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- **Commercial Buildings**
  Traders Hotel at Yangon, Myanmar
  Conrad International Centennial Singapore
  UOB Plaza II
- **Industrial Buildings**
  Factory Development at No. 5 Serangoon North Ave 5
  Communications Techno Centre
- **Institutional Buildings**
  Two Finger Buildings at Terminal 2 (S'pore Changi Airport)
  Kandang Kerbau Women's and Children's Hospital
  Redevelopment of S'pore Recreation Club
- **Residential Buildings ($1000/m^2 & above)**
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  Spring Grove Condominium
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- **Commercial Buildings**
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Award Winners - Commercial Buildings

TRADERS HOTEL AT YANGON, MYANMAR

Client:	Leo Property Management Pte Ltd
Main Contractor:	Syntech-Woh Hup Pte Ltd
Principal Consultant:	RSP Architects Planners & Engineers (Pte Ltd
Structural Consultant:	Buro Engineering Pte Ltd
M & E Consultant:	Parsons Brinckerhoff Consultants
Quantity Surveyor:	Northcroft Lim Consultants Pte Ltd
Construction Cost:	S$53 Million
Construction Period:	18 mths

Traders Hotel is the first international 4-star highrise hotel in Yangon. This building with 500 guest rooms features a 20m high structural steel architectu aluminium cladding on the roof, a podium roof-top swimming pool, and a bas works included the demolition and reinstatement of public footbridges, walkway

The project was located in a developing country without the general support se for a construction project in a more developed location. This required the beyond the use of normal management skills to effectively coordinate

construction equipment and materials from overseas. An in-house training cent
address the lack of skilled workers in the use of new building products and to
standards of quality and safety were achieved.

The complexities of the project included having to allay the fear of the local
had never experienced work of this nature and did not know what to ex
meetings were held between the construction team and the local commun
observation stations provided at the site boundaries to help explain the const
With the hotel located in the heart of a busy commercial centre, the contractor
disruption to local businesses and protect adjacent pre-war brick buildings duri
The use of silent piling techniques and "just-in-time" materials delivery prog
with the setting up of a monitoring system to check against subsidence and
buildings solved these problems. Potential flooding associated with the extre
table level at site was overcome by utilising a wellpoint dewatering system.

The contractor proposed an alternative design which reduced the number
above the ballroom area and optimised the tower crane location. The use of p
such as sun-shades, sills and cornices and the standardisation of floor elemer
to reduce the construction time and cost.

Overall, Traders Hotel was a project that is truly the culmination of a co
international flavour. Despite the complexities and the mixed nationalities
personnel, the hotel was completed and delivered on time and to the owner's s

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Award Winners - Commercial Buildings

CONRAD INTERNATIONAL CENTENNIAL SINGAPORE

Client:	Pontiac Marina Pte Ltd
Main Contractor:	Kajima Overseas Asia Pte Ltd
Principal Consultant:	DP Architects Pte Ltd
Structural Consultant:	Meinhardt (S) Pte Ltd
M & E Consultant:	Meinhardt (S) Pte Ltd
Quantity Surveyor:	Davis Langdon & Seah (S) Pte Ltd
Construction Cost:	S$116.8 Million
Construction Period:	32 mths

Conrad International Centennial Singapore is a 31-storey luxury class hotel guestrooms with two basements. It is linked to the adjoining Millenia Walk Suntec City buildings through a pedestrian tunnel.

The striking building facade, features asymmetrical and angular curtain walls symmetrical ‘punch-window’ precast concrete panels on the tower block as

cladded podium facades and entrances. Other external distinctive feature construction of the aluminium framed Porte-cochere canopy, pavilion structu and open trellis at the pool deck.

The contractor adopted the use of modular designed precast facade panels, the external angular profiled glass curtain walls which not only maintained the intent but also ensured the timely close-up of the building envelope for sub works that followed. The employment of precast concrete framed windows greatly enhanced the completion time and quality. The contractor was able to per floor of 6 days with the adoption of appropriate formwork systems sele designed elements.

