

**PROPOSED INSTALLATION
OF
INTEGRATED MOBILE RADIO BASE STATION
AT
LANTAU SOUTH COUNTRY PARK
NAM SHAN
PUI O
NT**

PROJECT PROFILE

HUTCHISON TELEPHONE CO LIMITED

Prepared by: Prudential Surveyors Int'l Ltd

MAY 2009

Basic Information

Project Title

1. Proposed Installation of Integrated Mobile Radio Base Station at Lantau South Country Park, Nam Shan, Pui O, Lantau Island.

Purpose and Nature of the Project

2. This project is a development of Hutchison Telephone Co Limited to improve the mobile phone coverage for visitors of the country park and to ensure that tele-communications for the general public is maintained in case of emergency.

Name of Project Proponent

3. Hutchison Telephone Co Limited.

Location and Scale of the Project

4. The Integrated Mobile Radio Base Station is proposed at Lantau South Country Park as shown on the location plan and site plan at **Appendix I**. The station will comprise of an equipment platform [4.0m (L) x 4.0m (W) x 0.75m (D)] with an area of 16 square meters (for detail, please refer to photograph of a typical existing mobile communication radio base station at Appendix IV and BD approved plan at Appendix V). The equipment platform, consisting of one (1) equipment cabinet [4.0m (W) x 3.0m (D) x 2.0m (H)] and one (1) antenna pole of 5 metres in height, will be erected on the hill at level +271 mPD. A lightning rod of 0.5m in height and an obstacle light will also be erected on top of the antenna pole. The equipment platform will be constructed of ready mixed cast in-situ concrete, which will be transported to the proposed area by helicopter. All the construction materials, equipment and wastes, etc., will be transported to and away from the site by helicopter. No haul road will be constructed. Public utilities such as electricity supply and telecommunication lines will be installed for the integrated mobile radio base station.
5. Lands Department had not issued us a formal letter of Short Term Tenancy (STT), but had verbally agreed to the establishment of an integrated mobile

phone base station at the proposed location and had given us a STT number (STT No.CX1824). The formal letter of STT from Lands Department is expected in late June 2009.

6. The mobile phone coverage and the impact on the environment are the salient factors in the site selection process. The proposed site is considered to provide significant mobile phone coverage to the surroundings. Other alternatives have also been considered but were found unsuitable.

Number and Types of Designated Projects to be Covered

7. The project involves an integrated mobile radio base station to be installed at the proposed location as shown in **Appendix I**. According to EIAO Schedule 2, PART I, Section Q.1, the proposed project is a designated project as it involves building works in an existing country park and it is not under exceptional cases in Section Q1 (a) to (j).

Name and Telephone Number of Contact Person

8. The contact person for this project is Mr. Henry Chan of Hutchison Telephone Co Limited, telephone number 2128 5838 and facsimile number 3152 2751.

Outline of Planning and Implementation Programme

Planning and Implementation

9. The project is planned and managed by Hutchison Telephone Co Limited and they will install their own mobile phone network at the proposed station.
10. Upon the grant of a Short Term Tenancy and Environmental Permit by the District Lands Office (DLO) and Environmental Protection Department (EPD) respectively and consent to commence building works by the Buildings Department (BD), Hutchison Telephone Co Limited will start and complete the construction work in accordance with the work schedule as shown in **Appendix II**. The structural drawings had already obtained approval by BD under the Buildings Ordinance on 7 April 2009. The approval letter issued by BD and the approved Drawing No(s). 346-S1 are attached in Appendix V.

Work Schedule

11. The construction work including the equipment and antennas installation is proposed to commence in early October 2009 and to be completed by the mid of November 2009. It is proposed that the integrated mobile radio base station will be put into operation in early December 2009. The proposed work schedule is attached in **Appendix II**.

It is anticipated the excavated material will be transported off the site immediately by helicopter. Also, the exposed excavated surface will be immediately screeded with cement/sand or binding layer to make the surface impervious. Furthermore, the excavated area will be covered completely prior to concreting to minimize the possibility of surface run-off from the site.

Possible Impact on the Environment

Construction Impacts

12. The landscape and visual impact during construction and after completion of work is considered and addressed in paragraph 20 & 21.
13. Noise emission during the construction and on completion of the projects is considered to be minimal and addressed in paragraph 22.
14. Disposal of waste including some surplus construction material and some general refuse is considered minimal and addressed in paragraph 23.
15. Dust impact from construction activities is considered to be minimal and is addressed in paragraph 24.
16. Earthworks operation is not required as the excavation depth is less than 1600 mm and there will be no blasting operation.
17. Night-time work is not required for the construction of the project.
18. No ecological impact is anticipated during the construction and on completion of the project.

Operational Impacts

19. Completion of the Integrated Mobile Phone Base Station will not cause any significant change to the environment. The site layout plan, sections and typical details of the proposed integrated mobile phone base station and site photos are shown in **Appendix III, V and VI**, whilst the photos of similar Integrated Mobile Base Station are shown in **Appendix IV**.

Major Elements of the Surrounding Environment

20. The major elements of the surrounding environment are as follows:-

Country Park Area setting

The proposed site comprises of an equipment platform situated on level ground on the hill top of the Country Park. The proposed site is surrounded by slopes and the ground of the hill top is covered with grass. To the east of the equipment platform is a footpath that leads to police transmitting station via the helicopter landing pad at northeast direction. To the north, west and south of the equipment platform are slopes. No streams are found near the site. Furthermore, no radiation monitoring station, ecological sensitive receiver or heritage sensitive receiver is located in the surrounding environment. Therefore, the installation will not affect the present setting of the Country Park.

The site is surrounded by bushes and grass, which is commonly found in Hong Kong and they are Rose Myrtle (桃金娘), Pond Spice (潺槁樹) and Ivy Tree (鵝掌柴). The development of the proposed radio base station will not affect the said species since the said station occupies a small area of 16 square metres. No tree is required to be felled to provide the necessary area for the installation of the proposed base station.

Landscape Impact

The integrated mobile radio base consists of an equipment cabinet and an antenna pole that is 2 meters and 5 meters in height respectively. The station will be erected on the hill at level +271 mPD. The highest point of the station is at level +276.5 mPD (allowing 500mm for the lightning rod), whilst the hilltop is at level +274.8mPD. The integrated mobile radio base station is barely visible from Pui O Lo Wai Tsuen and South Lantau Road due to its small size and great

separating distance (i.e., more than 300m) between the integrated mobile radio base station and Pui O Lo Wai Tsuen .

Environmental Protection Measures to be Incorporated in the Design and any Further Environmental Implications

21. As required by the Government Flying Services (GFS), the antenna pole will be painted or coated in red and white for easy identification. As for the landscaping, turfing and/ or vegetation planting will be used to reinstate temporarily disturbed areas to their original states.
22. Only hand held equipment will be used for construction. Heavy equipment will not be used. Also, noise sensitive receiver is more than 600m away from the site. Therefore, noise impact is anticipated to be minimal during the construction. Nevertheless, construction activities will be carried out only in daytime (9:00-19:00). Since there will be hikers enjoying their recreational activities in the Country Park Area during weekends and public holidays, no construction work will be scheduled on Saturday, Sunday and public holidays in order to minimize the impact on the hikers.
23. All the construction materials, equipment and wastes, etc., will be transported to and away from the site by helicopter. Helicopter flights required for transporting materials to/ from the site will not be frequent. Helicopter will be used when transporting materials and equipment to the site, transporting excavated soil and construction waste away from the site and concreting the antenna platforms and equipment platform. Construction waste generated on site will be transported away from site by helicopter as soon as possible. If the construction waste is left overnight, they will be stockpiled and covered with tarpaulin sheets to avoid run-off. For safety reason, construction materials, equipment and wastes will be kept clear away from places around the helipad. The estimated number of trips is 150 over a period of 49 days. As for construction waste, the estimated quantity of the excavated soil is 13m³.
24. The site will be completely watered down to minimize any dust that may be generated during the construction stage.
25. The Standard Pollution Mitigation Measures will be incorporated in relevant

