

Republic of the Philippines  
**NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY**  
3<sup>rd</sup> Level Science Heritage Building, DOST Compound, Bicutan, Taguig City  
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### **SUPPLEMENTAL/BID BULLETIN NO.1**

This Supplemental/Bid Bulletin is issued to inform prospective bidders of the procurement project “Interior Renovation and Curatorial Upgrade for PSHC (Phase I)” of the following:

1. Supplemental Plans/Drawings are attached (or download from [www.bit.ly/pshcsupplemental](http://www.bit.ly/pshcsupplemental))
2. Revised Bill of Quantities is attached (or download from [www.bit.ly/pshcsupplemental](http://www.bit.ly/pshcsupplemental))
3. Response to queries from prospective bidders:

<b>Item No.</b>	<b>Queries</b>	<b>NAST-BAC Response</b>
1	Provide schedule of doors and windows	Refer to Supplemental Plans/Drawings
2	Detailed plans showing dimensions	Refer to Supplemental Plans/Drawings
3	Cross section of the wall where ACU diffusers are to be installed	Refer to Sectional Elevation Plan/Drawing
4	Specifications of the wall on the other side is also needed	See Supplemental Plans, Wall Detail Plan
5	Framing details of the video wall	Dry wall board up on metal trucks and studs framing (see Wall Detail). Design and install for LED monitor mounting frame.
6	Details of the slit wall and slit ceiling	See Wall Detail Plan
7	Copy of the Technical Specifications of the project	Refer to Section VI of the Bid Documents
8	Location of door for Merchandising Area/ Store	Use existing location
9	Verify “Metal Pearl Steel”	Aluminum materials
10	Guidelines for the content and general appearance of the hologram capsule set	Refer to attached Guidelines
11	Guidelines for the video material and content of the Video Wall	Refer to attached Guidelines
12	Can we just make a commitment to employ a Curator should the project be awarded to us?	Bidders must comply with the requirements as stated under Section 12.b.ii.2 of the Bid Documents.

This bulletin shall form an integral part of the Bid Documents for the said project.

For guidance and information of all concerned.

  
**ROSEMARIE S. ESPINO**  
Chief Administrative Officer

## **Guidelines for the Video Material and Content for LED Wall**

- 1.0 It is expected that Curatorial Team of the winning Contractor will produce a high definition quality AVP (Audio-Visual Presentation) that lasts 20 minutes. This AVP shall be loaded on loop for the entire duration of museum hours.
- 2.0 The Working Script and/or Storyboard shall be presented to the Head Designer and NAST for joint approval. It is ideal that submission of this material should be done at the first 20 days of the execution of the project.
- 3.0 It is highly encouraged that professional actors, animators, and reputable crew shall be engaged in the production of this AVP.
- 4.0 There is generally free hand in the artistic and cinematic interpretation of the AVP although it is highly encouraged state of the art editing and filtering techniques to make the material fast paced and highly entertaining for younger crowds. The use of animation, Claymation, cinematographics and other multi-media techniques are highly encouraged.
- 5.0 Since this material is considered the “banner” of the project, highly researched content shall include the following non- negotiable information.
  - 5.1 Introduction of the New Salinlahi Museum, from its history to the planned three-phase development. Its goals and mandate.
  - 5.2 Phase One Curatorial Focus: Thirteen Living National Scientists and their achievements are highlighted. If there are live footage or archival material to be used, make sure that all copyrights and legal implications are considered.
  - 5.3 A brief enumeration of the 41 National Scientists their images, distinct contributions, and why they belong to this prestigious roster. Definition of a National Scientist and why it is relevant.
- 6.0 It is allowed to put end credits. The name of the producer or main production team may only appear on the end credits. NAST shall be the main presenter and will appear in opening credits.
- 7.0 First completed raw edit shall be viewed for approval by both head designer and NAST representatives. It is ideal that this is done between the 50<sup>th</sup> day to the 60<sup>th</sup> day of the contract so as to allow further revisions when necessary.
- 8.0 Faithful adherence to the accuracy of information presented is expected from producers of this material. NAST has the right to reject the entire material or edit portions thereof should there be questionable or unsuitable visuals and information.
- 9.0 Over all material shall not appear endorsing any product, or services nor presented in an advertorial way.
10. Think Global yet contemporary Filipino. This material may be used as an advertisement to promote Salinlahi in the international scene.



## **Guidelines for the Content and General Appearance of the hologram capsule set**

- 1.0 The entire cylindrical hologram capsule is design-intended to appear having the following dimensions.
  - 1.1 An over-all diameter of 1.5m
  - 1.2 Over all height is 2.4 m (from the base to the crown)
  - 1.3 The actual hologram should appear directly in an eye sight range for 1.2 -1.6m)
- 2.0 The hologram capsule is accompanied by its partner rostrum panel where visitors can tinker and key- in their digital interaction with the capsule. Although there is a suggested aesthetic form, there is free hand in improving its appearance based on its technical functions. Suggested height of rostrum panel is 1.0 m and a width of .70m and a depth of .35m
- 3.0 The Content of the hologram shall have both the live/near lifelike appearance of the national scientist and his/her avatar.
- 4.0 The Avatar can be created either through animation (anime-style) or digital creative reconstruction
- 5.0 There will be an in-synch voice and soundbyte pertinent to the material
- 6.0 A QR code ready panel shall be installed and a portal for headsets either disposable or personal.
- 7.0 The hologram experience should run not shorter than 3 minutes.
- 8.0 The hardware should contain the possibility of adding new set of holograms if NAST decides to include other national scientists other than the 13 living ones.
- 9.0 Content in the form of script and/or storyboard shall be submitted for approval to NAST and Head Designer within the first 20 days of the contract.
- 10.0 NAST reserves the right to reject and demand reconstruction if accuracy of information is compromised.

First draft for Bid Bulletin

Prepared by Ar. Manolet Garcia

Head Exhibition Consultant for New Salinlahi

NAST,DOST

22 November 2018

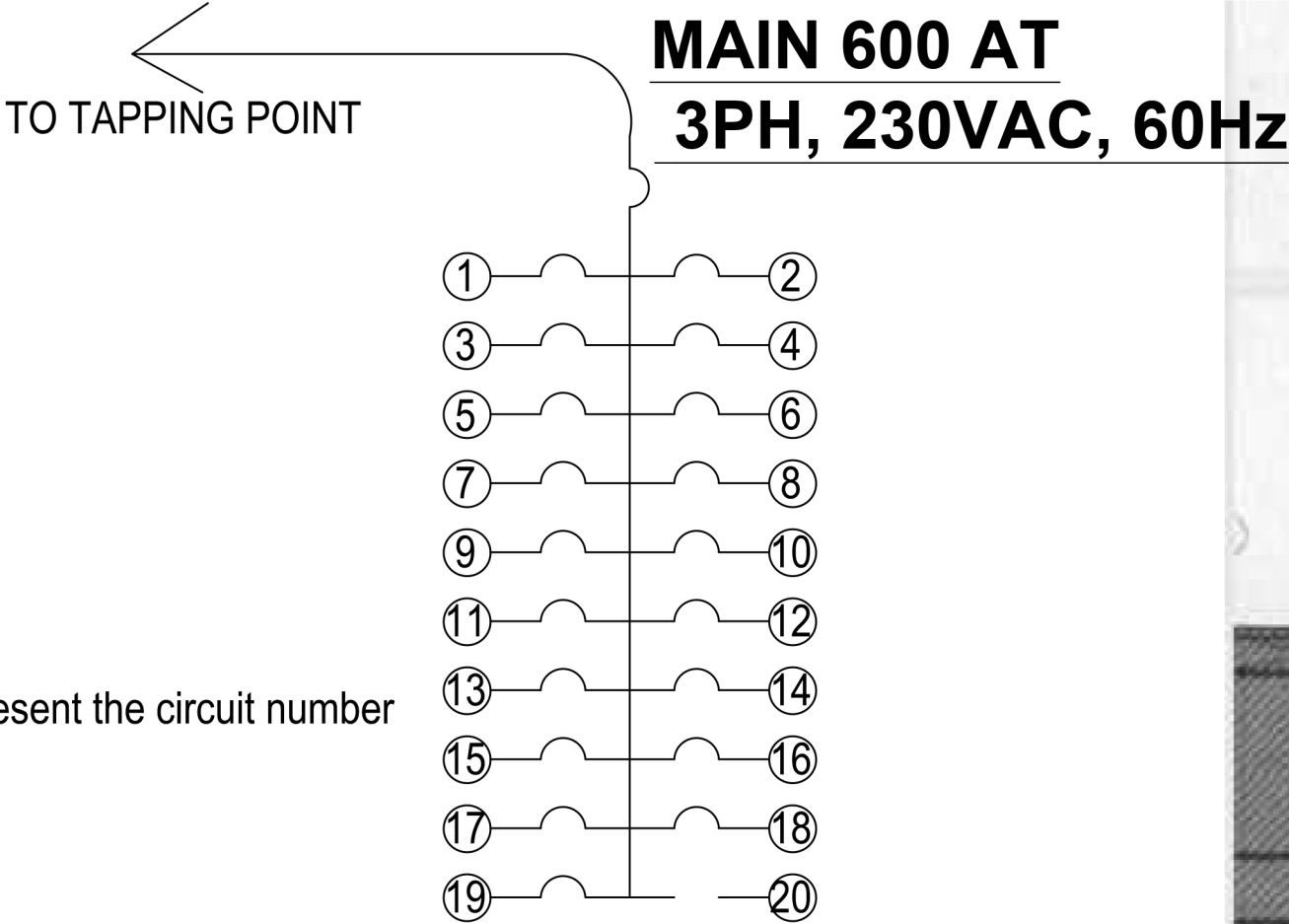


GENERAL NOTES :

