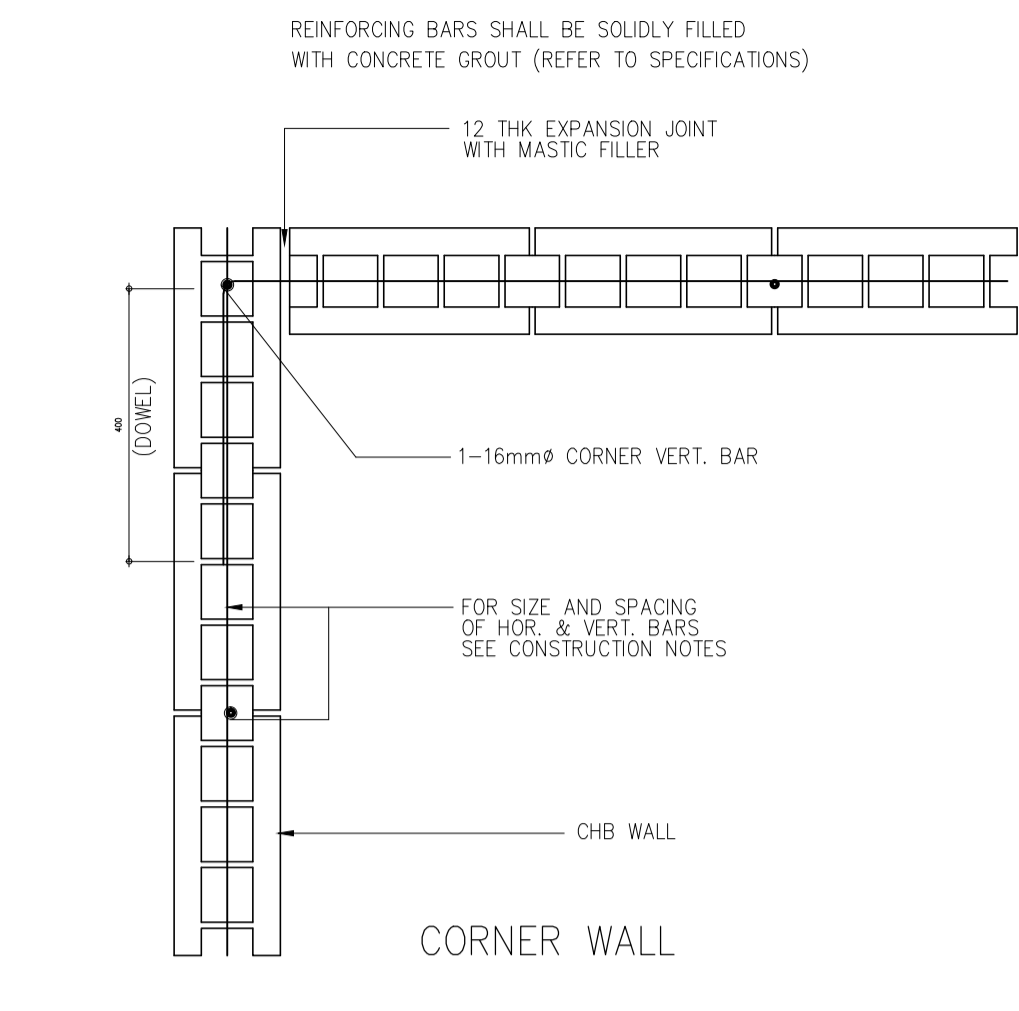
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CO., LTD.

DRAWING LIST

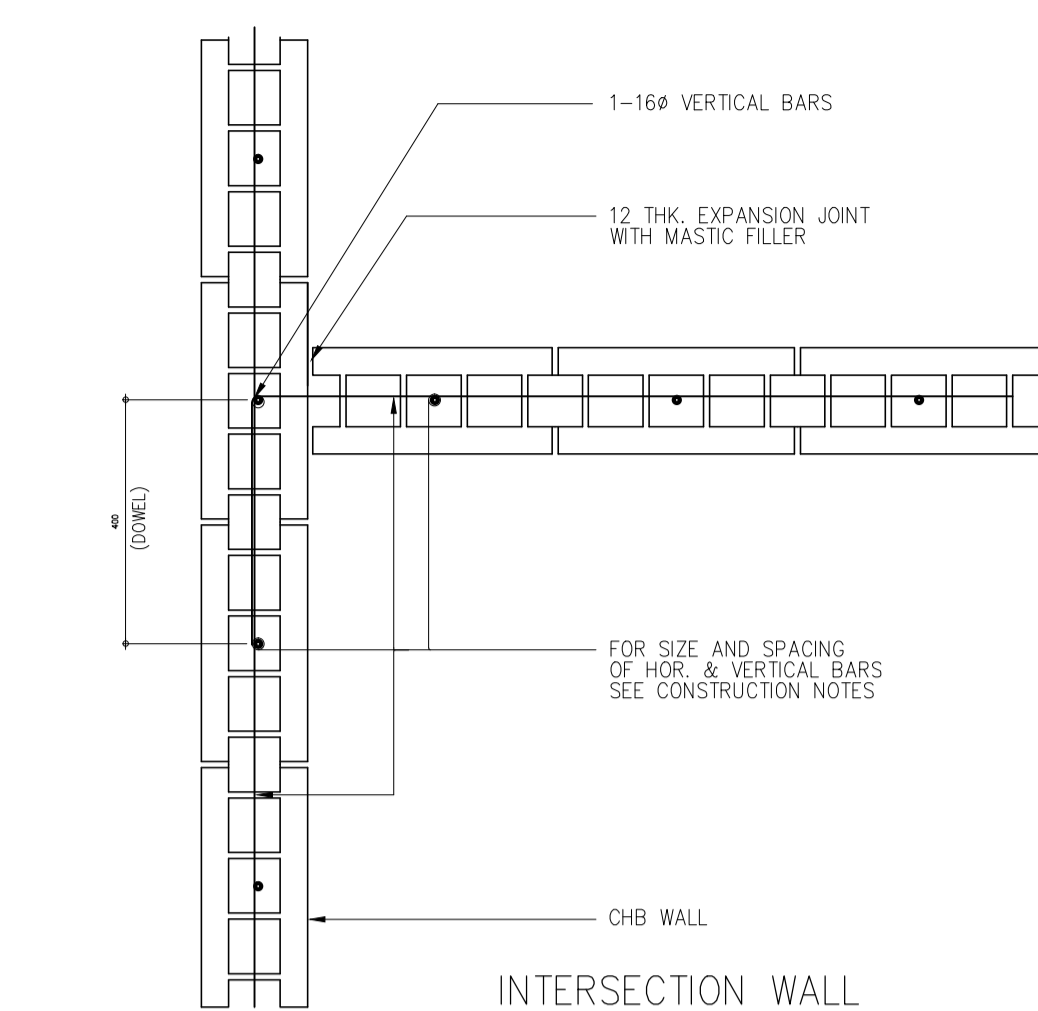
DOCUMENT IV: DRAWINGS
PART 4: BUILDING WORKS
DIVISION 0: GENERAL

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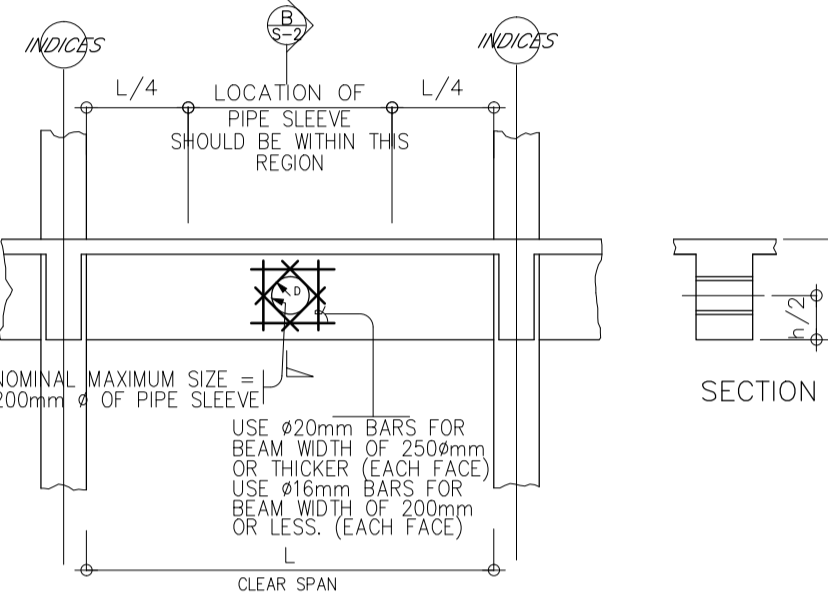
 Republic of the Philippines DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS	 JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PREPARED BY: WILLIAM I. MALLONGA <small>PROF: Architect FIR: 3911137</small> <small>REG. NO.: 4623 DATE: MAY 9, 2013</small> <small>TAX: 159-564-196 PLACE: MARIKINA CITY</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary</small> for Project Implementation, DOTC	APPROVED BY: JULIANITO G. BUCAYAN, JR. <small>Undersecretary</small> for Project Implementation, DOTC	PROJECT TITLE: <p style="text-align: center;">NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT</p> LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4 BUILDING WORKS (B) SUBCOMPONENT -4-0 (B0) GENERAL DRAWING LIST	SHEET NO: <p style="text-align: center;">B0-LIST</p> DRAWING SCALE: <p style="text-align: center;">AS SHOWN</p>
JICA DESIGN CONSULTANT JOINT VENTURE   							



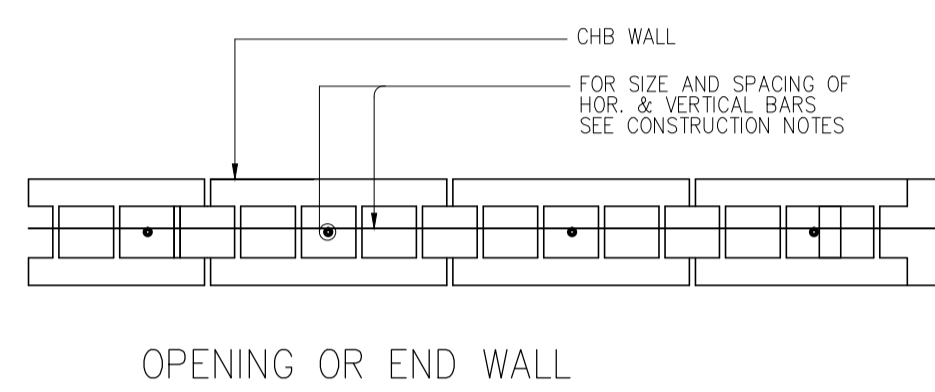
1 TYPICAL CONNECTION DETAIL OF MASONRY WALL
BQ-4200-02 SCALE 1: 50 MTS



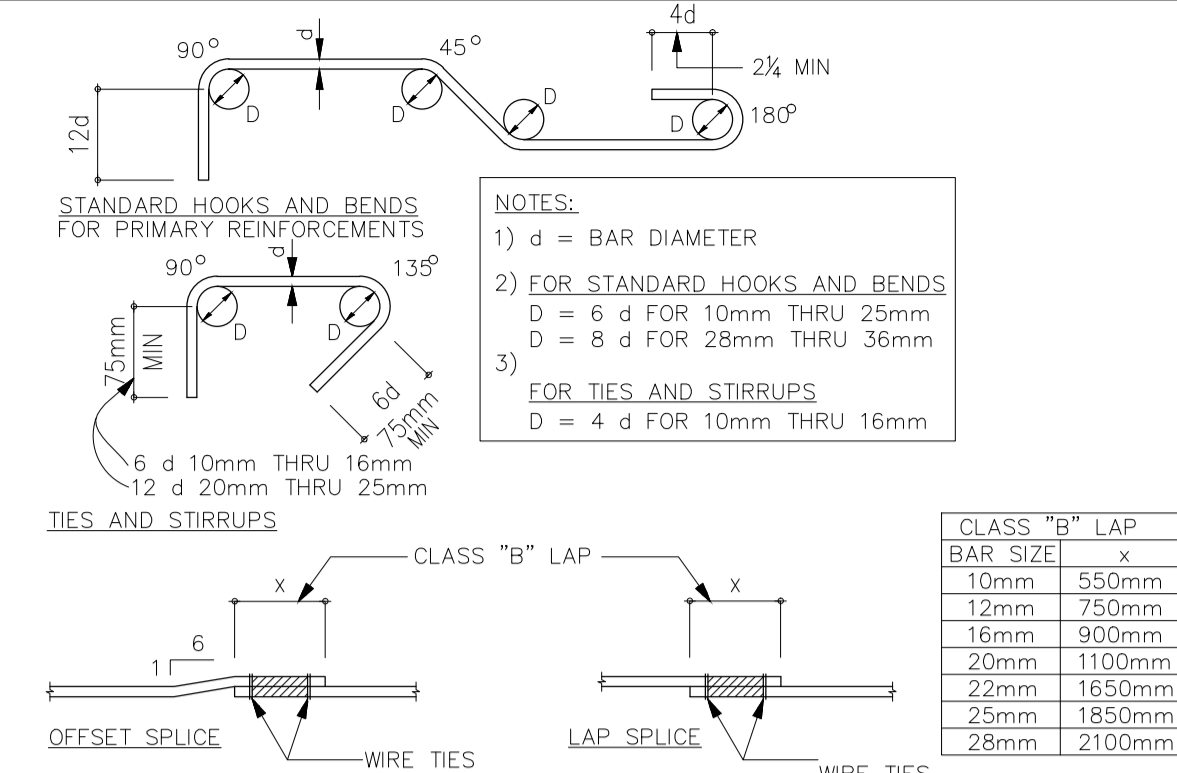
2 TYPICAL SLAB & BEAM CONSTRUCTION JOINT DET.
BQ-4200-02 SCALE 1: 50 MTS



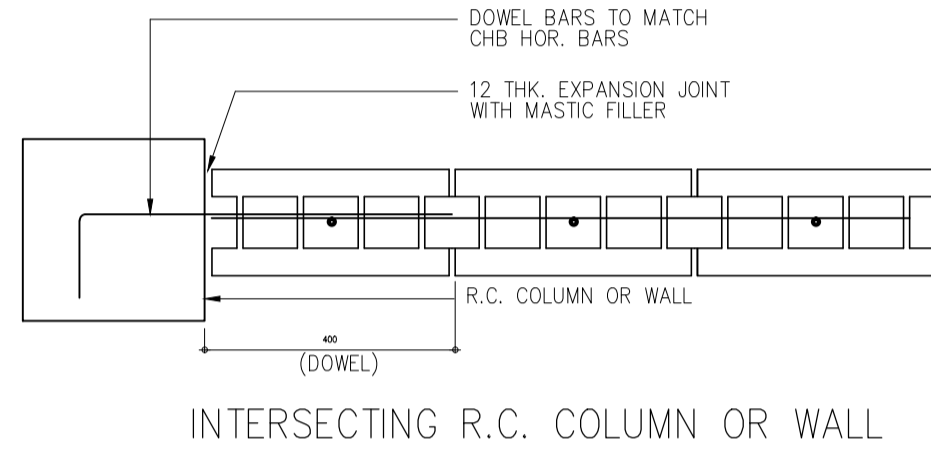
5 TYPICAL PIPE SLEEVE DETAIL
BQ-4200-02 SCALE 1: 50 MTS



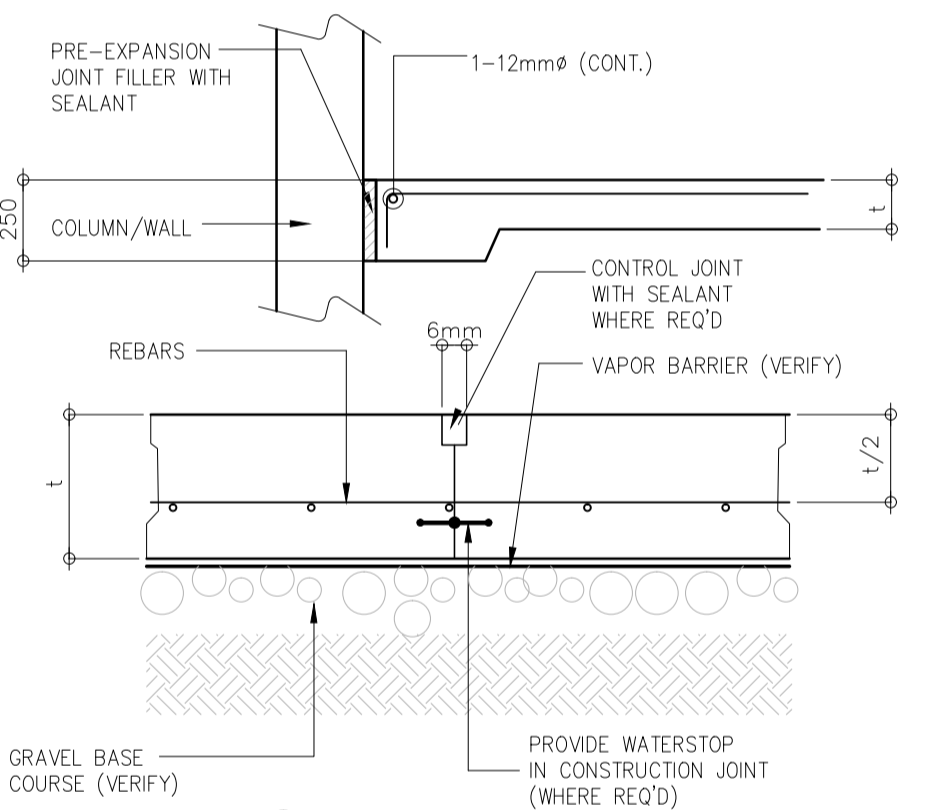
3 TYPICAL SUSPENDED CONCRETE SLAB OPENING
BQ-4200-02 SCALE 1: 20 MTS



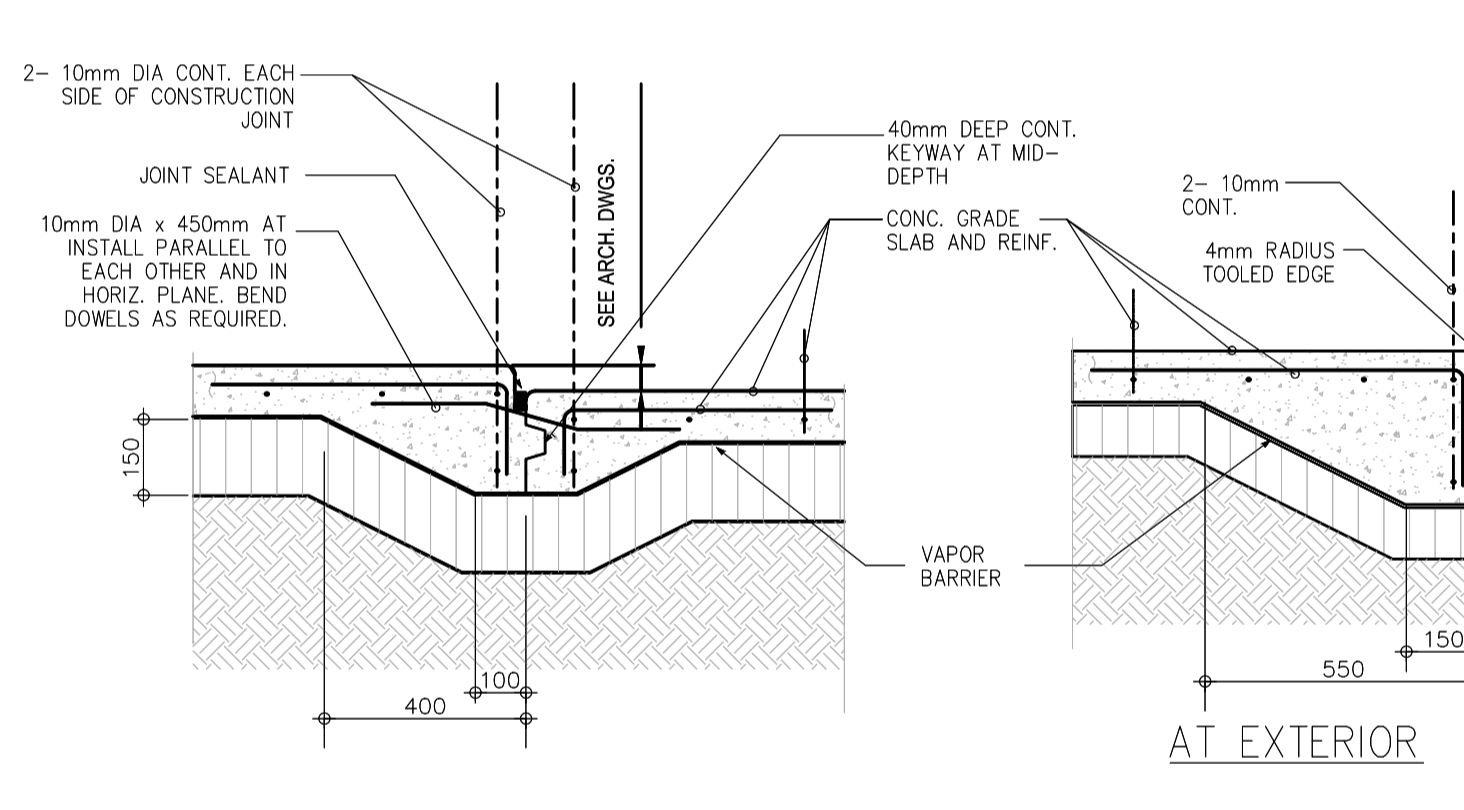
4 TYP. CONCRETE REINFORCING
BQ-4200-02 SCALE 1: 40 MTS



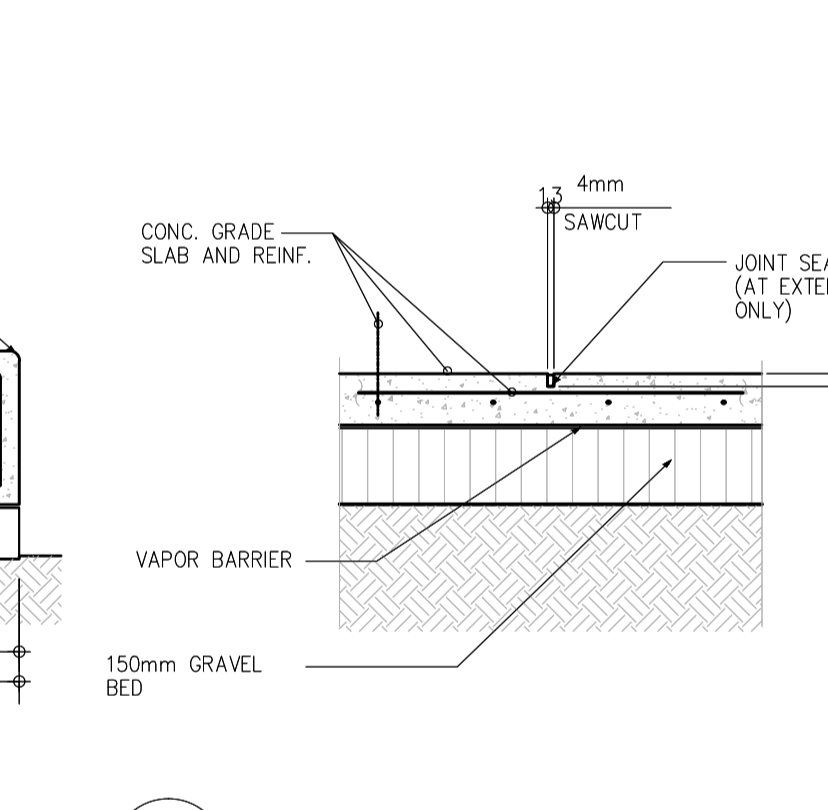
6 TYPICAL CONNECTION DETAIL OF R.C. WALL AT CORNERS
BQ-4200-02 SCALE 1: 50 MTS



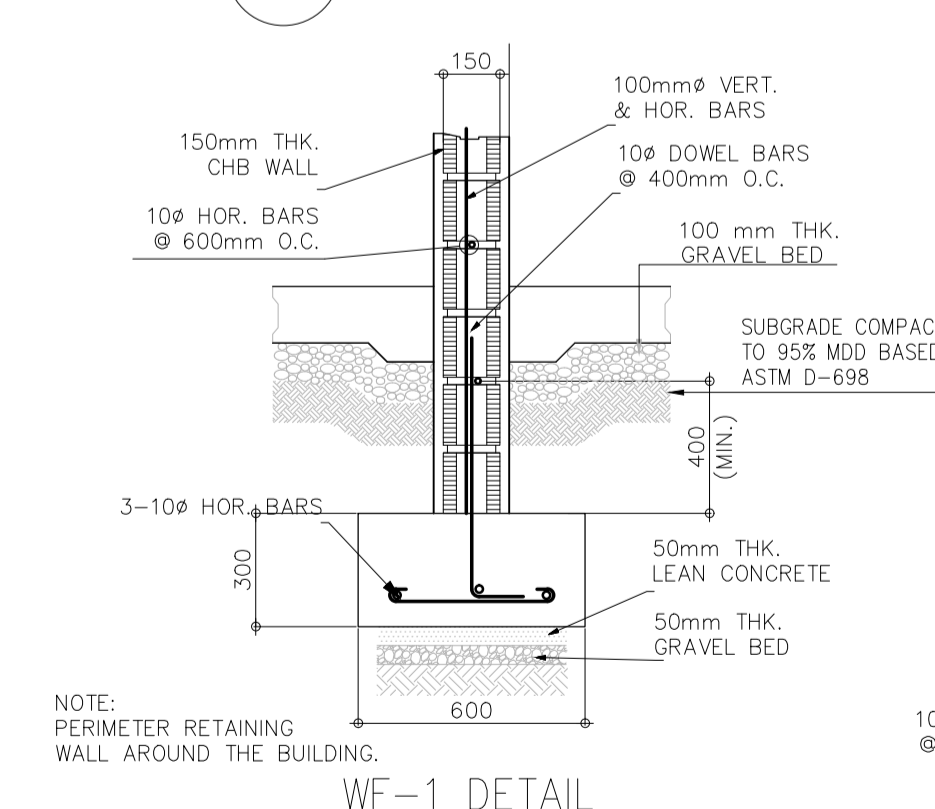
7 SLAB ON GRADE JOINT DET.
BQ-4200-02 SCALE 1: 50 MTS



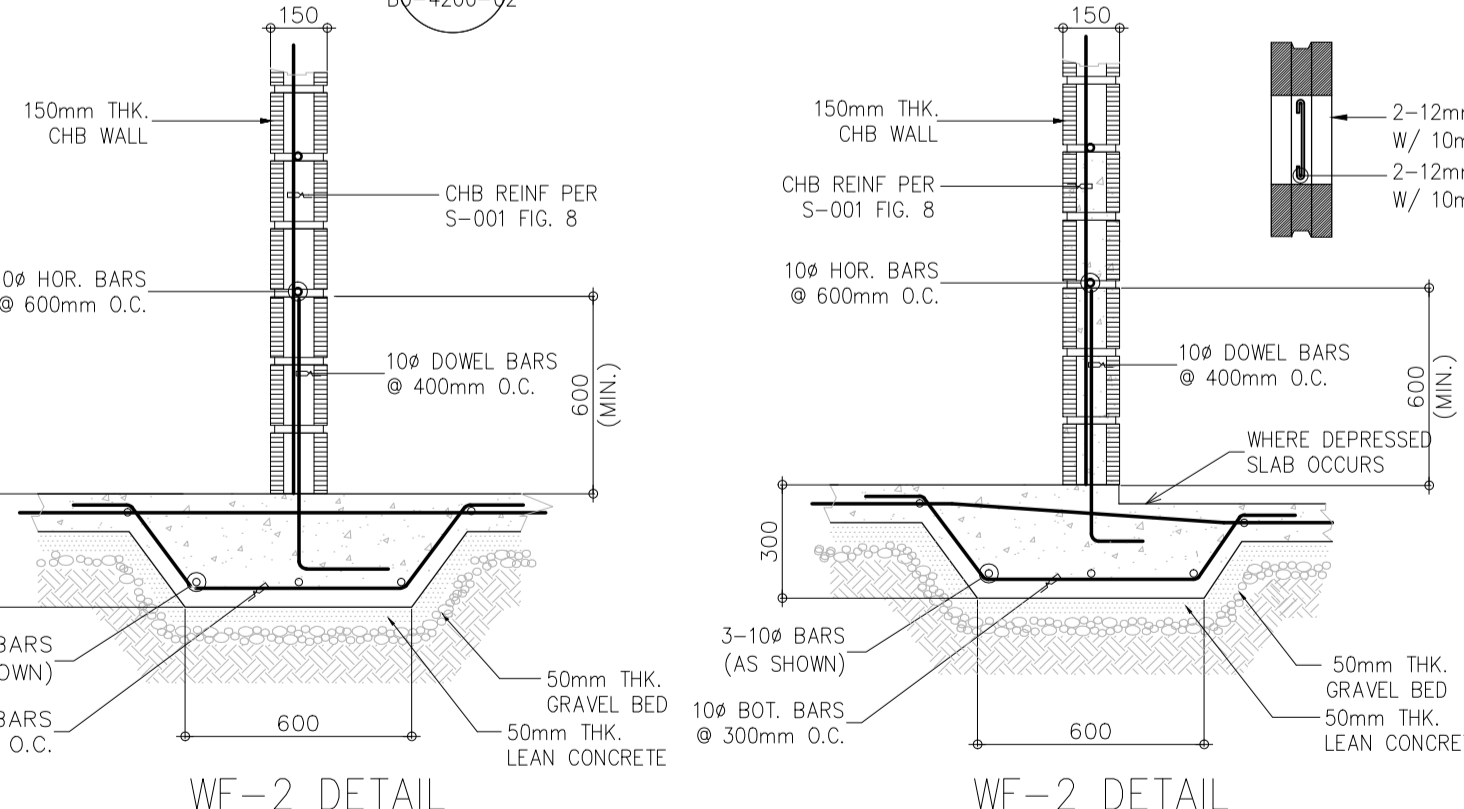
8 DEPRESSED SLAB
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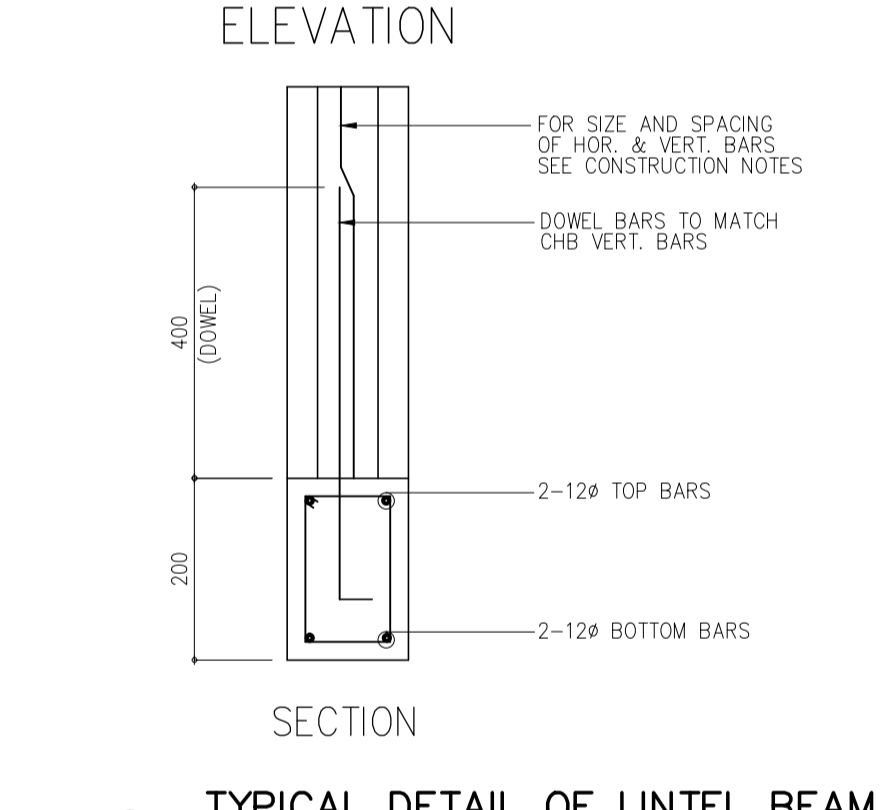
9 SAWCUT JOINT (S.J)
BQ-4200-02 SCALE 1: 15 MTS



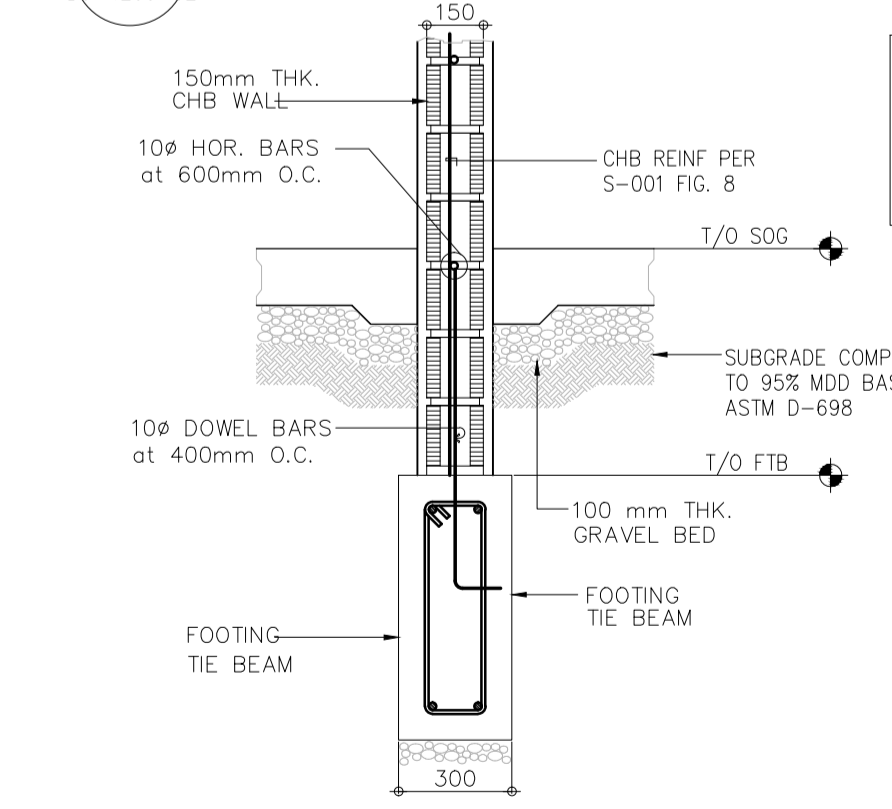
11 TYP. CHB WALL FOOTING DETAIL
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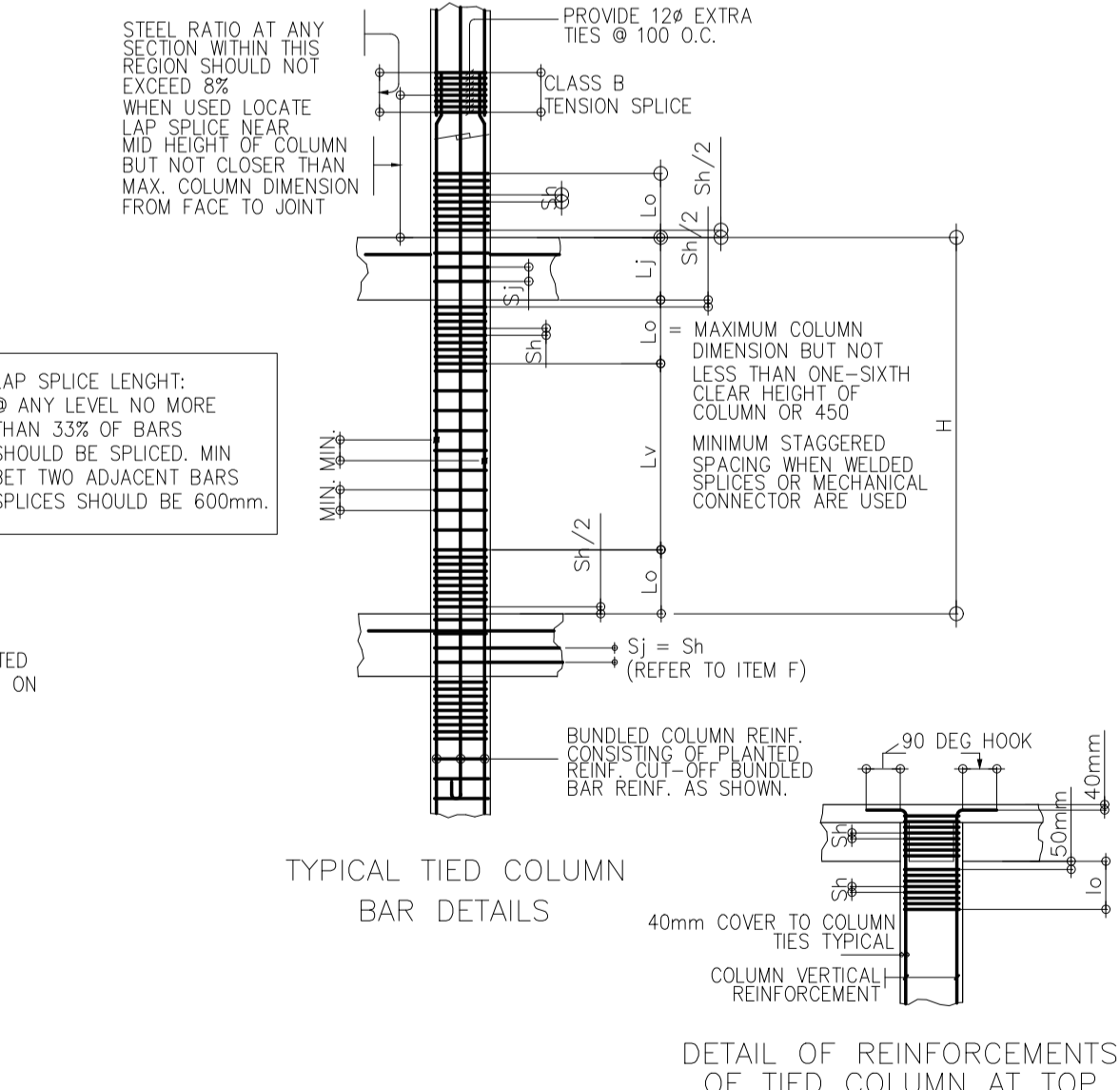
12 TYP. CHB EXTERIOR WALL AND FOOTING TIE BEAM CONNECTION DETAIL
BQ-4200-02 SCALE 1: 20 MTS



10 TYPICAL DETAIL OF LINTEL BEAM AT CHB WALL OPENING
BQ-4200-02 SCALE 1: 50 MTS



13 TYP. CHB INTERIOR WALL AND FOOTING TIE BEAM CONNECTION DETAIL
BQ-4200-02 SCALE 1: 20 MTS



14 TYPICAL COLUMN TIES
BQ-4200-02 SCALE 1: 20 MTS

Republic of the Philippines
DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS

JICA
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JICA DESIGN CONSULTANT JOINT VENTURE

JAC JAPAN AIRPORT CONSULTANTS, INC.
NIPPON KOEI CO., LTD.
NIS CONSULTANTS CO., LTD.

PREPARED BY: EDGARDO C. CRUZ
PROF. CIVIL ENGINEER PTR. 7589023B
REG. NO.: 23983 DATE: JANUARY 03, 2013
TEL. 601-157-021 PLACE: QUEZON CITY

RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR.
Assistant Secretary for Project Implementation, DOTC

APPROVED: JULIANITO G. BUCAYAN, JR.
Undersecretary for Project Implementation, DOTC

TADASHI AOI
Team Leader

PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT

LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES

DATE	INDEX	AMENDMENTS	Prepared by	Checked by	Validated by
JUNE 2013			FRS Jr.	WIM	HC

SHEET CONTENTS: COMPONENT-4 BUILDING WORKS (B)
(BO) GENERAL
STRUCTURAL
GENERAL NOTES 2

SHEET NO: BQ-4200-02

DRAWING SCALE: 1:200

CONSTRUCTION NOTES

STRUCTURAL STEEL

A. MATERIALS

A1. STRUCTURAL STEEL – STEEL TO BE USED FOR FABRICATION AND ERECTION OF THIS STRUCTURE SHALL COMPLY WITH ALL THE PERTINENT PROVISIONS OF AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS 2005.

STRUCTURAL STEEL	ASTM A-36, GR 36 OR A992
WIDE FLANGE (W AND WT) SECTIONS.....	Fy = 250MPa (36ksi)
CHANNEL & MISC SHAPES (C,MC,S,H,HP).....	ASTM A-36
	Fy = 250MPa (36ksi)
PIPE (STANDARD,X-STRONG,XX-STRONG).....	ASTM A-53, TYPE E, Gr. B
	Fy = 240MPa (35ksi)
TUBING.....	ASTM A-500, Gr. B
	Fy = 317Mpa (46ksi)
STEEL PLATES.....	ASTM A-36
	Fy = 250MPa (36ksi) UNO

a. STEEL DECKS

MANUFACTURED IN ACCORDANCE WITH JIS G3352 AND JIS G3302 Z27 OR EQUIVALENT

b. BOLTS

HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM 490 AND OTHER STRUCTURAL BOLTS SHALL CONFORM TO A325 UNLESS OTHERWISE INDICATED. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 105.

c. WELDS

ALL WELDS SHALL BE IN ACCORDANCE WITH AWS STRUCTURAL WELD CODE D1-1 LATEST REVISION FOR SUBMERGED ARC WELDING PROCESS, OR ARC LATEST EDITION. SHIELD METAL WELDING PROCESS MAY BE USED AT THE OPTION OF FABRICATOR UPON THE APPROVAL OF ENGINEER.

B. QUALITY CONTROL

B1. REFER TO SPECIFICATIONS FOR QUALITY CONTROL TESTING REQUIREMENTS.

B2. STEEL SHAPES

EVERY BATCH OF STRUCTURAL STEEL SHAPE FOR FABRICATION SHALL HAVE THE MANUFACTURER'S MILL CERTIFICATE SHOWING THEIR CHEMICAL AND PHYSICAL PROPERTIES. OWNER EXERCISES THE RIGHT TO UNDERTAKE DESTRUCTIVE OR NON-DESTRUCTIVE TESTING OF SAMPLES FROM MATERIALS USED FOR THE PROJECT.

B3. WELD FINISH

ALL WELDS SHALL BE FREE FROM UNDERCUTS, PINHOLES AND CRACKS. NON-DESTRUCTIVE TESTING SHALL BE CONDUCTED AT WELDS DEEMED NOT IN CONFORMITY WITH THE SPECIFICATION AND SHALL BE TO CONTRACTOR'S ACCOUNT.

B4. ALL TESTING PROCEDURES MUST BE DONE WITH THE PRESENCE OF THE QUALIFIED INSPECTOR AND OR WITH THE DESIGNER.

C. FABRICATION

C1. WELDS

ALL WELDED CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF THE MEMBERS CONNECTED.

a. LENGTH OF WELDS:

THE MINIMUM LENGTH OF FILLET SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL SIZE WHERE INTERMITTENT WELDS MAY BE USED THE LENGTH OF SEGMENT SHALL NOT BE LESS THAN 4 TIMES THE WELD SIZE WITH A MIN. OF 40mm.

b. END RETURN OF FILLET WELDS

SIDE OR END FILLET WELDS TERMINATING AT END OR SIDES SHALL BE RETURNED CONTINUOUSLY FOR A DISTANCE NOT LESS THAN TWICE THE NOMINAL SIZE OF THE WELD.

c. ULTRASONIC TESTING

WELDED CONNECTIONS SHALL BE TESTED USING ULTRASONIC TESTING AT THE EXPENSE OF THE CONTRACTOR AS SPECIFIED IN RELEVANT SECTION OF SPECIFICATION.

IN ADDITION, THE INSPECTOR OR DESIGNER MAY PIN POINT ADDITIONAL EXAMINATION SUBJECT FOR TESTING WHICH MAY EXHIBIT DOUBTFUL CONNECTION.

C2. BOLTS

a. MINIMUM EDGE DISTANCE:

THE MINIMUM EDGE DISTANCE OF BOLTS UNLESS OTHERWISE SPECIFIED SHALL CONFORM TO THE REQUIREMENTS OF AISC STEEL MANUAL 2005.

THE MAXIMUM EDGE DISTANCE FROM BOLT CENTER UNLESS OTHERWISE SPECIFIED SHALL BE 12 TIMES THICKNESS OF THE PLATE BUT NOT TO EXCEED 150mm.

b. MINIMUM PITCH:

ON CENTER SPACING OF BOLTS UNLESS OTHERWISE SPECIFIED SHALL NOT BE LESS THAN 2.5 TIMES THE NOMINAL DIAMETER.

C3. TOLERANCES

SOME VARIATIONS EXPECTED IN THE FINISH OVERALL DIMENSIONS OF FRAMES SHALL NOT EXCEED THE ROLLING TOLERANCES FOR CROSS-SECTIONAL DIMENSIONS, CAMBER AND SWEEP PERMITTED UNDER ASTM SPECIFICATION A36.

C4. CAMBERING

ALL HORIZONTAL MEMBERS MORE THAN 12m IN LENGTH SHALL BE PRE-CAMBERED WITH A MINIMUM OF SPAN/360 UNLESS SPECIFIED OTHERWISE IN THE PLAN.

LOCAL APPLICATION OF HEAT OR MECHANICAL MEANS MAY BE USED TO INTRODUCE OR CORRECT CAMBER OR CURVATURE. THE TEMPERATURE OF HEATED AREAS AS MEASURED BY APPROVED METHODS SHALL NOT EXCEED 590°C FOR A514 STEEL NOR 645°C FOR OTHER STEELS.

D. ERECTION

D1. BRACING:

THE FRAME OF STEEL STRUCTURE SKELETON SHALL BE CARRIED UP TRUE AND PLUMB, WITHIN THE LIMITS DEFINED IN PART 16-3, SECTION 7.13 OF THE AISC CODE OF STANDARD PRACTICE. TEMPORARY BRACING SHALL BE PROVIDED TO RESIST ALL LOADS INCLUDING ERECTION EQUIPMENT.

D2. ALIGNMENT:

NO RIVETTING, PERMANENT BOLTING OR WELDING SHALL BE DONE UNTIL STRUCTURE HAS BEEN PROPERLY ALIGNED.

D3. SAGRODS AND CROSS BRACINGS SHALL BE INSTALLED AND TIGHTENED BEFORE INSTALLATION OF ROOFING OR WALL CLADDING.

E. PAINTING AND SURFACE PREPARATION

E1. STEEL TO BE USED FOR ERECTION OF THIS STRUCTURE SHALL BE PAINTED AND ITS SURFACE PREPARED IN COMPLIANCE WITH THE SPECIFICATIONS.






E2. CONTRACTOR TO VERIFY WITH REPRESENTATIVES – PAINTING AND SURFACE PREPARATION SPECIFICATION BEFORE PROCEEDING WITH WORK.

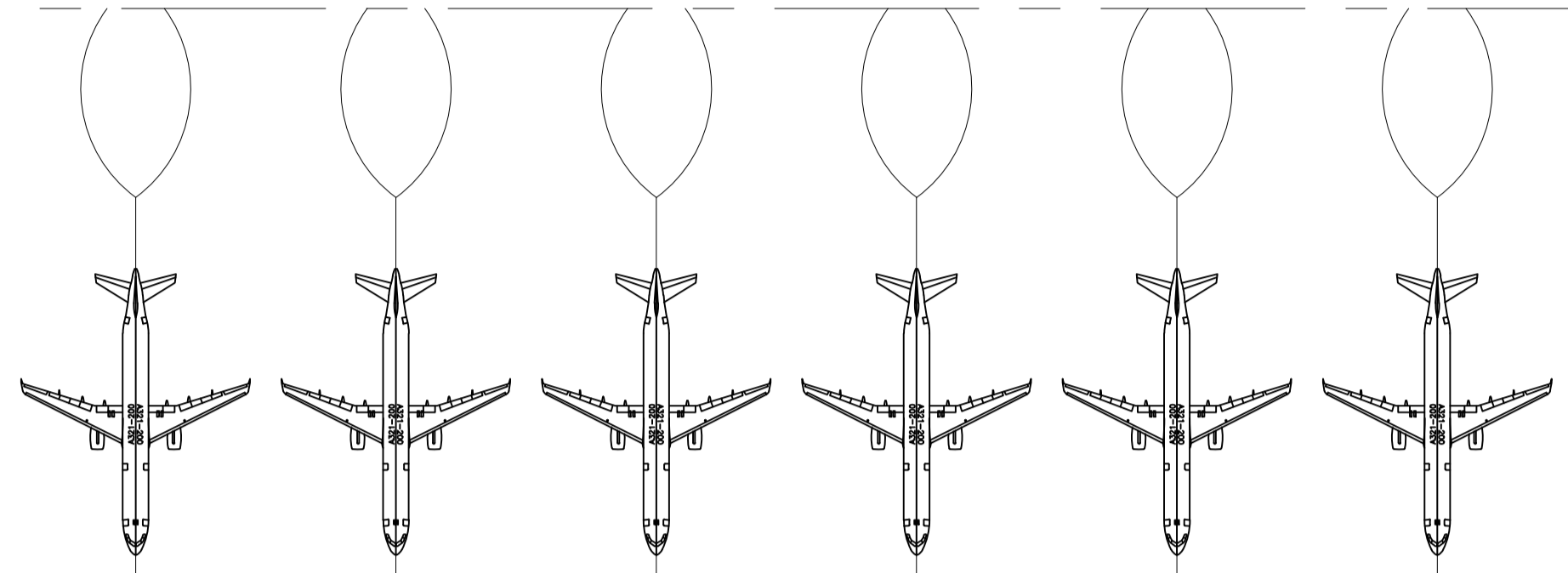
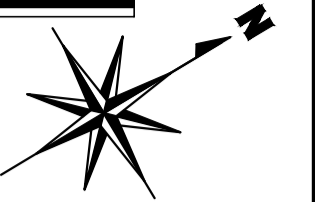
G. SUBMITTALS

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INCLUDING CONNECTION DETAILS SUBJECT TO APPROVAL OF THE STRUCTURAL ENGINEER.

NOTES ON EQUIPMENT AND MACHINERY LAYOUT

1. CONTRACTOR SHALL ALSO REFER TO OWNER FURNISHED EQUIPMENT DIAGRAMS AND LAYOUT TO VERIFY WHETHER ANY DISCREPANCY IS PRESENT. IN CASE OF DISCREPANCIES, THE OWNER AND THE ENGINEER SHOULD BE NOTIFIED IN WRITING BEFORE PROCEEDING WITH ANY AFFECTED WORK.

 <p>Republic of the Philippines DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS</p>	 <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	PREPARED BY:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT TITLE:	SHEET CONTENTS:			SHEET NO:		
		EDGARDO C. CRUZ			NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	COMPONENT-4 BUILDING WORKS (B)	B0-4200-03				
<p>JICA DESIGN CONSULTANT JOINT VENTURE</p>  <p>JAPAN AIRPORT CONSULTANTS, INC.</p>  <p>NIPPON KOEI CO., LTD.</p>  <p>NIS CONSULTANTS CO., LTD.</p>		<p>PROF. CIVIL ENGINEER PTR. 7589023B</p> <p>REG. NO.: 23983 DATE: JANUARY 03, 2013</p> <p>TEAM: 601-157-021 PLACE: QUEZON CITY</p>	<p>ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC</p>	<p>JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC</p>	<p>LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES</p>	<p>JUNE 2013</p>	<p>FRS Jr. WIM HC</p>	<p>STRUCTURAL GENERAL NOTES 3</p>	<p>DRAWING SCALE: 1:200</p>		
					DATE	INDEX	AMENDMENTS	Prepared by	Checked by	Validated by	



BUILDING WORKS (B)
SUBCOMPONENT 4-1
(B1) PASSENGER TERMINAL BUILDING (PTB)

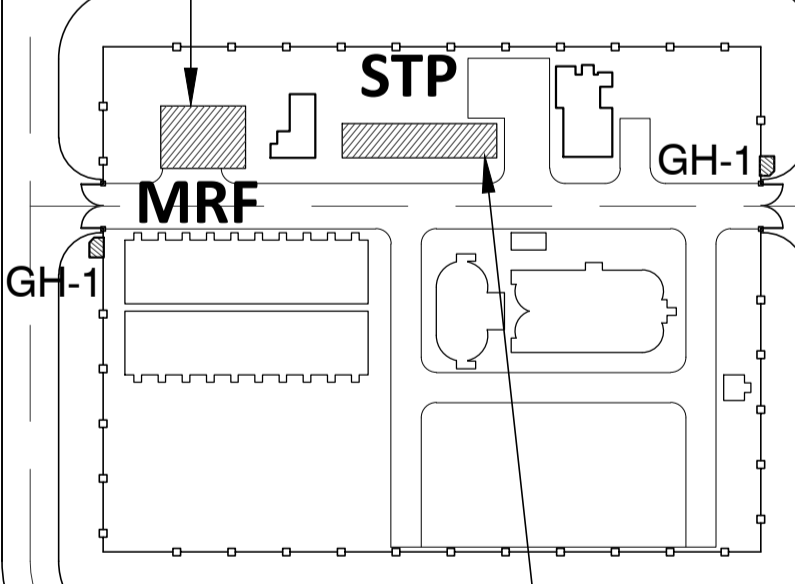
BUILDING WORKS (B)
SUBCOMPONENT 4-4
(B4) FIRE STATION AND AIRPORT
MAINTENANCE BUILDING (FSM)

BUILDING WORKS (B)
SUBCOMPONENT 4-3
(B3) CONTROL TOWER, ATC OPERATIONS
AND ADMINISTRATION BUILDING (CTO)

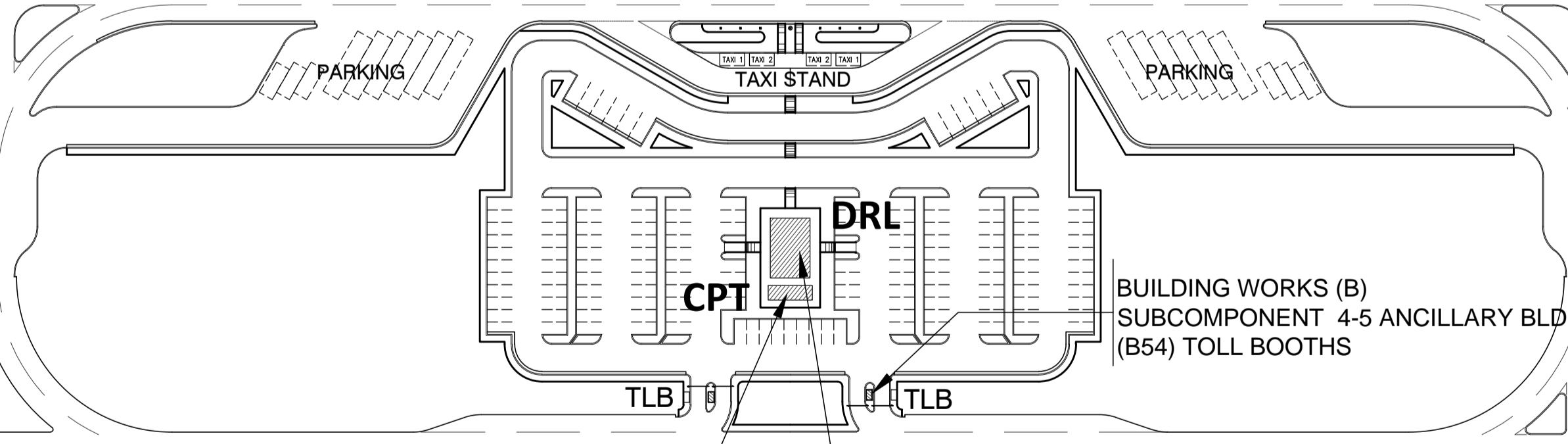
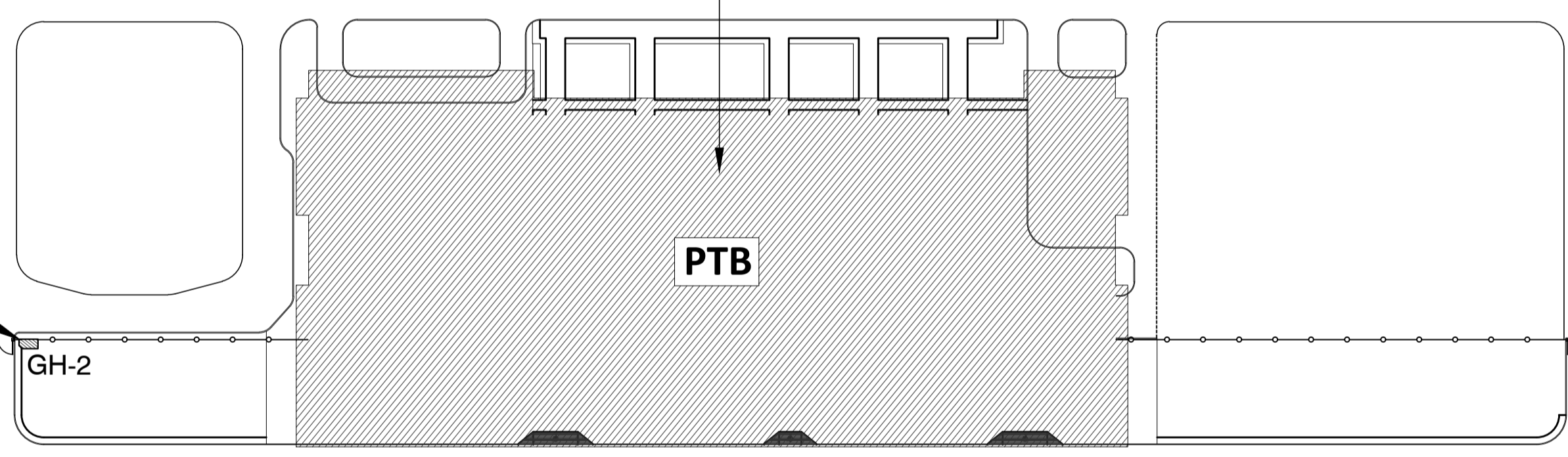
BUILDING WORKS (B)
SUBCOMPONENT 4-6 UTILITY BUILDINGS
(B62) POWER HOUSE (PWH)

BUILDING WORKS (B)
SUBCOMPONENT 4-5 ANCILLARY BUILDINGS
(B53) GUARD HOUSES (GDH)

BUILDING WORKS (B)
SUBCOMPONENT 4-6 UTILITY BUILDINGS
(B64) MATERIAL RECOVERY FACILITY

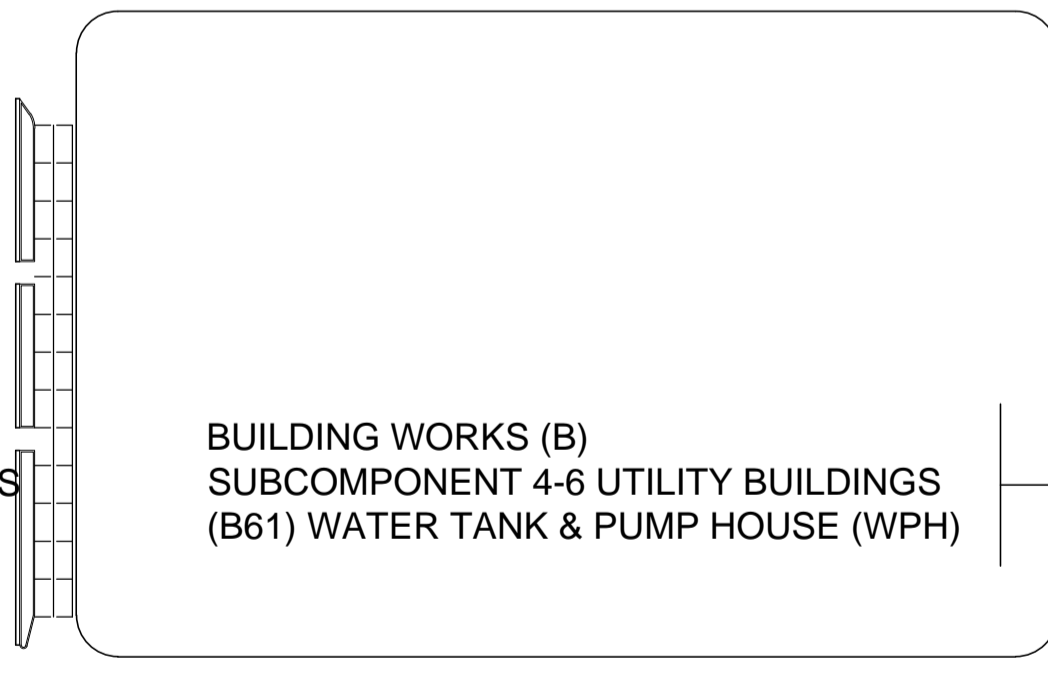
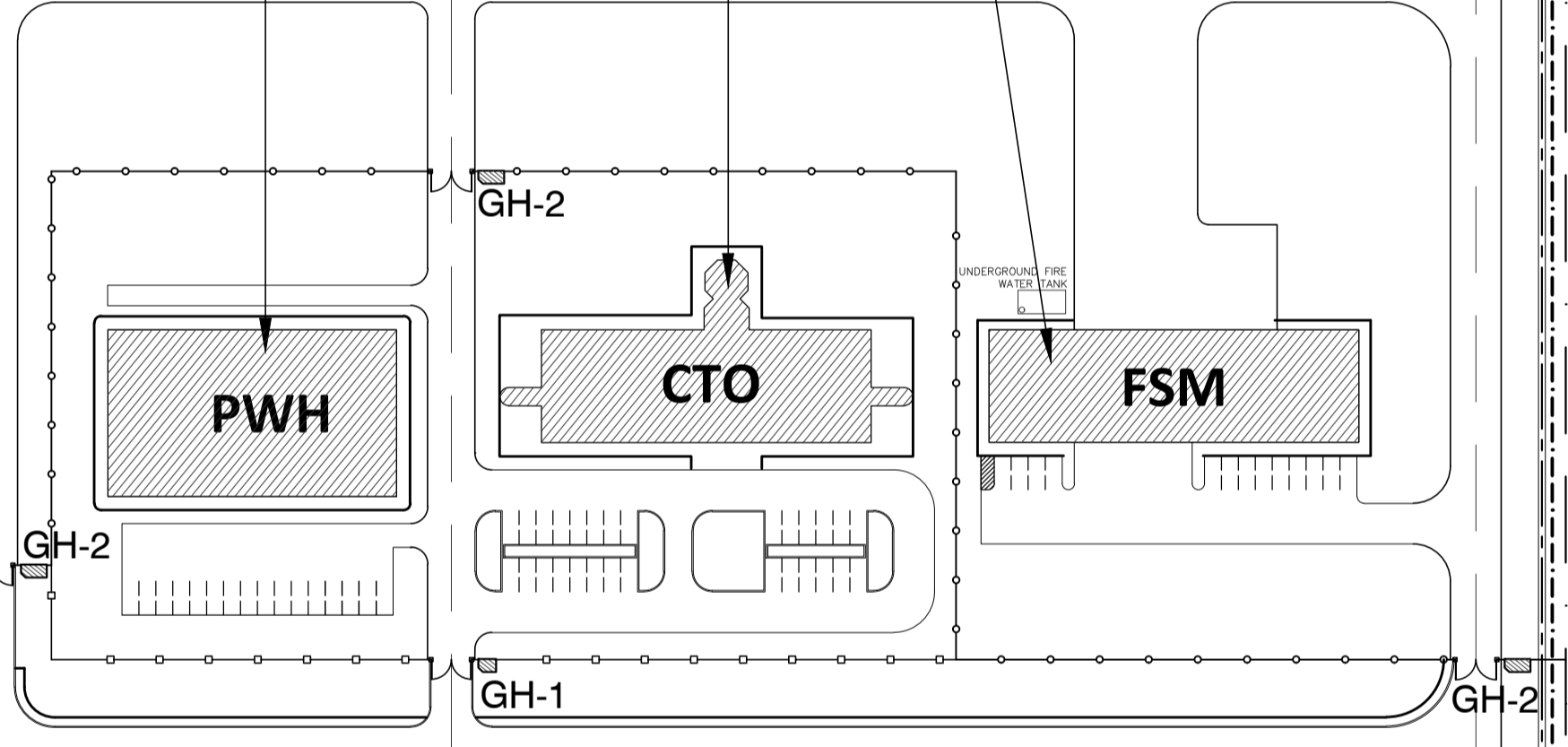


BUILDING WORKS (B)
SUBCOMPONENT 4-6 UTILITY BUILDINGS
(B63) STP CONTROL ROOM (STP)

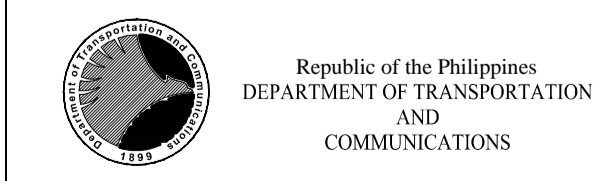


BUILDING WORKS (B)
SUBCOMPONENT 4-5 ANCILLARY BUILDINGS
(B52) CAR PARK TOILET (CPT)

BUILDING WORKS (B)
SUBCOMPONENT 4-5 ANCILLARY BUILDINGS
(B51) DRIVER'S LOUNGE (DRL)



BUILDING WORKS (B)
SUBCOMPONENT 4-6 UTILITY BUILDINGS
(B61) WATER TANK & PUMP HOUSE (WPH)



PREPARED BY:
WILLIAM I. MALLONGA
PROF. ARCHITECT PTR. 3011137
RES. NO.: 4623 DATE: MAY 9, 2013
TEAM: 120-564-198 PLACE: MANILA CITY

TADASHI AOI
Team Leader

RECOMMENDING APPROVAL:
ILDEFONSO T. PATDU, JR.
Assistant Secretary
for Project Implementation, DOTC

APPROVED:
JULIANITO G. BUCAYAN, JR.
Undersecretary
for Project Implementation, DOTC

PROJECT TITLE:
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SUBCOMPONENT-4-1 to 4-6
(B0) GENERAL