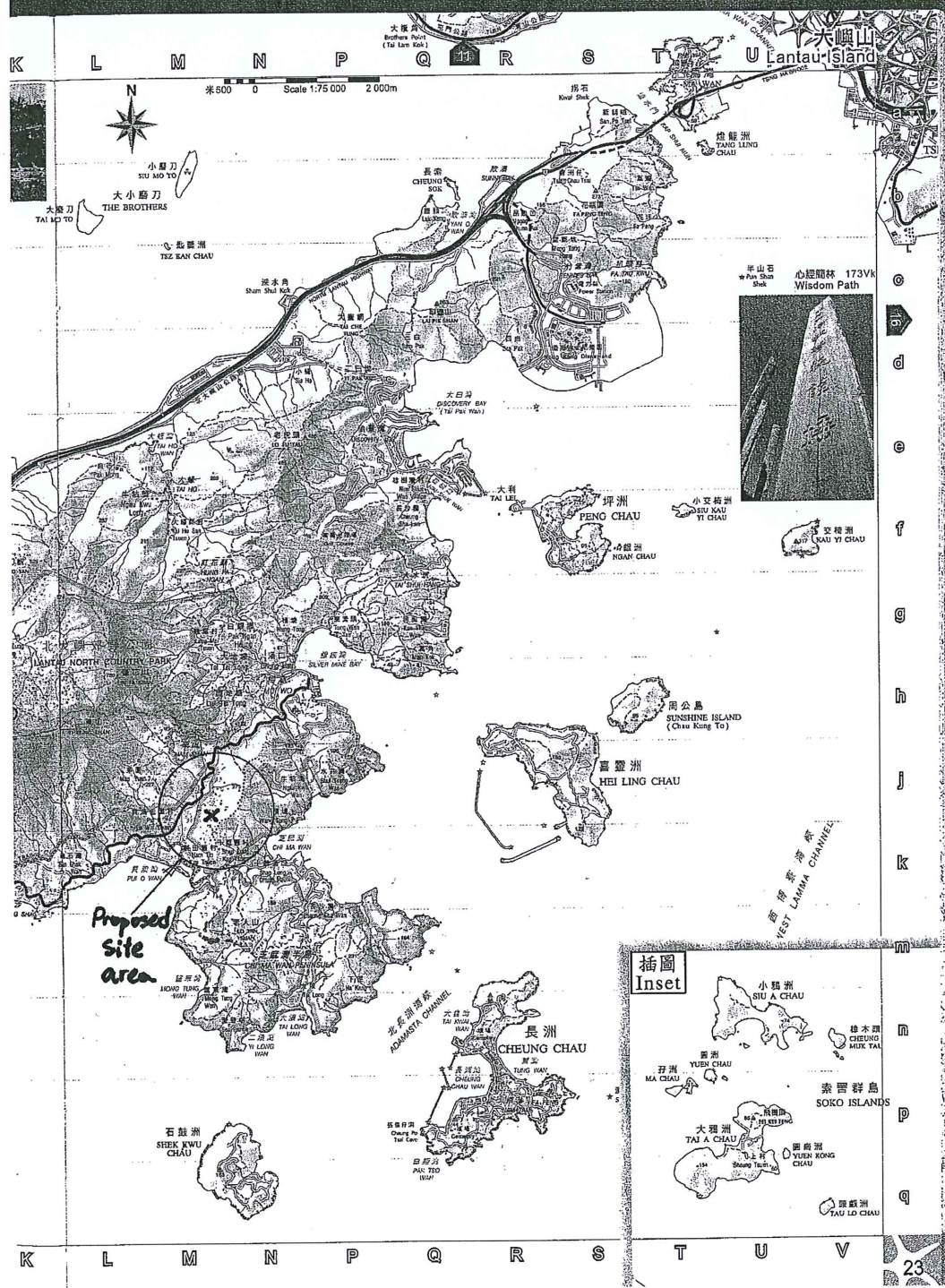
works contracts during the construction phase of the works. The operation of the proposed sites is unmanned and will not generate noise nor have any effect on air quality and water quality.

- 26 The operation of the proposed Integrated Mobile Radio Base Station will strictly comply with the “Code of Practice for the Protection of Workers and Members of Public Against Non-Ionizing Radiation Hazards from Radio Transmitting Equipment” issued by OFTA. The proposed location of the station is quite remote from any area for inhabitancy. Furthermore, the location of the emitter of the station is at least 5 metres from the ground and pointing away from any human activities or inhabitation. In this case, the non-ionizing radiation has no significant impact on the public.
- 27 The Integrated Mobile Phone Radio Base Station will be cleaned and painted every year if necessary to maintain the good condition of the site. Except in case of any troubleshooting and emergency repair, the periodic inspection will only be carried out once every three months in the first year and once a year afterwards. The low inspection frequency will therefore not give any significant impact on the environment.

APPENDICES

Appendix I	Site Location Plan and Part Plan
Appendix II	Proposed Work Schedule
Appendix III	Site Photos
Appendix IV	Photos of Typical Existing Integrated Mobile Radio Base Station
Appendix V	Buildings Department Approval Letter dated 7 April 2009 and Approved Structural Plan
Appendix VI	Typical Details of the Fiberglass Equipment Cabinet

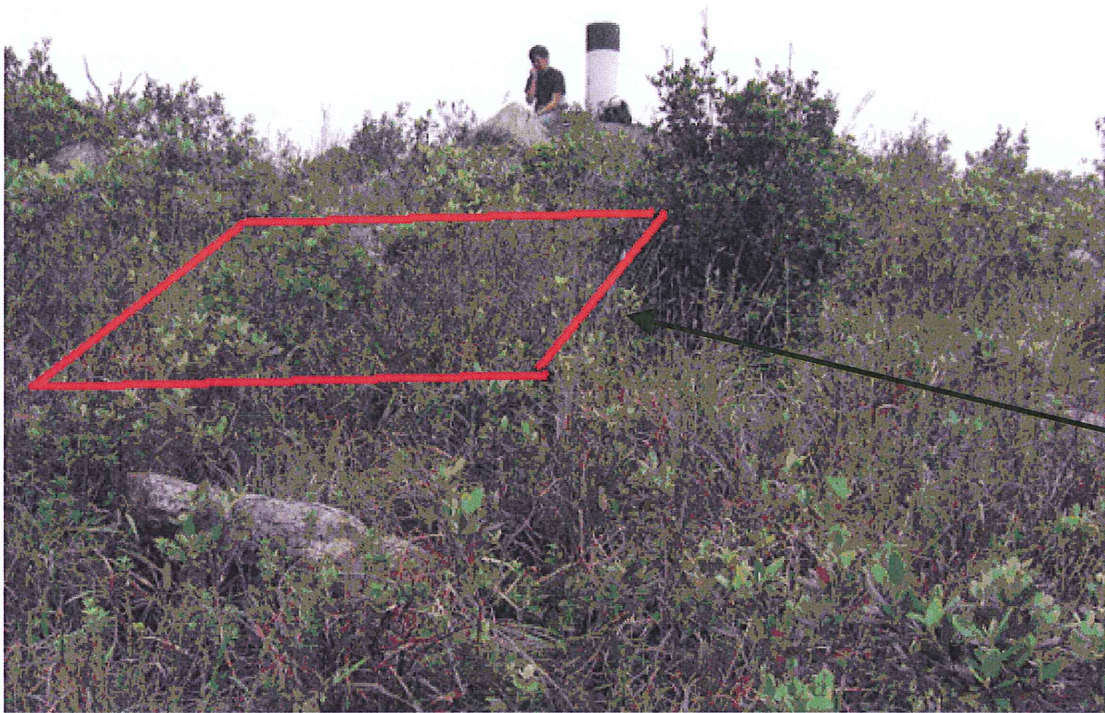
Appendix I
Site Location Plan & Site Plan