Tremendous care and effort was spent on the stonework for the external cladd internal guestrooms and public areas which included colour matching and sele final alignment and installation. Highly-skilled craftsmen and artisans from Japa were engaged for some of the delicate and varied interfacing finishing works.

The positive approach and commitment from the consultants, contractors enabled the timely completion of the hotel.

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Award Winners - Commercial Buildings

UOB PLAZA II

Client:	United Overseas Bank Ltd
Main Contractor:	Wimpey-Woh Hup JV Environmental Engineering
Principal Consultant:	Architects 61 Pte Ltd
Structural Engineer:	Ove Arup & Partners Singapore
M & E Consultant:	J Roger Preston & Partners
Quantity Surveyor:	Rider Hunt Levett & Bailey
Construction Cost:	S$96.7 Million
Construction Period:	24 mths

This project involved the extension and retrofitting of the existing 32–storey U heart of the business district. It also included the construction of a new bankii to UOB Plaza I and a MRT access to the nearby MRT station.

The existing tower was raised by 7 levels using a structural steel frame to r utilisation. The tower and podium were externally cladded with stone facia p UOB Plaza I and the existing tower was completely refurbished internally.

Demolition work was carried out at the roof, mid and low level including the methods which minimize the noise level. The debris generated was disposed c the early morning to minimize disturbances to the surrounding offices and ban counter the problem of space constraint at site. The verticality of the old b accuracy required in the level of the slabs called for meticulous coordination on the part of the contractor. A team of 5 surveyors were engaged continuousl contract for both the internal and external finishes below level 6 lined through t in particular the cladding, glazing and ceilings to the banking hall.

A completely new mechanical and electrical system was designed and installe M&E plant. The installation of all mechanical and electrical services were criti space was available in ceiling voids and plant rooms, and access through ex was reduced to minimal clearance of 50mm. Careful planning and coordinatic for all interconnecting services with UOB Plaza I to eliminate any possibility operations.

The contractor's proactive approach and team effort enabled the successful e complex retrofitting work, which achieved a high standard of quality and finish.

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Award Winners - Industrial Buildings

FACTORY DEVELOPMENT AT NO. 5 SERANGOON NORTH AVE 5

Client:	Singapore Technologies Pte Ltd
Main Contractor:	SembCorp Construction Pte Ltd
Principal Consultant:	ST Architects & Engineers Pte Ltd
Structural Consultant:	ST Architects & Engineers Pte Ltd
M & E Consultant:	ST Architects & Engineers Pte Ltd
Quantity Surveyor:	ST Architects & Engineers Pte Ltd
Construction Cost:	S$41 Million
Construction Period:	14.5 mths

This turnkey project involved the construction of a 5-storey factory buildi associated facilities at Serangoon North Ave 5.

The project was complicated by the imposed overall tight schedule of 16 r intermediate deadline of 10 months for the partial handover of the cleanroom. included ground constraints of 3m level difference as well as the close proxim reserve at the rear of the site.

To meet the deadline, a precast yard was set up adjacent to the site to enhan construction. Economies of scale, speed and cost effectiveness were achieve through the extensive use of standard precast components such as precast core slabs, door, windows and other standardised fixtures. The extensive elements required meticulous planning of cranage requirements and access placements of the precast elements which enhanced the productivity of the

process. The contractor's use of innovative construction methods simplified process of precast columns and contributed 25% time saving to the overall ere

The quality to the external facade was enhanced through the incorporation o segmental walls, which served the dual purpose of breaking the monotony as surface evenness.

The contractor's adoption of innovative solutions and buildability concept enabl be completed 1.5 months ahead of schedule with excellent quality. This proje of the CIDB Buildable Awards winner in 1997.