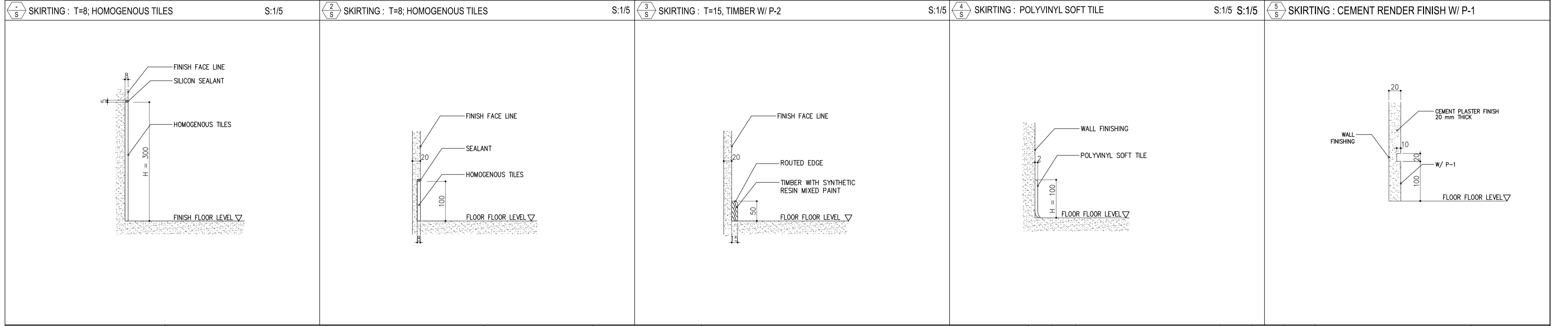
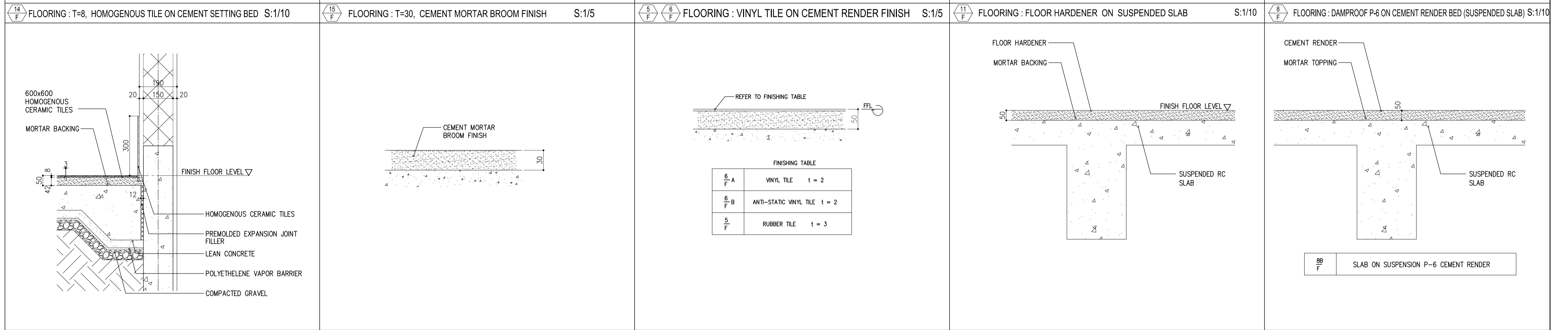
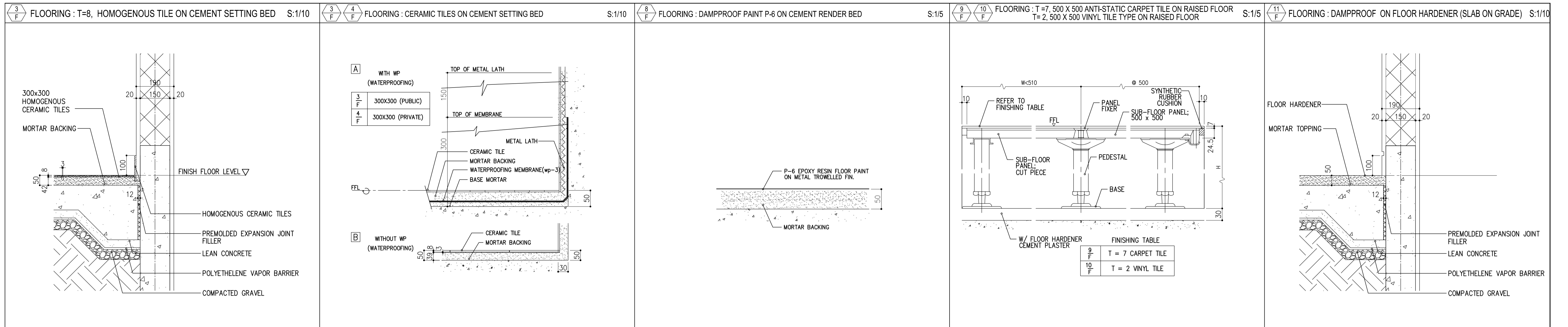
SHEET NO:
B0-4300-01

DRAWING SCALE:
1:1000 MTS

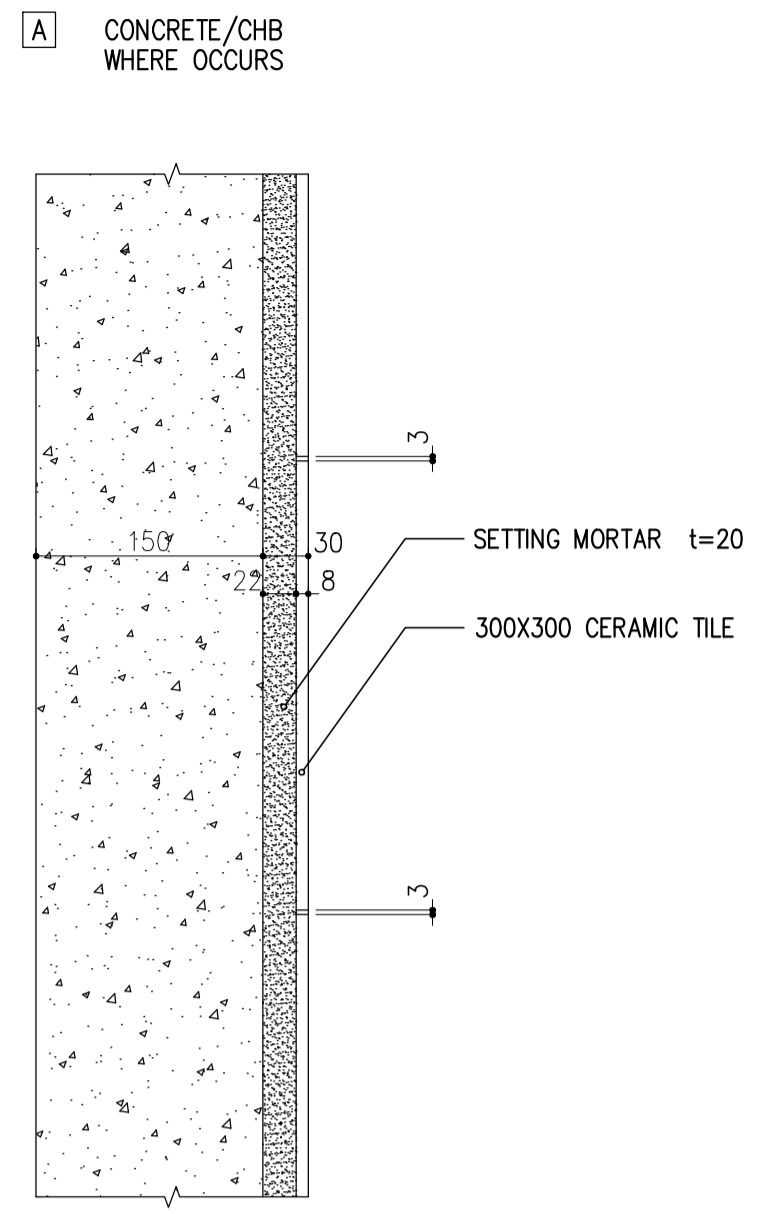
GENERAL NOTES FOR ARCHITECTURAL

LEGEND GENERAL				ABBREVIATIONS			
CONTENTS	SYMBOL	CONTENTS	SYMBOL	SYMBOL			
DRAWING NUMBER NOTATION	<p>B 1 -4300 -A 01</p> <p>(1) WORK NAME AND (2) COMPONENT No.</p> <p>COMPONENT-1 : (G) - GENERAL REQUIREMENTS COMPONENT-2 : (C) - CIVIL WORKS SUBCOMPONENT-2-1 : (C1) ACCESS ROAD SUBCOMPONENT-2-2 : (C2) AIRPORT INFRASTRUCTURE COMPONENT-3 : (U) - UTILITY WORKS SUBCOMPONENT-3-1 : (U1) WATER SUPPLY SYSTEM SUBCOMPONENT-3-2 : (U2) POWER SUPPLY SYSTEM SUBCOMPONENT-3-3 : (U3) SOLAR POWER GENERATION SYSTEM SUBCOMPONENT-3-4 : (U4) SEWAGE TREATMENT SYSTEM COMPONENT-4 : (B) - BUILDING WORKS SUBCOMPONENT-4-0 : (B0) GENERAL SUBCOMPONENT-4-1 : (B1) PASSENGER TERMINAL BUILDING SUBCOMPONENT-4-3 : (B3) CONTROL TOWER, OPERATIONS & ADMINISTRATION BLDG. SUBCOMPONENT-4-4 : (B4) FIRE STATION & MAINTENANCE BUILDING SUBCOMPONENT-4-5 : ANCILLIARY BUILDINGS SUBCOMPONENT-4-5 : (B51) DRIVER'S LOUNGE : (B52) CARPARK TOILET : (B53) GUARDBOUSES : (B54) TOLL BOOTHS SUBCOMPONENT-4-6 : UTILITY BUILDINGS : (B61) WATERTANK & PUMP HOUSE : (B62) POWERHOUSE : (B63) STP CONTROL ROOM : (B64) MATERIAL RECOVERY FACILITY SUBCOMPONENT-4-7 : NAVAIDS BUILDINGS : (B71) LLZ BUILDING : (B72) GS BUILDING : (B73) VOR BUILDING COMPONENT-5 : (N) - AIR NAVIGATION FACILITIES SUBCOMPONENT-5-0: (N0) GENERAL SUBCOMPONENT-5-1: (N1) ILS SUBCOMPONENT-5-2: (N2) VOR/DME SUBCOMPONENT-5-3: (N3) ATS AND TELECOMMUNICATIONS SUBCOMPONENT-5-4: (N4) METEOROLOGICAL OBSERVATION SYSTEM COMPONENT-6 : (L) - AERONAUTICAL GROUND LIGHTING WORKS SUBCOMPONENT-6-0: (L0) GENERAL SUBCOMPONENT-6-1: (L1) APPROACH LIGHTING SYSTEM SUBCOMPONENT-6-2: (L2) PRECISION APPROACH PATH INDICATOR SUBCOMPONENT-6-3: (L3) RUNWAY LIGHTING SYSTEM SUBCOMPONENT-6-4: (L4) TAXIWAY LIGHTING SYSTEM SUBCOMPONENT-6-5: (L5) OTHER AERONAUTICAL LIGHTING SUBCOMPONENT-6-6: (L6) APRON FLOODLIGHTING SUBCOMPONENT-6-7: (L7) UNDERGROUND CABLE DUCTS SUBCOMPONENT-6-8: (L8) CONTROL AND MONITOR SYSTEM (3) SERIES No. 1000 : GENERAL REQUIREMENTS 2000 : CIVIL WORKS 3000 : UTILITY WORKS 4000 : ARCHITECTURAL WORKS 5000 : MECHANICAL WORKS 6000 : ELECTRICAL WORKS 7000 : SPECIAL EQUIPMENT WORKS 8000 : RADIO NAVIGATION AIDS & METEOROLOGICAL WORKS 9000 : AERONAUTICAL GROUND LIGHTING WORKS (4) KIND OF BUILDING DRAWINGS .A - ARCHITECTURAL DRAWINGS .S - STRUCTURAL DRAWINGS .M - MECHANICAL DRAWINGS .E - ELECTRICAL DRAWINGS .SP - SPECIAL EQUIPMENT DRAWINGS .P - SERVICES DRAWINGS</p>	<p>FINISHING MATERIALS</p> <p>STANDARD ARCHITECTURAL DETAIL</p> <p>DOOR AND WINDOW NUMBER</p> <p>FURNITURE NUMBER</p> <p>BUILDING ABBREVIATIONS</p>	<p>FINISH MATERIAL NO. FOR EACH ELEMENT</p> <p>F - 1</p> <p>BUILDING ELEMENT</p> <p>F ; FLOOR S ; SKIRTING W ; WALL Co ; COLUMN C ; CEILING</p> <p>DETAIL NO. FOR EACH ELEMENT</p> <p>1 F</p> <p>FLOOR TYPICAL DETAIL</p> <p>F ; DETAIL OF FLOOR S ; DETAIL OF SKIRTING W ; DETAIL OF WALL Co ; DETAIL OF COLUMN B ; DETAIL OF BEAM C ; DETAIL OF CEILING RD ; DETAIL OF ROOF WAD ; DETAIL OF WALL DD ; DETAIL OF DOOR MD ; DETAIL OF MISCELLANEOUS EJD ; DETAIL OF EXPANSION JOINT</p> <p>NUMBER OF DOOR</p> <p>1 SD</p> <p>NUMBER OF WINDOW</p> <p>1 AW</p> <p>AD : ALUMINIUM DOOR AW : ALUMINIUM WINDOW AL : ALUMINIUM LOUVRE SD : STEEL DOOR (FLUSH) RS : ROLLING SHUTTER DOOR AS : ALUMINIUM SCREEN MP : MOVABLE PARTITION WD : WOODEN DOOR</p> <p>TYPE</p> <p>PP 01</p> <p>CLASSIFICATION</p> <p>FG; FURNITURE FOR GATE LOUNGE</p> <p>.PTB - PASSENGER TERMINAL BUILDING .CTO - CONTROL TOWER, OPERATIONS & ADMINISTRATION BUILDING .FSM - FIRE STATION & MAINTENANCE BUILDING .PWH - POWER HOUSE .WPH - WATER TANK & PUMP HOUSE .DRL - DRIVER'S LOUNGE .CPT - CARPARK TOILET .GH - GUARD HOUSE TYPE I & TYPE II (WITH TOILET) .TLB - TOLL BOOTHS .STP - SEWAGE TREATMENT PLANT - CONTROL ROOM .MRF - MATERIAL RECOVERY FACILITY .LLZ - LLZ BUILDING .GSB - GS BUILDING .VOR - VOR BUILDING</p>	<p>SYMBOLS TO BE CLASSIFIED FOR PAINTING</p> <p>P - 1 SYNTHETIC RESIN EMULSION PAINT P - 2 SYNTHETIC RESIN MIXED PAINT TYPE- I (FOR WOOD) P - 3 SYNTHETIC RESIN MIXED PAINT TYPE- II (FOR STEEL) P - 4 SYNTHETIC RESIN EMULSION MULTI-LAYER COATING. (EXTERIOR AND INTERIOR) P - 5 CLEAR LACQUER P - 6 EPOXY RESIN FLOOR PAINT P - 7 ACRYLIC RESINE ENAMEL PAINT P - 8 FLUORINE-RESIN ENAMEL COATING UE POLYURETHANE ENAMEL PAINT</p> <p>SYMBOLS TO BE CLASSIFIED FOR SEALANT</p> <p>SLT-1 SILICON SEALANT SLT-2 POLYSULPHIDE RESIN SEALANT SLT-3 POLYURETHANE RESIN SEALANT SLT-4 ASPHALT RUBBER SEALANT</p> <p>SYMBOLS TO BE CLASSIFIED FOR WATER PROOFING</p> <p>WP-1 CONCRETE TROWEL FINISH ON HOT APPLIED ROBBERIZED ASPHALT WATER PROOFING SYSTEM WP-2 HOT APPLIED ROBBERIZED ASPHALT WATER PROOFING SYSTEM WP-3 URETHANE WATERPROOFING COATING WP-4 ACRYLIC RUBBER WATER PROOFING COATING WP-5 SILICATE WATER PROOFING COATING WP-6 POLYVINYL SHEET CHLORIDE SHEET MEMBRANE</p>	<p>A/C AIR CONDITIONING AL ALUMINUM ARCH ARCHITECTURAL BLDG BUILDING C/C CONCESSION CLG CEILING CH CEILING HEIGHT CHB CONCRETE HOLLOW BLOCK CONJ CONSTRUCTION JOINT CLR CLEAR(ANCE) CONC CONCRETE COL COLUMN CONST CONSTRUCTION CONT CONTINUOUS CONTR CONTRACT(OR) DS DOWNSPOUT DTL DETAIL DIAM DIAMETER DIM DIMENSION DWG DRAWING E EAST ELEC ELECTRIC EQ EQUAL EXP-J EXPANSION JOINT EXT EXTERIOR EV ELEVATOR FIN FINISH FFL FINISH FLOOR LINE FLR FLOOR(ING) GL GLASS G.B GYPSUM BOARD H HEIGHT HOR HORIZONTAL INCL INCLUDE(ING) INT INTERIOR</p> <p>L LENGTH L.G.F LIGHT GUAGE FRAMING MAX MAXIMUM MECH MECHANICAL M METER(S) MM MILIMETER(S) MIN MINIMUM N NORTH O.C ON CENTER PLBG PLUMBING PNT PANTRY REF REFERENCE RD ROOF DRAIN RM ROOM RC REINFORCED CONCRETE SEC SECTION SKL SKYLIGHT S SOUTH STO. STORAGE SPEC SPECIFICATION SST STAINLESS STEEL STL STEEL SHO SHOWER ROOM TEL TELEPHONE TV TELEVISION THK THICK(NESS) VERT VERTICAL WP WATERPROOFING W WEST , WIDTH W/O WITHOUT W/ WITH WD WOOD TXT OTHER ABBREVIATIONS NOT INCLUDED REFER TO SCHEDULE OF FINISHES</p>		
				MATERIAL LEGEND			
		MATERIAL ≤1:50		MATERIAL ≥1:100			
		REINFORCED CONCRETE		REINFORCED CONCRETE			
		BLOCK (CHB)		BLOCK (CHB)			
		SASH		SASH			
		PARTITION		PARTITION			
		DRYWALL		DRYWALL			
		RAILING		RAILING			

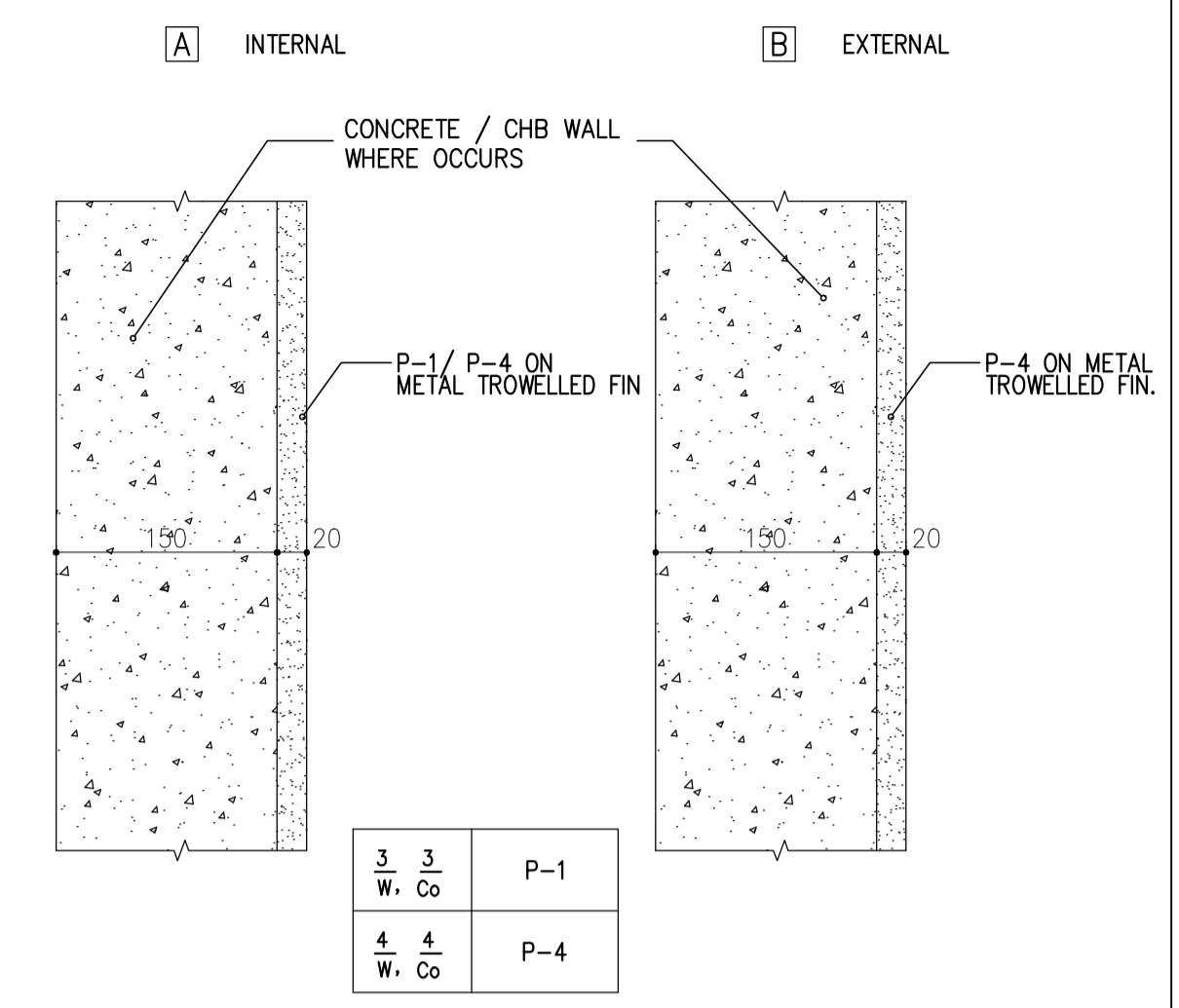
		PREPARED BY: WILLIAM I. MALLONGA <small>PROF: Architect PTR: 3811137 RES. NO.: 4623 DATE: MAY 9, 2013 TEL: 129-564-198 PLACE: MANILA CITY</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: <h3 style="text-align: center;">NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT</h3>	SHEET CONTENTS: COMPONENT-4 BUILDING WORKS (B) SUBCOMPONENT-4-0 (B0) GENERAL	SHEET NO: B0-4300-02
JICA DESIGN CONSULTANT JOINT VENTURE 		TADASHI AOI Team Leader	ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET SCALE: NTS	



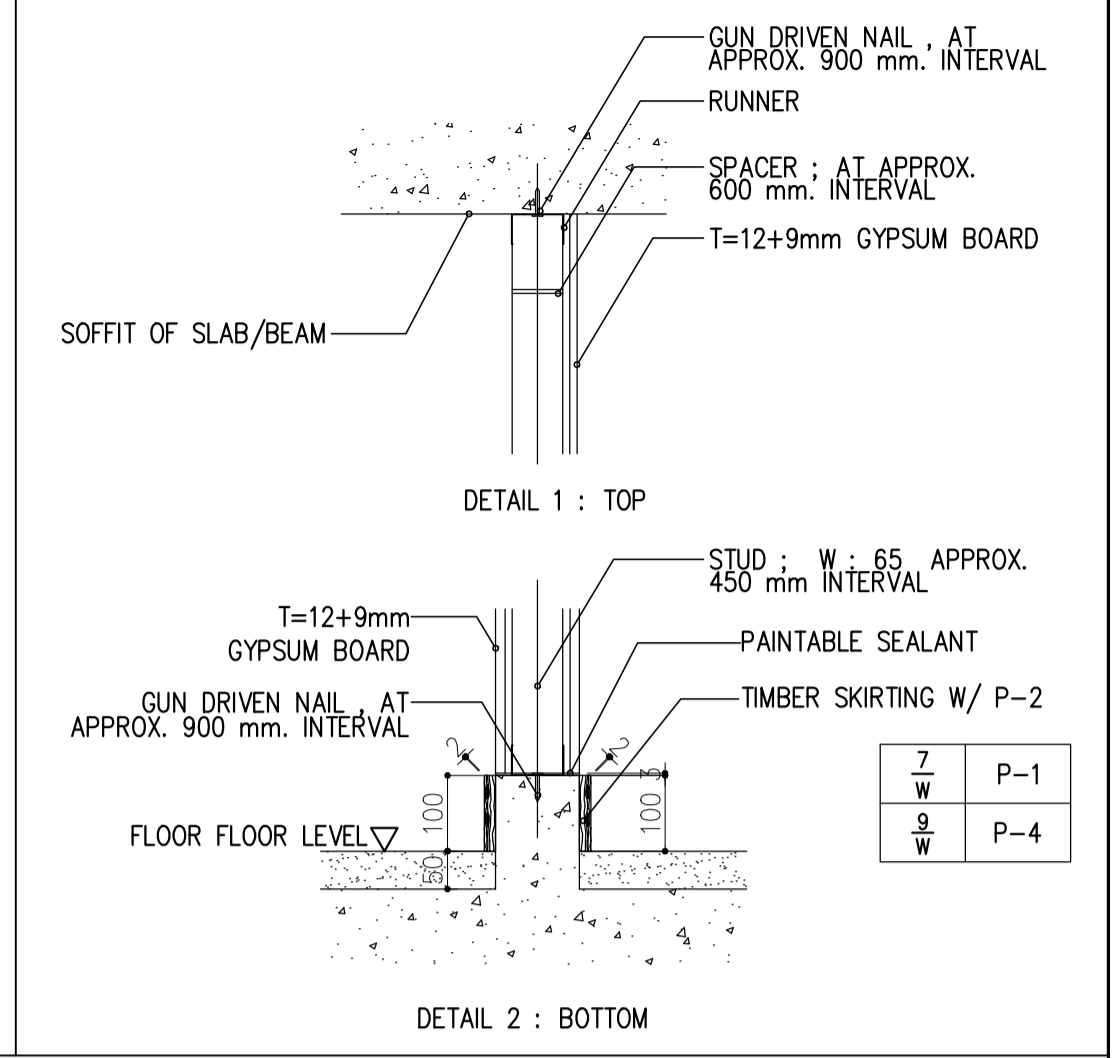
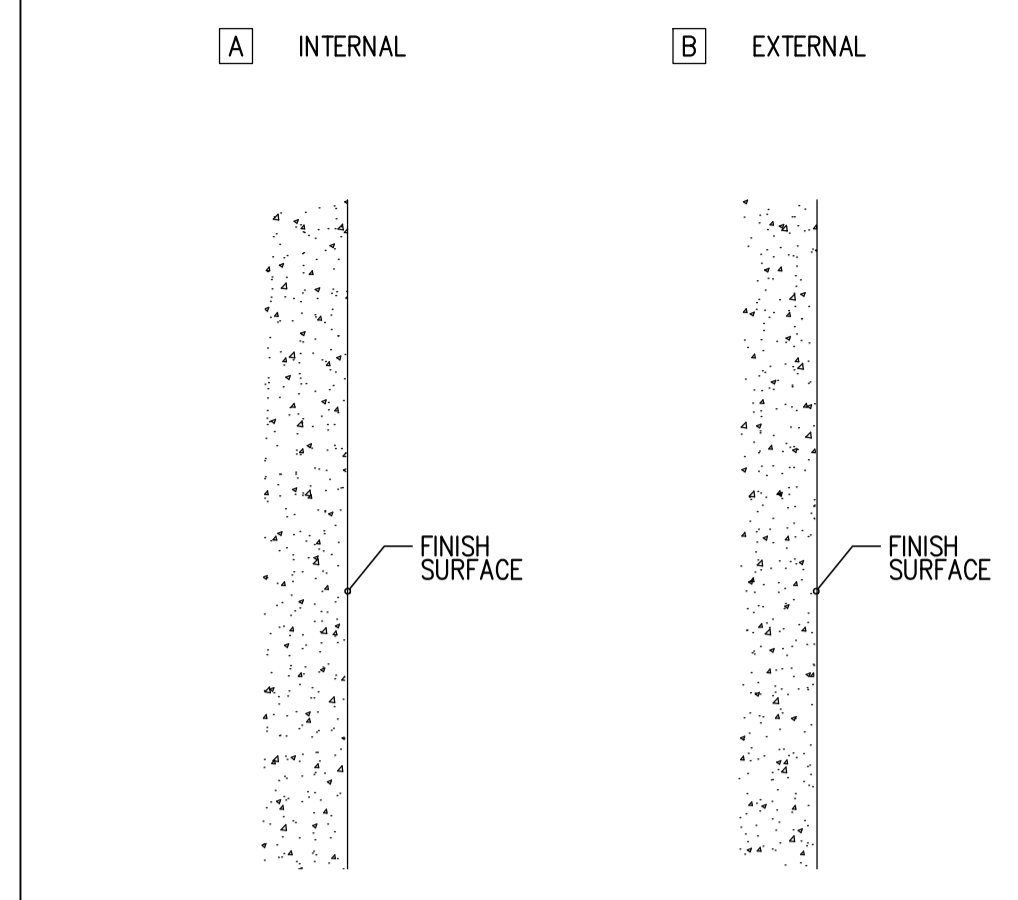
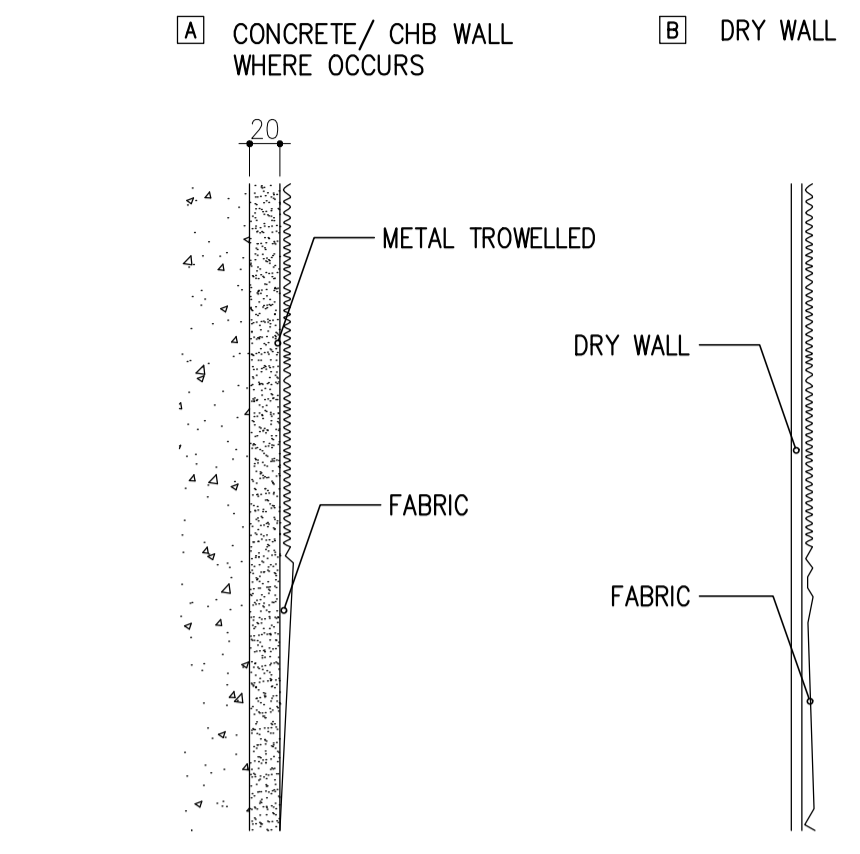
	PREPARED BY: WILLIAM I. MALLONGA <small>PROF: Architect PIR: 3811137 REG. NO.: 4623 DATE: MAY 9, 2013 TEL: 120-564-198 PLACE: MANILA CITY</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4 BUILDING WORKS (B) SUBCOMPONENT-4-0 (B0) COMMON DETAIL 1	SHEET NO: B0-4300-03
	JICA DESIGN CONSULTANT JOINT VENTURE JAC JAPAN AIRPORT CONSULTANTS, INC.	TADASHI AOI <small>Team Leader</small>	ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	DATE: JUNE 2013 INDEX:	AMENDMENTS:	PREPARED BY: FRS Jr. CHECKED BY: WIM VALIDATED BY: HC



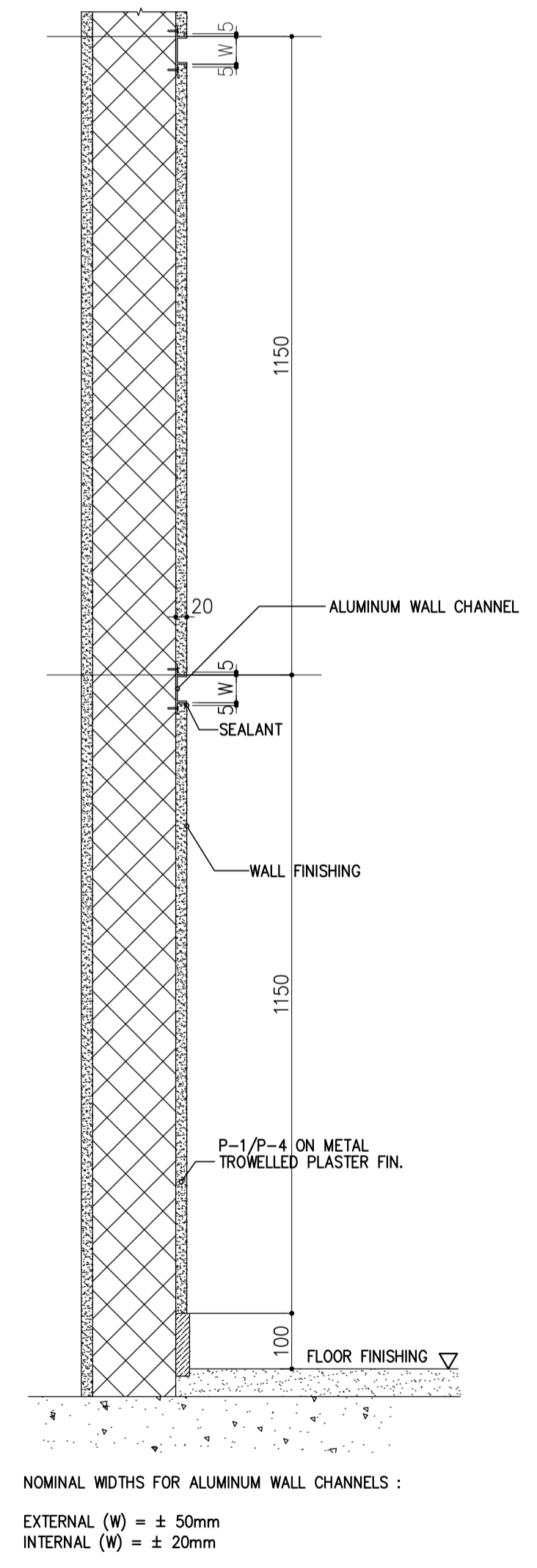
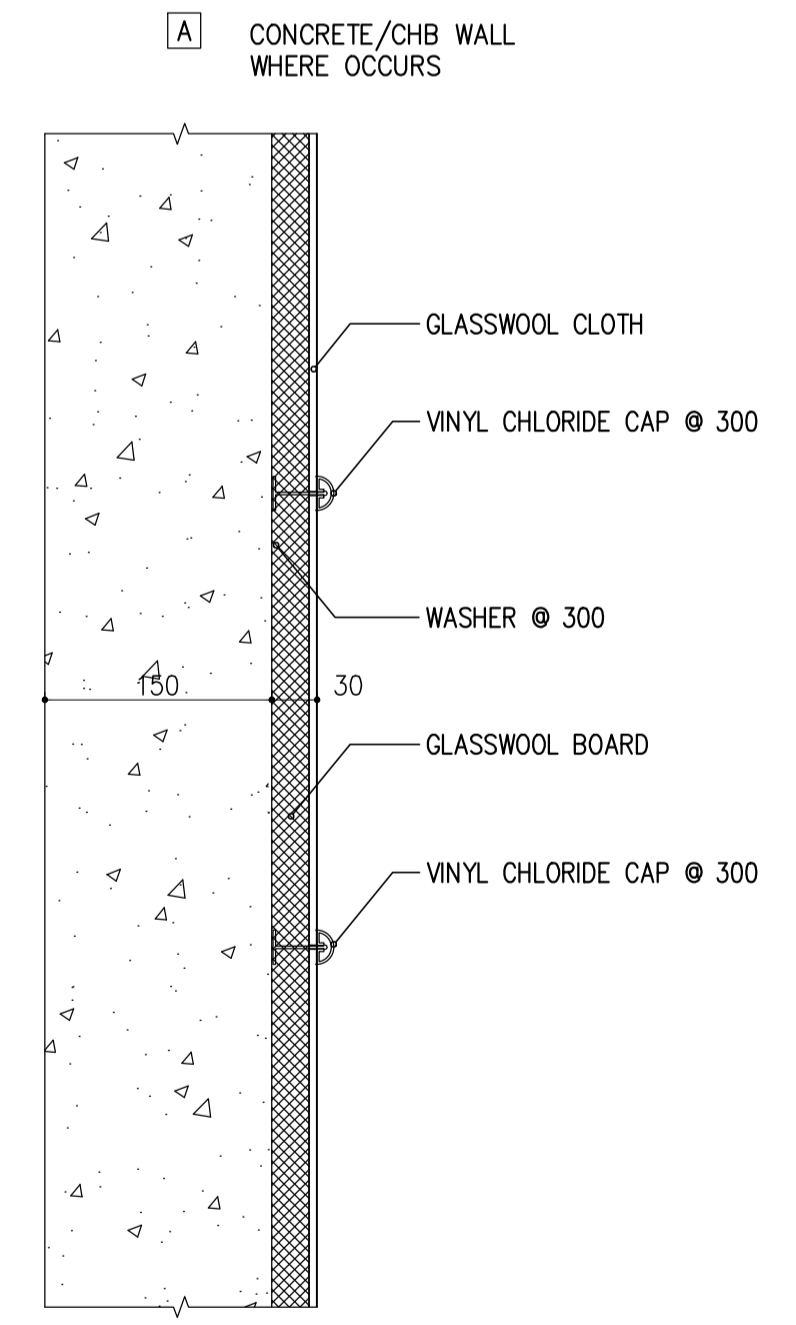
1/W	300X300 (PUBLIC)
2/W	300X300 (PRIVATE)



10/10 WALL & COLUMN : CEMENT RENDER FINISH /ALUMINUM WALL CHANNEL S:1/10



7/8 T=25, GLASSWOOL BOARD W/ GLASSWOOL CLOTH S:1/5



NOMINAL WIDTHS FOR ALUMINUM WALL CHANNELS :
 EXTERNAL (W) = ± 50mm
 INTERNAL (W) = ± 20mm

Republic of the Philippines
 DEPARTMENT OF TRANSPORTATION
 AND
 COMMUNICATIONS

JICA
 JAPAN
 INTERNATIONAL
 COOPERATION
 AGENCY

JICA DESIGN CONSULTANT JOINT VENTURE

JAC JAPAN AIRPORT CONSULTANTS, INC. **NK** NIPPON KOEI CO., LTD. **NIS** NIS CONSULTANTS CO., LTD.

PREPARED BY: WILLIAM I. MALLONGA
 PROF: Architect PIR: 3011137
 RES. NO.: 4623 DATE: MAY 9, 2013
 TEL: 150-564-198 PLACE: MANILA CITY

RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR.
 Assistant Secretary
 for Project Implementation, DOTC

APPROVED: JULIANITO G. BUCAYAN, JR.
 Undersecretary
 for Project Implementation, DOTC

PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT

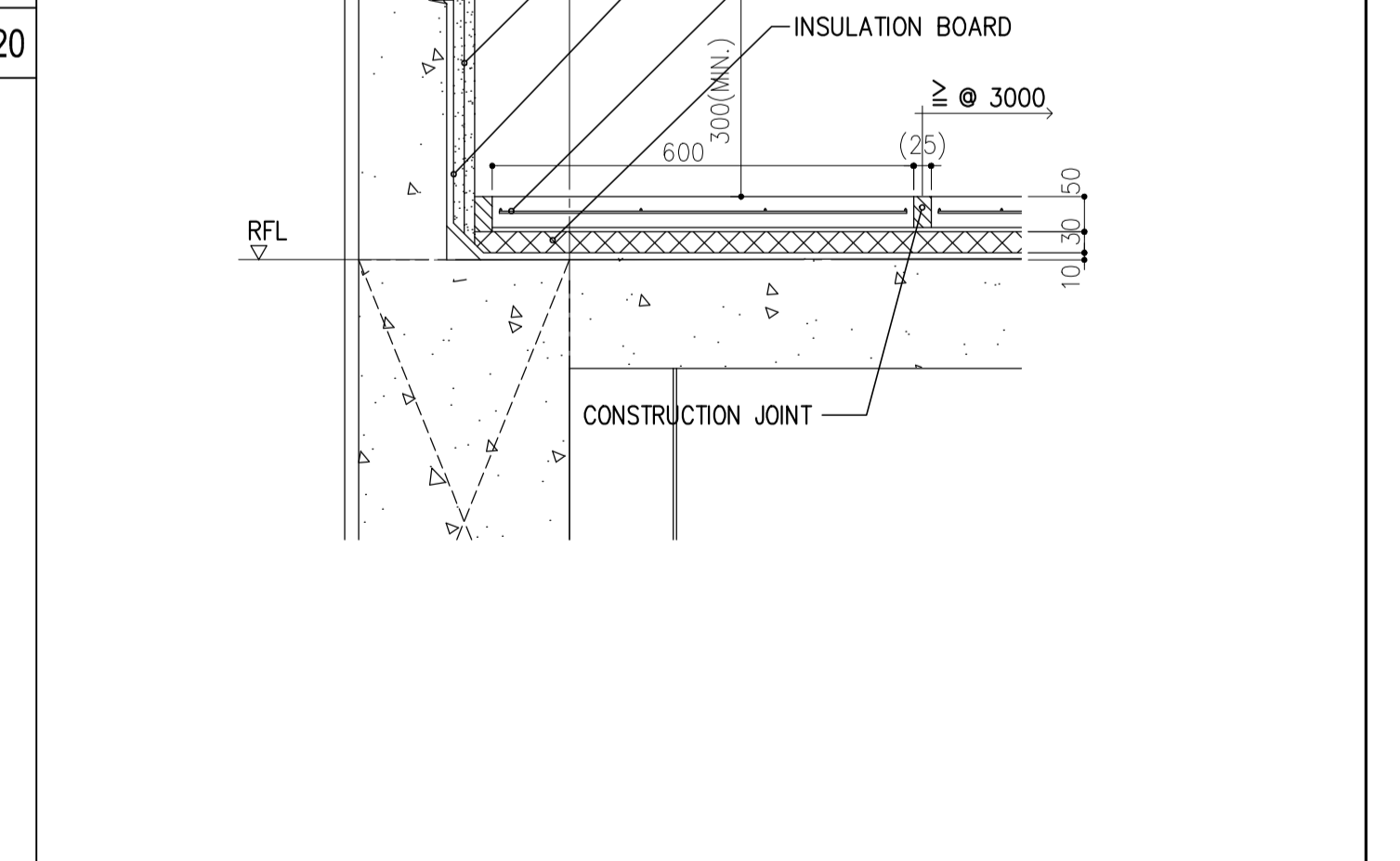
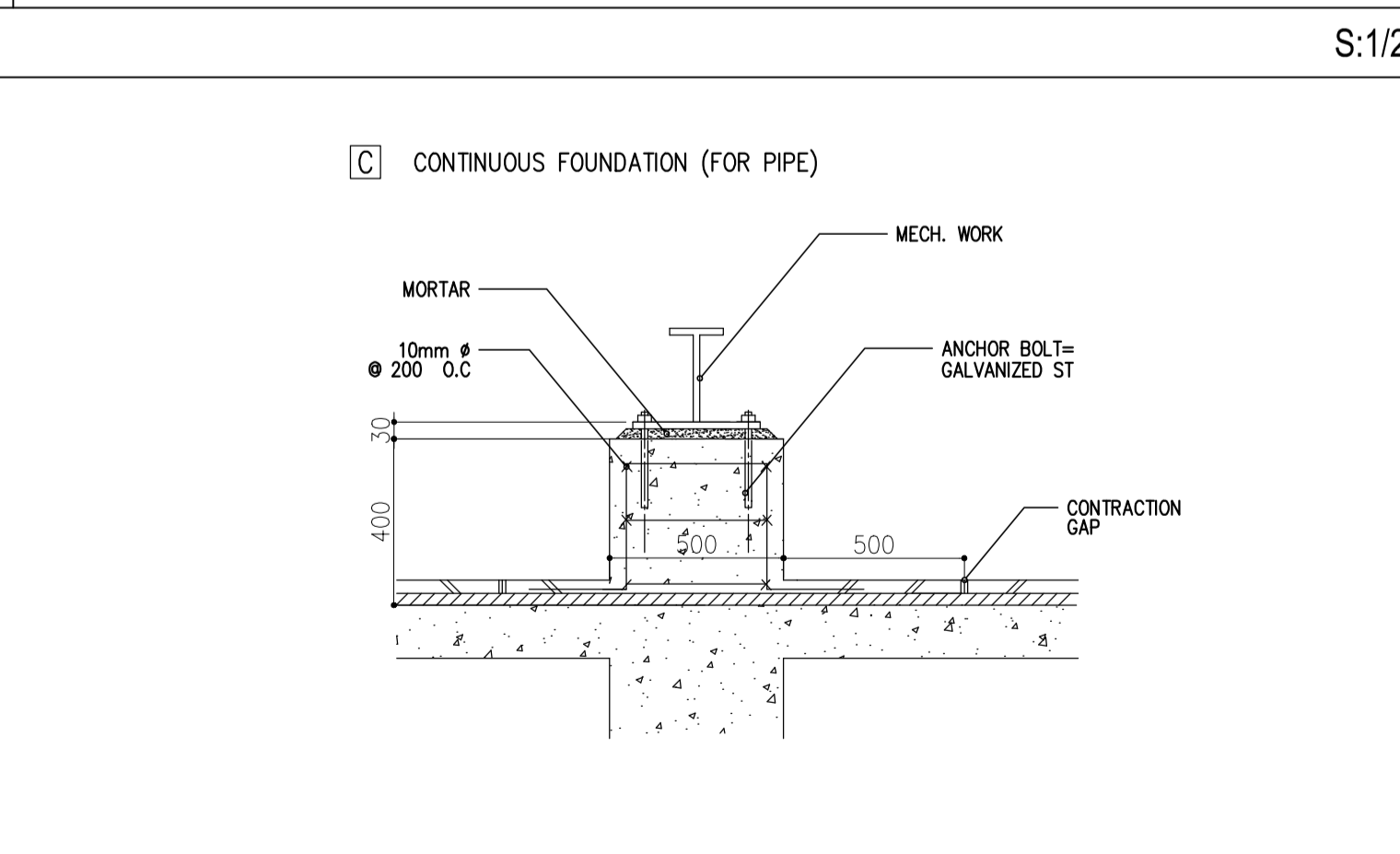
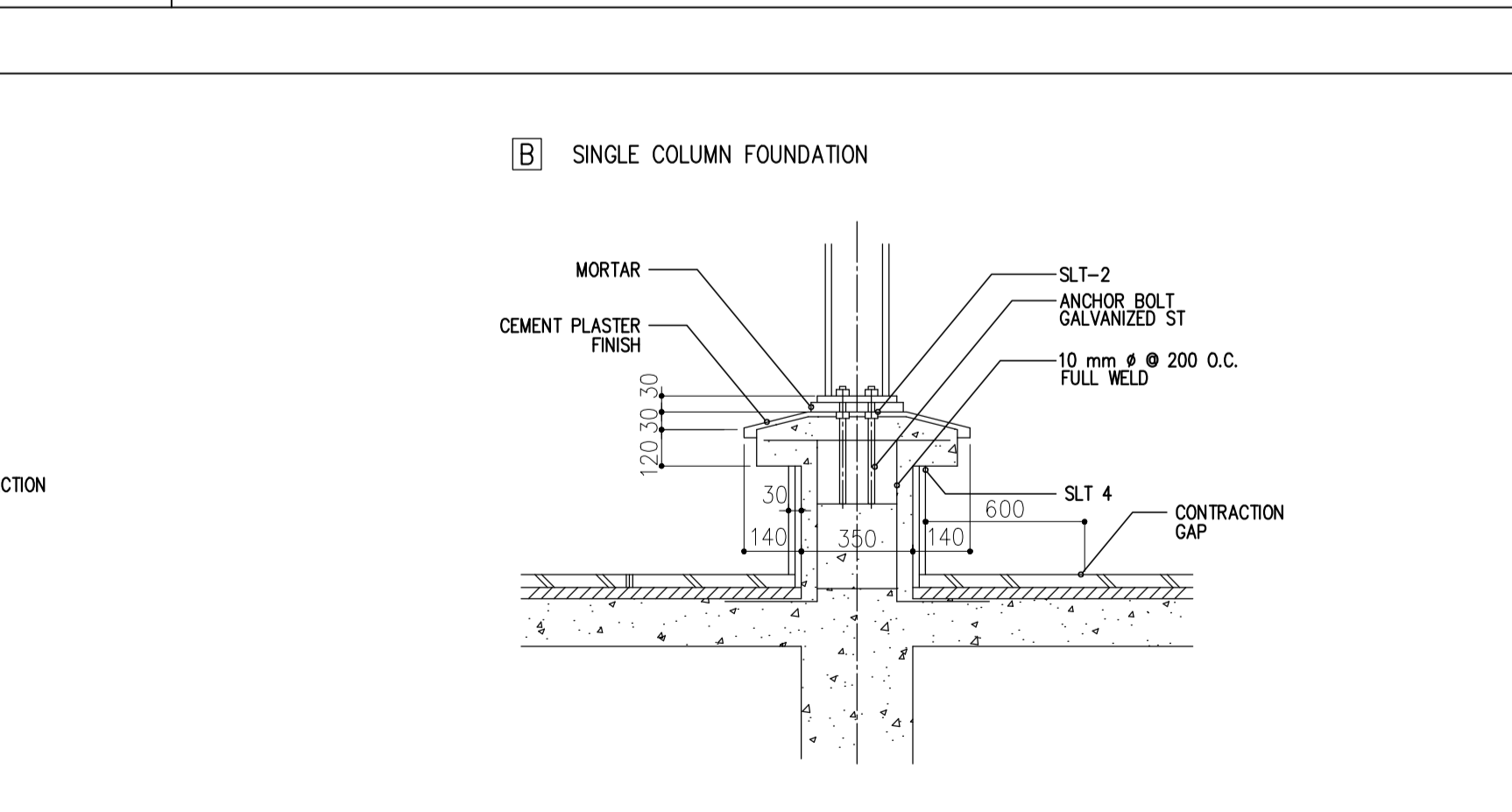
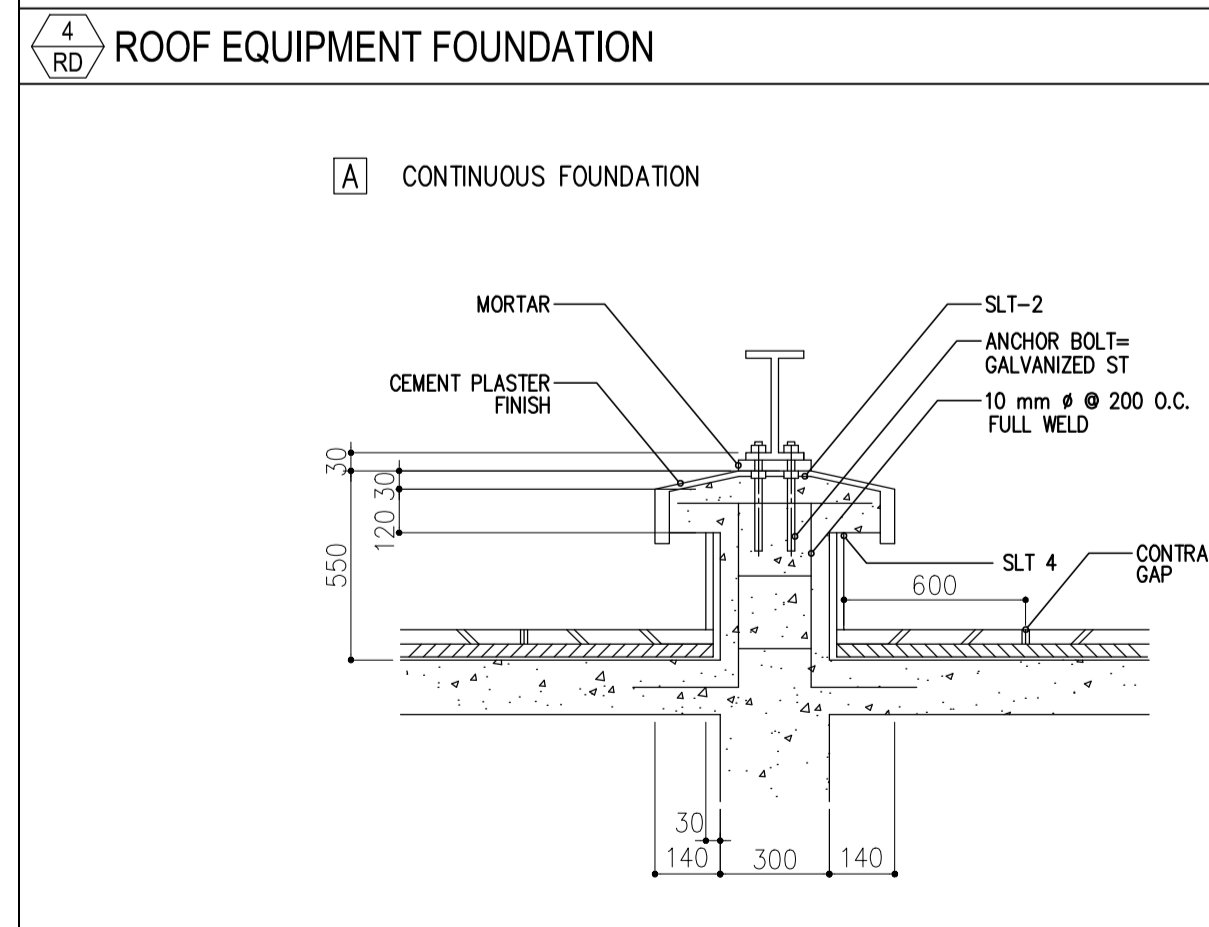
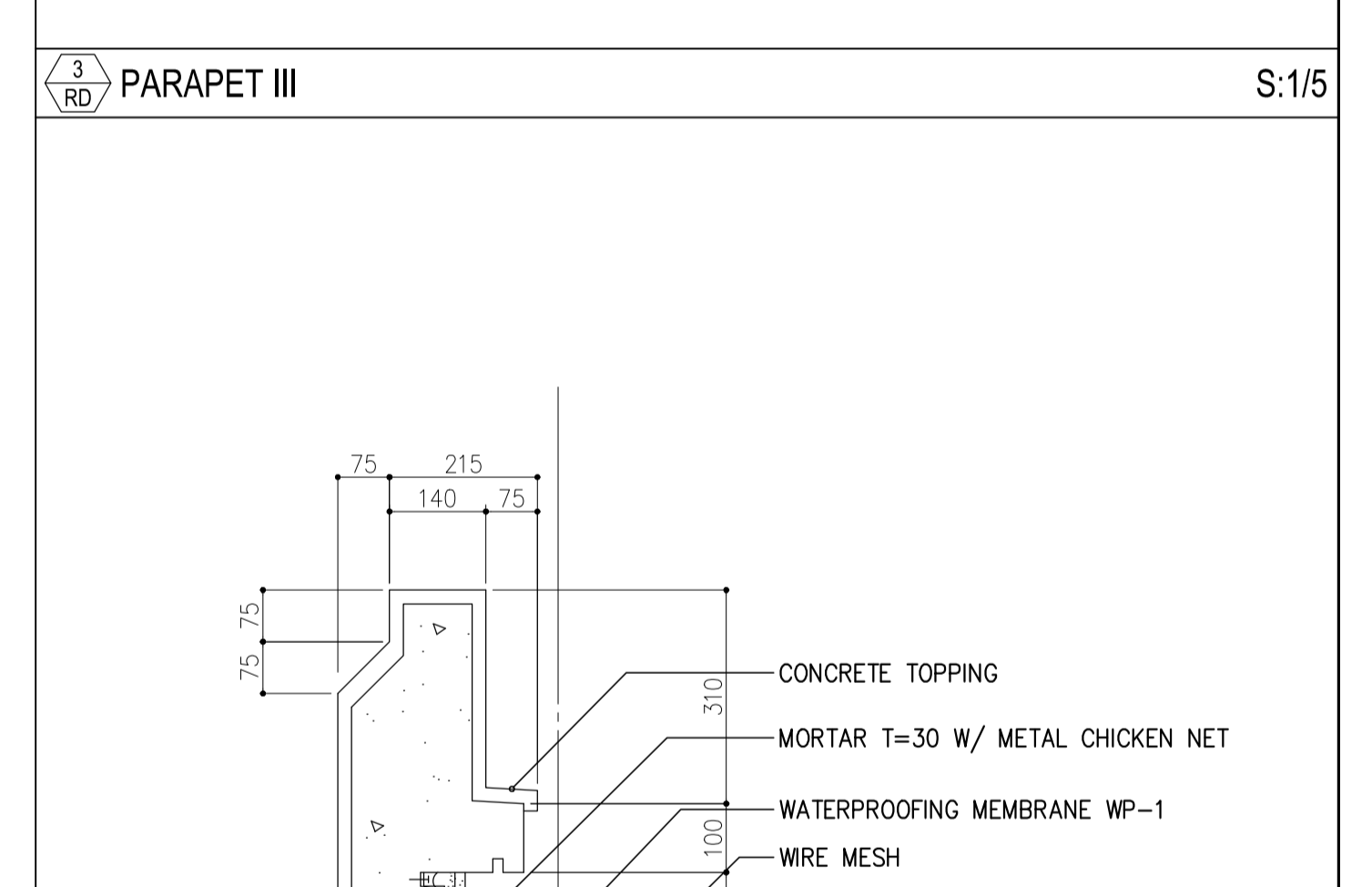
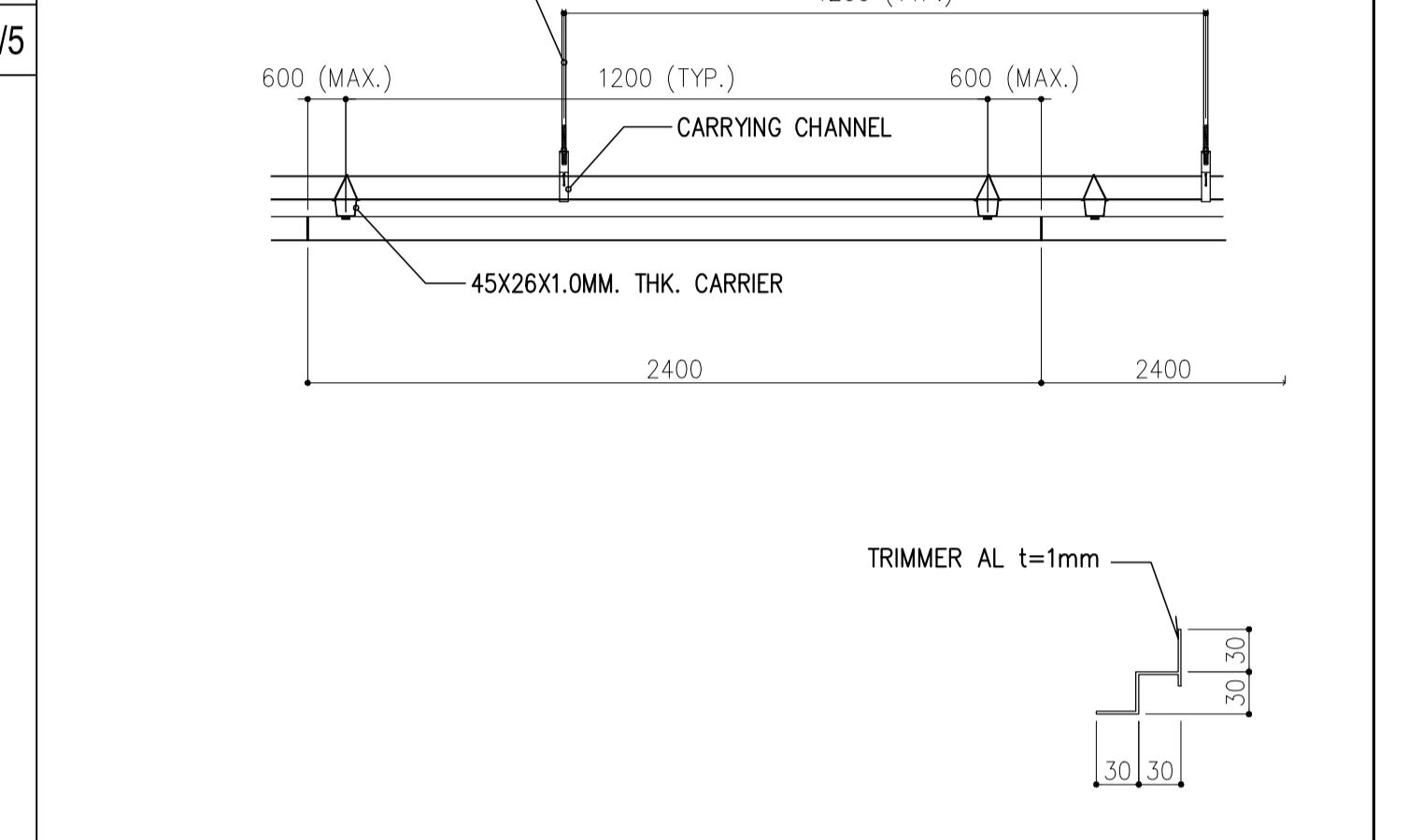
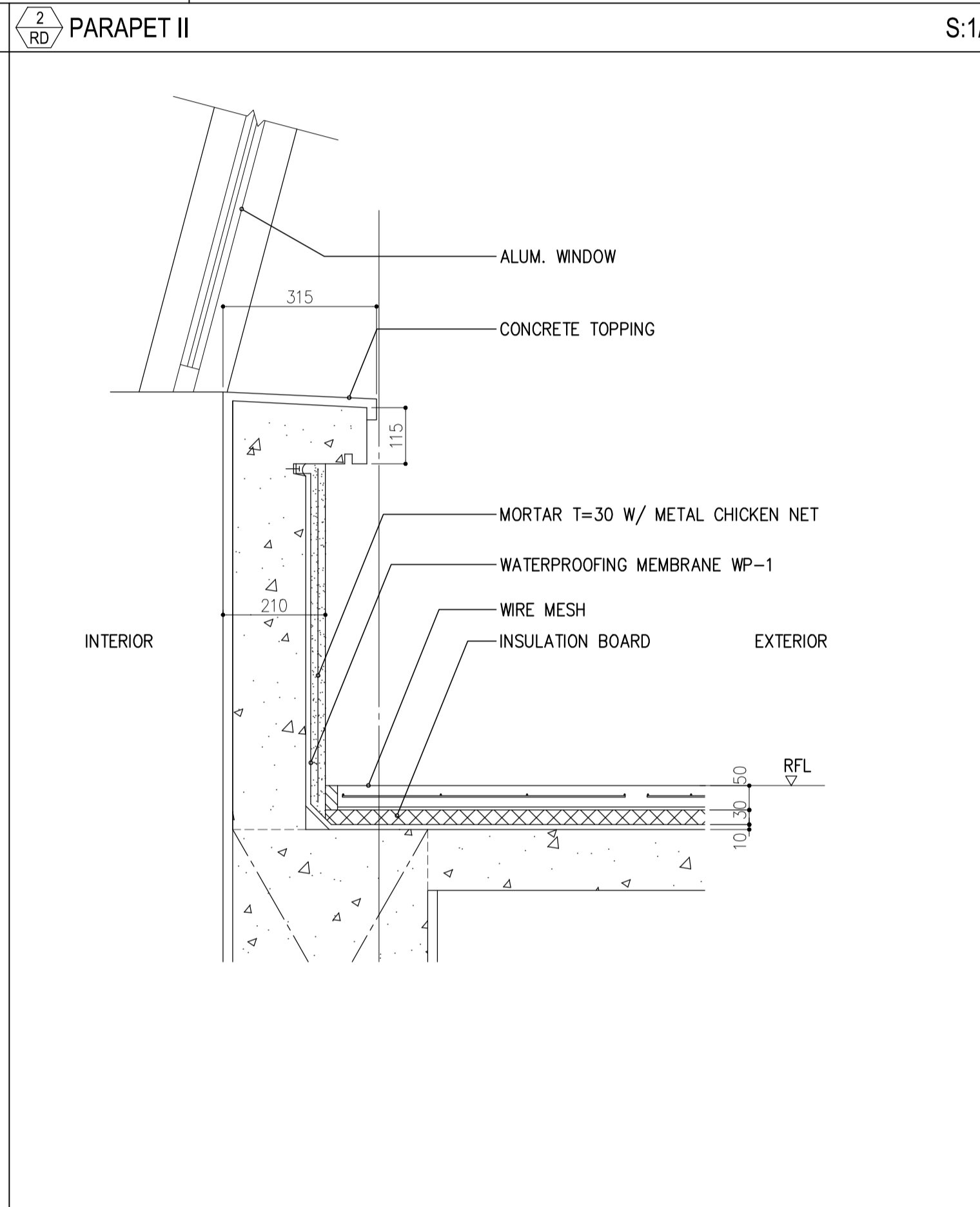
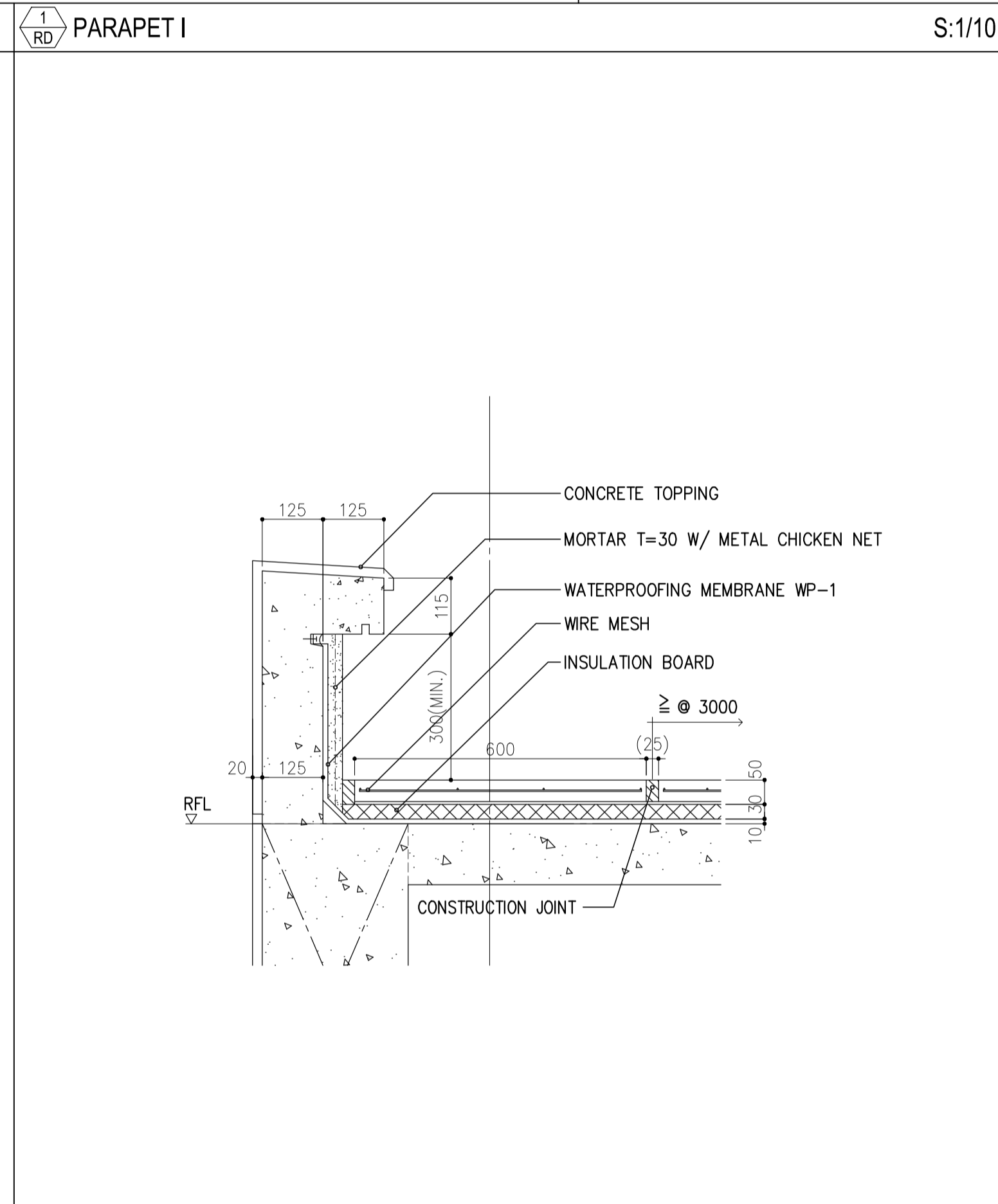
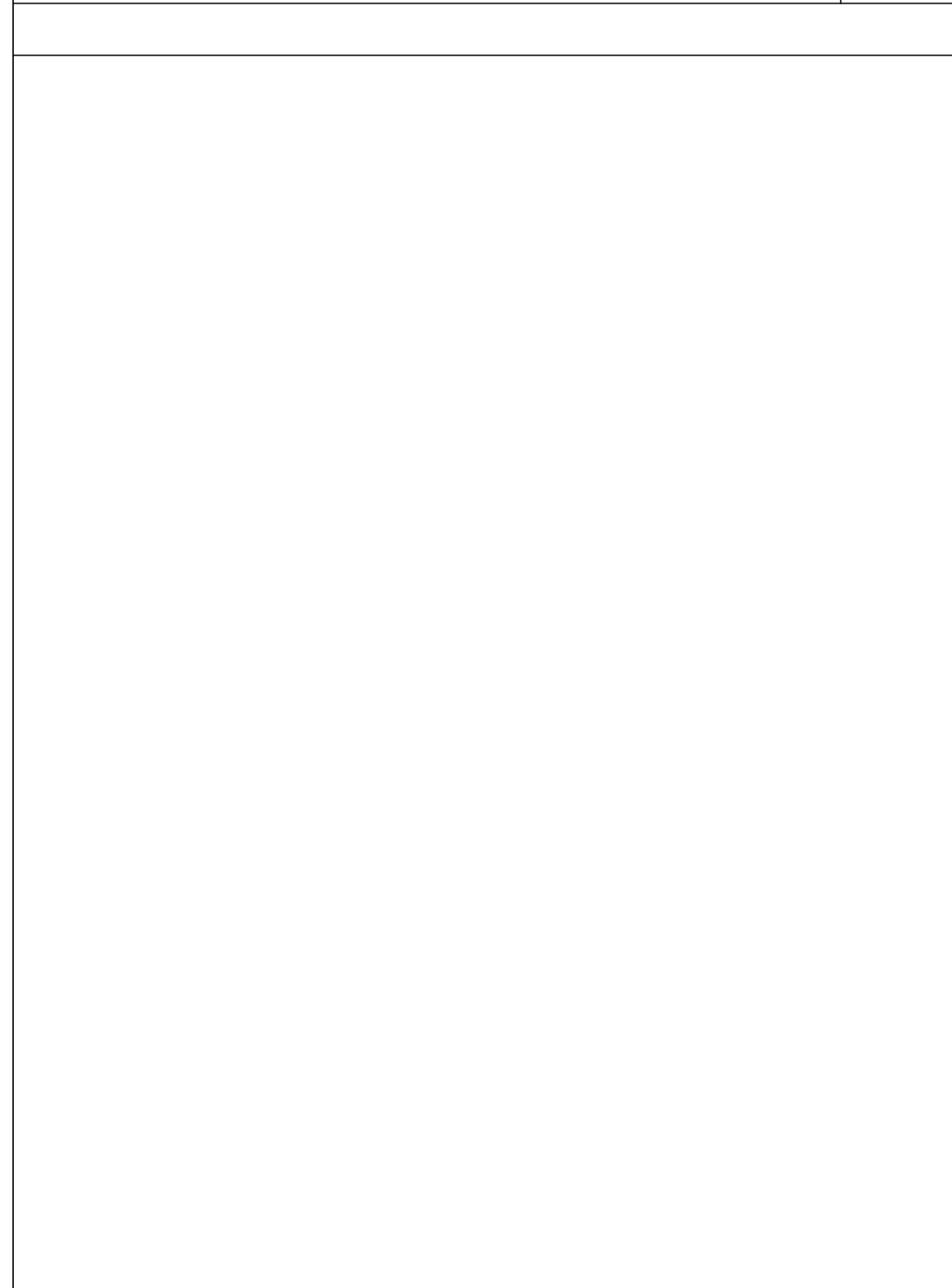
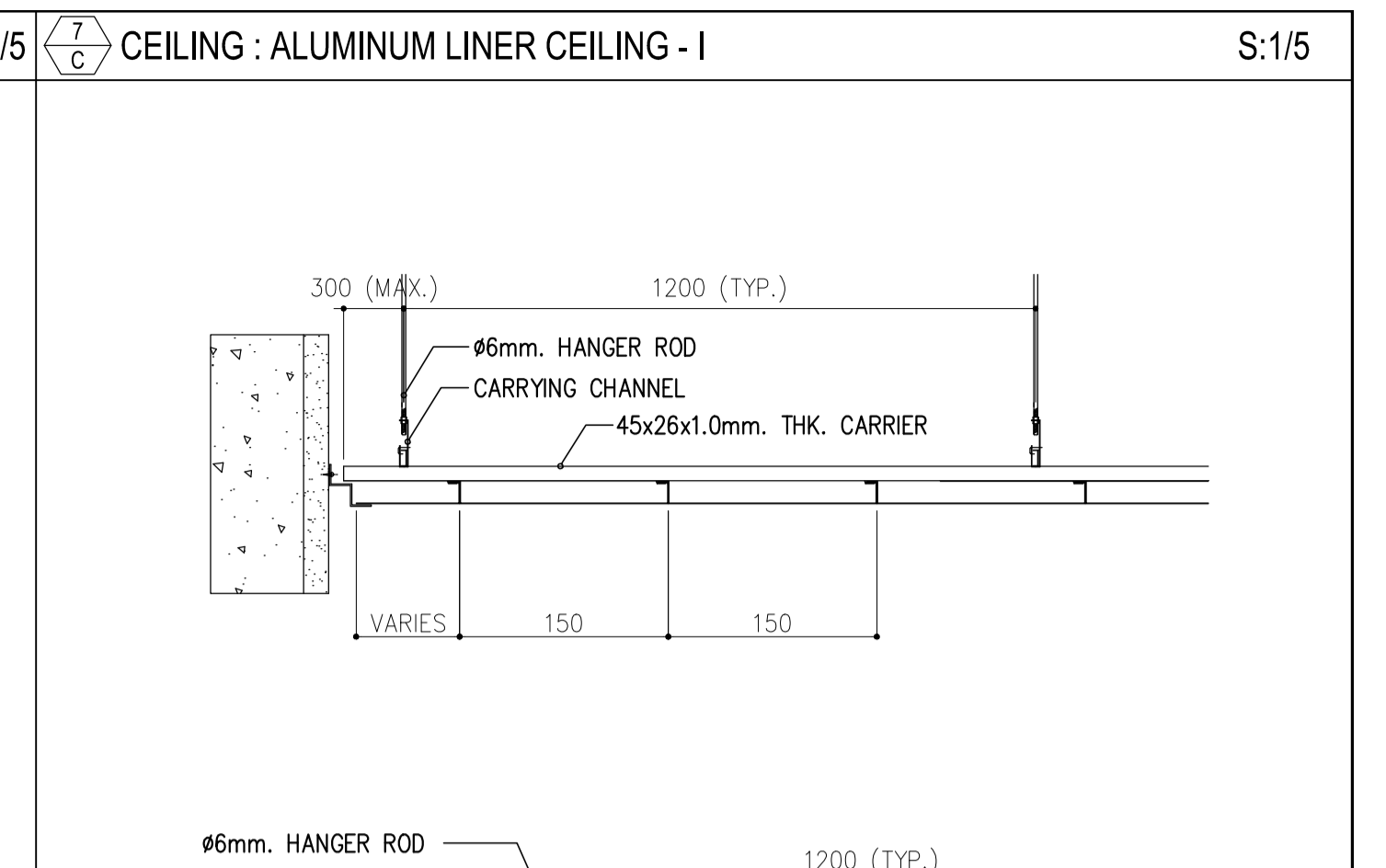
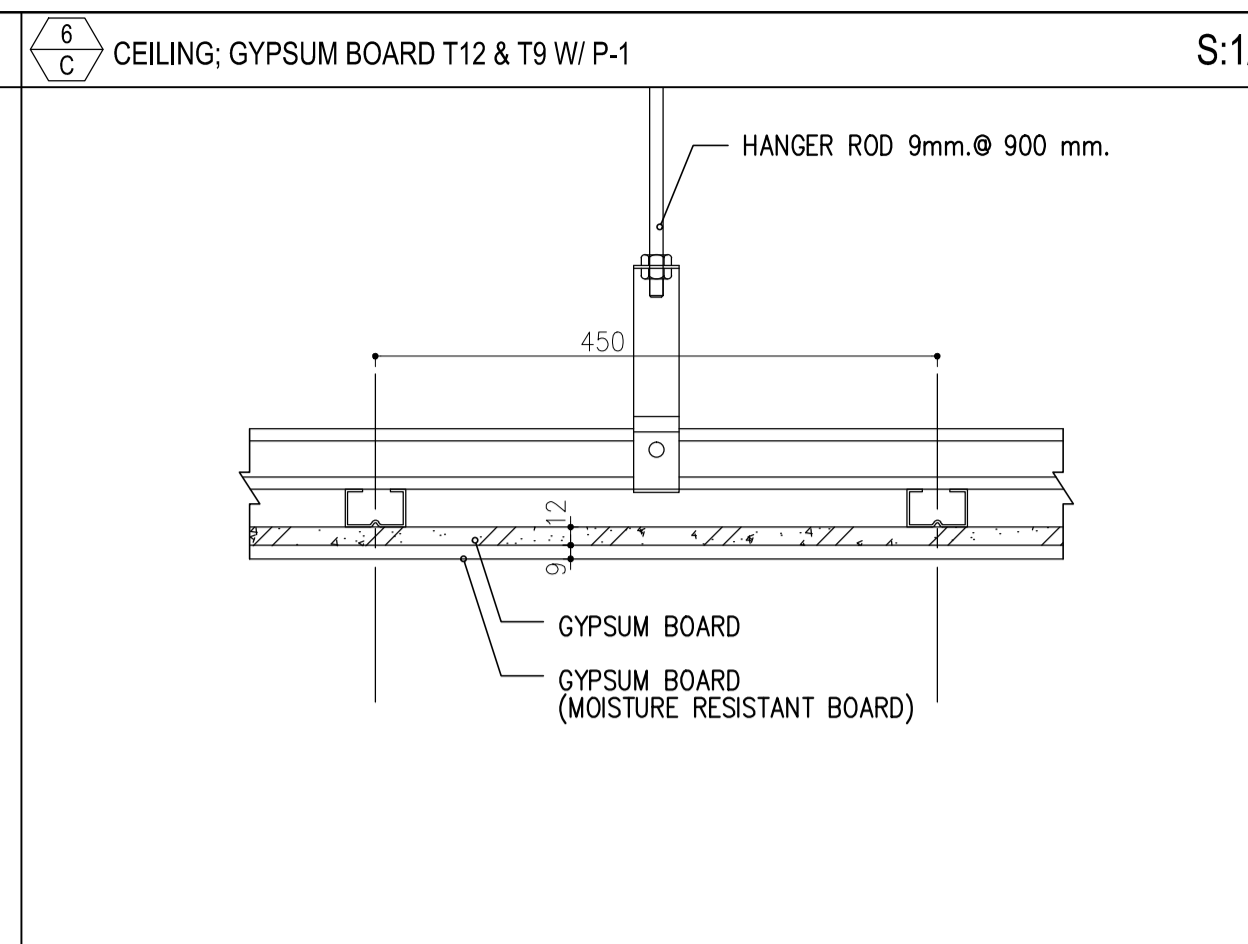
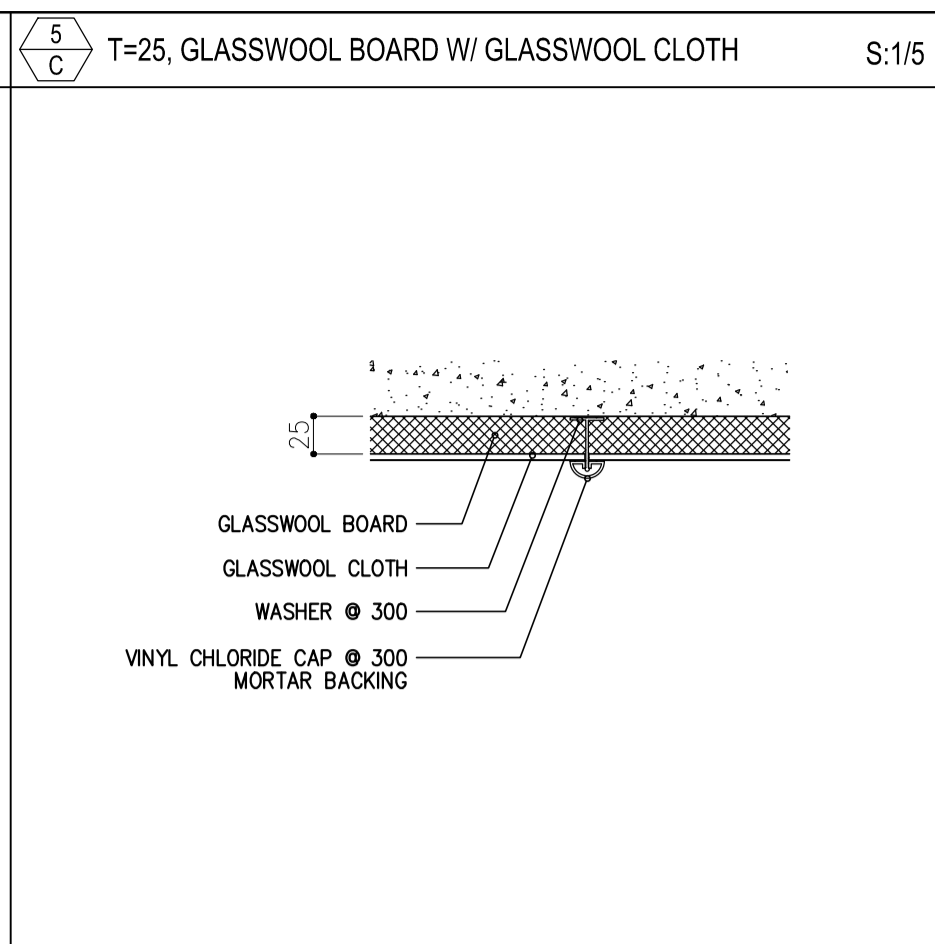
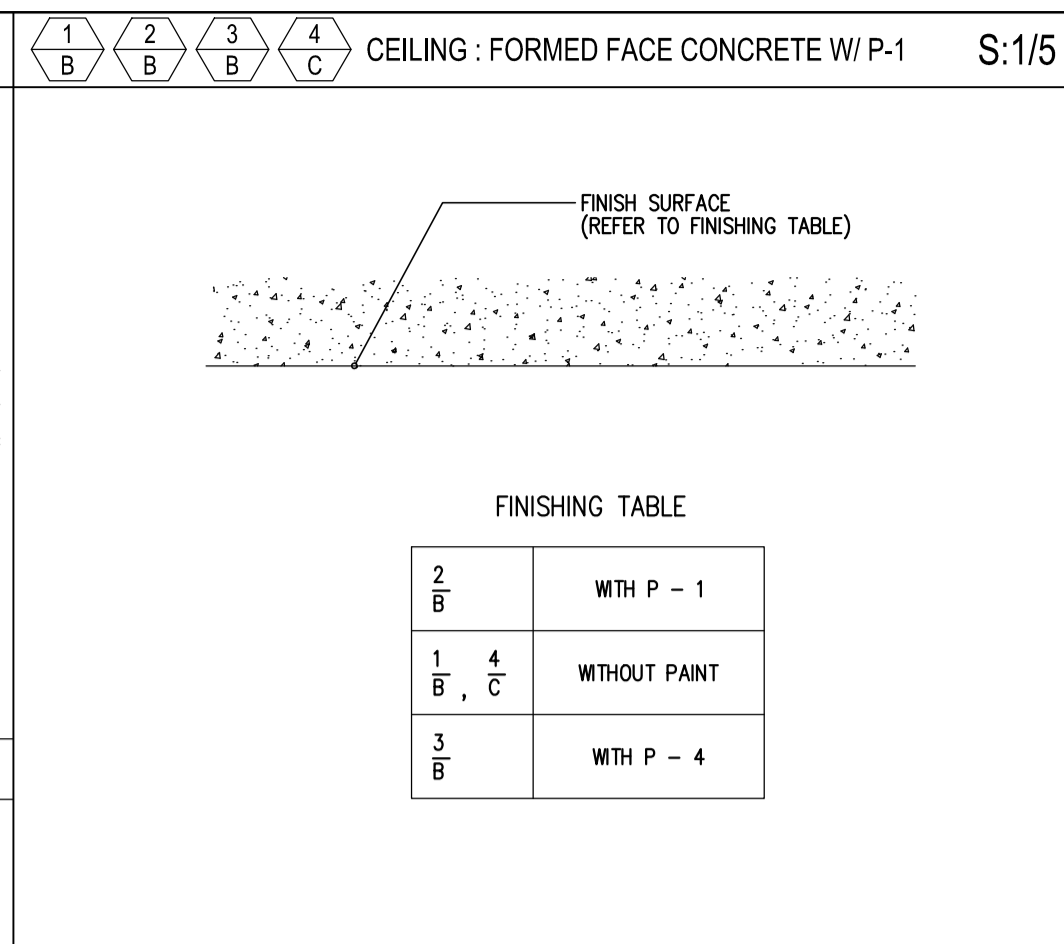
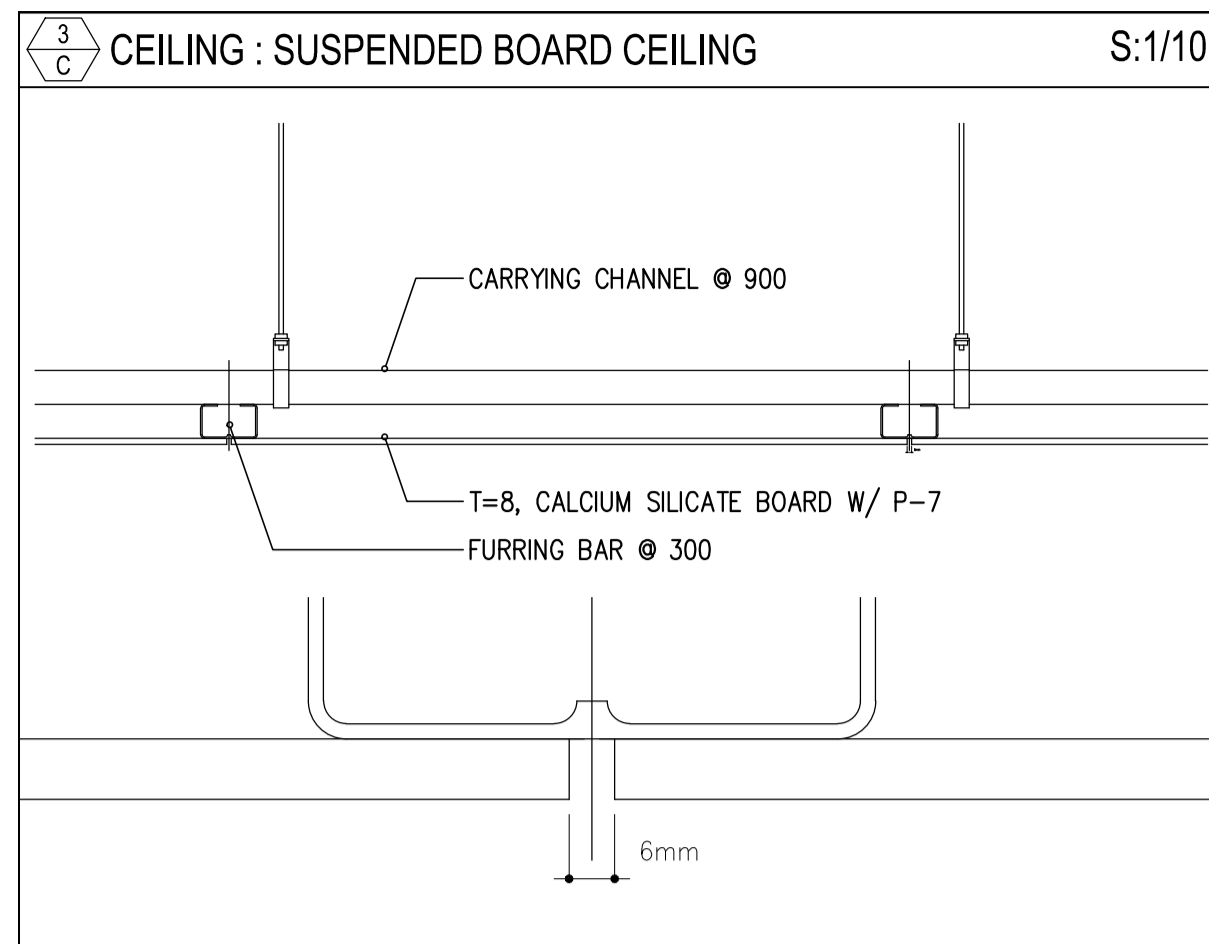
LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES

