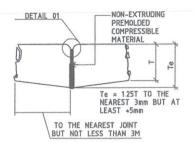
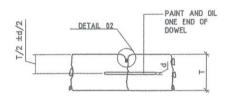


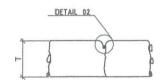
DIMENSIONS AND SPACING OF STEEL DOWELS						
	DOWELS					
PAVEMENT THICKNESS	CONTRACTION JOINTS			CONSTRUCTION JOINTS		
	DIAMETER &	LENGTH	SPACING	DIAMETER #	LENGTH	SPACING
.5"-12" (191mm-305mm)	16 mm DRSB	18 in (460 mm)	12 in (305 mm)	1ln (25 mm)	18 in (460 mm)	12 in (305 mm)



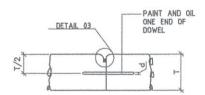
TYPE A (TA) - THICKENED EDGE (ISOLATION JOINT)



TYPE C (TC) - DOWELED CONTRACTION



TYPE D (TD) - DUMMY CONTRACTION

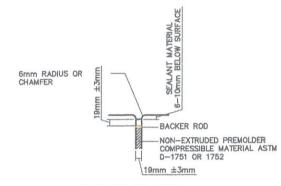


TYPE E (TE) - DOWELED CONSTRUCTION

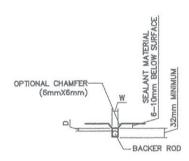


NOTE

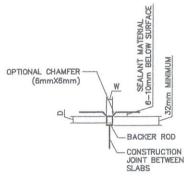
- 1. ALL STEEL DOWELS SHALL BE SUPPORTED AND HELD IN PLACE IN AN APPROVED ASSEMBLY.
- 2. ALL STEEL DOWELS SHALL BE OF GRADE 60 (60,000 psi / 414 MPa).
- 3. ALL FORMED JOINTS SHALL BE FINISHED WITH RADIUS OF 6mm OR 13mm.
- 4. ALL GROOVES OF CONTRACTION JOINTS SHALL BE SAWED WITHIN 24 HOURS.
- 5. WHERE PAYING OPERATIONS ARE DELAYED OR STOPPED, PROVIDE DOWELED CONSTRUCTION JOINT.
- 6. CONCRETE BLOCKING SHALL BE 3.0m BY 3.0m, UNLESS OTHERWISE GOVERNED BY ABUTTING EDGE.
- 7. ALL PAVING JOINTS SHALL BE FILLED WITH JOINT SEALANT AS SPECIFIED.
- 8. PROVIDE PIN HOLDERS EVERY 1.5M AT TRANSVERSE JOINTS



DETAIL 01

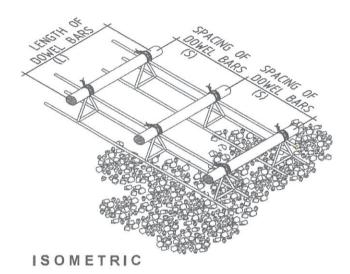


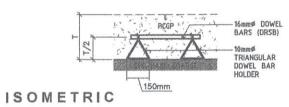
DETAIL 02



DETAIL 03



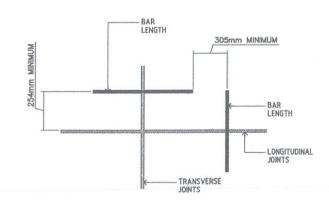






SECTION

DOWEL BAR HOLDER



POSITION OF DOWELS AT EDGE OF JOINT





REPUBLIC OF THE PHILIPPINES

CIVIL AVIATION AUTHORITY OF THE PHILIPPINI
AERODROME DEVELOPMENT AND MANAGEMENT SERVE
NAME ROAD, 1340 PARAY CITY

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AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

RAWN BY:	E.V.B / L.D.	TIM
HECKED BY:	EJDJR	- Comment

REVIEWED



ON

RECOMMENDED APPROVAL

ARNEL F. BORLADO
Department Manager III, AED-AD

I T CONSIDER A PAE /Bot

APPROVED:

CAPTAIN MANUEL ANYONIO L. TAMAY

NOTES/REVISIO

BORONGAN AIRPORT DEVELOPMENT PROJECT COMPLETION OF VEHICULAR PARKING AREA

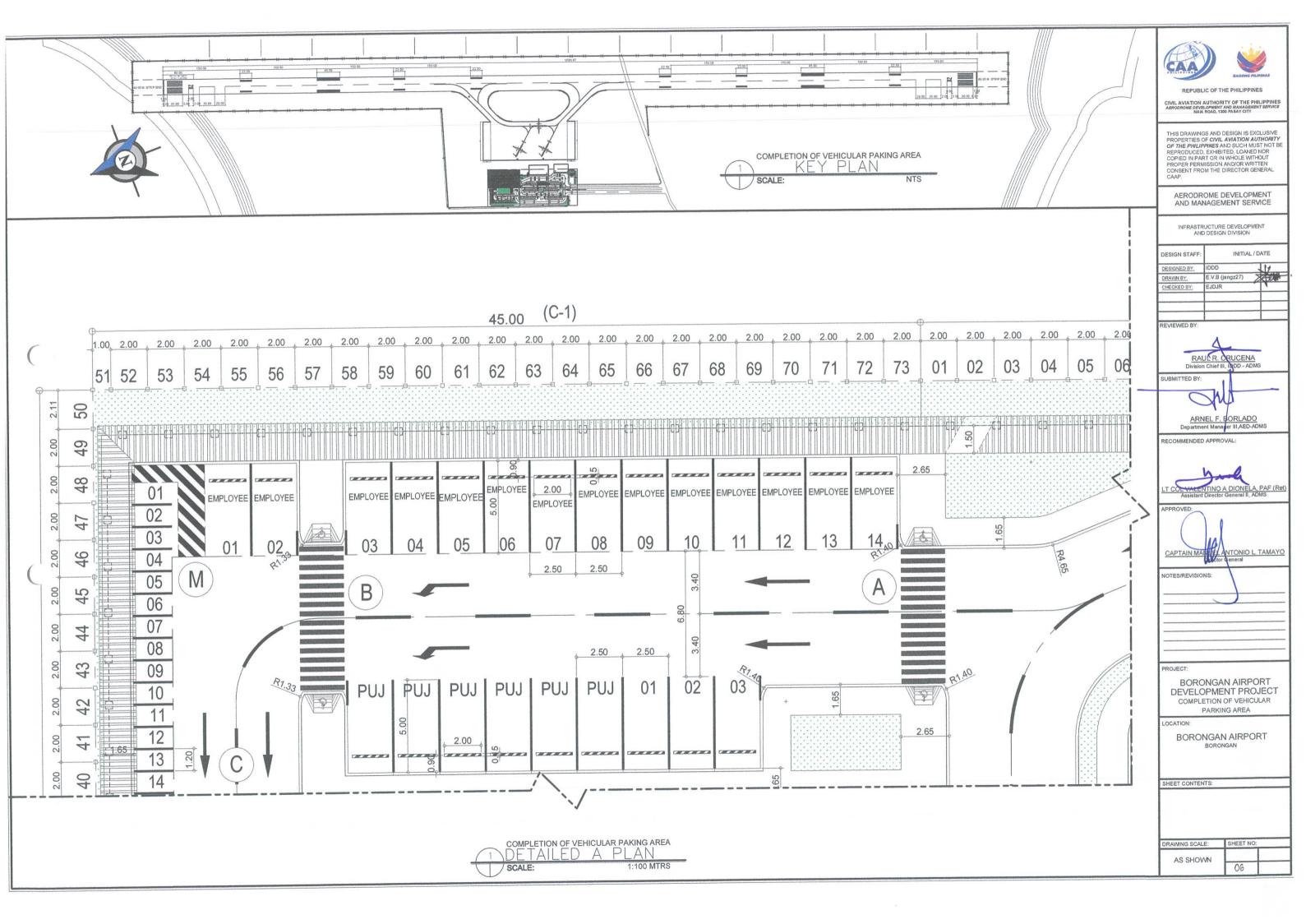
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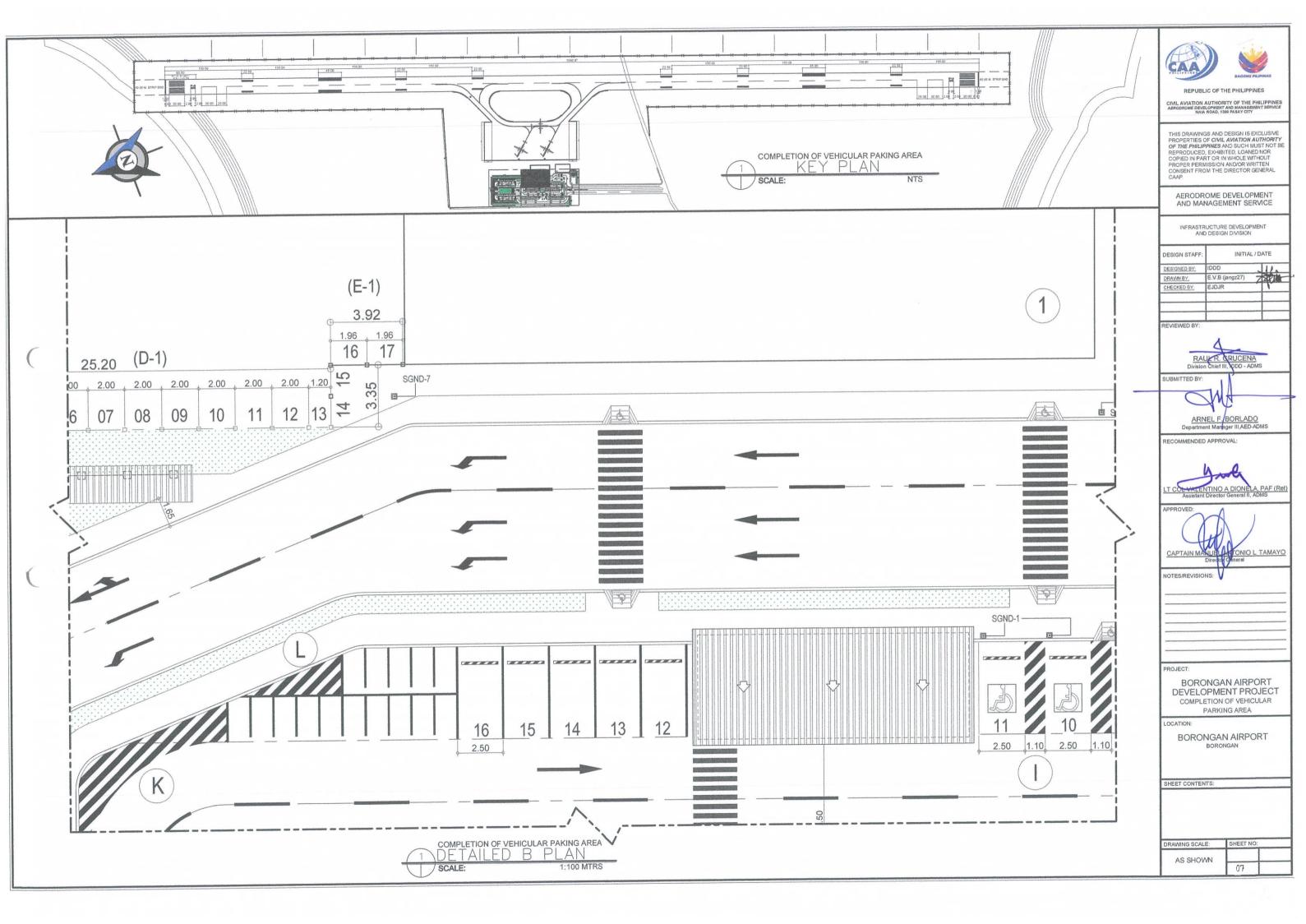
BORONGAN AIRPORT BORONGAN