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Award Winners - Industrial Buildings

COMMUNICATIONS TECHNO CENTRE

Client:	Xpress Print Pte Ltd
Main Contractor:	JDC – Santarli JV
Principal Consultant:	Kumpulan Akitek
Structural Consultant:	T H Chuah & Associates Pte Ltd
M & E Consultant:	Lincolne Scott Ng Consultants Pte Ltd
Quantity Surveyor:	JIA Quantity Surveyors & Project Managers Pte Ltd
Construction Cost:	S$13.8 Million
Construction Period:	11.5 mths

This project involved the construction and completion of a block of 8-storey fla a swimming pool at the 7th storey and associated external works at Kallang Wa

The unique circular balconies and curved beams encompassing the fact distinctive architectural features of the building. In view of the tight contra months and the poor soil conditions encountered on site, the contractor propos the use of pre-tensioned spun piles instead of the original intended design of u This alternative resulted in savings on both the construction time and cost.

The speed of the construction process and consistency in the quality of finis through the extensive use of precast structural elements such as the prestres slab, staircases, circular balconies and parapets as well as the curved bear floor cycle was achieved for the construction of the columns and core wall staircase using DOKA system formwork and early strength concrete.

Xpress print factory is a classic example of a fast track project, which used pre to deliver the desired distinctive features and a high standard of finish required and within the stipulated completion time.

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Award Winners - Institutional Buildings

TWO FINGER BUILDINGS AT TERMINAL 2 (SINGAPORE CHANGI AIRPORT

Client:	Civil Aviation Authority of Singapore
Main Contractor:	SembCorp Construction Pte Ltd
Principal Consultant:	PWD Consultants Pte Ltd
Structural Consultant:	PWD Consultants Pte Ltd
M & E Consultant:	PWD Consultants Pte Ltd
Quantity Surveyor:	PWD Consultants Pte Ltd
Construction Cost:	S$136.8 Million
Construction Period:	23.5 mths

Construction of Terminal 2 Extension comprised two new finger buildings (N Piers) and conversion of a portion of the existing Terminal II between the two into shops and waiting area.

The construction works were carried out in the midst of ongoing airport ope security tight environment with strict safety requirements. Meticulous co-planning were required to overcome these constraints. The contractor utilised systems manned by a team of 20 draughtsmen on site to develop combined se based on the shop drawings from various individual services. These assisted positioning of the various services and identifying potential installation confl averted and thus avoiding abortive works and delays.

Throughout the project, the contractor enhanced buildability through the
precast elements for the columns, beams and cantilevered slabs along the
fingers. This was the first PWD project which made use of 2-storey precast
could be installed within 30 minutes utilising a double nut system for the
column bases. The precast beams was designed to support the weight of the
core slabs and structural concrete without the need of supporting props
architectural and M&E works to proceed immediately after the placing c
concrete topping. The contractor also adopted numerous innovative construc
such as the introduction of galvanised fish-tail inserts for suspension o
installation to reduce labour cost and construction duration. "Just-in-time
adopted for the delivery of materials to resolve the problem of space constraint

The project was finally completed in 23.5 months against the original stipulated
of 29 months without compromising the service quality and image of Chang
leading international airport. This project was also one of the CIDB Buildable A
1997.

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Award Winners - Institutional Buildings

KANDANG KERBAU WOMEN'S AND CHILDREN'S HOSPITAL

Client:	Ministry of Health
Main Contractor:	Ssangyong Engineering & Construction C Ltd
Principal Consultant:	PWD Consultants Pte Ltd
Structural Consultant:	PWD Consultants Pte Ltd
M & E Consultant:	PWD Consultants Pte Ltd
Quantity Surveyor:	PWD Consultants Pte Ltd
Construction Cost:	S$231 Million
Construction Period:	36 mths

The new hospital comprises two six-storey tower blocks which accommodate over a 4-storey podium block with two basements including a civil defence s with medical facilities and a basement carpark with 545 lots.