SHEET CONTENTS: COMPONENT-4 BUILDING WORKS (B) SUBCOMPONENT-4-0 (B0) COMMON DETAIL 2

SHEET NO: B0-4300-04

DRAWING SCALE: AS SHOWN

JUNE 2013	DATE	INDEX	AMENDMENTS	Prepared by: FRS Jr.	Checked by: WIM	Validated by: HC
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JICA DESIGN CONSULTANT JOINT VENTURE

PREPARED BY:
WILLIAM I. MALLONGA
PROF. Architect PIR. 3811137
RES. NO.: 4623 DATE: MAY 9, 2013
TEAM: 129-564-198 PLACE: MANILA CITY

TADASHI AOI
Team Leader

RECOMMENDING APPROVAL:
ILDEFONSO T. PATDU, JR.
Assistant Secretary
for Project Implementation, DOTC

APPROVED:
JULIANITO G. BUCAYAN, JR.
Undersecretary
for Project Implementation, DOTC

PROJECT TITLE:
NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT

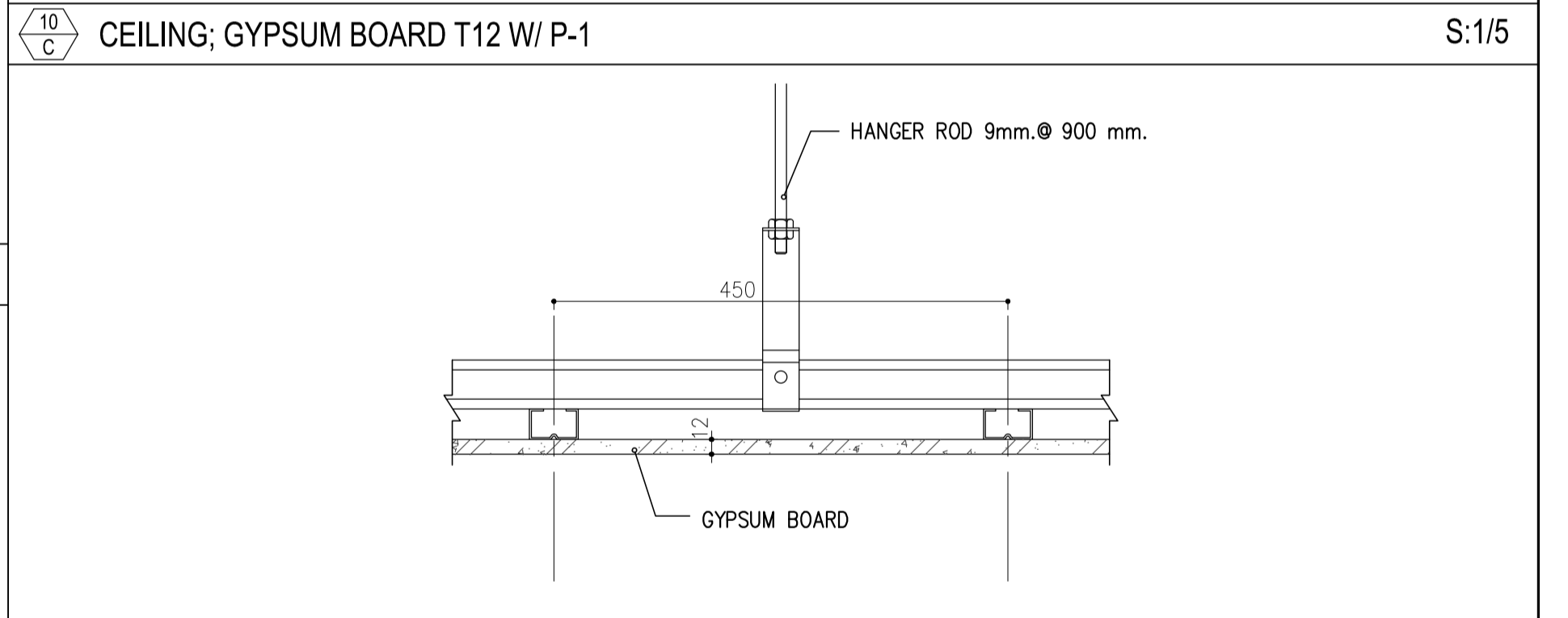
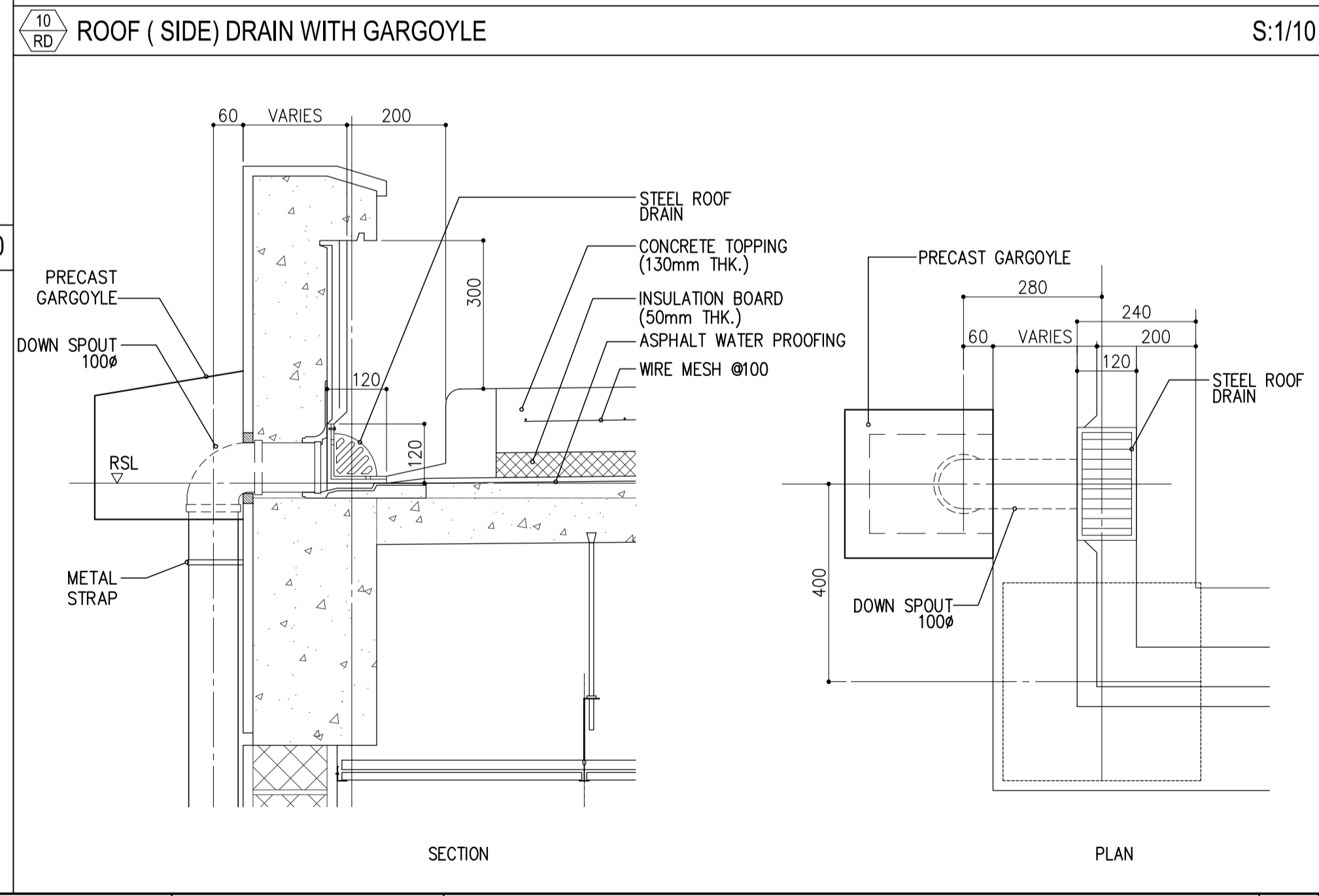
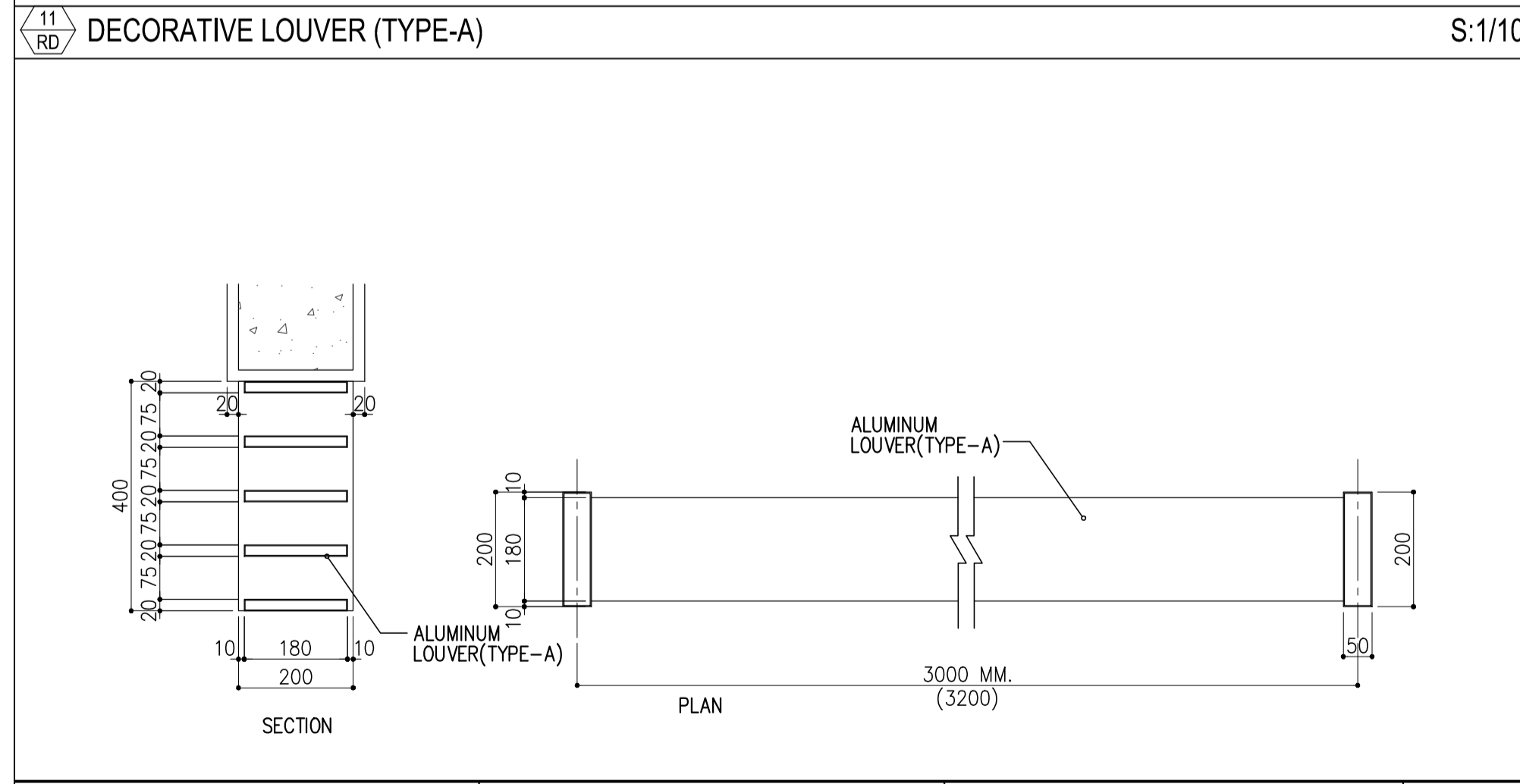
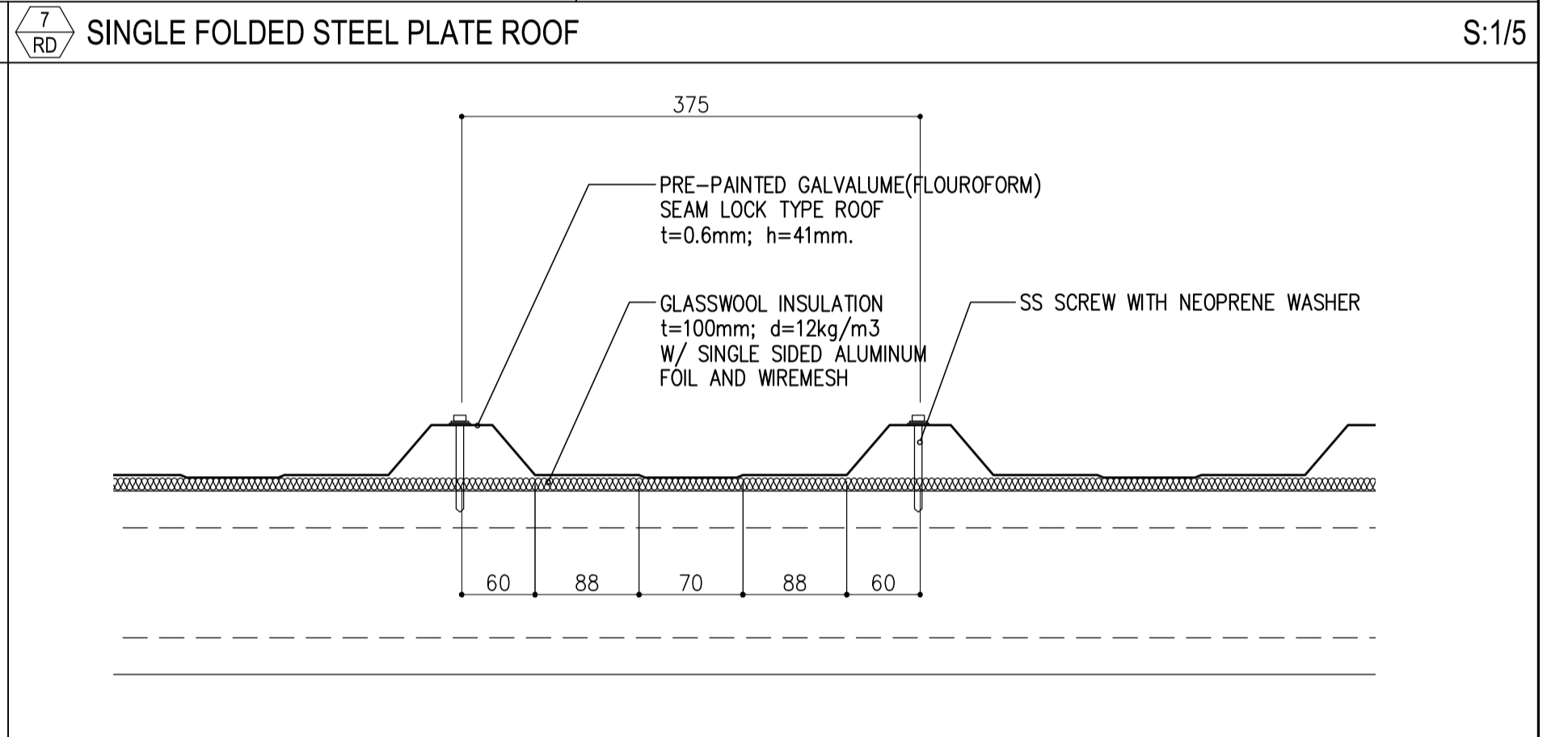
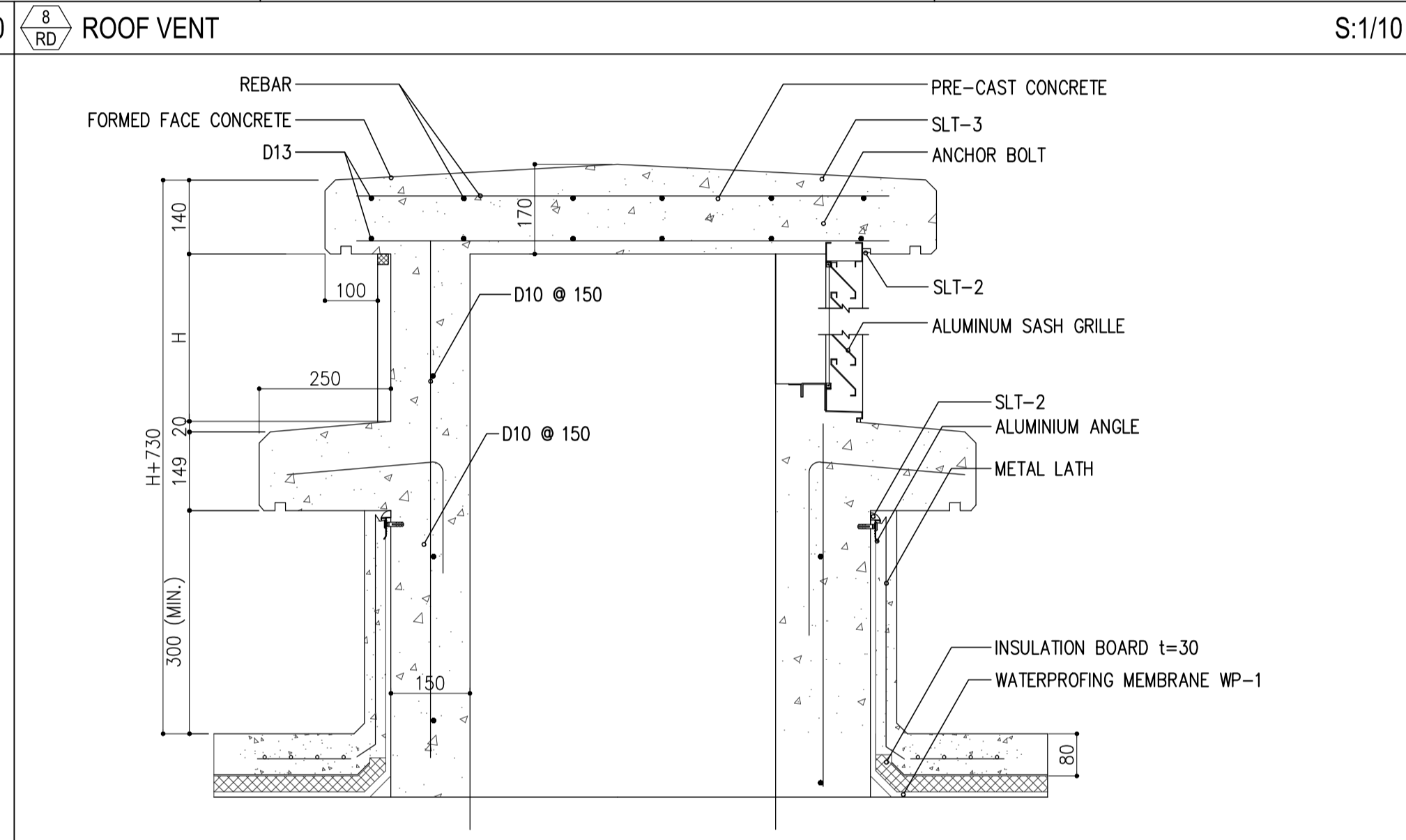
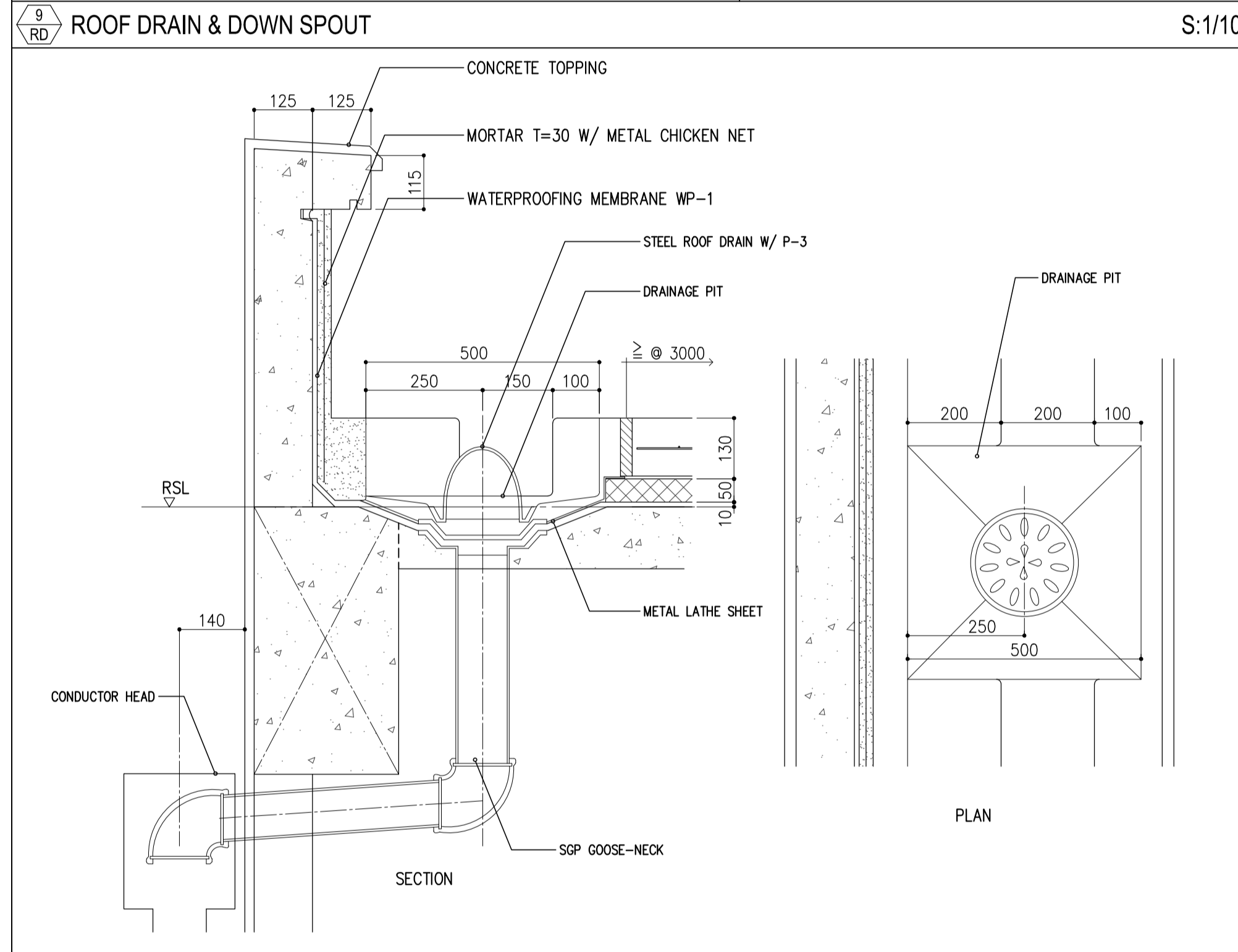
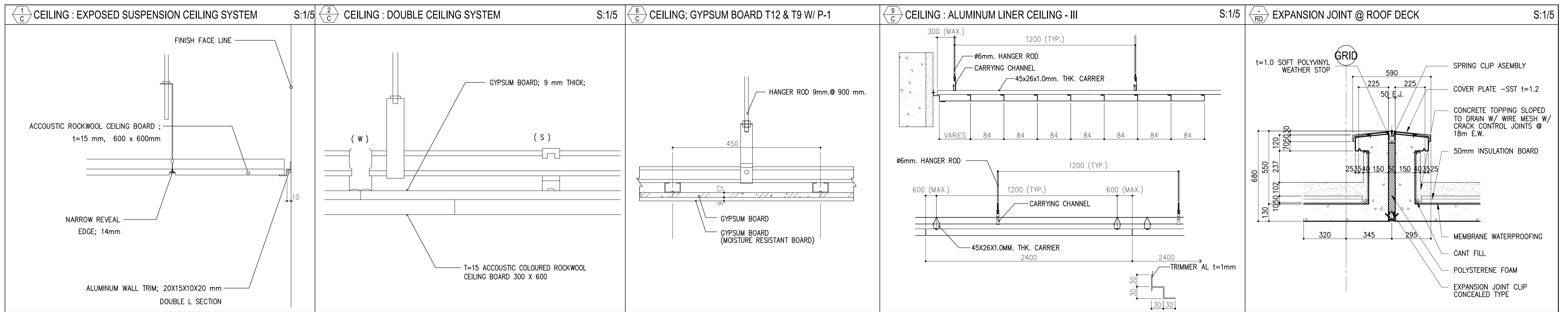
LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES

DATE	INDEX	AMENDMENTS	Prepared by	Checked by	Validated by
JUNE 2013			FRS Jr.	WIM	HC

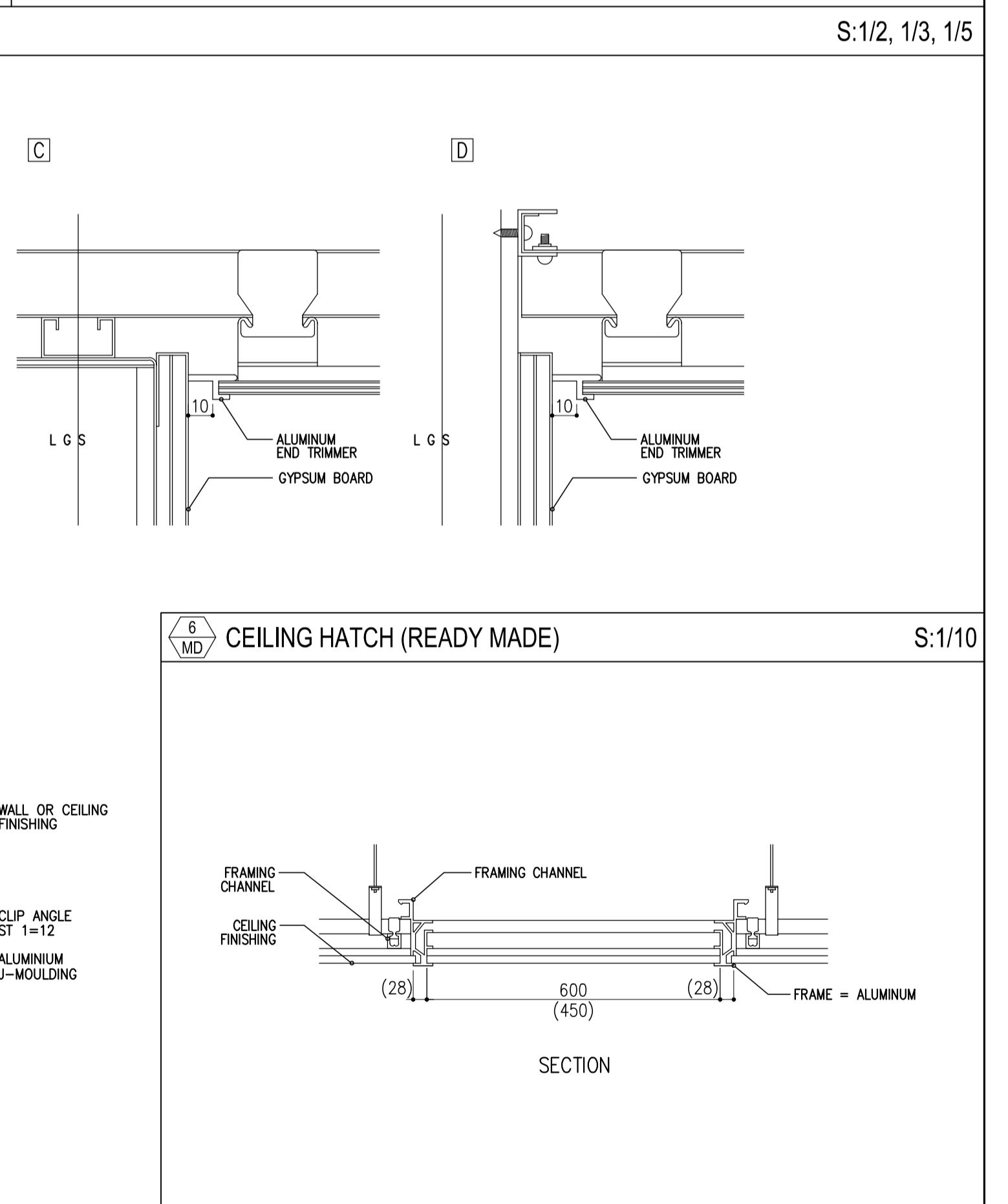
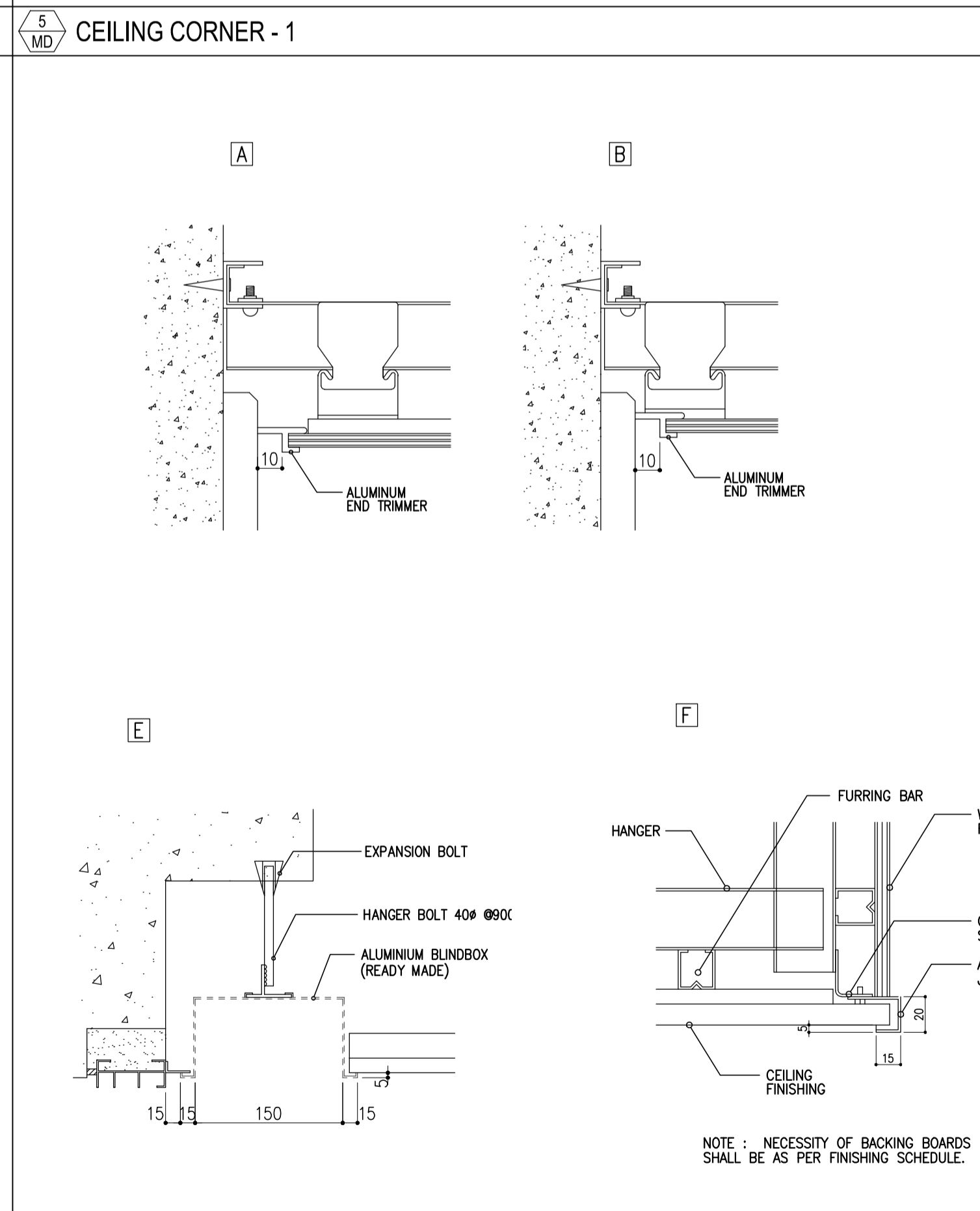
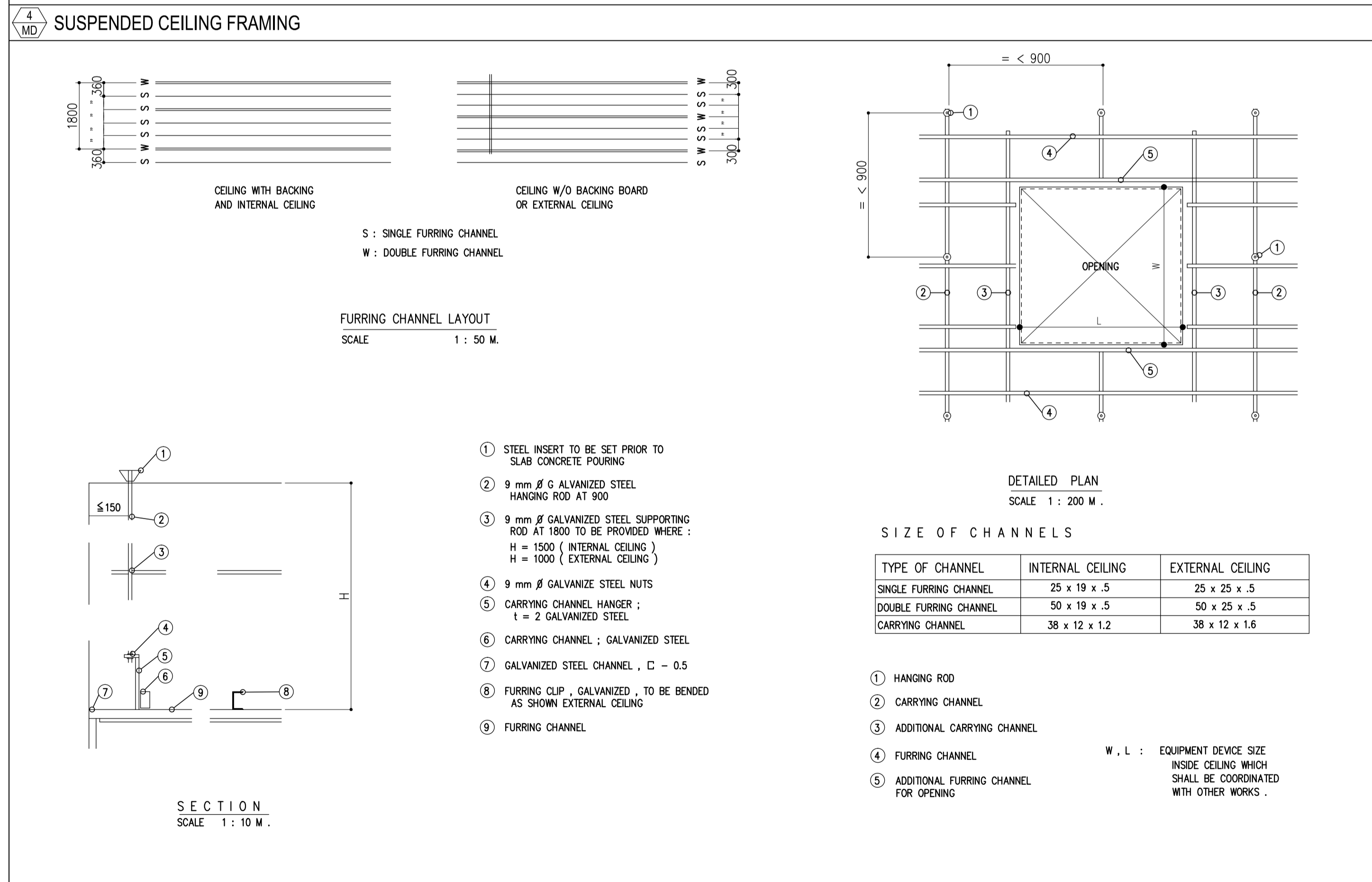
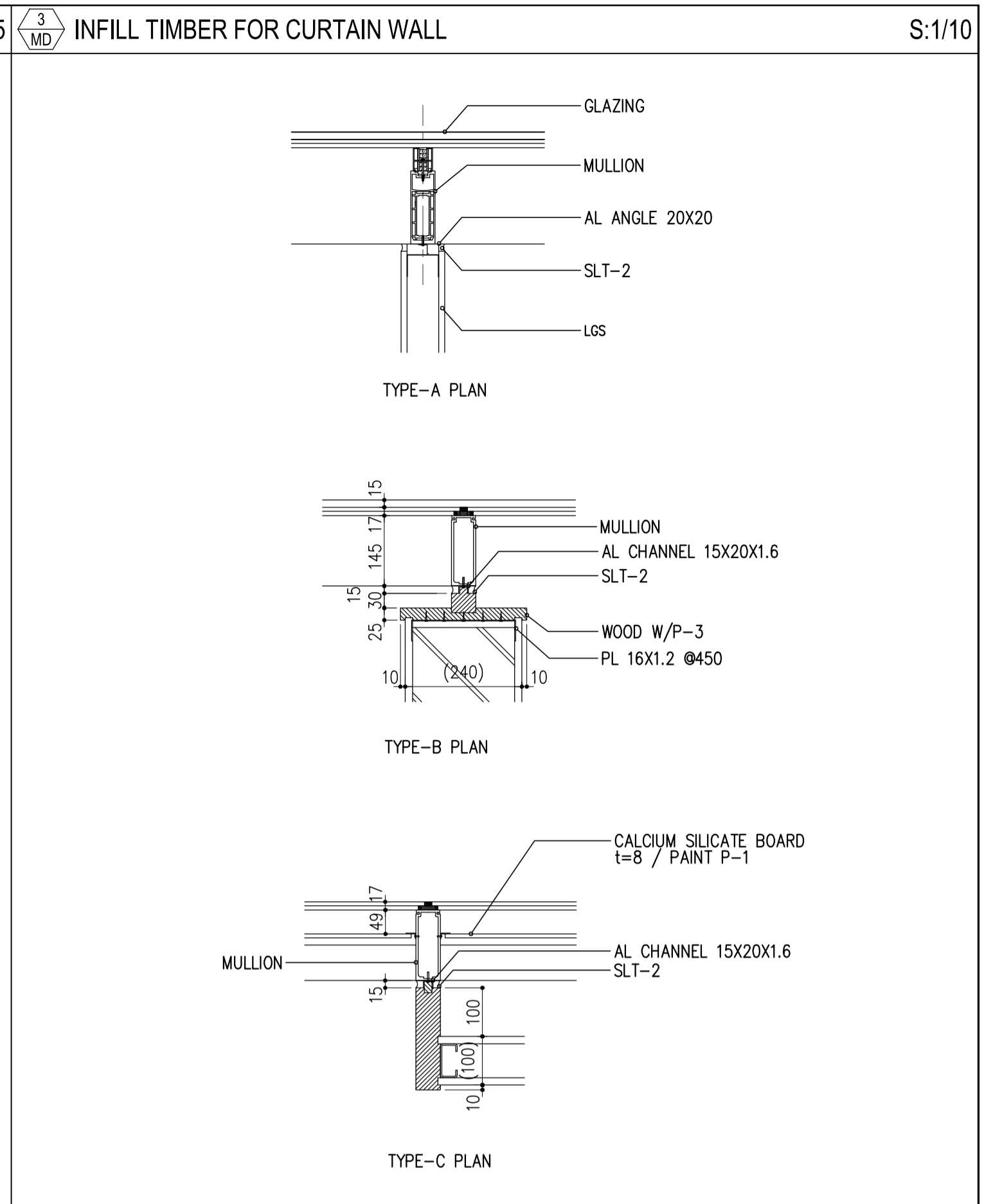
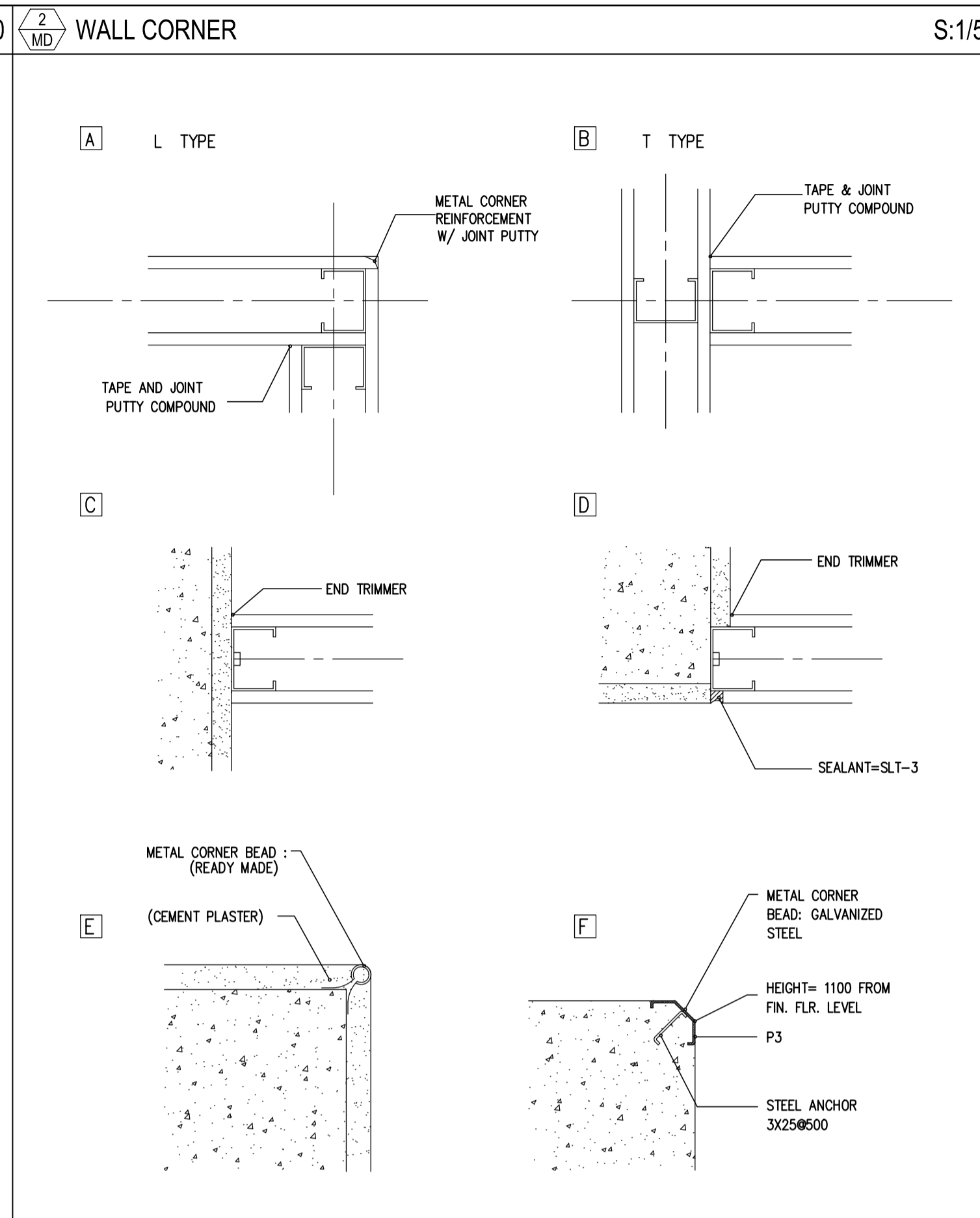
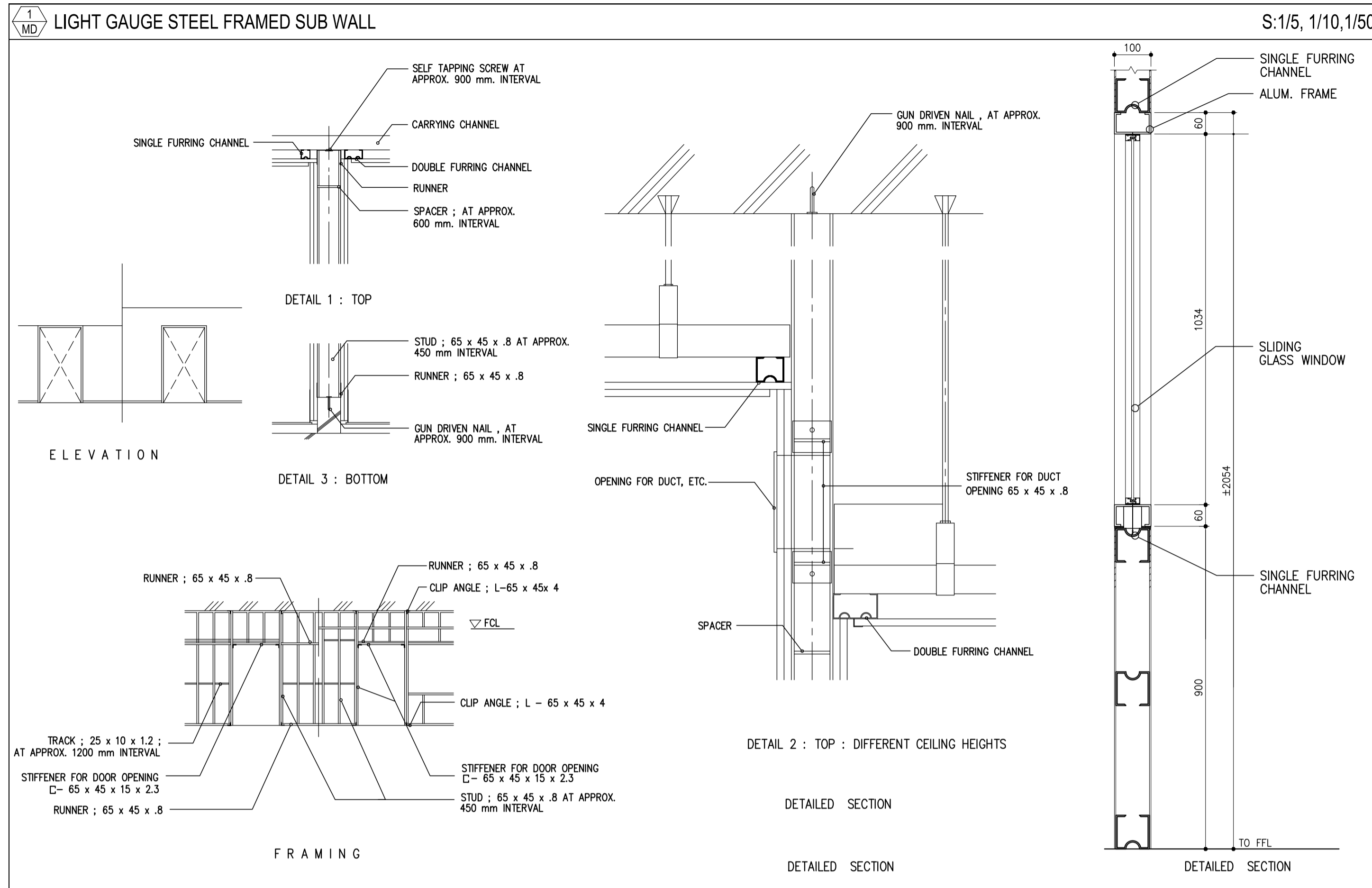
SHEET CONTENTS:
COMPONENT-4 BUILDING WORKS (B)
SUBCOMPONENT-4-0
(B0)
COMMON DETAIL 3

