

GENERAL NOTES:

1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AS WELL AS ANY REGULATIONS, STANDARDS, CODES OR SPECIFICATION REFERENCES THEREIN.
2. COORDINATION OF WORK WITH THE CAAP MANAGEMENT AND OTHER STAKEHOLDERS IS MANDATORY SO AS TO MINIMIZE IMPACTS ON AIRPORT OPERATIONS.
3. CONTRACTOR WILL NOT BE PERMITTED TO ENTER/ACCESS THE CONSTRUCTION AREA WITHOUT PROPER CLEARANCES FROM THE CAAP MANAGEMENT/CONTROL TOWER.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING INCIDENTAL GRADING AND INFRASTRUCTURE NECESSARY FOR THE TEMPORARY HAUL ROADS; ANY DISTURBED AREA SHALL BE RETURNED TO A CONDITION THAT IS EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ALL DAMAGE TO EXISTING PAVEMENT USED FOR HAUL ROUTES BY CONSTRUCTION OR HAULING EQUIPMENT.
6. CONSTRUCTION ACTIVITIES WITHIN THE AIRSIDE ARE SUBJECT TO CHANGE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER COORDINATION, PLANNING AND SCHEDULING WITH CAAP-PMO REGULARLY.
7. EXCAVATED MATERIALS AND DEBRIS SHALL NOT BE STOCKPILED HIGHER THAN 1 METER FROM THE EXISTING GROUND/GRADE. UNLESS APPROVED OTHERWISE BY THE CAAP MANAGEMENT/PMO.
8. THE CONTRACTOR'S WASTE MATERIAL SHALL BE DISPOSED OF OFF AIRSIDE LIMITS IN THE DESIGNATED DISPOSAL AREA.
9. CONSTRUCTION TRAFFIC SHALL YIELD TO AIRCRAFT TRAFFIC AT ALL TIMES.
10. ALL FOREIGN OBJECT DEBRIS (FOD) MUST BE KEPT OFF ACTIVE OPERATION AREAS.

SAFETY NOTES:

1. THIS CONTRACTOR SHALL BE AWARE OF AND PREVENT THE FOLLOWING TYPE OF SAFETY PROBLEMS AND/OR HAZARDS:
  - A. PILES OF SCRAPE ASPHALT, CONSTRUCTION MATERIALS, TEMPORARY STRUCTURES, OR OTHER OBJECTS IN THE VICINITY OF THE OPEN RUNWAY OR TAXIWAY.
  - B. VEHICLE OR EQUIPMENT, WHETHER OPERATING OR IDLE, ON ANY OPEN RUNWAY OR TAXIWAY WHICH COULD INTERFERE WITH THE MOVEMENT OF THE AIRCRAFT.
  - C. TRASH OR OTHER MATERIALS WITH FOREIGN OBJECT (FOD) POTENTIAL, WHETHER ON RUNWAY, TAXIWAYS, OR APRON; OR IN RELATED SAFETY AREAS.
  - D. FAILURE TO CONTROL UNAUTHORIZED VEHICLE AND HUMAN ACCESS FROM ACTIVE AIRCRAFT OPERATING AREAS.
  - E. CONSTRUCTION ACTIVITIES OR MATERIALS WHICH COULD HAMPER THE RESPONSE OF AIRCRAFT RESCUE AND FIRE FIGHTING OR OTHER EMERGENCY EQUIPMENT FROM REACHING AIRCRAFT.
  - F. BIRD ATTRACTANTS ON AIRFIELD SUCH AS EDIBLE (FOOD SCRAPS, ETC;) MISCELLANEOUS TRASH. OR PONDED WATER.
2. DEBRIS, WASTE, AND LOOSE MATERIALS CAPABLE OF CAUSING DAMAGE TO AIRCRAFT LANDING GEAR OR PROPELLERS, OR BEING INGESTED IN JET ENGINES SHALL NOT BE ALLOWED IN ACTIVE AIRCRAFT MOVEMENT AREAS OR ADJACENT GRASSED AREAS. MATERIALS OBSERVED IN THESE AREAS SHALL BE REMOVED IMMEDIATELY AND/OR CONTINUOUSLY BY THE CONTRACTOR.
3. CONSTRUCTION VEHICLE AND EQUIPMENT MUST HAVE ROTATING BEACON ALL DAY DURING CONSTRUCTION WITHIN THE ACTIVE AIRFIELD. A TWO-WAY RADIO COMMUNICATION WITH THE CONTROL TOWER PERSONNEL FROM THE CAAP ARE REQUIRED ALL THE TIME DURING CONSTRUCTION.