The whole building is covered with specially designed aluminium cladding com semi-curvy designed steel truss skylight canopy along the main entrance facad The entire podium block is surrounded externally with wide overhanging preca shades with prefabricated aluminium sun-shades encompassing the tower bloc

A total of 248 pieces of precast concrete sun-shades in 54 different types w weighing 30 tonnes were installed and supported on rafters. The adoption of and aluminium sun-shades complete with fall arrest rods for the anchorage

served the dual purpose of acting as a platform during maintenance as well enhancing the finished building. The contractor introduced S3 premixed dry n replace the traditional method of site preparation of wet mortar, which effectiv labour and time required and produced consistently high quality work.

This project also featured a full range of automation and intelligent syster integrated to enhance productivity and reduce dependency on labour intensive hospital's daily operations. Special mechanical and electrical systems include guided vehicle system for transportation of food, clean linen and surgical supp chute system for waste disposal, pneumatic tube for the transportation of lab and telelifts for the transportation of medical records.

Effective project management coupled with the extensive use of prefabricate productive construction methods resulted in an aesthetically pleasing and high project.

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Award Winners - Institutional Buildings

REDEVELOPMENT OF SINGAPORE RECREATION CLUB

Client:	Singapore Recreation Club
Main Contractor:	Hexacon Construction Pte Ltd
Principal Consultant:	Archurban Architects Planners
Structural Consultant:	KTP Consultants Pte Ltd
M & E Consultant:	United Projects Consultants Pte Ltd
Quantity Surveyor:	Northcroft Lim Consultants Pte Ltd
Construction Cost:	S$36.7 Million
Construction Period:	19 mths

The redevelopment of Singapore Recreation Club comprises a 3-storey cl basements which houses 265 carpark lots, the first subterranean swim underground 10-lane bowling alley in Singapore as well as other recreational fa

The top-down construction method was adopted in view of the tight schedule project. Being the deepest top-down construction ever attempted in Singapor construction coupled with the fact that the main MRT line between City Hall ar stations was only 20m away from the site, geotechnical consultants were eng and predict the effects of the excavation on the integrity of the MRT tunnels computer models and simulations. Construction was carried out basemer downwards with each new slab constructed acting as the strutting for sub excavation. Escape routes were provided and emergency evacuation drills regularly to ensure the safe exit of site personnel in the event of emergency. was closely monitored by a series of equipment to ensure that they were within

The successful operation of the top down construction allowed sufficient time the elaborate interior finish works. Among these were the large-scale artificia waterwalls surrounding the free-formed swimming pool and the handpainted directly above it decorated with wrought iron grills and fibre optic lighting lobbies and corridors, numerous rooms and restaurants each uniquely decora specific theme. The time saved also allowed a later decision to upgrade the from spray texture painting to granite cladding.

Despite the complicated engineering and high quality requirements, the proje on time without any accidents.

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Award Winners - Residential Buildings ($1000/m^2 & above)

THE BAYSHORE

Client:	Bayshore Park Pte Ltd
Main Contractor:	Mitsui Construction Co Ltd
Principal Consultant:	DP Architects Pte Ltd
Structural Consultant:	KTP Consultants Pte Ltd
M & E Consultant:	Rankine & Hill (S) Pte Ltd
Quantity Surveyor:	KPK Quantity Surveyors
Construction Cost:	S$193.8 Million
Construction Period:	29 mths

The Bayshore comprises two pairs of symmetrically located 30-storey towers roof crown features each linked by a 12-storey block, which accommodates 1 units with three swimming pools and includes one 9-storey block which housed communal facilities and a 3-storey basement carpark.

This is the first high rise condominium in Singapore to utilise load beari structure on the four 30-storey blocks for both the external and most of the inte yielded flat and smooth finished surfaces. A total of 20,792 precast panels c 700 different types were used for the entire project.