SITE LOCATION PLAN

Appendix II
Proposed Work Schedule

Appendix III
Site Photos



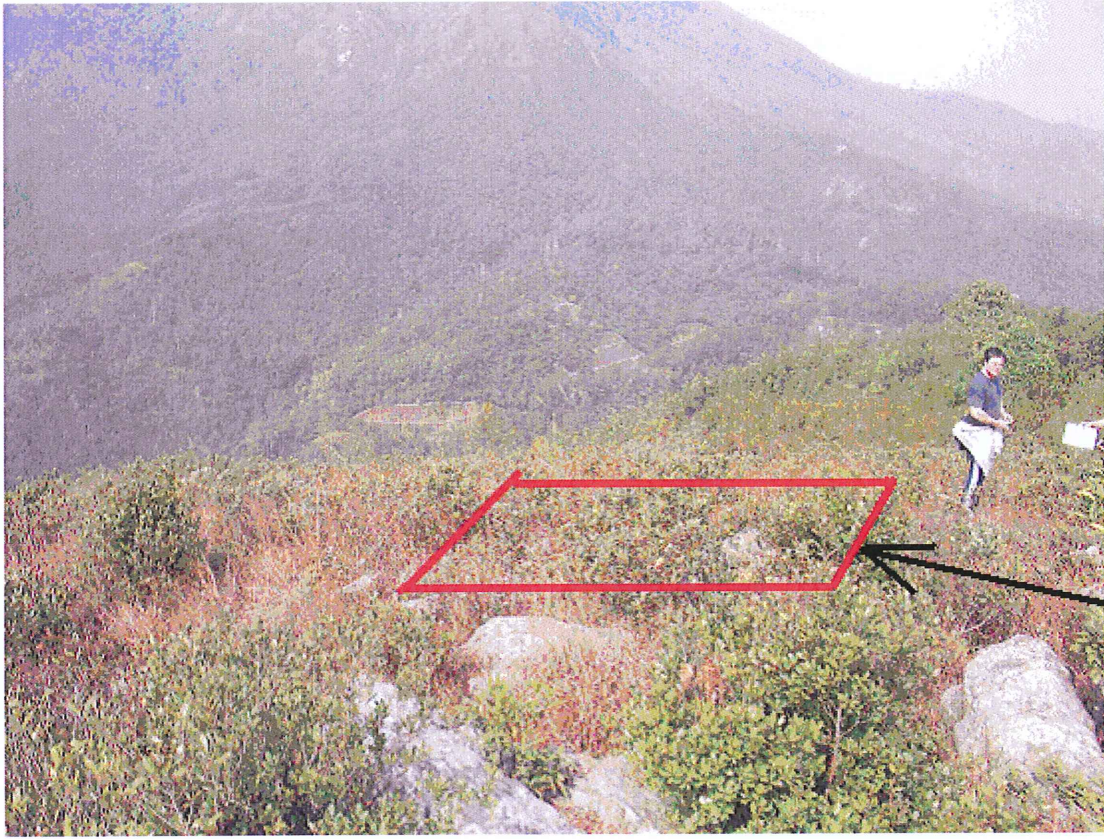
**Proposed
Site Area**

Photo 1: General view of the proposed area



**Proposed
Site Area**

Photo 2: General view of the proposed area



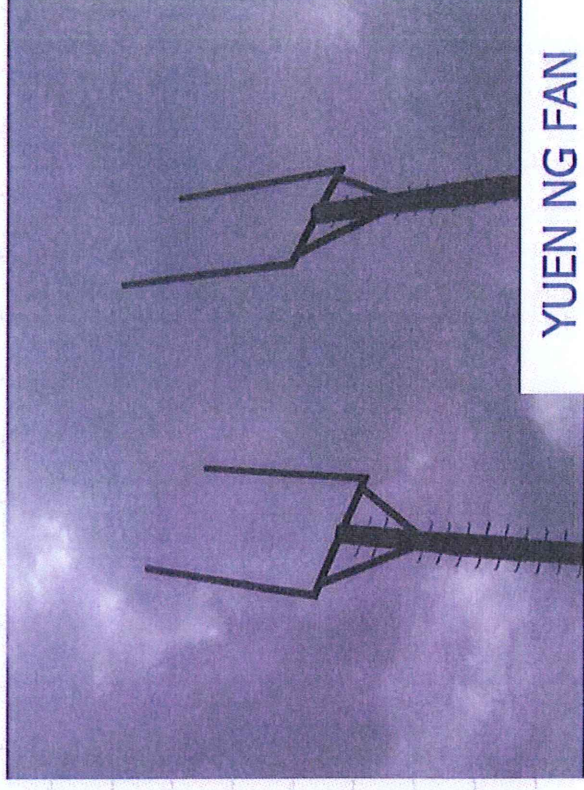
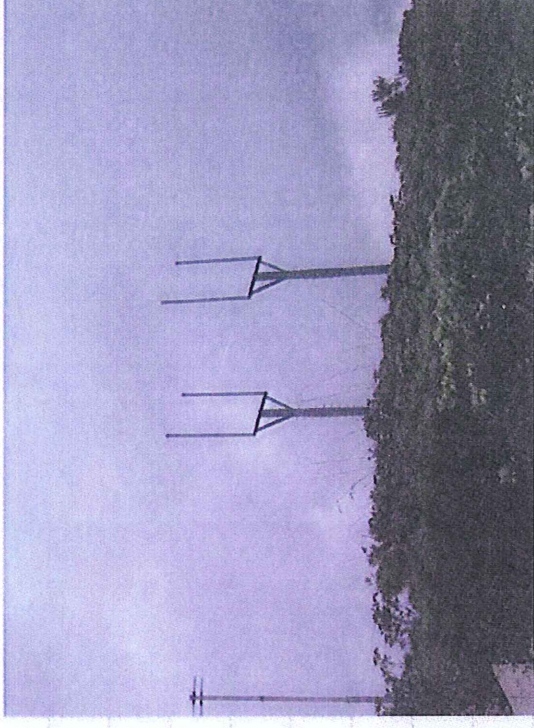
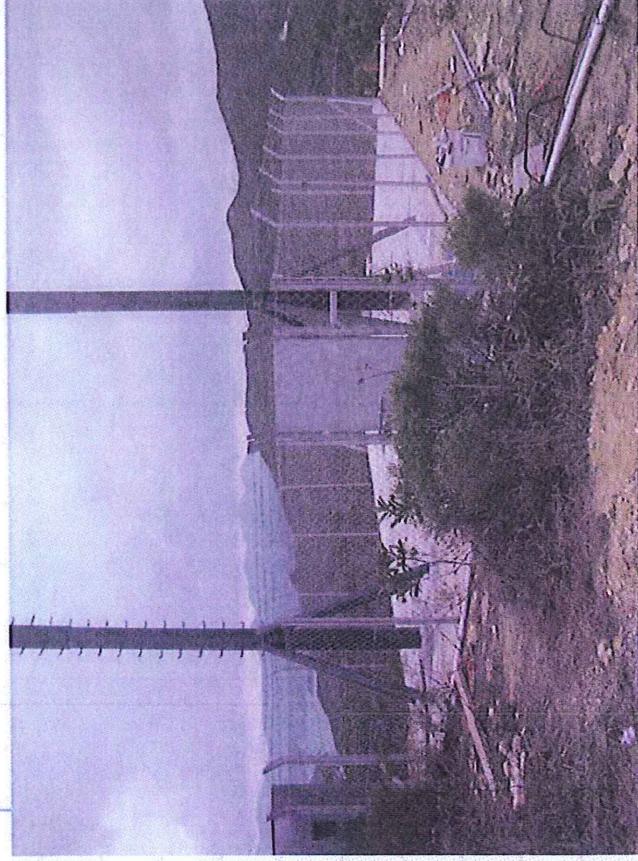
**Proposed
Site Area**