SHEET NO:
B0-4300-05

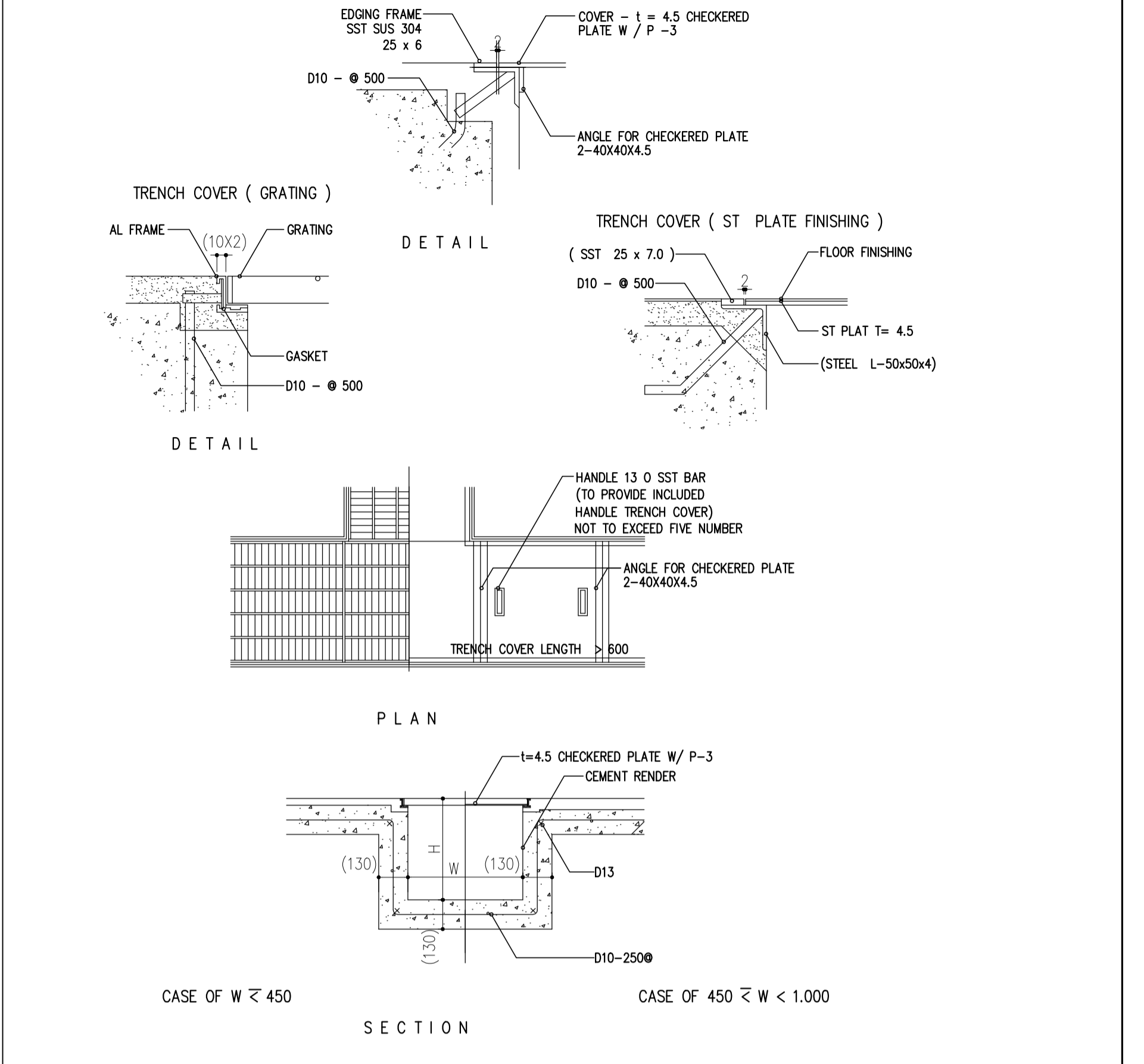
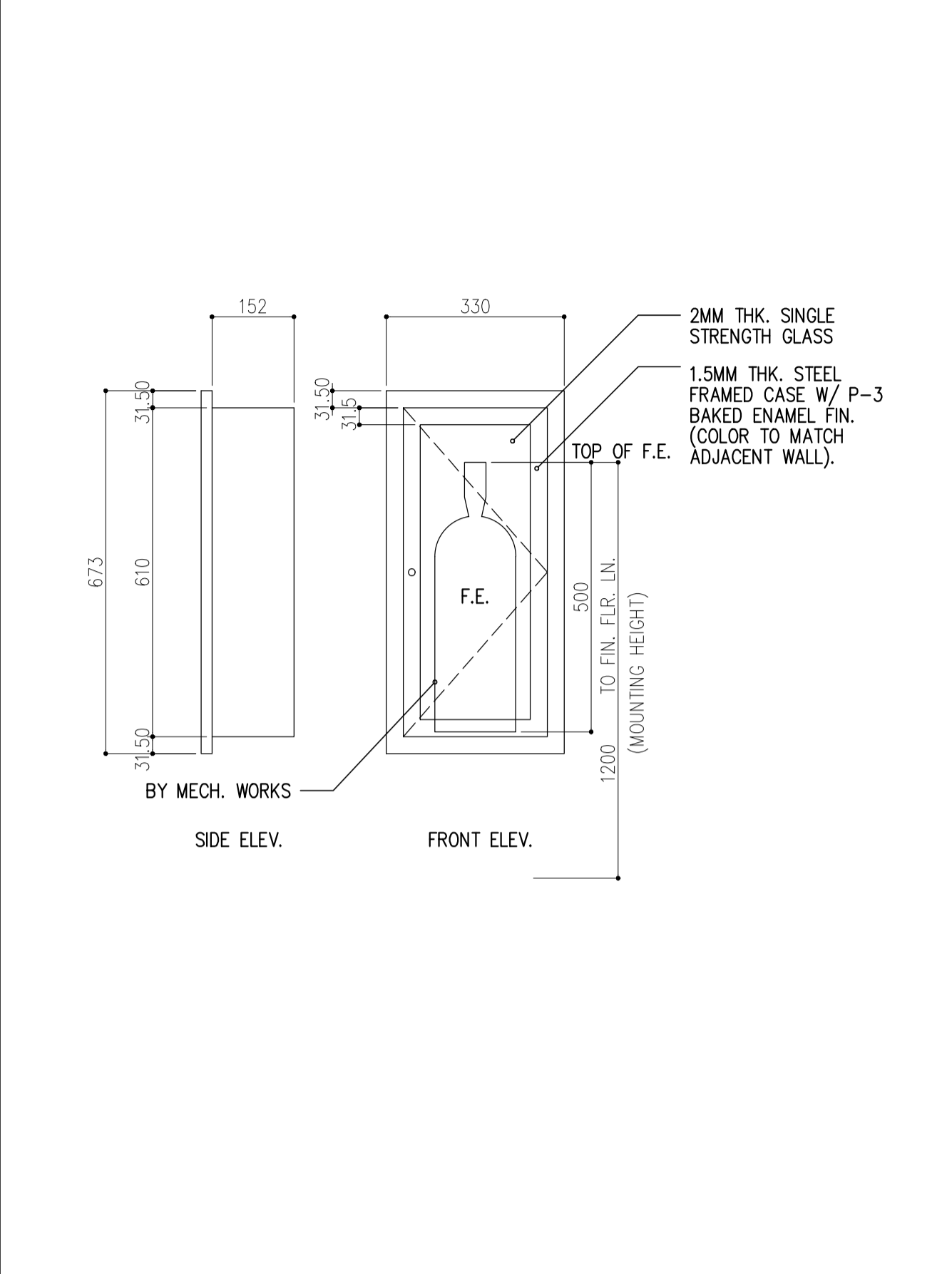
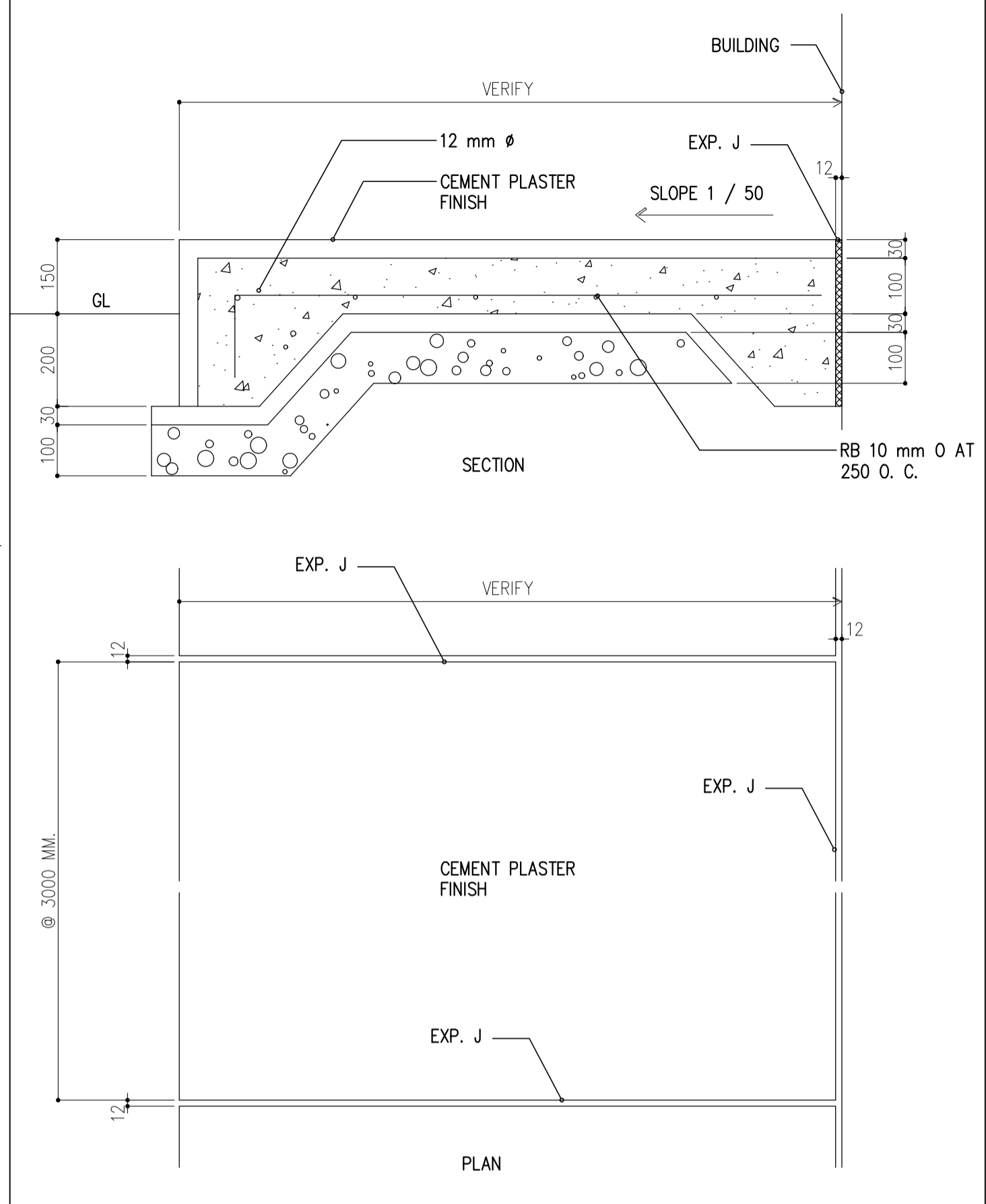
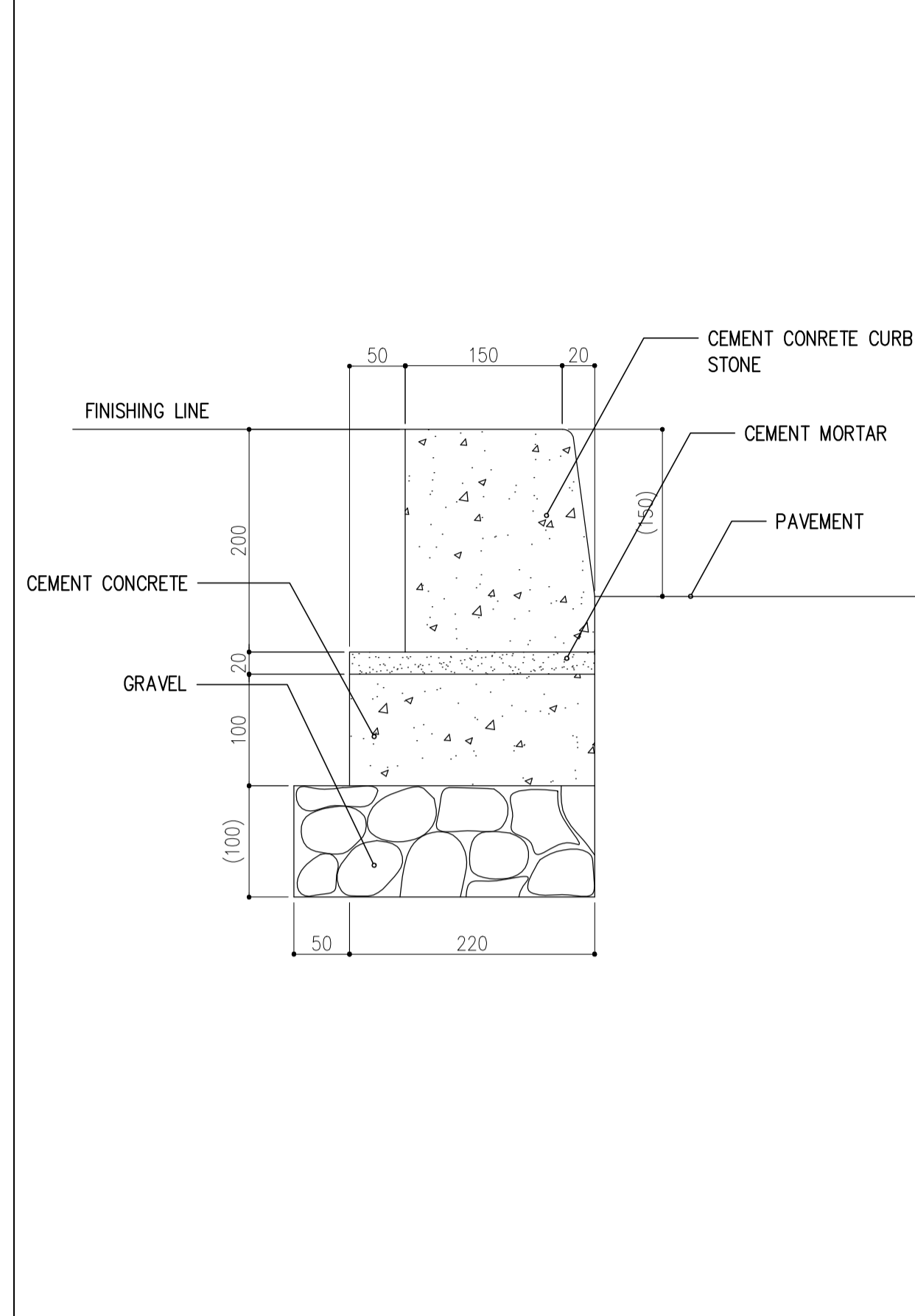
DRAWING SCALE:
AS SHOWN



	PREPARED BY: WILLIAM I. MALLONGA <small>PROF. Architect PIR. 3811137</small> <small>RES. NO.: 4623 DATE: MAY 9, 2013</small> <small>TEL. 159-564-198 PLACE: MANILA CITY</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4 BUILDING WORKS (B) SUBCOMPONENT-4-0 (B0) COMMON DETAIL 4	SHEET NO: B0-4300-06 DRAWING SCALE: AS SHOWN
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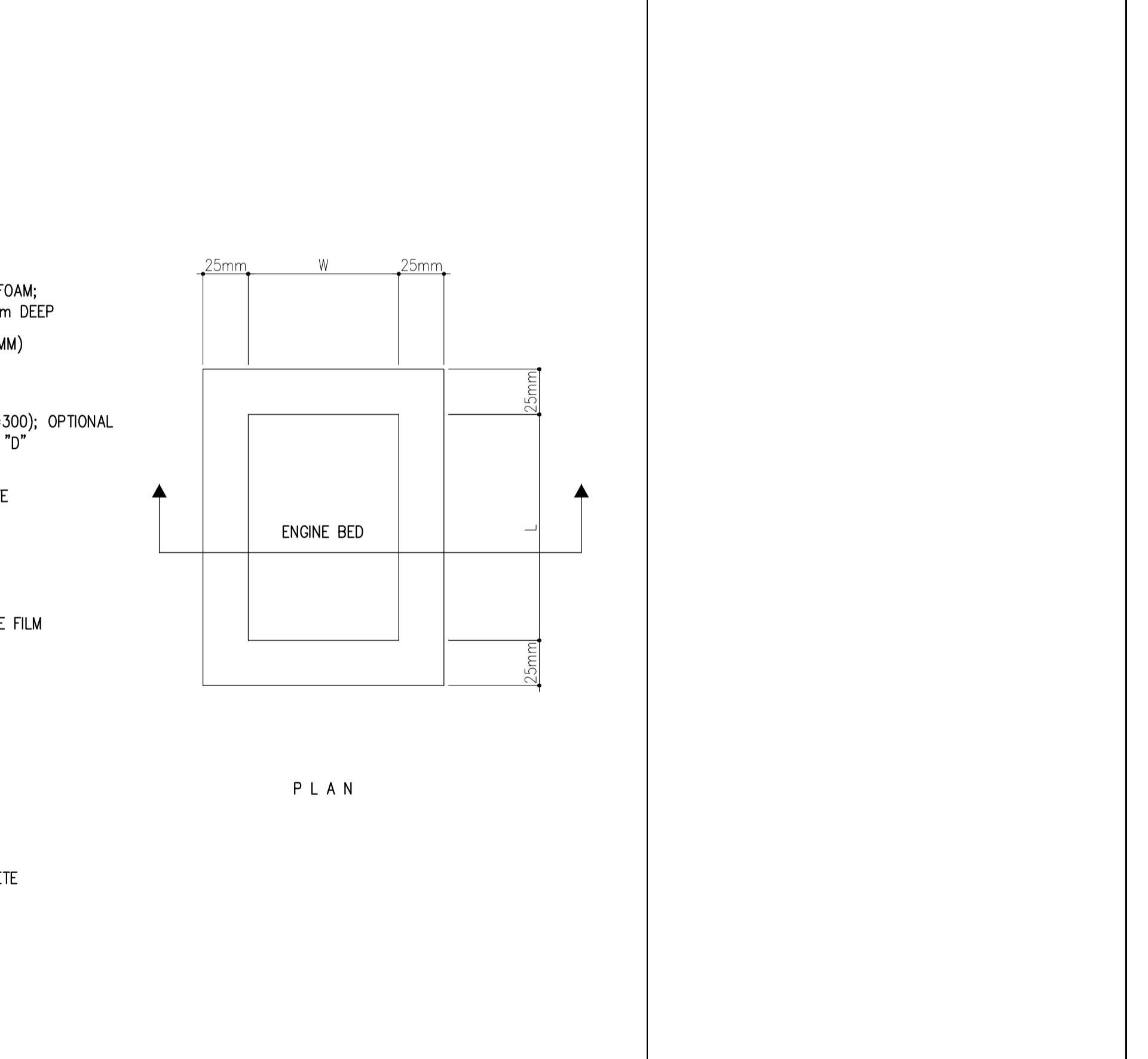
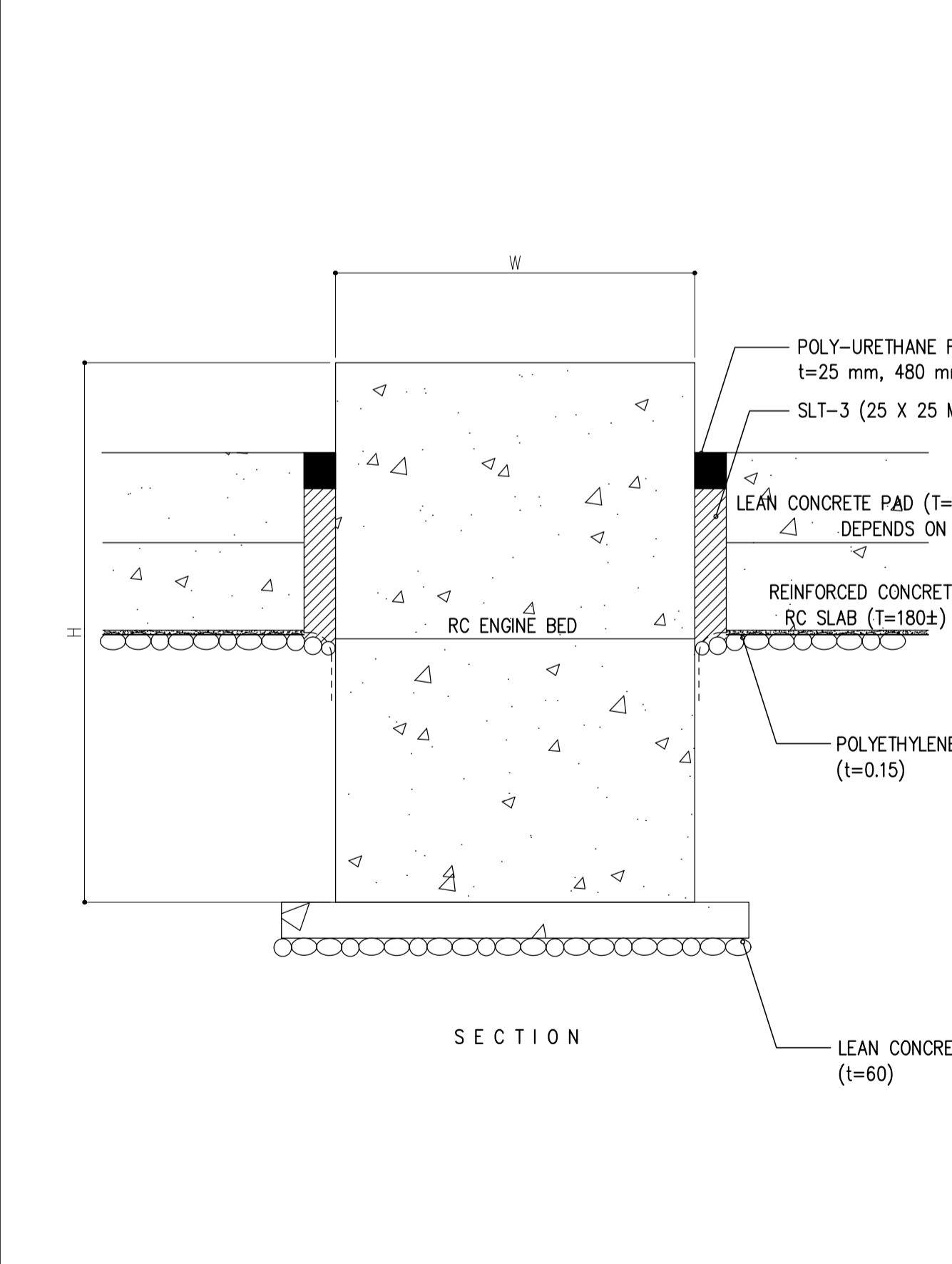
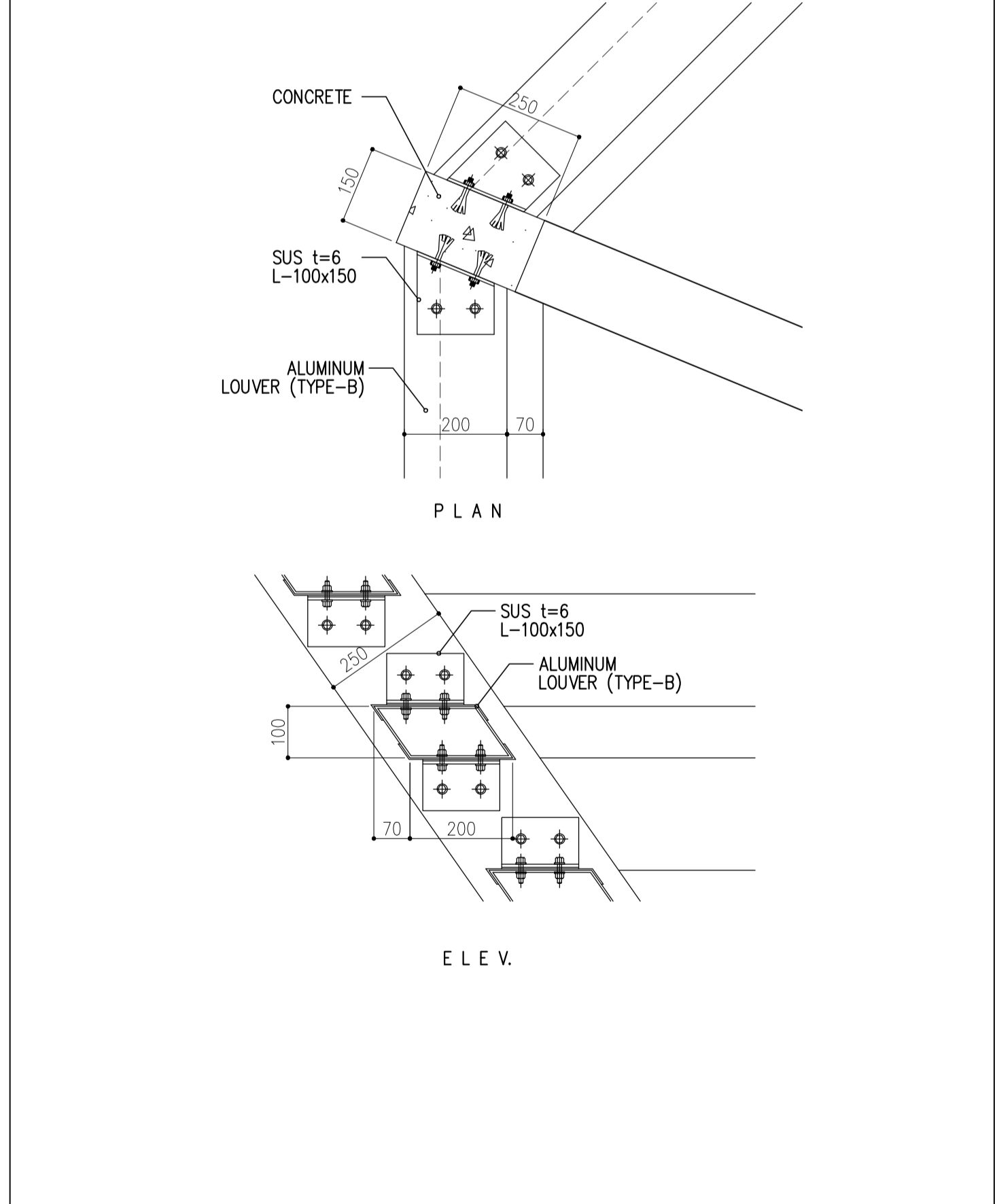
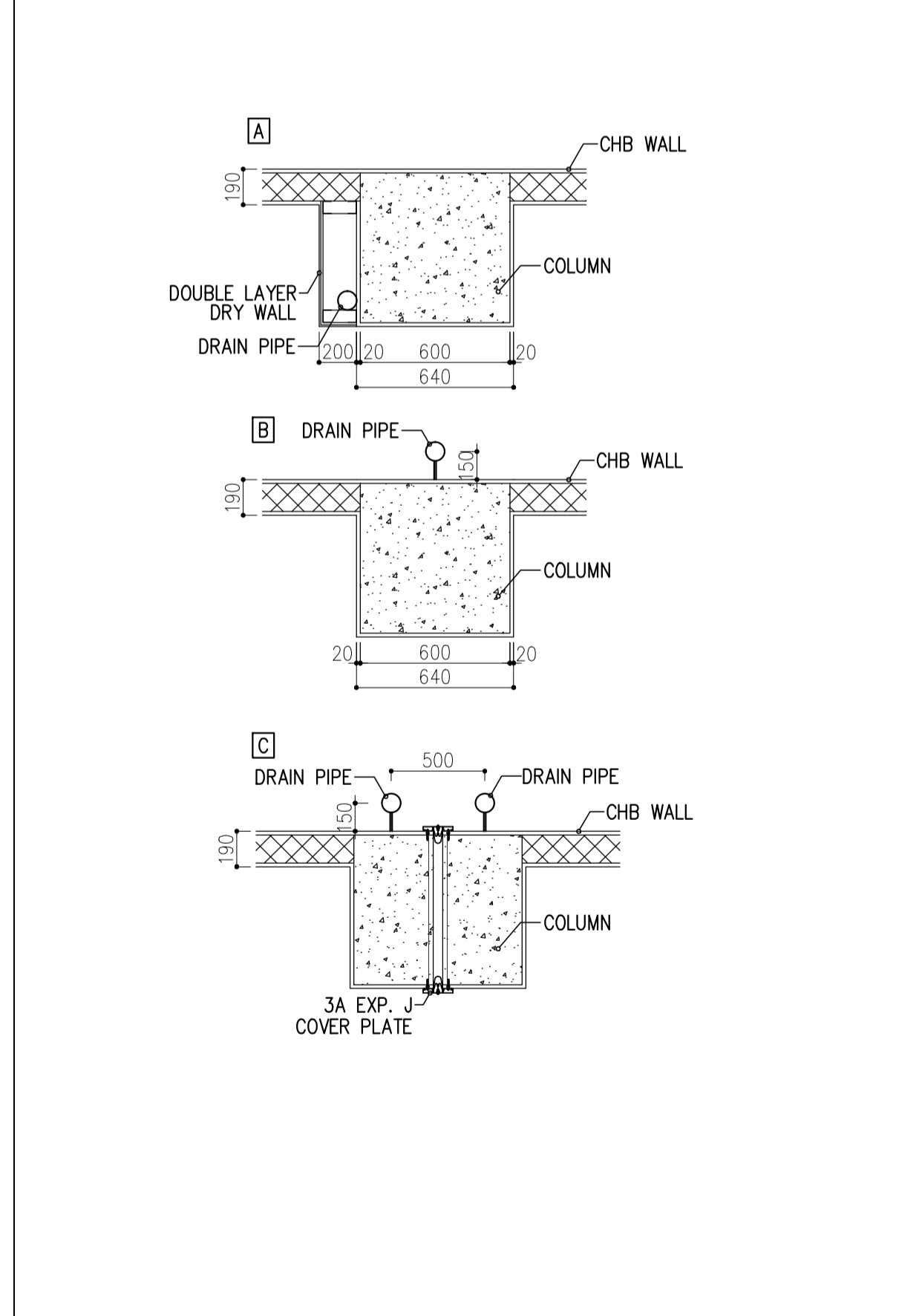
	PREPARED BY: WILLIAM I. MALLONGA PROF: Architect PIR. 3811137 RES. NO.: 4623 DATE: MAY 9, 2013 TEL. 159-564-198 PLACE: MANILA CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4 BUILDING WORKS (B) SUBCOMPONENT -4-0 (B0) COMMON DETAIL 8	SHEET NO: B0-4300-10
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NIS CONSULTANTS CO., LTD.	TADASHI AOI Team Leader	ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	DATE INDEX AMENDMENTS JUNE 2013	Prepared by: WIM Checked by: IC Validated by:



33 MD PIPE SHAFT DETAIL S:1/30

34 MD ALUMINUM LOUVER (CTO BUILDING) S:1/10

33A MD ENGINE GENERATOR BED S:1/3



Republic of the Philippines
DEPARTMENT OF TRANSPORTATION
AND
COMMUNICATIONS

JICA
JAPAN
INTERNATIONAL
COOPERATION
AGENCY

JICA DESIGN CONSULTANT JOINT VENTURE

JAC JAPAN AIRPORT CONSULTANTS, INC.
NIPPON KOEI CO., LTD.
NIS CONSULTANTS CO., LTD.

PREPARED BY: WILLIAM I. MALLONGA
PROF. Architect PIR. 3811137
RES. NO.: 4623 DATE: MAY 9, 2013
TEL. 129-564-198 PLACE: MANILA CITY

RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR.
Assistant Secretary
for Project Implementation, DOTC

APPROVED: JULIANITO G. BUCAYAN, JR.
Undersecretary
for Project Implementation, DOTC

TADASHI AOI
Team Leader

PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT

LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES

SHEET CONTENTS: COMPONENT-4 BUILDING WORKS (B) SUBCOMPONENT-4-0 (B0) COMMON DETAIL 11

SHEET NO: B0-4300-13

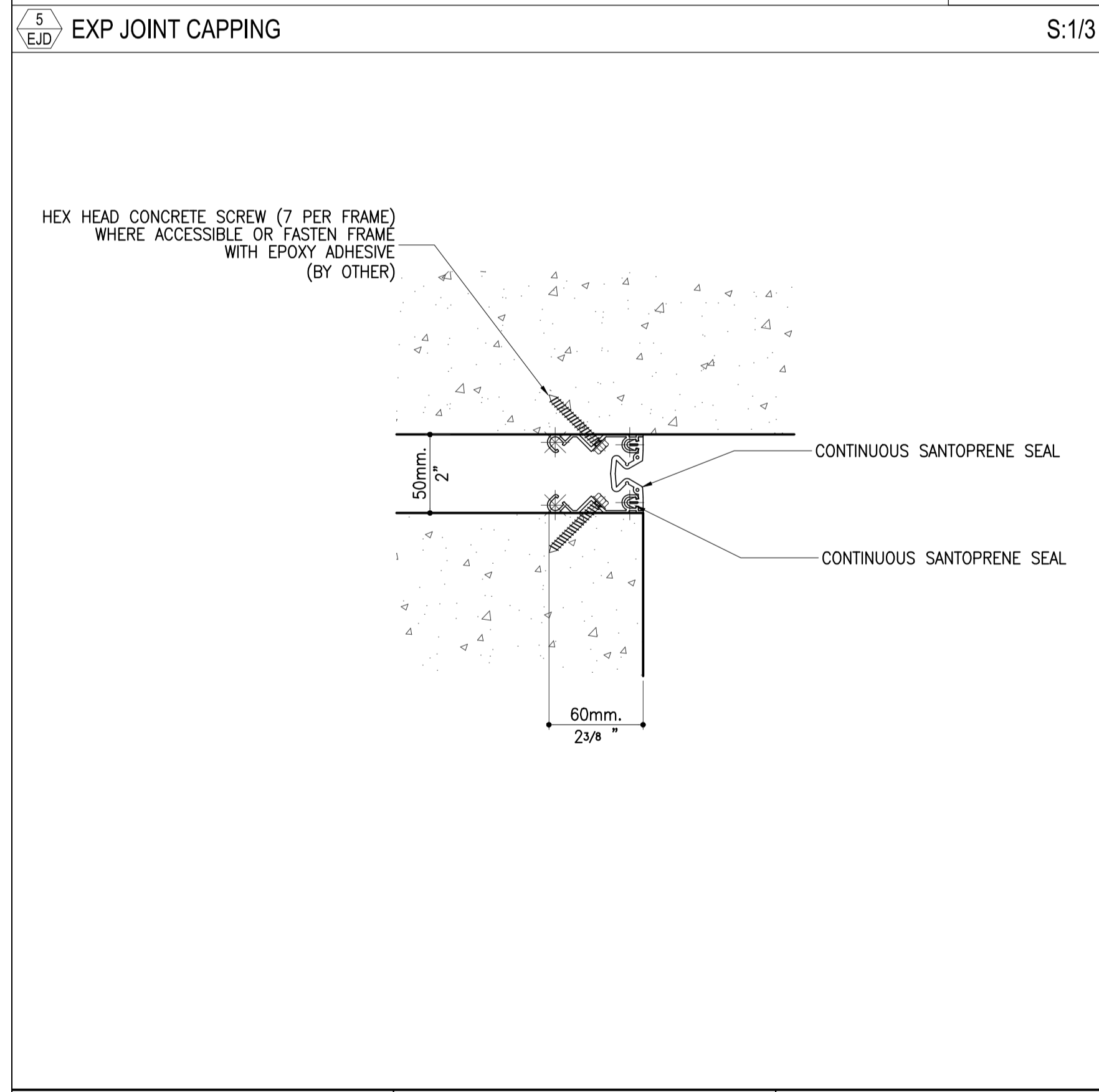
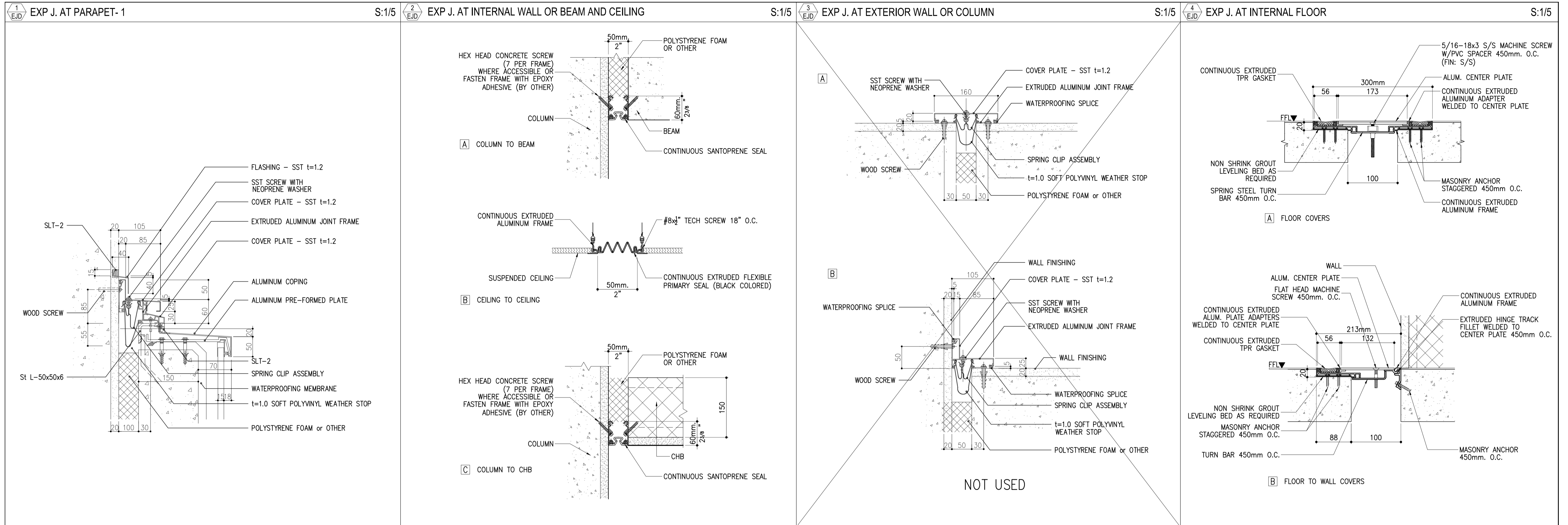
DRAWING SCALE: AS SHOWN

DATE: JUNE 2013

INDEX

AMENDMENTS

Prepared by: FRS Jr. WIM HC
Checked by:
Validated by:



	PREPARED BY: WILLIAM I. MALLONGA <small>PROF: Architect PIR: 3011137 REG. NO.: 4623 DATE: MAY 9, 2013 TEL: 120-564-198 PLACE: MANILA CITY</small>	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Project Manager (DOTC)</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Assistant Secretary (DOTC)</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4 BUILDING WORKS (B) SUBCOMPONENT-4-0 (B0) COMMON DETAIL 12	SHEET NO: B0-4300-14
	JICA DESIGN CONSULTANT JOINT VENTURE	TADASHI AOI <small>Team Leader</small>	JULIANITO G. BUCAYAN, JR. <small>Assistant Secretary (DOTC)</small>	DATE: JUNE 2013	INDEX:	AMENDMENTS:	Prepared by: FRS Jr. WIM HC Checked by: Validated by:

GENERAL NOTES:

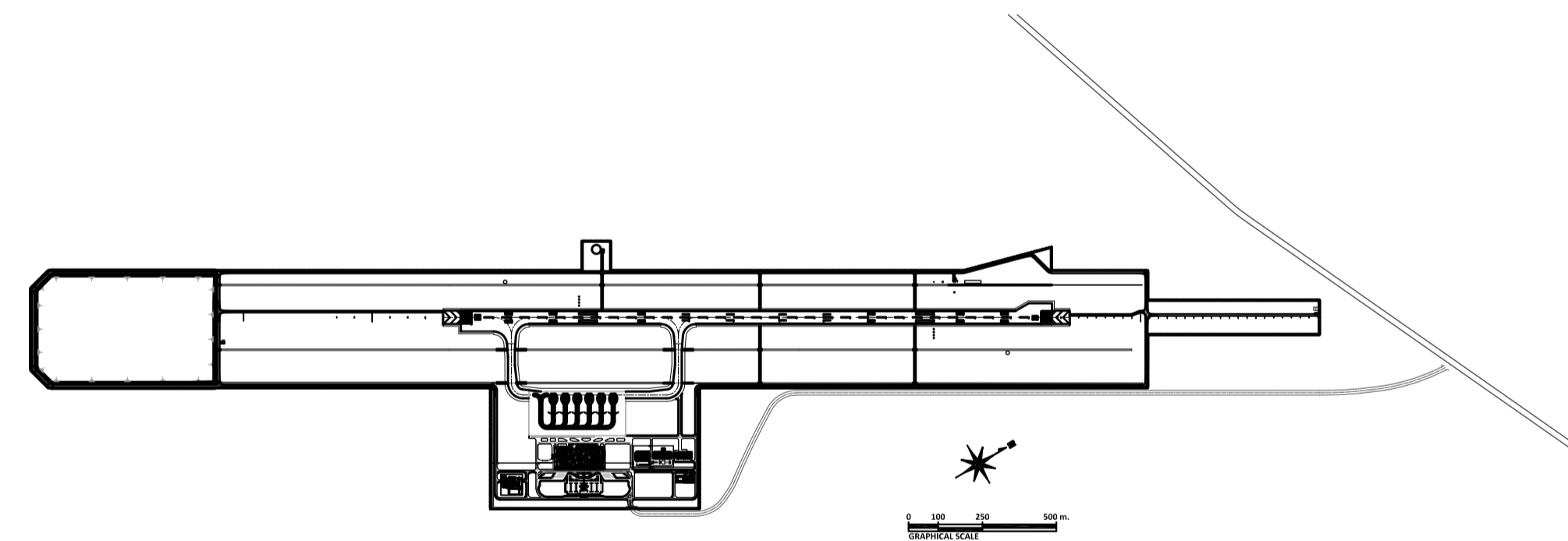
- ALL WORKS HEREIN SHALL BE DONE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- ALL INSTALLATION THEREIN SHALL BE DONE TO THE BEST PRACTICE OF THE PROFESSION SUPERVISED DURING CONSTRUCTION BY A LICENSED SANITARY ENGINEER.
- COORDINATE THE DRAWING WITH OTHER RELATED DRAWINGS AND SPECIFICATION. THE EMPLOYER'S REPRESENTATIVE SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.
- ALL PIPES SHALL BE INSTALLED AS INDICATED ON PLANS. ANY RELOCATIONS REQ'D FOR PROPER EXECUTION OF OTHER TRADE SHALL BE W/ PRIOR APPROVAL OF THE EMPLOYER'S REPRESENTATIVE.
- ALL DRAINAGE PIPES SHOWN IN THE DRAWINGS ARE LOCATED BELOW SLAB, VENT PIPES AND COLD WATER SUPPLY PIPING SHOWN ARE LOCATED AT HIGH LEVEL ABOVE CEILING UNLESS OTHERWISE SPECIFIED.
- IT IS NOT INTENDED THAT THE DRAWINGS SHALL SHOW EVERY PIPE, FITTING, VALVE AND APPLIANCE. ALL SUCH ITEMS WHETHER SPECIFICALLY MENTIONED OR NOT, OR INDICATED ON THE DRAWINGS SHALL BE FURNISHED AND INSTALLED. IF NECESSARY, TO COMPLETE THE SYSTEM IN ACCORDANCE WITH THE BEST PRACTICE OF THE PLUMBING TRADE AND TO THE SATISFACTION OF THE EMPLOYER'S REPRESENTATIVE.
- PIPING SHALL BE PROPERLY GRADED OR PITCHED TO ENSURE EASY DRAINAGE. THE MINIMUM SLOPES SHALL BE AS FOLLOWS:
 - SANITARY PIPES: FOR 80mm AND BELOW - 1:50
FOR 100mm AND LARGER - 1:100
- EXACT LOCATION OF UTILITIES STUB-OUTS (WATERLINES, SEWER LINES, MANHOLES AND STORM DRAINAGE LINES) SHALL BE VERIFIED BY THE CONTRACTOR AT JOBSITE.
- CONTRACTOR TO CONDUCT WATER SAMPLING ANALYSIS PRIOR TO PREPARATION OF SHOP DRAWINGS FOR APPROVAL BY OWNER OR HIS AUTHORIZED REPRESENTATIVE.
- THE PROPOSED UTILITIES SHALL BE MADE TO CONFORM TO THE ACTUAL LOCATION, TAPPING POINT, DEPTH AND INVERT LEVELS OF ALL EXISTING PIPES AND STRUCTURES SHALL BE VERIFIED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL GOVERNMENT / LOCAL CONSTRUCTION OPERATION PERMITS. OTHER PERMITS REQUIRED BY ANY REGULATORY AGENCY.
- EXTERIOR UNDERGROUND RAMP DISCHARGE PIPES SHALL BE CENTRIFUGALLY CAST IRON PIPE & FITTINGS
- ALL WORKS SHALL BE DONE WITH UTMOST CARE AND HIGHEST LEVEL OF QUALITY AND SAFETY; WITH NO ADVERSE DISRUPTION TO EXISTING UTILITIES AND / OR OPERATION.
- ANY EXISTING UTILITIES EQUIPMENT, PIPING OR PAVED AREAS AFFECTED SHALL BE RESTORED TO ORIGINAL CONDITION AND BE PROPERLY SCHEDULED PRIOR TO ACTUAL WORK WITH THE OWNER OR HIS AUTHORIZED REPRESENTATIVE.
- ALL PIPES PENETRATING THRU WALLS, CEILING, FLOORS SHALL BE ACOUSTICALLY SEALED WITH STC FIRE RATED MATERIALS.
- ALL PIPE SIZES INDICATED IN THE DRAWINGS ARE NOMINAL AND IN REFERENCE TO ITS INTERNAL DIAMETER. IT SHALL NOT BE CONSIDERED AS COMMERCIAL SIZE.
- THE CONTRACTOR SHALL SUBMIT FOR APPROVAL MATERIALS SAMPLE OF PIPES TO BE INSTALLED PRIOR TO INSTALLATION.

ABBREVIATIONS:

ABBREVIATIONS	DESCRIPTION OF ITEM	ABBREVIATIONS	DESCRIPTION OF ITEM
CB	CATCH BASIN	UP	PIPE UP
CCO	CEILING CLEAN OUT	RD	ROOF DRAIN
CDP	CONDENSATE DRAIN PIPE	SCD	SCUPPER DRAIN
CWL	COLD WATER LINE	SD	SHOWER DRAIN
CWR	COLD WATER RISER	SHO	SHOWER
DP	DRAIN PIPE	SSK	SLOP SINK
DS	DOWNSPOUT	SP	SOIL PIPE
EWH	ELECTRIC WATER HEATER	SS	SOIL STACK
FFL	FINISHED FLOOR LEVEL	TD	TRENCH DRAIN
FCO	FLOOR CLEAN OUT	U/G	UNDER GROUND
FD	FLOOR DRAIN	U/S	UNDER SLAB
GV	GATE VALVE	UR	URINAL
GT	GREASE TRAP	UPVC	UNPLASTICIZED POLYVINYLE CHLORIDE
HWL	HOT WATER LINE	VAC	VENT ABOVE CEILING
HB	HOSE BIBB	VP	VENT PIPE
H/L	HIGH LEVEL	VSTR	VENT STACK THRU ROOF
KS	KITCHEN SINK	VS	VENT STACK
LAV	LAVATORY	VTR	VENT THRU WALL
M/L	MID LEVEL	WC	WATER CLOSET
PS	PANTRY SINK	WP	WASTE PIPE
PBD	PLANT BOX DRAIN	WHA	WATER HAMMER ARRESTER
DN	PIPE DOWN		

LEGEND & SYMBOLS:

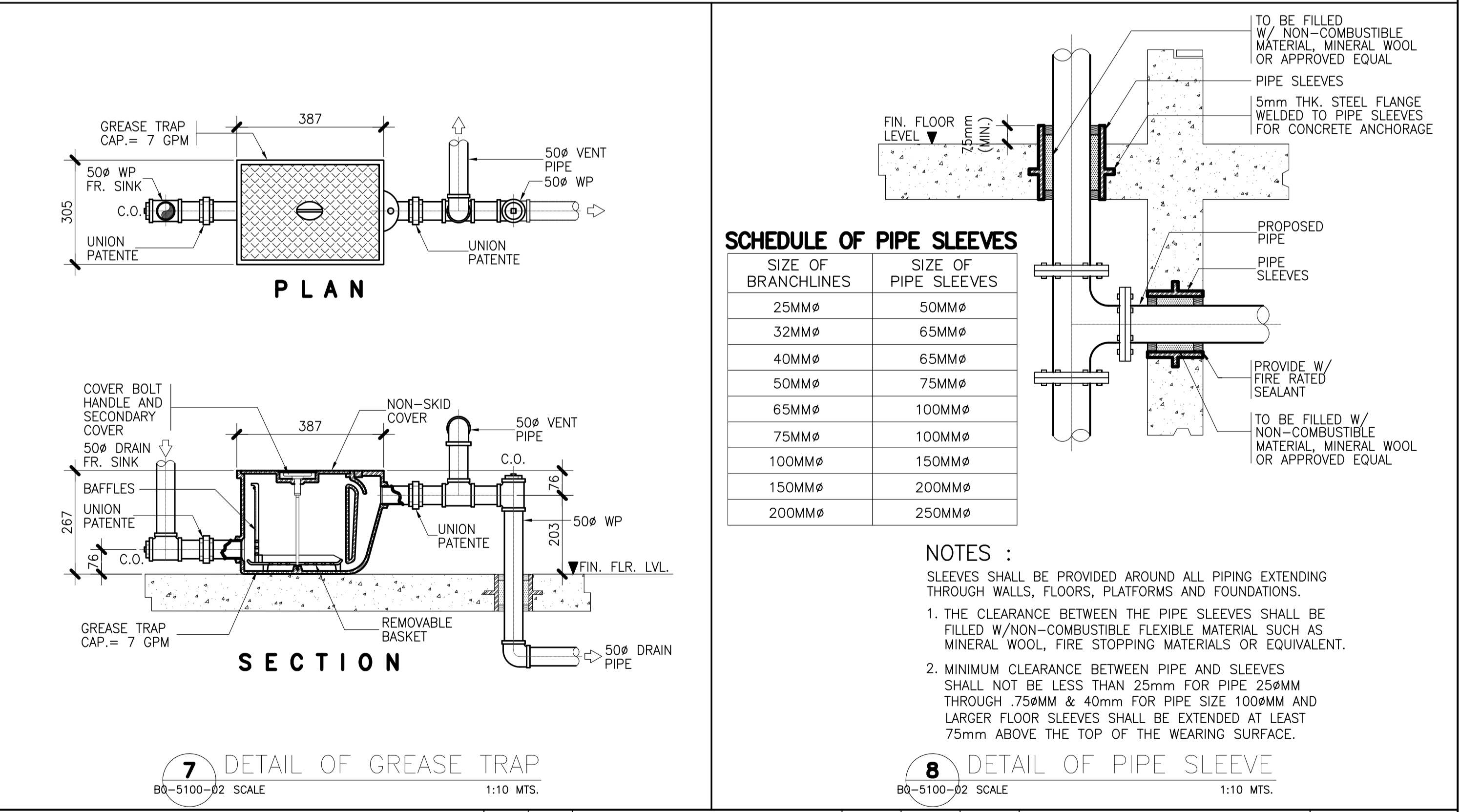
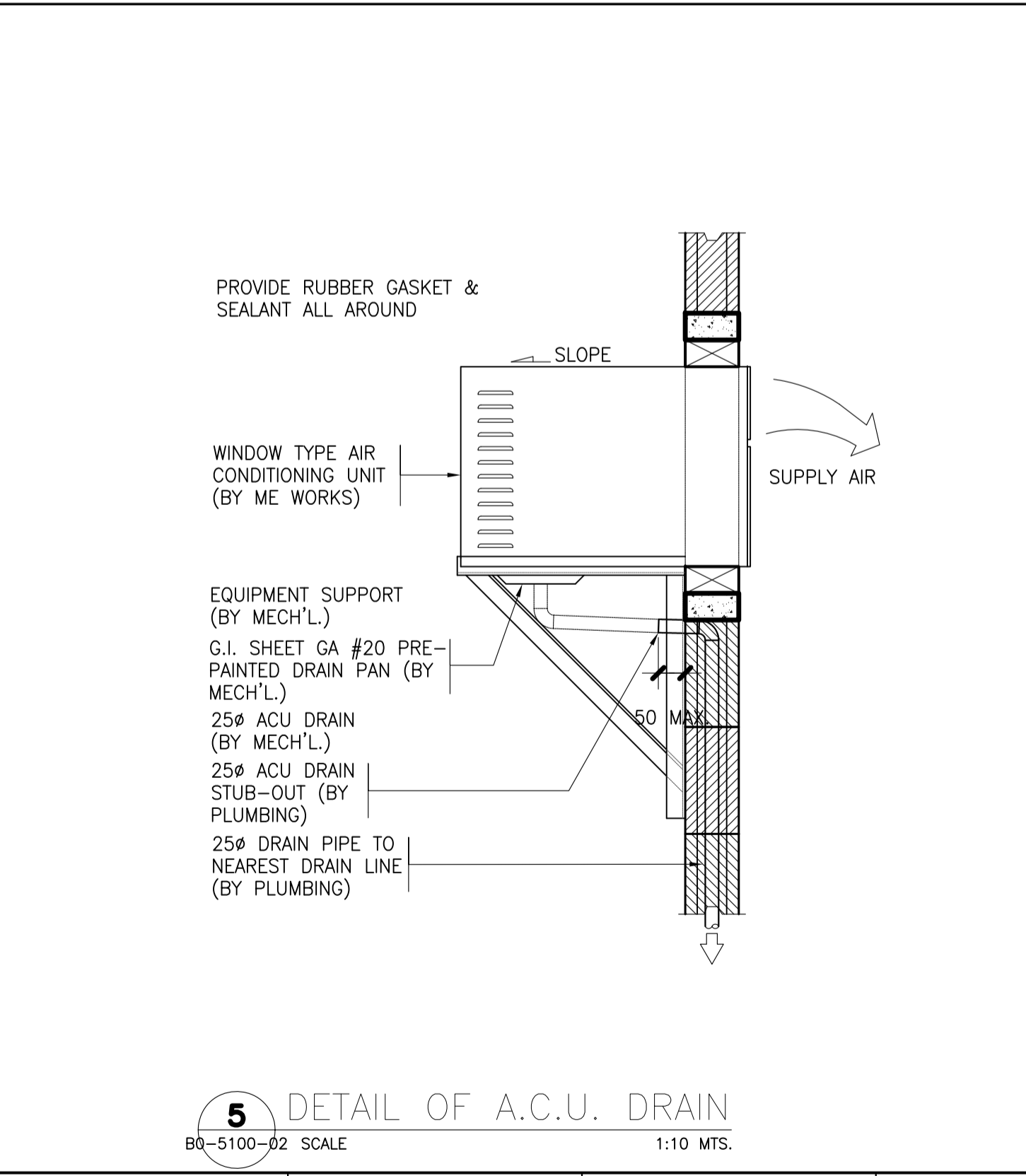
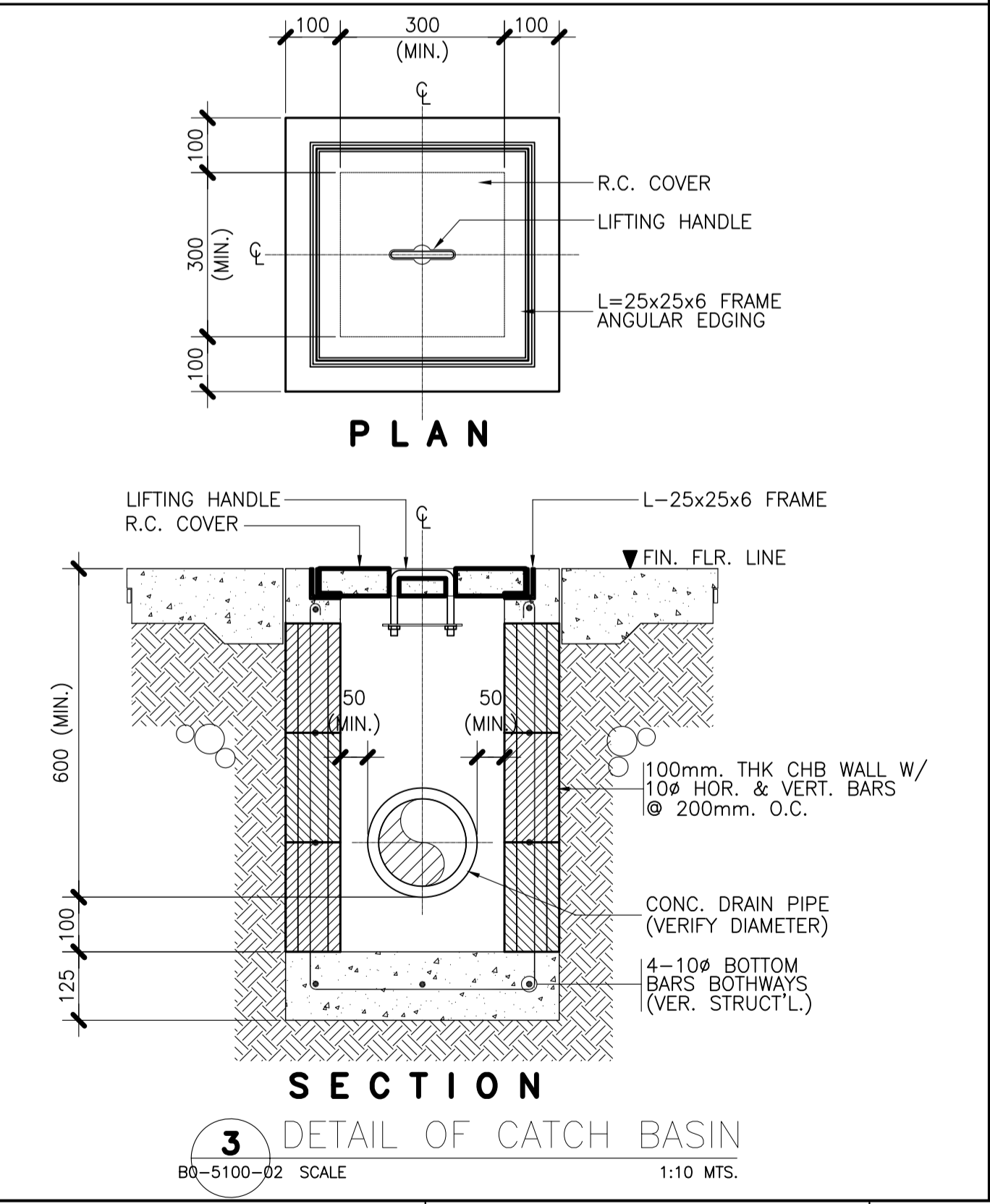
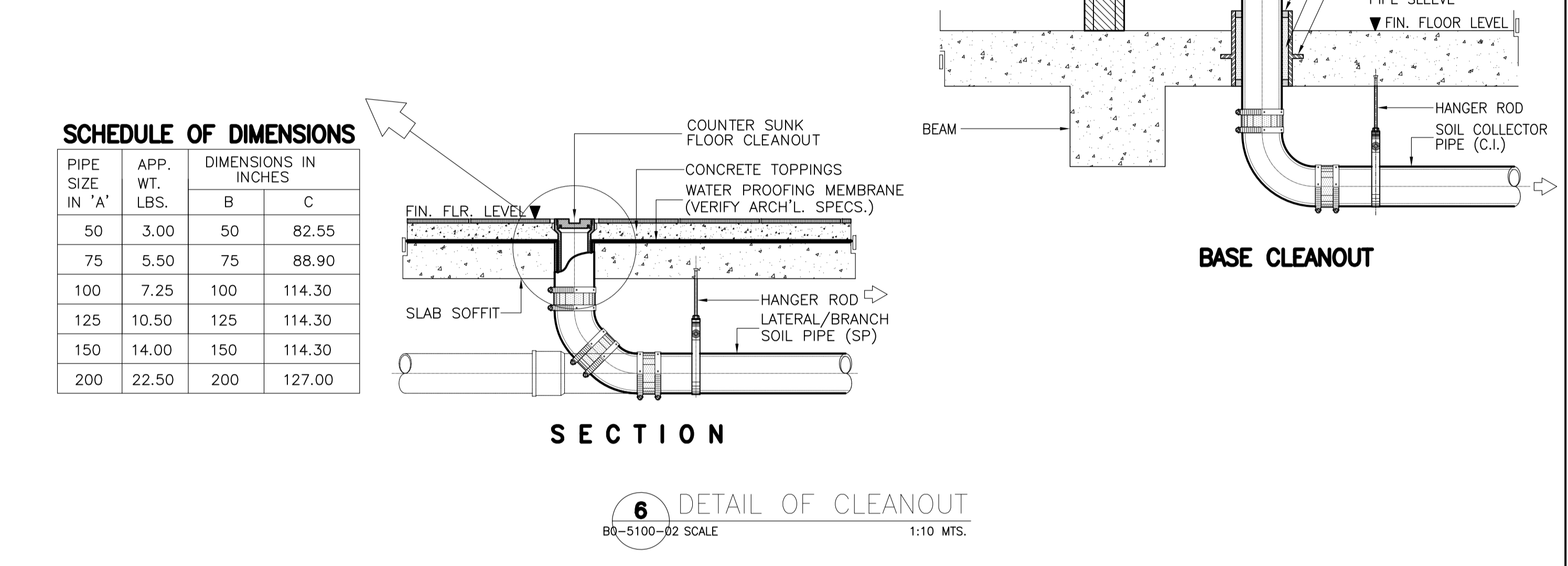
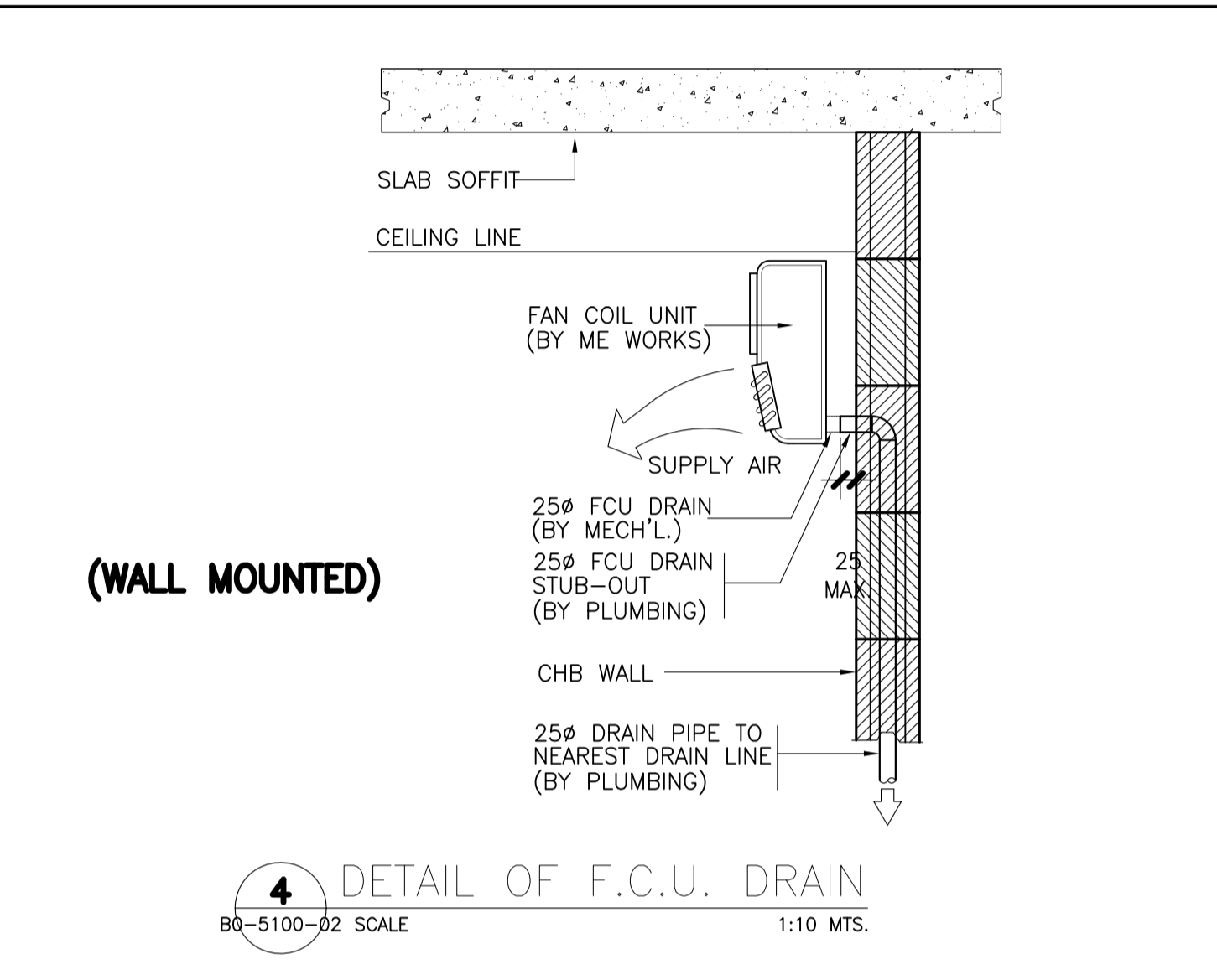
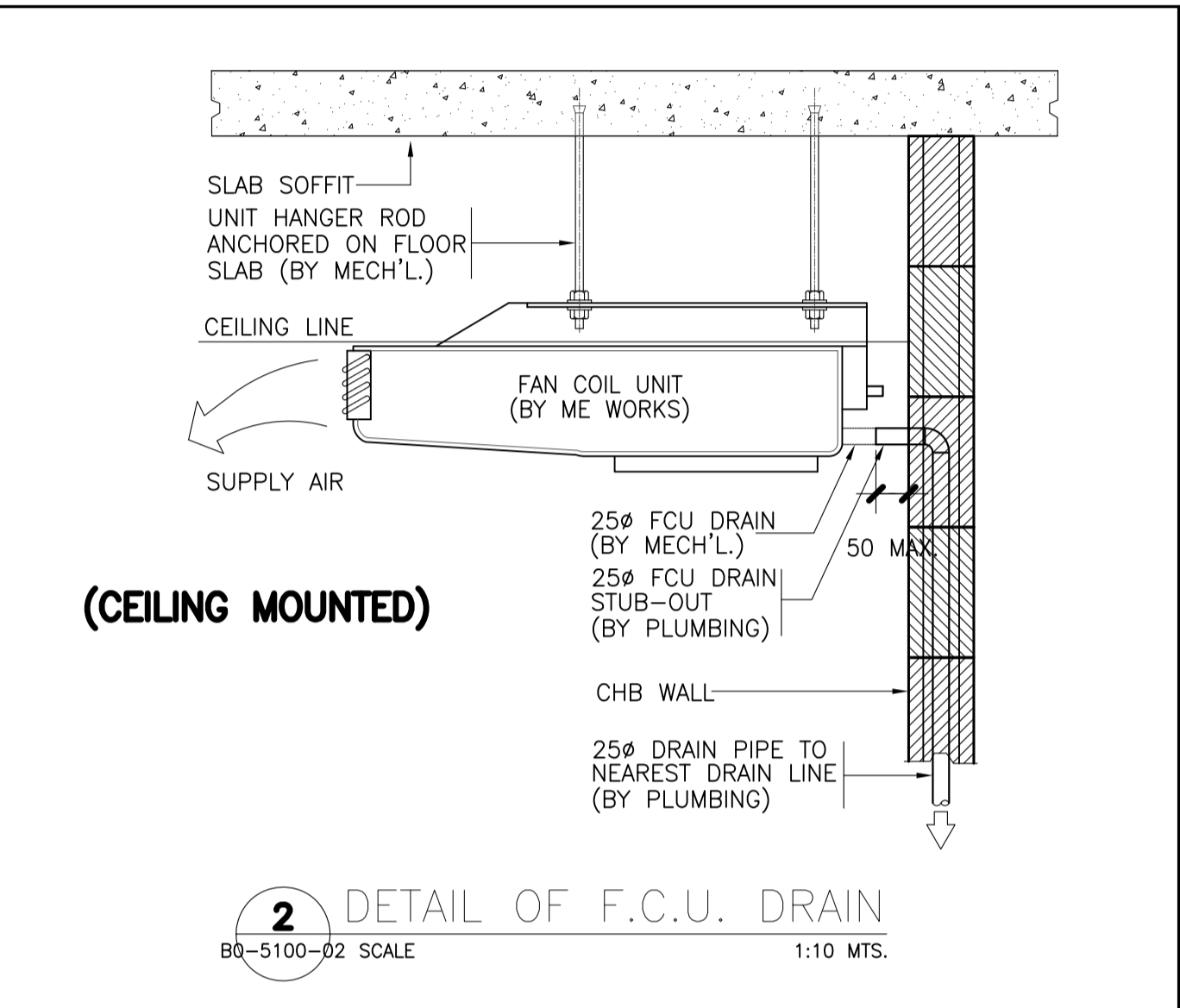
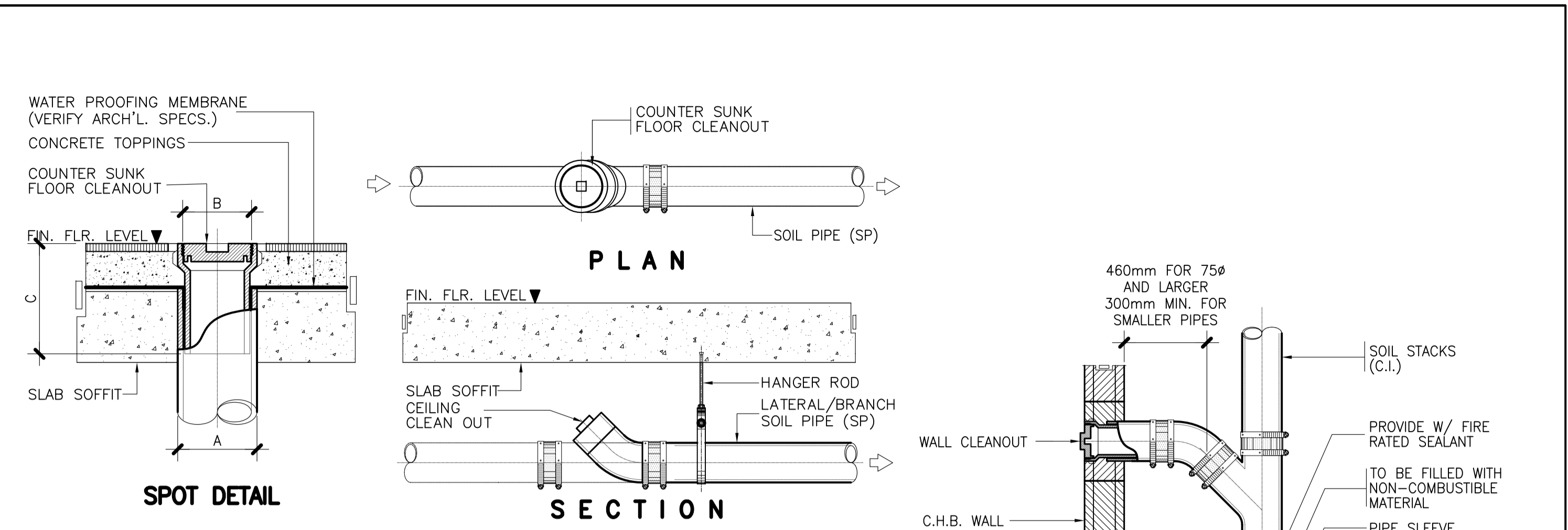
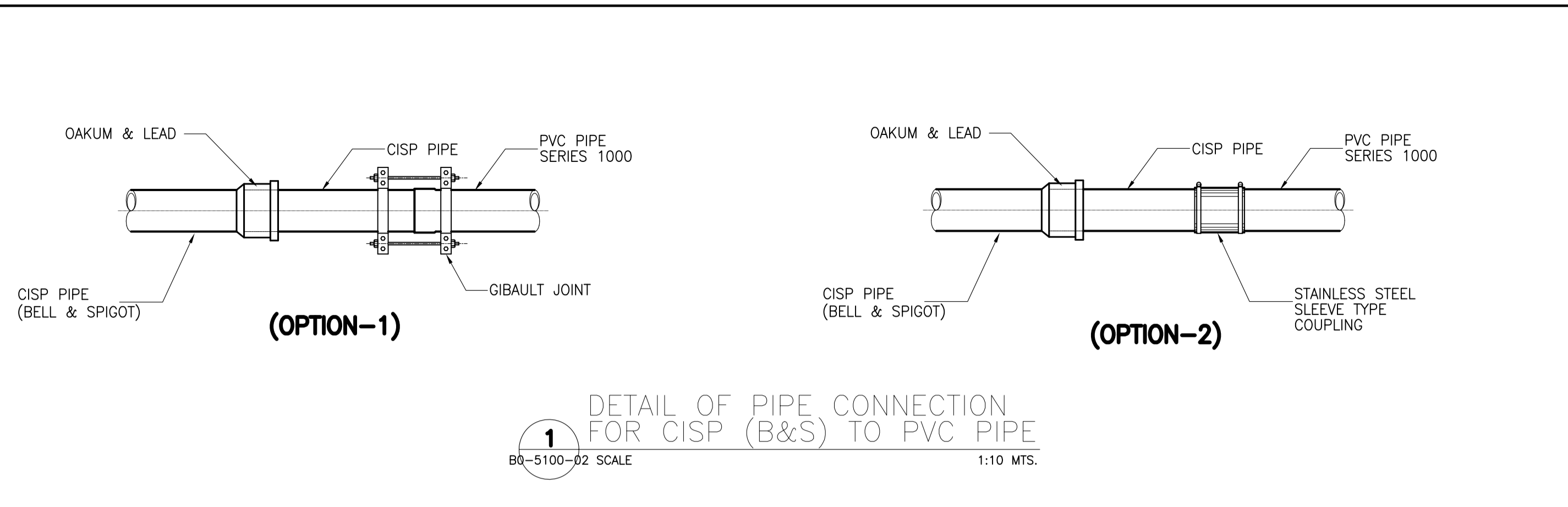
SYMBOL	DESCRIPTION OF ITEM
—	SOIL/WASTE PIPE
----	VENT PIPE
— — — — —	COLD WATER LINE
- - - - -	CONDENSATE DRAIN PIPE
- - - - -	STORM DRAIN PIPE
⊙ / ⊙	FLOOR CLEANOUT
⊠	FLOOR DRAIN
⊠	GATE VALVE
⊠	WATER HAMMER ARRESTER
→	DIRECTION OF FLOW
→	FLOW DIRECTION
— ⊙	PIPE UP
— ⊙	PIPE DOWN
⊠	GREASE INTERCEPTOR
⊠	CATCH BASIN
⊠	PIPE CAP
⊠	CEILING CLEANOUT
⊠	ELECTRIC WATER HEATER
⊠	VENT STACK THRU ROOF
⊠	VENT STACK THRU WALL
⊠	OIL INTERCEPTOR
⊠	HOSE BIBB
⊠	PLANT BOX DRAIN
⊠	BOOSTER PUMP SET W/ PRESSURE TANK