1. ALL ELECTRICAL INSTALLATION WORKS HEREIN BE DONE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE. THE RULES AND REGULATIONS OF THE LOCAL ENFORCING AUTHORITY. THE ELECTRICAL WORKS SHALL BE UNDER THE IMMEDIATE SUPERVISION OF A DULY LICENSED MECHANICAL ENGINEER.
2. THE ELECTRIC SERVICE SHALL BE SINGLE PHASE, 2-WIRE, 230 VOLTS WITH GROUND & NEUTRAL WIRE.
3. THE ELECTRICAL PIPINGS INSTALLATION SHALL BE DONE IN COPPER PIPES, COMPLETE WITH FITTINGS, FULLY INSULATED SHALL BE USED WHEN REQUIRED. MINIMUM SIZE SHALL BE ¾ INCHES INSIDE DIAMETER OR MECHANICAL TRADE SIZE.
4. ALL WIRES SHALL BE COPPER AND THERMOPLASTIC INSULATED TYPE "THHN" OR "THW" UNLESS OTHERWISE INDICATED. THE MINIMUM SIZE FOR POWER, AND GROUNDING SHALL BE 3.5mm². THE CONTROL WIRES SHALL BE AS INDICATED OR AS SPECIFIED ELSEWHERE ON THE PLANS. ALL GROUND WIRES SHALL BE GREEN.
5. ALL EQUIPMENT, SWITCHES, PANEL BOARDS, OUTLETS, DIVICES AND ALL NON-CURRENT CARRYING METAL PARTS SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PHILIPPINE MECHANICAL CODE.
5. ALL FEEDERS SHALL BE INSTALLED AS INDICATED ON THE PLANS. BRANCH CIRCUIT HOMERUN WIRES SHALL BE INSTALLED IN INDIVIDUAL HOMERUN CONDUITS.
6. ANY DISCREPANCY IN LOCATION AND RATINGS EQUIPMENT, LENGTH OF WIRE, SHALL BE VERIFIED WITH THE OWNER OR ANY OF HIS REPRESENTATIVES.
7. ALL MATERIALS TO BE USED AND THE EQUIPMENT TO BE INSTALLED SHALL BE BRAND NEW AND MUST BE OF THE APPROVED TYPE FOR THE PARTICULAR LOCATION AND PURPOSE INTENDED. BRAND NAME SHALL BE AS PRESCRIBED BY THE OWNER OR AS REQUIRED BY BUILDING / ADMIN.
8. ALL MOUNTING HEIGHT SHALL BE SUBJECT TO ENGINEERS APPROVAL PRIOR TO INSTALLATION.
9. THE CONTRACTOR SHOULD ALWAYS VERIFY THE ACTUAL LAYOUT FOR , EQUIPMENTS, DEVICES, WIREWAY, PANEL BOARDS, AVR, TRANSFORMER AND OTHER PARTICULARS THAT MIGHT BE CHANGED FROM TIME TO TIME FOR THE REASON OF THE UNFORSEEN PPROBLEMS.

RISER DIADRAM

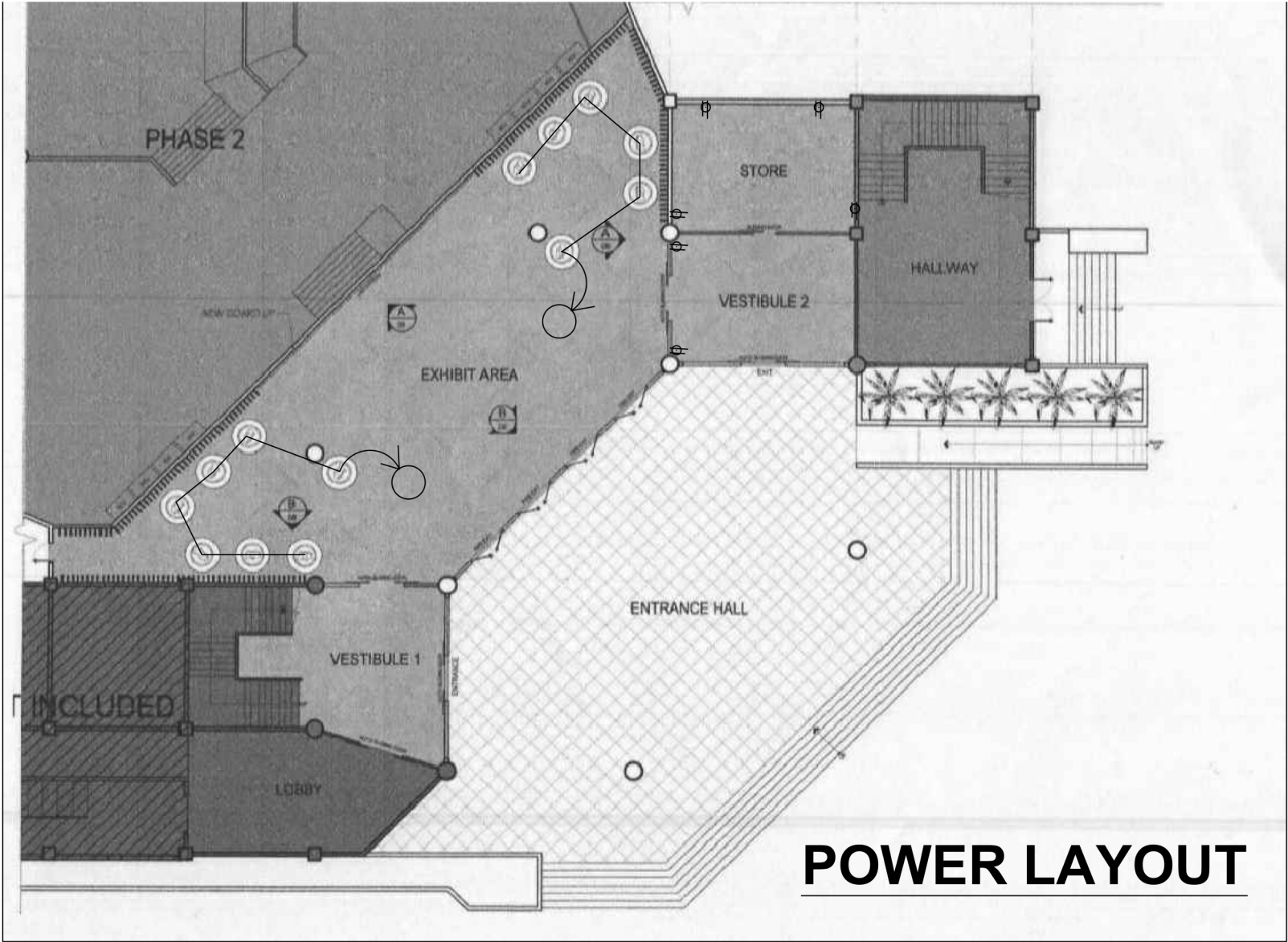
NOTE : The number indicated represent the circuit number