ASPHALT PAVEMENT:

1. AGGREGATE FOR ASPHALTIC CONCRETE PAVING:  
PROVIDE A MIXTURE OF SAND, MINERAL AGGREGATE, AND LIQUID ASPHALT MIXED IN SUCH PROPORTIONS THAT THE PERCENTAGE OF WEIGHT WILL BE WITHIN:

SIEVE SIZES	PERCENTAGE PASSING
19mm (3/4")	100
9.5mm (3/8")	67-85
6.4mm (1/4")	50-65
2.4mm (No. 8 Mesh)	37-50
600µm (No. 30 Mesh)	15-25
75µm (No. 200 Mesh)	3-8
2. ASPHALTS;  
COMPLY WITH PROVISIONS OF ASPHALTS INSTITUTE SPECIFICATIONS;

ASPHALT	:	HOT MIX ASPHALT (PG 60-70) WITH 5% - 8% BINDER
ADDITIVE	:	ANTI RUTTING ADDITIVE (ARA) 0.3% BY WEIGHT OF ASPHALT MIX
PRIME COAT	:	CUT-BACK ASPHALT, GRADE MC - 70
TACK COAT	:	CATIONIC - CRS-1
SEALER	:	OXIDIZE BITUMEN 115-15
3. PROVIDE HOT PLANT-MIXED ASPHALTIC CONCRETE PAVING MATERIALS.  
TEMPERATURE LEAVING THE PLANT : 143°C (290°F) MINIMUM  
TEMPERATURE AT PLACEMENT : 135°C (275°F) MINIMUM  
180°C (356°F) MAXIMUM
4. DO NOT ACCEPT MATERIALS UNLESS COVERED WITH TARPAULIN UNTIL UNLOADED AND HAS A TEMPERATURE OF NOT LESS THAN 135°C.
5. DO NOT COMMENCE PLACEMENT OF ASPHALTIC CONCRETE MATERIALS WHEN THE ATMOSPHERIC TEMPERATURE IS BELOW 10°C NOT DURING FOG, RAIN OR OTHER UNSUITABLE CONDITIONS.
6. SEALING WORKS ON DEFECTS LIKE CRACKS SHALL BE PERFORMED BY THE CONTRACTOR. TRANSVERSE AND LONGITUDINAL JOINTS OF EXISTING PAVEMENT SHALL ALSO BE SEALED BEFORE PAVING.
7. PRIOR TO APPLICATION OF BITUMINOUS TACK COAT, ALL LOOSE STONES, DEBRIS AND OTHER SCATTERED MATERIALS ON THE SURFACE OF EXISTING PAVEMENT SHALL BE CLEANED/REMOVED WITH THE USE OF AIR COMPRESSOR.
8. THE MIXTURE SHALL BE SPREAD AND STRUCK OFF TO MATCH THE GRADE AND ELEVATIONS SHOWN ON THE DRAWINGS.
9. AFTER THE MATERIALS HAS BEEN SPREAD TO THE PROPER DEPTH, ROLL IT UNTIL THE SURFACE IS HARD, SMOOTH, UNYIELDING AND ACHIEVES A MINIMUM OF AT LEAST 97% OF THE THEORETICAL DENSITY, ADHERING TO THE THICKNESS AND ELEVATIONS DEPICTED IN THE DRAWINGS.
10. THE NEWLY PAVED SECTION SHALL BE CLOSED TO TRAFFIC UNTIL SUCH TIME THAT THE TEMPERATURE COOLS DOWN TO ATMOSPHERIC TEMPERATURE OF 60-70°C.

REFERENCE/S:

1. DPWH DO 11 S 2019
2. FAA AC 150-5370 10H
3. PAVEMENT DESIGN FOR AIRFIELD, UFC 3-260-02



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AERODROME DEVELOPMENT AND MANAGEMENT SERVICE

INFRASTRUCTURE DEVELOPMENT AND DESIGN DIVISION

DESIGN STAFF	INITIAL/DATE
DESIGNED BY:	IDDD
DRAWN BY:	
REVIEWED BY:	
DATE:	

CHECKED BY:  
  
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Division Chief, IDDD

SUBMITTED BY:  
  
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CAPTAIN MANUEL ANTONIO L. TAMAYO  
DIRECTOR GENERAL

NOTE/REVISIONS:  

