



INITIAL PROPERTY DEVELOPMENT BRIEF (PDB)

Property with an approx. **5,000.0 sqm** Total Lot Area (TLA)
(approx. **50.0 m** frontage by say **100.0 m** depth)
and located at Roxas Blvd. (near Sen. Gil Puyat Ave.), Pasay City, Metropolitan Manila Area (MMA)

Prepared 17 November 2014 by
Architect (Ar.) Armando N. ALLÍ, apec ar
for the

Property Owner: **Philippine Economic Zone Authority (PEZA)**

POSSIBLE DEVELOPMENT ALTERNATIVE

(**POSSIBLE 40.0-STOREY HIGH-RISE MIXED USE BUILDING
WITH NO BASEMENT LEVEL**)

*Note: This brief presents the potentially **maximum** developments allowed under existing national and local laws for the property under consideration. The Property Owner is at liberty to scale down the proposed development to the desired/ required/ affordable limit.*

1. Current Property Characteristics

Per the information made available to Architect (Ar.) Alli, the PEZA property can be generally characterized as follows:

- a) approximate total lot area (TLA) at five thousand square meters (5,000.0 sqm);
- b) approximate land area occupied by the existing reinforced concrete (RC) six (6)-storey building with roof deck level (i.e. medium-rise) at one thousand (1,000.0) sqm;
- c) the sub-floor at the 6th floor (an additional structural load on the building frame) is of wood construction;
- d) the existing building (at 45.0 m by 17.8 m or approx. 801.0 sqm in plan and 23.0 m in height) is between 40 to 50 years old, has sustained severe fire damage in the mid-1980s (i.e. 30 years ago), has apparently undergone facelifting and retrofit work several times over the last 2 decades and only has one (1) elevator;
- e) while no information is supplied, the total gross floor area (TGFA) of the building is initially estimated at about 5,000.0 sqm, including deck roof level;
- f) the site is reclaimed land i.e. all land sited west of Taft Avenue are reclaimed and may be subject to liquefaction in case of severe earth movement or similar other natural occurrences; the property is generally flat;
- g) site is very accessible (public and private modes) but parking provisions may be a problem (if the National Building Code of the Philippines/ NBCP is to be fully complied with); site location exceeds 200.0 m walking threshold to bus/ *jeepney* stops for tropical locations, particularly for hot and humid days; commercial developments as well as other existing and emerging mixed-use developments are also generally outside the threshold; the SM Mall of Asia (MoA) Complex is only a few kilometers (km) away (requires a direct ride via the infrequent Green Frog hybrid bus service along Sen. Gil Puyat Ave. but other services are also available); and the Ninoy Aquino International Airport (NAIA) Complex and the Port of Manila are only a few km away;



- h) the lot frontage faces the west squarely; prevailing winds and storm winds can severely affect the building envelope (shell).

2. Recommendations by P-Square Associates Co. (PSAC)

Per the PSAC Final Structural Investigation Report, the subject property can be redeveloped under any of the following options:

- a) Option 1: demolish/ remove/ replace the existing building; requires full transfer of PEZA operations; cost at PhP269M;
- b) Option 2: demolish the 6th floor and deck roof level (wood construction) and replace with RC construction and retrofit the lower floors using carbon fiber reinforced polymer (CBRP); use the 6th floor as assembly area i.e. combining live loads and long spans/ deck roof level supports; requires transfer of PEZA offices housed at the 6th floor; cost at PhP542M; and
- c) Option 3 : same as Option 2 but with lesser CBRP and additional shear walls at selected locations; entails rehabilitation requiring massive foundation investigation and strengthening; requires full transfer of PEZA operations; cost at 431M.

3. Initial Comments on PSAC Recommendations

The following comments are made on the evolved development options:

- a) Option 1: a large part of the building could still be saved and subjected to adaptive reuse e.g. museum, conference/ assembly facilities, reception and social spaces, etc.; this presumes of course that a tower shall be built on the 4,000.0 sqm portion of the property; the remaining building shall then serve as the podium for the tower; note that taking away the deck roof level, the 6th floor, and the 5th floor could greatly relieved the stresses and loads on the existing structure; note also that the building was made of sturdier/ stronger building materials; finally, with the age of the building , there may be need to look into heritage aspects (as the building may already fall under the heritage building classification under new laws (such that it may not be that easy to demolish the entire building); Option 1 shall also severely affect PEZA operations;
- b) Option 2: demolishing the 6th floor, the floor and deck roof level and putting the remaining building to adaptive reuse could be the better option; replacing the 6th floor with RC construction only maintains/ or adds to the existing stresses and loads on the entire building frame and supports (without improvements in the structural system); the Option 2 cost is prohibitive and is already equivalent to about 15,500.0 sqm of new construction at present day prices (at say Php35,000.0 per sqm for the subject site); Option 1 shall greatly affect PEZA operations; and
- c) Option 3 : this is again much too expensive and invasive and may not yield good returns as it shall severely affect PEZA operations.