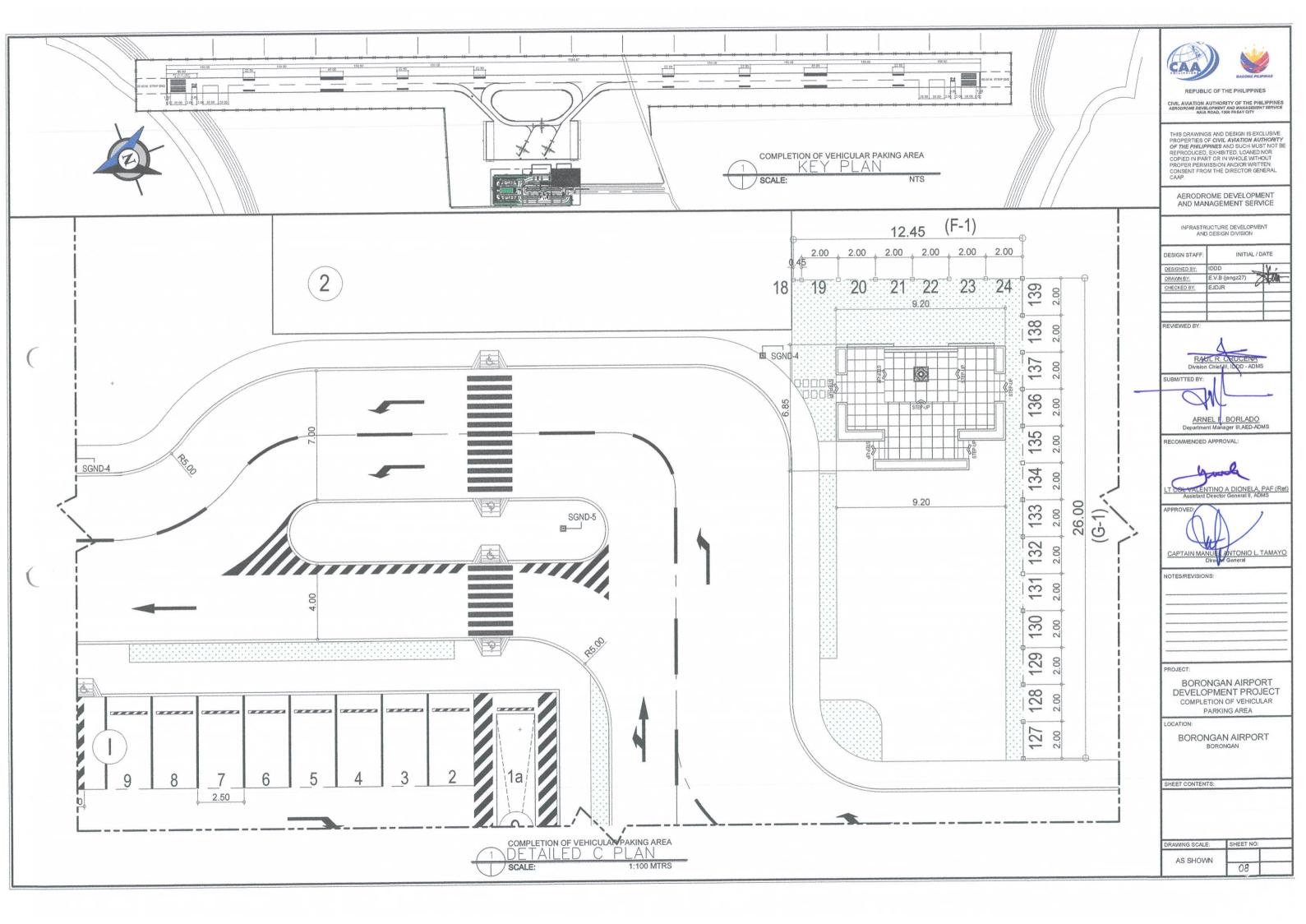
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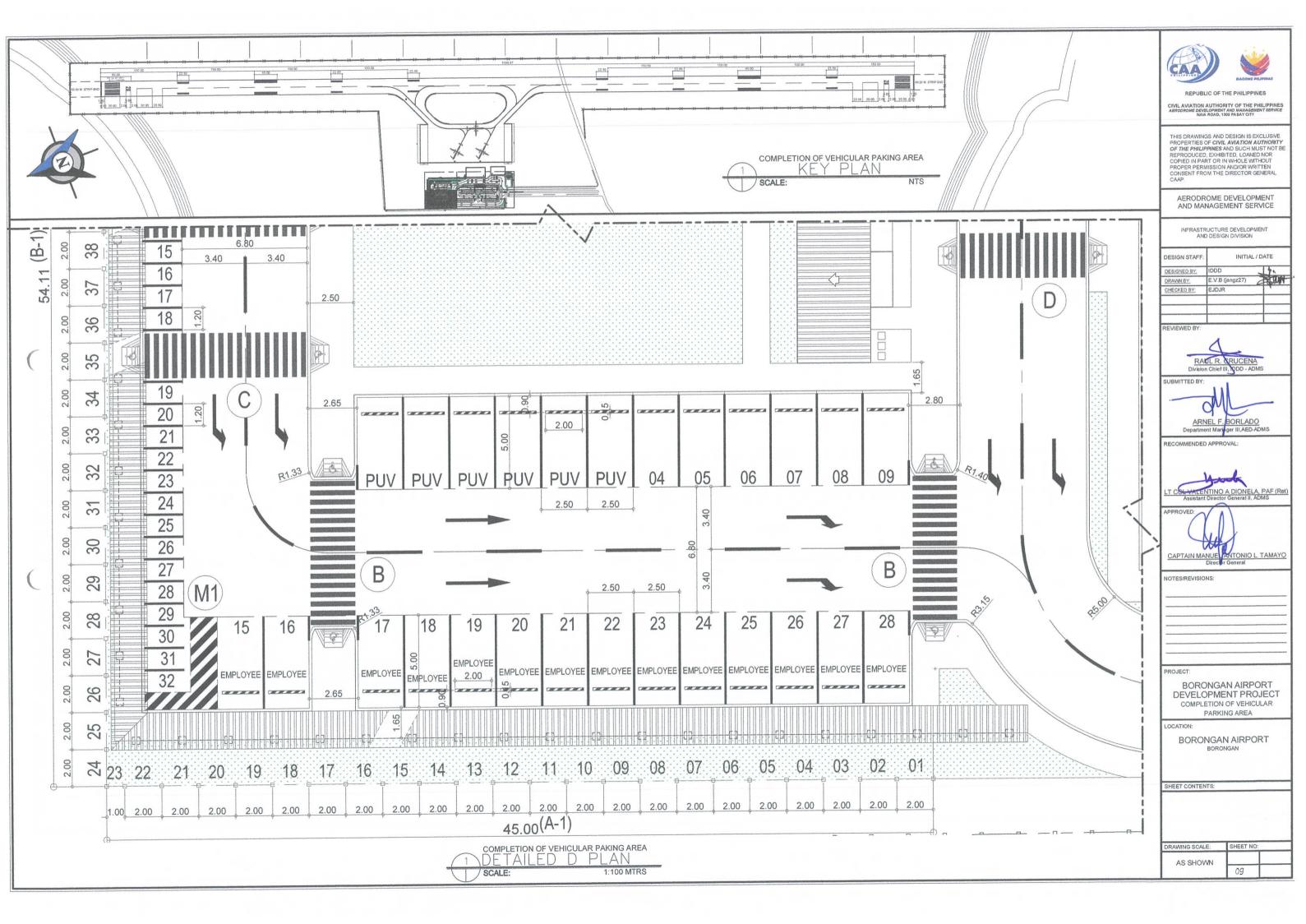
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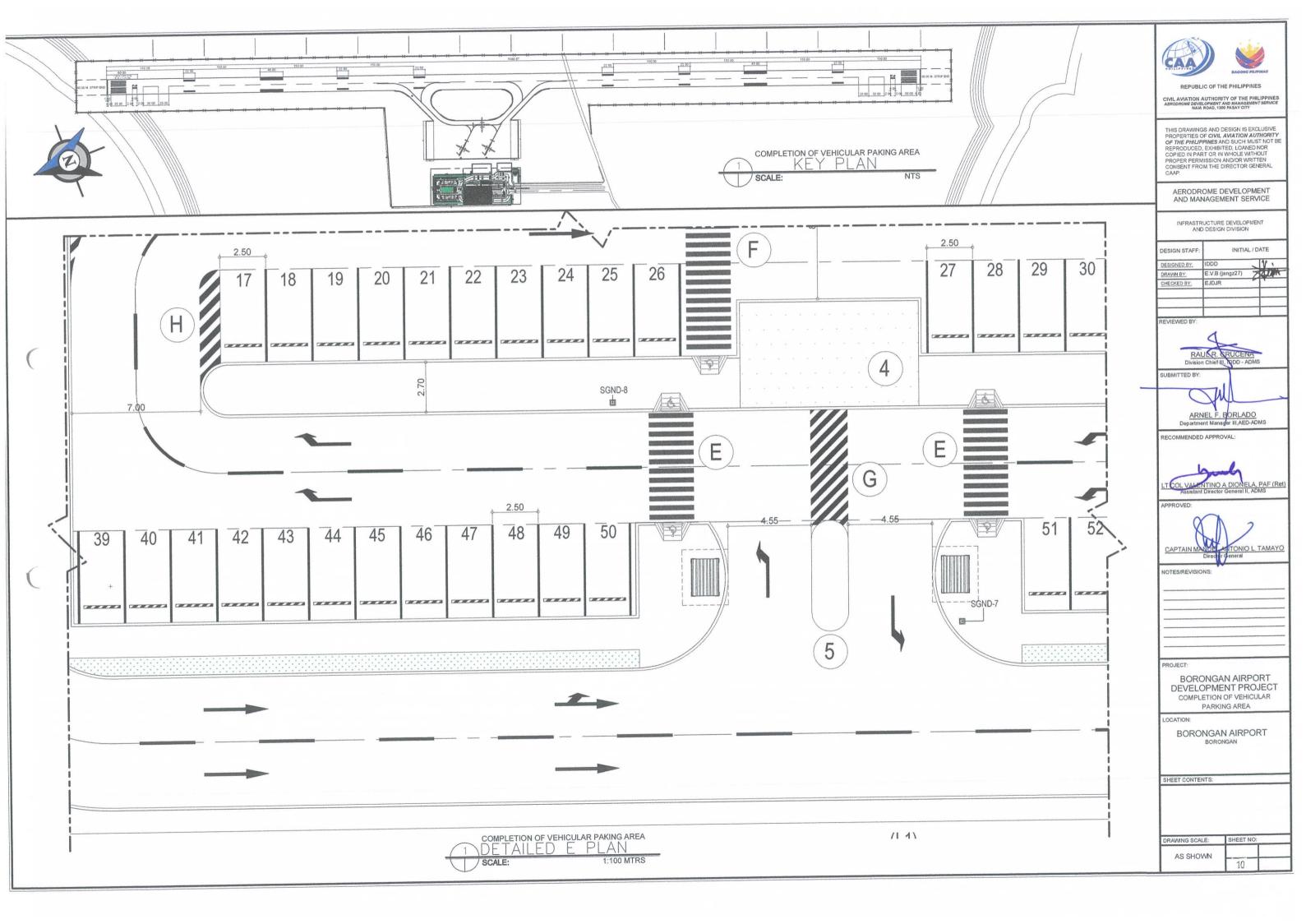
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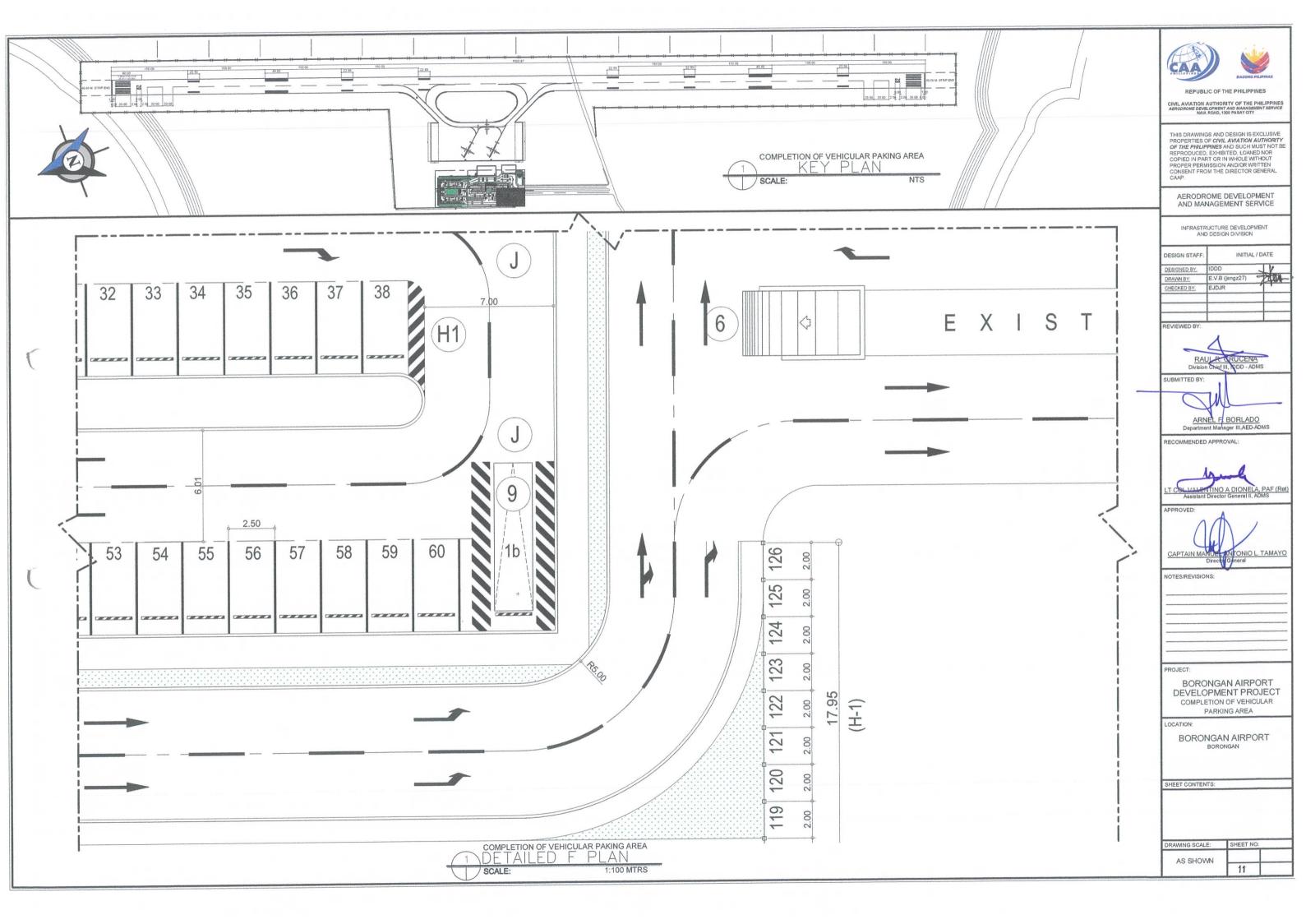