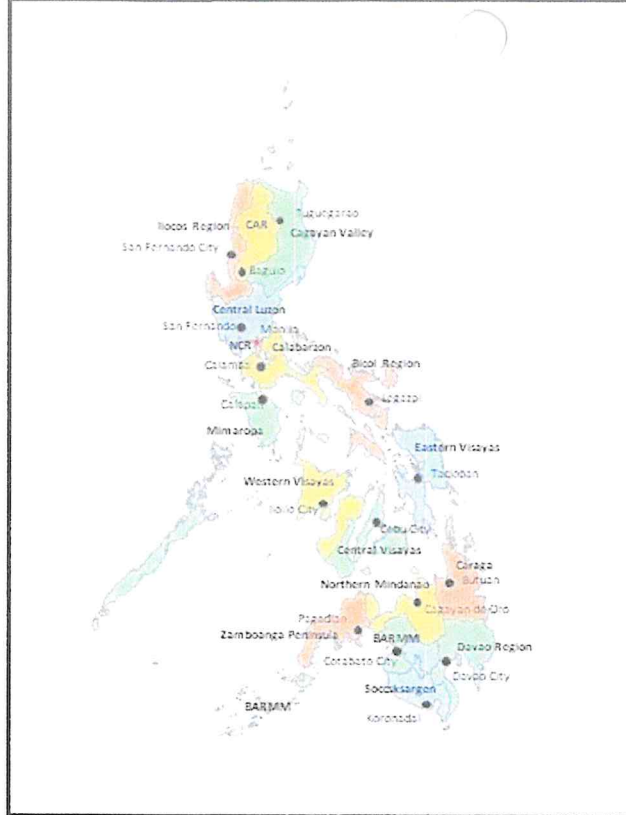

PROJECT TITLE:  
**ASPHALT OVERLAY  
OF RUNWAY AT NAGA AIRPORT**

LOCATION:  
**NAGA AIRPORT**  
BRGY. SAN JOSE, PILI, CAMARINES SUR

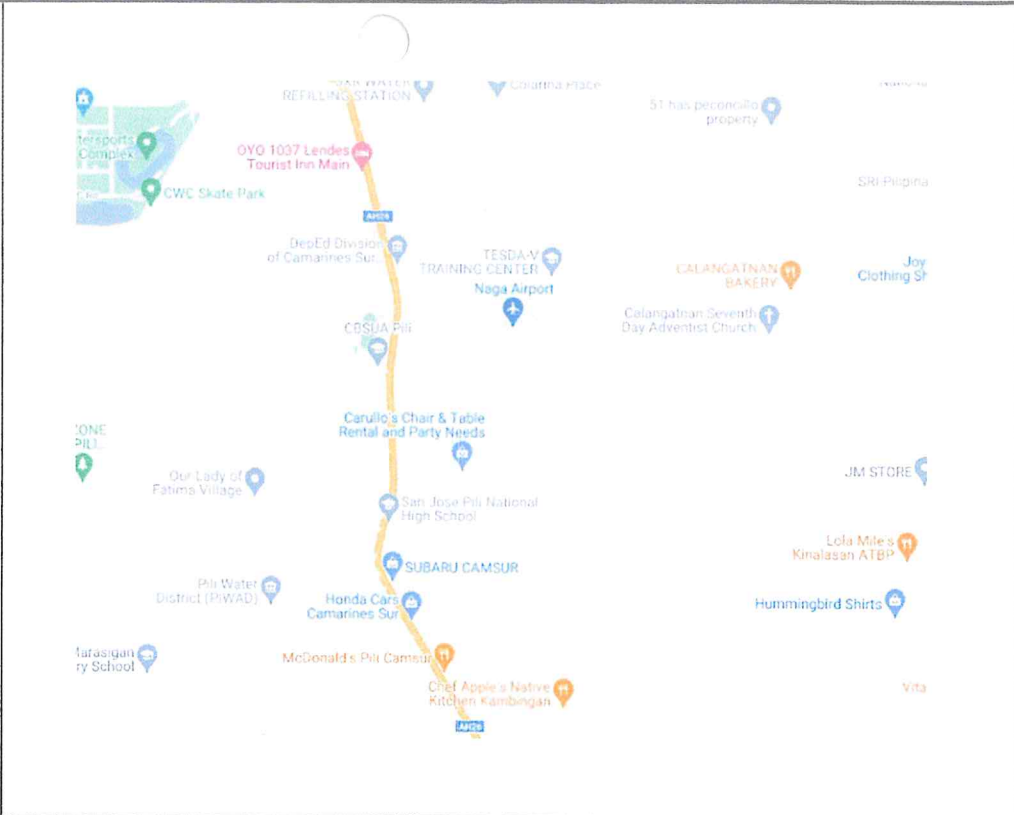
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• CONSTRUCTION NOTES