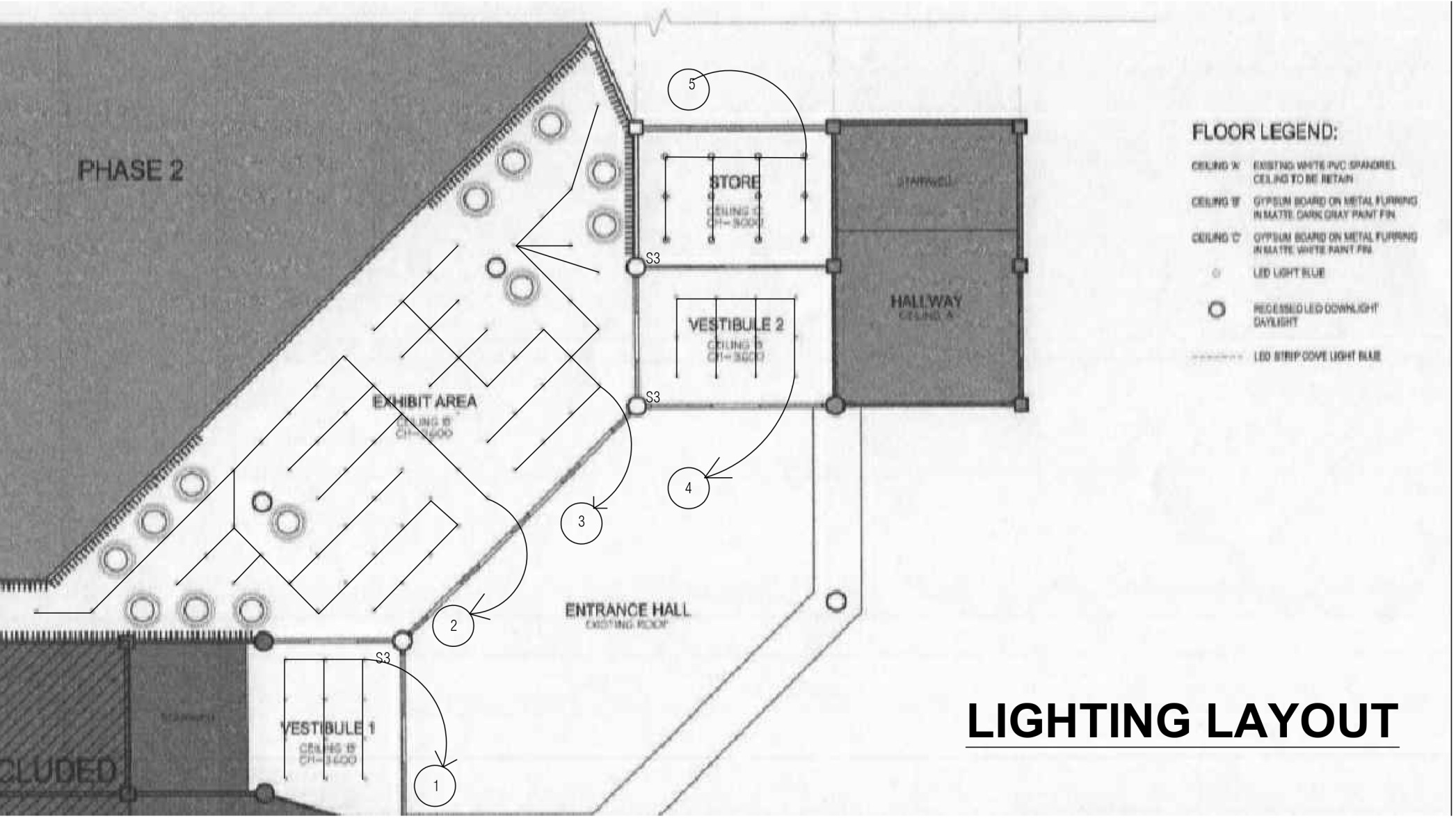
LOAD SCHEDULE

CKT No.	LOAD DESCRIPTION	C.O./L.O.	WATTS/ OUTLET	VOLTS	Hz	WATTS	AB	BC	CA	3PH	CB	WIRE & CONDUIT
1	LIGHTING LOAD 1 (VESTIBULE 1)	12	50	230	60	600	2.61				20 A	3.5mm² THHN in 25mm Ø conduit
2	LIGHTING LOAD 2 (EXHIBIT AREA 1)	37	50	230	60	1850	8.04				20 A	3.5mm² THHN in 25mm Ø conduit
3	LIGHTING LOAD 3 (EXHIBIT AREA 2)	37	50	230	60	1850	8.04				20 A	3.5mm² THHN in 25mm Ø conduit
4	LIGHTING LOAD 4 (VESTIBULE 2)	12	50	230	60	600		2.61			20 A	3.5mm² THHN in 25mm Ø conduit
5	LIGHTING LOAD 5 (STORE)	12	50	230	60	600		2.61			20 A	3.5mm² THHN in 25mm Ø conduit
6	CONVENIENCE OUTLET	3	360	230	60	1080	4.70				30 A	5.5mm² THHN in 25mm Ø conduit
7	CONVENIENCE OUTLET	3	360	230	60	1080	4.70				30 A	5.5mm² THHN in 25mm Ø conduit
8	CONVENIENCE OUTLET	3	360	230	60	1080	4.70				30 A	5.5mm² THHN in 25mm Ø conduit
9	HOLOGRAM OUTLET 1	7	1500	230	60	10500			45.65		60A	8.0mm² THHN in 32mm Ø conduit
10	HOLOGRAM OUTLET 2	6	1500	230	60	9000		39.13			50 A	8.0mm² THHN in 32mm Ø conduit
11	ACU 1 ( Split Type 5TR)	1	5000	230	60	5000				60.00	100 A	14.0mm² THHN in 40mm Ø conduit
12	ACU 2 ( Split Type 5TR)	1	5000	230	60	5000				60.00	100 A	14.0mm² THHN in 40mm Ø conduit
13	ACU 3 ( Split Type 5TR)	1	5000	230	60	5000				60.00	100 A	14.0mm² THHN in 40mm Ø conduit
14	ACU 4 ( Split Type 5TR)	1	5000	230	60	5000				60.00	100 A	14.0mm² THHN in 40mm Ø conduit
15	ACU 5 ( Split Type 5TR)	1	5000	230	60	5000				60.00	100 A	14.0mm² THHN in 40mm Ø conduit
16	ACU 6 ( Split Type 5TR)	1	5000	230	60	5000				60.00	100 A	14.0mm² THHN in 40mm Ø conduit
17	ACU 7 ( Split Type 5TR)	1	5000	230	60	5000				60.00	100 A	14.0mm² THHN in 40mm Ø conduit
18	ACU 8 ( Split Type 5TR)	1	5000	230	60	5000				60.00	100 A	14.0mm² THHN in 40mm Ø conduit
19	SPARE 4 (Motor loads)	1	2500	230	60	2500	10.87				30 A	5.5mm² THHN in 25mm Ø conduit
20	Space											
							43.65	44.35	45.65	480.00	600 A	
	DEMAND FACTOR 100%											Use : 4 sets 3-50.0 mm² THHN + 1- 8.0 mm² THHN in 76mm Ø RSC conduit
	TOTAL LOAD DEMAND : TOTAL 3PH LOAD + HIGHEST 1PH LOAD ( 100% D.F.) =					525.65						Use : 600 AT / 600AF CB 3PH , 230 Vac , 60 Hz