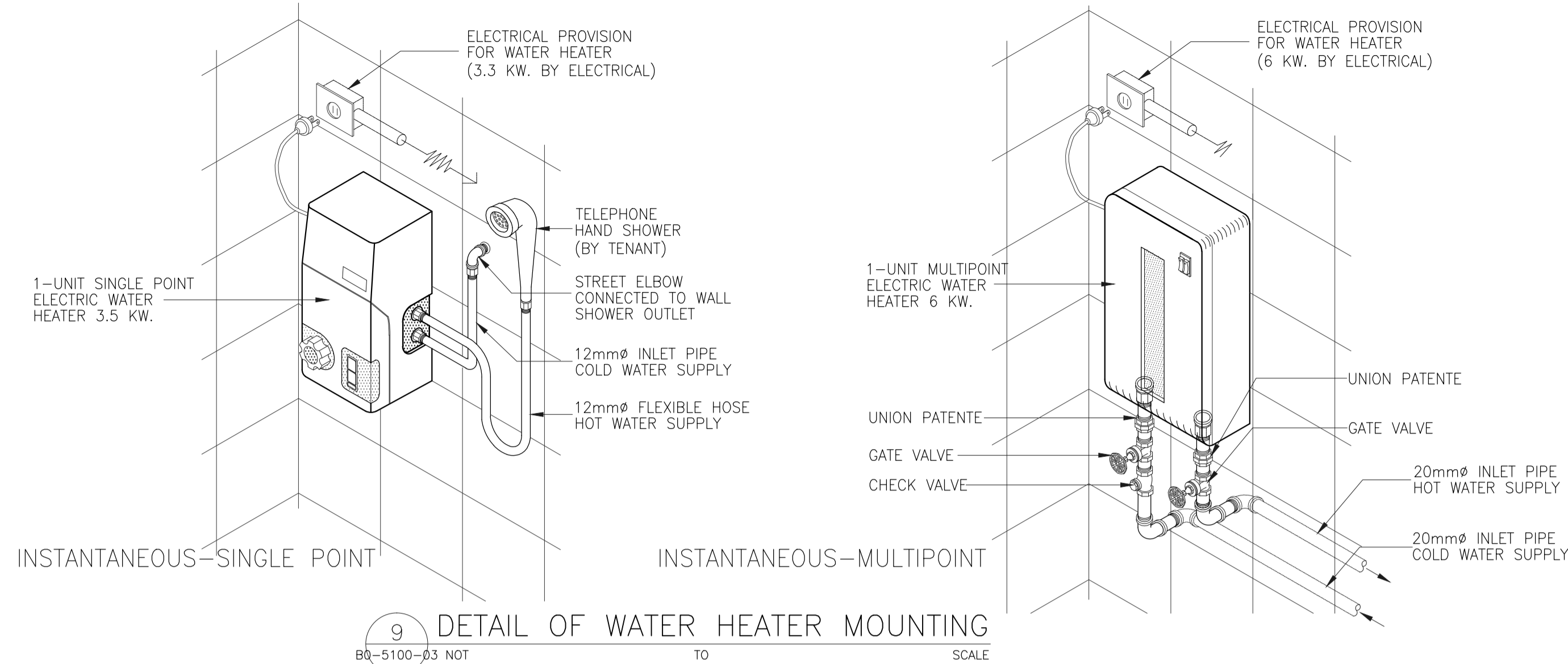


1 SITE DEVELOPMENT PLAN

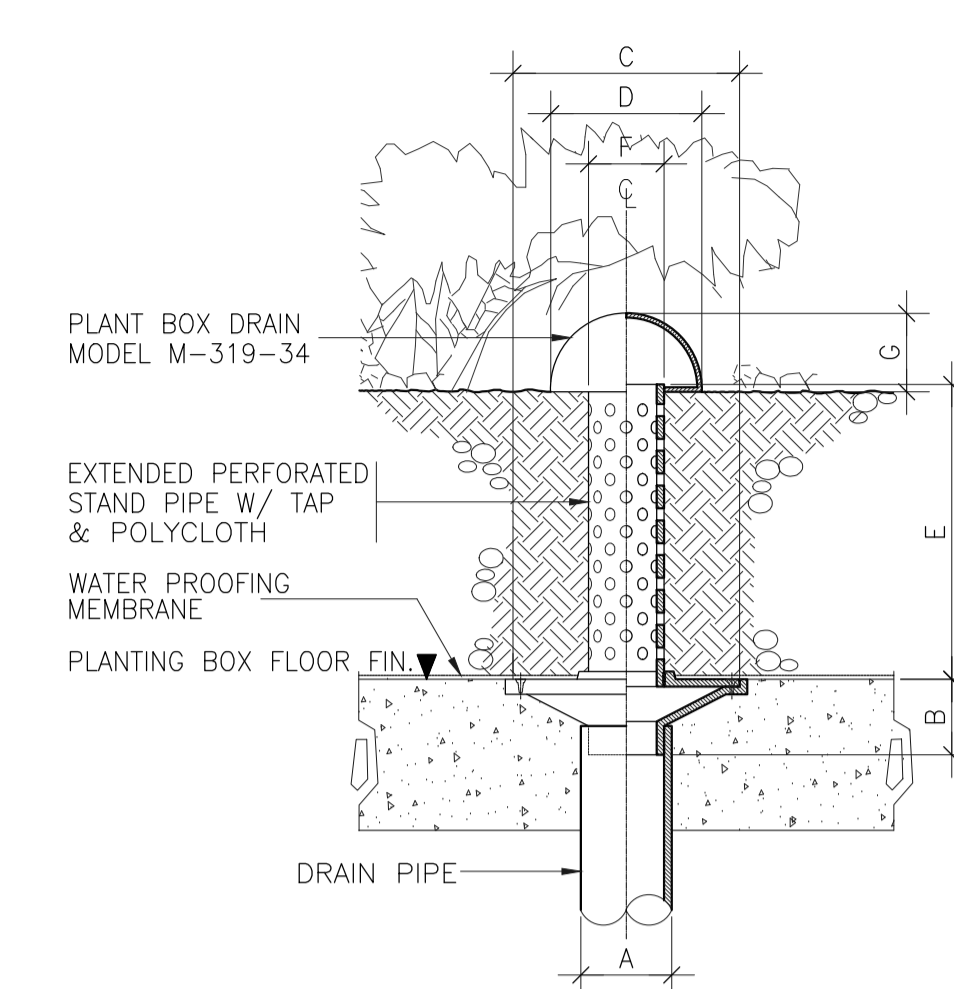
BO-5100-01 NTS

	PREPARED BY: LEOVIMEL J. VINELES Filipino Registered Engineer PROF: SANITARY ENGINEER PTR: 2024236 REG. NO: 0002435 DATE: 07-09-2013 TIN: 237-652-602-000 PLACE: MANILA	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-0: GENERAL MECHANICAL SANITARY AND PLUMBING GENERAL NOTES, ABBREVIATIONS, LEGENDS AND SYMBOLS & SITE DEVELOPMENT PLAN	SHEET NO: BO-5100-01
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPON KOEI CO., LTD. NIS CONSULTANTS CO., LTD.	TADASHI AOI Team Leader	JUN 2013	DATE INDEX AMENDMENTS	Prepared by: WIM Checked by: IIC Validated by:	DRAWING SCALE: NTS	





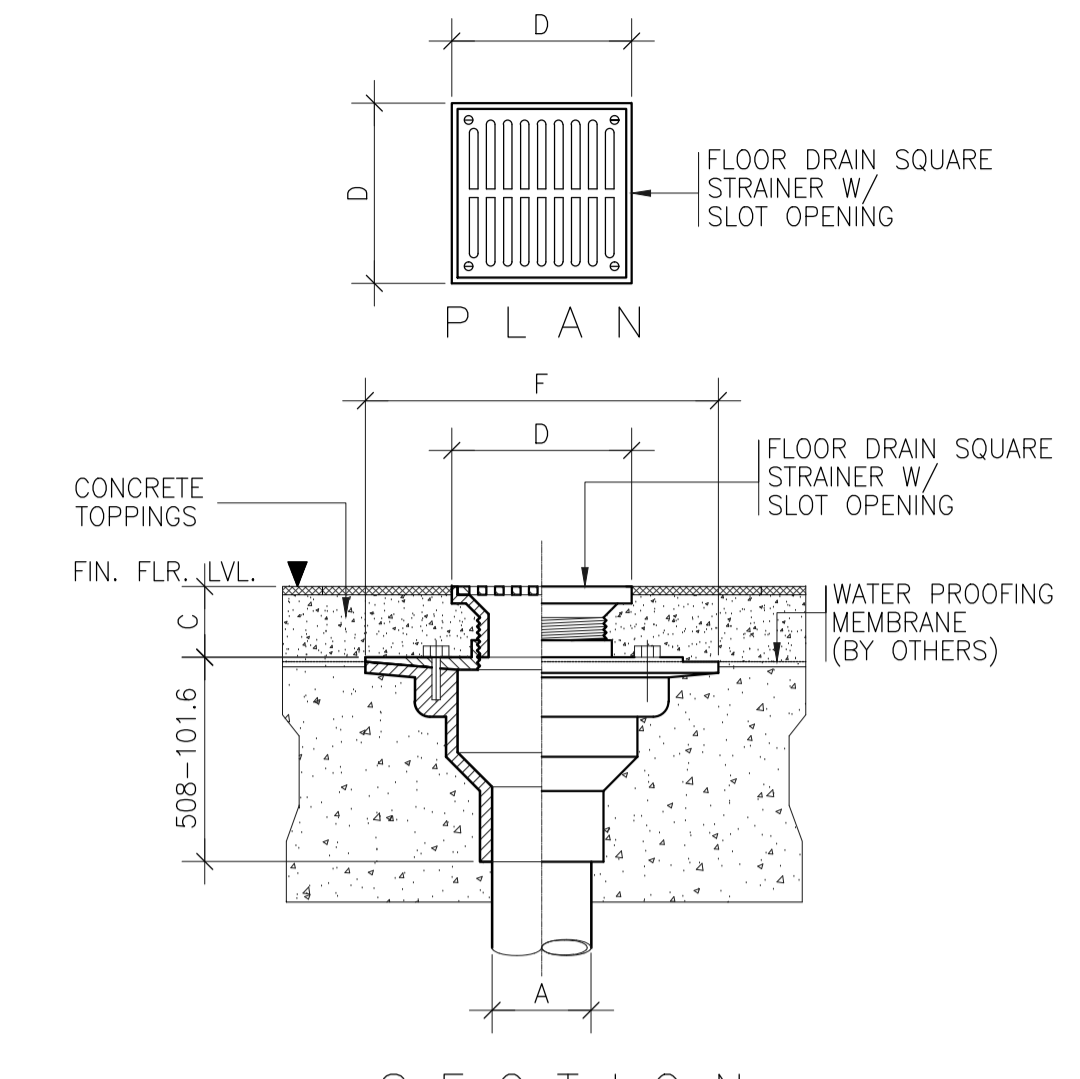
9 DETAIL OF WATER HEATER MOUNTING
B0-5100-03 NOT TO SCALE



SCHEDULE OF DIMENSIONS

PIPE SIZE IN 'A'	DIMENSIONS IN MM.					
	B	C	D	E	F	G
50	41.2	100	121	4-6	44	60
75	41.2	127	121	4-6	44	60
100	45	133	121	4-6	44	60

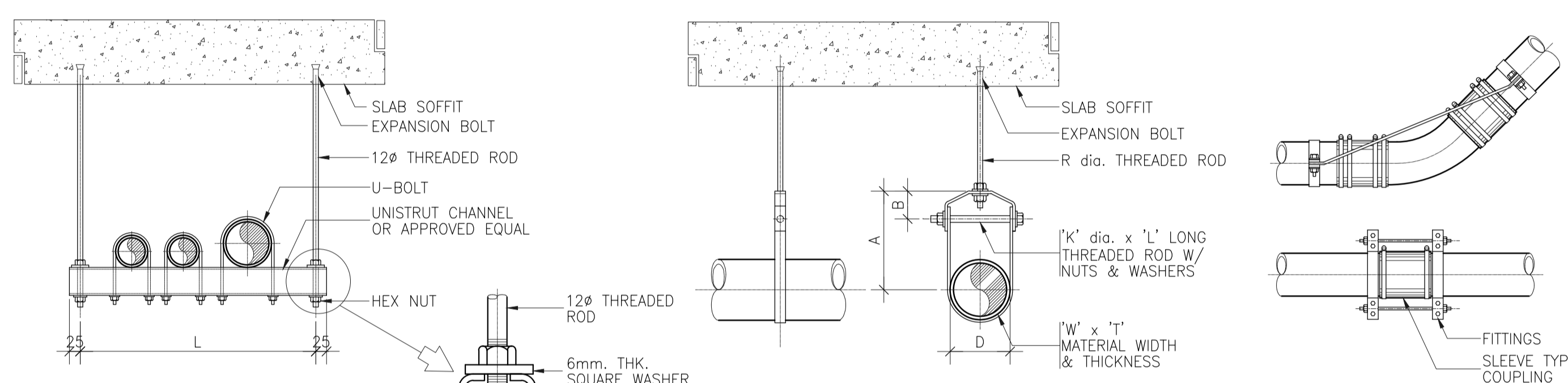
11 DETAIL OF PLANTER'S DRAIN
B0-5100-03 NOT TO SCALE



SCHEDULE OF DIMENSIONS

PIPE SIZE IN 'A'	DIMENSIONS IN MM.		
	C	D	F
50	38.10	100X100	225.42
75	38.10	125X125	225.42
100	40.00	150X150	225.42
150	50.80	200X200	282.57

13 DETAIL OF FLOOR DRAIN
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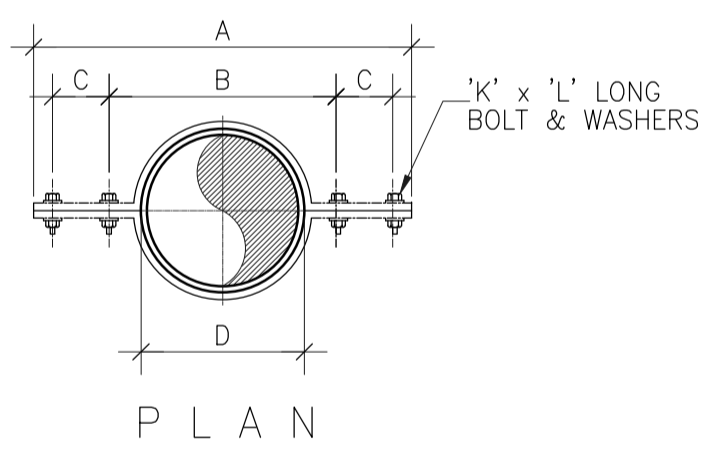
FITTINGS FOR BEND PIPE/HORIZONTAL PIPE

STANDARD TRAPEZE HANGERS TABLE OF DIMENSIONS

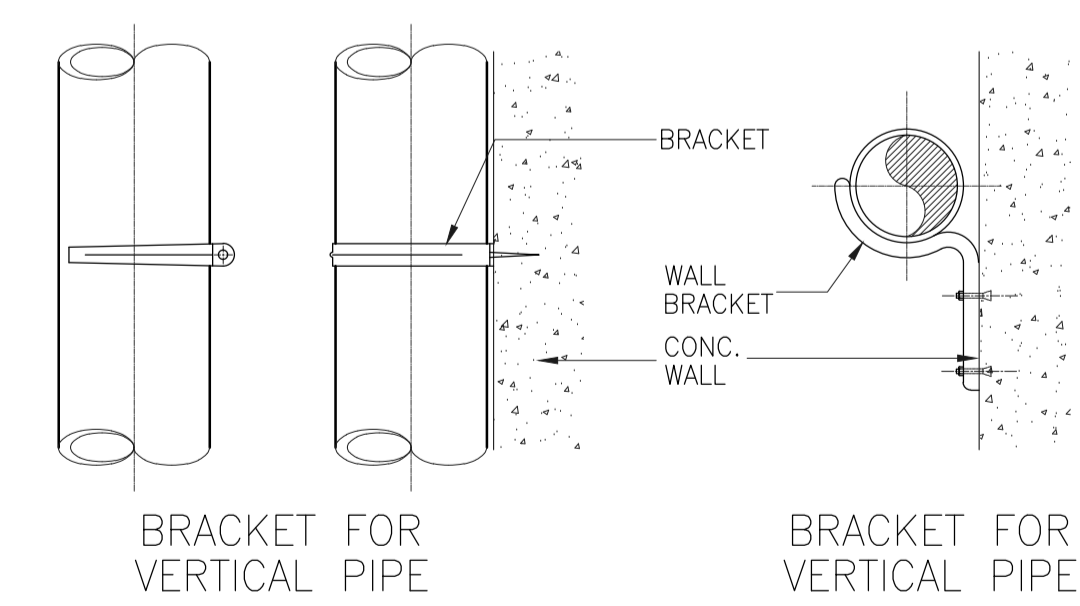
PART NO.	L	LOAD CAPACITY	CHANNEL
P2700	300	3.20 kN	P4000
P2701	450	2.00 kN	P4000
P2702	600	1.45 kN	P4000
P2703	600	4.23 kN	P2000
P2704	750	3.34 kN	P2000
P2705	900	3.50 kN	P1000
P2705	1000	3.25 kN	P1000

STANDARD CLEVIS HANGERS TABLE OF DIMENSIONS

D	A	B	R	W x T	K x L
34	80	45	12	25 x 3	M10 x 70
43	90	50	12	25 x 3	M10 x 80
48	95	50	12	25 x 3	M10 x 85
60	105	55	12	25 x 3	M10 x 100
76	115	60	14	40 x 6	M12 x 115
89	125	60	14	40 x 6	M12 x 130
114	145	65	18	40 x 6	M16 x 160
140	165	75	18	40 x 6	M16 x 190
165	185	80	18	40 x 6	M16 x 210



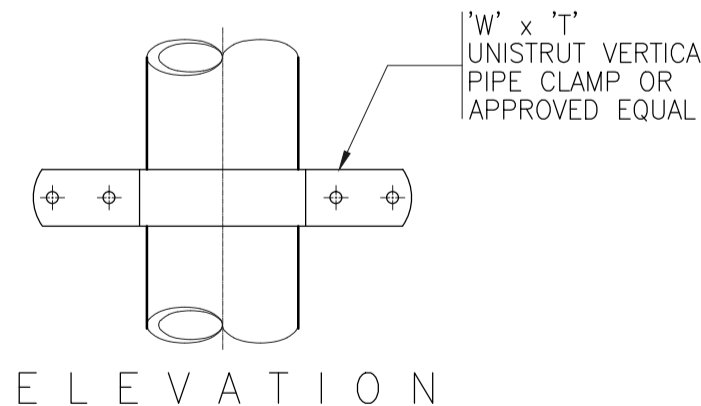
PLAN



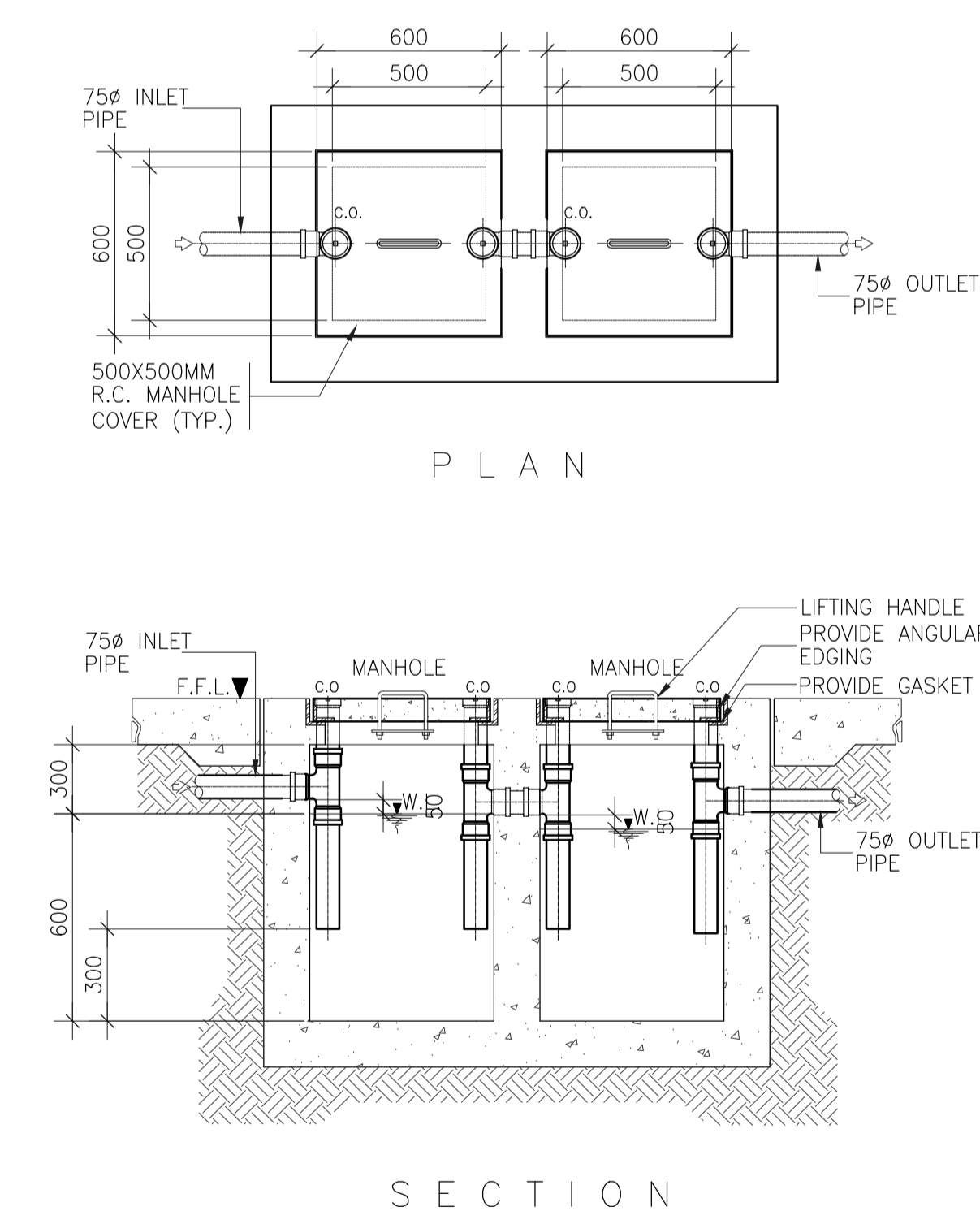
BRACKET FOR VERTICAL PIPE

STANDARD VERTICAL CLAMP TABLE OF DIMENSIONS

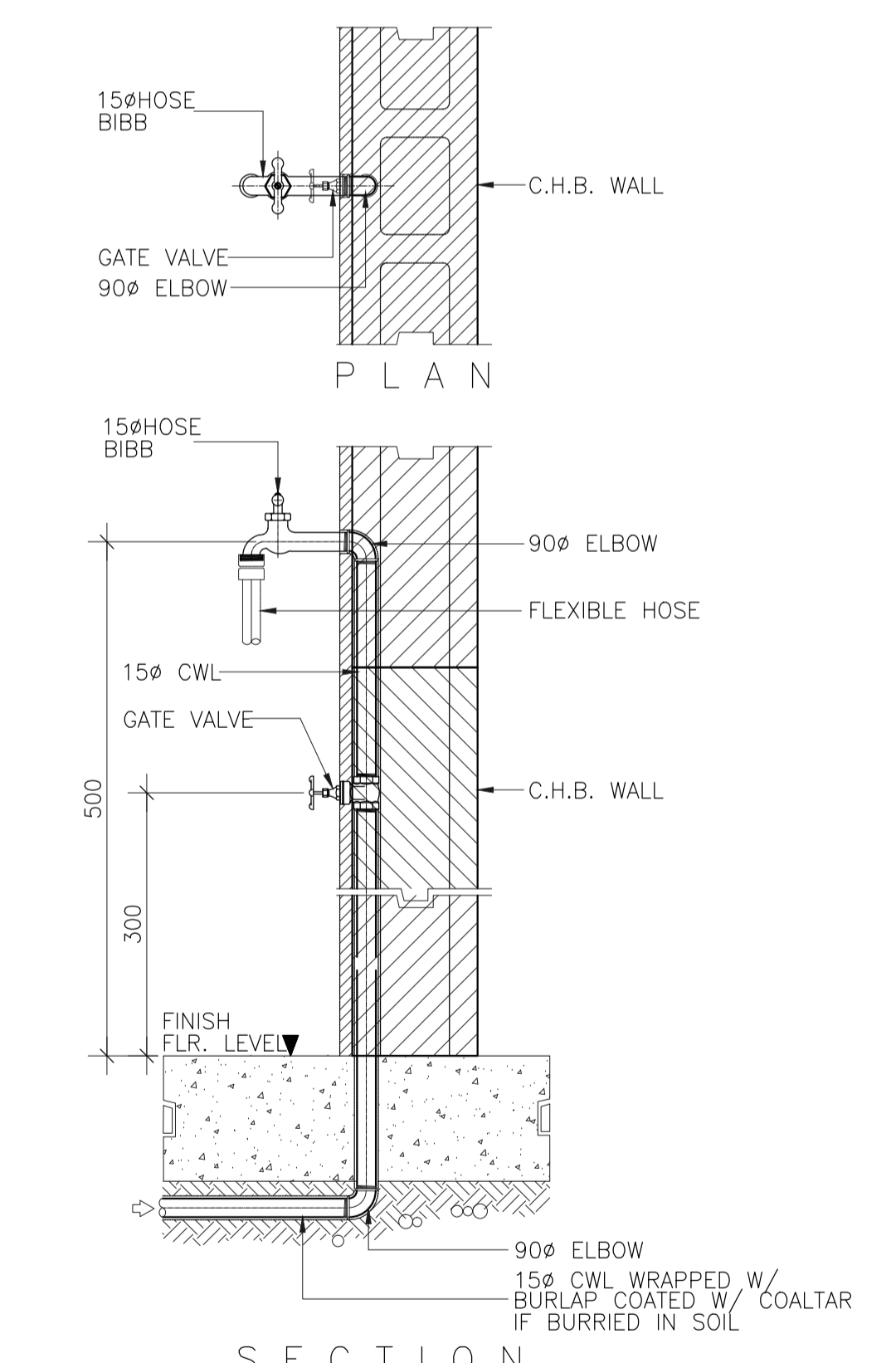
D	A	B	C	W x T	K x L
60	250	114	48	40 x 6	M12 x 40
76	266	130	48	50 x 6	M12 x 40
114	304	168	48	50 x 6	M12 x 40
165	468	254	75	75 x 10	M16 x 60
219	519	305	75	75 x 10	M16 x 60
273	573	359	75	75 x 10	M16 x 60
324	624	410	75	75 x 10	M16 x 60



ELEVATION



12 DETAIL OF OIL INTERCEPTOR
B0-5100-03 SCALE 1:100MTS.



14 DETAIL OF HOSE BIBB
B0-5100-03 SCALE 1:10MTS.

10 DETAIL OF PIPE HANGER, CLAMPS & BRACKETS
B0-5100-03 SCALE 1:10MTS.

	PREPARED BY: LEOVIMEL J. VINELES Filipino Registered Engineer PROF: SANITARY ENGINEER PTR. 2024236 REG. NO: 0002935 DATE: 07-09-2013 T.IN. 237-652-602-000 PLACE: MANILA CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-0: GENERAL MECHANICAL SANITARY AND PLUMBING MISCELLANEOUS DETAILS 2	SHEET NO: B0-5100-03 DRAWING SCALE: AS SHOWN
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NIS CONSULTANTS CO., LTD.	TADASHI AOI Team Leader	JUN 2013 DATE INDEX AMENDMENTS	Prepared by WIM Checked by HC Validated by		

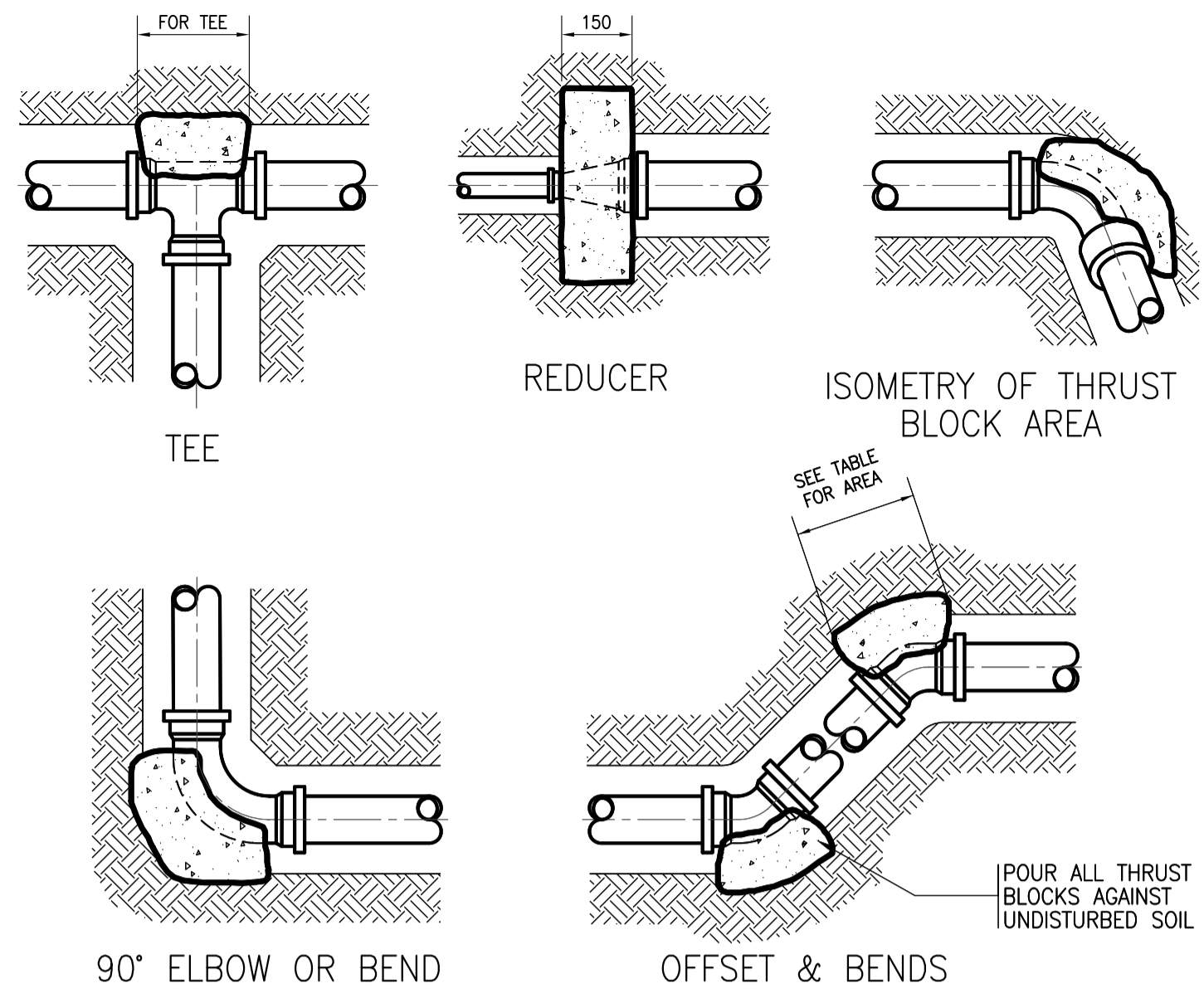
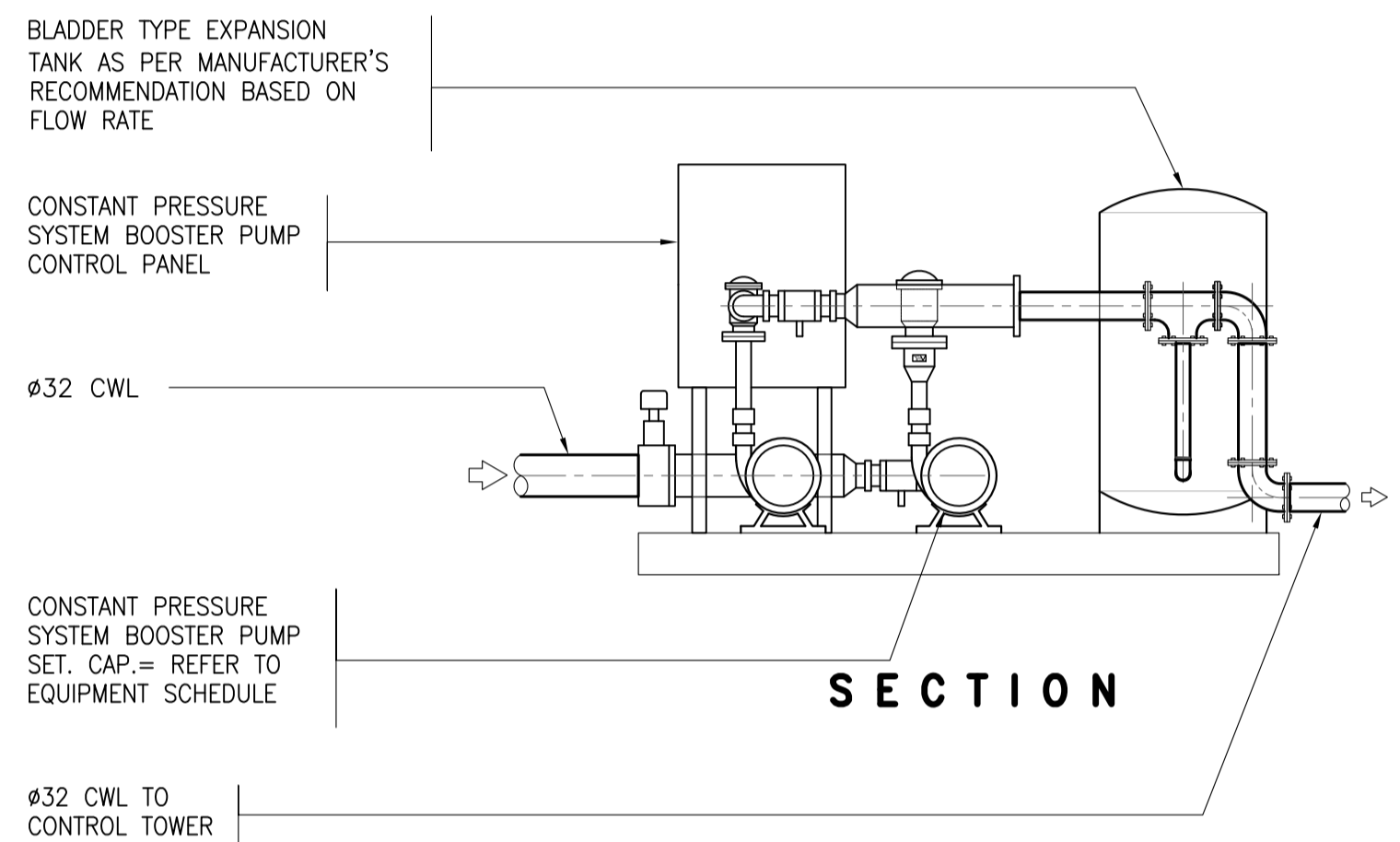
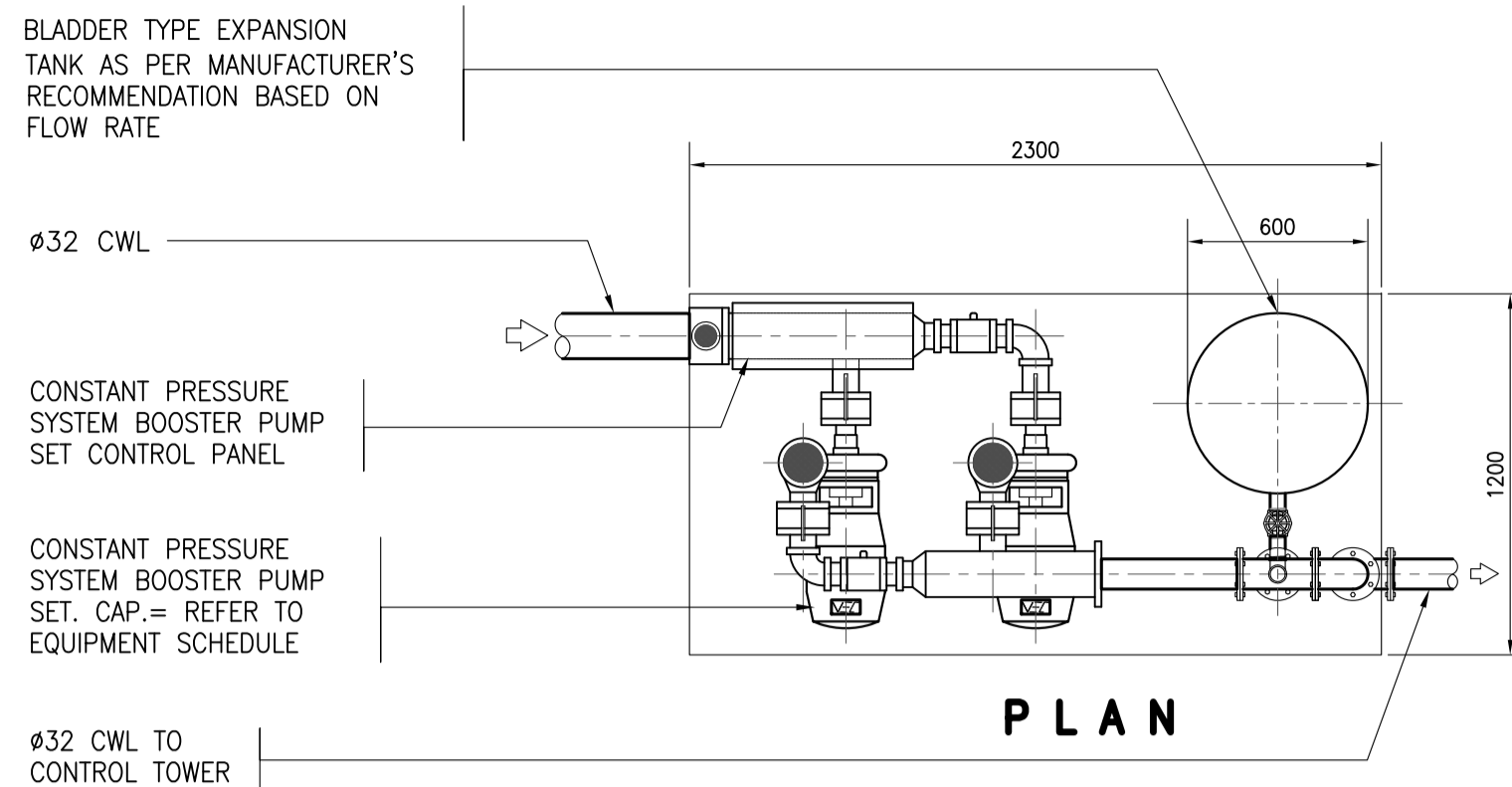


TABLE OF MINIMUM THRUST BLOCK BEARING AREAS IN SQUARE METERS FOR PIPE SIZES 75 mmØ TO 250 mmØ

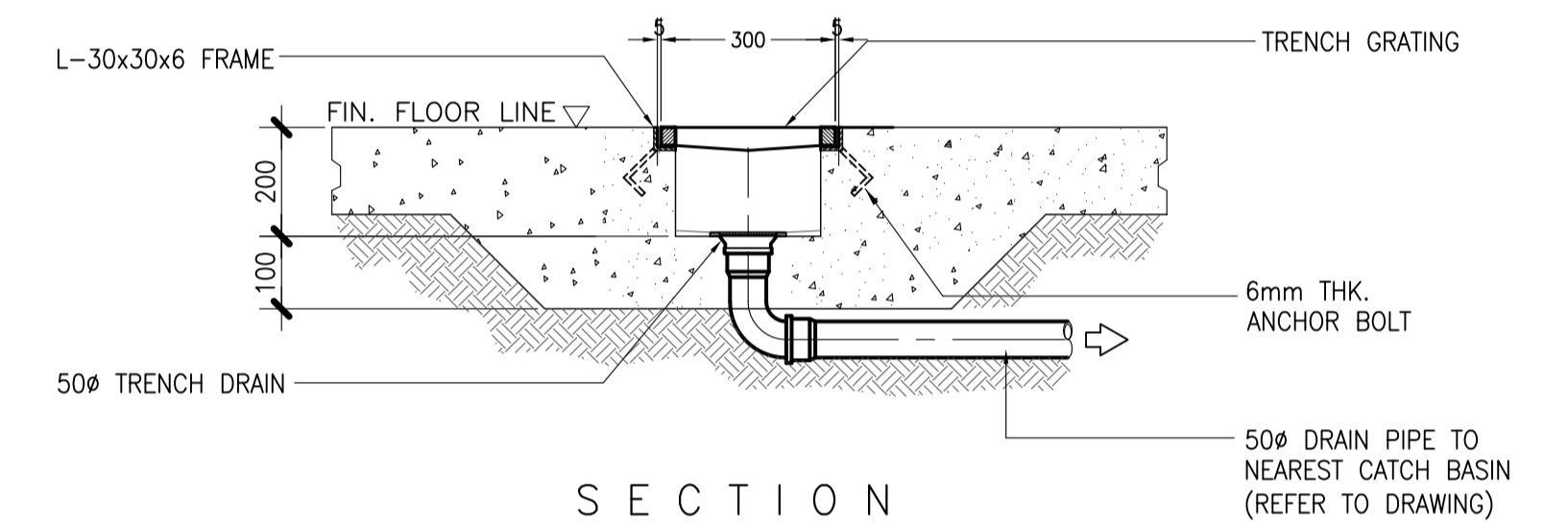
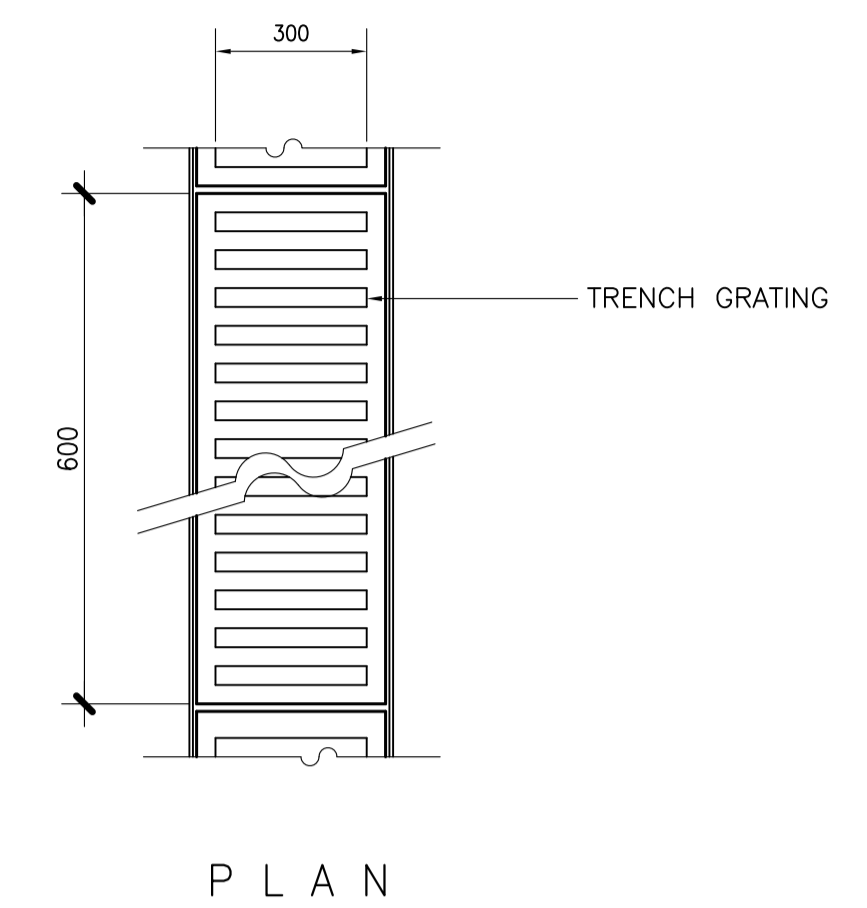
PIPE SIZE mm (in.)	TEE & DEAD END	90° BEND	45° BEND	22 1/2° BEND
75 (3")	0.05	0.07	0.04	0.02
100 (4")	0.09	0.12	0.07	0.04
150 (6")	0.20	0.28	0.15	0.08
200 (8")	0.35	0.50	0.27	0.14
250 (10")	0.55	0.77	0.42	0.24

- NOTES:**
- ABOVE AREAS BASED ON AN ASSUMED SOIL BEARING PRESSURE OF 96kpa (2000 psf).
 - REDUCE OR INCREASE AREAS PROPORTIONATELY TO SUIT ACTUAL FIELD CONDITIONS UPON APPROVAL OF THE ENGINEER.
 - CONCRETE FOR THRUST BLOCK SHALL BE 13.8 mpa. (2000 psi).
 - CONCRETE FOR ANCHOR BLOCK SHALL BE 13.8 mpa. (2000psi).
 - THRUST BLOCKS NOT REQUIRED ON STEEL PIPE LINE WITH WELDED OR FLANGED JOINTS OR ON SOLVENT WELDED PVC PIPE.
 - WHERE PIPE CONNECTS TO A FITTING IN A STEEL PIPE LINE, THE STEEL PIPELINE SHALL BE BLOCKED AS SHOWN HERE ON.
 - BEARING AREAS BASED ON INTERNAL PRESSURE OF 106m (150 psi).