The precast components were prefabricated off site with the electrical conduit recesses for the M & E services incorporated and transported to the site base time principle for installation. The contractor adopted the jack-up form construction of the corewalls comprising lift and staircase walls. Construction c in the core area was standardised using pre-assembled steel cage stairc

transfer forces between the precast components and ensure structurally sou grouted and cast-in-situ connections were used. NMB Splice sleeve system w keep the joints between the wall to floor panel together and prevent them f Between the wall panels, the vertical and horizontal joints were formed b pressure grouting and sealed from outside to ensure water tightness.

The contractor was able to achieve a construction cycle of 10 days per floor construction method and completed the condominium with excellent quality. T also one of the CIDB Buildable Awards winner in 1997.

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Award Winners - Residential Buildings ($1000/m^2 & above)

SPRING GROVE CONDOMINIUM

Client:	City Developments Ltd / Marubeni Development Singapore Pte Ltd
Main Contractor:	Sumitomo Construction Co Ltd
Principal Consultant:	RSP Architects Planners & Engineers Pte Ltd
Structural Consultant:	RSP Architects Planners & Engineers Pte Ltd
M & E Consultant:	Squire Mech Pte Ltd
Quantity Surveyor:	Davis Langdon & Seah (S) Pte Ltd
Construction Cost:	S$79.8 Million
Construction Period:	32 mths

Spring Grove consists of three 20-storey apartment blocks with a total of 325 swimming and wading pool, one sub-basement carpark, one 3-storey carpark squash courts. This project also involved the conservation of a 150 year-old 2-s which was converted to a club house.

The cream coloured apartment towers, in a simple, unimposing style with its classical embellishments on the facade blended well with the restored

restoration was complicated by the lack of records on the details of the b national archive as well as the treatment and replacements required to the timber elements. Because of the close proximity of the clubhouse to the carpar pool, extensive protection works against failure as a result of structural settlements were needed around the existing bungalow throughout the projec post and planking walls with pre-stressed tie-back ground anchors were u settlement. Proper and adequate structural strengthening were required on the uphold the roof structure during replacement of all the external timber posts well as the internal floor and walls, including anti-termite treatment.

The contractor engaged specialist to utilise the climbform system for the constr stair core walls which shortened the construction period. Glass reinforce introduced for the decorative and ornamental façade to minimise selfweight to comprehensive and serviceable method of drainage system was adopted f above roof level to eliminate unsightly staining to the external facade due to rai

Despite the time and noise constraint due to the surrounding polytechn residential buildings, and the preservation required on a large numbers of exis the site, the contractor was able to deliver to a satisfied client a well finish project was also given the URA Architectural Heritage Award as well as a spe award by the Paris-based International Real Estate Federation (Fiabci) in 1998

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Award Winners - Civil Engineering Projects

JALAN AHMAD IBRAHIM / UPPER JURONG ROAD INTERCHANGE

Client:	Land Transport Authority
Main Contractor:	Wee Poh Construction Co Ltd
Principal Consultant:	Land Transport Authority
Structural Consultant:	PWD Consultants Pte Ltd
M & E Consultant:	PWD Consultants Pte Ltd
Quantity Surveyor:	Land Transport Authority
Construction Cost:	S$47 Million
Construction Period:	37.3 mths

This project is part of the upgrading of Jalan Ahmad Ibrahim from an arterial r lane expressway stretching from Jurong Town Hall Road to Tuas West Drive conversion of an existing signalised junction at Upper Jurong Road / Tuas R interchange, consisting of Tuas Flyover, Tuas Underpass linking Upper Jurong Road and a surface road with roundabout for turning traffic. This is the first 3- completed in Singapore in 1997.

The flyover is 750m long consisting of 12 spans of precast prestressed beam structure at both end. The underpass is 100m long with average of 140m long connected to both ends. It comprises a twin-cell tunnel for the dual 3-lane car the Upper Jurong Road with Tuas Road. An automatic drainage system is underpass/depressed road which is remotely monitored at the control center auto-paging response system attached to improve its reliability. The underpass

with a waterproofing system consisting of waterproofing membrane on the exte structure and additional drainage membrane in the inner face of the walls. were finished with a removable cladding system for future maintenance.