Photo 3: General view of the proposed area

Appendix IV
Photos of Typical Existing Integrated Mobile
Radio Base Station

Country Park

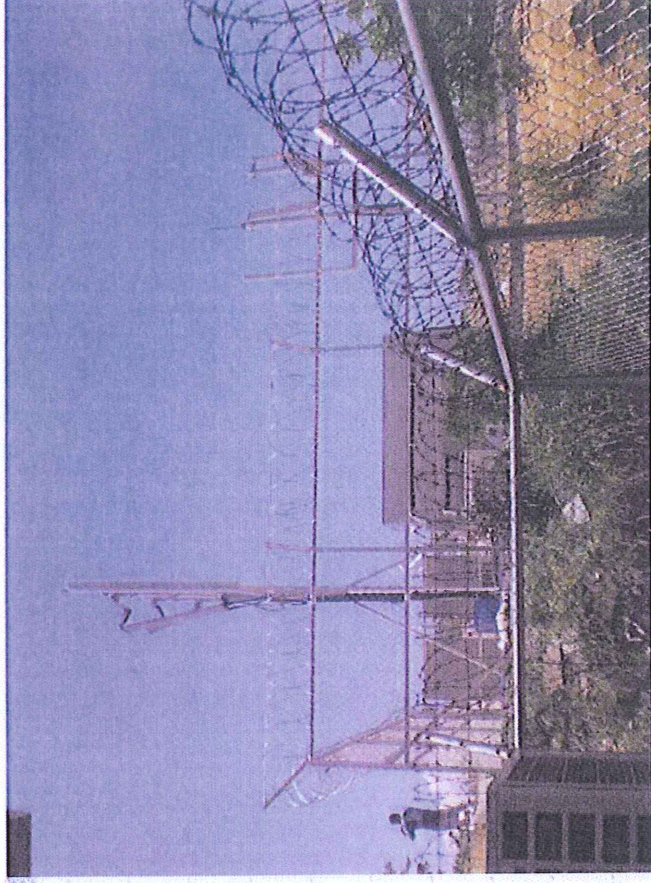
Duty: Design the equipment shelter and antennas, Submission to Buildings Department for approval, Site supervision to the works



YUEN NG FAN

Country Park

Duty: Design the equipment shelter and antennas, Submission to Buildings Department & Environmental Department for approval, Site supervision to the works,



SOUTH LANTAU ISLAND COUNTRY
PARK, MAN CHEUNG PO, TAI O

Appendix V

**Buildings Department Approval Letter dated
7 April 2009 and Approved Structural Plan**



FILE RECORD

OUR REF 本署信號: BD 2/9014/08
FAX 圖文傳真: 2845 1559
TEL 電話: 2626 1278
www.bd.gov.hk

BS 1302

Mr. WONG Wing-cheung Dennis
c/o Prudential Surveyors International Ltd.
Rooms 3101-3106, Dah Sing Financial Centre
108 Gloucester Road
Wanchai, Hong Kong

7 April 2009

8
+ 130106

Dear Sir,

Lantau South Country Park, Nam Shan,
Pui O, Lantau Island - Is. Misc 214
(To be known as STTCX 1824)

Table with columns: BUILDING DIVISION, Project Section, Date Rec'd, Project Manager, and various initials (TN, LW, LPI, etc.)

I refer to your application dated received on 9 March 2009 for approval of proposals in respect of Building and Structural.

- 2. Your submission of plans has been checked under the curtailed check system announced in Practice Note for Authorized Persons & Registered Structural Engineers 272. On this basis, I am satisfied that your submission is fundamentally acceptable and may be approved.
3. You are reminded that the curtailed check system covers only the fundamental issues of a building proposal. Although non-fundamental issues will not be raised as reasons for disapproving a submission, I expect that all contraventions of the Buildings Ordinance and its subsidiary legislation are rectified as and when they are discovered and in any event, before completion of the works is certified. In this connection, I ask you to note that the Building Authority attaches great importance to the proper assumption of duties and responsibilities by authorized persons and registered structural engineers.
4. In accordance with the provisions of regulation 30(1) of the Building (Administration) Regulations, this is to notify that the above-mentioned plans submitted with your application dated received on 9 March 2009 are hereby approved. One set of the said plans, on which I have signified my approval, is enclosed. Your client has been sent a copy of this letter but I would request that you ensure that the contents are understood by him.
5. This approval should not be deemed to confer any title to land or to act as a waiver of any term in any lease or licence. This approval does NOT authorize the commencement or the carrying out of any works shown in the approved plans. Section 14(2) of the Buildings Ordinance refers.

(Please see attached sheet)

Yours sincerely,

c.c. Hutchison Telephone Co. Ltd.
12/F, Hutchison Telecom Tower,
99 Cheung Fai Road,
Tsing Yi, New Territories

Handwritten signature of Shum Luk-cheung

(Shum Luk-cheung)
Chief Building Surveyor
for Building Authority

DPO/SK & Is DLO/Is CGE/MW, GEO
DFS DGCA DAF&C
CO/SM SPO/IAU

S.L. 9 (02/2004)

Our ref.: BD 2/9014/08

6. This approval is subject to conditions and requirements stipulated in Appendices A to C attached.

7. Under Building (Administration) Regulation 10, you are required to submit the ground investigation report to verify the design bearing capacity of the founding stratum. Consent to the commencement and carrying out of the foundation works now approved will not be given until the above ground investigation report has been submitted and found satisfactory. Section 16(3)(ba) of the Buildings Ordinance refers.

8. District Planning Officer/Sai Kung & Islands, Planning Department (contact officer: Mrs. Maggie W F LAM, tel. 2158 6158) has the comments in Appendix D.

9. Director-General of Civil Aviation (contact officer: Ms. Cecilia Pang, tel. 2183 1252) has the comments in Appendix E.

10. Chief Geotechnical Engineer/Mainland West, Geotechnical Engineering Office, Civil Engineering and Development Department (contact officer: Mr. S Y CHU at tel. 2762 5218) has the comments in Appendix F.

11. Director of Agriculture, Fisheries and Conservation (contact officer: Mr. K T CHAN, tel. 2150 6843) commented that the antenna pole of the mobile phone base station should be painted in Pantone 462U, BS10B25 or similar subdued colours to match with the surrounding natural environment.

12. Your submission of plans has been referred to District Lands Officer/Islands for direct comment.

13. A form F.BD106 is enclosed.

14. Your submission of plans has been selected for audit checking but contraventions on non-fundamental issues were not identified.

Ref : BD 2/9014/08

Address : Lantau South Country Park, Nam Shan, Pui O, Lantau Island - Is. Misc 214

Appendix A to approval dated - 7 APR 2009

Reinforced Concrete Works

In giving this approval of plans, I hereby impose the following conditions under item 6 in section 17(1) of the Buildings Ordinance:

- (a) Sampling and testing of steel reinforcement should be carried out in accordance with Practice Note for Authorized Persons and Registered Structural Engineers 122 (PNAP 122) current at the date of this approval. Testing should be carried out by a laboratory* accredited under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for the particular test concerned. Test results should be reported on a HOKLAS Endorsed Certificate and submitted within 60 days of the delivery of the steel reinforcement to the site. The test reports should be appended with a statement signed by the Authorized Person/Registered Structural Engineer to confirm the following:
 - (i) All steel reinforcement used for the construction and the test specimens covered by the test reports are in accordance with the types and grades of steel shown in the approved plans.
 - (ii) Sampling and testing of steel reinforcement used have been carried out in accordance with the current PNAP 122.
 - (iii) The acceptance criteria appropriate to each type and grade of steel reinforcement used have been complied with.
 - (iv) All steel reinforcement tests have been carried out by a laboratory* accredited under HOKLAS.
- (b) Sampling of concrete and compression testing of concrete test cubes should be carried out in accordance with the methods specified in CS1:1990. Testing should be carried out by a laboratory* accredited under HOKLAS for the particular test concerned. Test results should be reported on a HOKLAS Endorsed Certificate and submitted within 21 days after testing. The test reports[#] should be appended with a statement signed by the Authorized Person/Registered Structural Engineer to confirm the following:

- (i) All concrete used for the construction and concrete cubes covered by the test reports are in accordance with the concrete grades shown in the approved plans.
 - (ii) Concrete cube sizes, rates of sampling fresh concrete for testing and acceptance criteria for compressive strength set out in Building (Construction) Regulations have been complied with.
 - (iii) All concrete cube tests have been carried out by a laboratory* accredited under HOKLAS and in accordance with the methods specified in CS1:1990.
- (c) Qualified site supervision of the reinforced concrete works and of the sampling of concrete and making and curing of test cubes, by an experienced and competent person, should be provided to ensure that the works are carried out in accordance with the plans approved and that the required standards are complied with.

* A Directory of Accredited Laboratories in Hong Kong is obtainable from the Hong Kong Accreditation Service (HKAS) Executive, Innovation and Technology Commission.

Up-to-date information on accredited laboratories and their scopes of accreditation are available on the internet at the HKAS website at <http://www.info.gov.hk/itc/hkas/>.

A laboratory's accreditation for an individual test or calibration may be granted, modified or withdrawn at any time. To ensure that the test that you commission the laboratory to conduct is within its scope of accreditation, please always insist on test results be reported on a HOKLAS Endorsed Certificate.