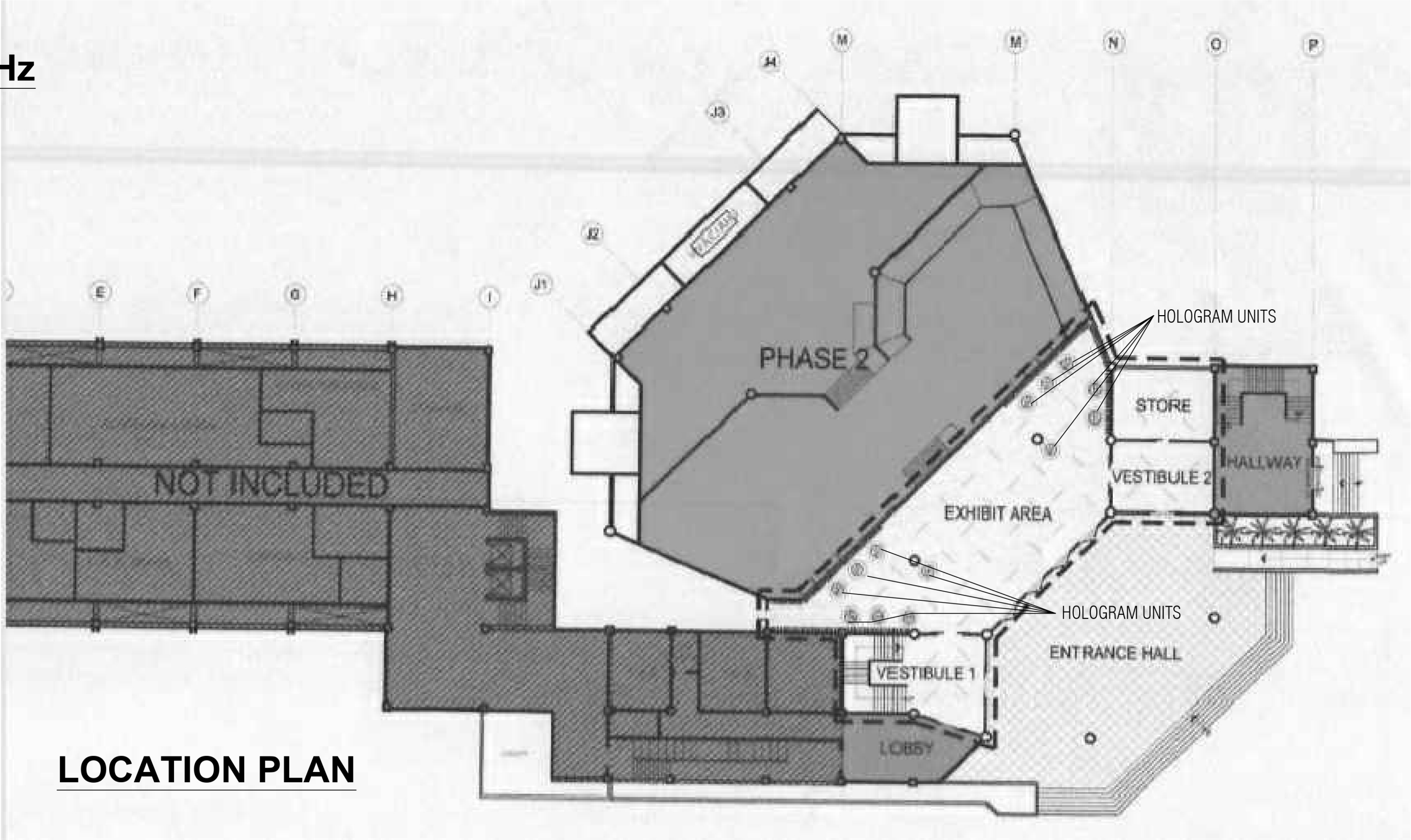
POWER LAYOUT



LIGHTING LAYOUT

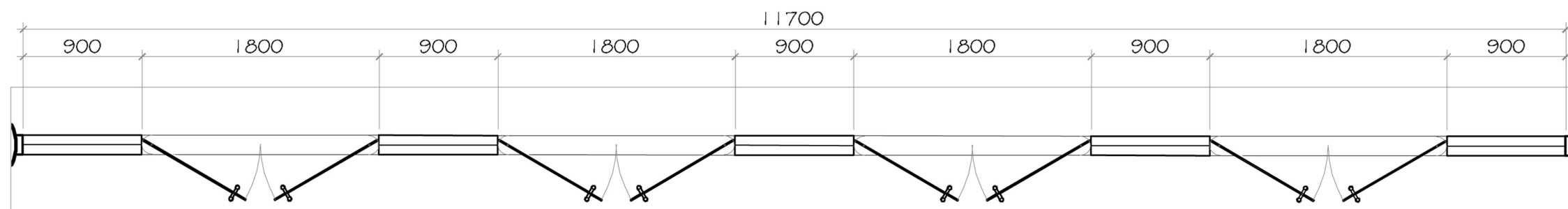


LOCATION PLAN

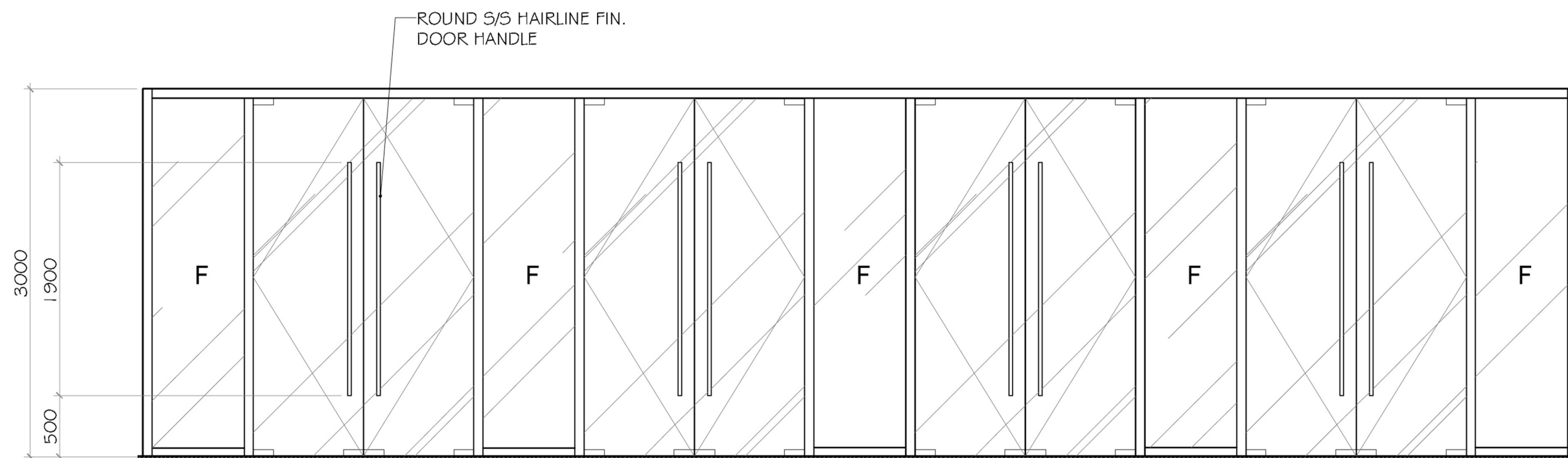


CONTRACTOR:		PROFESSIONAL ELECTRICAL ENGINEER:		PRC	PROJECT:	OWNER:	PREPARED BY: RHETT AYLLON	SHEET CONTENTS:	SHEET NO.:		
<div>THIS DRAWING IS A PROPERTY OF BEAVER ELECTRO-MECHANICAL WORKS AND MAY NOT BE COPIED IN WORDS AND MAY NOT BE COPIED IN WHOLE OR PART, OR DISCLOSE WITHOUT PRIOR WRITTEN CONSENT FROM THE FROM THE ABOVE MENTIONED C O M P A N Y</div> <div>BEAVER ELECTRO-MECHANICAL WORKS</div> <div>864 J.P. Rizal Street, Barangay Poblacion, Makati City, Metro Manila 1210</div>	<div></div>		PTR	PROPOSED INTERIOR RENOVATION OF THE NEW SALINLAHI MUSEUM ( PHASE 1 )	NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY (NAST)	RECOM. APPROVAL:		AS SHOWN	E-1		
			DATE			REVISION:			SCALE:		
			PLACE								
			TIN	LOCATION: DOST COMPOUND, BICUTAN, TAGUIG CITY						CHECKED BY:	



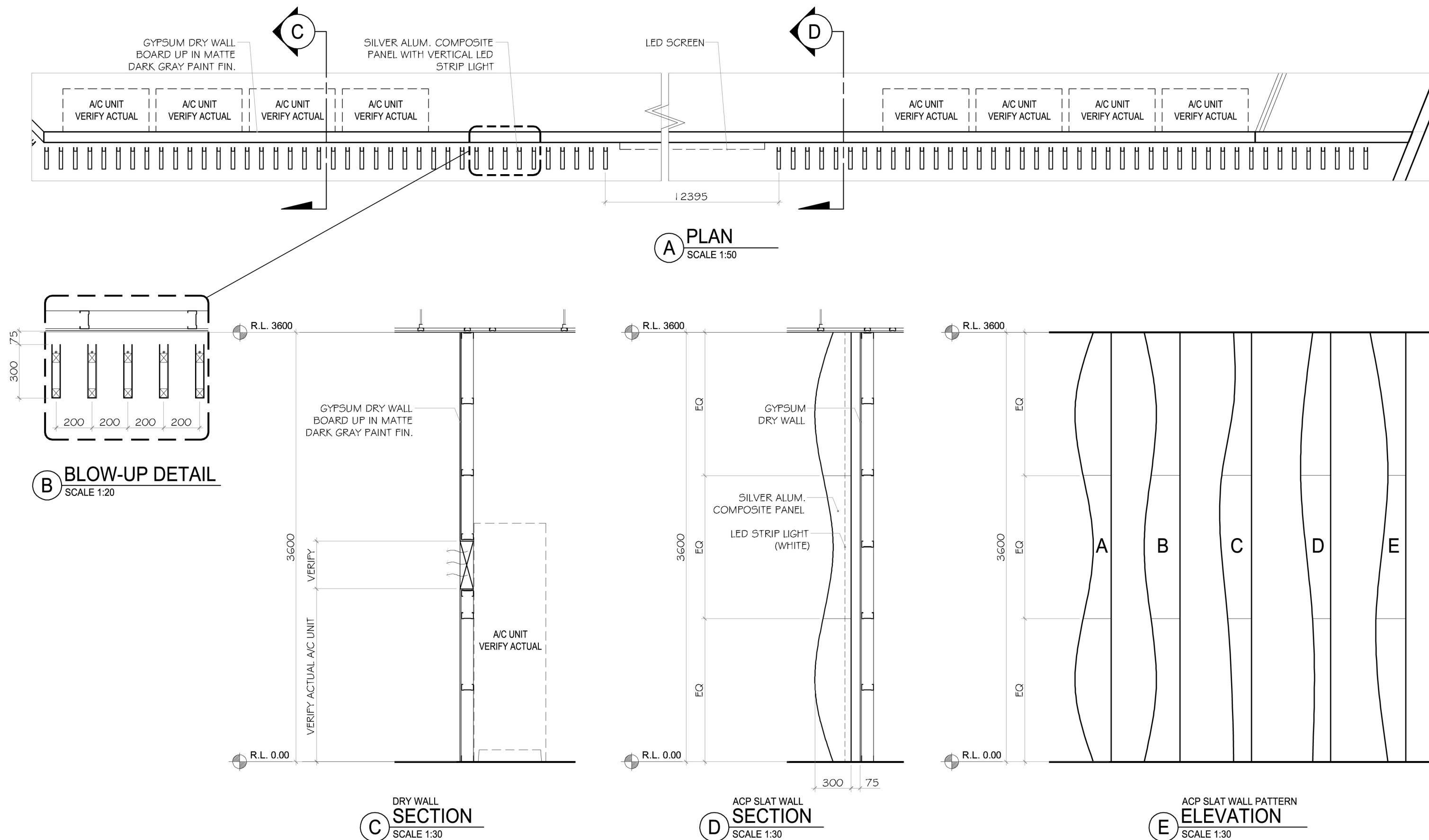


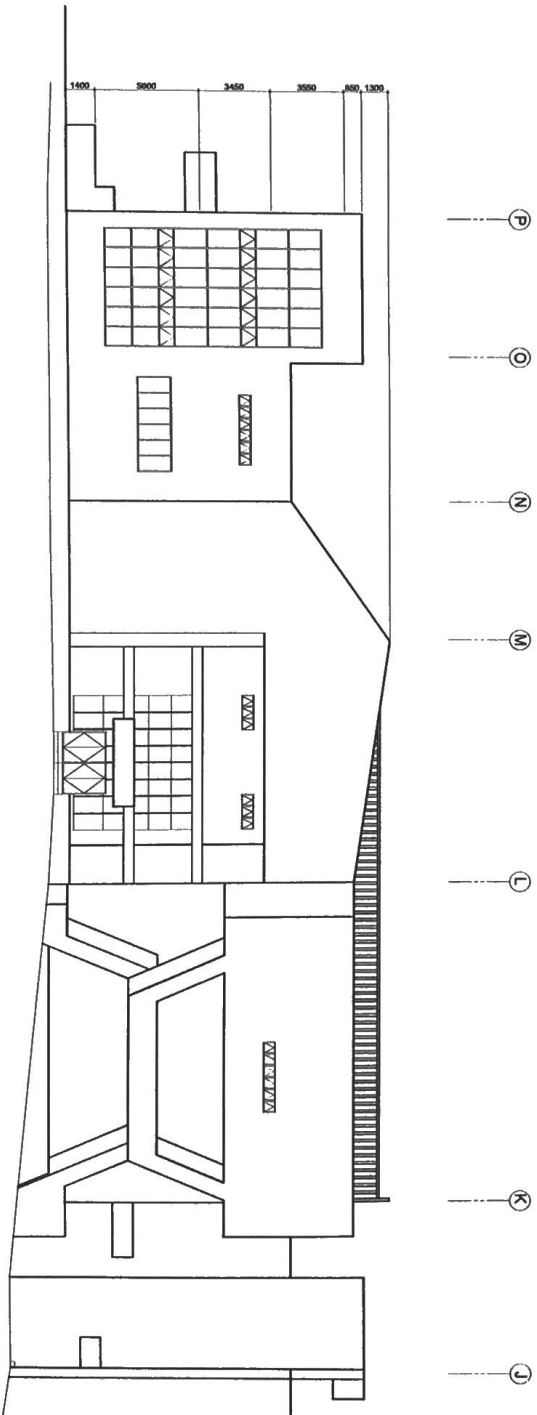
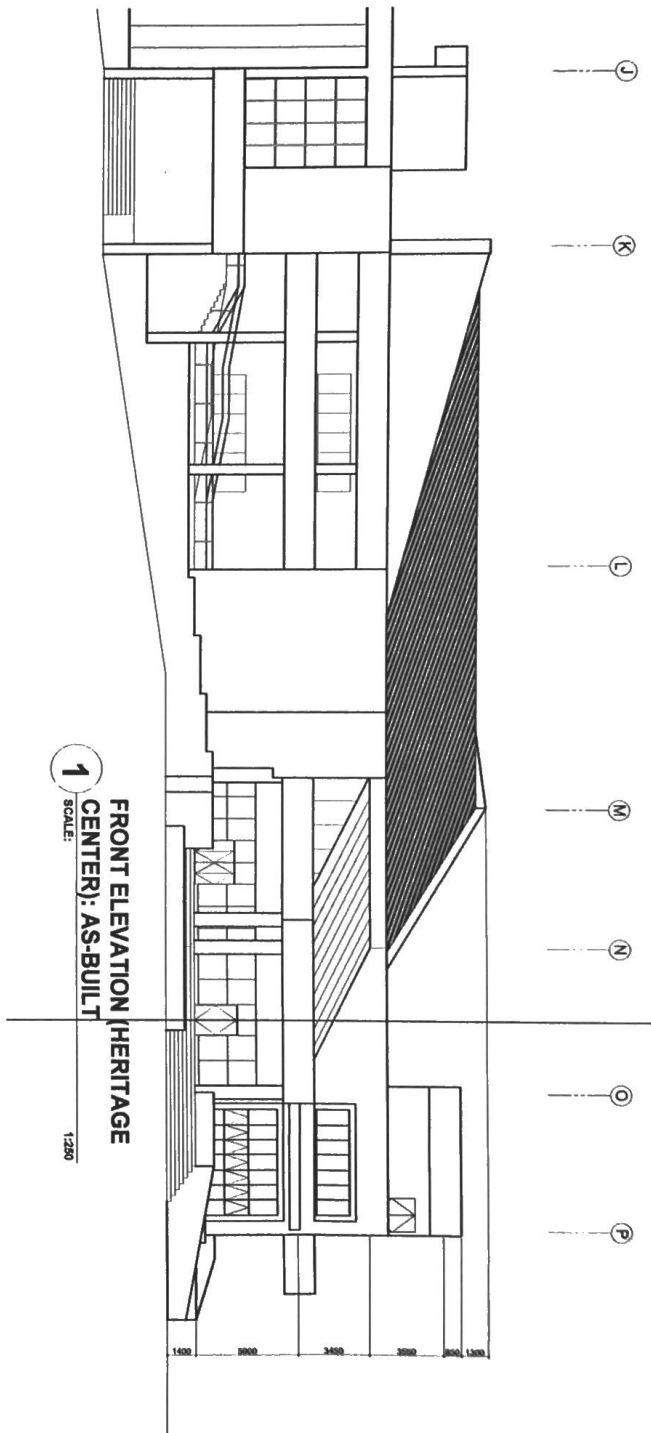
PLAN