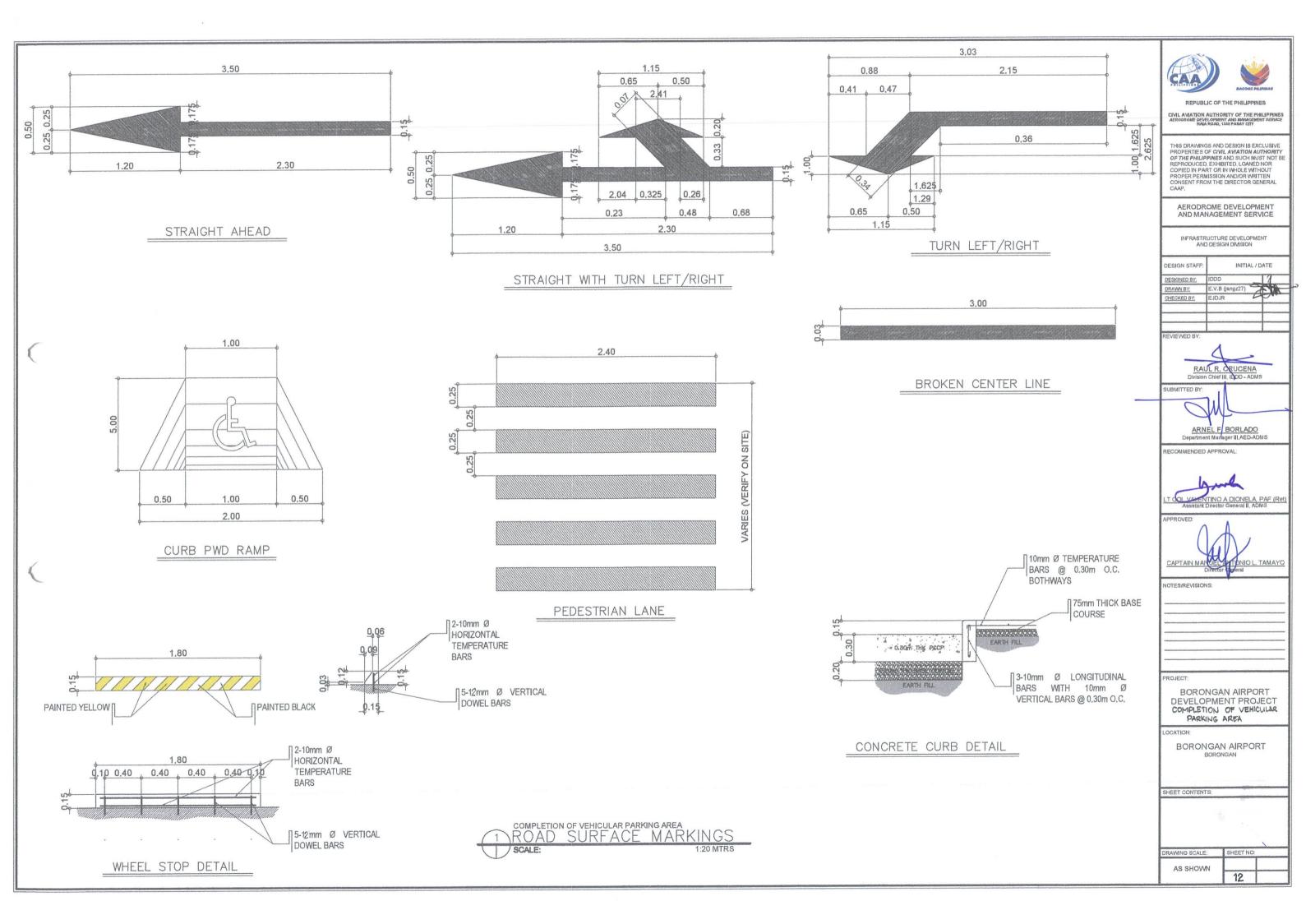


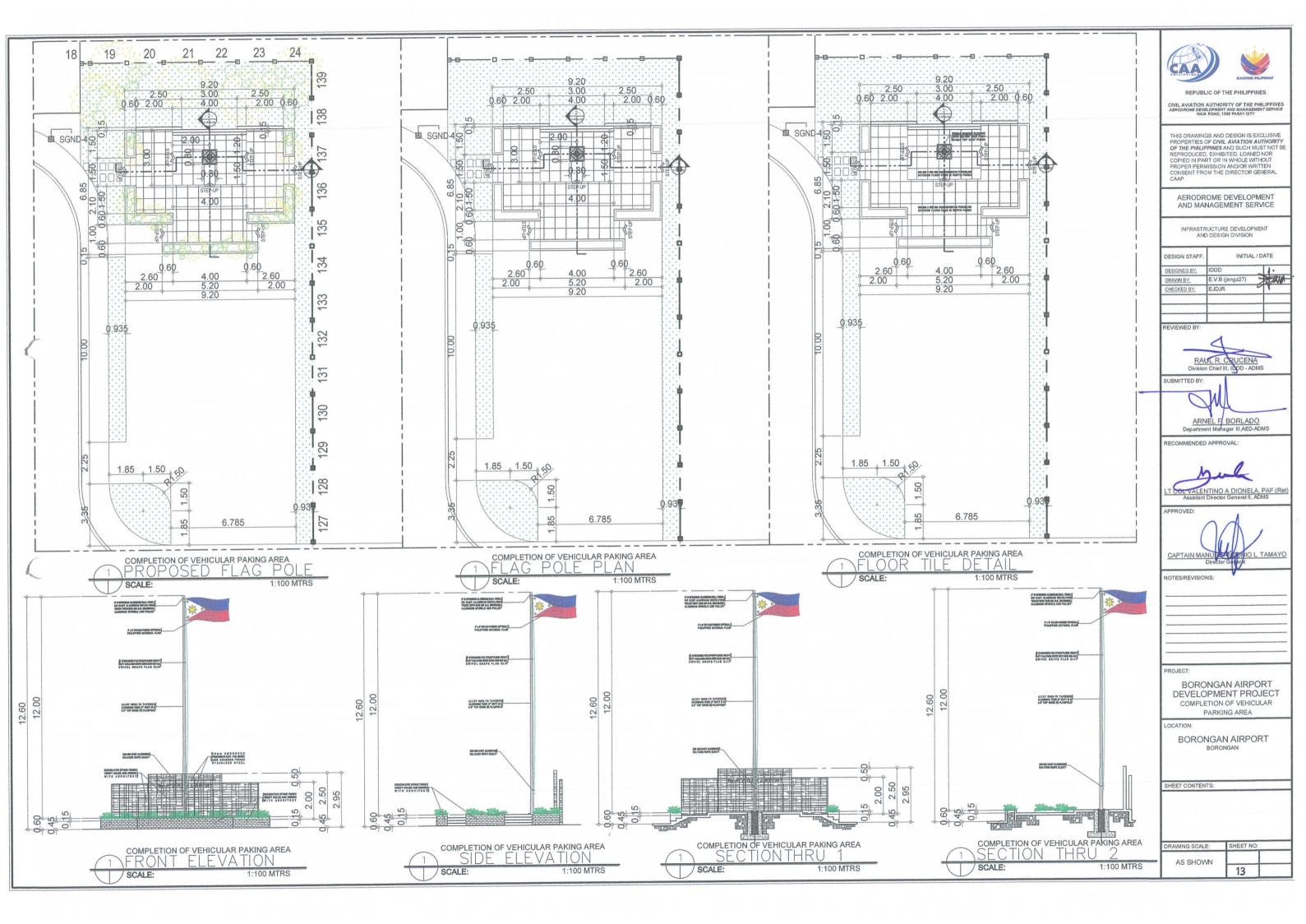


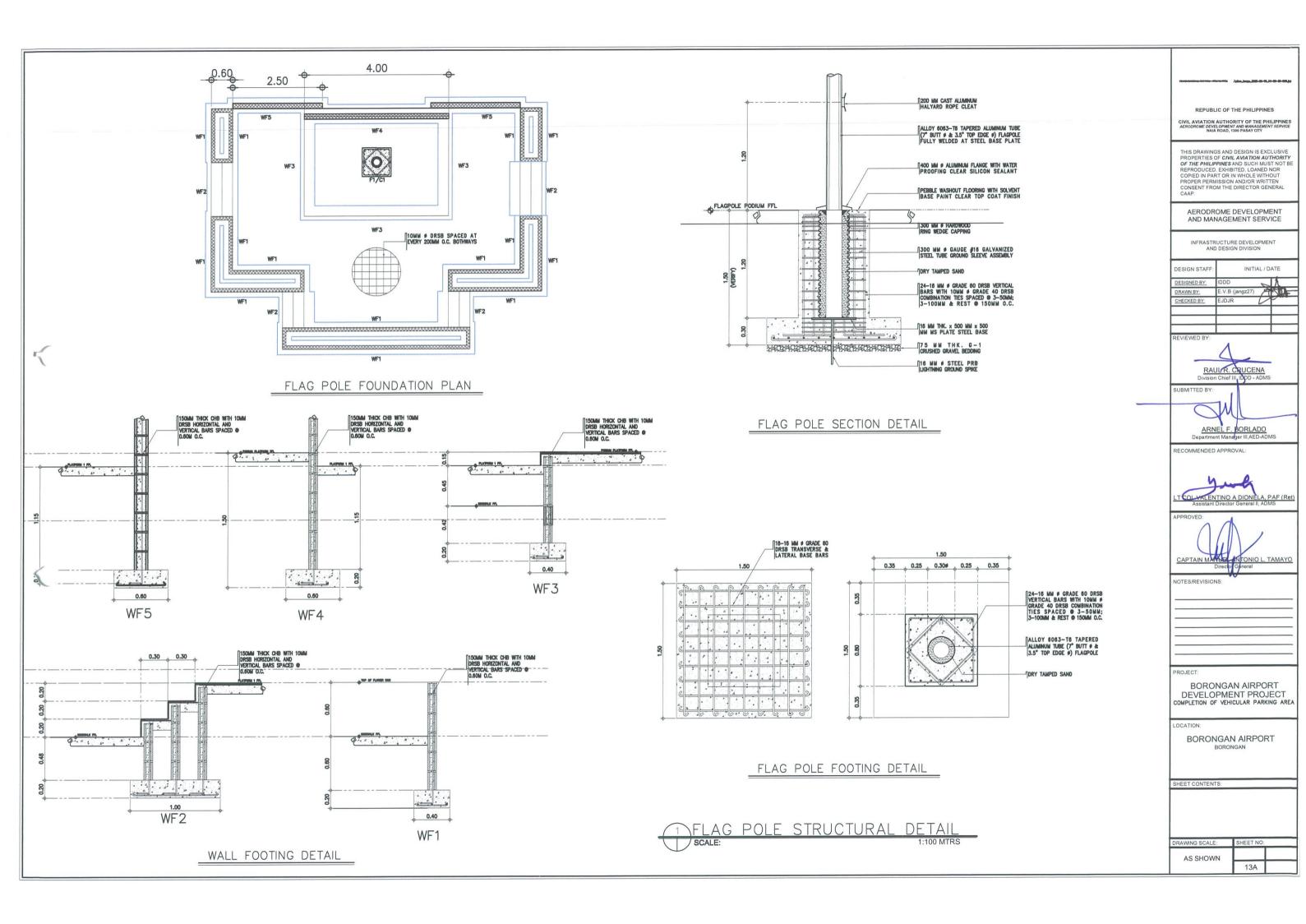


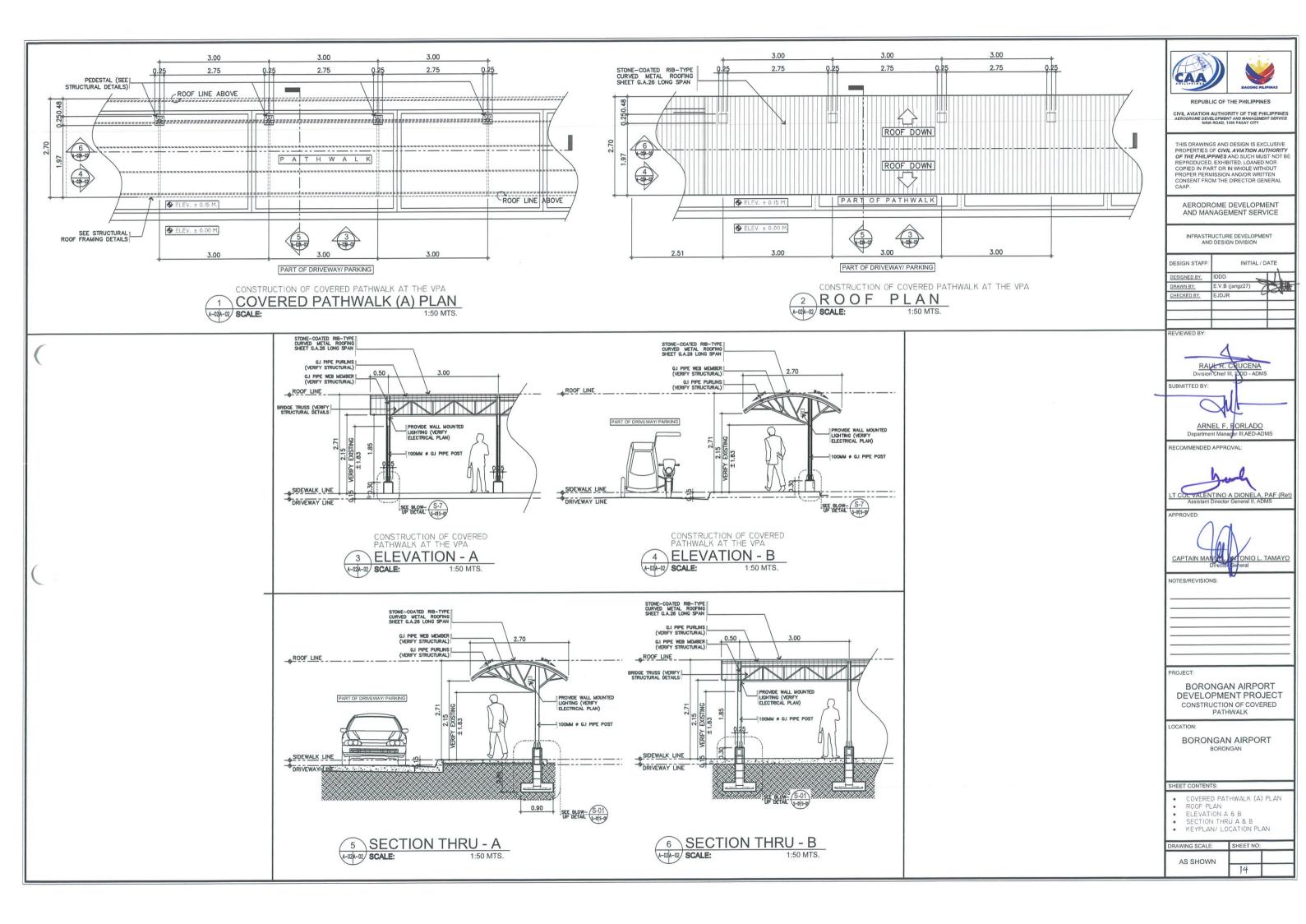


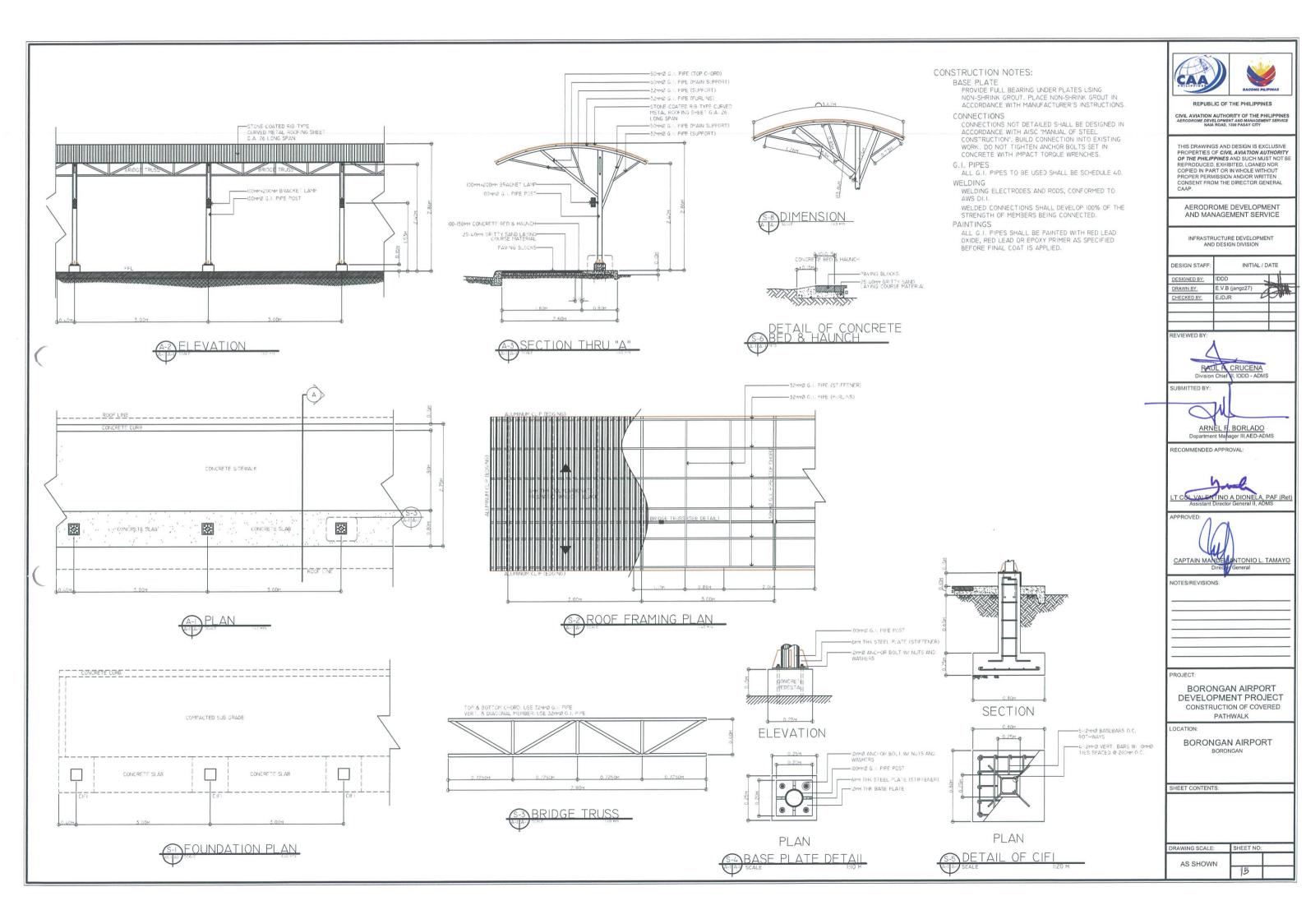


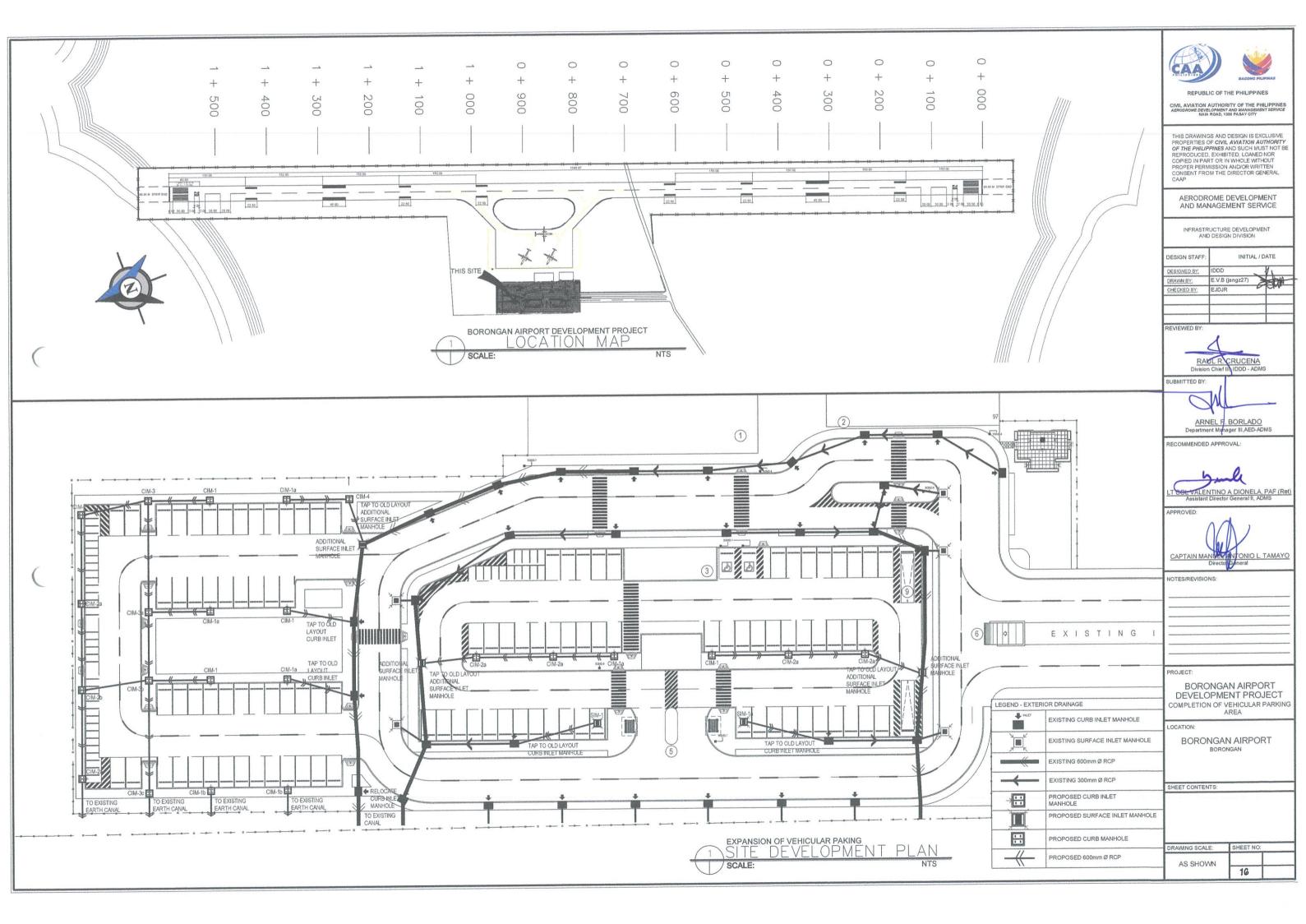


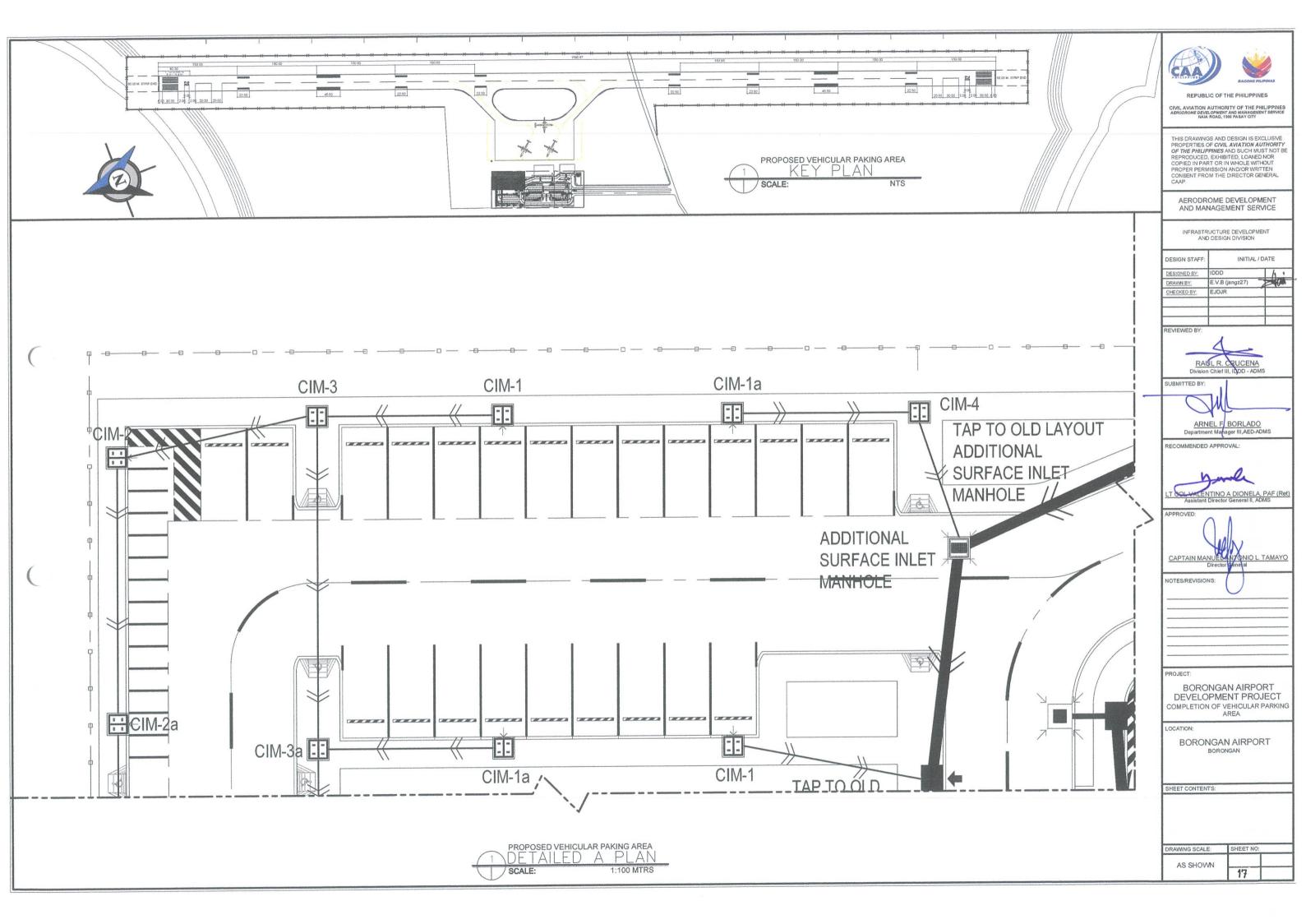


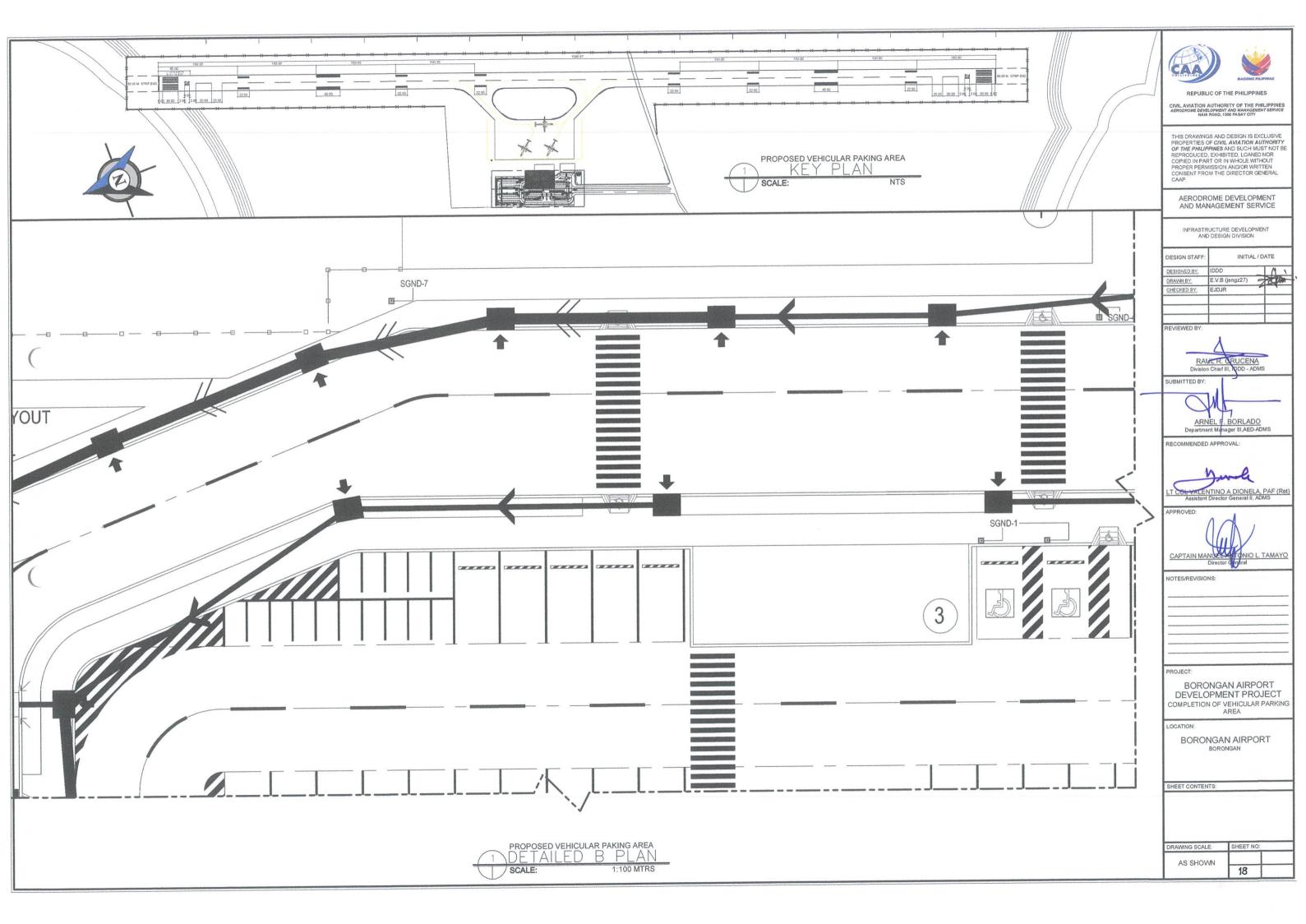


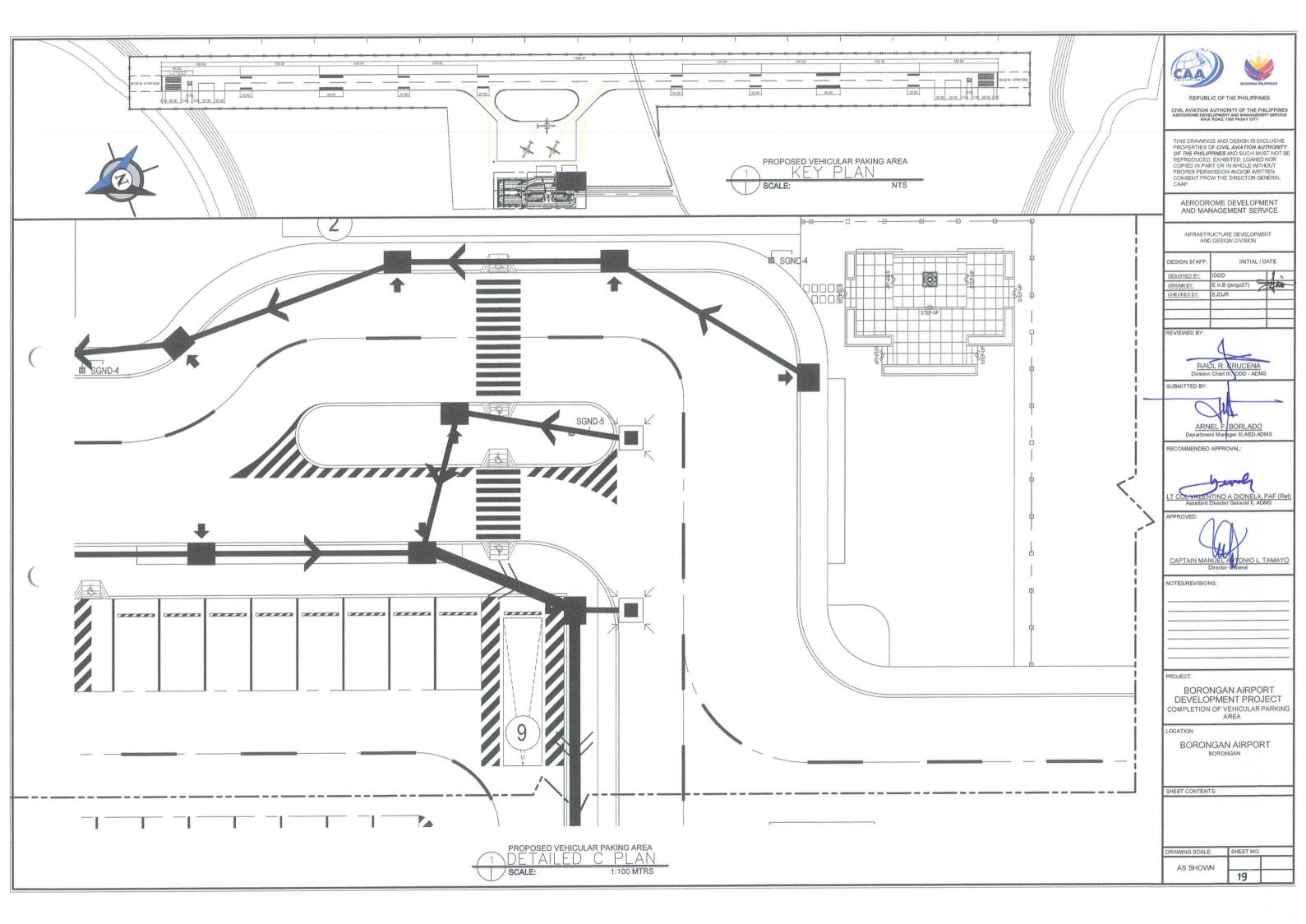


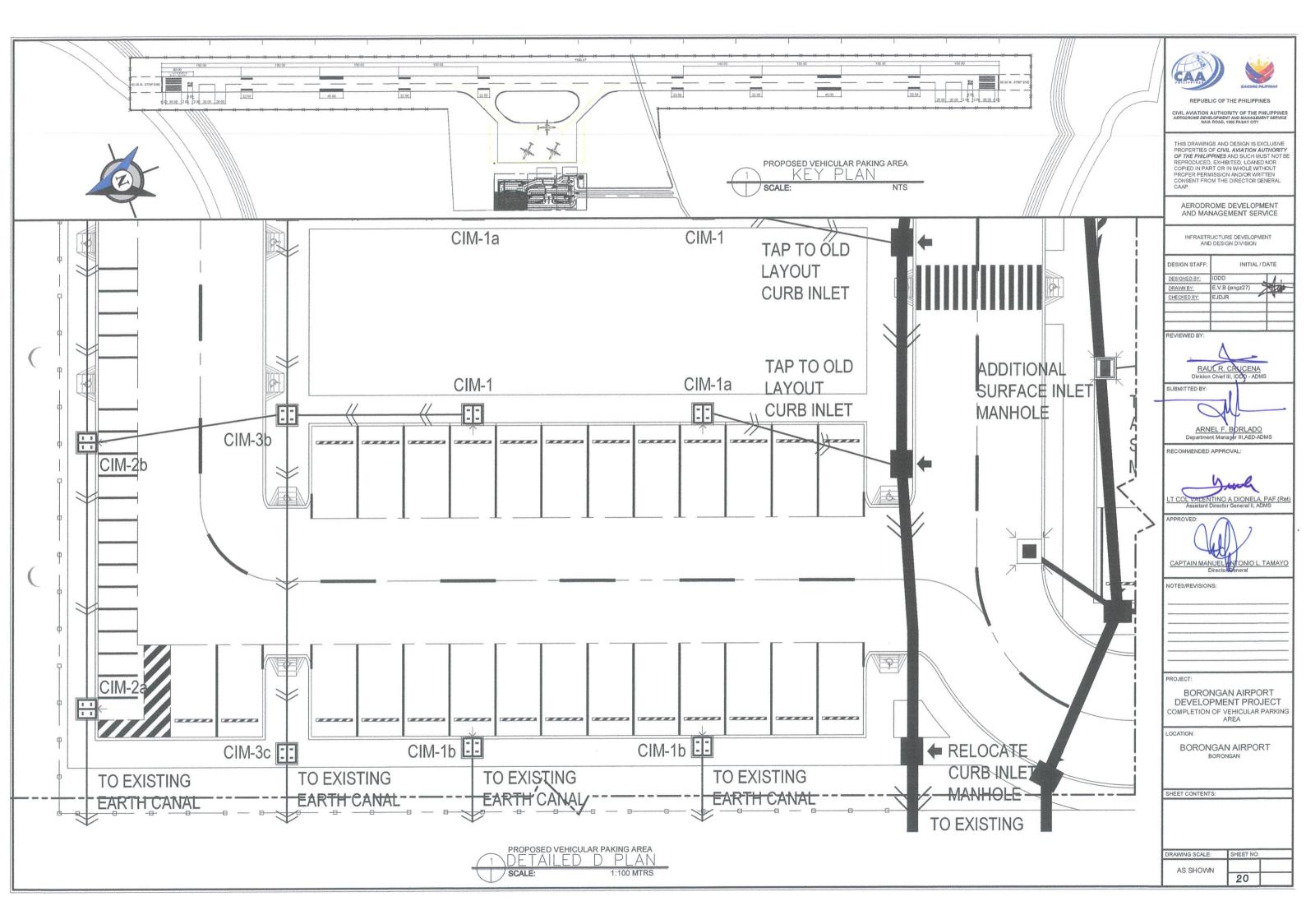


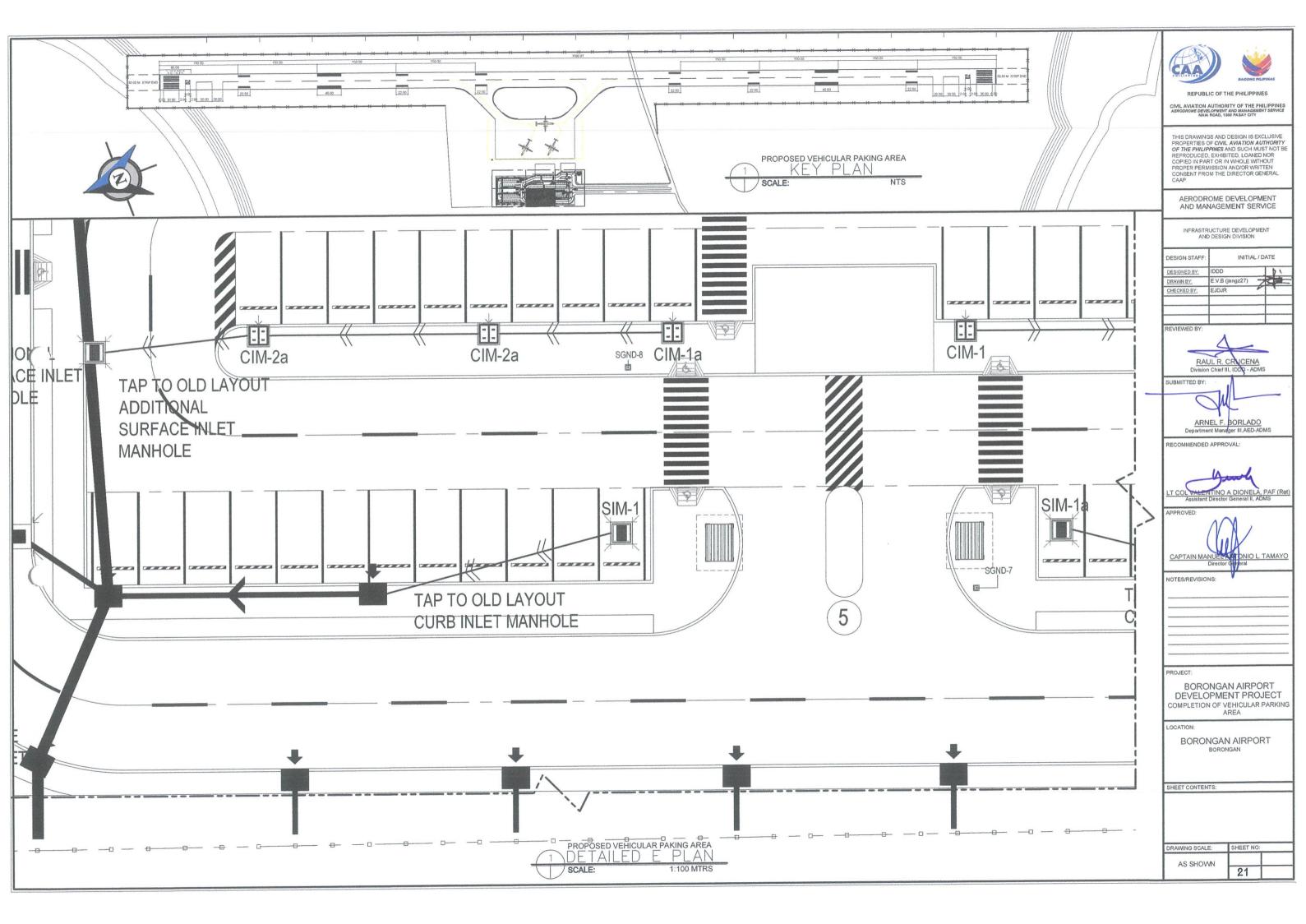


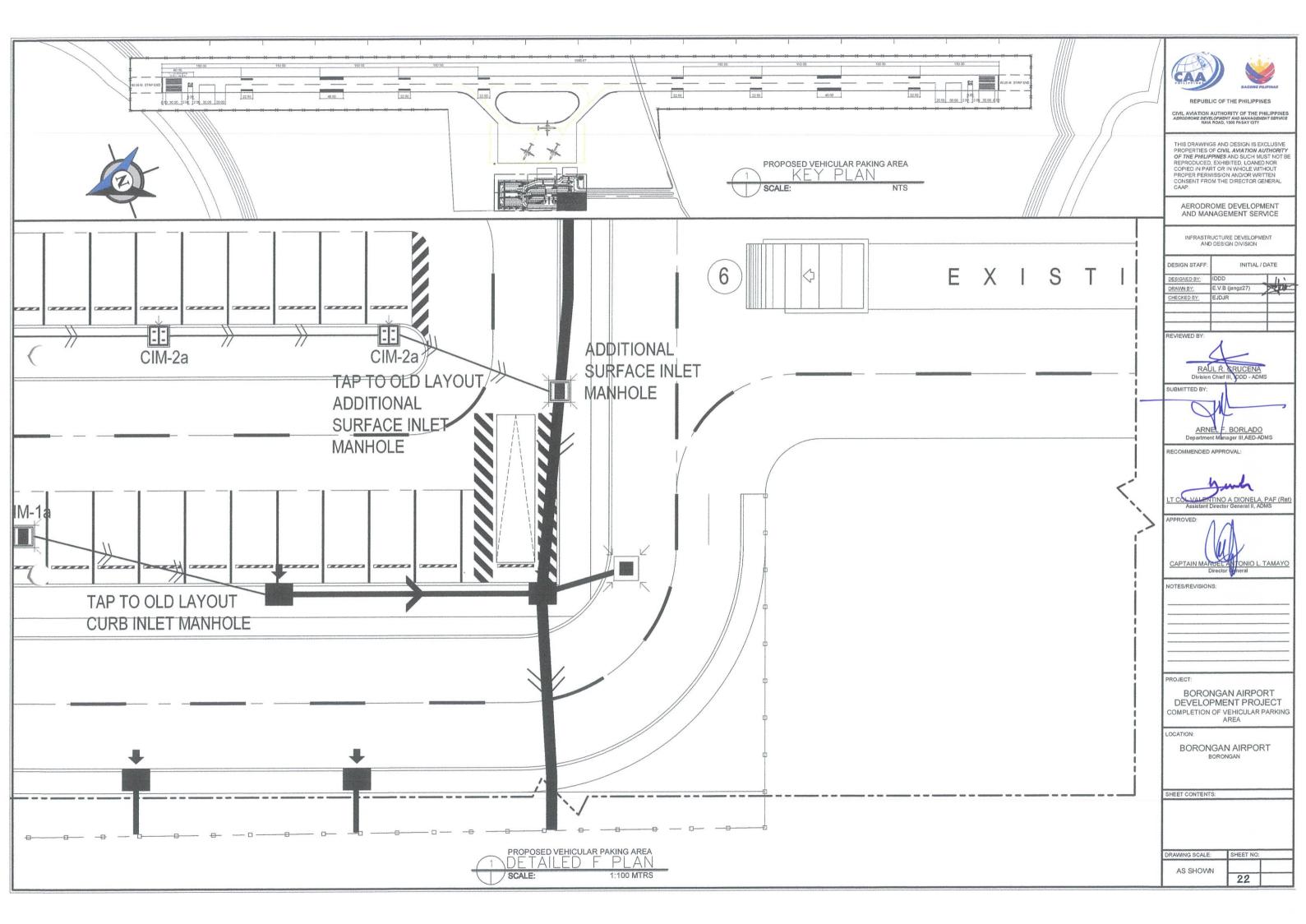