DRAWING SCALE:	SHEET NO.:
AS SHOWN	CW - 01
	01 16





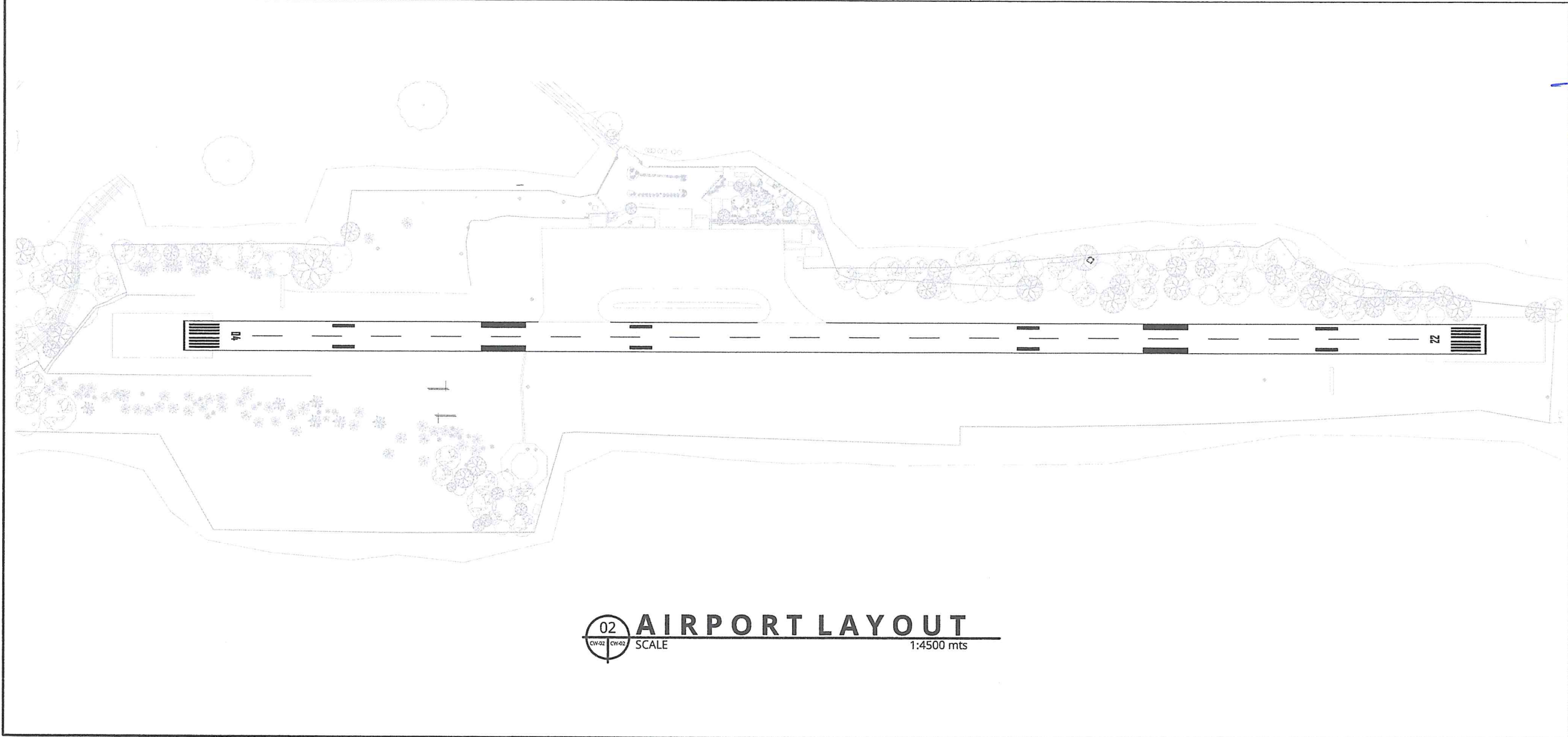
MAP OF THE PHILIPPINES





VICINITY MAP



AERIAL VIEW



02 AIRPORT LAYOUT  
SCALE 1:4500 mts