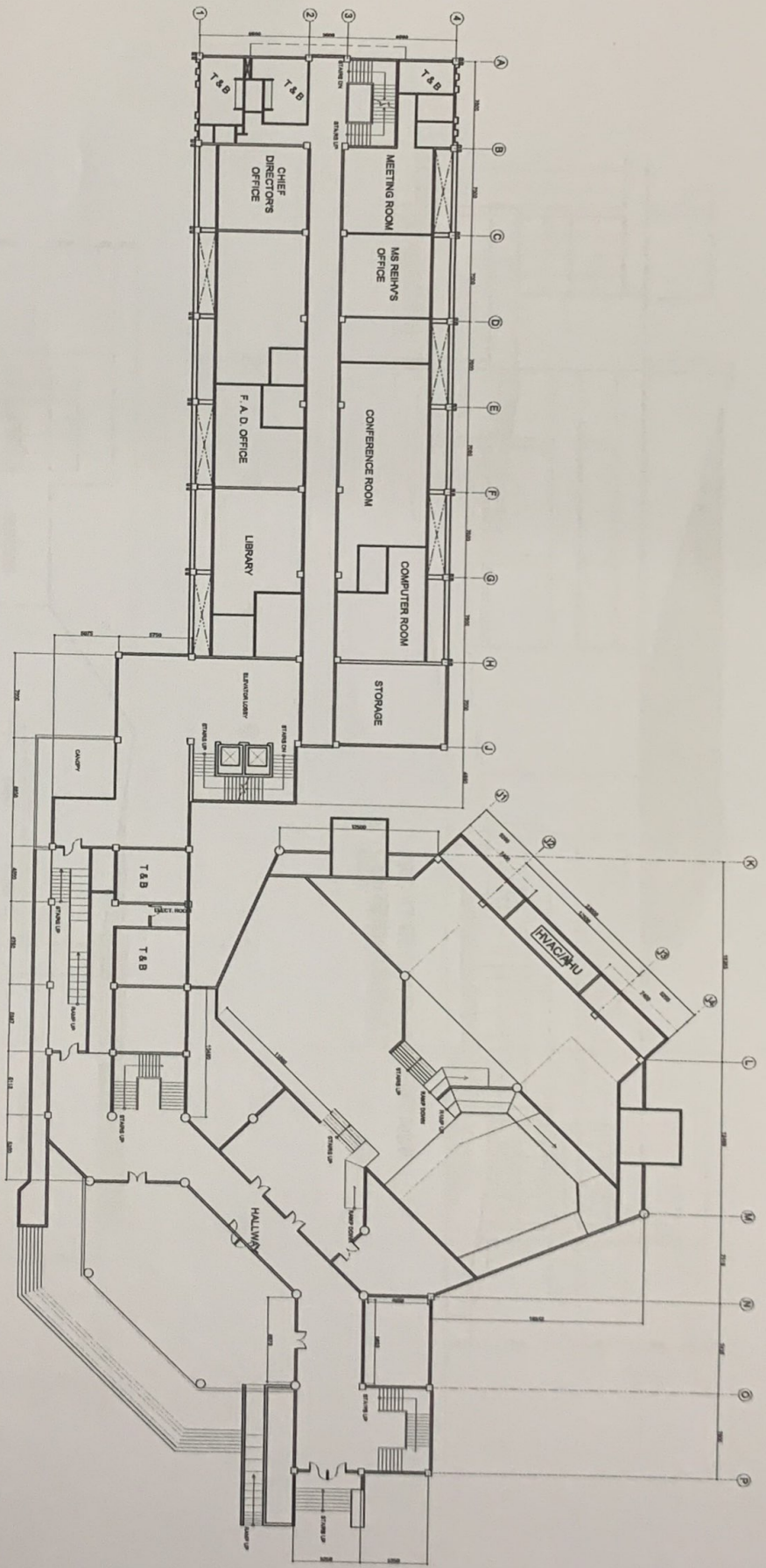


ELEVATION

DOOR NO.	: <b>D-01</b>
TYPE	: GLASS SWING DOOR
DESCRIPTION	: SEAMLESS TEMP. CLEAR GLASS
JAMB	: N/A
QUANTITY	: 1 SET
LOCATION	: MAIN ENTRANCE
HARDWARE	: BY SUPPLIER