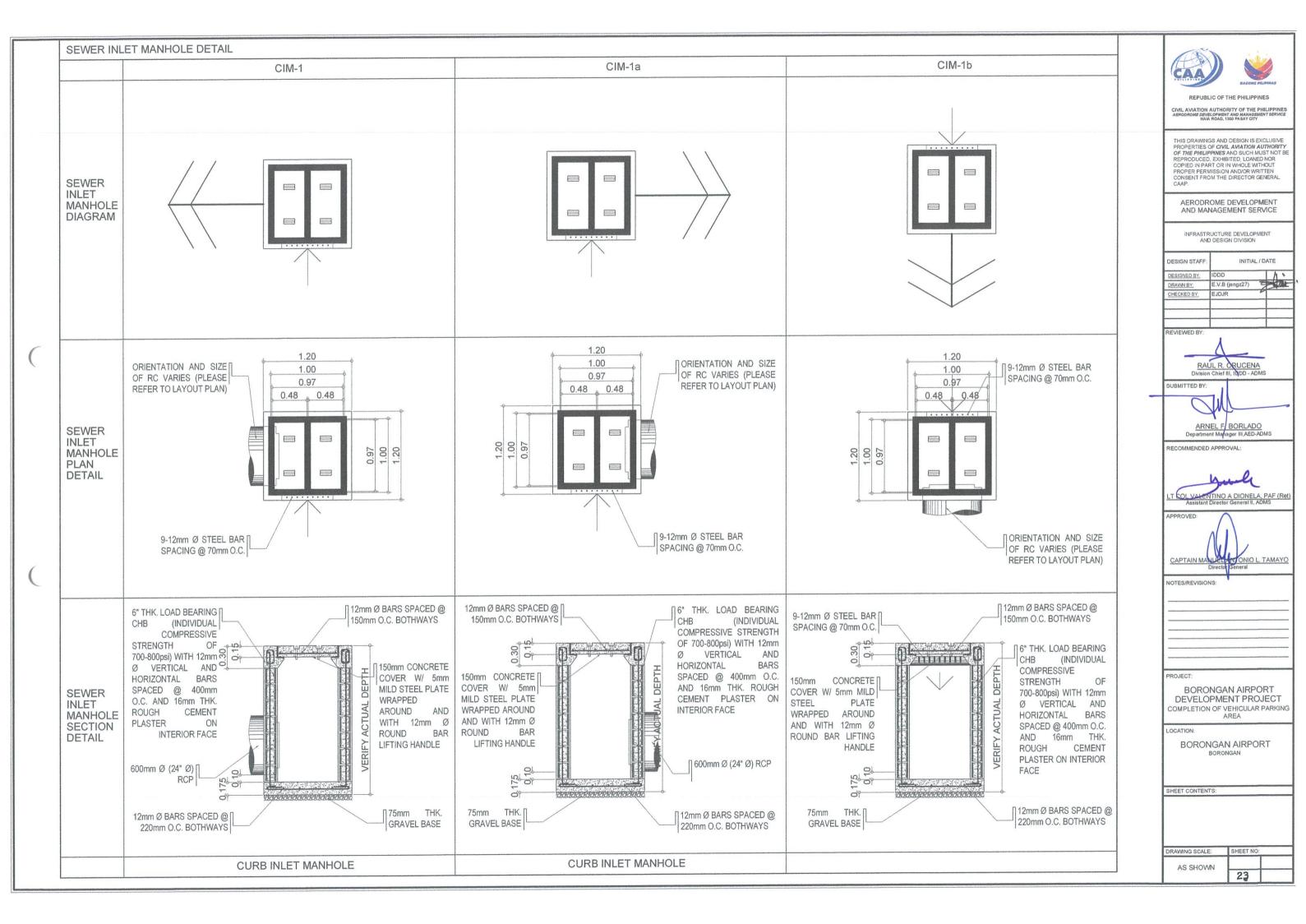


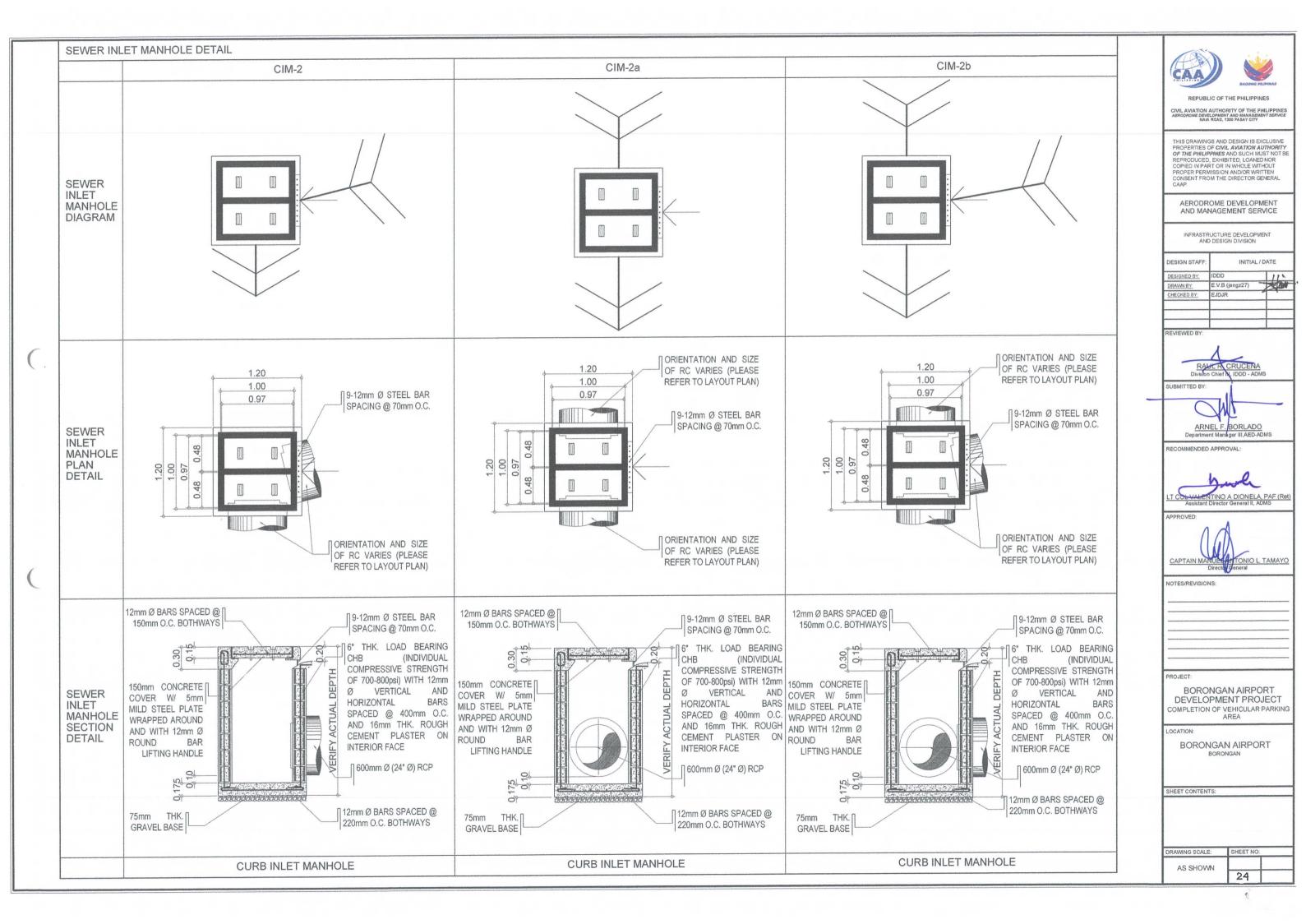


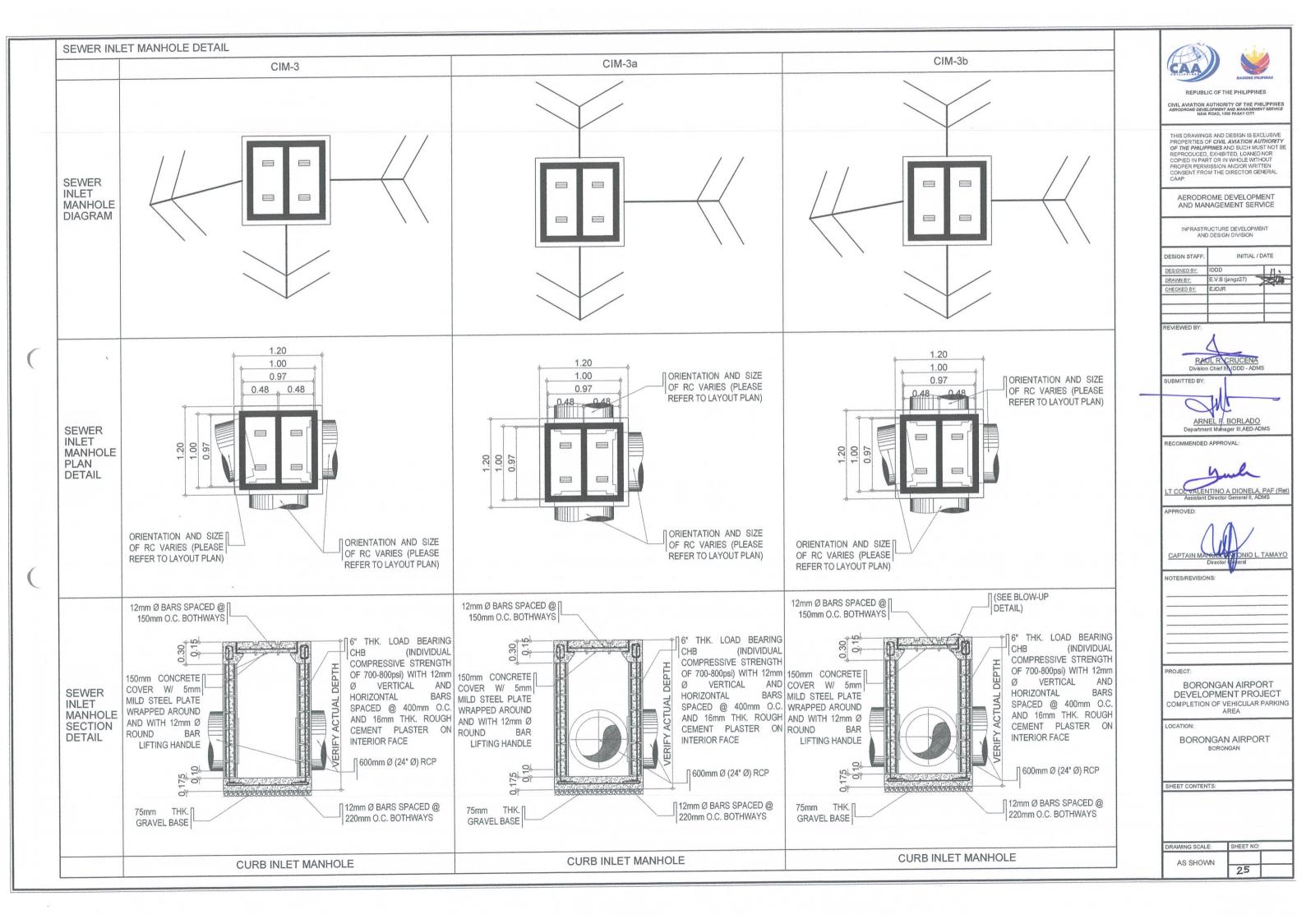


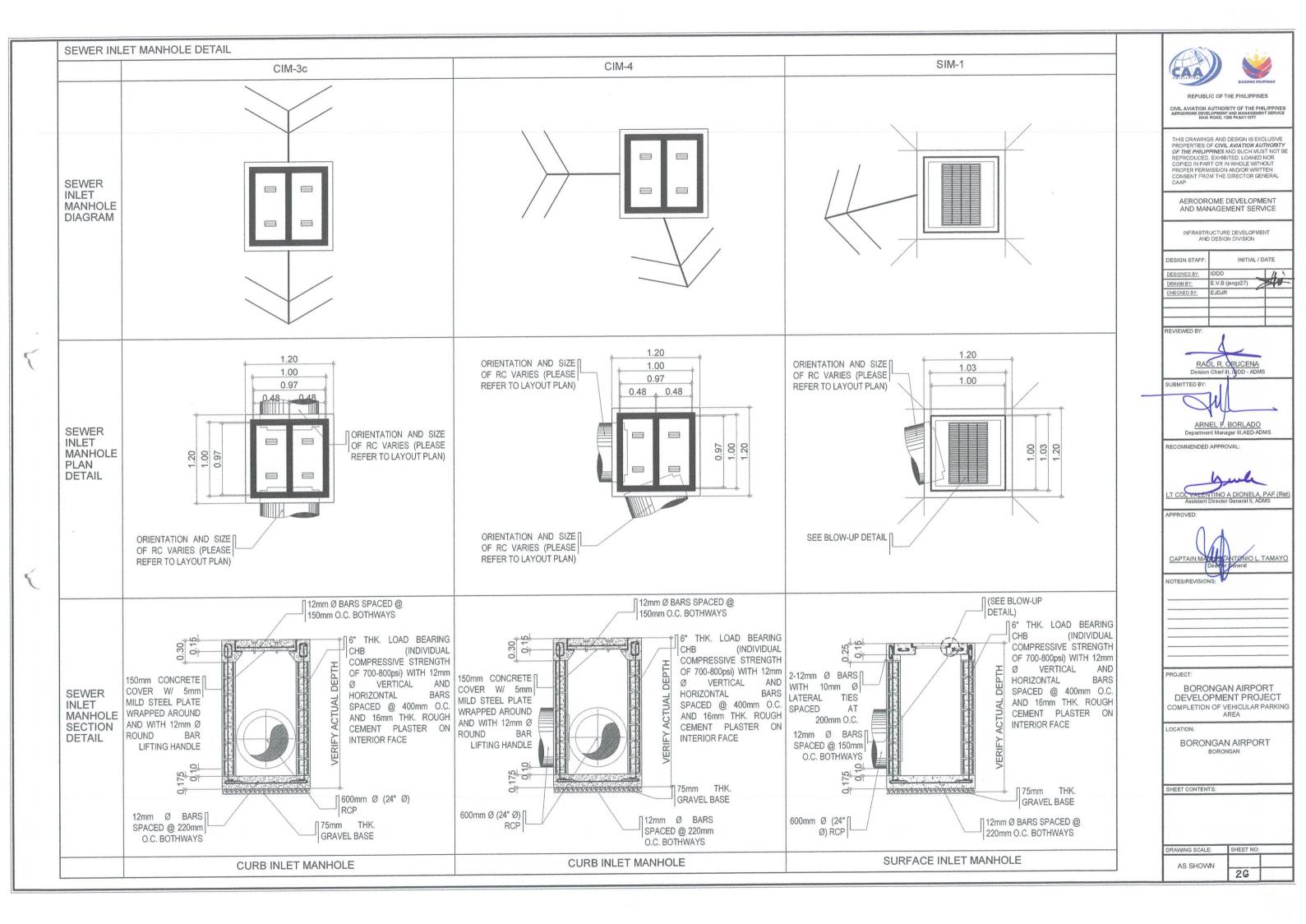


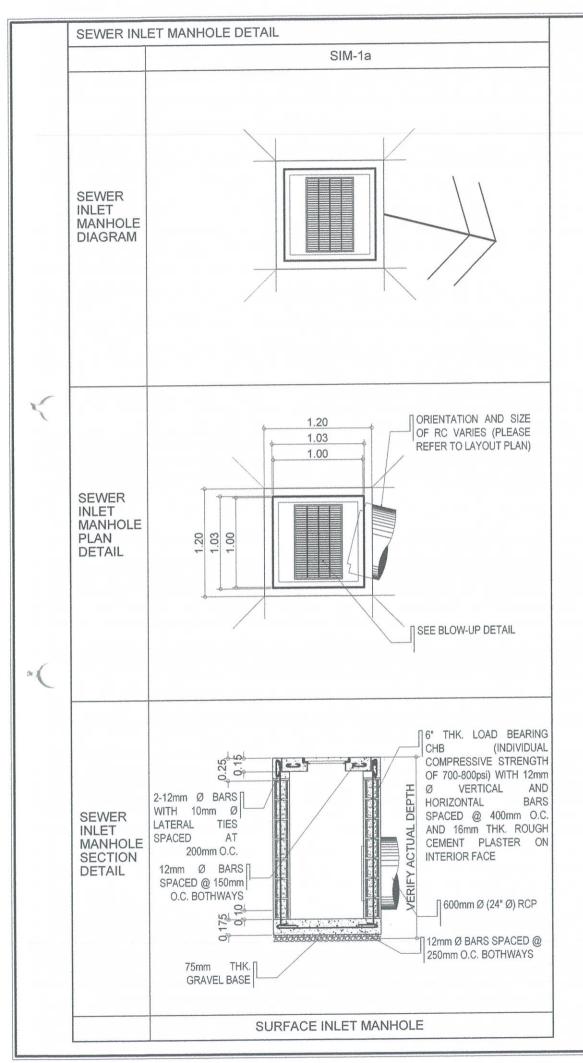






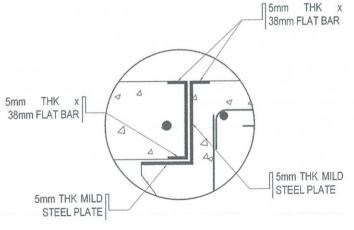




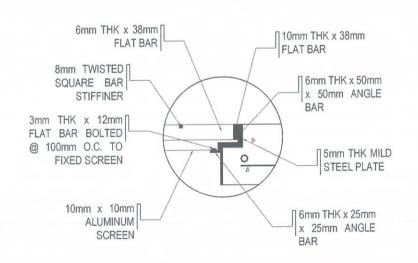


SEWER INLET MANH	OLE DETAI	L		
		QUANTITY		
INLET MANHOLE	WIDTH (M)	LENGTH (M)	DEPTH (M)	QUANTITI
CURB INLET MANHOLE (CIM)				
CIM - 1	1.20	1.20	verify on site	4
CIM - 1a	1.20	1.20	verify on site	4