The complexity of the project lied in the construction of the underpass and carriageway which involved a major traffic diversion on the existing traffi diversion of existing services into the future proposed side-table. An existing was converted into a temporary roundabout to resolve the traffic diversion facilitate the construction of the underpass. Thorough planning and co-ordinat construction process to be carried out smoothly with minimal disruption to the c and traffic.

The main construction feature of this project was the innovative use of soil n panels for the temporary shoring of the underpass/depressed road excavation successfully implemented it with some cost saving for the first time locally.

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Certificate Of Merit - Commercial Buildings

CENTRAL MALL
ERECTION OF A 5-STOREY BUILDING AND CONSERVATION OF EXISTIN

Client:	City Development Ltd
Main Contractor:	Sysma Construction Pte Ltd
Principal Consultant:	P&T Consultants Pte Ltd
Structural Consultant:	P&T Consultants Pte Ltd
M & E Consultant:	Wong & Ouyang Associates (S) Pte Ltd
Quantity Surveyor:	KPK Quantity Surveyors
Construction Cost:	S$20.6 Million
Construction Period:	15 mths

Central Mall, located in the heart of the city centre close to the central b involved the conservation and conversion of pre-war warehouses into cineple offices with modern amenities including the erection of a 5-storey car-parking b

The main distinctive feature of the project is the fully conserved pre-war wa were beautifully restored to bring out their old world charm. A gazebo, constru iron was erected to blend into the overall design and served as the focal p activities and entertainment.

The highly dilapidated existing structure called for extensive temporary proppi work. 'Top-down' approach of construction was adopted in strict compliar conservation building guidelines. More than 230 micropiles were driven int support the new reinforced concrete structure with the piling rigs modified to ac

low headroom within the building. Special pit was constructed to monitor the w
the construction of the substructure due to the proximity of the site to the
Additional precaution was taken with the installation of geotechnique ins
strategic locations to monitor for any sign of soil movement.

The good coordination effort and intimate working relationship between the
consultants and various subcontractors enabled the successful delivery of
project without compromising on the quality and safety requirements.

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Certificate Of Merit - Industrial Buildings

DESIGN & BUILD OF A 2-STOREY FACTORY WAREHOUSE CUM CORPOI DEVELOPMENT AT TUAS LINK 4

Client:	Singapore Epson Industrial Pte Ltd
Main Contractor:	Tekenaka Singapore Pte Ltd
Principal Consultant:	Tan See Kiat Chartered Architects / Takenaka Corporation
Structural Consultant:	Lim Cheng Hock Engrg & Consultancy Services
M & E Consultant:	BESCON Consulting Engineers
Construction Cost:	S$37.2 Million
Construction Period:	11 mths

This Design-and-Build project comprises a 2-storey factory, warehouse and cc Tuas Link 4 for Singapore Epson Industrial Pte Ltd.

A flexible Design-and-Build system was essential for this high-tech factc requirements in M&E services and cleanrooms. Unlike most Design-and-B contractor's role began early - liaising with the Jurong Town Corporation Development Board on matters relating to sourcing of land and feasibility stu involvement allowed early feedbacks to the owner, who in turn have a shorter l and thereby speeding up its decision process enabling the contractor to refine highly functional factory.

Extensive use of precast components such as external wall panels, columns, b were adopted and this reduced the efforts spent on housekeeping and effecti towards the requirements on safety and time. Emphasis and meticulous effort the construction of the clean rooms, which demanded a high standard of requir

hand-over date.

The contractor was able to achieve the owner's project objectives on time, cos
as environment based on its buildable design. The simple and clean design ha
building an image fitted for a high-tech company.