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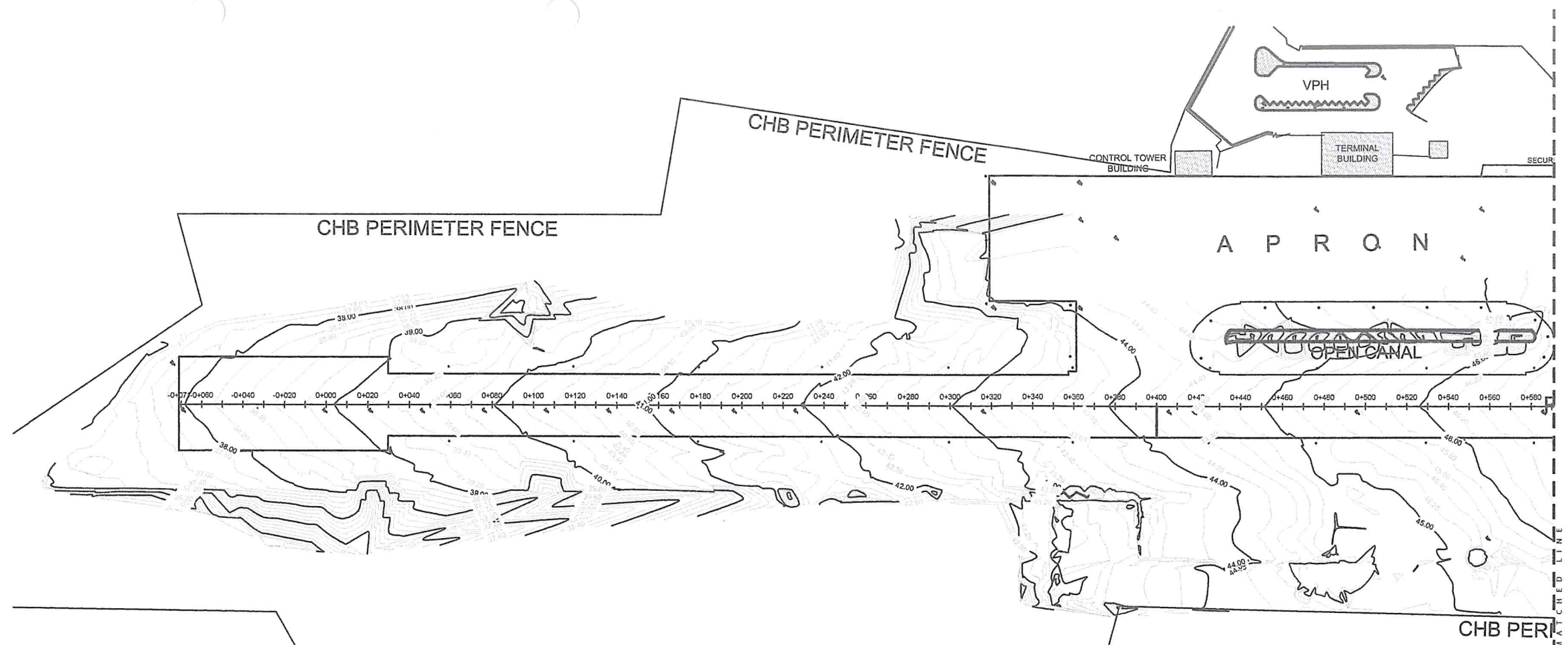
NAGA AIRPORT  
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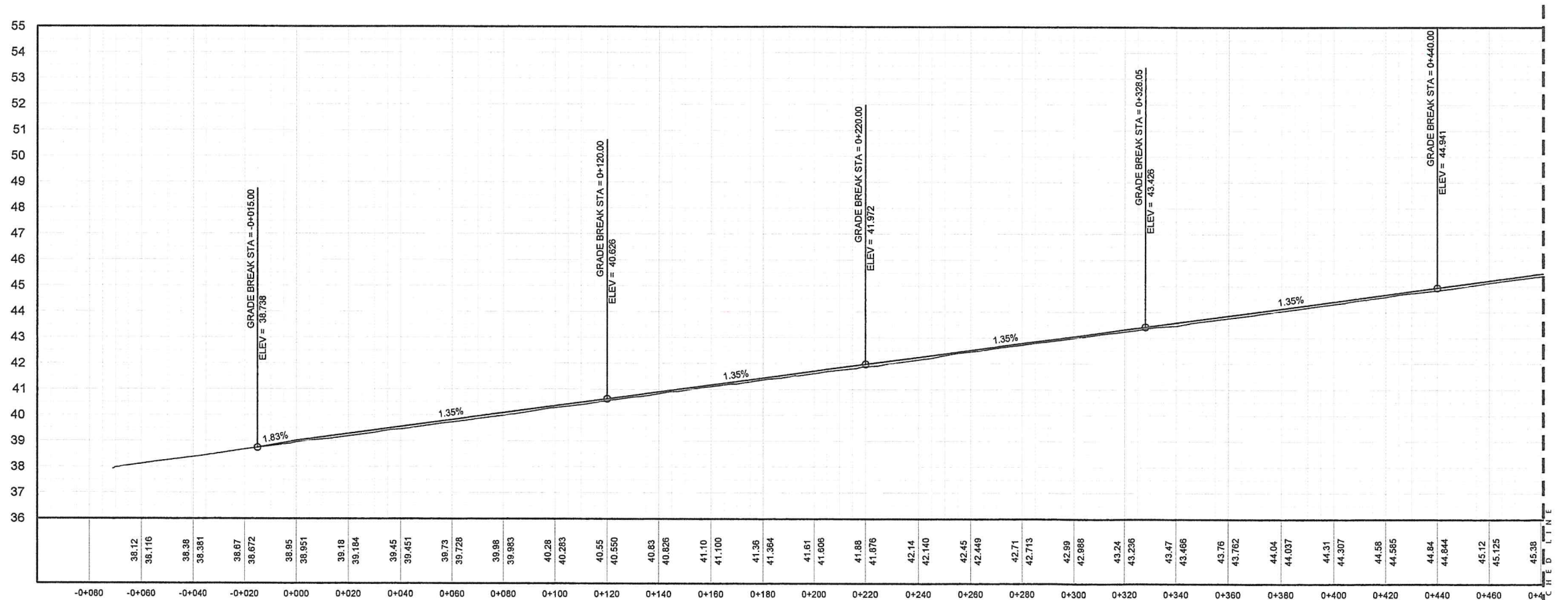
● AIRPORT LAYOUT