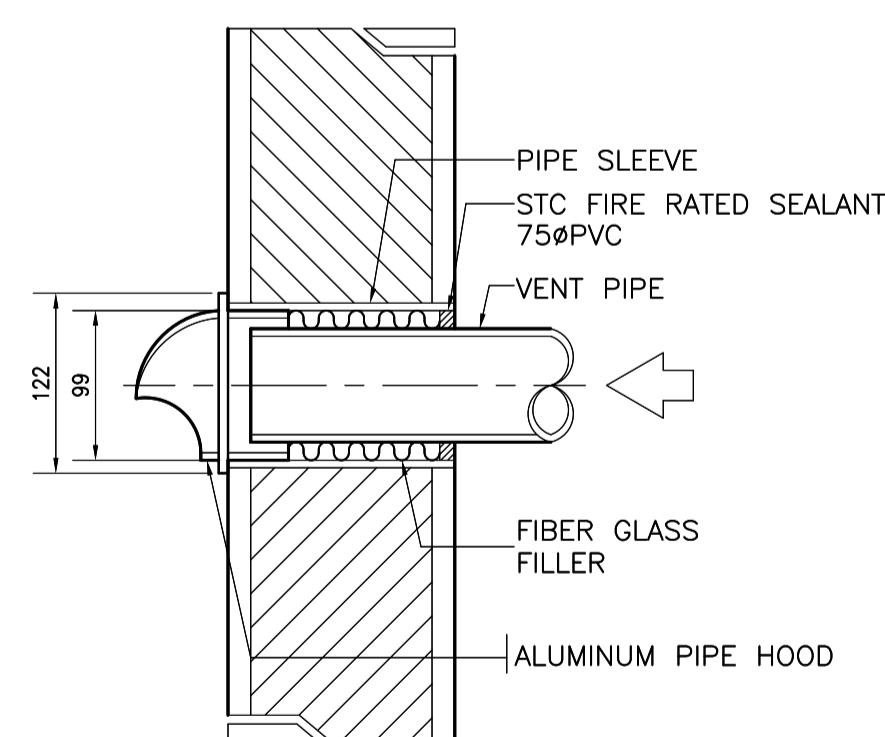
15 DETAIL OF CONCRETE THRUST BLOCKS
B0-5100-04 NOT TO SCALE



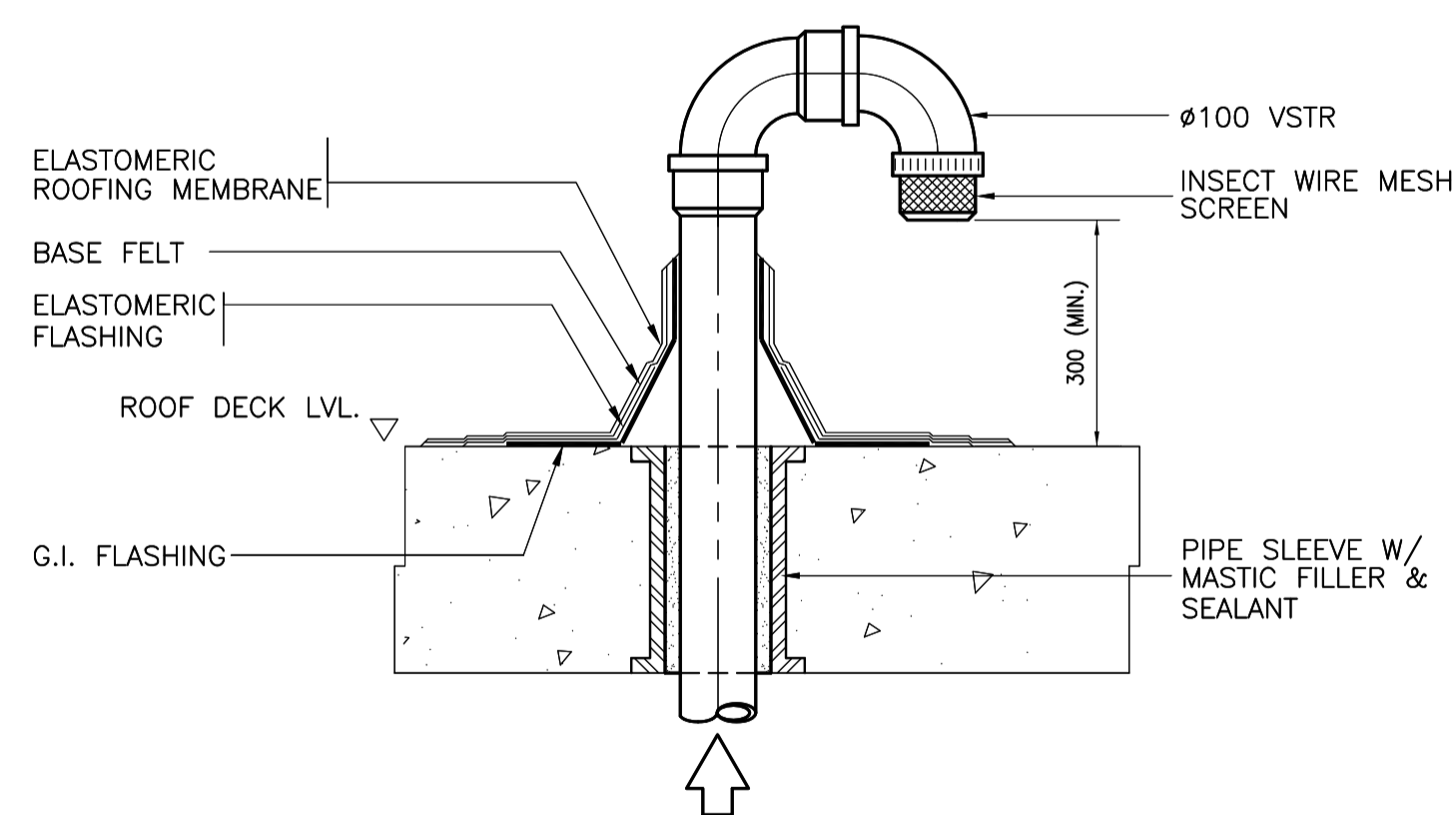
17 CONSTANT PRESSURE SYSTEM PUMP DETAIL
B0-5100-04 NOT TO SCALE



19 DETAIL OF TRENCH DRAIN W/ GRATING COVER
B0-5100-04 SCALE 1:10 MTS.



16 VENT THRU WALL DETAIL
B0-5100-04 SCALE 1:10MTS.



18 VENT STACK THRU ROOF DETAIL
B0-5100-04 SCALE 1:10MTS.

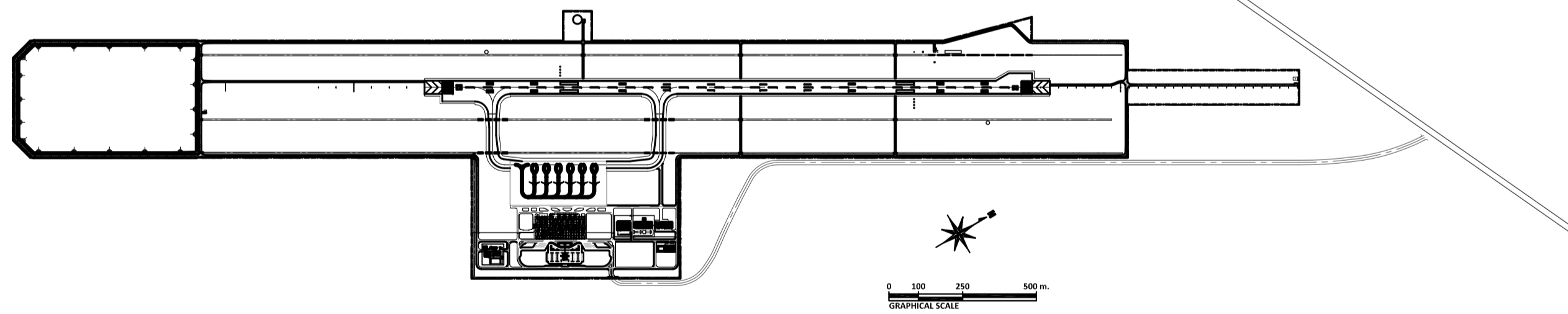
	PREPARED BY: LEOVIMEL J. VINELES <small>Philippine Registered Engineer</small> PROF: SANITARY ENGINEER PTR: 2024236 REG. NO: 0002435 DATE: 07-09-2013 TEL: 237-652-822-000 PLACE: MANILA CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-0: GENERAL MECHANICAL SANITARY AND PLUMBING MISCELLANEOUS DETAILS 3	SHEET NO: B0-5100-04 DRAWING SCALE: AS SHOWN
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	DATE: JUNE 2013 INDEX: - AMENDMENTS: - Prepared by: WIM Checked by: HC Validated by: -				

- ALL SERVICE RUNS AND CONNECTIONS, ACCESSORIES ANCILLARY EQUIPMENT AND BUILDERS WORKS SHALL BE PROVIDED TO SUIT EQUIPMENT INCLUDED BY THE CONTRACTOR IN HIS TENDER, WHERE APPLICABLE AND WHERE INDICATED.
- UNLESS OTHERWISE SHOWN, ALL DUCT DIMENSIONS INDICATED ARE INSIDE CLEAR DIMENSIONS IN MM, NET OF ALL INTERNAL LINING AND EXTERNAL INSULATION THICKNESS.
- ALL PIPE SIZES ARE IN MM.
- ALL PRESSURE DROPS INDICATED IN SCHEDULES AND DRAWINGS ARE FOR GUIDANCE ONLY. CONTRACTOR TO CHECK THE ABOVE AGAINST EQUIPMENT, FITTINGS AND UNITS INSTALLED AS PER SHOP DRAWINGS SUBMITTED FOR APPROVAL.
- PROVIDE CEILING ACCESS TO EQUIPMENT, DAMPER, VALVES AND OTHER DEVICES LOCATED ABOVE CEILING.
- ALL OPENINGS FOR DUCTS AND PIPES SHALL NOT IN ANYWAY, PENETRATE STRUCTURAL RIB ON BEAMS UNLESS OTHERWISE AUTHORIZED.
- ALL MOTOR CONTROLLERS FOR MECHANICAL EQUIPMENT SHALL BE SUPPLIED BY MECHANICAL CONTRACTOR. MOTOR CONTROLLERS SHALL BE ENCLOSED IN A LOCAL CONTROL PANEL EQUIPPED WITH A DEDICATED REQUIRED CIRCUIT BREAKER. PROVIDE FULL VOLTAGE STARTER FOR MOTORS UP TO 15 Hp. FOR MOTORS 20 Hp & ABOVE, PROVIDE WYE DELTA STARTER.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION.
- UNLESS OTHERWISE NOTED, THE FREE AREA OF ALL EXTERNAL LOUVERS SHALL BE A MINIMUM OF 50% OF FACE AREA. ALSO, ALL INTAKE LOUVERS SHALL BE PROVIDED WITH SAND TRAP LOUVER.
- EMERGENCY STOP SWITCHES SHALL BE INSTALLED ADJACENT TO EACH MOTOR.
- VOLUME CONTROL DAMPER SHALL BE PROVIDED FOR SUPPLY AIR DUCT AT EACH BRANCH. WHETHER SHOWN OR NOT SHOWN ON PLANS.
- THE CONTRACTOR SHALL ENSURE THAT ALL THE OFFERED EQUIPMENT CAN BE POSITIONED PROPERLY SUCH THAT REGULAR MAINTENANCE CAN BE PERFORMED. AN APPROVED SHOP DRAWING IS REQUIRED BEFORE INSTALLATION.
- THE CONTRACTOR SHALL SUPPLY AND INSTALL FIRE DAMPERS FOR AIR DUCTS PASSING THROUGH FIRE RATED WALLS / SLABS.
- AIR TIGHT ACCESS PANELS SHOULD BE PROVIDED ON AIR DUCTS ADJACENT TO FIRE DAMPERS FOR INSPECTION AND MAINTENANCE.
- THE EXACT LOCATION AND LEVEL OF ALL WALL MOUNTED THERMOSTATS / SWITCHES SHALL BE SUBJECT TO ARCHITECT'S APPROVAL BEFORE INSTALLATION.
- THE CONTRACTOR SHALL SELECT SILENCERS FOR ALL FAN & FRESH AIR HANDLING EQUIPMENTS AT SUCTION AND DISCHARGE SIDE TO ACHIEVE THE SPECIFIED ROOM AND EXTERNAL ACOUSTIC LEVELS BASED ON THE EQUIPMENTS OFFERED, ALTHOUGH NOT INDICATED ON THE LAYOUT PLAN AND AIR FLOW SCHEMATICS.
- MANUAL OVERRIDE SWITCHES SHALL BE PROVIDED AT THE F.S. CONTROL ROOM FOR SWITCHING OFF THE FANS FOR ALL THE MECHANICAL VENTILATING SYSTEMS SERVING THE BUILDING IN THE EVENT OF AN EMERGENCY.
- ALL AIR GRILLES / LOUVRES SHALL BE MADE OF ALUMINIUM UNLESS OTHERWISE SPECIFIED. THE COLOUR & SURFACE FINISHING OF THE GRILLES / LOUVRES SHALL BE SUBMITTED TO ARCHITECT FOR APPROVAL BEFORE MATERIAL ORDERING. UNLESS OTHERWISE SPECIFIED, COLOUR FINISH SHALL BE IN BAKED ENAMEL PAINT.
- ACCESS PANEL LOCATIONS SHALL BE SUBMITTED BY THE AIR CONDITIONING AND MECHANICAL VENTILATION (ACMV) CONTRACTOR FOR APPROVAL BY THE ARCHITECT AND ENGINEERS.
- RUN INSULATED DRAIN PIPE FROM EACH FCU AND FAHU TO THE NEAREST FLOOR DRAIN OR DIRECTLY TO THE NEAREST CONDENSATE DRAIN RISER.
- DURING THE PROCESS OF THE WORKS ALL OPEN ENDS OF PIPES, CONDUITS, DUCTS ETC. SHALL BE SUITABLY CAPPED TO PREVENT THE INGRESS OF FOREIGN MATTER.
- THE SLOPE OF ALL HORIZONTAL RUN CONDENSATE DRAIN PIPES SHALL BE NOT LESS THAN 1:100.
- ALL ANTI-VIBRATION MOUNTS FOR EQUIPMENT AND PIPEWORK SHALL BE OF SPRING TYPE UNLESS OTHERWISE SHOWN ON DRAWINGS.
- ALL FRESH / SUPPLY / PRIMARY AIR BRANCH DUCTS FROM MAIN / SUB-MAIN DUCT SHALL BE PROVIDED WITH ADJUSTABLE SPLITTER VANES.
- FOR PIPES, SLEEVES AND DUCTS THROUGH FIRE BARRIER, THE GAP BETWEEN THE PIPES AND ITS SLEEVES, AND THE GAP BETWEEN THE DUCTS AND FIRE BARRIERS MUST BE FIRMLY SEALED WITH SOFT PACKING HAVING A PERIOD OF FIRE RESISTANCE EQUAL TO THE FIRE BARRIERS. DETAILS OF DUCTS AND PIPES THROUGH WALL AND FLOOR COMPLYING WITH U.L. SHALL BE PROVIDED BY CONTRACTOR AND APPROVED BY ARCHITECT BEFORE INSTALLATION.
- INSULATION FOR PIPES AT POINT WHERE THEY PASS THROUGH FIRE BARRIERS MUST HAVE A PERIOD OF FIRE RESISTANCE EQUAL TO THE FIRE BARRIERS.
- WHERE DUCT REQUIRING INSULATION PASSES THROUGH A FIRE BARRIER AND IS PROVIDED WITH A FIRE DAMPER, THE EXTERNAL INSULATION MUST HAVE A PERIOD OF FAIRE RESISTANCE EQUAL TO THE FIRE BARRIERS.
- ALL SQUARE AND/OR RECTANGULAR DUCT ELBOWS MUST BE FITTED WITH TURNING VANES TO DW 144 STANDARD.
- SIZE OF GRILLES, LOUVERS OR DIFFUSERS SHOWN ARE NECK SIZE UNLESS OTHERWISE SPECIFIED.
- SIZE OF ALL BRANCH DUCTS TO REGISTERS/GRILLES, LOUVERS OR DIFFUSERS SHALL BE THE SAME OF THE NECK SIZE OF THE RESPECTIVE REGISTERS/GRILLES, LOUVERS OR DIFFUSERS UNLESS OTHERWISE SPECIFIED.
- ALL DUCTS FANS SHALL BE INSTALLED WITH VIBRATION ISOLATORS AND FLEXIBLE DUCT CONNECTORS.
- ALL SUPPLY GRILLES AND DIFFUSERS SHALL BE INSTALLED WITH VOLUME CONTROL DAMPERS WHILE ALL SUPPLY AIR REGISTERS SHALL BE PROVIDED WITH OPPOSED BLADE DAMPERS.
- IN THE ABSENCE OF ANY OTHER REQUIREMENT NOT FOUND IN THE LOCAL CODE, THE MATERIALS, CONSTRUCTION AND INSTALLATION OF THE DUCTWORKS SHALL COMPLY WITH THE REQUIREMENT OF SMACNA OR ASHRAE.
- DUCTWORKS WITHOUT DUCT SILENCERS ARE TO BE INTERNALLY LINED WITH ACOUSTIC MATERIALS, MINIMUM 5M UPSTREAM AND DOWNSTREAM OF FANS, AND MINIMUM 1.5M FOR FCUs. ALL ACOUSTIC MATERIALS ARE TO BE NON-COMBUSTIBLE TYPE ACCEPTABLE TO FIRE SAFETY BUREAU AND IAQ CODE OF PRACTICE.
- ALL SERVICES CROSSING SEISMIC GAP SHALL BE PROVIDED WITH FLEXIBLE JOINTS. REFER TO GENERAL PLANS FOR LOCATION.
- TOILET DOORS SHALL EACH BE PROVIDED WITH DOOR LOUVERS OR UNDERCUT FOR AIR PASSAGE.
- FURNITURES INCLUDING WHITE GOODS TO KITCHEN IS INDICATIVE ONLY & WILL NOT BE SHOWN ON THE DESIGN DEVELOPMENT DRAWINGS.

1 GENERAL NOTES
SCALE NTS

DESCRIPTION OF ITEM	DESCRIPTION OF ITEM	DESCRIPTION OF ITEM
AAV AUTOMATIC AIR VENT	OA OUTSIDE AIR	FOP FUEL OIL PUMP
ABV AUTOMATIC BALANCING VALVE	Pa PASCAL	FOS/R FUEL OIL SUPPLY/ RETURN
ACMV AIR CONDITIONING AND MECHANICAL VENTILATION	PSF PRESSURIZATION FAN	FPC FLEXIBLE PIPE CONNECTION
	RA RETURN AIR	FSMD FIRE/SMOKE DAMPER
ACCU AIR COOLED CONDENSING UNIT	RAG SUPPLY AIR GRILLE	GV GATE VALVE
AHU AIR HANDLING UNIT	RLD RETURN LINEAR DIFFUSER	H/L HIGH LEVEL
AS AIR SEPARATOR	RPM REVOLUTION PER MINUTE	KW KILOWATT
BDD BACK DRAFT DAMPER	SA SUPPLY AIR	L/L HIGH LEVEL
CD CONDENSATE DRAIN	SAD SUPPLY AIR DUCT	l/s LITER PER SECOND
C/W COMPLETE WITH	SAG SUPPLY AIR GRILLE	CMH CUBIC METER PER HOUR
DIDW DOUBLE INLET DOUBLE WIDTH FAN	SAR SUPPLY AIR REGISTER	MM MILLIMETER
EA EXHAUST AIR	SCD SUPPLY CEILING DIFFUSER	MD MOTORIZED DAMPER
EAD EXHAUST AIR DUCT	SF SUPPLY FAN	MV MOTORIZED VALVE
EAG EXHAUST AIR GRILLE	SLD SUPPLY LINEAR DIFFUSER	N.C. NORMALLY CLOSE
EAL EXHAUST AIR LOUVER	SPF STAIRCASE PRESSURIZATION FAN	N.O. NORMALLY OPEN
EF EXHAUST FAN	TEAD TOILET EXHAUST AIR DUCT	NRD NON RETURN DAMPER
FAD FRESH AIR DUCT	VAV VARIABLE AIR VOLUME	NTS NOT TO SCALE
FAG FRESH AIR GRILLE	VD VOLUME CONTROL DAMPER	F/A FROM ABOVE
F/B FROM BELOW	VRF VARIABLE REFRIGERANT FLOW	T/B TO BELOW
FAL FRESH AIR LOUVER	HP HORSE POWER	SM SQUARE METER
FCU FAN COIL UNIT	FA FRESH AIR	T/A TO ABOVE
FD FIRE DAMPER	DL/DU DOOR LOUVER/UNDER CUT	SL/LL SUCTION LINE/LIQUID LINE
FDC FLEXIBLE DUCT CONNECTOR	DV DRAIN VALVE	FACP FIRE ALARM CONTROL PANEL

2 ABBREVIATIONS
SCALE NTS

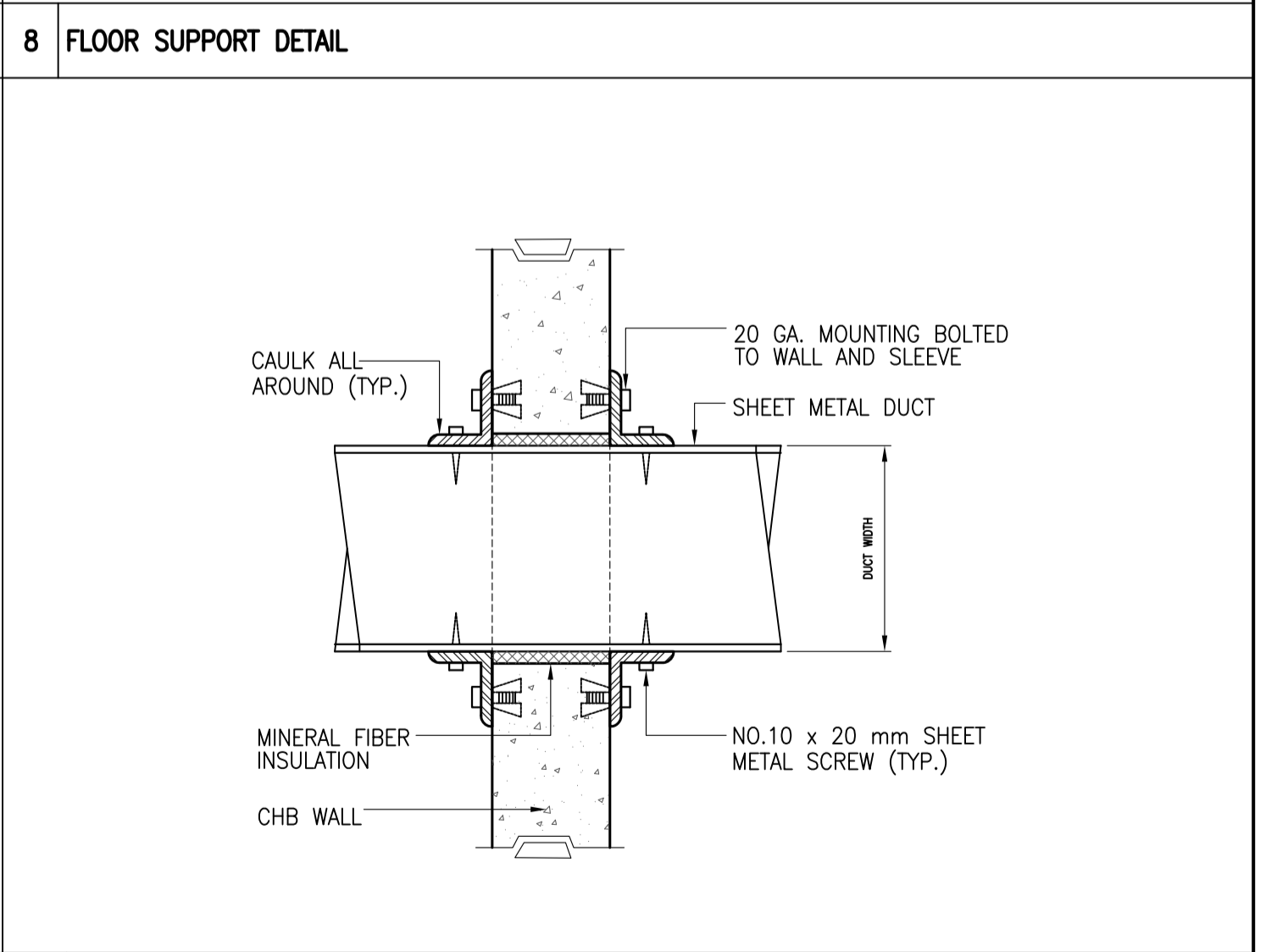
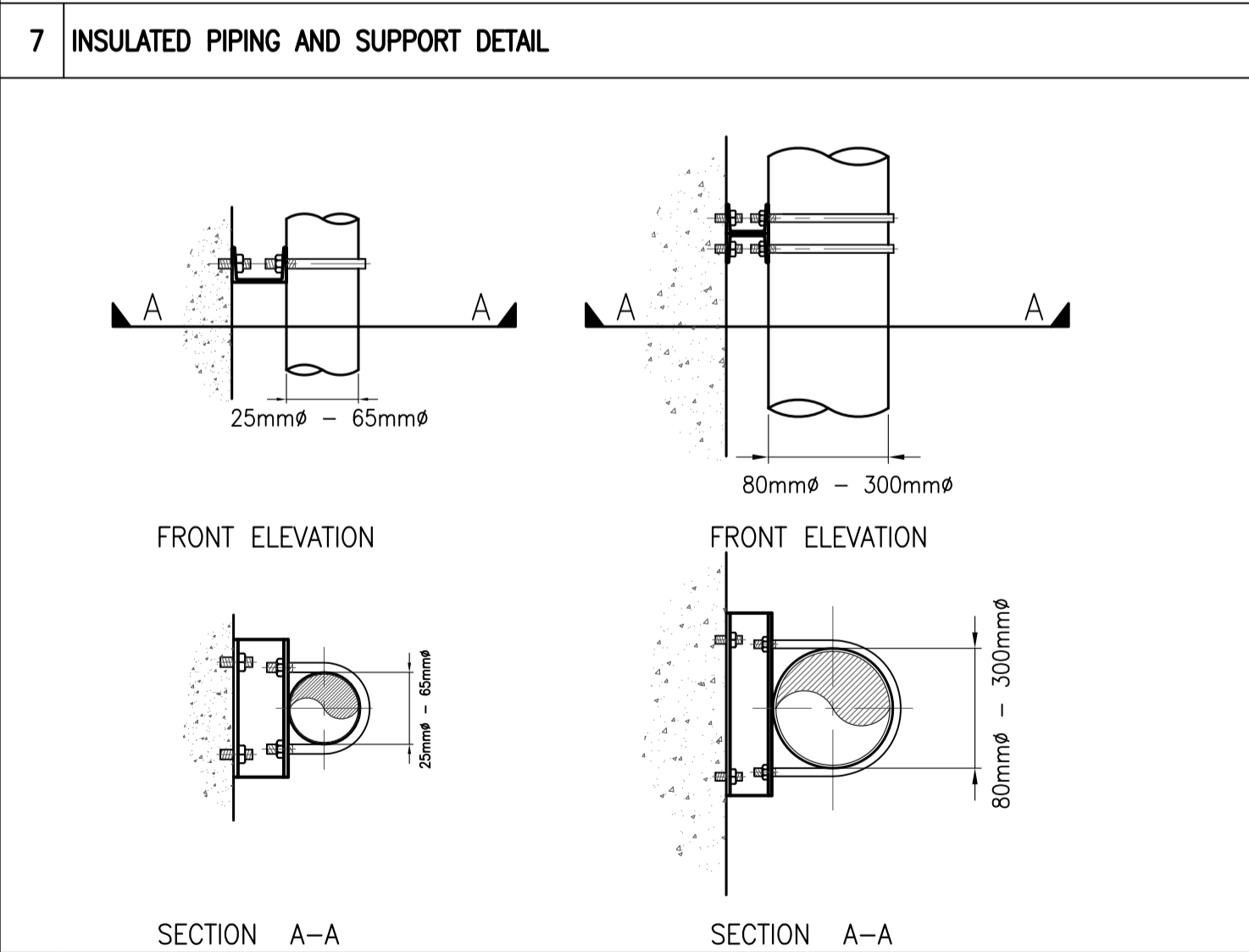
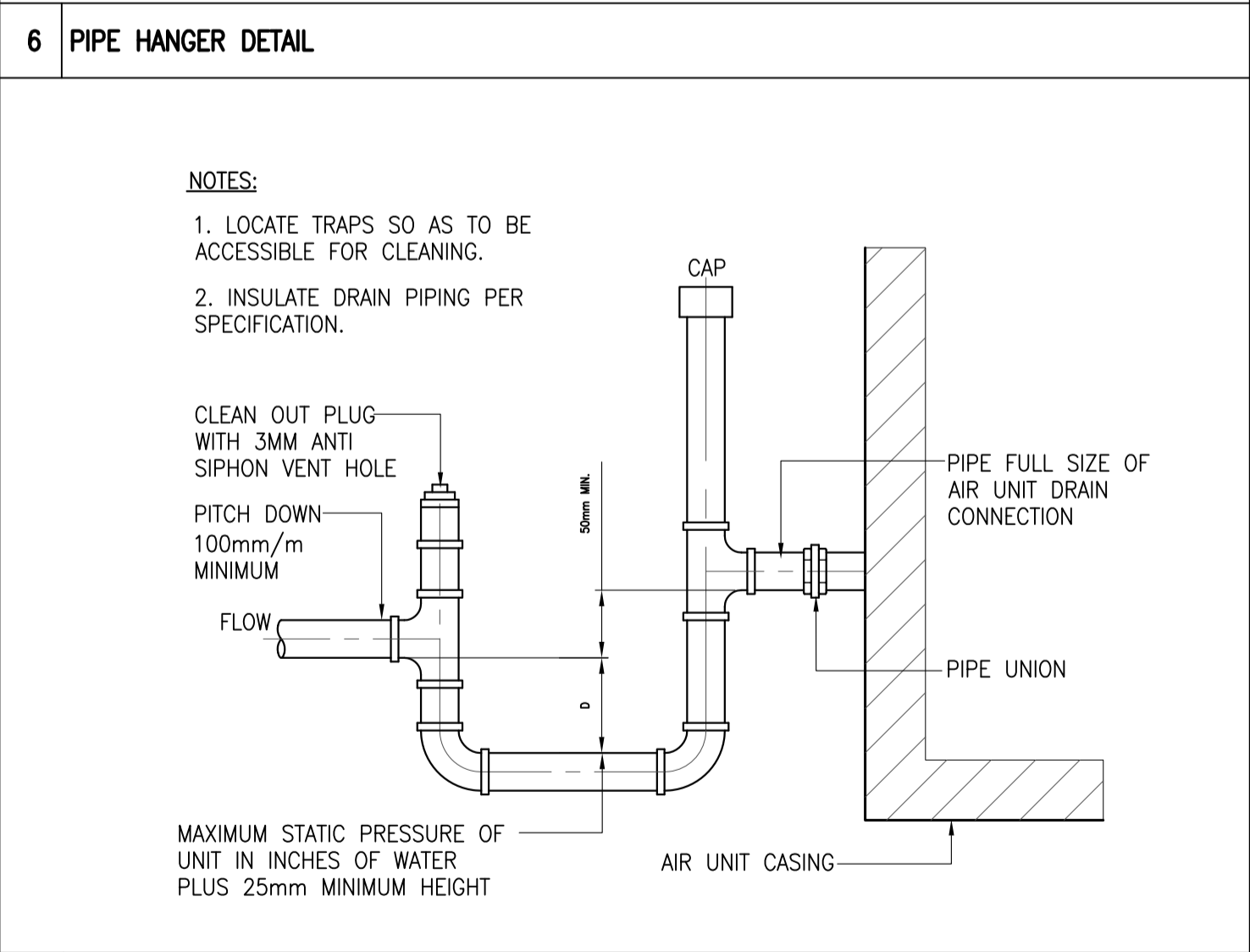
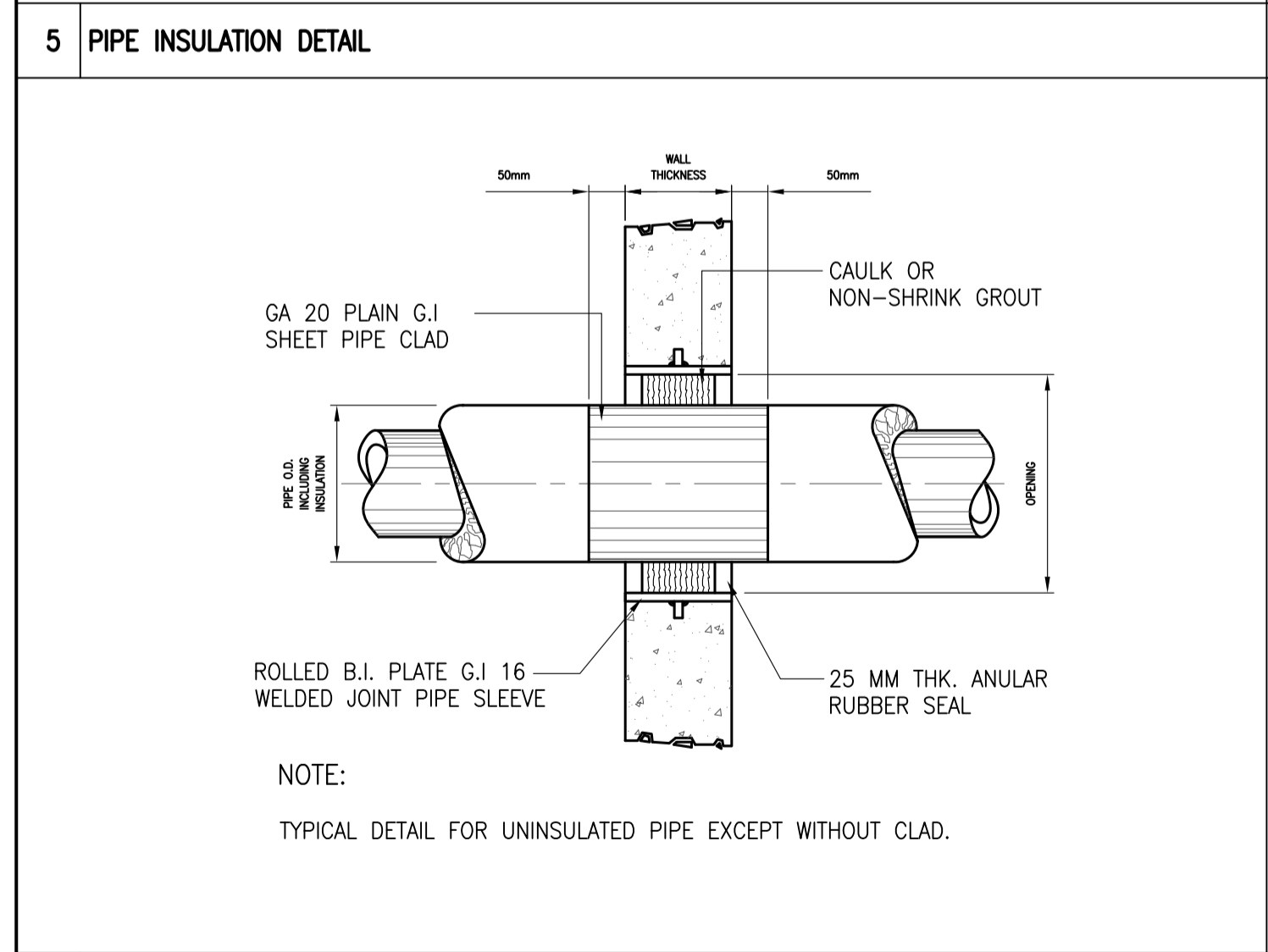
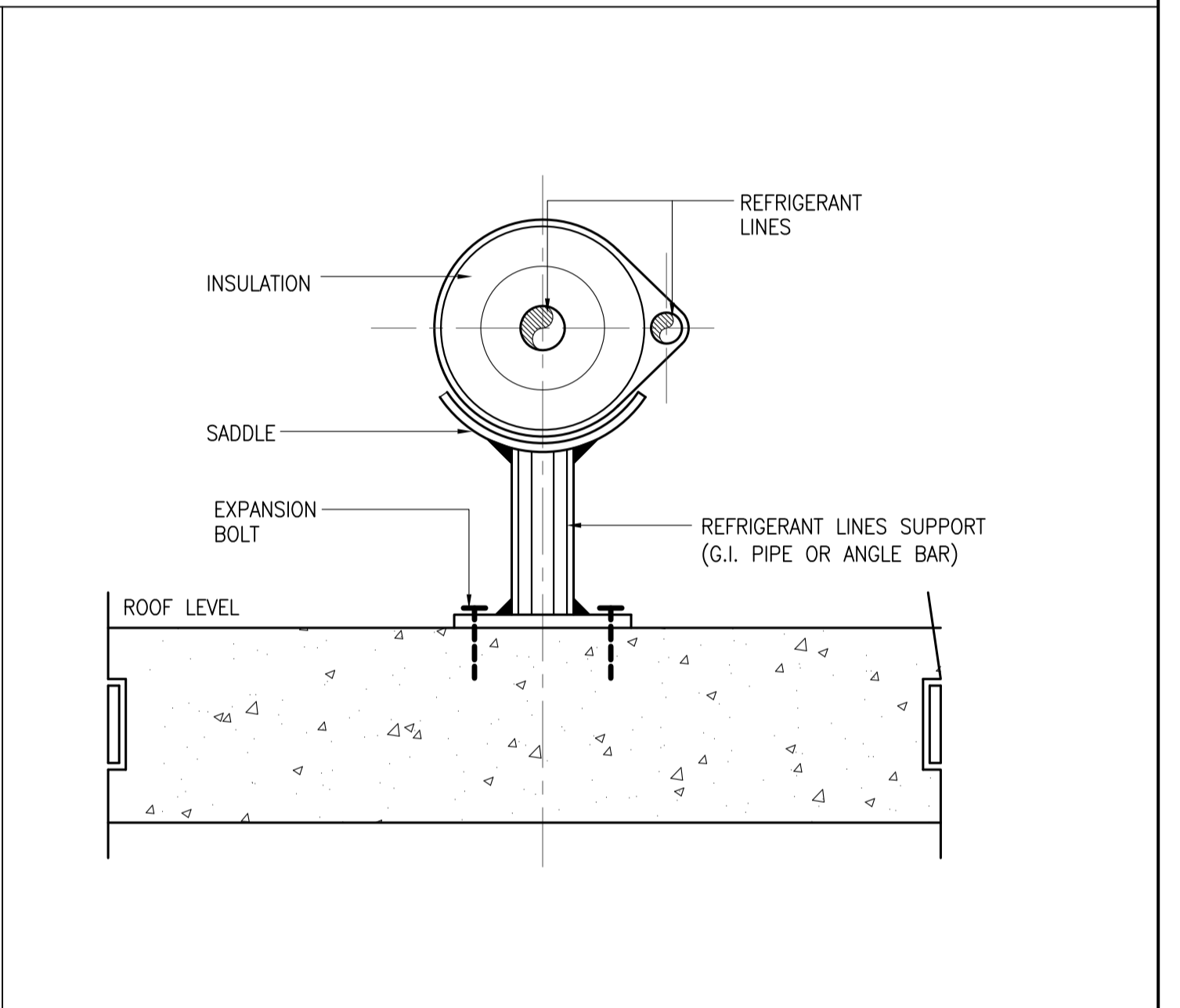
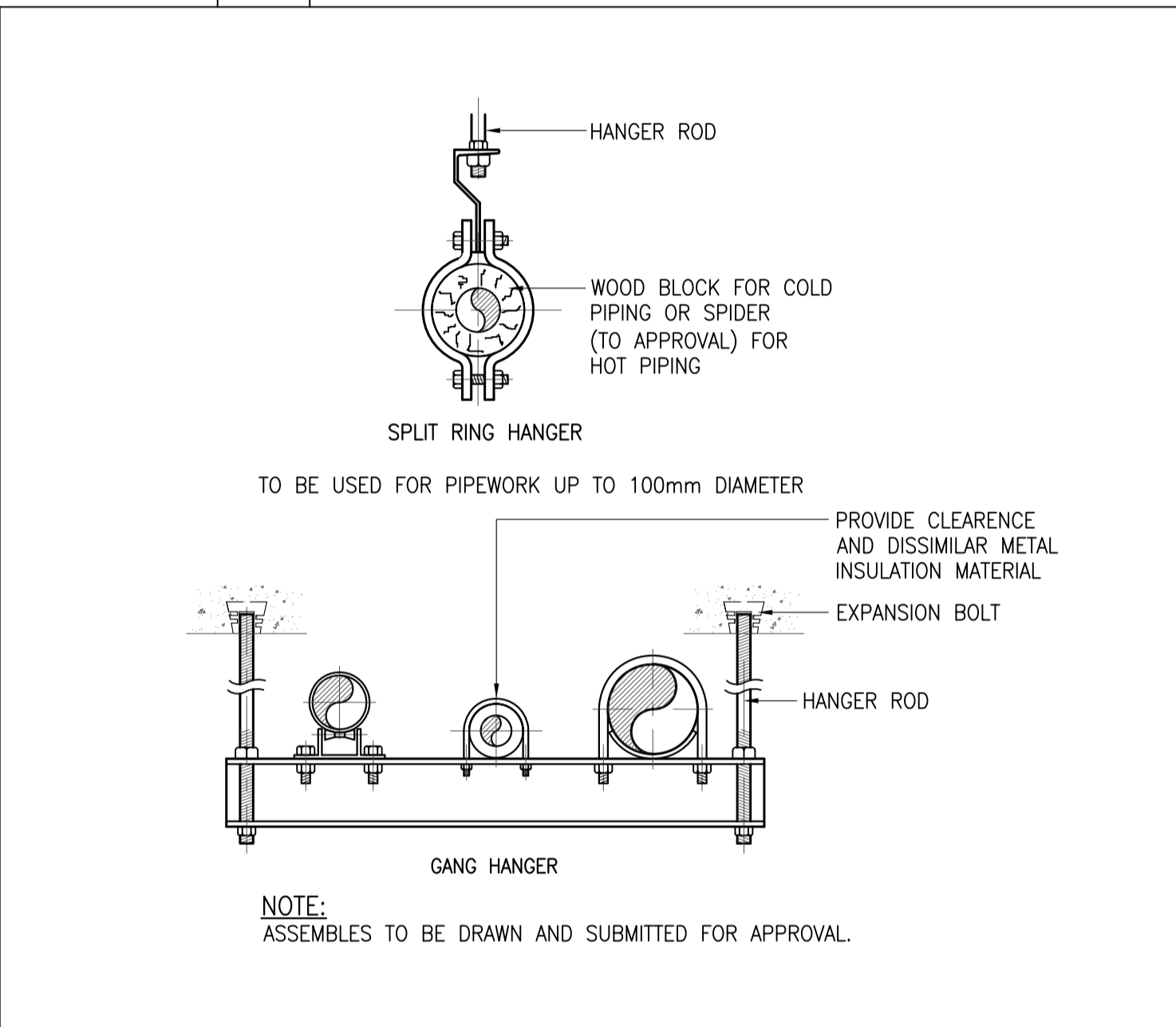
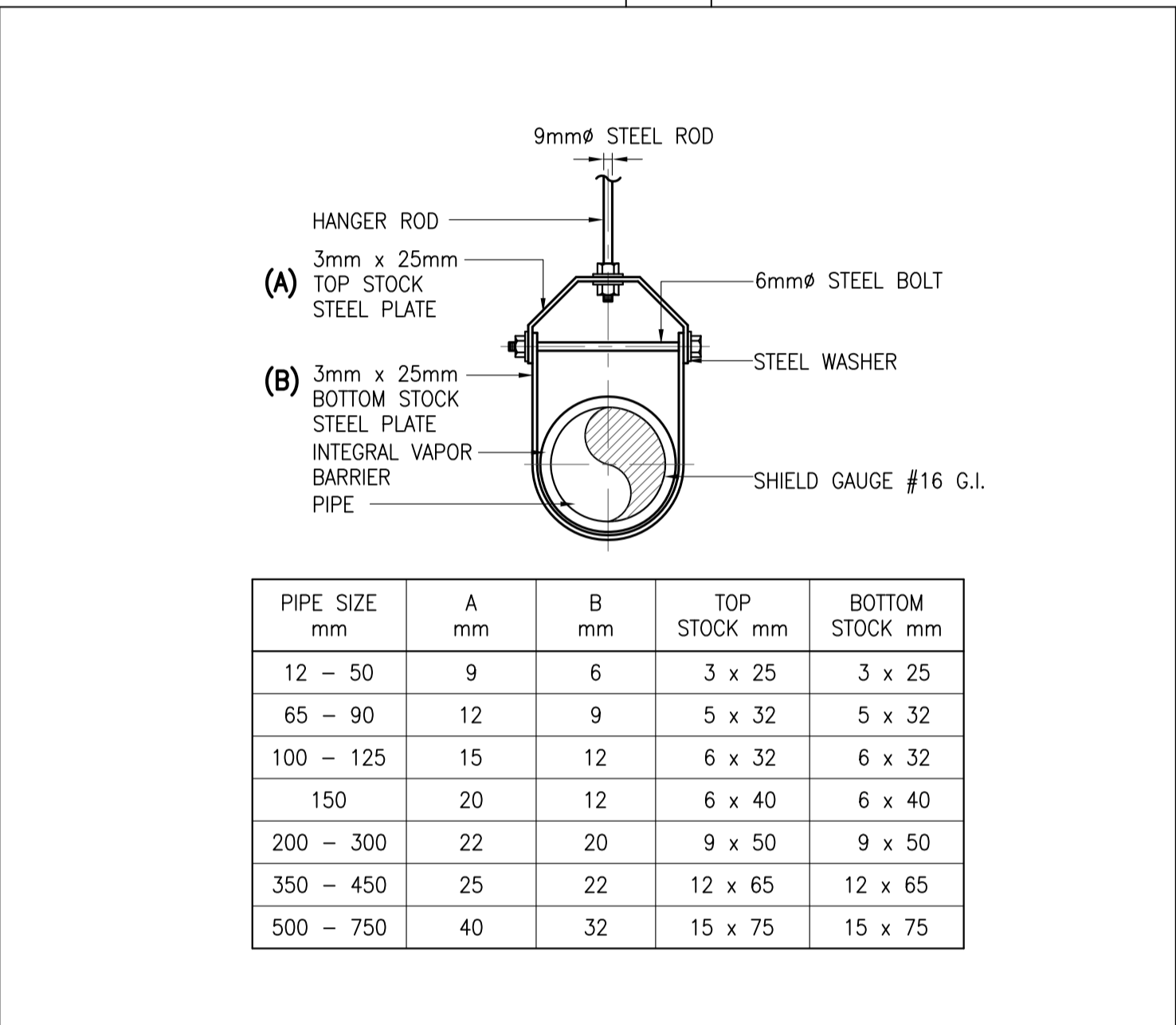
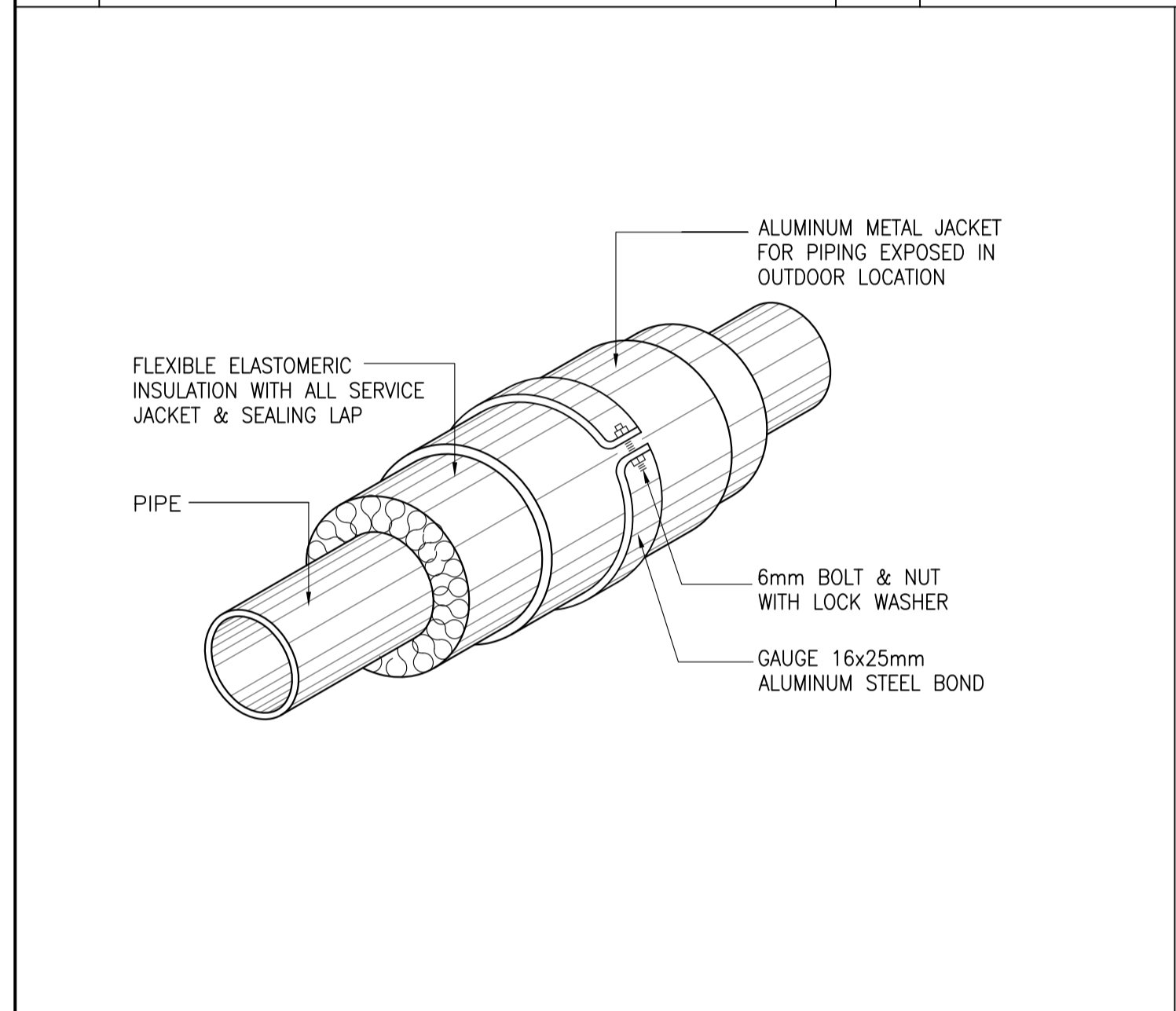
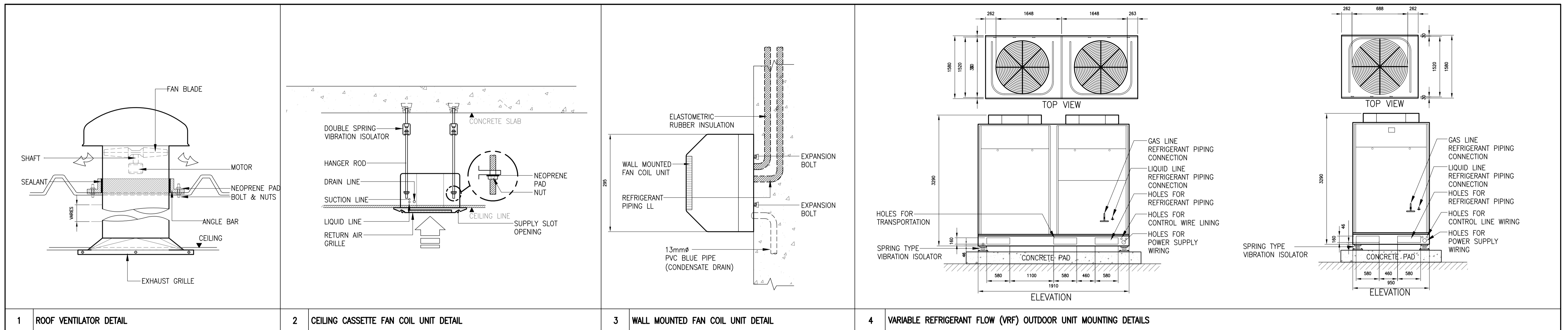


3 SITE DEVELOPMENT PLAN
SCALE NTS

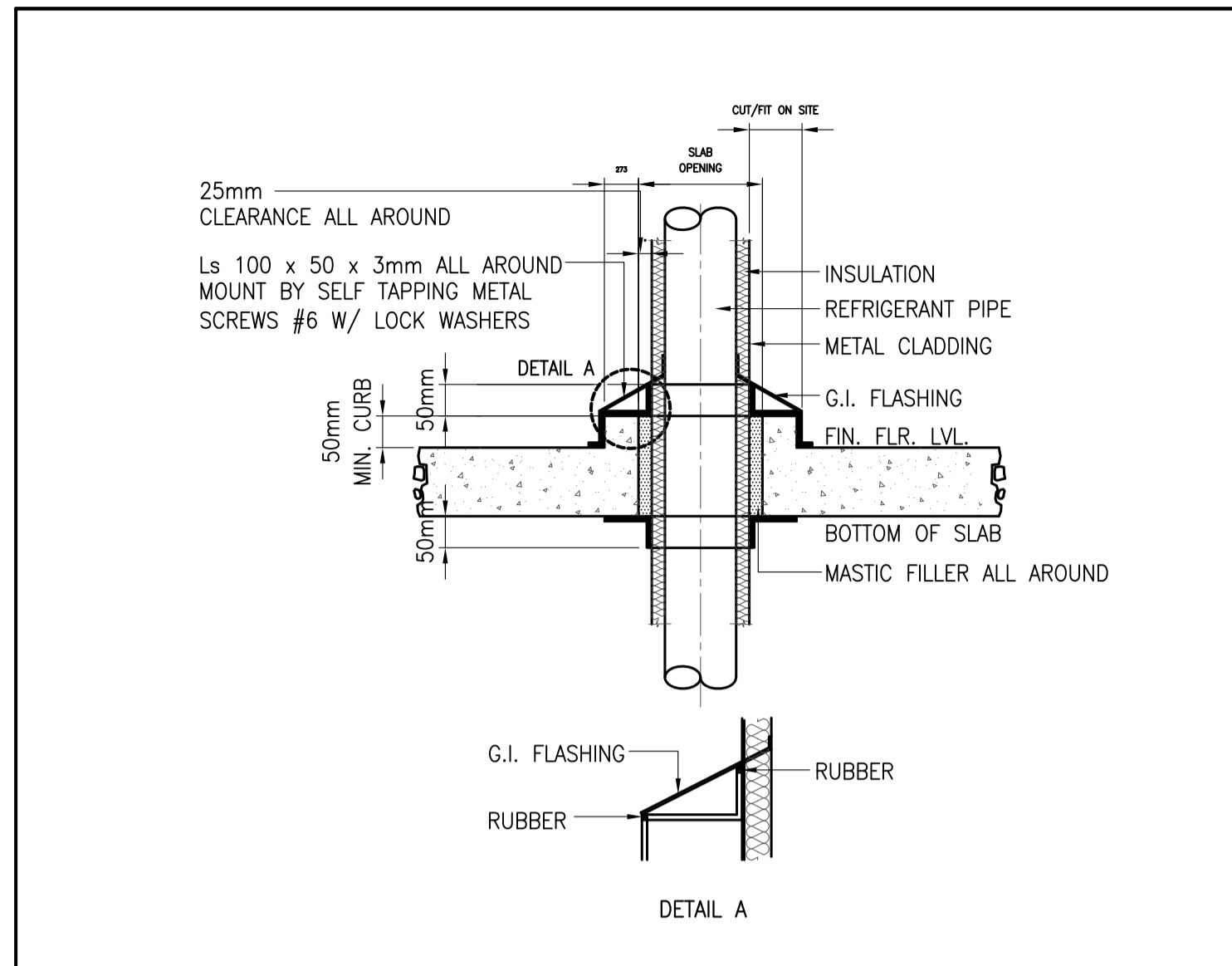
SYMBOLS	DESCRIPTION OF ITEM	SYMBOLS	DESCRIPTION OF ITEM
	VRF - OUTDOOR UNIT		RETURN AIR DUCT
	IN-LINE AXIAL FAN		SUPPLY AIR DUCT
	FAN COIL UNIT (CEILING SUSPENDED TYPE)		TOILET EXHAUST AIR DUCT
	LOCAL CONTROL PANEL/ MOTOR CONTROL PANEL		TURNING VANE
	CEILING CASSETTE EXHAUST FAN		SPLITTER DAMPER
	IN-LINE CENTRIFUGAL FAN		BACK DRAFT DAMPER
	ROOF VENTILATOR (AXIAL FAN)		MOTORIZED VOLUME DAMPER
	AIR HANDLING UNIT (SCHEMATIC)		VOLUME CONTROL DAMPER
	FAN COIL UNIT (WALL MOUNTED) FREE-BLOW		WATER FLOW DIRECTION
	FAN COIL UNIT (CEILING CASSETTE)		FLEXIBLE PIPE CONNECTOR
	WALL MOUNTED PROPELLER FAN		GLOBE CONTROL VALVE
	SUPPLY CEILING DIFFUSER		REFRIGERANT BRANCH KITS/FITTINGS
	SUPPLY/PRESSURAZATION AIR GRILLE		BUTTERFLY VALVE
	RETURN AIR GRILLE		DOOR LOUVER BY BUILDER. AIR FLOW DIRECTION INDICATED
	FRESH AIR GRILLE		ELBOW TURNED TOWARD
	SUPPLY AIR GRILLE		ELBOW TURNED AWAY
	RETURN AIR GRILLE		TEE TURNED AWAY
	EXHAUST AIR LOUVER		TEE TURNED TOWARD
	RETURN LINEAR DIFFUSER		PIPE CAP THREADED
	SUPPLY LINEAR DIFFUSER		PLUG
	ELBOW		CONDENSATE DRAIN PIPE
	REDUCER		REFRIGERANT PIPE
	SUPPLY AIRDUCT RISER F/A AND OR T/B		EQUIPMENT DESIGNATION
	RETURN AIRDUCT RISER F/A AND OR T/B		FLANGE CONNECTION
	ATTENUATOR/ SILENCER		UNION
	FLEXIBLE DUCT CONNECTION		AUTOMATIC AIR VENT
	FRESH AIR DUCT		BLIND FLANGE CONNECTION
	PRESSURIZATION AIR DUCT		THERMOSTAT/ TEMPERATURE TRANSMITTER-WALL MOUNTED
	KITCHEN EXHAUST AIR DUCT		THERMOSTAT/ TEMPERATURE TRANSMITTER-CEILING MOUNTED
	EXHAUST AIR DUCT		HEAT SENSOR
			CARBON MONOXIDE SENSOR
			DIRECT DIGITAL CONTROLLER PANEL

4 LEGENDS AND SYMBOLS
SCALE NTS

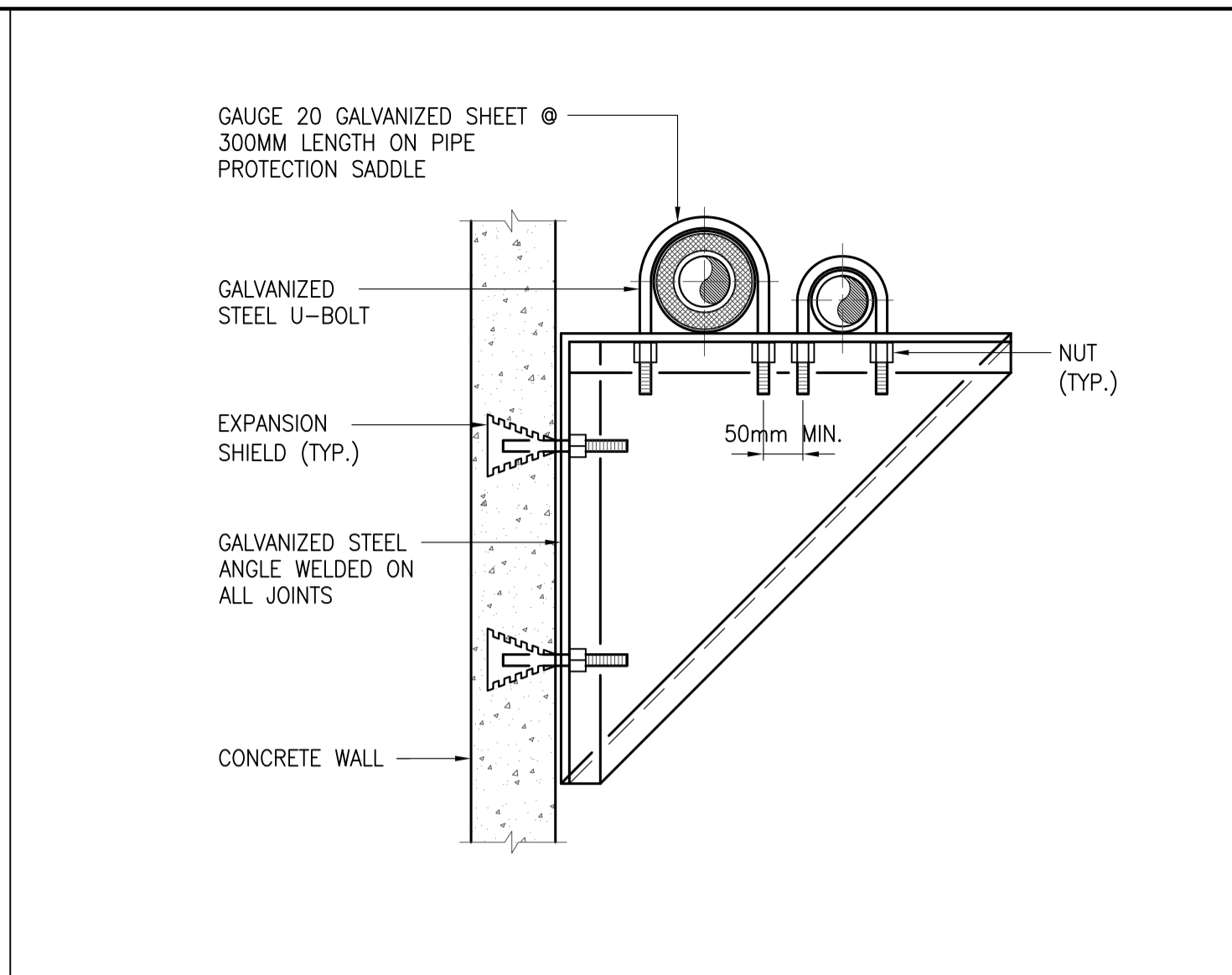
	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> PROF: MECHANICAL ENGINEER PTR: 1725187 REG. NO: 2379 DATE: JANUARY 01, 2013 TEL: 150-563-379 PLACE: TAGBILAR CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-0: GENERAL MECHANICAL VENTILATION AND AIR-CONDITIONING GENERAL NOTES, ABBREVIATIONS, SITE DEVELOPMENT PLAN LEGEND & SYMBOLS	SHEET NO: BO-5200-01 DRAWING SCALE: AS SHOWN
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NIS CONSULTANTS CO., LTD.	DATE: JUNE 2013 INDEX: AMENDMENTS: Prepared by: WIM Checked by: IIC Validated by:				



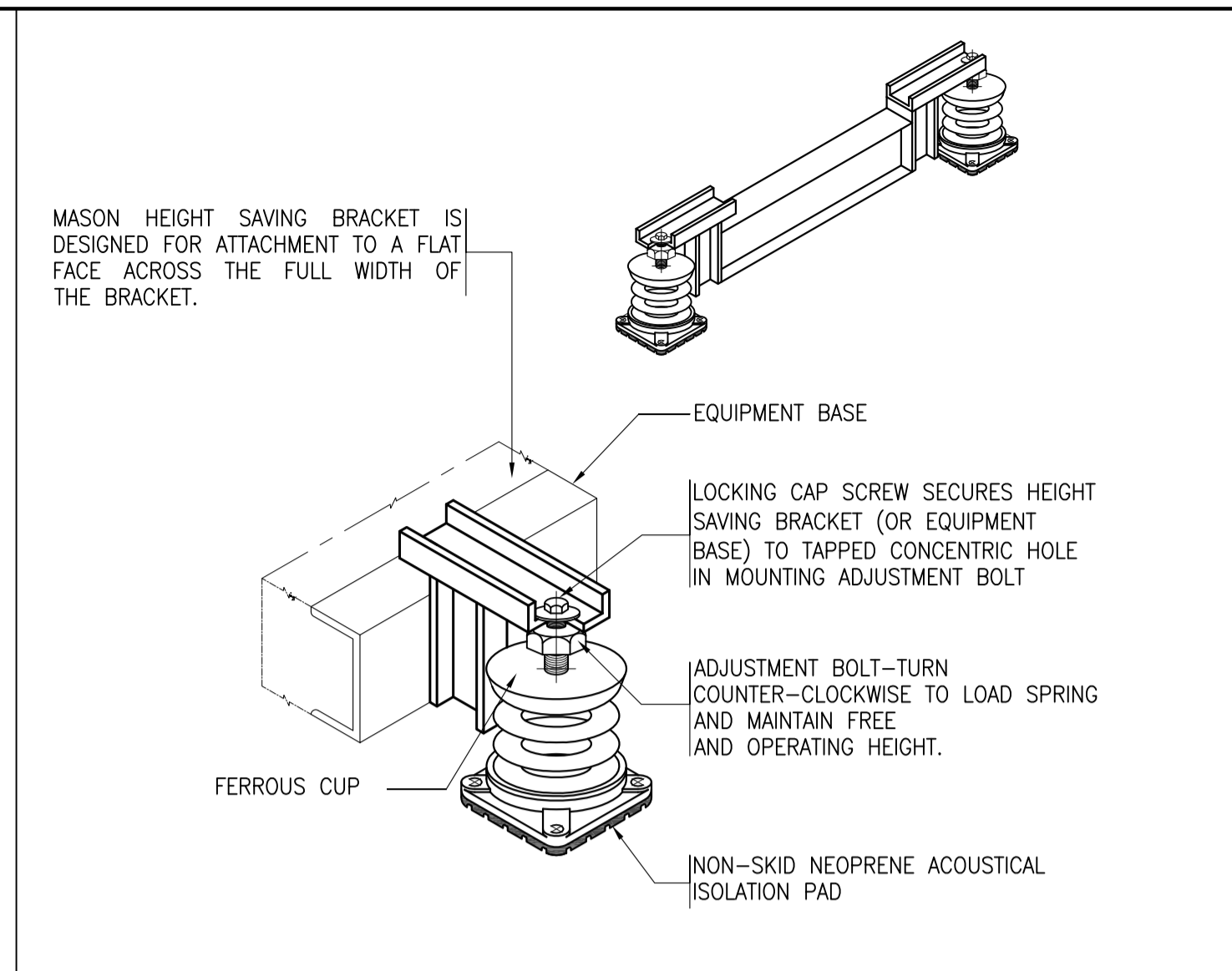
	PREPARED BY: RENATO A. ARRIOLA Filipino Registered Engineer PROF. MECHANICAL ENGINEER PIR. 1725187 REG. NO. 2379 DATE: JANUARY 01, 2013 TEL. 150-563-379 PLACE: TAGUIG CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-0: GENERAL MECHANICAL VENTILATION AND AIR-CONDITIONING MECHANICAL DETAIL (1)	SHEET NO: B0-5200-02 DRAWING SCALE: AS SHOWN
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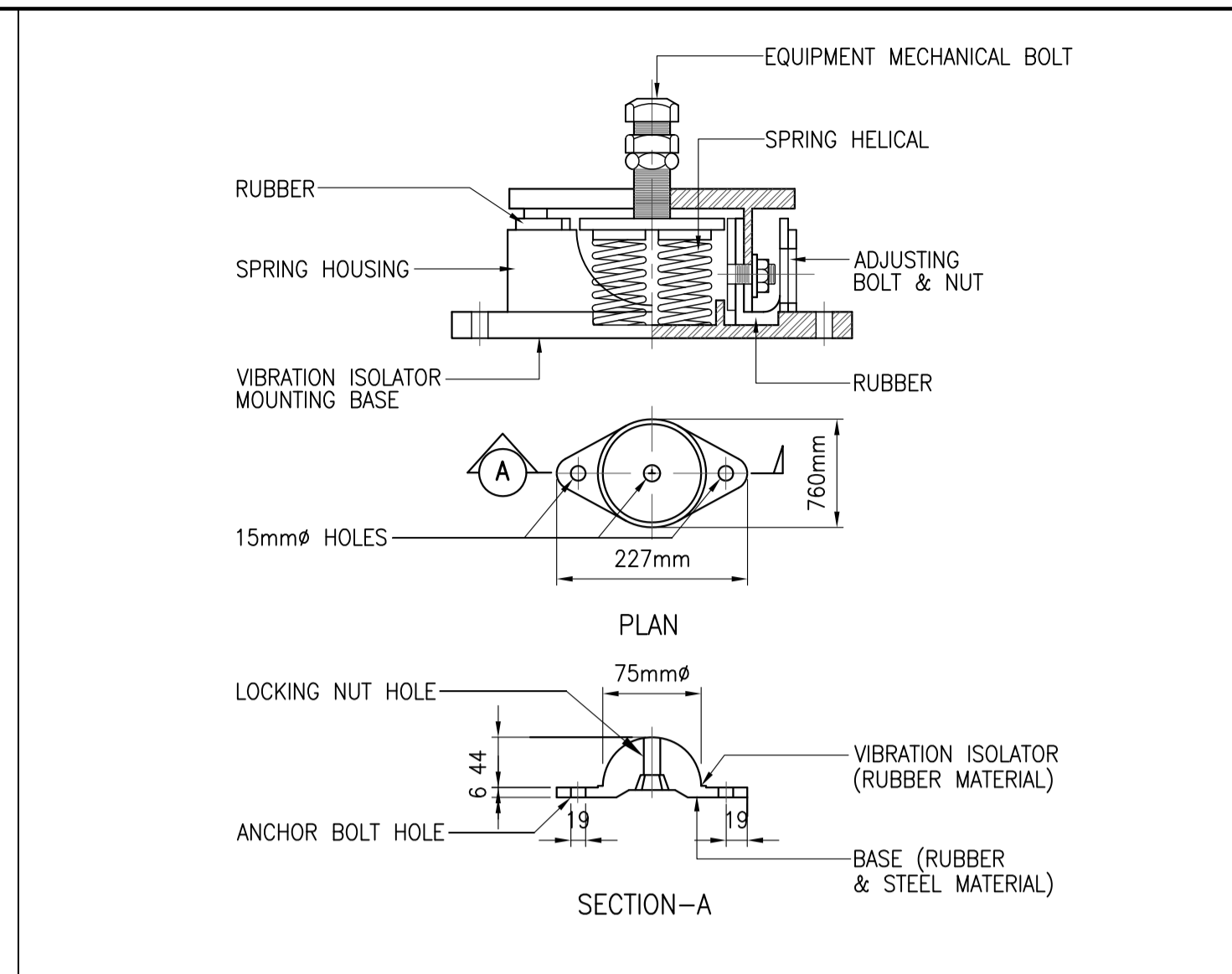
13 VERTICAL PIPE INSULATION DETAIL (ROOF SLAB PIPE PENETRATION DETAIL)



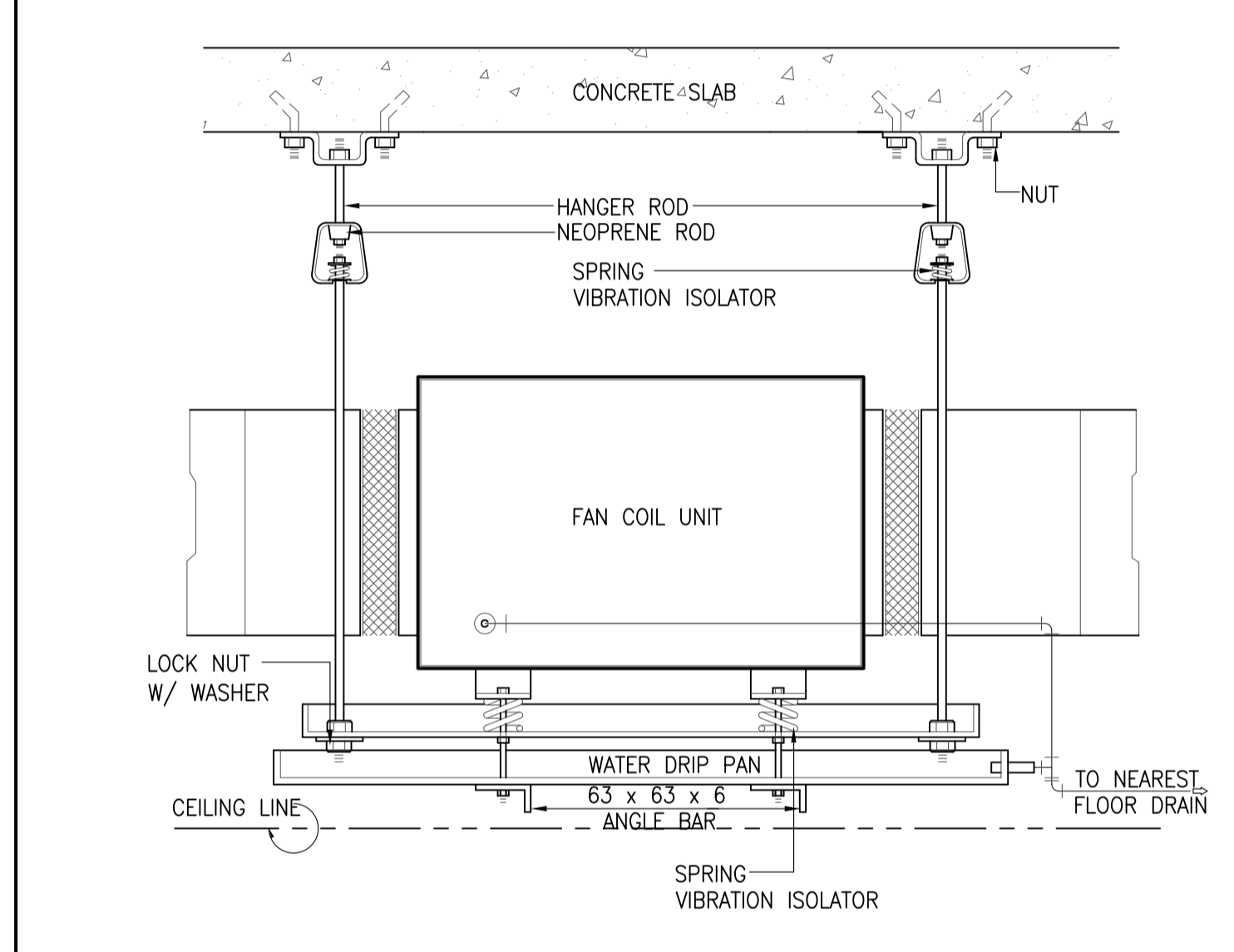
14 PIPE INSTALLATION WALL MOUNTING DETAIL