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Certificate Of Merit - Industrial Buildings

DESIGN & BUILD OF A 2-STOREY FACTORY WAREHOUSE CUM CORPOI DEVELOPMENT AT TUAS LINK 4

Client:	Singapore Epson Industrial Pte Ltd
Main Contractor:	Tekenaka Singapore Pte Ltd
Principal Consultant:	Tan See Kiat Chartered Architects / Takenaka Corporation
Structural Consultant:	Lim Cheng Hock Engrg & Consultancy Services
M & E Consultant:	BESCON Consulting Engineers
Construction Cost:	S$37.2 Million
Construction Period:	11 mths

This Design-and-Build project comprises a 2-storey factory, warehouse and cc Tuas Link 4 for Singapore Epson Industrial Pte Ltd.

A flexible Design-and-Build system was essential for this high-tech factc requirements in M&E services and cleanrooms. Unlike most Design-and-B contractor's role began early - liaising with the Jurong Town Corporation Development Board on matters relating to sourcing of land and feasibility stu involvement allowed early feedbacks to the owner, who in turn have a shorter l and thereby speeding up its decision process enabling the contractor to refine highly functional factory.

Extensive use of precast components such as external wall panels, columns, b were adopted and this reduced the efforts spent on housekeeping and effecti towards the requirements on safety and time. Emphasis and meticulous effort the construction of the clean rooms, which demanded a high standard of requir

hand-over date.

The contractor was able to achieve the owner's project objectives on time, cos
as environment based on its buildable design. The simple and clean design ha
building an image fitted for a high-tech company.

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Certificate Of Merit - Industrial Buildings

THE SYNERGY

Client:	Jurong Town Corporation
Main Contractor:	Evan Lim & Co Pte Ltd
Principal Consultant:	Jurong Town Corporation
Structural Consultant:	Jurong Town Corporation
M & E Consultant:	Jurong Town Corporation
Quantity Surveyor:	Jurong Town Corporation
Construction Cost:	S$88 Million
Construction Period:	23 mths

The Synergy, located in Jurong East, consists of a 10-storey tower block ((storey podium block (Business park) with a 2-level basement carpark.

The distinctive architectural feature to the tower block is the aesthetically p aluminium claddings which comprises numerous curved panels to form a sr finish. The other main external feature to the podium block is its quadrant glas: by a space-frame steel structure.

The tower block is supported by four 3-metre diameter reinforced concrete numbers of 2.8 x 3.3 metres deep transfer beams at the 6-storey level. For the the transfer beams, the contractor designed a temporary foundation with separ platform to support and transfer the loadings and avoid damages to the beams. Due to the deep excavation within the first reserve of MRT zone, contiguous bored piles wall and preloaded struts were erected to prevent affecting the MRT foundation. Daily soil instrumentation monitoring was conc

the MRT requirements.

The adoption of flat slab system from the original design of ground beams ar for the podium basement substructure reduced the construction period by contractor also expedited the construction of typical slab by using system formw

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Certificate Of Merit - Institutional Buildings

**4-STOREY NURSING HOME
AT BEDOK SOUTH ROAD/BEDOK SOUTH AVE 2
FOR LIONS NURSING HOME FOR THE ELDERS**

Client:	Lions Nursing Home For The Elders
Main Contractor:	Chuang Uming (Pte) Ltd
Principal Consultant:	A I M & Associates
Structural Engineer:	Executive Decisions Inc
Mechanical Consultant:	William Tan Boon Ngee Consulting Engineer
Electrical Consultant:	Woo & Associates
Quantity Surveyor:	Davis Langdon & Seah (S) Pte Ltd
Construction Cost:	S$8.8 Million
Construction Period:	17.6 mths

The Lions Club nursing home for the aged, situated at the junction of Bedok S Bedok South Avenue 2, is a 4-storey building fully equipped with its own k medical facilities and a hydraulic lift serving every floor.

The external facade of the building was cladded with full height modulated alu complete with built-in shading devices. The green fluorocarbon aluminium fr green glass presented a pleasant relaxing mood for the environment. Structura system was used for the main roof to support the clay roof tile covering as wel the architectural pyramid roof design in the centre of the building.