The test reports, when submitted, should be appended with a summary which contains information on locations of concerned structural elements, concrete grades and dates of cast. The summary should also include previous summary information of concrete cube test reports in chronological order.

Ref : BD 2/9014/08

Address : Lantau South Country Park, Nam Shan, Pui O, Lantau Island - Is. Misc 214

Appendix B to approval dated - 7 APR 2009

Structural Steel Works

In giving this approval of plans, I hereby impose the following conditions under item 6 in section 17(1) of the Buildings Ordinance:

- (a) Qualified site supervision of the structural steel works, including fabrication, erection and examination of the structural elements, by an experienced and competent person should be provided to ensure that the works are carried out in accordance with the plans approved and that the required standards are complied with.
- (b) For welding of structural steel works, welding procedures and welders should be assessed/tested in accordance with the appropriate provisions of the Annex A to the Code of Practice for the Structural Use of Steel 2005.
- (c) Non-destructive testing of welds should be carried out in accordance with the appropriate provisions of the Code of Practice for the Structural Use of Steel 2005 and by a laboratory* accredited under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) or by other laboratory accreditation bodies which have reached mutual recognition agreements/arrangements with HOKLAS for the particular test concerned. The test reports[@] shall be kept on site and made available for inspection by representatives of the Buildings Department.

2. Under Building (Administration) Regulation 10, the following documents are required to be submitted for structural steel of Classes 1, 2 or 1H classified in accordance with the Code of Practice for the Structural Use of Steel 2005:

- (a) A copy of mill certificates of the structural steel used, which should be appended with a statement signed by the authorized person/registered structural engineer to confirm that the requirements of chemical composition and mechanical properties appropriate to the type of steel have been complied with and the structural steel used is produced from a manufacturer with an acceptable Quality Assurance system.

3 Where structural steel of Classes 2, 3 or 1H is used, the following conditions are imposed under item 6 in section 17(1) of the Buildings Ordinance:

Sampling and testing of structural steel should be carried out in accordance with Annex D to the Code of Practice for the Structural Use of Steel 2005. Testing should be carried out by a laboratory* accredited under HOKLAS or by other laboratory accreditation bodies which have reached mutual recognition agreements/arrangements with HOKLAS for the particular test concerned. The test results@ should be appended with a statement signed by the authorized person/registered structural engineer who has prepared the plans and submitted within 60 days of the delivery of the structural steel to the site for confirmation of the followings:

- (i) All structural steel used for the construction and the test specimens covered by the test reports are in accordance with the classes and grades of steel shown in the approved plans.
 - (ii) Sampling and testing of structural steel used have been carried out in accordance with the Code of Practice for the Structural Use of Steel 2005.
 - (iii) The acceptance criteria appropriate to each class and grade of steel used have been complied with.
 - (iv) Testing of steel has been carried out by a laboratory* accredited under HOKLAS or by other laboratory accreditation bodies which have reached mutual recognition agreements/arrangements with HOKLAS.
- * Up-to-date information on accredited laboratories and their scopes of accreditation are available on the internet at the HKAS website at <http://www.info.gov.hk/itc/hkas/>.
- @ The test carried out by an accredited laboratory should be within its scope of accreditation. Test results should be reported on a HOKLAS Endorsed Certificate or equivalent Certificate/Report issued from other laboratory accreditation bodies which have reached mutual recognition agreements/arrangements with HOKLAS.

Ref : BD 2/9014/08

Address : Lantau South Country Park, Nam Shan, Pui O, Lantau Island - Is. Misc 214

Appendix C to approval dated - - 7 APR 2009

Foundation Works (Spread Footings/Rafts)

In giving this approval of plans, you are reminded that site supervision of the foundation works by a team of supervisors shall be provided each by the Authorized Person, the Registered Structural Engineer and the Registered Specialist Contractor / Registered General Building Contractor in accordance with the Technical Memorandum for Supervision Plans and the Code of Practice for Site Supervision to ensure that the quality of the foundation works is up to standard and that the works are carried out in accordance with the plans approved and in such a manner as not to render inadequate the margin of safety of, or impair the stability of, or cause danger to any building, structure, land, street or services. Details of site supervision for the foundation works shall be included in the supervision plan and submitted prior to or at the time of application for consent to the commencement of the foundation works.

2. In connection with paragraph 1 above regarding inspection of bearing stratum to check for compliance with approved plans, site investigation reports and design assumptions, the Buildings Department should be notified of the time and date of the inspection so that it may be witnessed by a representative from the Department.
3. Under Building (Administration) Regulation 10, two sets of foundation record plans and report together with the Form BA 14 stipulated in Building (Administration) Regulation 25 to certify the completion of the foundation works are required to be submitted. The record plans should show the characteristic features of the site and the identification, location, size and founding level of each foundation unit as constructed

Appendix D

District Planning Officer/Sai Kung & Islands, Planning Department (contact officer: Mrs. Maggie W F LAM, tel. 2158 6158) has the following comments:

I refer to your ~~memo under reference and a copy of~~ re-submission of the building plan (Drawing No. 346-S1) for the proposed radio base station at the subject site.

Statutory Comment

2. The subject site falls within an area zoned "Country Park" ("CP") on the Approved South Lantau Coast Outline Zoning Plan No. S/SLC/14 (the Plan). According to the Notes of the Plan, all uses and developments require consent from the Country and Marine Parks Authority and approval from the Town Planning Board is not required. In this regard, I have no comment on the proposed radio base station from statutory planning point of view.

Other Comment

3. The above comments on the building plan submitted may be subject to revision should there be a change in circumstances before a decision on the building plan is made by the Building Authority.

Appendix E

Director-General of Civil Aviation (contact officer: Ms. Cecilia Pang, tel. 2183 1252) has the following comments:

2. We have nil comment on the proposal.

3. We would like to keep the set of the AP's drawing for reference.

4. In passing, the proposed structure exceeds the airport height restrictions limit specified in the Hong Kong Airport (Control of Obstructions) Ordinance (CAP. 301). Having assessed the details as shown in the AP's drawing, we have advised Secretary for Development vide our memo of 24 March 2009 in the even series (a copy of the memo is attached for your easy reference) that we have no objection to the proposal and their application for a permanent exemption from CAP. 301 from airport height restriction point of view.

Appendix F

Chief Geotechnical Engineer/Mainland West, Geotechnical Engineering Office, Civil Engineering and Development Department (contact officer: Mr. SY CHU at tel. 2762 5218) has the following comments:

Recommendations (to be transmitted to AP/RSE/RGE)

2. There is no in-principle geotechnical objection to the approval of the building & structural amendment plan (Drg. No. 346-S1) at f(21)¹ in BD 2/- main file.
3. Please ask the AP/RSE/RGE to submit the following information to the satisfaction of BD prior to the Form BA13 occupation permit for the radio base station works:
 - (a) Pursuant to PNAP: 167, submission of phase 1 test results e.g. fill density and compaction tests, etc in accordance with GEOSPEC 3 to be issued on HOKLAS – endorsed test certificates or report.
4. Please be advised that my comments under paragraphs 4 & 5 of my memo under the same reference dated 17 March 2008 are still applicable.
- 5. My internal comments are attached at Appendix A of this memo.

BUILDING AUTHORITY OF HONG KONG
Form BD 106
BUILDINGS ORDINANCE
(Chapter 123)
Section 42

Permit under Section 42

Permit No. NT 110/2009(MOD)

Our Ref. No. BD 2/9014/08

To : Hutchison Telephone Tower

c/o Mr. WONG Wing-cheung Dennis

12th Floor, Asian House,

1 Hennessy Road, Wanchai,

Hong Kong.

Date 7 April 2009

In exercise of the powers vested in me by section 42 of the Buildings Ordinance, I hereby grant modification of and/or exemption from the provisions of -


Building (Planning) Regulation 41D to permit the non-provision of EVA for the mobile phone base station.

in respect of the proposed *building works/~~street works~~ at (No. and name of street and locality) Lantau South Country Park, Nam Shan, Pui O, Lantau Island on (lot no.) Is. Misc 214.

2. This permit is granted subject to the following conditions :-

(a) The said works are to be carried out in accordance with the plans approved on 7 April 2009 under our Ref. No. BD 2/9014/08.