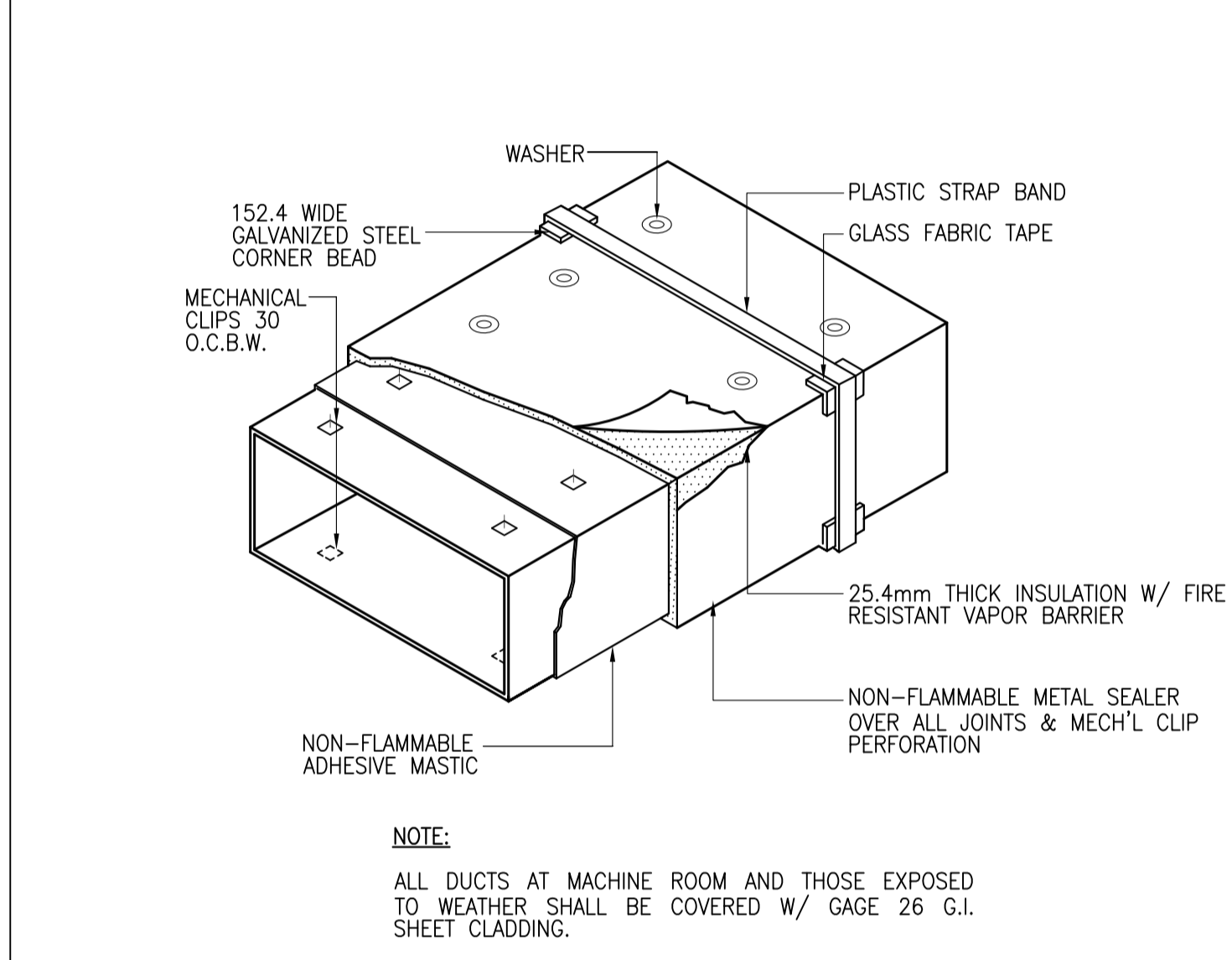
15 VIBRATION ISOLATOR DETAIL (AIR-HANDLING AND AIR COOLED CONDENSING UNITS)



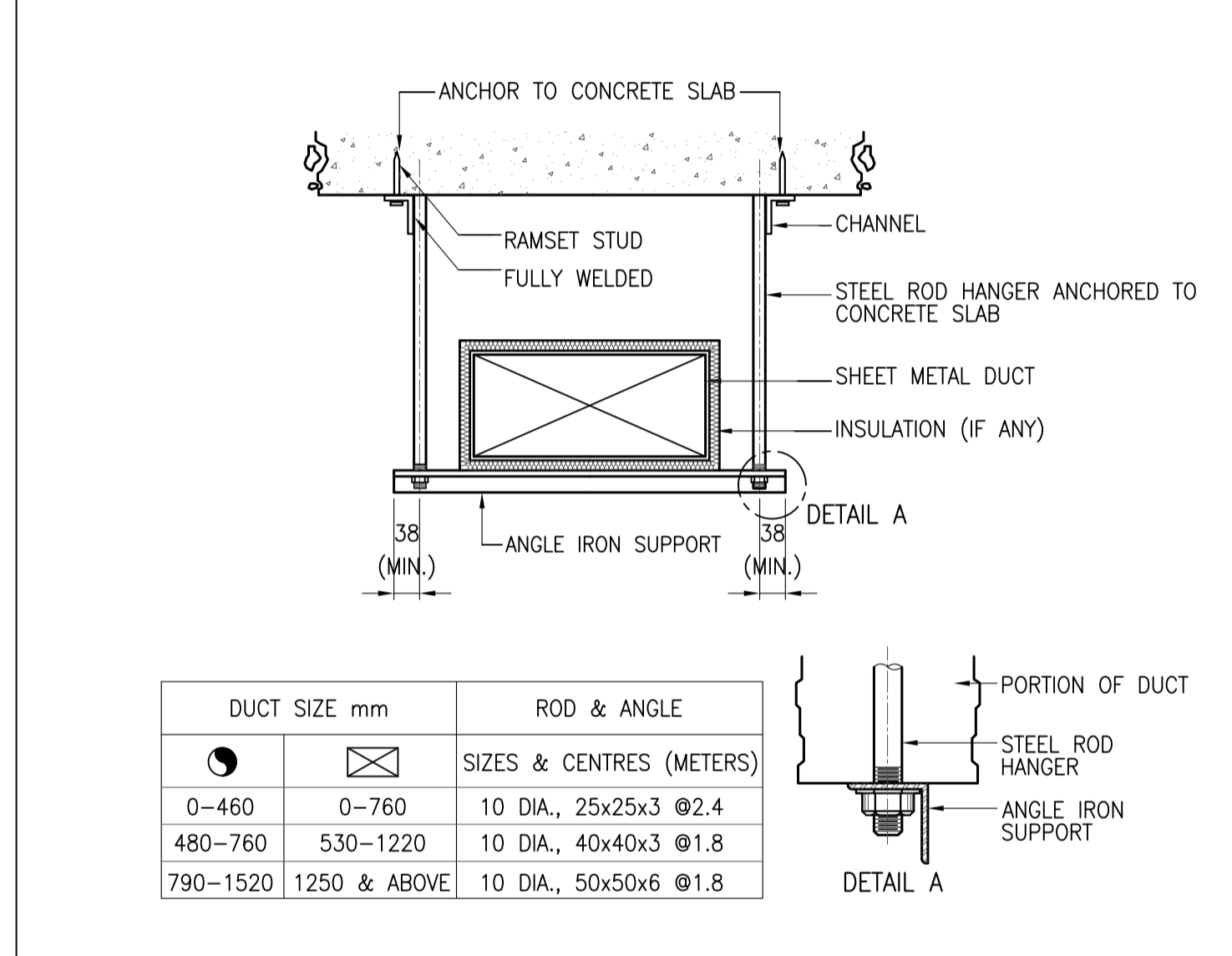
16 VIBRATION ISOLATOR DETAIL (PUMPS AND MOTORS)



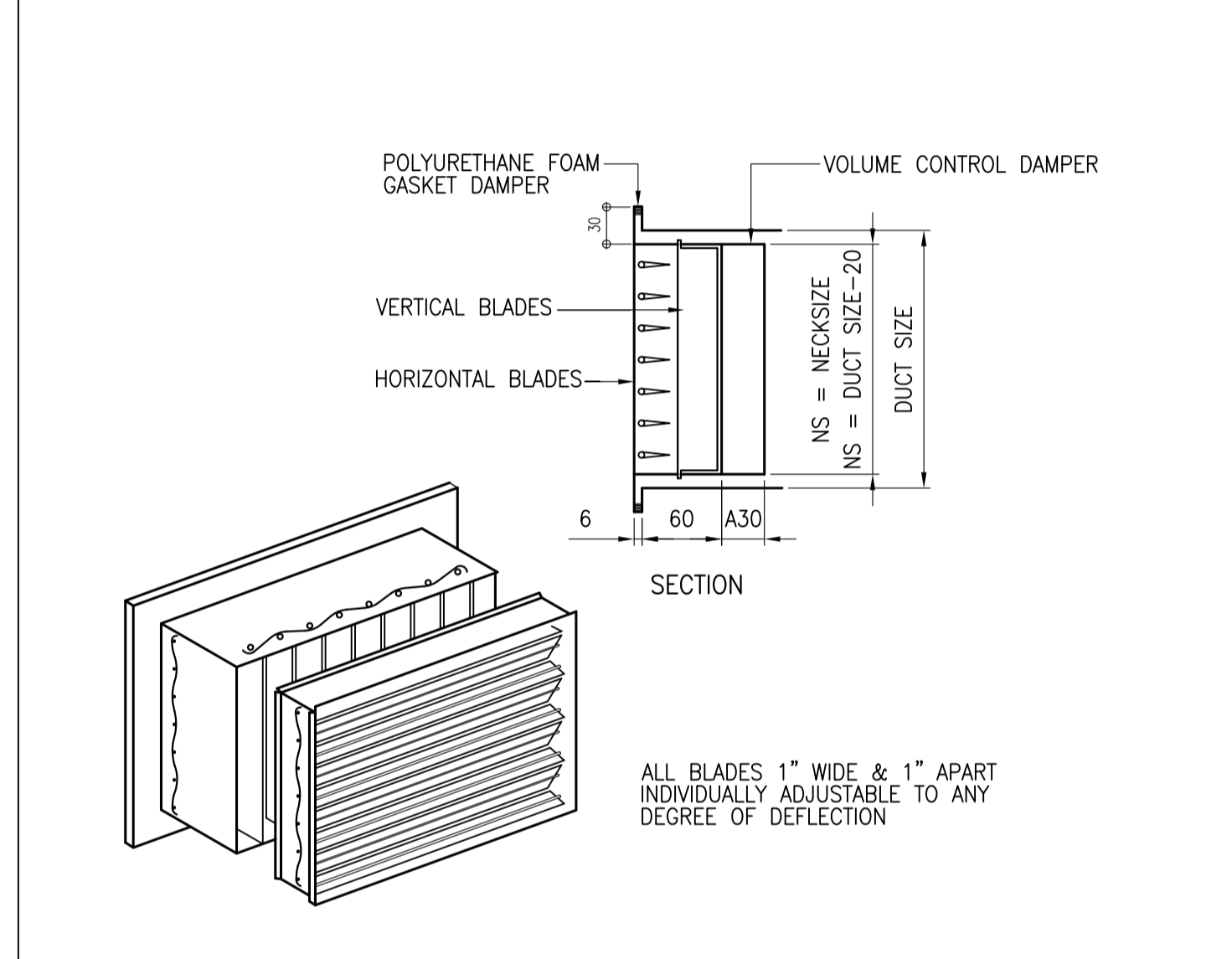
17 CEILING CONCEALED FAN COIL UNIT (GANGWAY AC UNIT INSTALLATION)



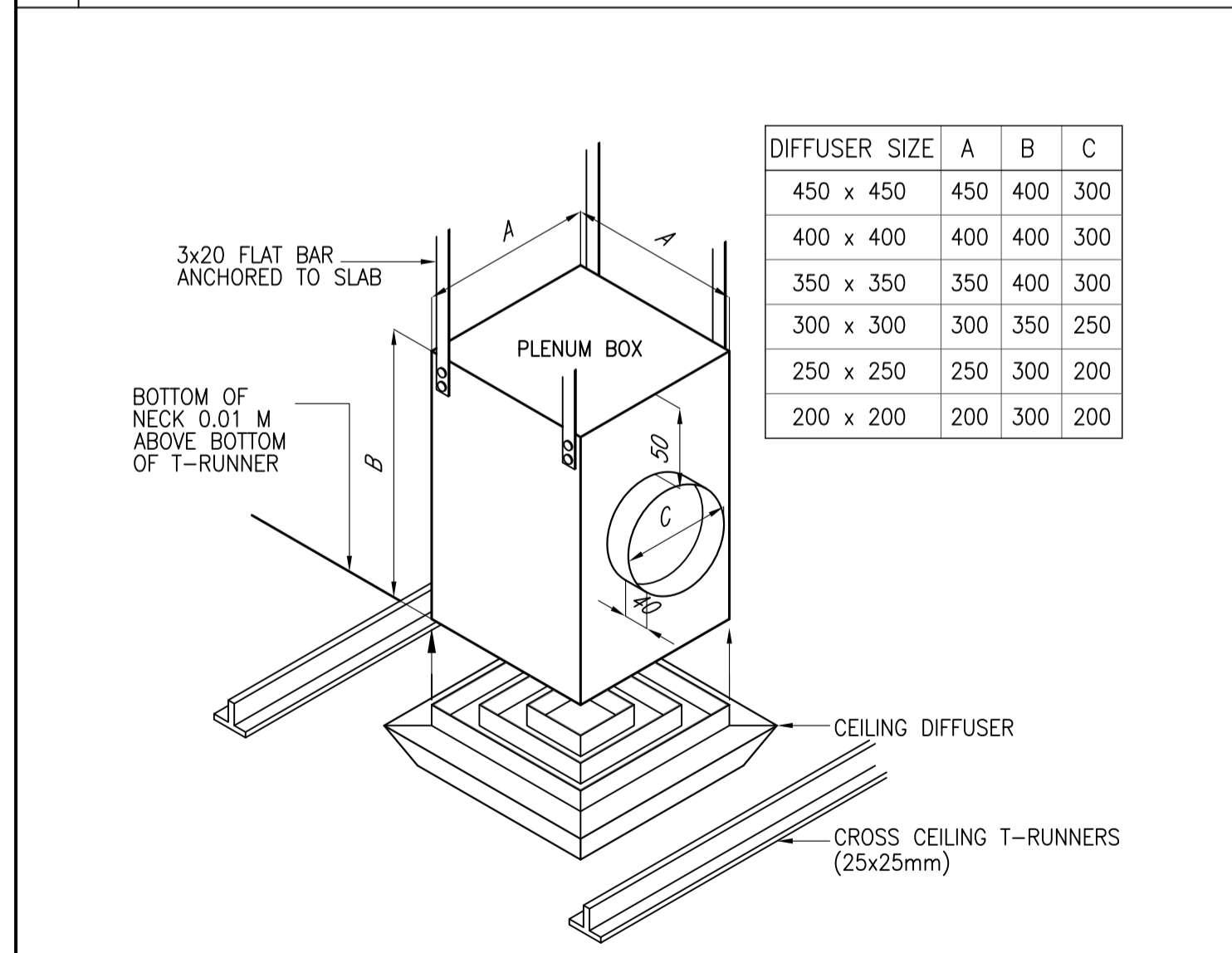
18 DUCT INSULATION DETAIL



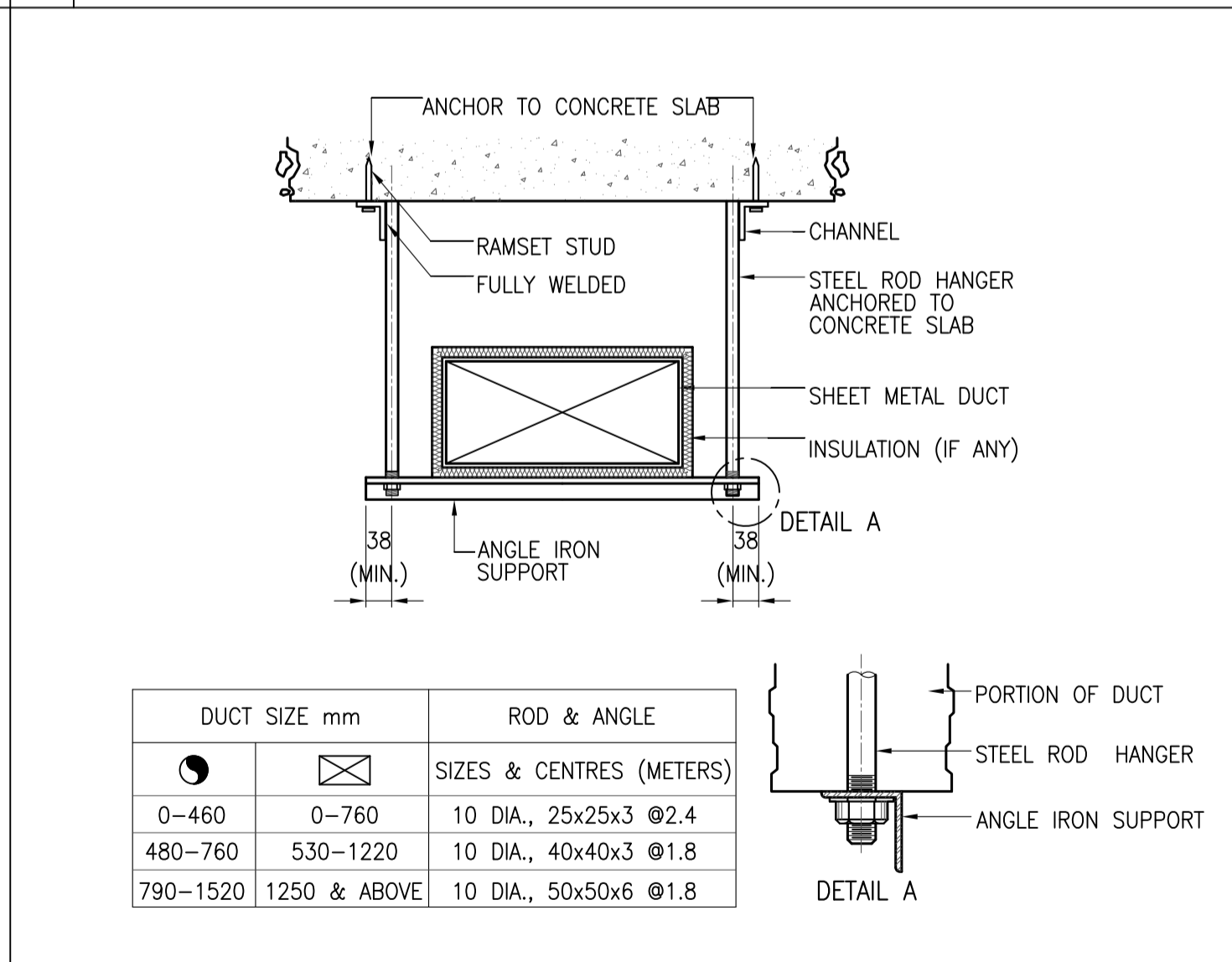
19 DUCT HANGER DETAIL



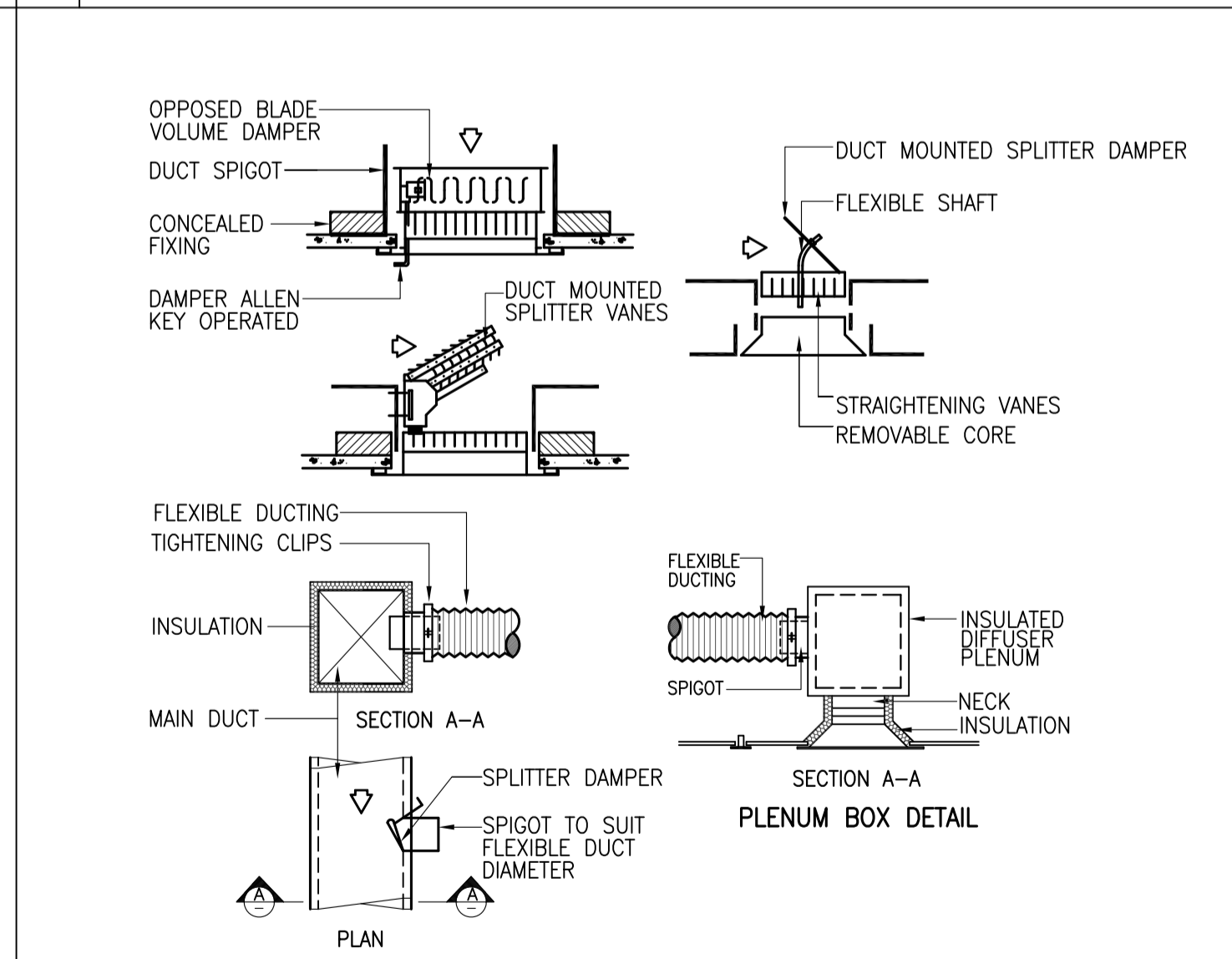
20 DOUBLE DEFLECTION SUPPLY AIR REGISTER DETAIL



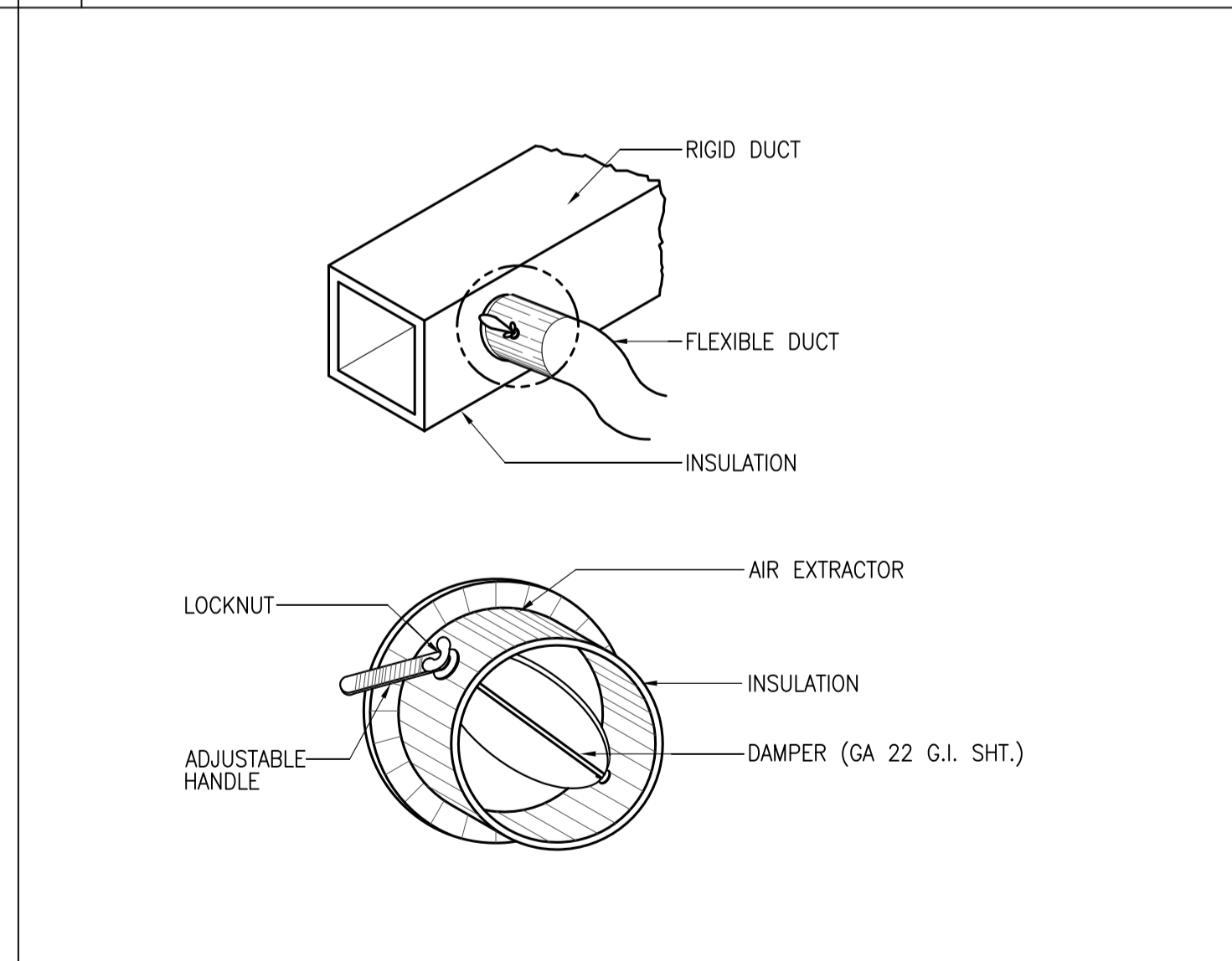
21 DIFFUSER MOUNTING DETAIL (ADMINISTRATION BUILDING SUPPLY DIFFUSERS)



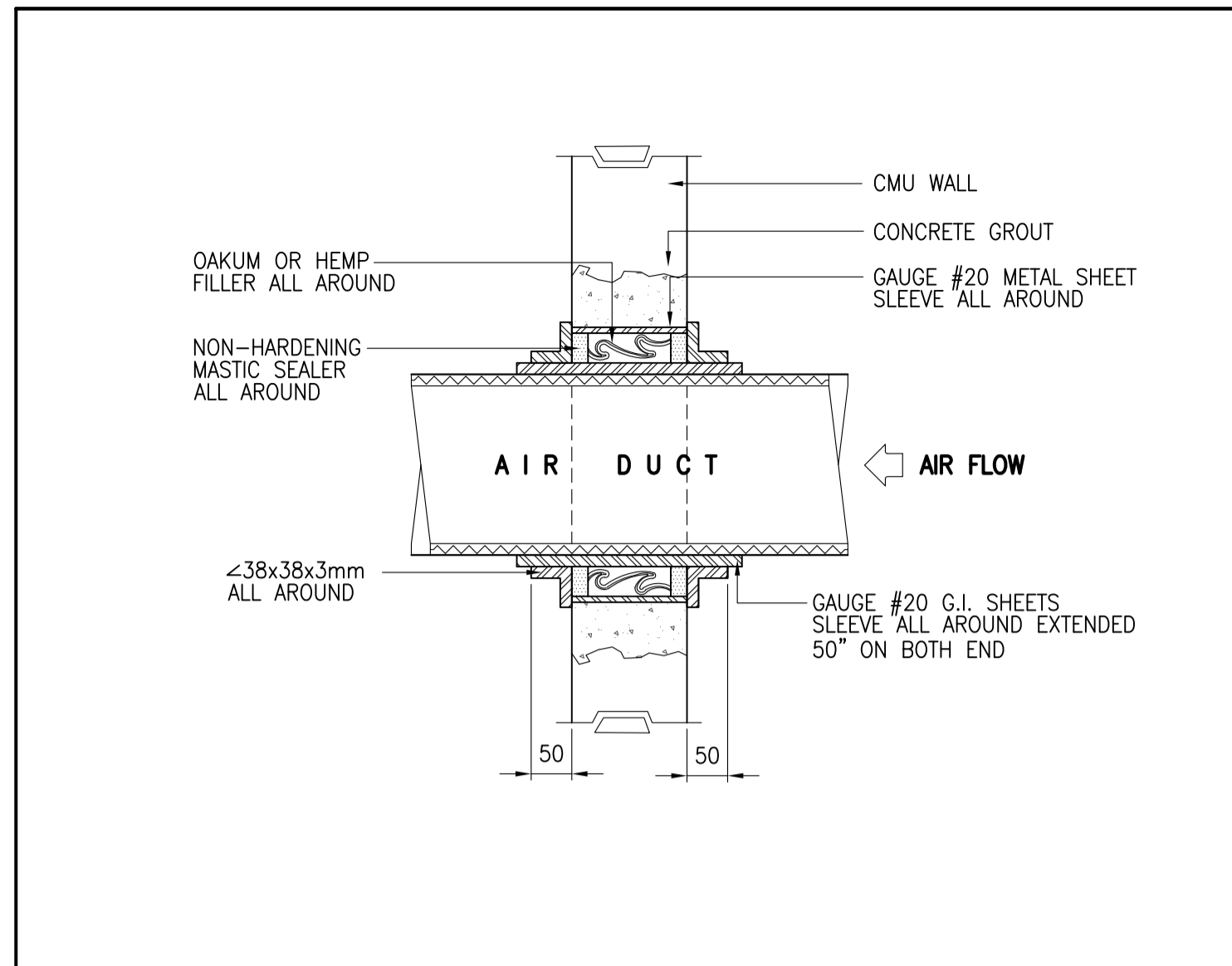
22 DIFFUSER DETAIL



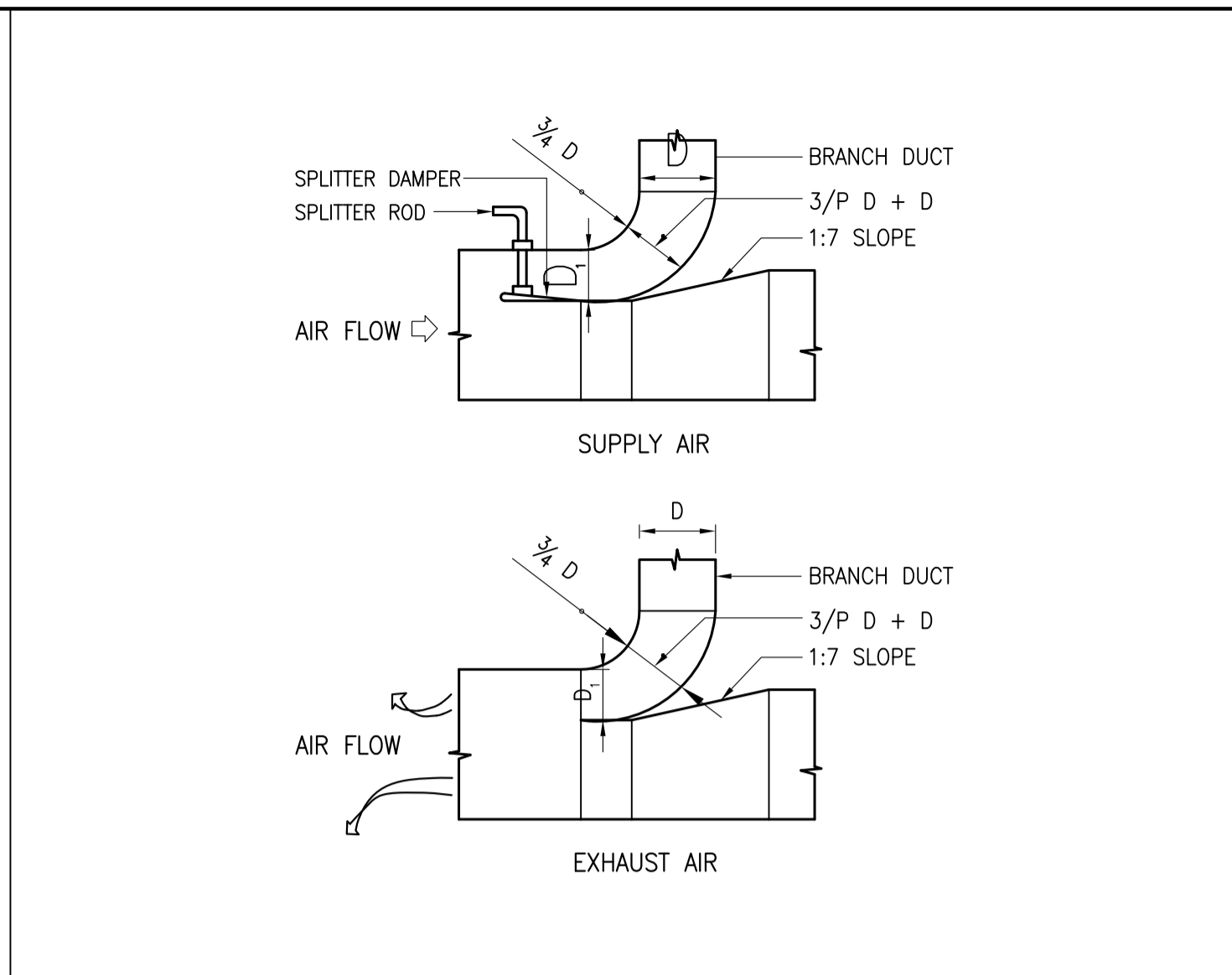
23 DETAIL OF DIFFUSER AND REGISTER



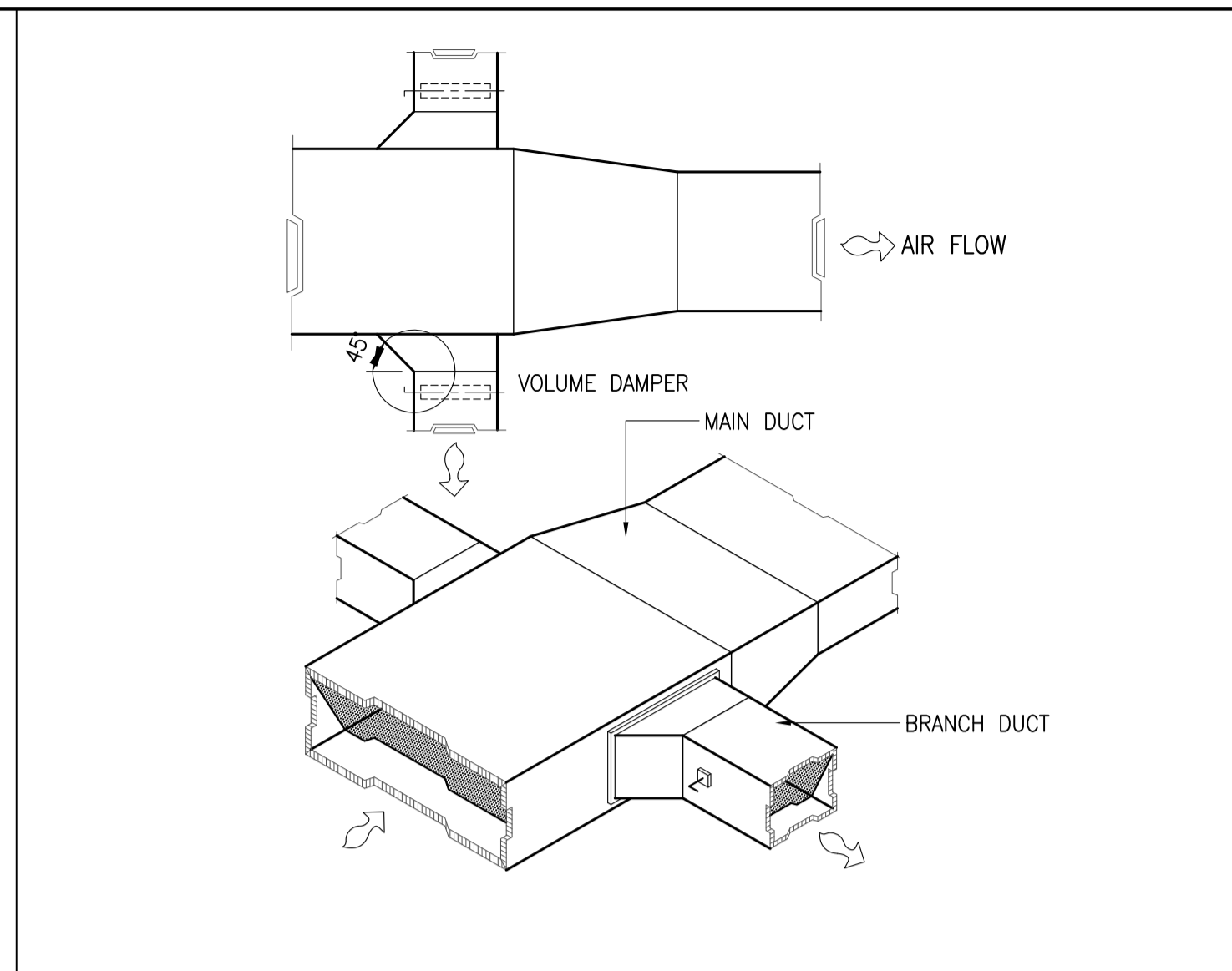
24 CIRCULAR DUCT VOLUME CONTROL DAMPER



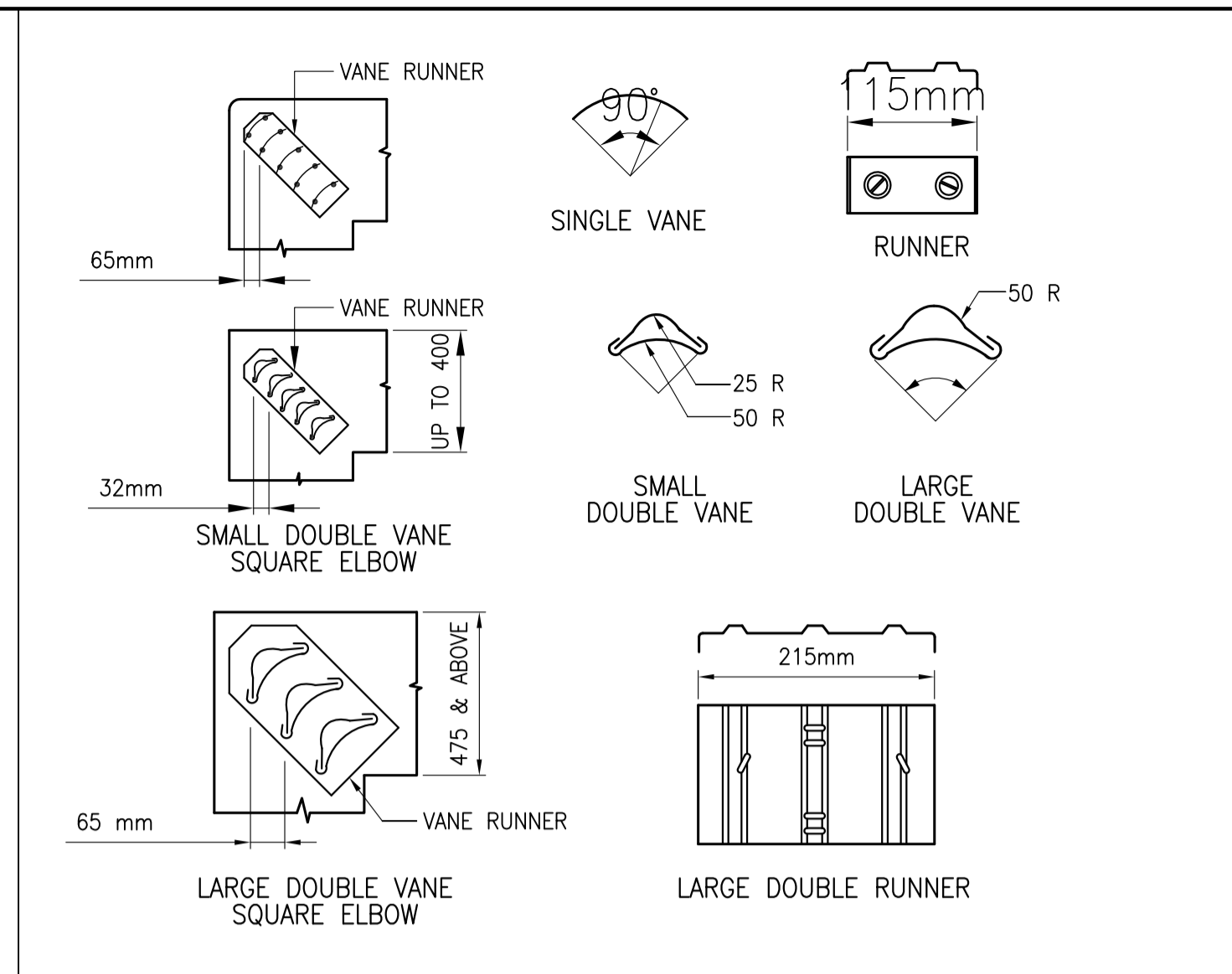
25 DUCT THRU WALL DETAIL



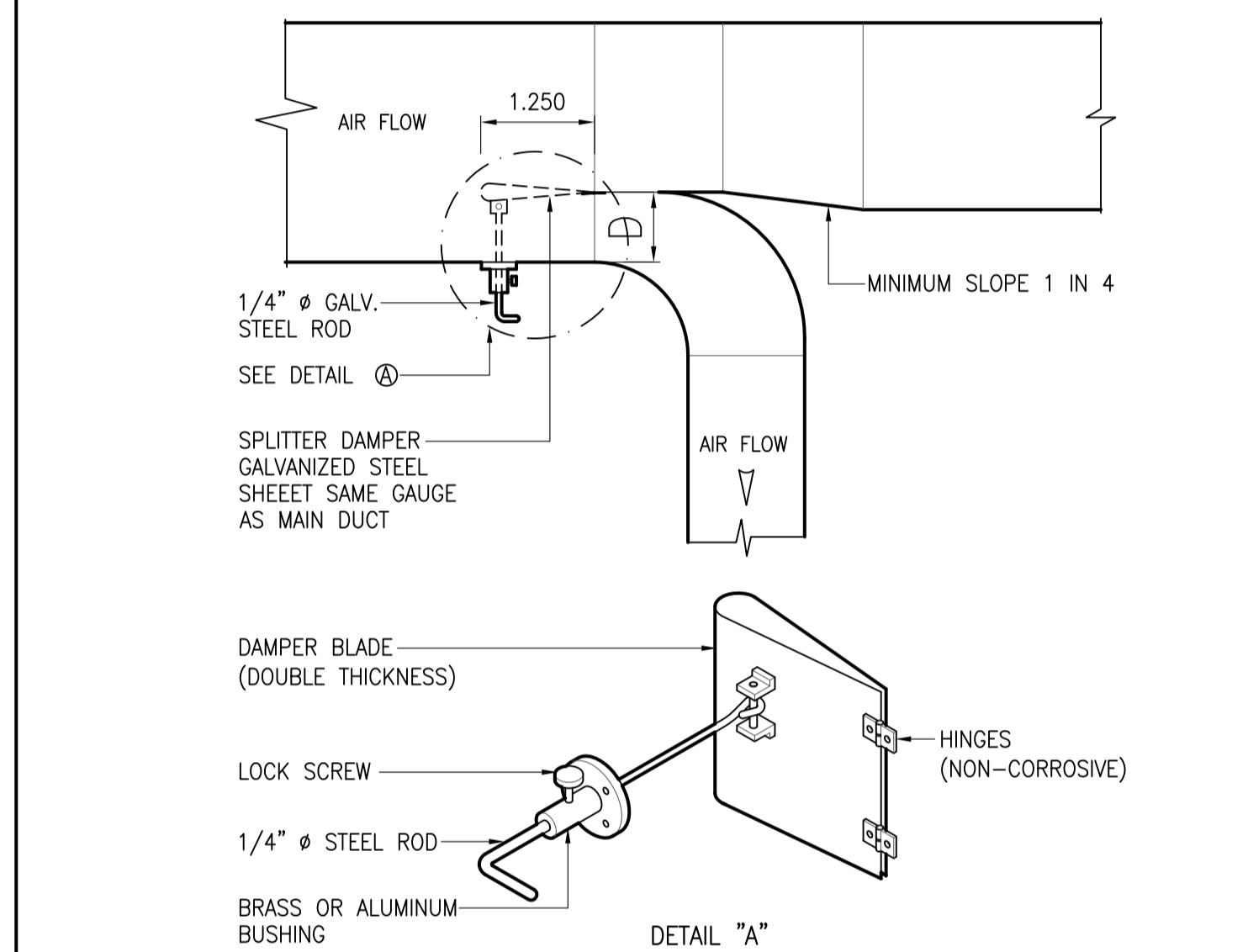
26 TYPICAL DUCT TAKE-OFF DETAIL



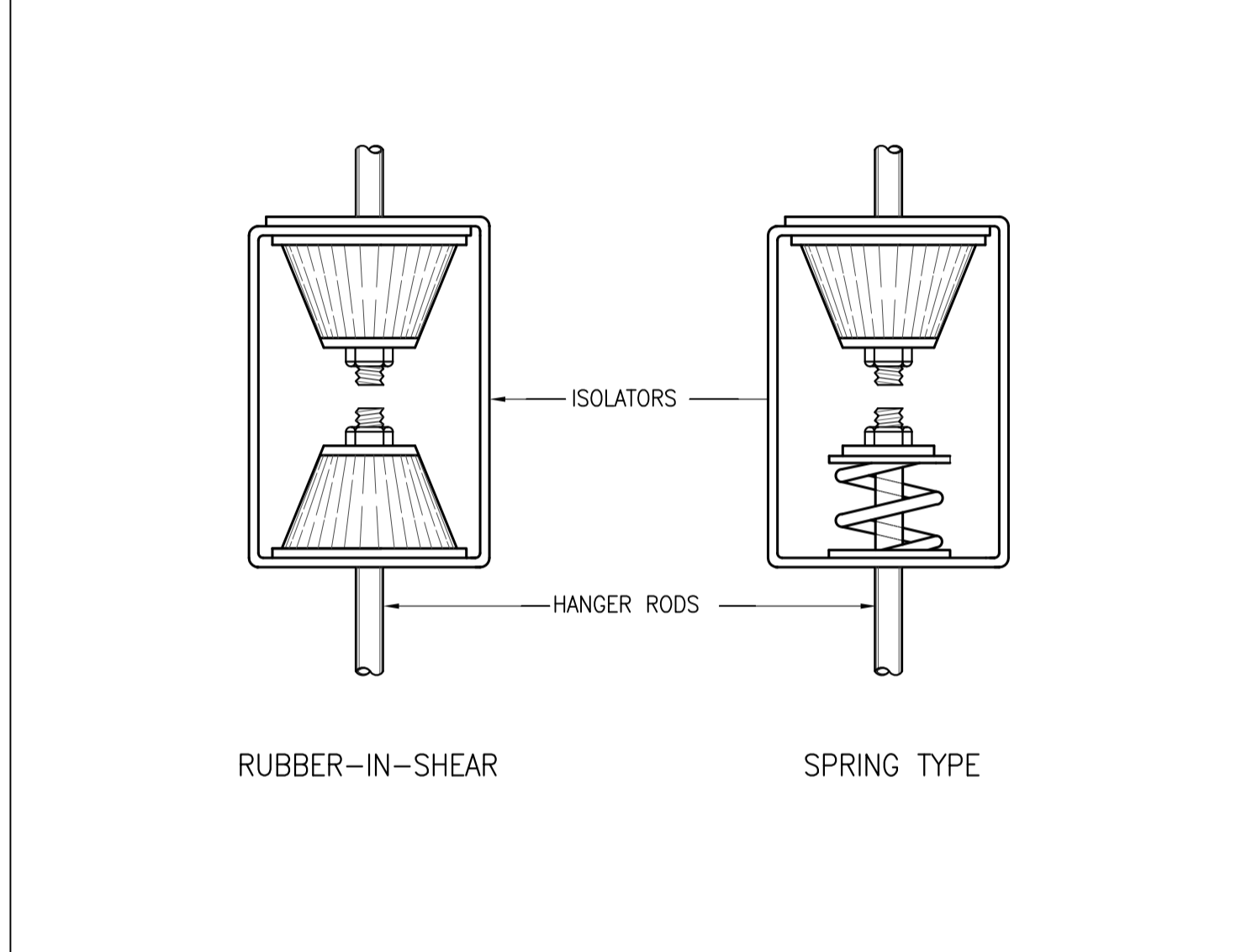
27 DUCT BRANCH DETAIL



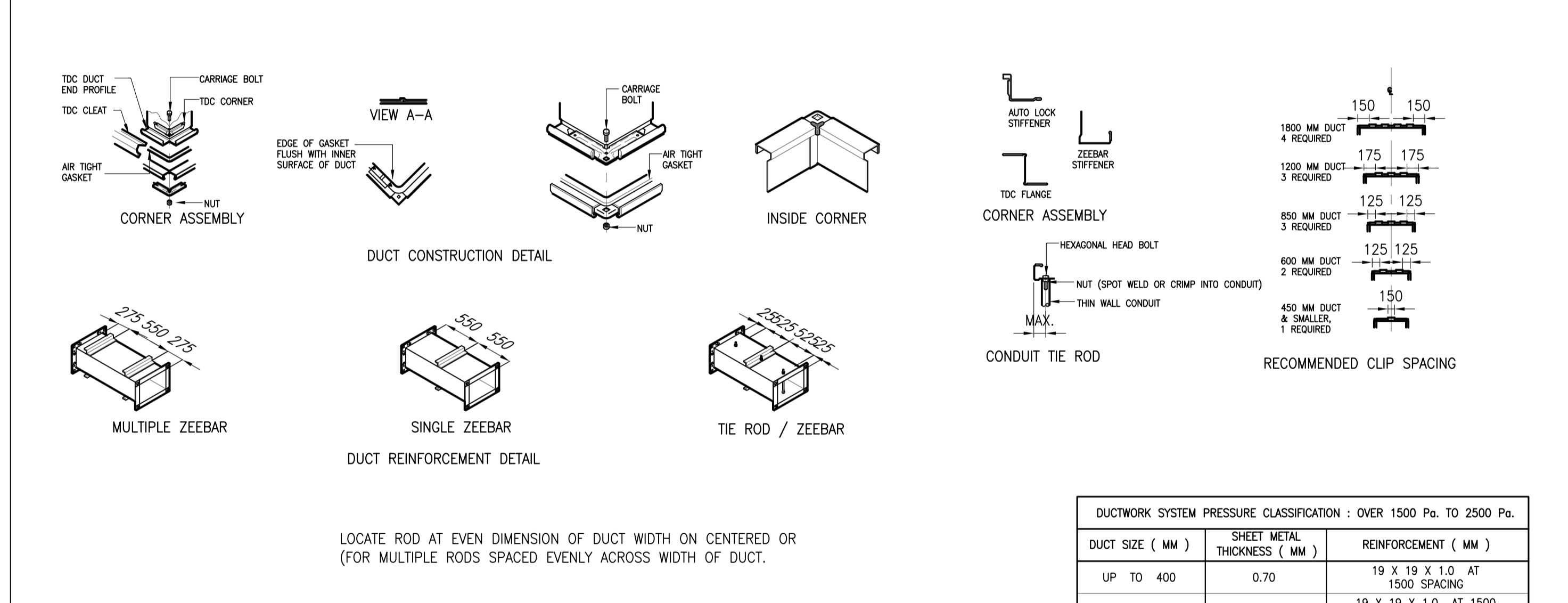
28 TURNING VANE DETAIL



29 SPLITTER DAMPER DETAIL

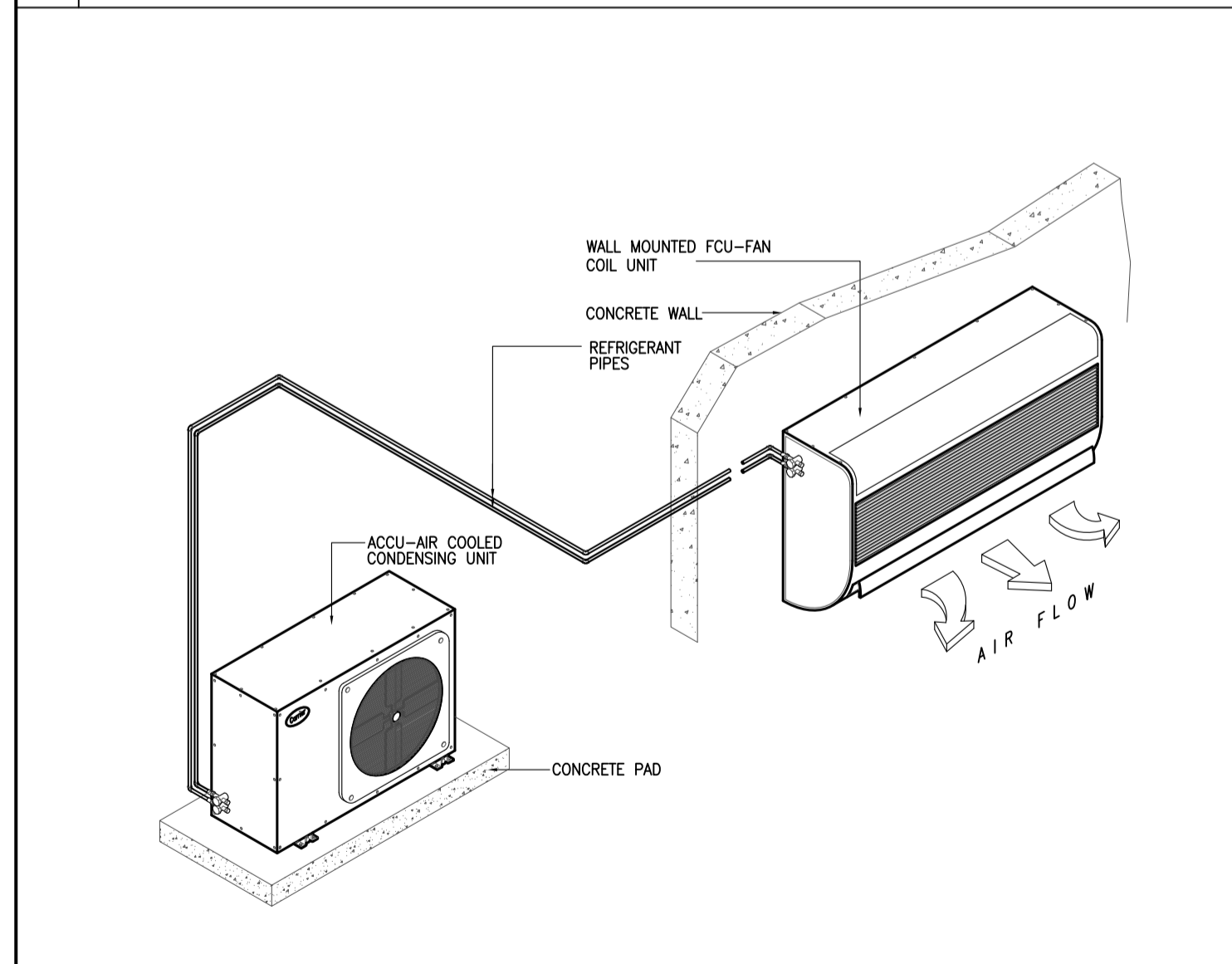


30 RUBBER AND SPRING VIBRATION ISOLATOR

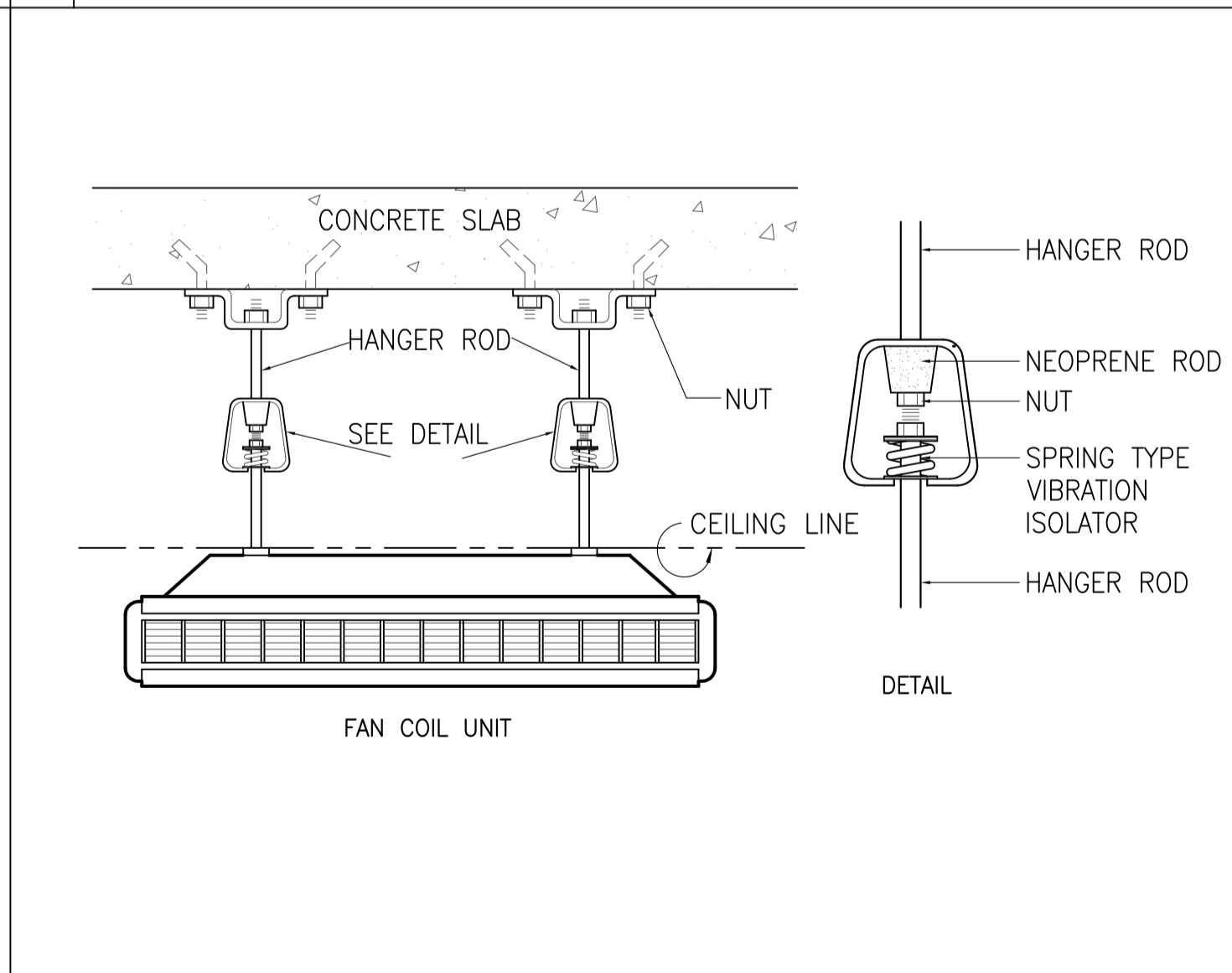


27 DUCT BRANCH DETAIL

28 TURNING VANE DETAIL



31 WALL MOUNTED (FAN COIL UNIT) DETAIL



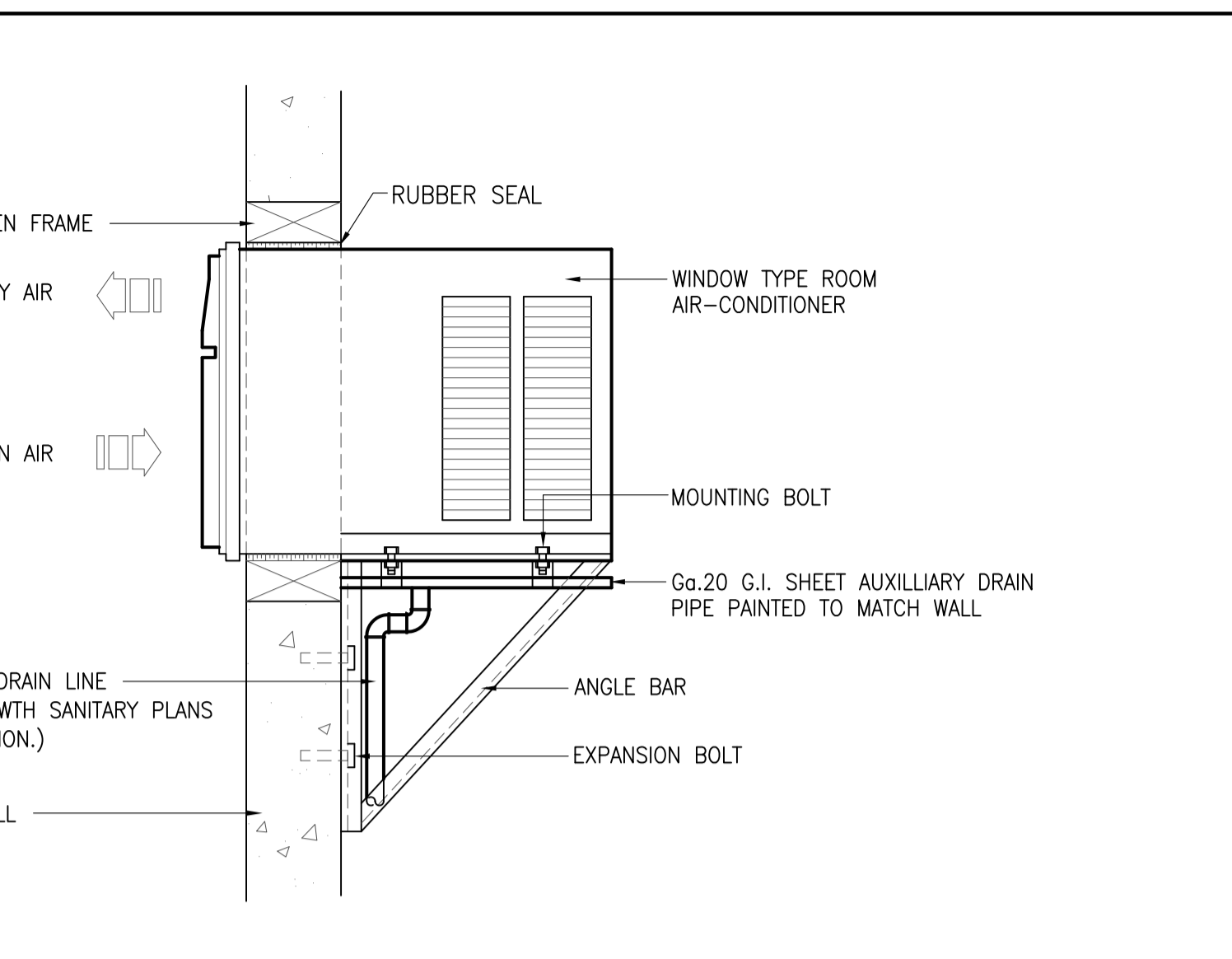
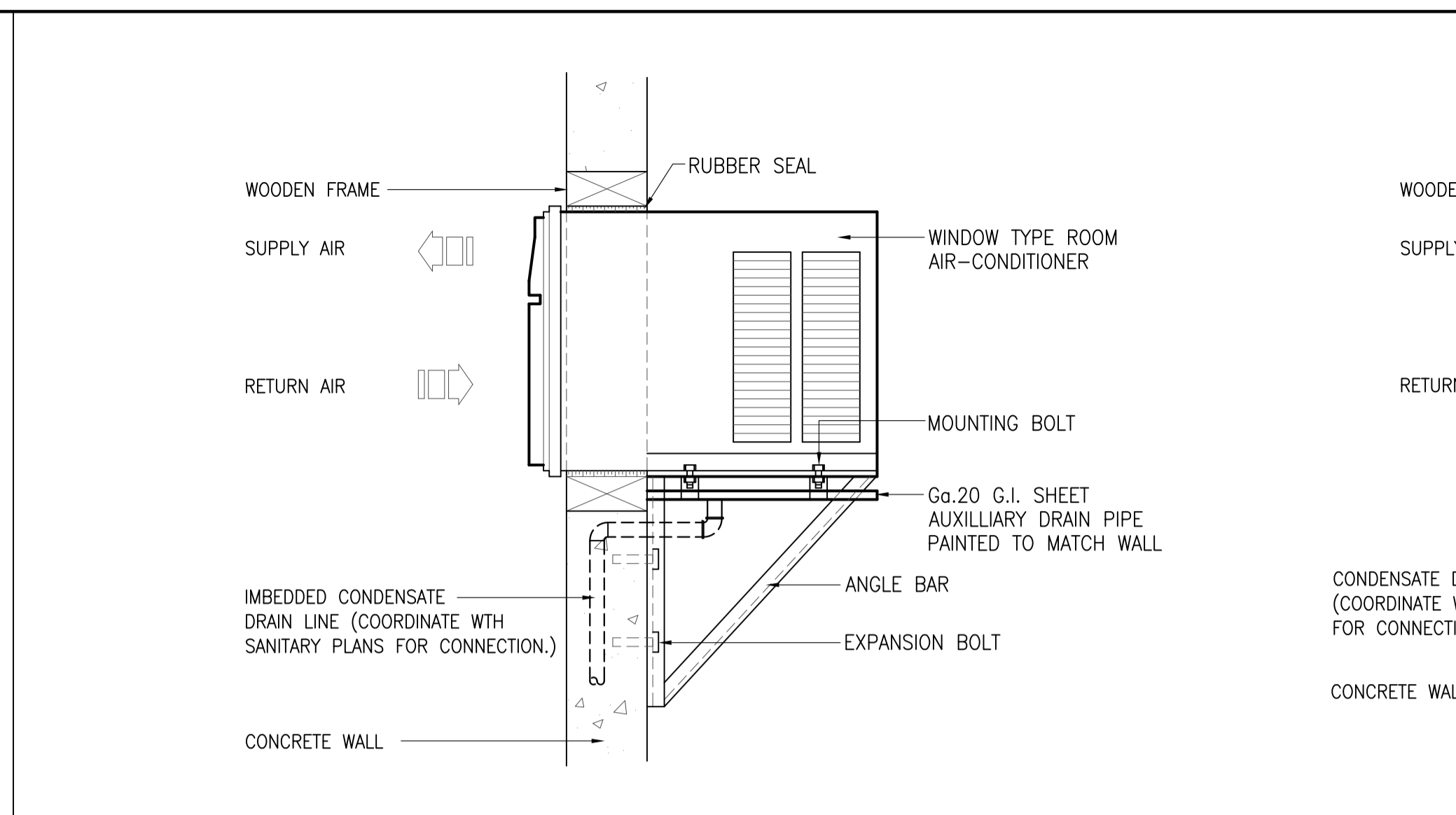
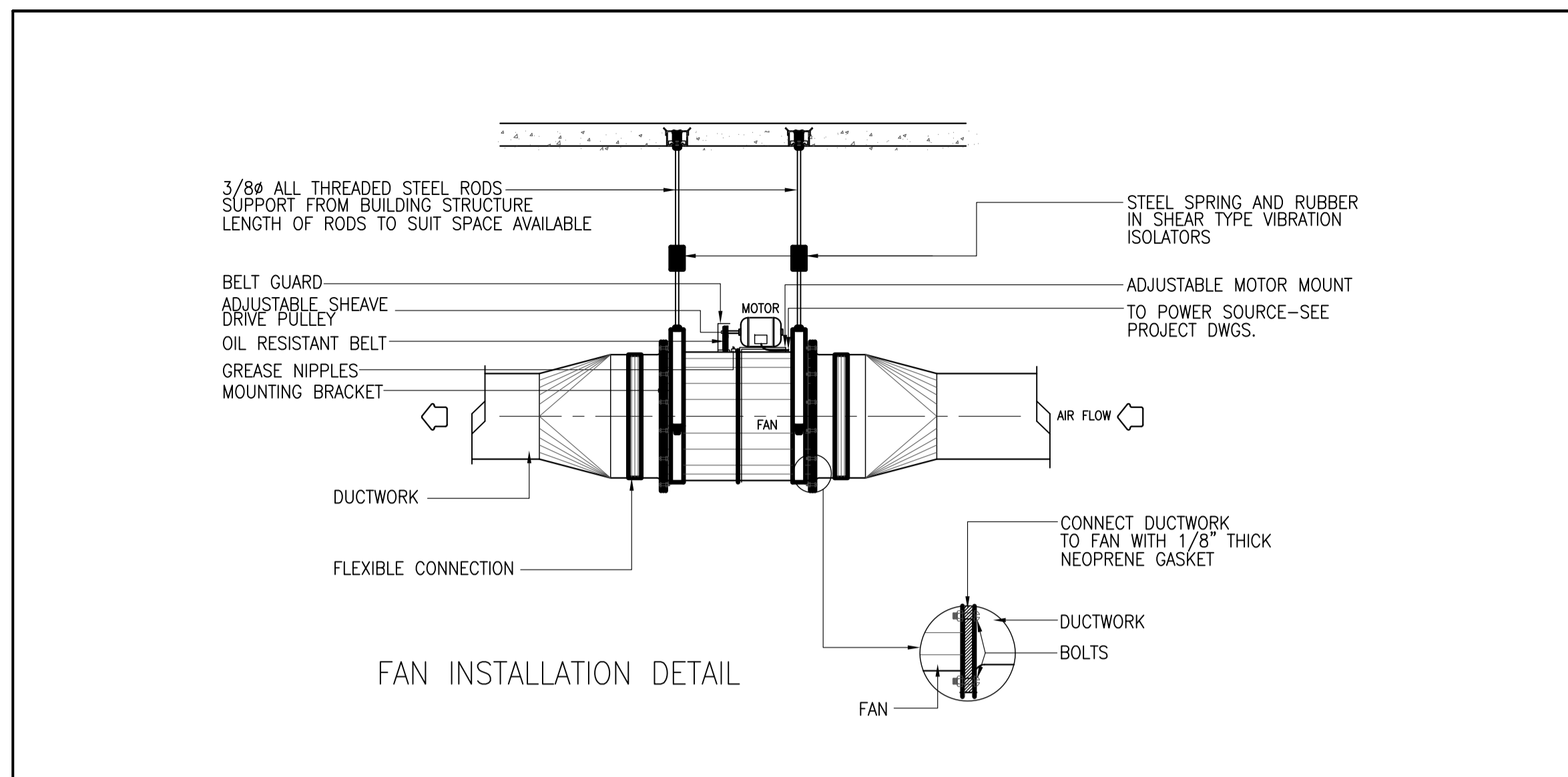
32 CEILING SUSPENDED (FAN COIL UNIT) DETAIL

SHEET METAL THICKNESS & REINFORCEMENT SCHEDULE

DUCTWORK SYSTEM PRESSURE CLASSIFICATION : UP TO 250 Pa.			DUCTWORK SYSTEM PRESSURE CLASSIFICATION : OVER 250 Pa. UP TO 500 Pa.			DUCTWORK SYSTEM PRESSURE CLASSIFICATION : OVER 500 Pa. TO 750 Pa.			DUCTWORK SYSTEM PRESSURE CLASSIFICATION : OVER 750 Pa. TO 1000 Pa.			DUCTWORK SYSTEM PRESSURE CLASSIFICATION : OVER 1000 Pa. TO 1500 Pa.			DUCTWORK SYSTEM PRESSURE CLASSIFICATION : OVER 1500 Pa. TO 2500 Pa.		
DUCT SIZE (MM)	SHEET METAL THICKNESS (MM)	REINFORCEMENT (MM)	DUCT SIZE (MM)	SHEET METAL THICKNESS (MM)	REINFORCEMENT (MM)	DUCT SIZE (MM)	SHEET METAL THICKNESS (MM)	REINFORCEMENT (MM)	DUCT SIZE (MM)	SHEET METAL THICKNESS (MM)	REINFORCEMENT (MM)	DUCT SIZE (MM)	SHEET METAL THICKNESS (MM)	REINFORCEMENT (MM)	DUCT SIZE (MM)	SHEET METAL THICKNESS (MM)	REINFORCEMENT (MM)
UP TO 1200	0.50	NONE REQUIRED	UP TO 700	0.50	NONE REQUIRED	UP TO 700	0.50	NONE REQUIRED	UP TO 600	0.70	NONE REQUIRED	UP TO 600	0.70	NONE REQUIRED	UP TO 400	0.70	19 X 19 X 1.0 AT 1500 SPACING
1200 TO 1500	0.70	NONE REQUIRED	725 TO 900	0.70	NONE REQUIRED	725 TO 900	0.70	NONE REQUIRED	625 TO 750	1.00	32 X 32 X 3 CENTERED BETWEEN FLANGES	625 TO 750	1.00	32 X 32 X 3 AT 900 SPACING	425 TO 500	0.80	19 X 19 X 1.0 AT 1500 SPACING
1525 TO 1800	0.70	38 X 38 X 5 CENTERED BETWEEN FLANGES	925 TO 1500	0.70	32 X 32 X 3 CENTERED BETWEEN FLANGES	925 TO 1500	0.70	32 X 32 X 3 AT 900 SPACING	775 TO 900	1.00	38 X 38 X 6 AT 750 SPACING	775 TO 900	1.00	38 X 38 X 6 AT 750 SPACING	525 TO 600	0.80	25 X 25 X 3 AT 900 SPACING
1825 TO 2400	0.80	38 X 38 X 5 AT 550 SPACING	1525 TO 1800	0.80	38 X 38 X 6 AT 550 SPACING	1525 TO 1800	0.80	38 X 38 X 6 AT 550 SPACING	925 TO 1050	1.00	50 X 50 X 5 AT 750 SPACING	925 TO 1050	1.00	50 X 50 X 5 AT 750 SPACING	625 TO 750	1.00	32 X 32 X 3 AT 900 SPACING
2425 AND OVER	1.00	38 X 38 X 6 CENTERED BETWEEN FLANGES W/ 10MM DIA / TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES.	1825 TO 2100	0.80	50 X 50 X 6 AT 550 SPACING	1825 TO 2100	0.80	50 X 50 X 6 AT 550 SPACING	1075 TO 1350	1.30	62 X 62 X 5 AT 600 SPACING	1075 TO 1350	1.30	62 X 62 X 5 AT 600 SPACING	1375 TO 1500	1.30	62 X 62 X 6 AT 450 SPACING
			2125 TO OVER	1.20	38 X 38 X 6 CENTERED BETWEEN FLANGES W/ 10MM DIA/TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES .	2125 TO OVER	1.20	38 X 38 X 6 CENTERED BETWEEN FLANGES W/ 10MM DIA/TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES .	1375 TO 1500	1.30	62 X 62 X 6 AT 450 SPACING	1375 TO 1500	1.30	62 X 62 X 6 AT 450 SPACING	1525 TO 1800	1.30	75 X 75 X 6 AT 450 SPACING
									1825 TO 2100	1.30	38 X 38 X 6 AT 600 SPACING W/ 10MM DIA/TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES .	1825 TO 2100	1.30	38 X 38 X 6 AT 600 SPACING W/ 10MM DIA/TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES .	1825 TO 2100	1.30	38 X 38 X 6 AT 600 SPACING W/ 10MM DIA/TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES .
									2125 TO 2400	1.30	38 X 38 X 6 AT 600 SPACING W/ 10MM DIA/TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES .	2125 TO 2400	1.30	38 X 38 X 6 AT 600 SPACING W/ 10MM DIA/TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES .	2125 TO 2400	1.30	38 X 38 X 6 AT 600 SPACING W/ 10MM DIA/TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES .
									2425 AND OVER	1.60	38 X 38 X 6 AT 600 SPACING W/ 10MM DIA/TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES .	2425 AND OVER	1.60	38 X 38 X 6 AT 600 SPACING W/ 10MM DIA/TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES .	2425 AND OVER	1.60	38 X 38 X 6 AT 600 SPACING W/ 10MM DIA/TIE RODS AT 1200 MAX. SPACING ALONG JOINTS AND INTERMEDIATES .