DRAWING SCALE:	SHEET NO.:
AS SHOWN	CW - 02
	02 16





02  
CW-03 CW-03  
TOPOGRAPHIC PLAN  
**EXISTING RUNWAY**  
SCALE NTS.



03  
CW-03 CW-03  
PROFILE ALONG RUNWAY CENTERLINE  
**RUNWAY DESIGN PROFILE**  
HORIZONTAL SCALE 1:4500 mts  
VERTICAL SCALE 1:2250 mts



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SHEET CONTENTS:  
• TOPOGRAPHIC PLAN (EXISTING RUNWAY)  
• RUNWAY DESIGN PROFILE  
(PROFILE ALONG RUNWAY CENTERLINE)

DRAWING SCALE:	SHEET NO.:
AS SHOWN	CW - 03
	03 16





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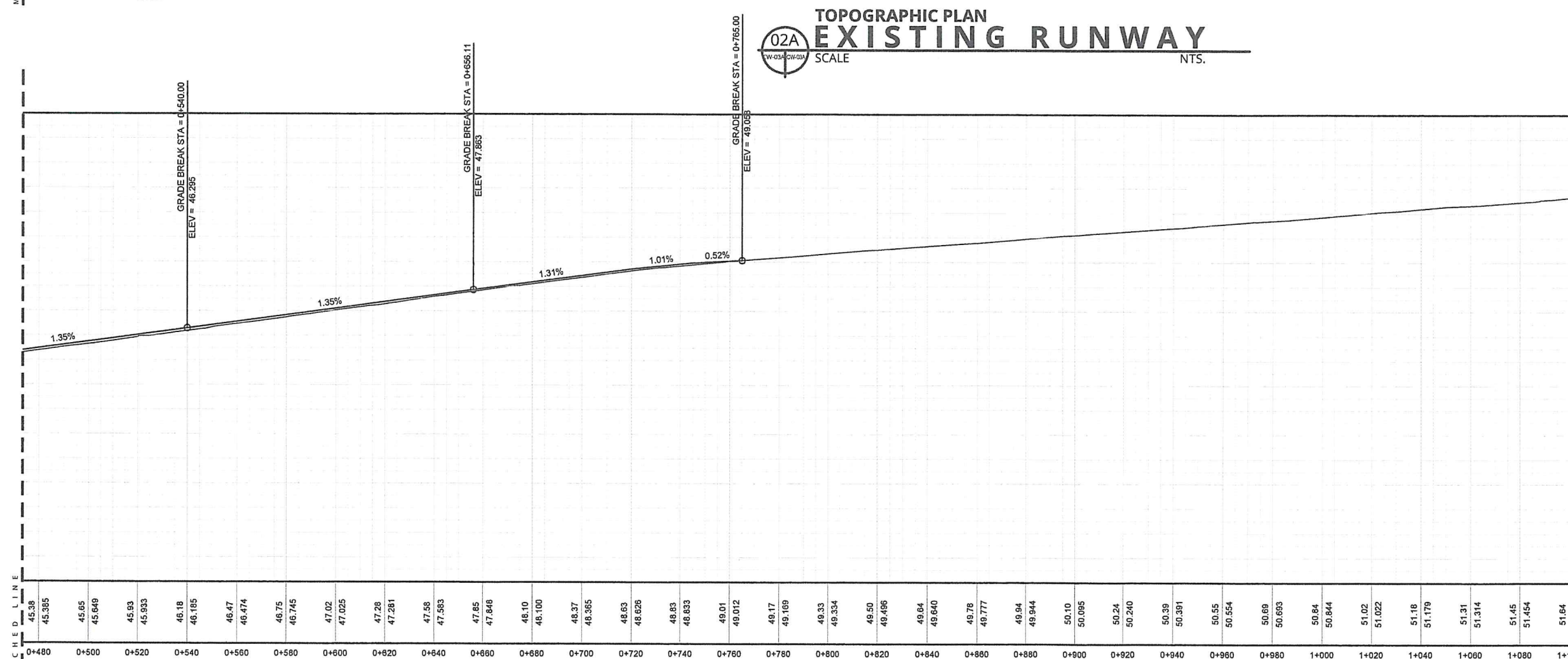
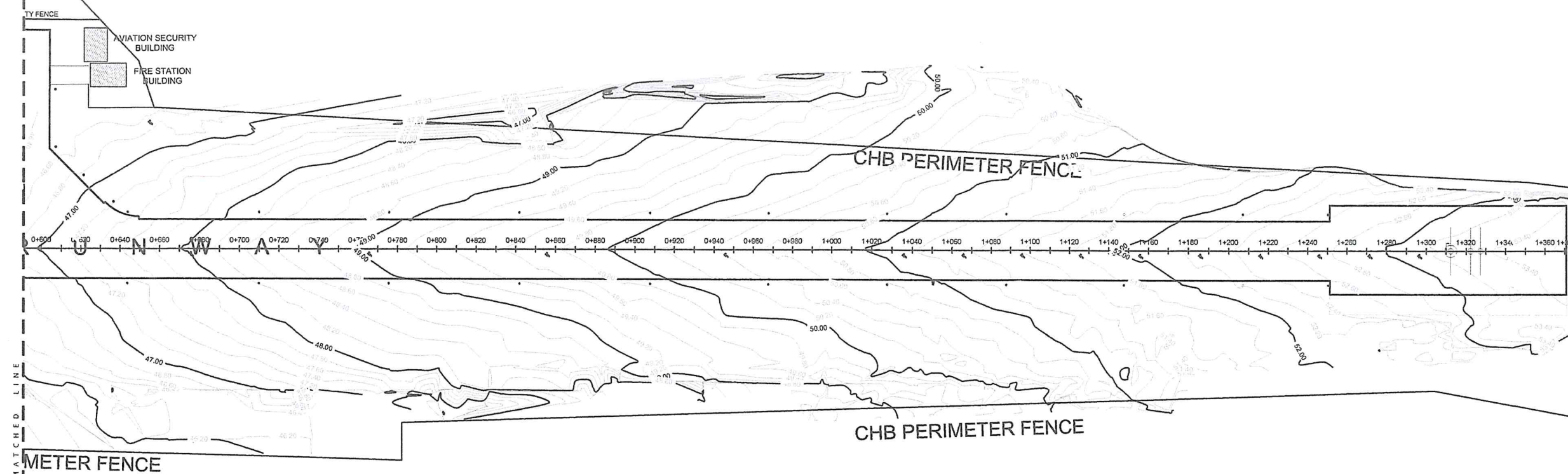
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• RUNWAY DESIGN PROFILE  
(PROFILE ALONG RUNWAY CENTERLINE)

DRAWING SCALE:	SHEET NO.:
AS SHOWN	CW - 03A
	03A 16



PROFILE ALONG RUNWAY CENTERLINE  
**RUNWAY DESIGN PROFILE**  
HORIZONTAL SCALE 1:4500 mts  
VERTICAL SCALE 1:2250 mts





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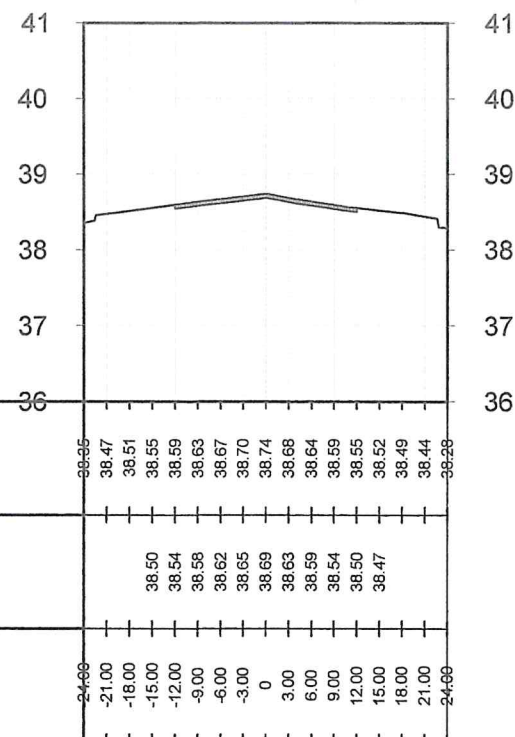
LOCATION:

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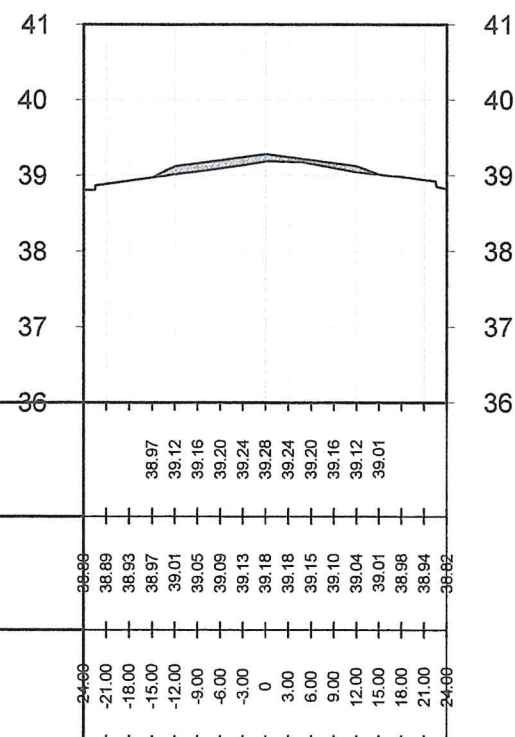
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CROSS SECTION VIEWS  
(FROM STA -0 + 015 TO STA 0 + 040)

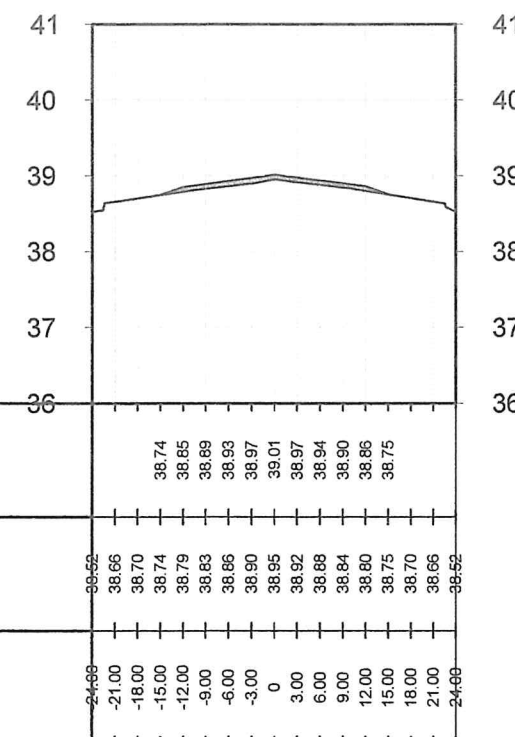
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AS SHOWN	CW - 04
	04 16



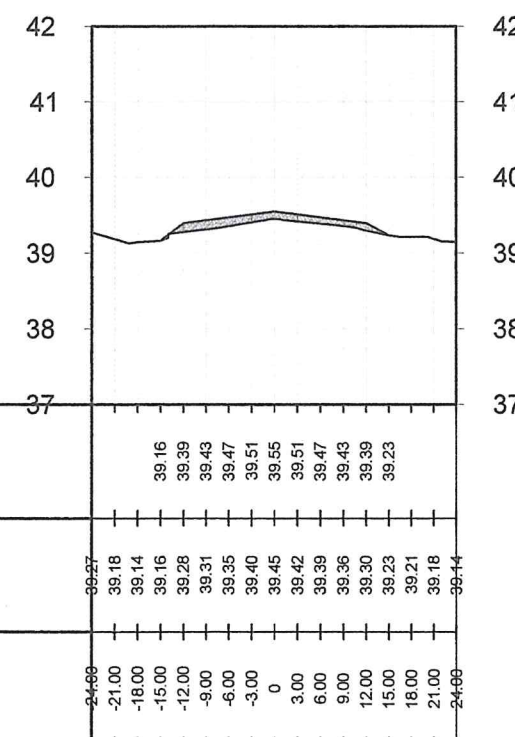
-0 + 015



0 + 020



0 + 000



0 + 040

FROM STA -0 + 015 TO STA 0 + 040  
**CROSS SECTION VIEWS**  
SCALE  
HORIZONTAL 1:1000 mts  
VERTICAL 1:100 mts