(b) A checklist of valid Forms BD106 is to be submitted at the time of the application for an occupation permit.


(SHUM Luk-cheung)
Chief Building Surveyor
for Building Authority

*Delete whichever is inapplicable

GENERAL NOTES:

STRUCTURAL WORKS

- The design of superstructure is in accordance with "Building (Construction) Regulation 1997", "The Structural Use of Steel 2005, Hong Kong" and "The Structural Use of Concrete 1997".
- The wind analysis to be in accordance with "Code of Practice on Wind Effects, Hong Kong - 2004".
- All reinforced concrete works shall comply with the Hong Kong Building (Construction) 1997.
- All structural steel to be Grade S275 and complies with BS EN 10025:2004. All structural hollow section steel shall be Grade S275 and complies with BS EN 10210-1:1999.
- The structural steel shall be hot-dip galvanized to BS EN 1461:1999.
- The fabrication, erection and welding of structural steel shall conform to the Hong Kong Building (Construction) Regulations 1997 and Code of Practice for Structural Use of Steel 1997.
- All welding shall conform to BS EN-1011 PART 1 & 2. All welding shall thereafter be applied with two coats of zinc rich epoxy primer.
- All welding shall be carried out by qualified welders having satisfactorily completed the appropriate welding tests specified in B.S.4971 (1985) prior to the commencement of structural steelwork.
- Except where otherwise stated in the drawings, 5mm continuous fillet welds shall be used.
- All weld shall be tested in accordance with B.S.3923 (1985).
- Certificate of origin and chemical composition of the structural steel to be used shall be submitted to the Engineer prior to the commencement of fabrication work.
- Adequate supervision shall be carried out by the Engineer during execution of the proposed works.
- Test reports on bolts and weldings shall be submitted to the BD office for record purposes.
- The Contractor shall appoint a professionally qualified and technical competent person to supervise the execution of works.
- All stainless steel bolts and nuts shall be grade A2-50 and complies with BS 6105-1981.
- All non-shrinkage grout shall be complied with SAA MP20 part 3.
- Soil bearing capacity = 62.5 kPa.
- Design bearing pressure = 30.11 kPa.
- Footings founded on compacted fill materials.
- Concrete cover to be 50mm concrete grade to be 300 to CSI.
- Design wind pressure is 3.36 kPa, H=277.3m, Ext. ground level to be 272.5mPD.
- Apply bitument point on stainless steel bolts to avoid bi-metallic effect with GMS.
- The rise cut slope will be treated with hydro-seeding for new cut slope surface protection.
- G.I. report will be submitted to B.D. prior to application of consent.

FIRE SERVICES NOTES:

- No F.S. equipments installation is required.

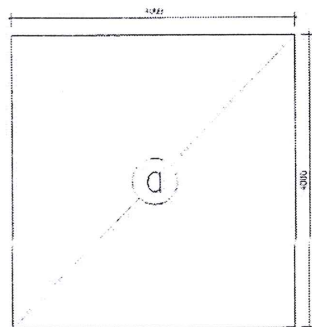
OTHERS:

- Antenna pole shall be painted in RAL 4010, RAL 4011 or similar similar colors to match with the surrounding natural environment.

THE PROTECTION OF EARTHWORKS AGAINST HEAVY RAINFALL

- Surface water flowing into the site from adjacent ground shall be intercepted and conducted from the site to an indicated safe discharge point.
- All earthworks shall be graded and sealed to ensure run-off and to avoid ponding.
- A method of working shall be adopted to minimize the exposed base soil at any time.
- Where temporary base earth slope faces are unavoidable, they shall be protected with sheeting well-secured against the wind. Where slope faces are to be temporary exposed for more than two weeks temporary hard surfacing shall be provided and temporary shall be installed.

TENANCY AREA



TOTAL TENANCY AREA
= 4000mm X 4000mm
= 16.0m²

SCHEDULE OF CO-ORDINATE FOR ANTENNA POLE & CONCRETE PLINTH

POINT	EAST	NORTH
(A)	818933.07 E	812337.10 N
(B)	818937.19 E	812334.36 N
(C)	818933.31 E	812333.36 N
(D)	818932.31 E	812337.24 N
(E)	818936.19 E	812338.24 N
(F)	818934.75 E	812335.80 N

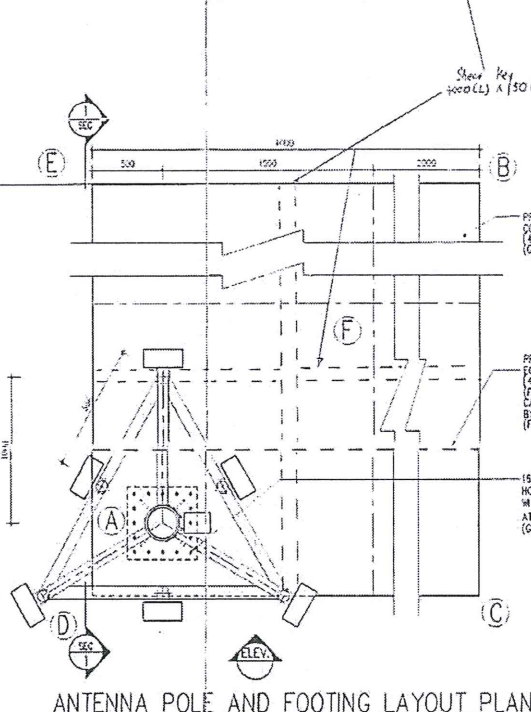
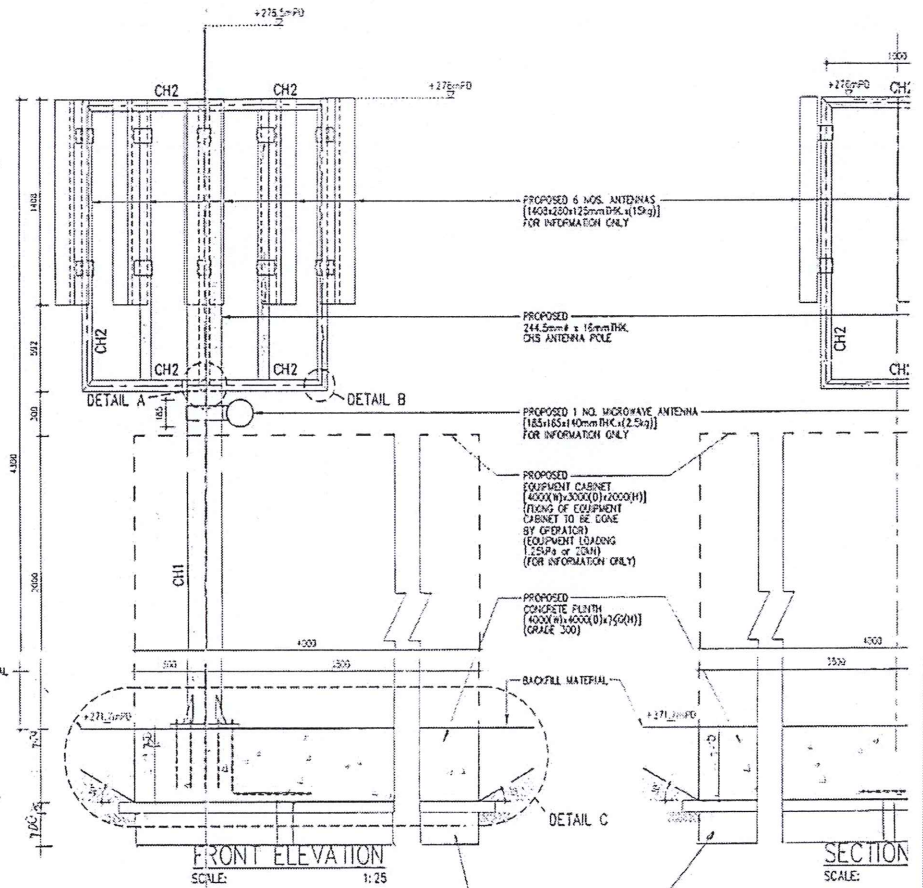
SCHEDULE OF STEEL MEMBERS FOR ANTENNAS

MARK	SIZES
CH1	244.5mm x 16mm THK. GMS STEEL POLE
CH2	76.1mm x 5mm THK. GMS STEEL POLE

R.C. FOOTING FOR MOBILE NETWORKS ANTENNAS

SIZES	TOP & BOTTOM BARS
4000(W)X4000(D)X500(M)H	Y12 @ 150mm c/c (T & B) BOTH WAYS
CONCRETE MIX : GRADE 300	

BASE PLATE	500 x 500 x 20mm THK. G.M.S. BASE PLATE
HOLDING DOWN BOLTS	12mm S/S HOLDING DOWN BOLTS WITH NUTS AND WASHERS (GRADE A2-50 TO BS 6105) = 16 NOS.