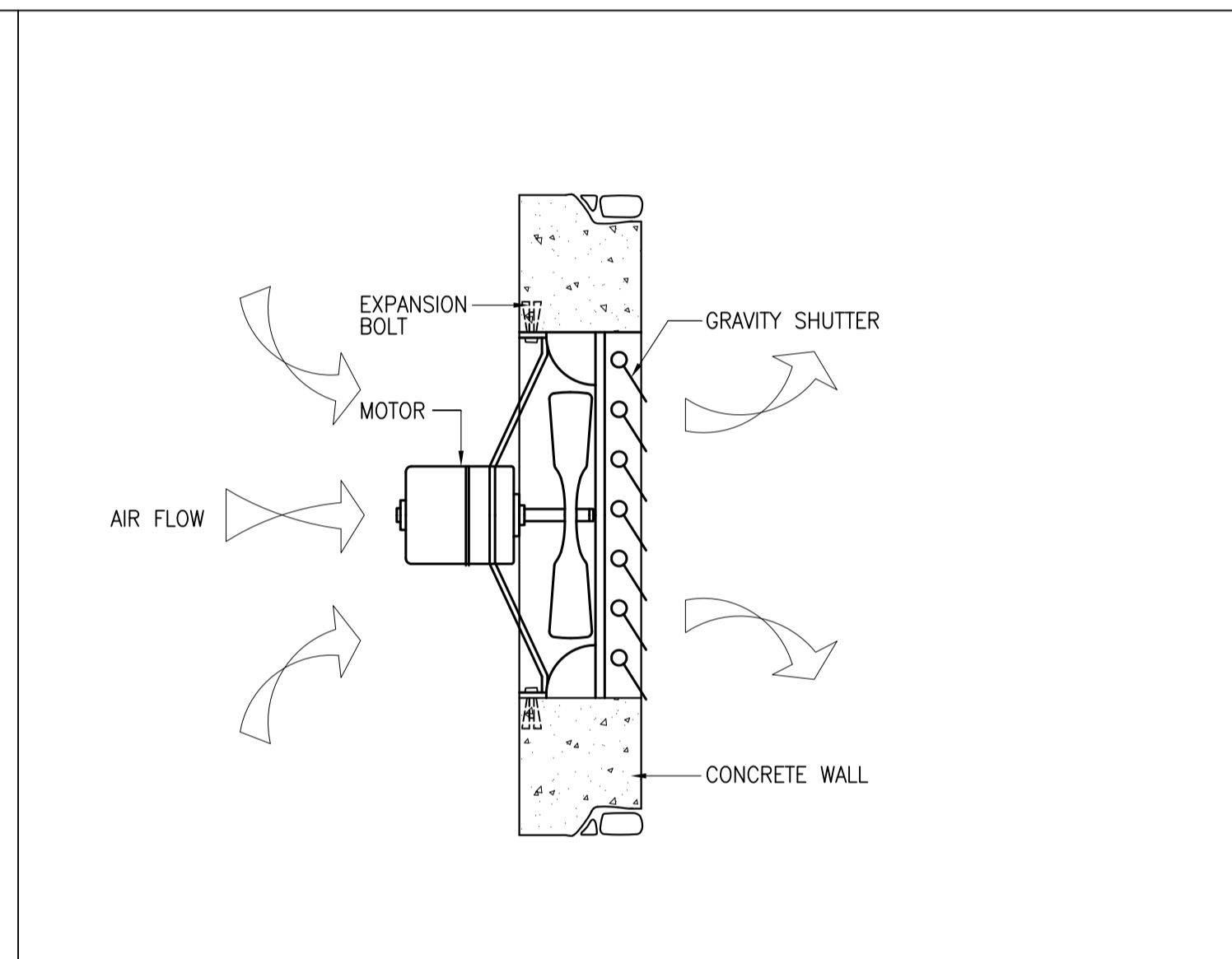
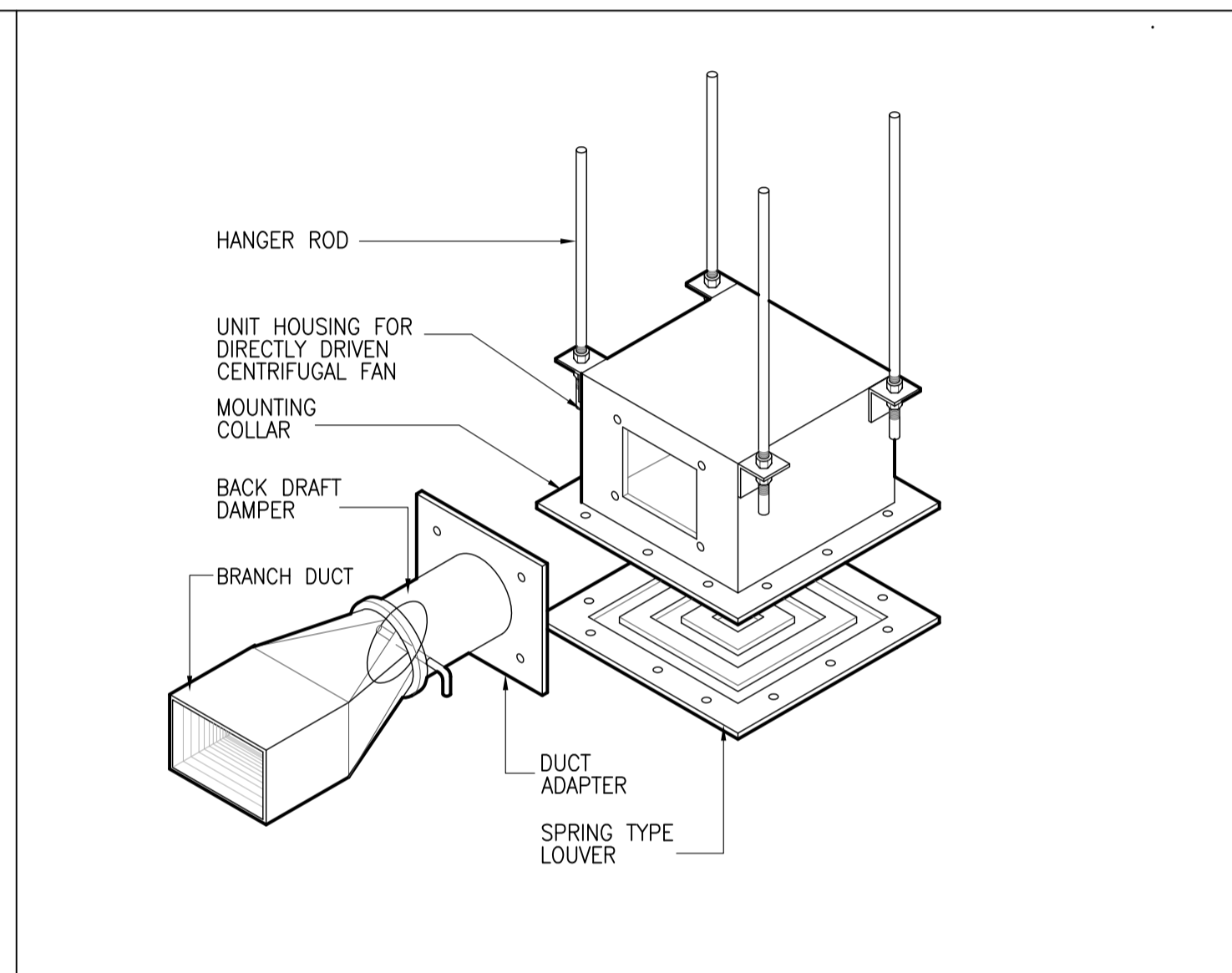
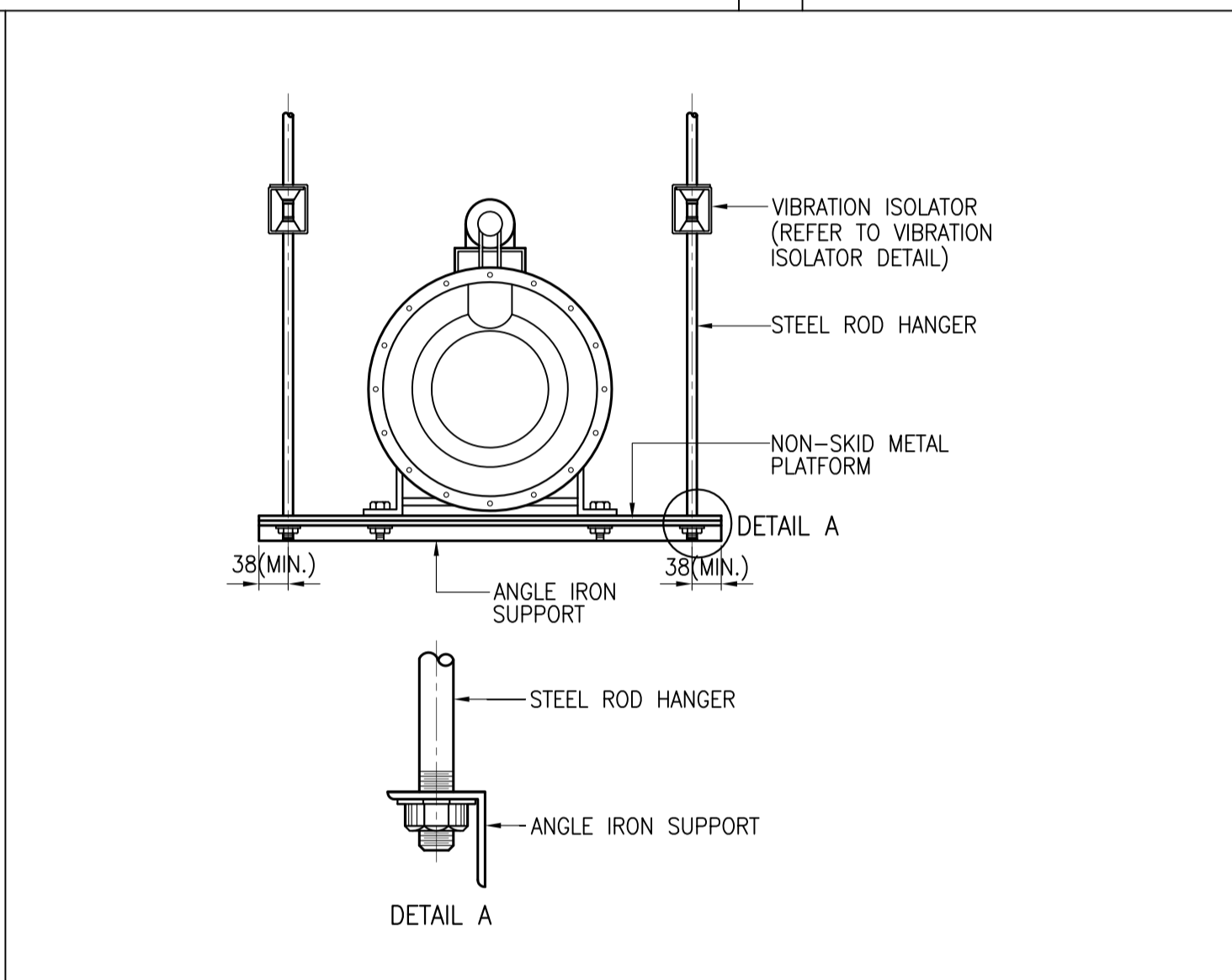
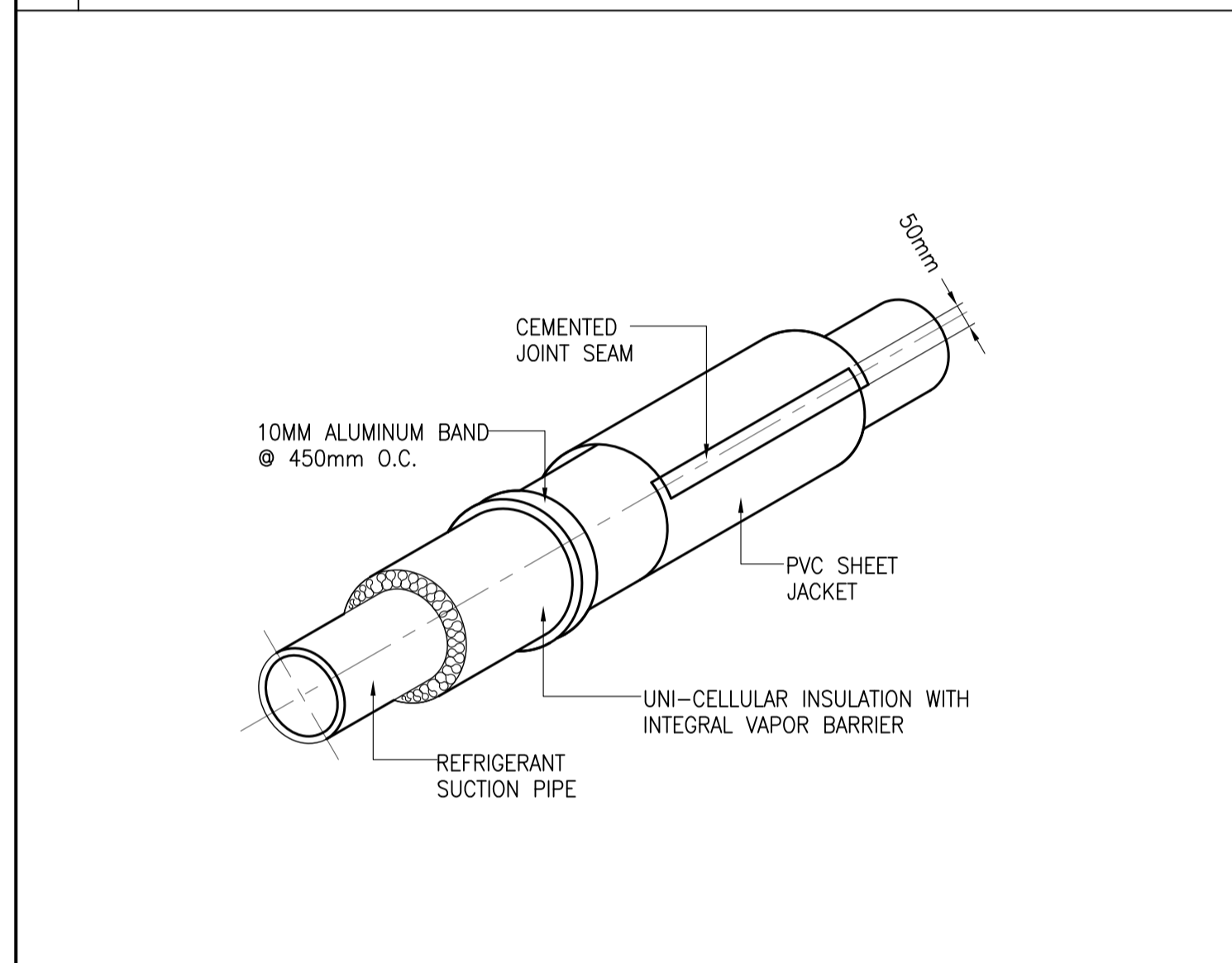
33 DUCT CONSTRUCTION DETAIL

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> PROF: MECHANICAL ENGINEER PIR. 1725187 REC. NO: 2379 DATE: JANUARY 01, 2013 TEL. 150-563-379 PLACE: TAGUIG CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-0: GENERAL MECHANICAL VENTILATION AND AIR-CONDITIONING MECHANICAL DETAIL (3)	SHEET NO: BO-5200-04 DRAWING SCALE: AS SHOWN
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	JUNE 2013 DATE INDEX AMENDMENTS Prepared by Checked by Validated by	WIM IIC			



34 FAN INSTALLATION DETAIL

35 WINDOW TYPE AIR-CONDITIONING W/ DRAIN PIPE

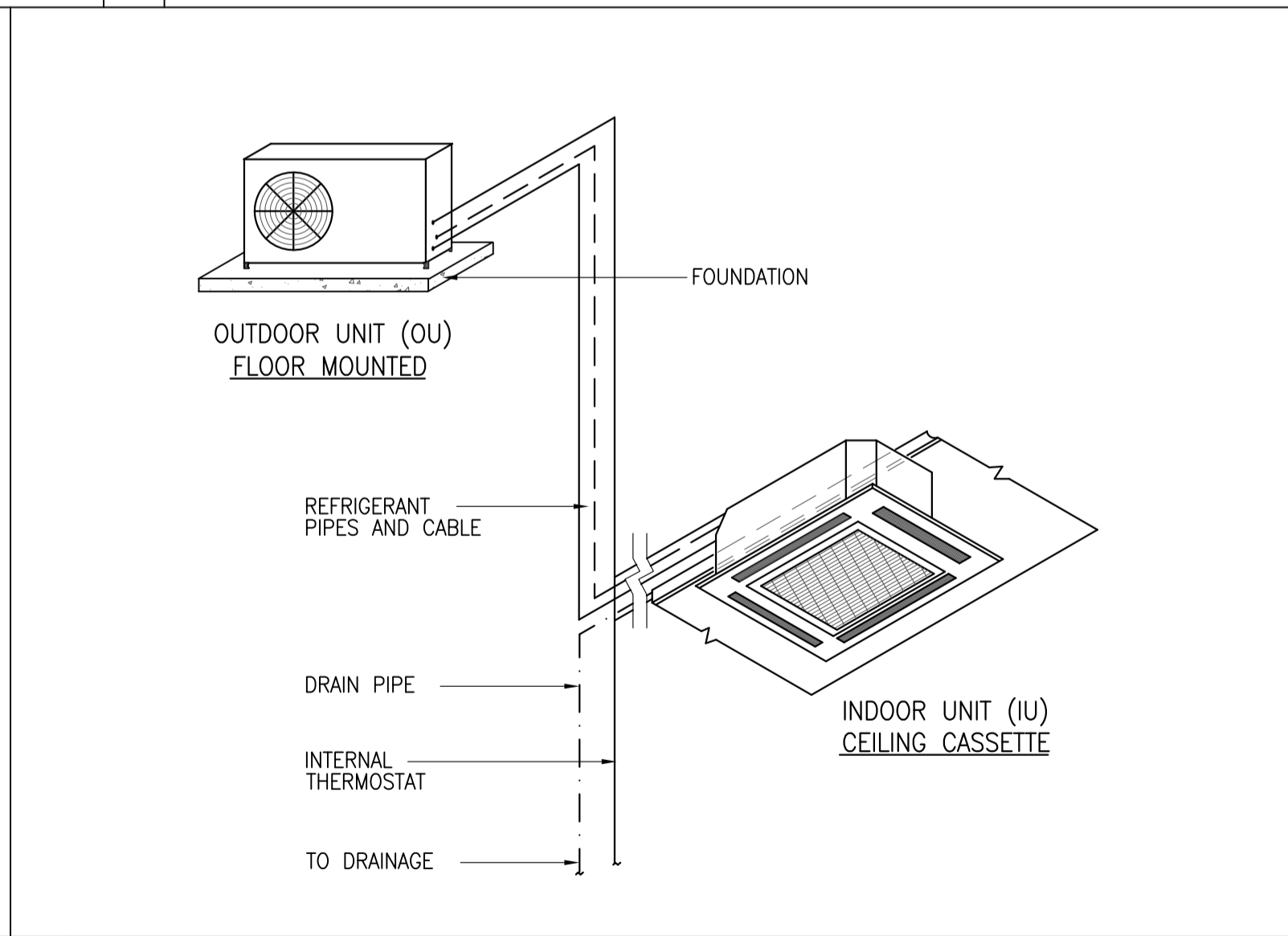
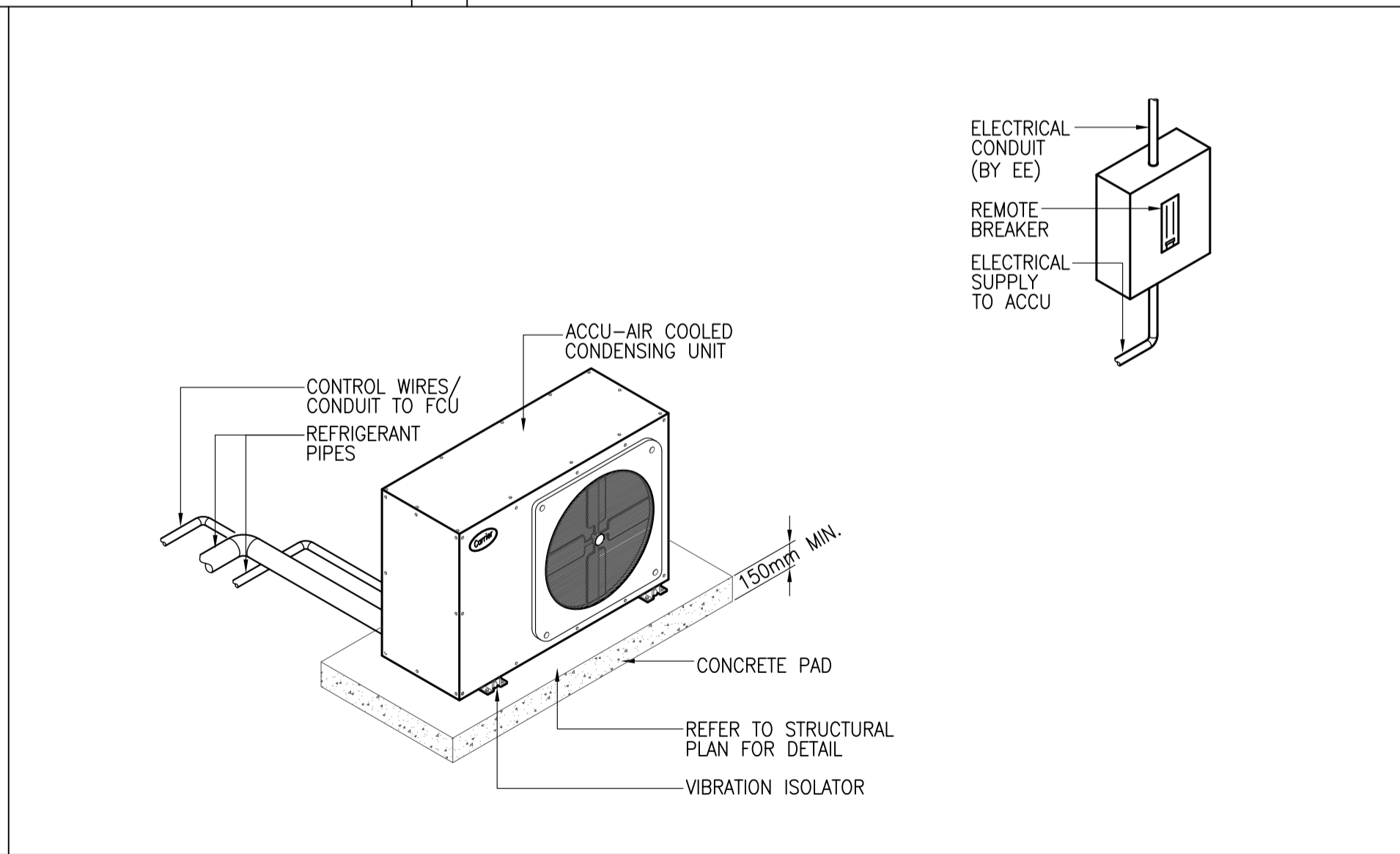
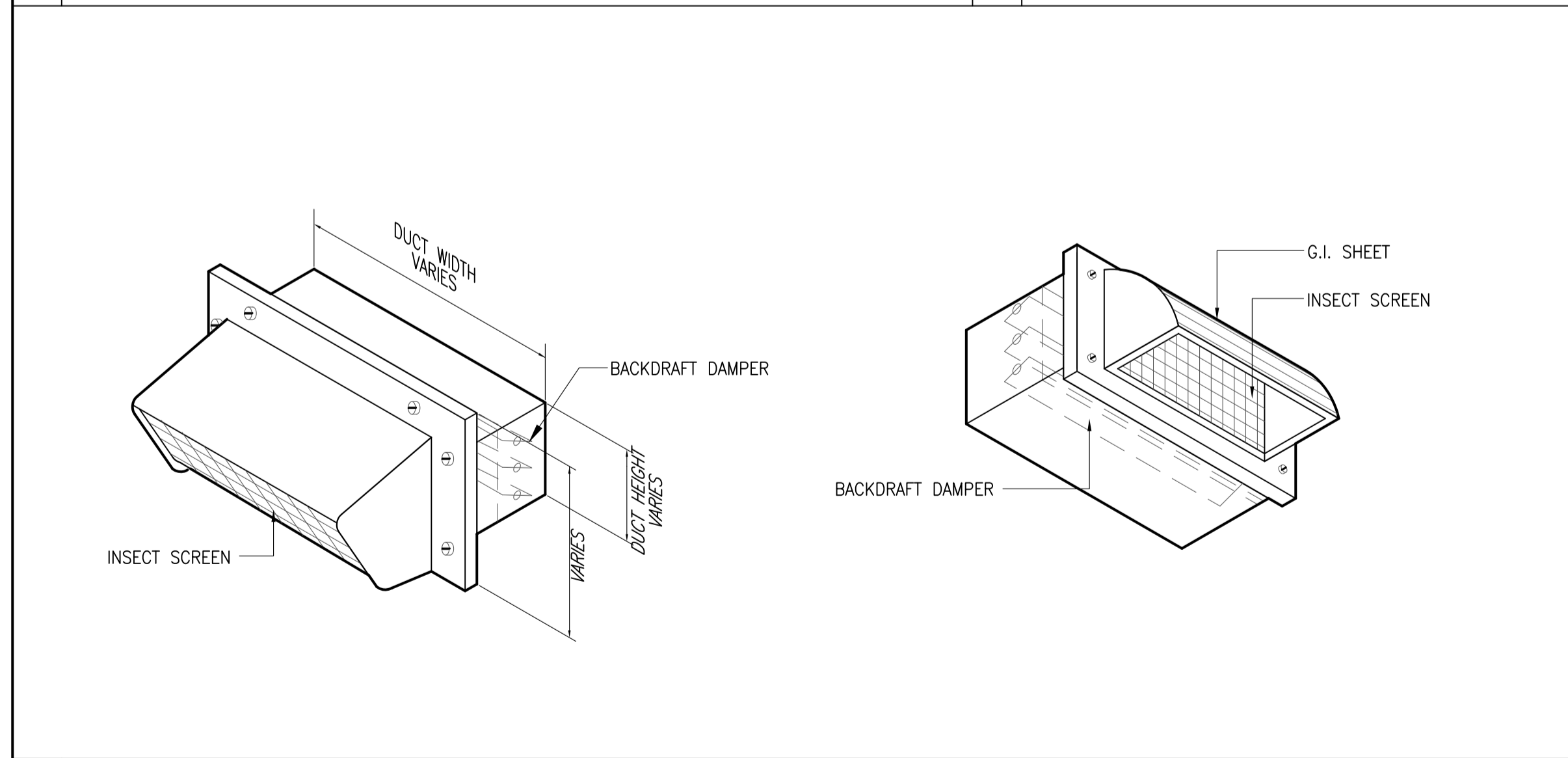


36 REFRIGERANT PIPE INSULATION DETAIL

37 HORIZONTAL FAN MOUNTING DETAIL

38 TOILET EXHAUST FAN DETAIL

39 WALL EXHAUST FAN MOUNTING DETAIL



40 DOUBLE DEFLECTION SUPPLY AIR REGISTER DETAIL

41 ACCU MOUNTING DETAIL

42 CEILING CASSETTE FAN COIL UNIT PIPING CONNECTION DETAIL

	PREPARED BY: RENATO A. ARRIOLA <small>Filipino Registered Engineer</small> PROF: MECHANICAL ENGINEER PIR. 1725187 REG. NO: 2379 DATE: JANUARY 07, 2013 TEL: 150-563-379 PLACE: TAGUIG CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. <small>Assistant Secretary for Project Implementation, DOTC</small>	APPROVED: JULIANITO G. BUCAYAN, JR. <small>Undersecretary for Project Implementation, DOTC</small>	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-0: GENERAL MECHANICAL VENTILATION AND AIR-CONDITIONING MECHANICAL DETAIL (4)	SHEET NO: B0-5200-05 DRAWING SCALE: AS SHOWN
	JICA DESIGN CONSULTANT JOINT VENTURE JAPAN AIRPORT CONSULTANTS, INC. NIPPON KOEI CO., LTD. NJS CONSULTANTS CO., LTD.	DATE: JUNE 2013 INDEX AMENDMENTS Prepared by: WIM Checked by: IIC Validated by:				

GENERAL NOTES:

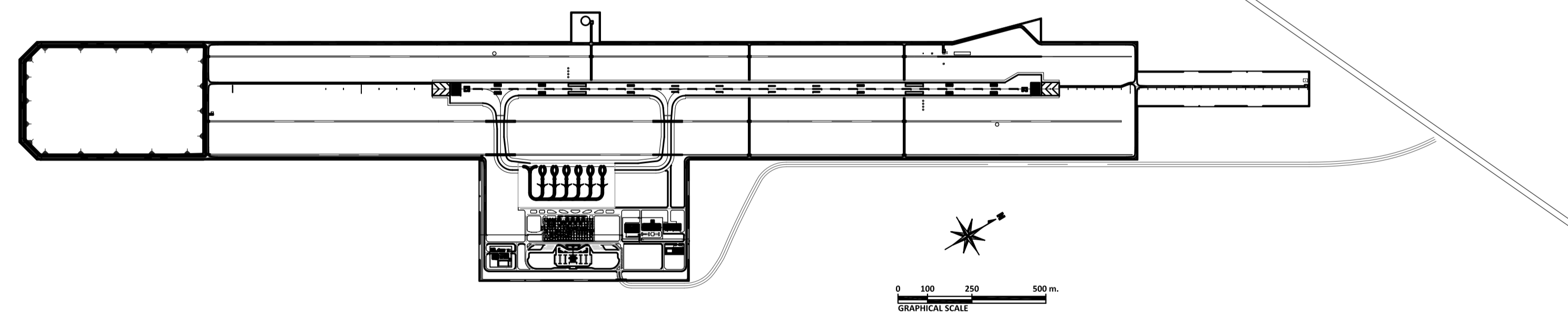
- THE SPECIALIST FIRE PROTECTION CONTRACTOR SHALL COMPLETE FULL HYDRAULIC CALCULATIONS FOR THE SPRINKLER, WET RISER & HOSE REEL SYSTEM. ALL CALCULATIONS SHALL BE IN ACCORDANCE WITH NFPA. A FULL SET OF CALCULATIONS & DRAWINGS SHALL BE ISSUED TO THE ENGINEER FOR APPROVAL PRIOR TO SUBMISSION TO THE LOCAL AUTHORITY HAVING JURISDICTION.
- THE SPECIALIST FIRE PROTECTION CONTRACTOR SHALL ALSO PRODUCE & SUBMIT FOR APPROVAL OF THE ENGINEER & THE LOCAL AUTHORITY HAVING JURISDICTION THE FOLLOWING :-
 - ISOMETRIC DRAWING FOR FIRE PROTECTION PIPEWORK.
 - FLOW & PRESSURE AT THE TOP & BOTTOM LEVELS OF EACH CIRCUIT.
 - CONFIRMATION OF PUMP DUTIES FOR EACH CIRCUIT, MAXIMUM SYSTEM PRESSURE AT PUMP OUTLET WITH CLOSED HEAD.
 - PROVIDE PUMP PERFORMANCE CURVES IN ACCORDANCE WITH NFPA 13, 14 & 20, INDICATING THE DUTY CONDITION.
 - ANY OTHER SUPPORTING DOCUMENTATION REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION TO ACHIEVE FULL APPROVAL.
- ALL FIRE PUMP SETS SHALL BE IN ACCORDANCE WITH NFPA 20 & UL LISTED/FM APPROVED & IN ACCORDANCE WITH THE CURRENT REQUIREMENTS & REGULATIONS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- ALL ASSOCIATED ANCILLARIES WITHIN THE FIRE PROTECTION SYSTEM SHALL BE UL LISTED, WHERE POSSIBLE, & IN ACCORDANCE WITH THE REQUIREMENTS & REGULATIONS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- THE COMPLETE BUILDING SHALL BE PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM, IN ACCORDANCE WITH NFPA 13 & NFPA 14, AND TO THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
 - THE LAYOUT SHOWN ON THE DRAWINGS IS FOR PURPOSE OF ILLUSTRATING THE GENERAL AREA OF SPRINKLER PROTECTION REQUIRED AND PREFERRED PIPEWORK DISTRIBUTION. THE NUMBER OF SPRINKLERS IS INDICATIVE ONLY AND THE CONTRACTOR SHALL PROVIDE THE NUMBERS NECESSARY TO FULFILL NFPA & THE LOCAL AUTHORITY HAVING JURISDICTION REQUIREMENTS. THE SYSTEM SHALL BE DESIGNED IN DETAIL AND INSTALLED BY A SPECIALIST SUBCONTRACTOR, APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION SUBJECT TO THE ENGINEER'S APPROVAL.
 - THE CONTRACTOR SHALL PREPARE WORKING DRAWINGS AND SHALL COORDINATE WITH OTHER SERVICES FOR PIPE ROUTING AND SPRINKLER HEAD LOCATIONS AND SHALL ENSURE A MIN. OF 2400mm CLEAR SPACE IN DRIVEWAY/CARPARKS. THE RAMPS SHALL BE PROTECTED WITH SIDE WALL TYPE SPRINKLER HEADS.
- DESIGN PARAMETERS.
 - DESIGN STANDARD - NFPA 13 & NFPA 14
 - HAZARD CLASSIFICATIONS:
 - TYPICAL FLOOR & OFFICES - LIGHT HAZARD
 - AIRPORT FACILITIES AS PER NFPA 415 - ORDINARY HAZARD GROUP - 1
 - INSTALLATION TYPE - WET PIPE SYSTEM
 - DESIGN COVERAGE AREA OF SPRINKLER HEADS - ORDINARY HAZARD GROUP - 1 LIGHT HAZARD
- THE SPRINKLER SYSTEM SHALL BE COMPLETE WITH ALL NECESSARY ACCESSORIES, IN ACCORDANCE WITH NFPA 13 & 14; BUT SHALL NOT BE LIMITED TO THE FOLLOWING ACCESSORIES :
 - WATER ALARM GONG
 - SPRINKLER TEST METER
 - LOW LEVEL AUDIBLE ALARM
 - HIGH PRESSURE ALARM VALVE
 - SUPERVISED ISOLATING VALVE (BUTTERFLY TYPE) WITH "OPEN & CLOSED" INDICATIONS WIRED TO THE NEAREST FIRE ALARM PANEL.
 - FLOOR CONTROL VALVES WITH DRAIN AS PER NFPA-13 FOR EACH FLOOR BRANCH CONNECTION.
- CONTRACTOR TO ENSURE SPRINKLERS ARE PROVIDED ADDITIONALLY WITHIN:-
 - CEILING VOIDS IF THE VOIDS ARE GREATER THAN 800mm.
 - SERVICE FLOORS/PLANT ROOMS TO ENSURE ADEQUATE COVERAGE TO ALL AREAS ONCE THE SYSTEM LAYOUT HAS BEEN FULLY COORDINATED WITH OTHER SERVICES.
- THE FIRE SPRINKLER SYSTEM DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 13-2002, AND SPECIFICATION SECTION 13930. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL SPRINKLER SYSTEM COMPONENTS AND COORDINATE WITH THE VARIOUS TRADES.
- ALL DEVICES AND EQUIPMENT SHALL BE UL LISTED OR FM APPROVED.
- SPRINKLER PIPING IN FINISHED AREA SHALL BE CONCEALED FROM VIEW EXCEPT IN CERTAIN PUBLIC AREAS.
- WHERE APPLICABLE LOCATE SPRINKLERS IN APPROXIMATE CENTER OF CEILING TILE.
- SPRINKLER PIPING SHALL COMPLY WITH NFPA 13, EXCEPT AS MODIFIED HEREIN. PROVIDE SCHEDULE 40 MIN. STEEL PIPING. STEEL PIPING AND FITTINGS SHALL BE NOT DIPPED GALVANIZED FOR THE RISER AND RISER TRIM.
- THE PIPE ROUTING AND SPRINKLER LOCATIONS ARE CONCEPTUAL THE CONTRACTOR SHALL INSTALL THE SYSTEM IN ACCORDANCE WITH THE APPLICABLE CODES, MANUFACTURER'S RECOMMENDATION AND EQUIPMENT LISTING.
- PIPING SHALL BE PROVIDED WITH EARTHQUAKE SWAY BRACING AND BRANCH LINE RESTRAINT IN ACCORDANCE WITH NFPA 13 INCLUDING TIA 02-01.
- SPRINKLER SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 13-2002.
- CONTRACTOR SHALL REVIEW THE CONTRACT DRAWINGS, AND INSPECT THE SITE TO ENSURE INSTALLATION MAKES ALLOWANCE FOR STRUTURAL BEAMS, DUCTS, AND CONDUITS ABOVE THE CEILING
- ALL PENETRATIONS THROUGH FIRE RATED SHALL BE FIRE STOPPED.
- 2 TYPES OF SPRINKLERS SHALL BE USED ON CERTAIN PUBLIC AREAS. A COMBINATION OF UPRIGHT AND PENDENT SPRINKLERS AND A COMBINATION OF UPRIGHT AND EXTRA ORIFICE SPRINKLERS.

LEGENDS AND ABBREVIATIONS:

○	SPRINKLER HEAD UPRIGHT TYPE. BRASS FINISH. 68" STANDARD RESPONSE
●	SPRINKLER HEAD PENDENT TYPE
▼	SPRINKLER HEAD (WALL MOUNTED) SIDEWALL TYPE, EXTENDED COVERAGE QUICK RESPONSE C/W ESCUTCHEON 68"(CHROME FINISH).
○-○-○	LANDING VALVE WITH BUILT IN PRV 65mmØ AND 30 M LONG 65mmØ HOSE WITH QUICK COUPLING AND NOZZLE.
H	FIRE HYDRANT
□	DELUGE VALVE
□	CONCRETE THRUST BLOCK
→○←	FLOOR CONTROL VALVE ASSEMBLY
↔	TEST DRAIN
○-○-○	FIRE HOSE CABINET
▲	9.0 kg. FIRE EXTINGUISHER (CO2)
▲	4.5 kg. DRY POWDER FIRE EXTINGUISHER (ABC)
▲	5.0 kg. AUTOMATIC FOAM FIRE EXTINGUISHER (AFFF)
▲	23.0 kg. FIRE EXTINGUISHER WHEEL TYPE (CO2)
FM	FIRE MAIN
FHC	FIRE HOSE CABINET
FCV	FLOOR CONTROL VALVE
TV	TEST VALVE
PRV or [PRV]	PRESSURE REDUCING VALVE STATION
—FW—	CENTRIFUGAL CAST IRON PIPE
—FS—	WET PIPE SPRINKLER PIPING
⋈	UNDERGROUND GATE VALVE
⋈	OS&Y GATE VALVE
⋈	BUTTERFLY VALVE
⋈	CHECK VALVE
⋈	ALARM CHECK VALVE
⋈	SOLENOID VALVE
⋈	Y-STRAINER
⋈	WET PIPE SPRINKLER SYSTEM ALARM PRESSURE SWITCH
⋈	WATER FLOW SWITCH
⋈	WET PIPE SPRINKLER RISER
⋈	FIRE DEPARTMENT CONNECTION
⋈	PORTABLE FIRE EXTINGUISHER 4A:60B:C MOUNT IN RECESSED CABINET
[FACP]	FIRE ALARM CONTROL PANEL
[FAP]	FIRE ALARM ANNUNCIATOR PANEL
[FAPP]	FIRE ALARM POWER EXTENDER PANEL
⋈	COMBINATION OF UPRIGHT AND EXTRA ORIFICE SPRINKLER
⋈	COMBINATION OF UPRIGHT AND PENDENT SPRINKLER

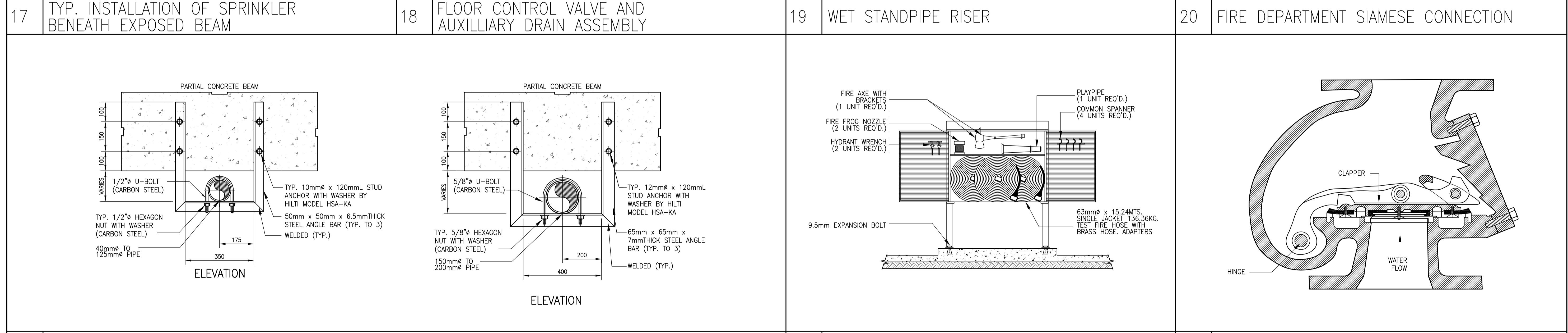
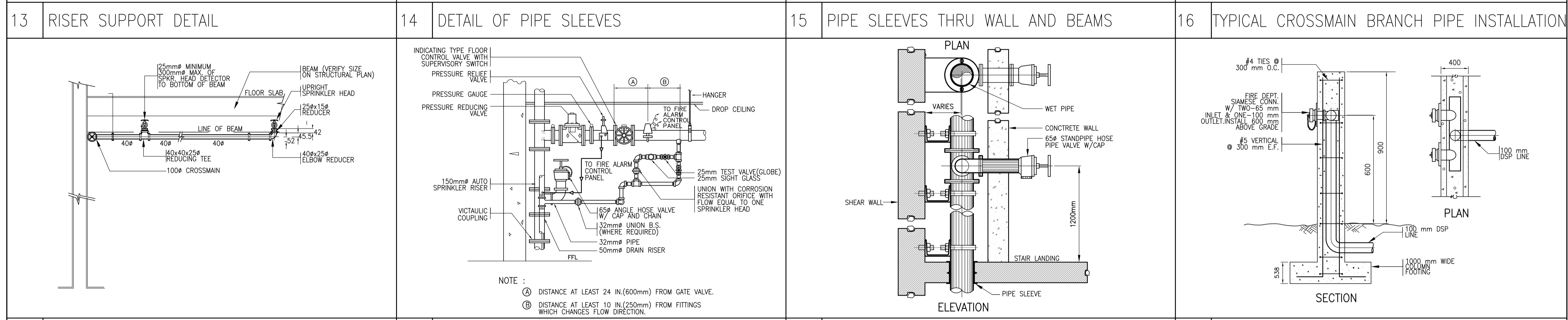
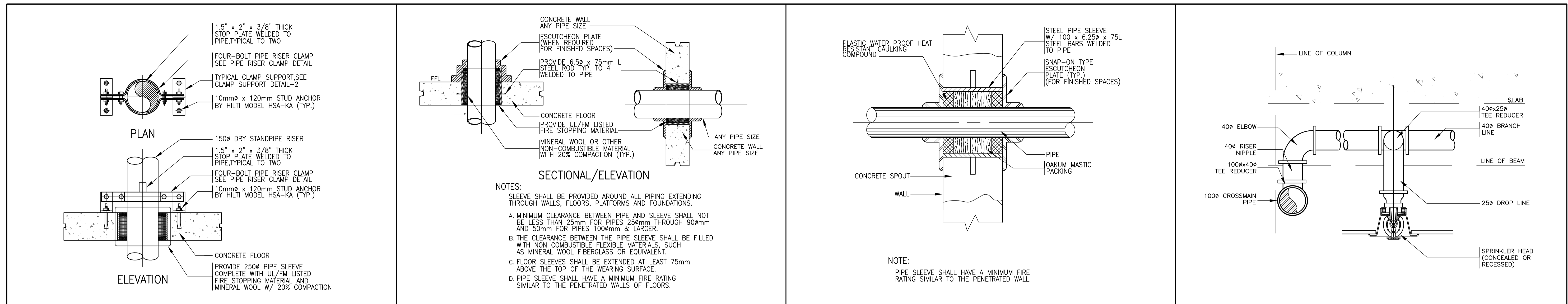
SPRINKLER PIPE DIAMETER TABLE:

SPRINKLER PIPE SIZING SHALL BE AS PER NFPA-13		
NO. OF SPRINKLERS		PIPE SIZE
UPTO 2 SPRINKLERS		25Ø
UPTO 3 SPRINKLERS		32Ø
UPTO 5 SPRINKLERS		40Ø
6 - 10 SPRINKLERS		50Ø
11 - 30 SPRINKLERS		65Ø
30 - 60 SPRINKLERS		80Ø
61 - 100 SPRINKLERS		100Ø
100 - 160 SPRINKLERS		125Ø
161 - 275 SPRINKLERS		150Ø

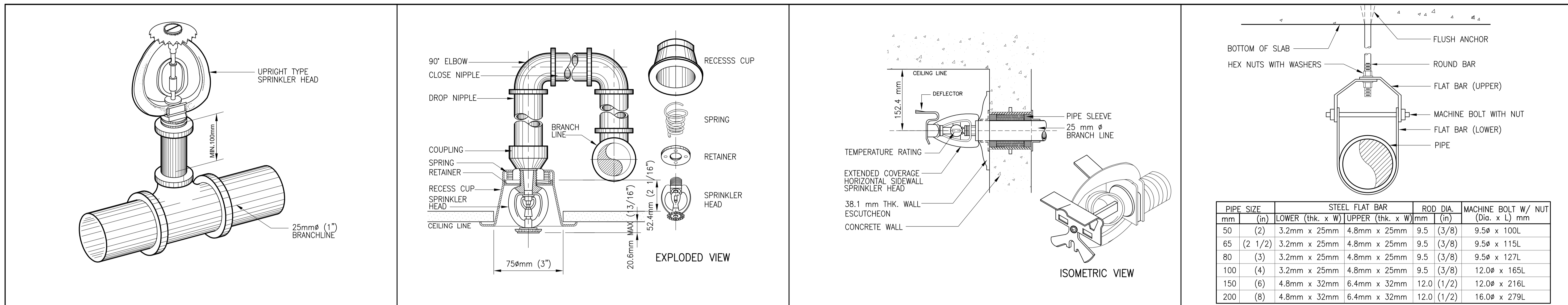


1 SITE DEVELOPMENT PLAN
BO-5300-01 NTS

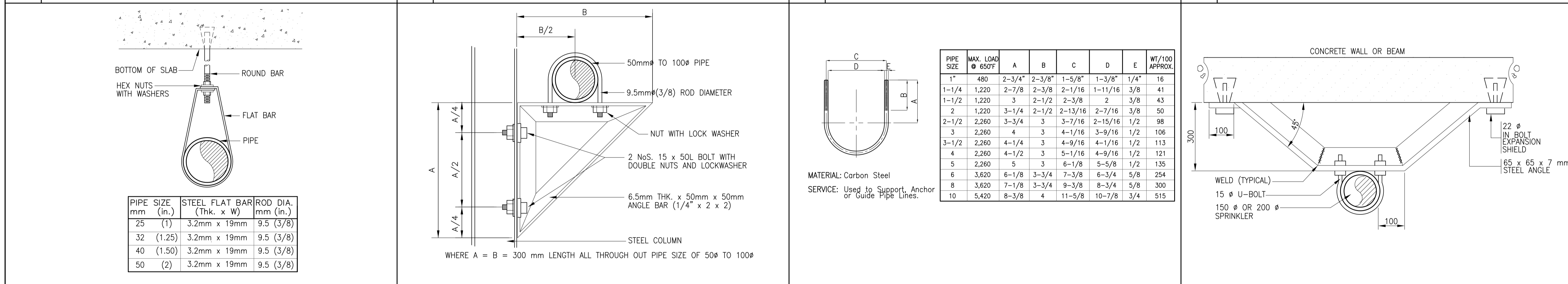
	PREPARED BY: RENATO A. ARRIOLA Filipino Registered Engineer PRV: MECHANICAL ENGINEER PTR: 1725187 REG. NO: 2379 DATE: JANUARY 01, 2013 TIA: 150-563-379 PLACE: TAGUIG CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT	LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-0: GENERAL MECHANICAL FIRE PROTECTION GENERAL NOTES, SPRINKLER PIPE DIAMETER TABLE, SITE DEVELOPMENT PLAN, LEGENDS AND SYMBOLS	SHEET NO: BO-5300-01
	JICA DESIGN CONSULTANT JOINT VENTURE	TADASHI AOI Team Leader	JUN 2013	DATE INDEX AMENDMENTS	Prepared by: WIM Checked by: IIC Validated by:	DRAWING SCALE: NTS	



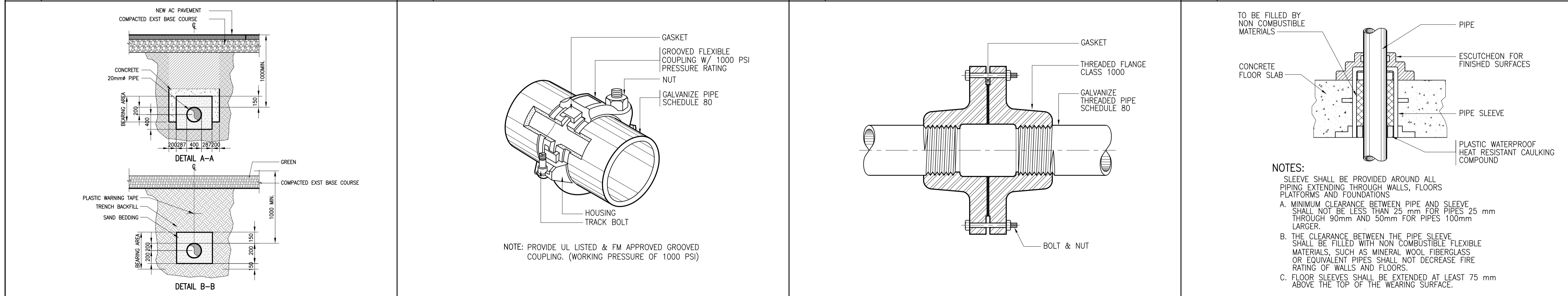
		PREPARED BY: RENATO A. ARRIOLA Filipino Registered Engineer PROF. MECHANICAL ENGINEER PIR. 1725187 REG. NO. 2379 DATE: JANUARY 01, 2013 TIN. 150-563-379 PLACE: TAGAYtay CITY	RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC	APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC	PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES	SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-0: GENERAL MECHANICAL FIRE PROTECTION FIRE PROTECTION DETAIL (1)	SHEET NO: B0-5300-02 DRAWING SCALE: NTS
JICA DESIGN CONSULTANT JOINT VENTURE JAC JAPAN AIRPORT CONSULTANTS, INC. NK NIPPON KOEI CO., LTD. NIS NIS CONSULTANTS CO., LTD.		DATE: JUNE 2013 INDEX AMENDMENTS Prepared by: WIM Checked by: IIC Validated by:					



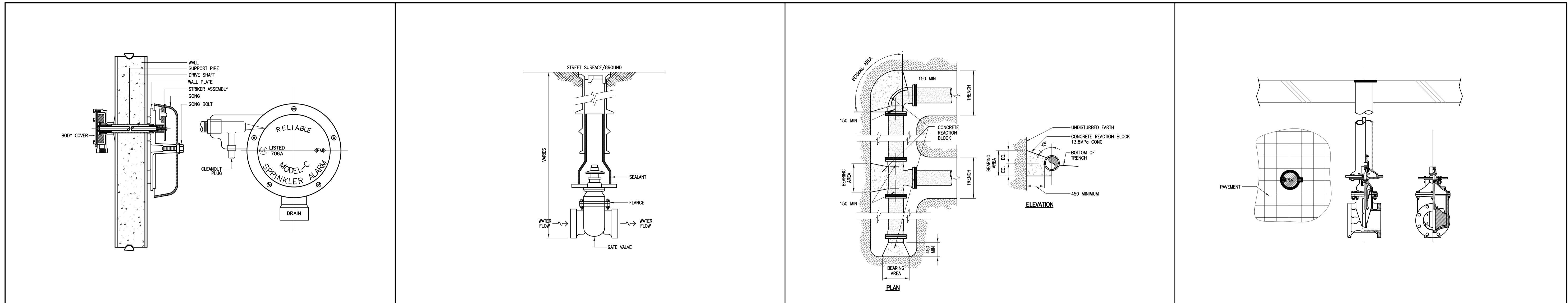
1 UPRIGHT TYPE SPRINKLER HEAD DETAIL 2 PENDENT TYPE SPRINKLER HEAD DETAIL 3 SIDEWALL SPRINKLER HEAD DETAIL 4 ADJUSTABLE TYPE CLEVIS HANGER DETAIL (1)



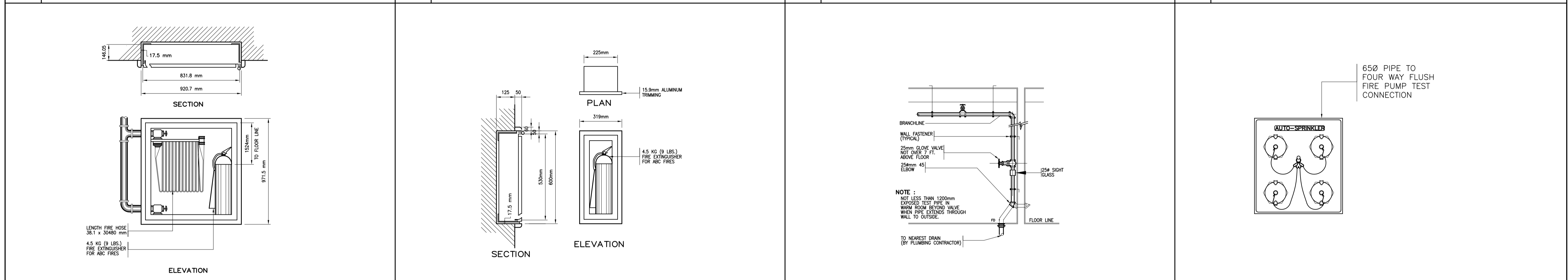
5 ADJUSTABLE TYPE CLEVIS HANGER DETAIL (2) 6 WALL PIPE HANGER DETAIL 7 STANDARD U-BOLT 8 PIPE RISER BRACKET DETAIL



9 DETAIL A-A (FROM SITE FIRE PROTECTION) 10 GROOVED COUPLING DETAIL 11 THREADED FLANGE CONNECTION DETAIL 12 WATER TIGHT PIPE SLEEVE THRU FLOORS AND WALLS



24 WATER MOTOR GONG 25 UNDERGROUND GATE VALVE 26 THRUST BLOCK DETAIL 27 INDICATOR VALVE



28 RECESSED FIRE HOSE CABINET 29 FIRE EXTINGUISHER FOR ABC FIRES 23 INSPECTOR CONNECTION DETAIL 31 FOUR WAY FLUSH FIRE PUMP TEST CONNECTION



32 EXTERNAL FIRE HOSE CABINET

<p>Republic of the Philippines DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS</p> <p>JICA JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>JICA DESIGN CONSULTANT JOINT VENTURE</p> <p>JAC JAPAN AIRPORT CONSULTANTS, INC.</p> <p>NIPPON KOEI CO., LTD.</p> <p>NJS CONSULTANTS CO., LTD.</p>	<p>PREPARED BY: RENATO A. ARRIOLA Filipino Registered Engineer PROF. MECHANICAL ENGINEER PIR. 1725187 REG. NO. 2379 DATE: JANUARY 07, 2013 T.I.N. 150-563-379 PLACE: TAGBILAG CITY</p>	<p>RECOMMENDING APPROVAL: ILDEFONSO T. PATDU, JR. Assistant Secretary for Project Implementation, DOTC</p>	<p>APPROVED: JULIANITO G. BUCAYAN, JR. Undersecretary for Project Implementation, DOTC</p>	<p>PROJECT TITLE: NEW BOHOL AIRPORT CONSTRUCTION AND SUSTAINABLE ENVIRONMENT PROTECTION PROJECT</p> <p>LOCATION: MUNICIPALITY OF PANGLAO, PROVINCE OF BOHOL, PHILIPPINES</p>	<p>SHEET CONTENTS: COMPONENT-4: BUILDING WORKS (B) SUBCOMPONENT-4-0: GENERAL MECHANICAL FIRE PROTECTION FIRE PROTECTION DETAIL (3)</p>	<p>SHEET NO: B0-5300-04</p> <p>DRAWING SCALE: NTS</p>
	<p>DATE: JUNE 2013</p> <p>INDEX</p> <p>AMENDMENTS</p> <p>Prepared by: WIM Checked by: HC Validated by:</p>					