CIM - 1b	1.20	1.20	verify on site	2
CIM - 2	1.20	1.20	verify on site	1
CIM - 2a	1.20	1.20	verify on site	6
CIM - 2b	1.20	1.20	verify on site	1
CIM - 3	1.20	1.20	verify on site	1
CIM - 3a	1.20	1.20	verify on site	1
CIM - 3b	1.20	1.20	verify on site	1
CIM - 3c	1.20	1.20	verify on site	1
CIM - 4	1.20	1.20	verify on site	1
SURFACE INLET MANHOLE (CIM)				
SIM - 1	1.20	1.20	verify on site	1
SIM - 1a	1.20	1.20	verify on site	1

LEGEND - EXTER	RIOR DRAINAGE
HALET	EXISTING CURB INLET MANHOLE
	EXISTING SURFACE INLET MANHOLE
	EXISTING 600mm Ø RCP
\leftarrow	EXISTING 300mm Ø RCP
11	PROPOSED CURB INLET MANHOLE
	PROPOSED SURFACE INLET MANHOLE
1 1	PROPOSED CURB MANHOLE
	PROPOSED 600mm Ø RCP







SURFACE INLET MANHOLE





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AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

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ARNEL F. BORLADO
Department Manager III, AED-ADMS

RECOMMENDED APPROVAL:



	l		1	MANUEL ANTONIO L. TAMAYO
CA	P	I	N	MANUEL ANTONIO L. TAMAYO
	V	ď	L	Director General