ANTENNA POLE AND FOOTING LAYOUT PLAN

SCALE: 1:25

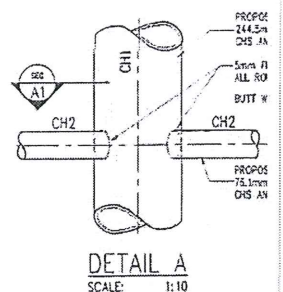
COMPACTION

- The in-site field dry densities of compacted materials shall not be less than 95% of Maximum Dry Density described.

TABLE 1

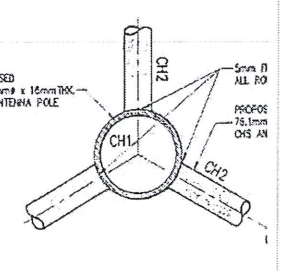
DESCRIPTION	SIZE OF AREA OF FILL IN BATCH ¹	NO. OF DETERMINATIONS PER BATCH
FILL IN EXCAVATIONS	0-100m ³	3
	100-500m ³	2 FOR EACH 100m ³ OF PART THEREOF
	EXCEEDING 500m ³	1 FOR EACH 100m ³ OF PART THEREOF

* A BATCH OF FULL MATERIAL IS ANY QUANTITY OF FILL MATERIAL OF THE SAME TYPE AND HAS SIMILAR PROPERTIES THROUGHOUT.



DETAIL A

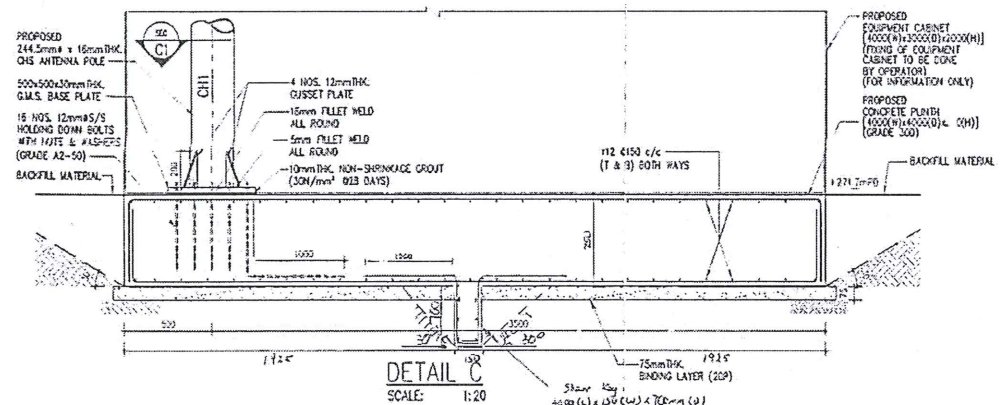
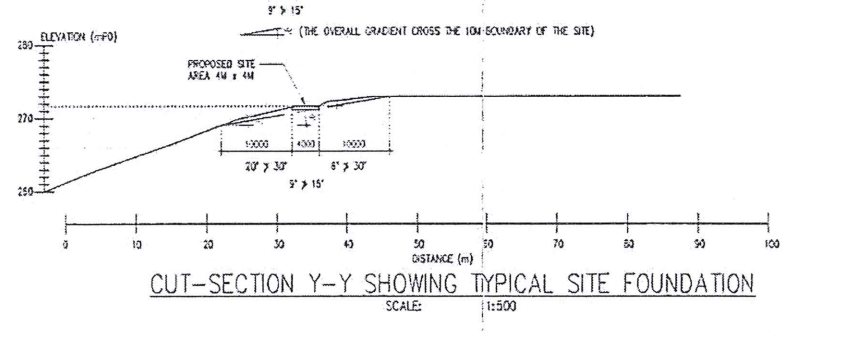
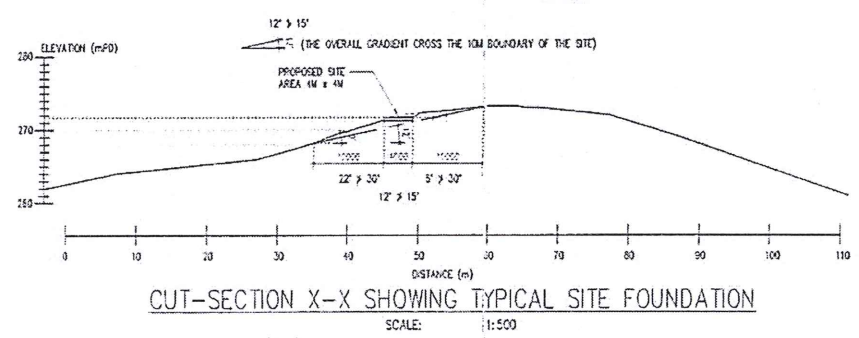
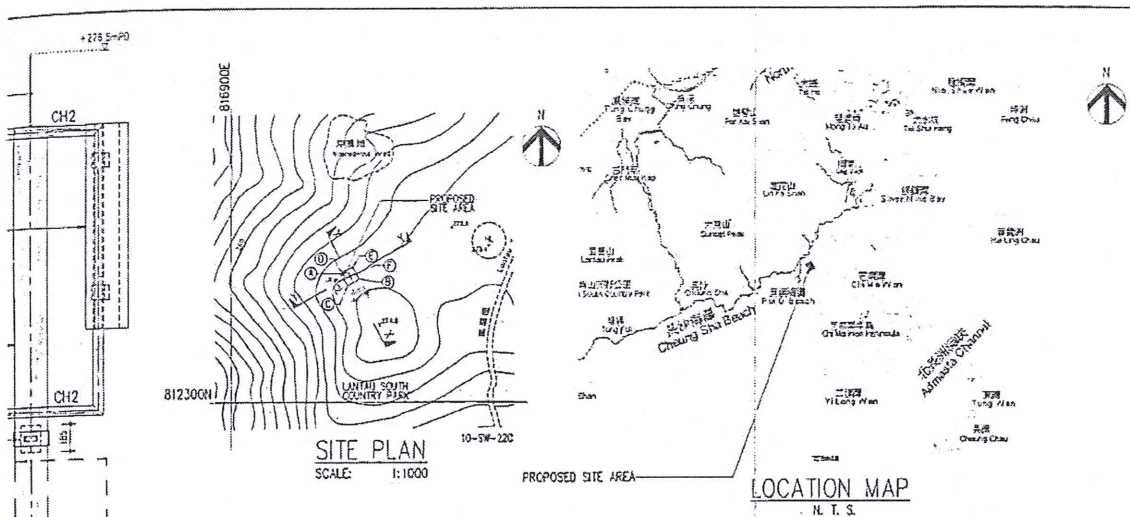
SCALE: 1:10



SECTION A1

SCALE: 1:20

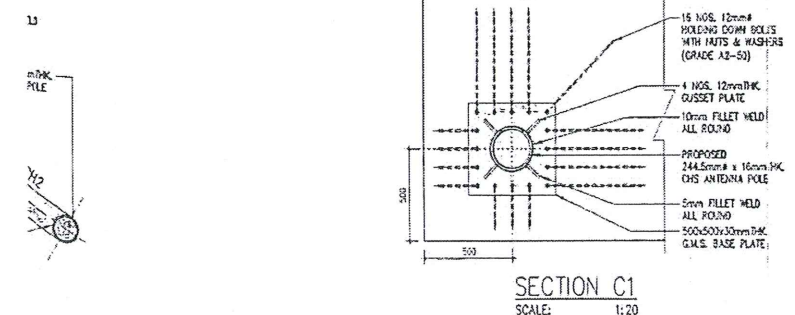
2/9/014/08
Set II (SI)