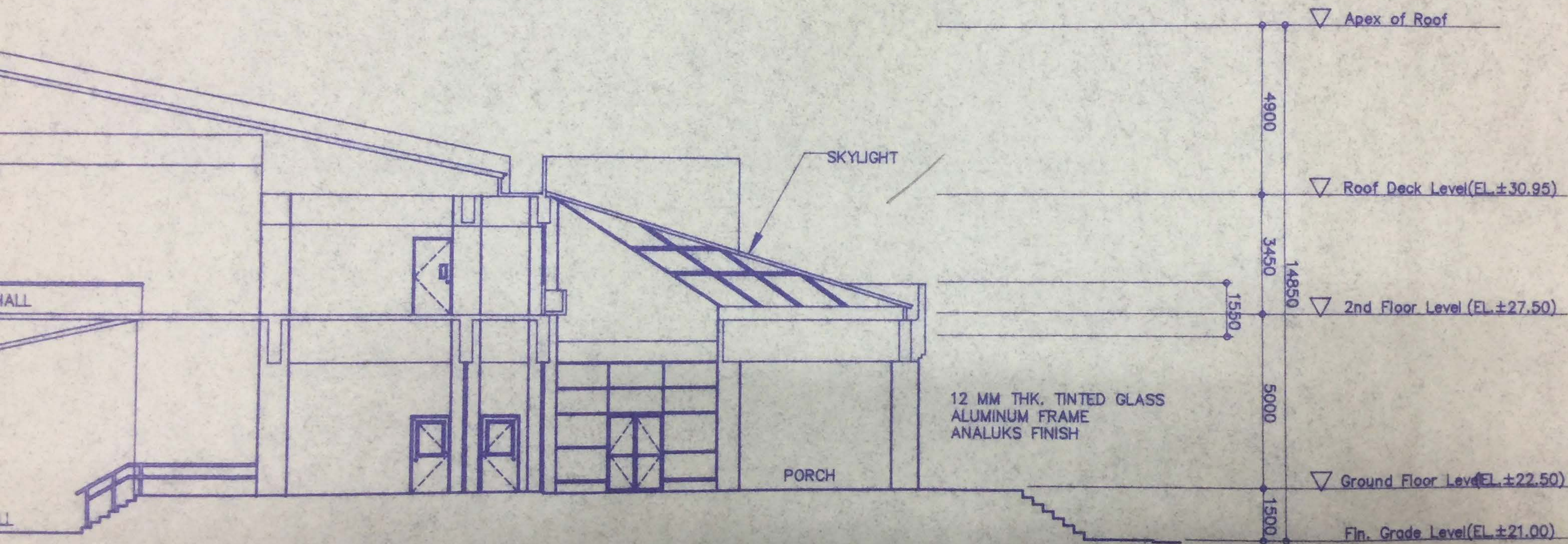
1

SECOND FLOOR PLAN: AS-BUILT

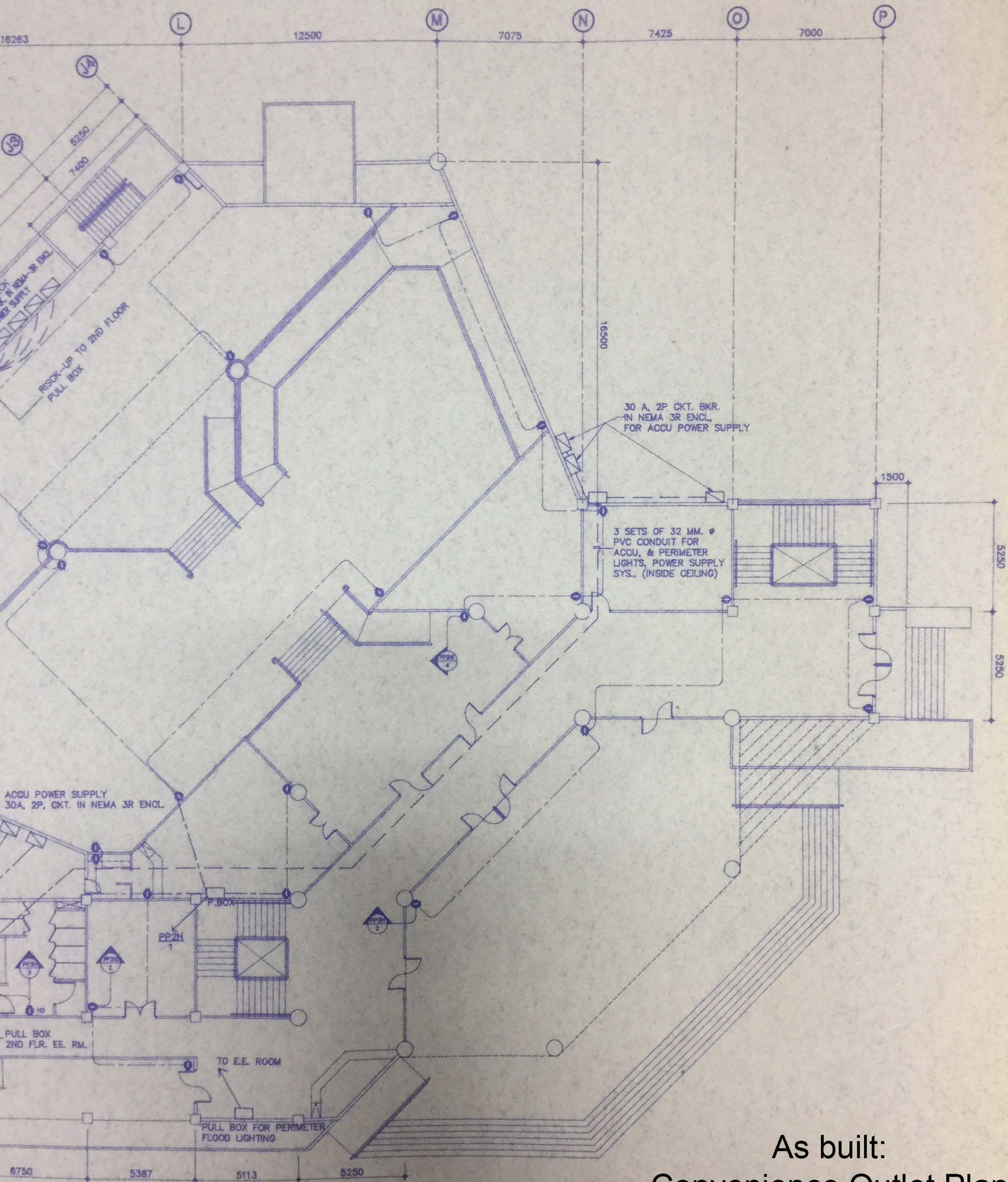
SCALE:

1:250



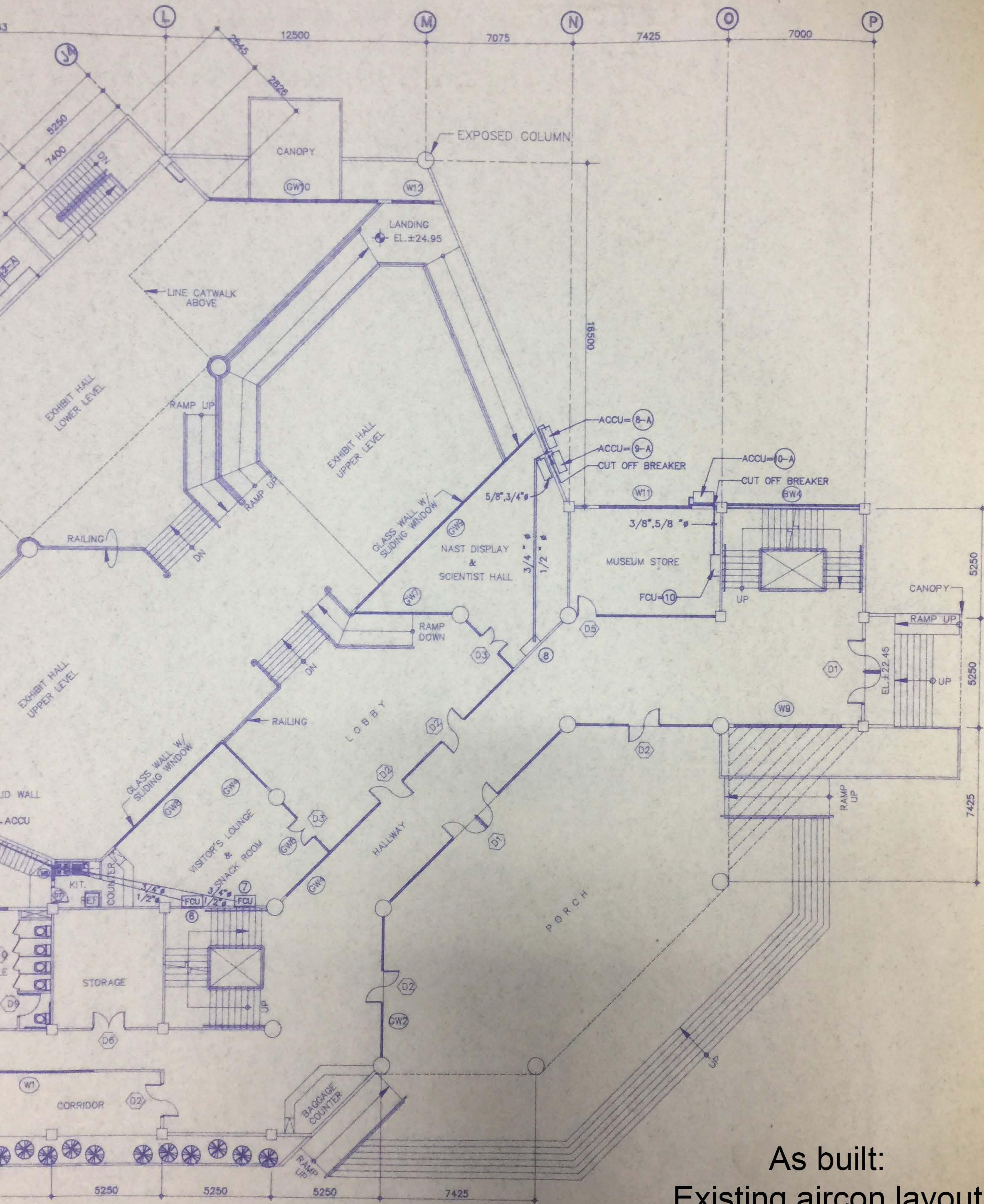






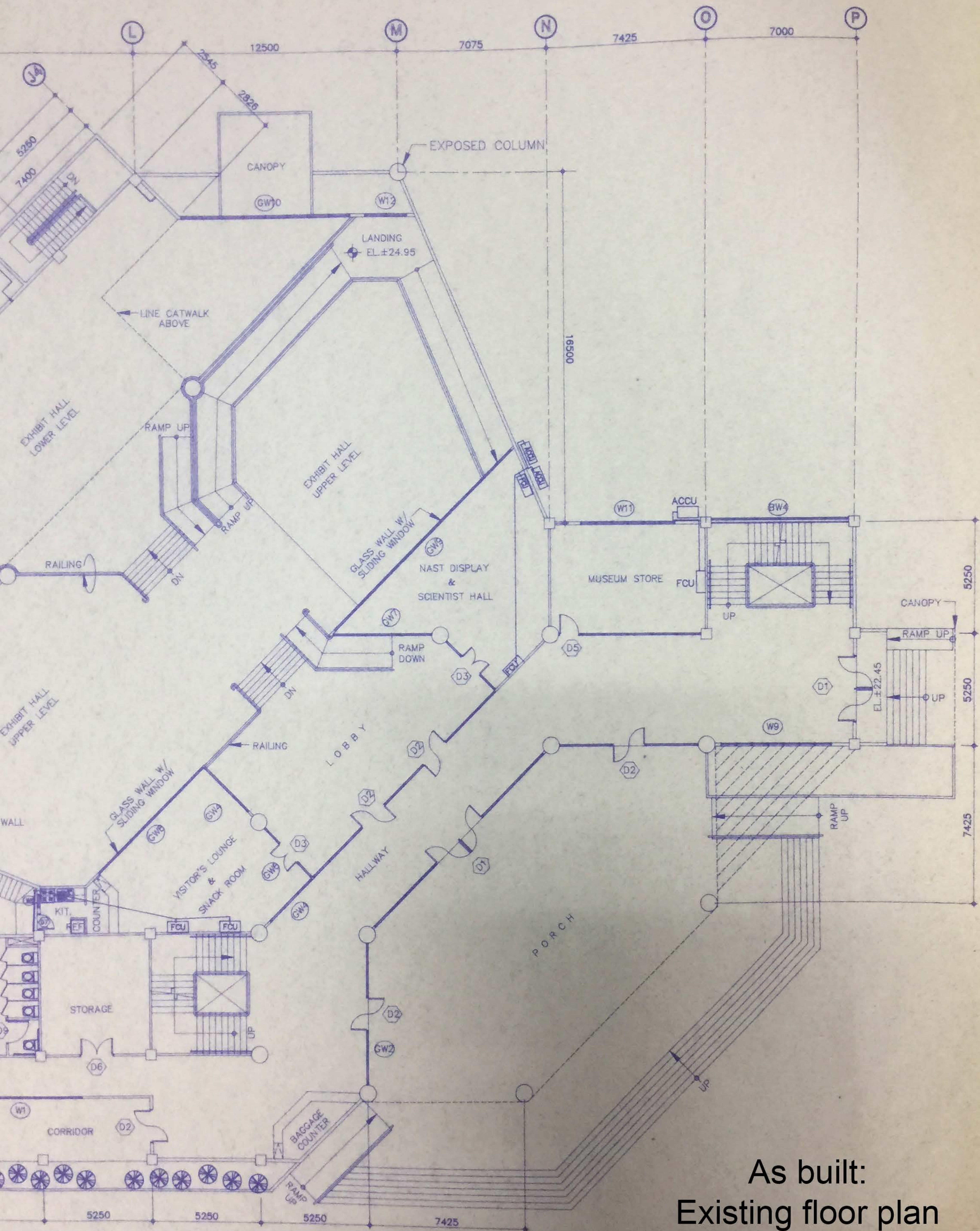
As built:  
Convenience Outlet Plan





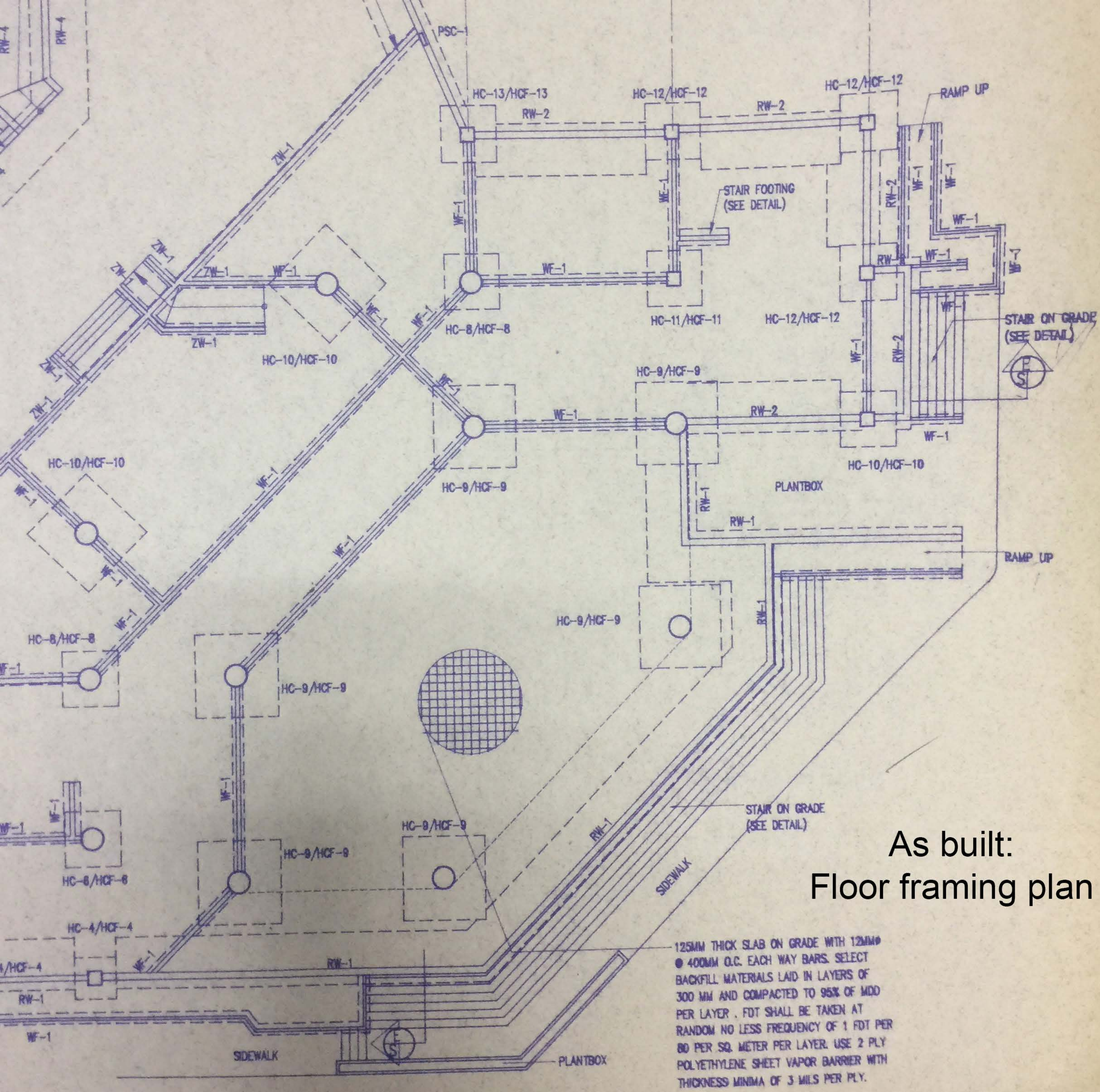
As built:  
Existing aircon layout





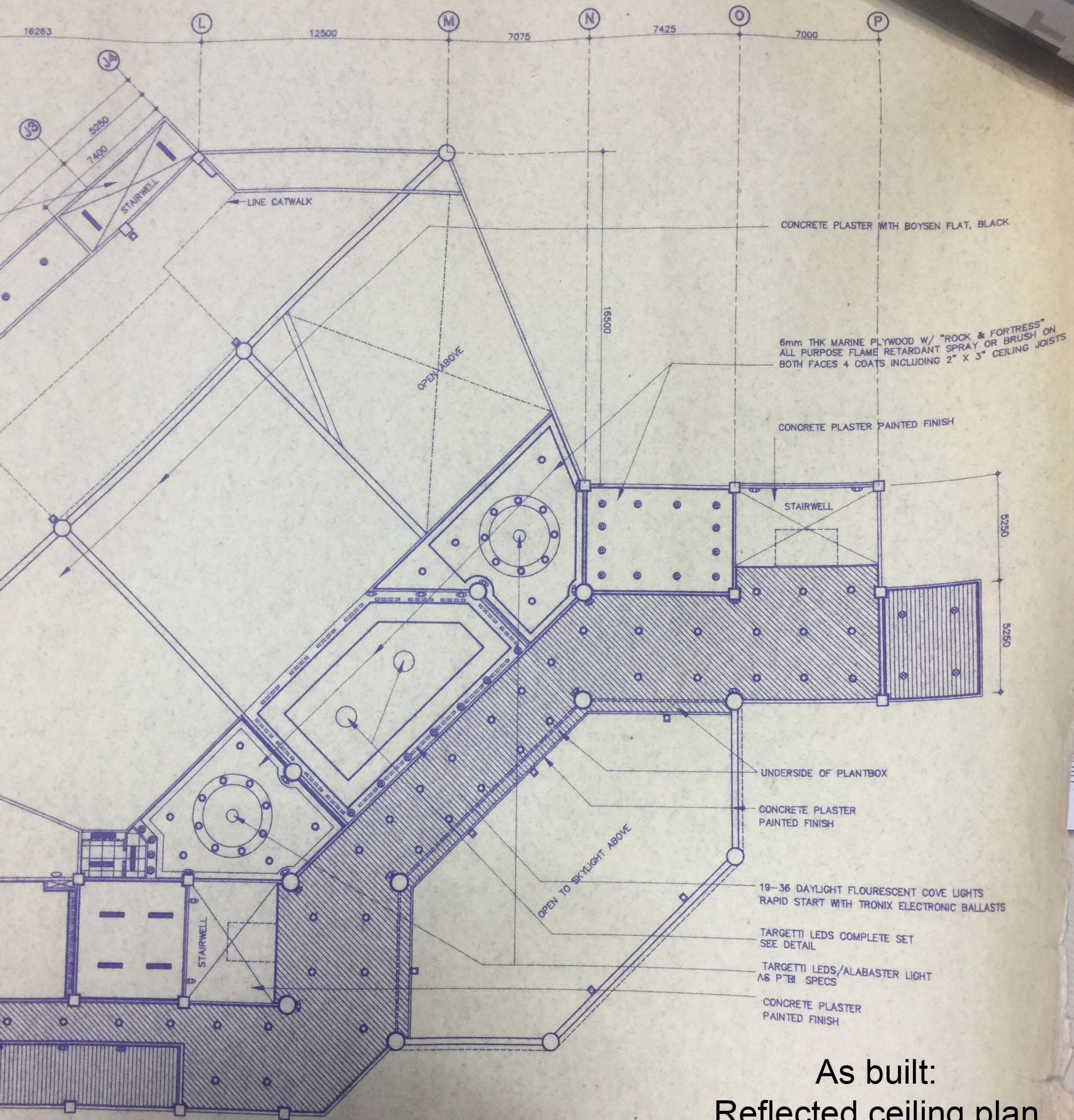
As built:  
Existing floor plan





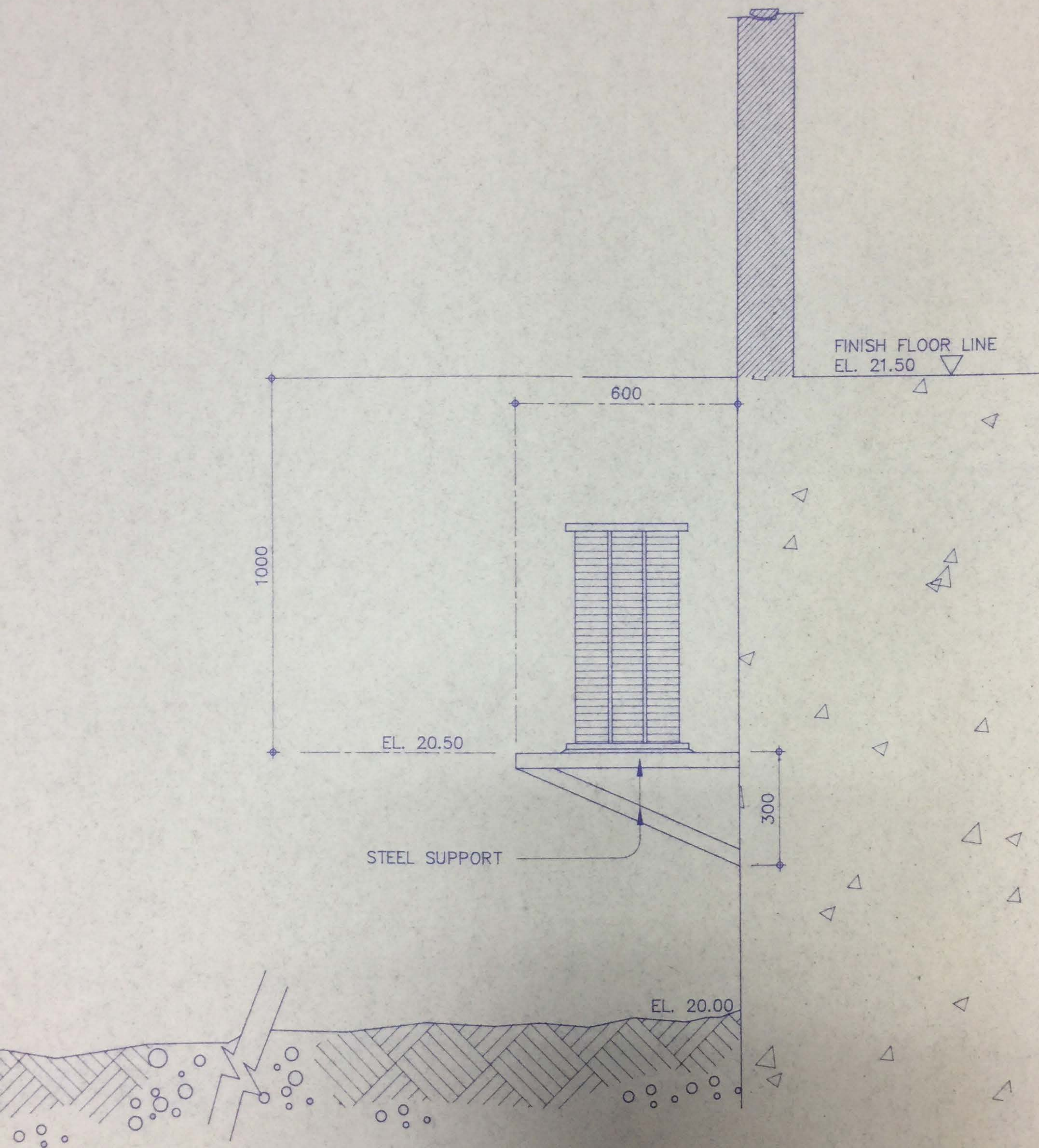
As built:  
Floor framing plan





As built:  
Reflected ceiling plan





7 SECTION THRU - L  
SCALE 1:10 METERS

Section of Aircon  
Condenser Mounting



## *Section VIII. Bill of Quantities*

ITEM NO.	SCOPE OF WORK		QUANTITY	UNIT	LABOR	MATERIAL	TOT UNIT COST	TOTAL COST
Interior Renovation and Curatorial Upgrade for the PSHC (Phase I)								
I.	General Requirements							
		Mobilization and Demobilization	1.00	lot				
		Temporary Facility	1.00	lot				
		Bonds and Insurances	1.00	lot				
		Safety Requirements.	1.00	lot				
		Tools & Equipment	1.00	lot				
		Scaffoldings.	1.00	lot				
		Hauling & Disposal of Debris	1.00	lot				
		As built plans submission	1.00	lot				
II.	Demolition Works							
	Exhibit Area							
		Stripping of Floor Tiles	265.53	sqm				
		Chipping of Existing Concrete Topping of Floor Tiles	265.53	sqm				
		Ceiling (Demolition)	265.53	sqm				
		Aluminum Fixed Glass, Window & Doors (Demolition)	257.57	sqm				
		CHB Wall (Demolition)	33.00	sqm				
	Vestibule 1 & 2							

		Stripping of Floor Tiles	37.38	sqm				
		Chipping of Existing Concrete Topping of Floor Tiles	37.38	sqm				
	<i>Merchandising Area/ Store</i>							
		Ceiling (Demolition)	37.42	sqm				
		Stripping of Floor Tiles	37.42	sqm				
		Chipping of Existing Concrete Topping of Floor Tiles	37.42	sqm				
III.	<b>Concrete Works</b>							
	<i>Exhibit Area</i>							
		Concreting/Topping of Floor	265.53	sqm				
	<i>Vestibule 1 &amp; 2</i>							
		Concreting/Topping of Floor	37.38	sqm				
	<i>Merchandising Area/ Store</i>							
		Concreting/Topping of Floor	37.42	sqm				
IV.	<b>Masonry Works</b>							
	<i>Exhibit Area</i>							
	<i>Vestibule 1 &amp; 2</i>							
		Overhead CHB Wall along Doors & Windows	46.00	sqm				
	<i>Merchandising Area/ Store</i>							
V.	<b>Doors and Windows (Refer to Supplemental Plans/ Drawings</b>							
	<i>Exhibit Area</i>							
		Automated Sliding Glass Door(12mm Tempered Glass)@2.40 ht.	4.00	sets				

	<i>Vestibule 1 &amp; 2</i>							
	Doors	Automated Sliding Glass Door(12mm Tempered Glass)@2.40 ht.	4.00	sets				
		Double Swing Door( 12mm Temp. Glass @ 2.40 m height)	4.00	sets				
		Single Swing Door( 12mm Temp. Glass @ 2.40 m height)	1.00	set				
	Windows	Fixed Glass with Aluminum Frame (12mm Temp. Glass@ 2.40m Height)	90.27	sqm				
	<i>Merchandising Area/Store</i>							
VI.	<b>Electrical Works (Refer to Supplemental Plan/Drawing</b>							
	<i>Exhibit Area</i>							
		Roughing-ins (including fittings and fixtures)	1.00	lot				
	C.Outlet	Floor Outlet with wiring to junction box	13.00	sets				
		ACU Outlet with wiring to junction box	7.00	sets				
		Panel board, Circuit breaker & Main Feeder to include wiring	1.00	lot				
	Lighting	Recessed LED Downlight	67.00	pcs				
		LED Daylight	12.00	pcs				
		Inground LED Light, IP 68, water-resistant	27.00	pcs				
	Conduits	Telephone/Data System (design, layout and installation)	1.00	lot				
	CCTV	CCTV Camera and Accessories (to include PC Monitoring System)	1.00	lot				
		(design, layout and installation)						
	<i>Vestibule 1 &amp; 2</i>							



	Merchandising Area/Store							
VII.	Mechanical Works (Refer to Supplemental Plan/Drawing)							
	Exhibit Area							
		Floor Mounted 5TR Inverter with Installation	8.00	sets				
		Cooling: 60,000 BTU/h	-	-				
		Power Consumption: 5,370 W	-	-				
		Rated Current: 15.5 A	-	-				
		EER: 11 BTU/h-W	-	-				
		Indoor Noise Level (low): 49.2 dB(A)	-	-				