NOTES/REVISIONS:

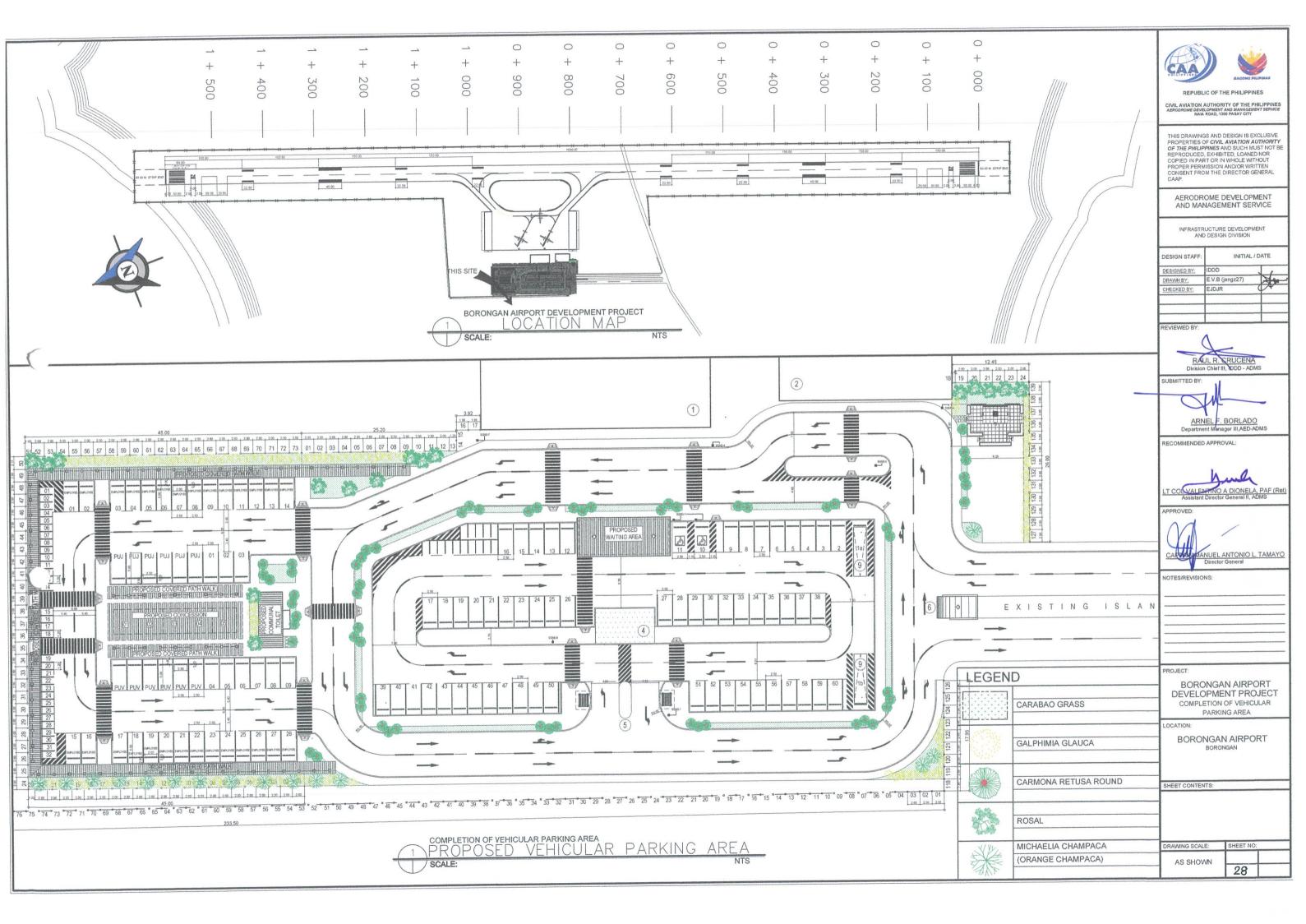
BORONGAN AIRPORT DEVELOPMENT PROJECT COMPLETION OF VEHICULAR PARKING AREA

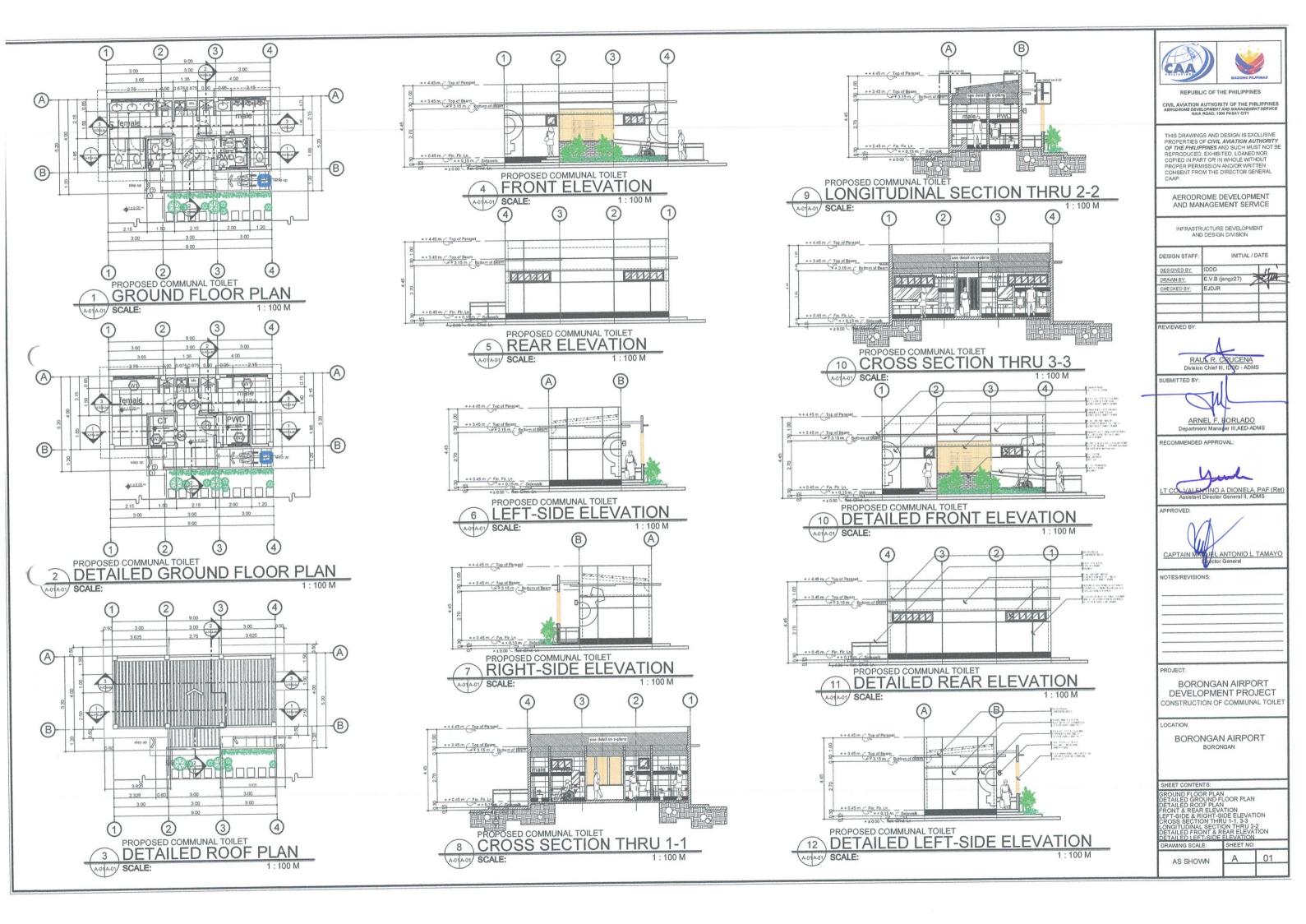
BORONGAN AIRPORT BORONGAN

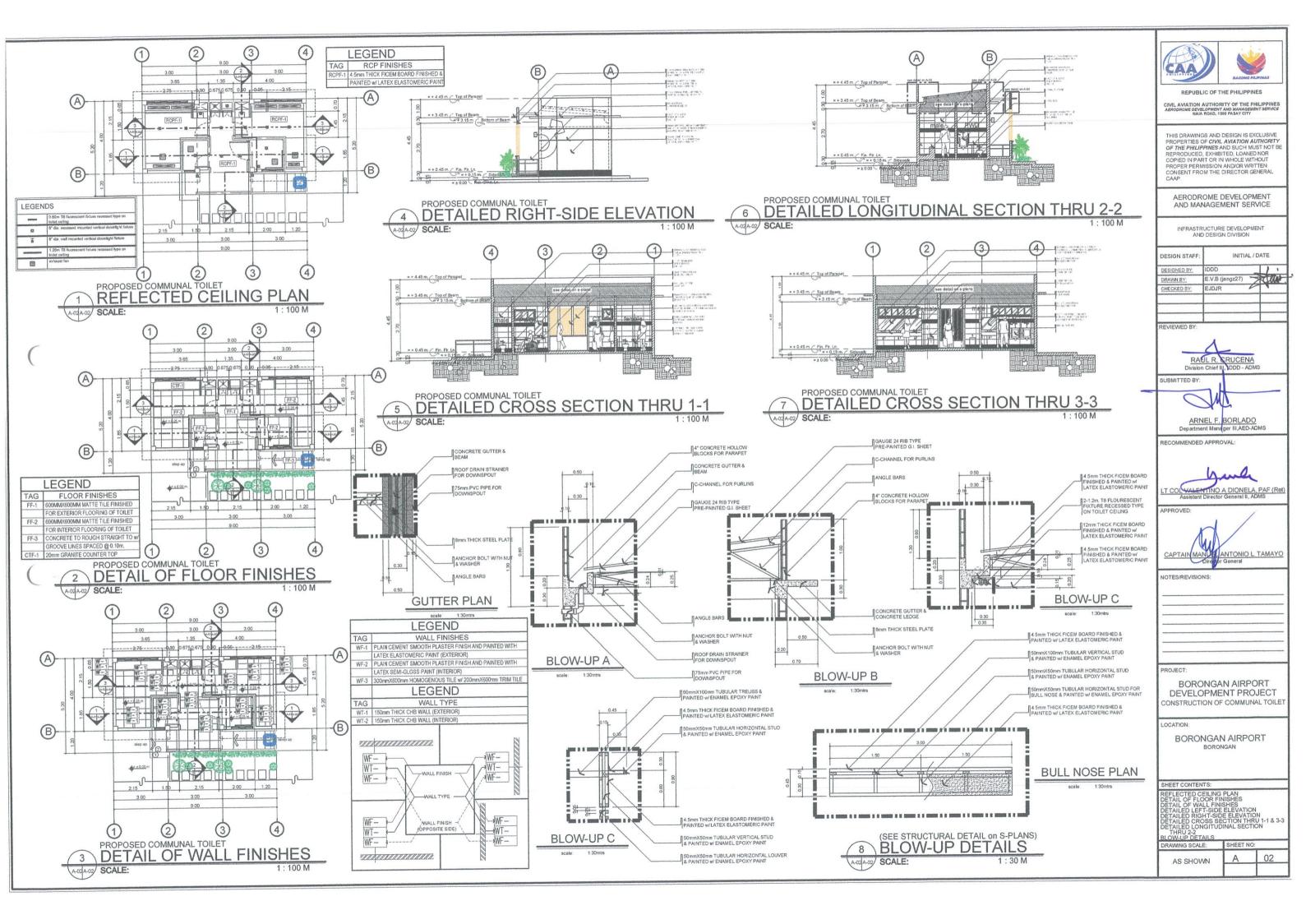
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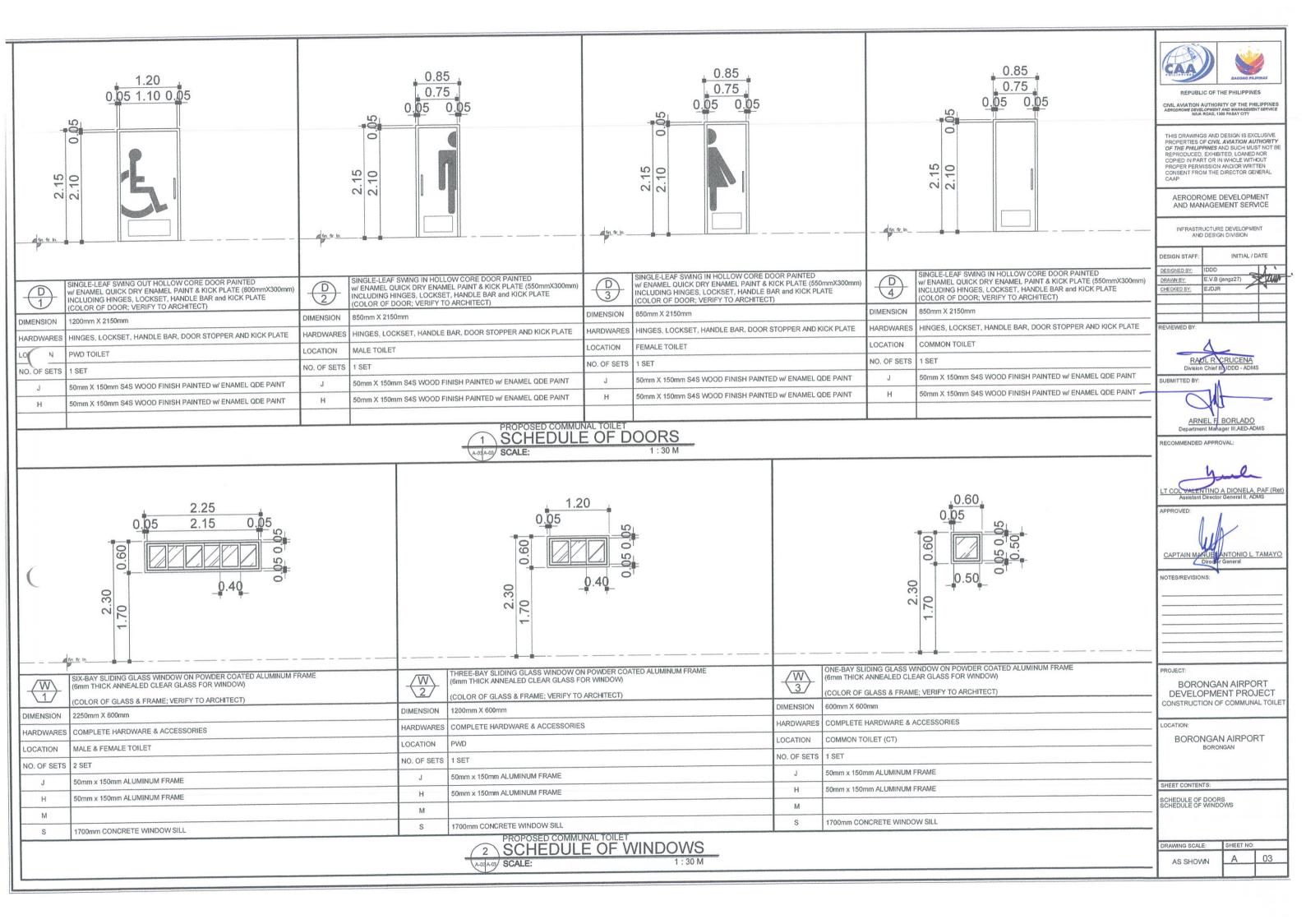
DRAWING SCALE: SHEET NO: AS SHOWN

27









CONSTRUCTION NOTES:

STEEL:

REINFORCING STEEL BAR:

PROVIDE THE FOLLOWING UNLESS INDICATED OTHERWISE

ALL MAIN REINFORCING BARS SHALL BE DEFORMED CONFORMING TO ASTM A706.