Precision block walls were proposed as the alternative to dry-partition wall b which is more durable to moisture due to the frequent washing and clear anticipated in future. A unique giant aluminium sun-shading fin, provided ov located in the internal courtyard helped to lower the ambience temperature of th

To enable a low maintenance cost, durable material such as heavy
polyurethane paint, polyethylene door protection sheets and sprayed elegan
wall finishes were used extensively for this project.

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Certificate Of Merit - Residential Buildings ($1000/m^2 & above)

KEW GATE

Client:	Kew Gate Pte Ltd
Main Contractor:	Chon Hwa Construction Pte Ltd
Principal Consultant:	Archurban Architects Planners
Structural Engineer:	Hyder Consulting Pte Ltd
M & E Consultant:	Hyder Consulting Pte Ltd
Quantity Surveyor:	ONT Building Cost Consultants Pte Ltd
Construction Cost:	S$9 Million
Construction Period:	18 mths

Kew Gate consists of 31 units of cluster housing with basement carparks swimming pool, wading pool and clubhouse.

Due to site constraints, all site activities were planned at an early sta unnecessary delays. The contractor proposed and introduced subsoil p basement structures to prevent uplifting during the construction of the innovative use of aluminium C-channel for forming grooves lines on the achieved consistency in straightness and depth. Good quality of finish and s also achieved on the external wall using precast moulding.

Meticulous planning of the construction activities and close monitoring of tl quality required as spelled out in the quality checklists effectively minimized ur spent on abortive and rectification works. The contractor completed the projec high quality of finish.

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Certificate Of Merit - Residential Buildings ($1000/m^2 & above)

CONVENTIONAL HOUSING DEVELOPMENT AT JALAN KELULUT/JALAN SELASEH

Client:	Singapore United Estates Pte Ltd
Main Contractor:	Aoki Corporation
Principal Consultant:	RSP Architects Planners & Engineers (Pte)
Structural Engineer:	RSP Architects Planners & Engineers (Pte)
M & E Consultant:	Squire Mech Pte Ltd
Quantity Surveyor:	Davis Langdon & Seah (S) Pte Ltd
Construction Cost:	S$20 Million
Construction Period:	22 mths

This conventional housing project, located between Jalan Kelulut and comprises 10 blocks of 73 units of 2-storey terrace houses.

The site is located in an existing mature residential area which demanded clos construction operations to minimize disturbances to the local residents. proposed and utilised pipejacking instead of the normal open-cut methoc construction from site to the existing sewerage system which runs across the r Selaseh. This alternative construction method eliminated disruption to traffi inconvenience and disturbance to surrounding neighbourhood and ground se as shortened the construction period.

The contractor also adopted the use of precast components for the constructi wall on the south boundary of the site and effectively reduced the construction month. Through the close co-operation of the client, consultants and main project was completed on schedule with a high level of quality.

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Certificate Of Merit - Residential Buildings (below $1000/m^2)

TAMPINES N7 C7

Client:	Housing & Development Board
Main Contractor:	Hua Kok Realty Pte Ltd
Principal Consultant:	Housing & Development Board
Structural Consultant:	Housing & Development Board
M & E Consultant:	Housing & Development Board
Quantity Surveyor:	Housing & Development Board
Construction Cost:	S$30 Million
Construction Period:	20 mths

The Housing & Development Board project at Tampines N7 C7, located at Tan consists of four 14-storey high apartment blocks with a total of 502 units amenities.

The main architectural feature of the buildings are the circular and semi-cir concrete columns at the front elevation of the apartment blocks which prese and grandeur look. This feature was repeated for the four blocks and the d finish and alignment for the constructed columns were achieved through th formwork system and good control of workmanship.

Precast components were used for the construction of parapets walls, refu staircase flights and high-level water tanks. The external walls of the buildin with fairface bricks from the second to tenth storeys. Corrugated parapet

erected at the eleventh to fourteenth storeys. With careful selection of pair aesthetics were achieved. This shows that simple designs with inclinatio aspects can also achieve astonishingly good results.

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