		Indoor Air Flow (High): 2,200 m3/h	-	-				
		Maximum Pipe Length: 50 m	-	-				
		Maximum Diferrence in Level: 30 m	-	-				
		Tubing Connection Diameter (Liq/Gas): 9.52mm/19mm	-	-				
		Power Supply: 220-240v/60hz/3Ph	-	-				
		Refrigerant: R410A	-	-				
		Compressor: Twin-Rotary	-	-				
		Unit Dimesion (WxDxH): 610 mm x 390 mm x 1,925 mm	-	-				
		Carton Dimension (WxDxH): 2,050 mm x 745 mm x 1925 mm	-	-				
		Weight (Net/Shipping): 59 Kg/77 Kg	-	-				

	Vestibule 1 & 2							
	Merchandising Area/Store							
VIII.	Finishing Works Floor, Wall, Ceiling							
	Exhibit Area							
	Ceiling	Slit Ceiling	37.62	lm				
		Flat Ceiling @ Metal Frame - 13mm MR Gypsum Board	265.53	sqm				
	Floor	Concrete Polishing of Floor Slab	265.53	sqm				
		Floor Accent Black Quartz Tile/Stone	3.00	sqm				
	Wall	Restoration of Damaged CHB Wall	1.00	lot				
		Multimedia Slat Wall (Silver aluminum composite panel)	126.00	sqm				
		Video Wall Border with Metal Pearl Steel	31.00	lm				
		Slit Wall @ Video wall	12.00	lm				
	Vestibule 1 & 2							
	Floor	Concrete Polishing of Floor Slab	37.38	sqm				
	Merchandising Area/Store							
	Ceiling	Flat Ceiling @ Metal Frame - 13mm MR Gypsum Board	37.42	sqm				
	Floor	Concrete Polishing of Floor Slab	37.42	sqm				
IX.	Painting Works							
	Exhibit Area							
		Ceiling	265.53	sqm				
		Existing Column	40.00	sqm				

		Drywall	200.00	sqm				
		Multimedia Slit Wall ( Ducco Finish)	300.00	sqm				
	<i>Vestibule 1 &amp; 2</i>							
		Overhead CHB Wall	300.00	sqm				
	<i>Merchandising Area/Store</i>							
		Ceiling	37.42	sqm				
X.	<b>Equipment and Display (to include bracing and mounting)</b>							
	<i>Exhibit Area</i>							
		Steel Framing of Video Wall (Angular/Tubular) – Design and install	40.00	sqm				
		Hologram Capsule (Fabrication, delivery and installation including videos, photos, content development, etc.)	13.00	sets				
		<b>Video Wall- LED Monitor D-Series (D3/D4) - 8mx 2.5m</b>	1.00	lot				
		D3V (5000mmx500mmx100) with spare	82.00	pcs				
		MCTRL660 Sending Box	2.00	pcs				
		Control pc. With Accessories & w/ 2Output DVI/HDMI	1.00	set				
		LVP615s Video Processor	1.00	pc.				
		Electrical Works	1.00	lot				
		25KVA UPS	1.00	PC				
		<b>Ultra-short throw projector for the Hologram Exhibit</b>	13.00	sets				
		Projection System: 3LCD Technology						

		LCD Panel: 0.59 inch with D9						
		Colour Light Output: 3,500 Lumen - 2,900 lumen (economy)						
		White Light Output: 3,500 Lumen - 2,900 lumen (economy)						
		Resolution: WXGA, 1280x800, 16:10	-	-				
		Contrast ratio: 14,000:1						
		Lamp: 250 W, 5,000 h durability, 10,000 h durability (economy mode), 9,000 h durability (economy mode)						
		Keystone Correction: Manual vertical: +- 3 degrees, manual horizontal: +- 3 degrees						
		Colour Reproduction: up to 1.07 billion colors						
		Projection Ratio: 0.28 - 0.37:1						
		Zoom: Digital, Factor: 1 - 1.35	-	-				
		Image Size: 60 inches - 100 inches	-	-				
		Projection Distance wide: 0.4 m (60 inch screen), tele: 0.6 m (100 inch screen)	-	-				
		Focal Distance: 3.7 mm	-	-				
		Focus: Manual	-	-				
		Offset: 5.8:1						
		USB Display Function: 3 in 1: Image/Mouse/Sound						
		Interfaces: USB 2.0 Type A, USB 2.0 type B, RS - 232C, HDMI in (3x), Composite in, RGB in (2x), RGB out, Stereo mini jack audio out, Stereo mini jack audio in (3x), microphone input,						

		ethernet interface (100 Base-TX//10-Base-T), Wireless LAN IEEE 802.11b/g/n (optional), VGA in (2x), VGA out, MHL						
		Security: Kensington Lock, Password Lock, Security cablr hole, Wireless LAN unit lock, Password protection						
		Warranty: 36 months On-site service or 8,000 h, Lamp: 12 months or 1,000 h.						
	<i>Vestibule 1 &amp; 2</i>							
	<i>Merchandising Area/ Store</i>							
TOTAL								