B. YIELD STRENGTH

THE MINIMUM YIELD STRENGTH OF REINFORCEMENT TO BE USE CORRESPONDING TO THE STRUCTURAL MEMBER SHALL BE ENUMERATED BELOW:

FOOTINGS/ FOOTING TIE BEAMS COLUMNS/ REAMS

Ev = 60 000 Ps Fy = 60,000 Psi Fv = 40.000 Ps

SLABS (ON GRADE AND SUSPENDED)

• ASTM 36 GRADE 36 (Fy = 248 KPa, 36 Ksi) FOR ROOF RAFTERS.

STEEEL TRUSS:

A. DOUBLE ANGLE SHALL BE PLACED BACK TO BACK WITH 6mm THK GUSSET PLATE AT CONNECTION.

B. SPLICE PLATE SHALL BE 10mm THK STEEL PLATE.

C. WELDED CONNECTION SHALL DEVELOP 125% OF THE STRENGTH OF MEMBERS BEING CONNECTED

® BOLTS, NUTS, AND WASHERS:

PROVIDE THE FOLLOWING UNLESS INDICATED OTHERWISE:

A. BOLTS: ASTM A 307, GRADE A; ASTM A 325 TYPE 1 OR TYPE II.

B. NUTS: ASTM A 563, GRADE A; HEAVY HEX STYLE, EXCEPT NUTS UNDER 1-1/2 INCH MAYBE PROVIDED IN HEX STYLE.

C. WASHERS: ANSI B 18.22.1, TYPE B.

CONCRETE:

'X DESIGN SHALL CONFORM TO ACI 211.1 AND ACI 301. THE MINIMUM 28-DAY CYLINDER COMPRESSIVE

RENGTH SHALL BE: Fc' = 24.00MPa (8500Psi) FOUNDATIONS, COLUMNS, BEAMS, SUSPENDED SLABS.

Fc' = 24.00 MPa (3500Psi) SLAB ON FILL, GRADED SLABS.

CEMENT

CEMENT FOR THE CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF "SPECIFICATIONS FOR PORTLAND CEMENT" (ASTM C150, LATEST EDITION).

CONCRETE AGGREGATES

A. FINE AGGREGATE

FINE AGGREGATES SHALL CONSIST OF NATURAL PORAC SAND. FINE AGGREGATES SHALL CONSIST OF HARD, TOUGH, DURABLE, UNCOATED PARTICLES. THE STIPULATED PERCENTAGE OF FINES IN THE SAND SHALL BE OBTAINED EITHER BY THE PROCESSING OF NATURAL SAND OR BY THE PRODUCTION OF A SUITABLY GRADED MANUFACTURED SAND.

B COARSE AGGREGATE COARSE AGGREGATES SHALL CONSIST OF GRAVEL, CRUSHED GRAVEL OR ROCK, OR A COMBINATION OF GRAVEL AND CRUSHED GRAVEL OR ROCK, APPROVED BY THE STRUCTURAL ENGINEER. THE COARSE AGGREGATE, AS DELIVERED TO THE SITE, SHALL HAVE UNIFORM AND STABLE MOISTURE CONTENT.

THE SIZES OF COARSE AGGREGATE TO BE USED IN THE VARIOUS PARTS OF THE WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING OR AS DIRECTED BY THE STRUCTURAL ENGINEER

GENERAL USE

FOOTINGS

25mm OR 19mm 1" OR 3/4" 3/11 19mm

SIZES

R.C. BEAMS, COLUMNS, SLABS, WALLS, WALL FOOTING, LINTEL BEAMS

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

ADMIXTURES TO BE USED IN CONCRETE SHALL BE SUBJECT TO PRIOR APPROVAL OF THE STRUCTURAL ENGINEER. USE DARACEM RM AND/OR PRIMEPLAST R1 SUPER PLASTICIZERS FOR ALL CONCRETE MIX. SUPER PLASTICIZERS SHALL BE ADDED ONLY AFTER THE MIX HAS COMPLIED WITH THE SLUMP REQUIREMENT OF NOT MORE THAN 50mm.

CONCRETE SLAB ON FILL:

THE CONCRETE SLAB ON FILL SHALL BE LAID ON A PREPARED FOUNDATION CONSISTING OF A SUB GRADE AND GRANULAR FILL WITH THICKNESS EQUAL TO THE THICKNESS OF OVERLYING SLAB EXCEPT AS INDICATED OTHERWISE. A. SUBGRADE SHALL BE ROLLED, RAMMED, AND TAMPED TO A THOROUGHLY COMPACTED FOUNDATION.

FOUNDATION:

A. ALLOWABLE BEARING CAPACITY SHALL BE 130 KPA FOR DL + LL + EQ COMBINATION. B. EXCAVATION FOR FOOTINGS SHALL BE CARRIED TO A DEPTH AS SPECIFIED IN THE PLANS.

REINFORCED CONCRETE BEAM:

A. UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS, CAMBER ALL R.C. BEAMS AT LEAST 6mm FOR EVERY4.5M OF

SPAN EXCEPT CANTILEVERS WHICH SHALL 18mm FOR EVERY 3M OF SPAN.

B. IF THERE ARE TWO (2) OR MORE LAYERS OF REINFORCING BARS, USE 25mm DIAMETER SEPARATORS SPACED AT 900mm O.C.

C. TOP BARS SPLICES SHALL BE LOCATED AT MIDSPAN AND BOTH BAR SPLICES AT COLUMN SUPPORTS.

D. PROVIDE AT LEAST 10mm Ø STIRRUPS SPACED AT 150mm O.C. AT BEAM SUPPORTS, THE FIRST STIRRUP LOCATED 50mm FROM THE FACE OF THE COLUMN UNLESS CLOSER SPACING IS SPECIFIED IN THE STRUCTURAL PLANS.

CHB WALL:

A. VERTICAL AND HORIZONTAL REINFORCEMENT UNLESS OTHERWISE SPECIFIED, THE VERTICAL AND HORIZONTAL REINFORCEMENTS FOR CHB SHALL BE 10mm Ø AT 600mm FOR ALL WALL THICKNESS. LAP SLICES SHALL BE 300mm LONG (MINIMUM).

WHERE CHB WALLS ADJOIN R.C. COLUMNS AND BEAMS, PROVIDE DOWELS ON R.C. COLUMN AND BEAMS PRIOR TO POURING TO MATCH CHB WALL REINFORCEMENT. THE DOWELS SHALL BE 12mm BARS AT 400mm O.C., UNLESS OTHERWISE SHOWN ON THE C. ANCHORS

WHERE COLUMNS AND BEAMS HAVE BEEN POURED WITHOUT THE CHB WALL DOWELS, PROVIDE 16mm Ø EXPANSION BOLTS AT 400mm O.C. THESE ANCHORS SHALL BE DRILLED AND HAMMERED IN PLACE. NO CHIPPING-OFF OF CONCRETE COLUMNS AND BEAMS IS ALLOWED UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER.

CONCRETE PROTECTION FOR REINFORCEMENT:

CONCRETE COVER
THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING BARS. FOR BUNDLES, THE MINIMUM
COVER SHALL EQUAL THE EQUIVALENT DIAMETER OF THE BUNDLE BUT NEED NOT BE MORE THAN 2 INCHES ON THE TABULATED
MINIMUM WHICHEVER IS GRATER.

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH

EXPOSED TO EARTH, WEATHER OR CORROSIVE SUSTANCE

20mm Ø AND LARGER 16mm Ø AND SMALLER

NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND, SLABS

WALLS, AND JOINTS 25mm Ø AND SMALLER

BEAMS, GIRDERS AND COLUMNS PRINCIPAL REINFORCEMENT, TIES STIRRUPS OR SPIRALS

STANDARD HOOK:

REBAINS

a. A SEMI-CIRCULAR TURN PLUS AN EXTENSION OF AT LEAST 4 DIAMETERS BUT NOT LESS THAN 62mm AT THE FREE END OF THE BAR.
b. A 90 DEGREE TURN PLUS AN EXTENSION OF AT LEAST 12 BARS DIAMETER AT THE FREE END OF THE BAR.

BEIND DIAMETERS OF BEND MEASURED ON THE INSIDE OF THE BAR SHALL BE AS FOLLOWS

WELDING:

WELDING ELECTRODES AND RODS, CONFORMED TO AWS D1.1

WHEN USED, SHALL DEVELOP A RESISTANCE EQUAL TO AT LEAST 125% OF THE TENSILE CAPACITY OF THE BAR BEING SPLICED.

B BUTT-WELDED SPLICE

BUTT-WELDED SPLICE
WHEN USED, SHALL BE CONSIDERED 75% EFFICIENT. THE REMAINING 50% CAPACITY TO DEVELOP 125% OF THE TENSILE CAPACITY
OF THE BAR SHALL BE PROVIDED FOR BY AN ADDITIONAL WELDED LAP SPLICE CONNECTION ON THE SAME JOINT.

C DETAILS/ REQUIREMENTS

DETAILS/ REQUIREMENTS DETAILS OF ALL WELDED SPLICES SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE STRUCTURAL ENGINEER ONLY CERTIFIED WELDERS SHALL BE ALLOWED TO PERFORM WELDING OPERATIONS. THESE WELDERS SHALL SUBJECT TO THE APPROVAL OF THE PROJECT MANAGER

PAINTINGS:

• SHOP PAINT STRUCTURAL STEEL, EXCEPT AS MODIFIED HEREIN. DO NOT PAINT STEEL SURFACES EMBEDDED IN CONCRETE, GALVANIZED SURFACES, OR SURFACES WITHIN ½" OF THE TOE OF THE WELDS PRIOR TO WELDING. PRIOR TO ASSEMBLY, PAINT SURFACES WHICH WILL BE CONCEALED OR INACCESSIBLE AFTER ASSEMBLY. DO NOT PAINT IN FOGGY OR RAINY WEATHER: WHEN THE AMBIENT TEMPERATURE IS BELOW 45°F OR OVER 95°F; OR WHEN PAINT MAY BE EXPOSED TO TEMPERATURES BELOW 40°F WITHIN 48 HRS AFTER APPLICATION, UNLESS APPROVED OTHERWISE.

SSPC SP 6, EXCEPT AS MODIFIED HEREIN. SSPC SP 3 OR SP 6 FOR STEEL SURFACES EXPOSED IN SPACES ABOVE CEILINGS, ATTIC SPACES, CRAWL SPACES, FURRED SPACES, AND CHASES. IN ADDITION, MAINTAIN STEEL SURFACES FREE FROM RUST, DIRT. OIL, GREASE, AND OTHER CONTAMINANTS THROUGH FINAL ASSEMBLY.

B PRETREATMENT:

IMMEDIATELY AFTER CLEANING, PROVIDE THE METAL SURFACES WITH ONE COAT OF MIL. SPEC. DOD-P-15328 PRETREATMENT TO A DRYFILM THICKNESS OF 0.3 TO 0.5 MIL. FED. SPEC. TT-C-490 PRETREATMENT MAY BE APPLIED TO SSPC SP 6 CLEANED SURFACES, IN ACCORDANCE WITH FED. SPEC. TT-C-490.

IMMEDIATELY AFTER THE PRETREATMENT COATING HAS DRIED, APPLY PRIMER TO A MINIMUM DRY FILM THICKNES

OF 2.0 MIL. REPAIR DAMAGED PRIMED SURFACES WITH AN ADDITIONAL COAT PRIMER





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AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

INITIAL / DATE DESIGN STAF HECKED BY

RAUL R CRUCENA

JBMITTED BY

COMMENDED APPROVAL

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ARNEL F. BORLADO

TYTONIO L. TAMAYO CAPTAIN MAN

OTES/REVISIONS

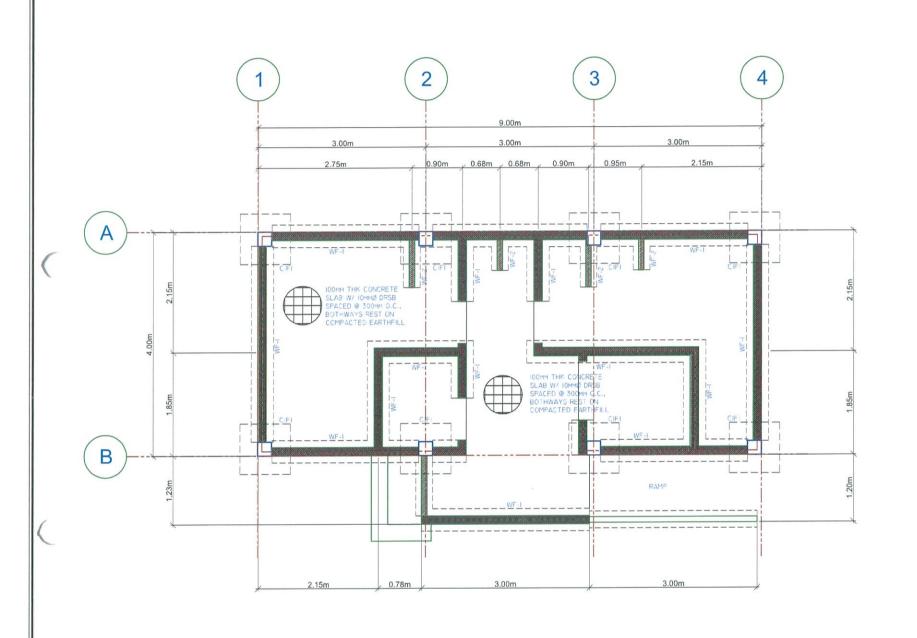
BORONGAN AIRPORT DEVELOPMENT PROJECT

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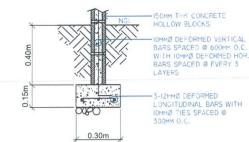
BORONGAN AIRPORT

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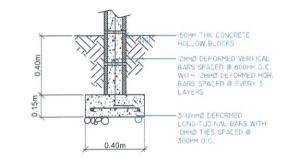
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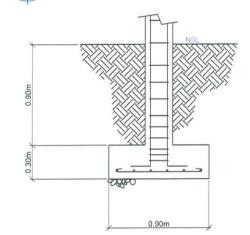




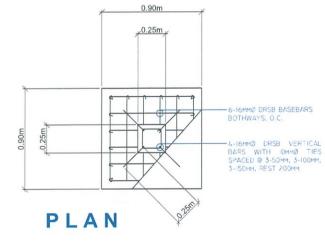
4 DETAIL OF WF2 SCALE 1:20 mts



3 DETAIL OF WFI S-2 S-2 SCALE 1:20 mts



SECTION









REPUBLIC OF THE PHILIPPINES

CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
AERODROME DEVELOPMENT AND MANAGEMENT SERVICE
NAIA ROAD, 1360 PASAY CITY

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AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

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NOTES/REVISIONS:

PROJECT

BORONGAN AIRPORT DEVELOPMENT PROJECT (CONSTRUCTION OF TOLLET)

LOCATION:

BORONGAN AIRPORT BORONGAN

SHEET CONTENTS:

AS SHOWN S 002