4. Zoning Classification (Land/ Building Use Restrictions) and Other Development Controls

Per initial information from the ongoing Pasay City LGU effort at revising the 2003 Zoning Ordinance (ZO), the property is situated in an area to be classified as a commercial 3 (**C-3**) zone for which the following development controls presently apply under the NBCP:

- a) an average floor to lot area ratio (**FLAR**) of from 9 to 34 i.e. which if applied to the total lot area (**TLA**) of the rear 4,000.0 sqm portion of the PEZA property results in an approximate Gross Floor Area (**GFA**) of from **36,000.0 sqm to 136,000.0 sqm**;



- b) an applicable percentage of land occupancy (**PLO**, same as percentage of site occupancy or **PSO** of 75% of TLA, as per Rule VII of the 2004 Revised IRR of **P.D. No. 1096**, otherwise known as the 1977 National Building Code of the Philippines/ NBCP) or a PLO/ PSO of **3,000.0 sqm** for the 4,000.0 sqm rear portion of PEZA property; and
- c) a building height limit (BHL) at 16 to 60 storeys **maximum** i.e. 48.0 m to 180.0 m, with the higher BHL only as allowed by the **CAAP**, formerly the Air Transportation Office (ATO) i.e. a **high-rise** development under the Rule VII Table VII.2 of the 2004 Revised IRR of P.D. No. 1096 (1977 NBCP); an optimum of **say 40 storeys** is initially suggested, with a TGFA of say **120,000.0 sqm**.

If the PLO/ PSO and BHL development controls are used together, a TGFA of only **120,000.0 sqm** shall result i.e. including certain spaces such as equipment rooms, above-ground parking areas, utility areas, fire exits and exit enclosures, etc. The resultant FLAR for the 4,000.0 sqm rear portion of PEZA property shall only be 20.

Supportive commercial uses may be introduced at the ground floor but these are generally intended to service the needs of the end-users of the proposed development as well as a limited number of users from the immediately surrounding areas.

5. Mandated Compliances with the National Building Code of the Philippines (NBCP), Fire Code and Accessibility Law

P.D. No. 1096 (the 1977 **NBCP**) and its **2004 Revised IRR**, effective 01 May 2005), its referral codes (RCs) such as the **R.A. No. 9514** (The 2008 Fire Code of the Philippines/ FCP and its 2009 IRR) and **B.P. Big. 344** (Accessibility for the Disabled) are only three (3) of the main national laws that have to be complied with in the physical planning and design of the proposed facility. Full compliance with B.P. No. 344 will be required due to the facility's public nature i.e. disabled ramps and toilets will have to be provided at all public spaces. Please note however that the pertinent provisions of these national laws may be duly modified only if the parallel provisions under local laws i.e. Pasay City ordinances are more **stringent/ stricter** (to address very specific concerns).

Although there are apparently **no** imposed development controls concerning the utilization of the area below the natural surface of the property i.e. for basement construction, it would be prudent **not** to introduce a basement due to possible flooding (from below ground i.e. seepage) and potential liquefaction considerations i.e. since the PEZA property is reclaimed land.

While the lack of a basement level shall result in a substantial loss in the utilization efficiency of the lot, it shall make the proposed building generally safer and less of an operational and maintenance concern. As such, covered parking spaces that could have been introduced at the basement would now have to be above ground (within the property) or in adjacent open parking spaces or parking structures (on nearby lots).

Being an institutional property with a high PLO/ PSO, firewalls may not be allowed. The use of multiple elevators, fire exit stairways and sprinkler systems shall be required while pressurized stairwells shall be an option.



6. Maximum Development Potential (with Initially Suggested Concept of Use) and the Initial Estimate of Development Cost

The initially estimated total gross floor area (TGFA) shall be at approximately **124,600.0** sqm at a total cost of **Php4.281 billions**, broken as follows:

- a) adaptive reuse and retrofit work at existing building (reduced to 4 storeys with deck roof level) i.e. for public and semi-private spaces and social areas; TGFA of say 4,600.0 sqm X Php17,500.0 = P80.6M; this shall serve as the podium component of the redevelopment; and
- b) new building construction (4 storeys with deck roof level) i.e. for private and semi-private spaces; TGFA of **say 120,000.0 sqm X Php35,000.0 = P4.2 billions** (40 storeys excluding deck roof level); this shall serve as the podium component of the redevelopment

Very Important Notes:

- 1) *The stated amount only covers the estimated direct and indirect cost of constructing the proposed development, including air-conditioning systems and basic capital equipment such as elevators, transformers and generators.*
- 2) *Specifically excluded are furniture and special fixtures/ equipment.*
- 3) *Professional fees for physical planning/ design/ project and construction management and related consulting services i.e. relative to the conduct of pre-design studies, site development planning, architectural/ engineering/ allied architectural design/ project and construction management, legal and financial consulting and similar requirements for the proposed development) are similarly excluded.*

5. Site and Building Plan/ Design Limitations, Possible Design Intent & Development Options

- a) the PEZA property requires the envisioned building/ redevelopments onsite to withstand a very harsh coastal environment i.e. extremes of ambient heat, full solar exposure, reflected light, humidity, a full southwest (SW monsoon wind/"*hanging habagat*") exposure, the salty air, possible flooding from beneath (seepage) and from waterways that drain Pasay City; reclamation and its associated soil stability concerns, air and noise pollution from major thoroughfares, informal settlements, etc.;
- b) the required architectural plan/ design solutions, engineering interventions, natural/ built environmental mitigations, and like considerations for the site/ building shall considerably increase construction and operation and maintenance (O&M) costs i.e. particularly for mechanical conveyances with many corrosion-prone metal or plastic parts such as air-conditioning equipment, elevators/ escalators, vehicles, computers, metal furniture, etc.;
- c) if the intended development is to be a sustainable design project i.e. resource efficient, green-designed, etc., the initially identified development cost (**IPCE**) could increase by 15-20%. However, this initial cost could be recovered over the short through medium terms (5-8 years) as operating costs could be drastically reduced; thereafter, savings could accrue. Maintenance costs could be only slightly higher compared to conventional systems;
- d) the proposed development offers an excellent opportunity for a Government-led development effort that can considerably advance the development of public buildings; and
- e) the property redevelopment effort may be assisted by the private sector through various development partnership modalities. *Nothing follows.*