DETAIL B
SCALE: 1:10

DETAIL C
SCALE: 1:20

TYPICAL R.C. FOOTING DETAILS FOR ANTENNAS

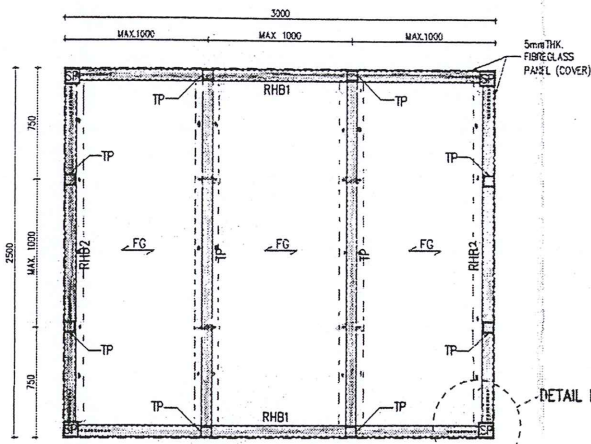


SECTION C1
SCALE: 1:20

B.D. REF : 2/9/014/08			
F.S.D. REF :			
NOTES: 1. WORK FROM HORIZONTAL DIMENSIONS ONLY. 2. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BY THE CONTRACTOR. 3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT SPECIFICATIONS, CONDITIONS OF CONTRACT AND ALL OTHER RELEVANT DRAWINGS. THE AUTHORIZED PERSON / REGISTERED STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN. 4. THIS DRAWING IS NOT VALID FOR CONSTRUCTION OR OTHER PURPOSES UNLESS IT HAS BEEN SIGNED BY THE AUTHORIZED PERSON / REGISTERED STRUCTURAL ENGINEER. 5. ALL WORKS SPECIFIED ON THIS DRAWING SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH PROVISIONS OF THE BUILDING ORDINANCE AND REGULATIONS. 6. COPYRIGHT OF THIS DRAWING IS RESERVED BY THE AUTHORIZED PERSON / REGISTERED STRUCTURAL ENGINEER. NO PORTION OF THIS DRAWING MAY BE REPRODUCED WITHOUT HIS WRITTEN CONSENT.			
REVISION	DESCRIPTION	DATE	
1	1. GENERAL NOTES REVISED 2. COMPACTION TABLE ADDED 3. LEVEL AND LOADING ADDED 4. MOUNTING DETAILS REVISED 5. CO-ORDINATION REVISED	09/03/09	
CONSULTANT : PRUDENTIAL SURVEYORS (INTL) LTD TEL 25078333 FAX 25986576			
AUTHORIZED PERSON & REGISTERED STRUCTURAL ENGINEER : Dennis W.C. Wong 5th Floor, Service, Unit, Wanch, Wanch, A.P.S. B.P.E. Authorized Person Registered Structural Engineer			
PROJECT TITLE : PROPOSED RADIO BASE STATION AT LANTAU SOUTH COUNTRY PARK, NAM SHAN, PUI O, LANTAU ISLAND (STT Cx 1324)			
DRAWING TITLE : GENERAL NOTES, LOCATION MAP, SITE PLAN, LAYOUT PLAN FOR FOUNDATION AND ANTENNA MOUNTING DETAILS			
DATE	DRAWN/DESIGNED	CHECKED	SCALE
09/03/09	MISU	A	DW AS SHOWN
JOB NO. : B2302	DRAWING NO. : 346-S1		
FILING CODE : T:\B2302(5) BD\DETAIL			
STATUS : RESUBMISSION			
APPROVED SEAL: Pia Approved SHUM Yuecheung Chief Building Surveyor for BUILDING AUTHORITY - 7 APR 2009			

Appendix VI

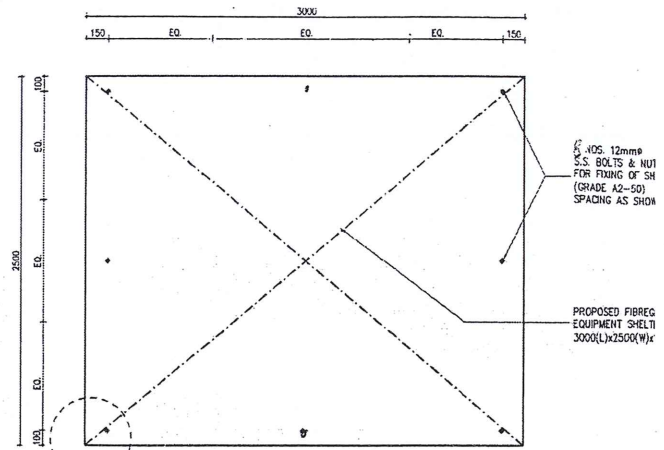
Typical Details of Fiberglass Equipment Cabinet



TOP FRAMING PLAN

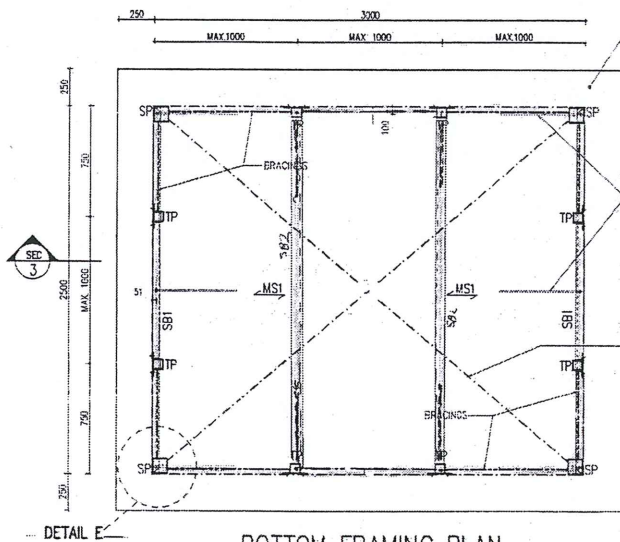
SCALE: 1:25

Roof loading of equipment = 0.75 kPa



LAYOUT OF FIXING BOLTS & NUTS FOR SHELTER

SCALE: 1:25



BOTTOM FRAMING PLAN

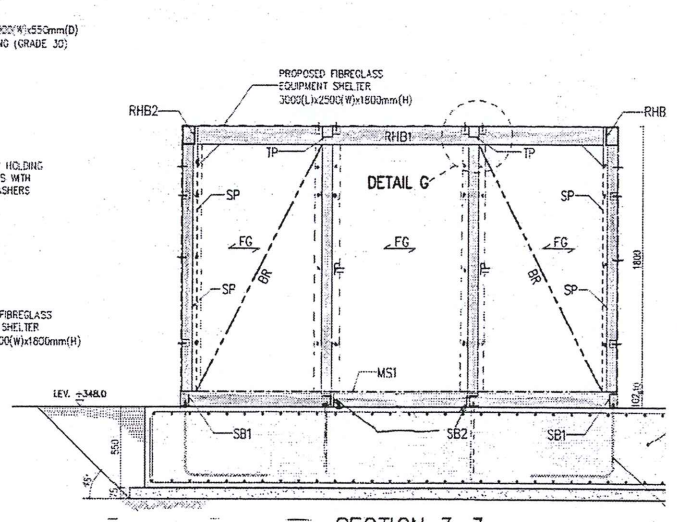
SCALE: 1:25

EQUIPMENT SHELTER MOUNTING DETAILS

Dead load of Equipment = 4.5.09 kN (8.01 kPa)
Live load of Equipment = 1.5 kPa

SCHEDULE OF STRUCTURAL FRAMES

MARKS	SIZES
SB1, SB2	102 x 51 x 10.42kg/m STEEL CHANNELS
MS1	10mm THK. G.M.S. PLATE
HOLDING DOWN BOLTS	Y12 HOLDING DOWN BOLTS WITH NUTS & WASHERS = 10 NOS.
FIXING BOLTS & NUTS	12mm S.S. FIXING BOLTS & NUTS = (8 NOS.)



SECTION 3-3

SCALE: 1:25

SCHEDULE OF STEEL MEMBERS FOR SHELTER

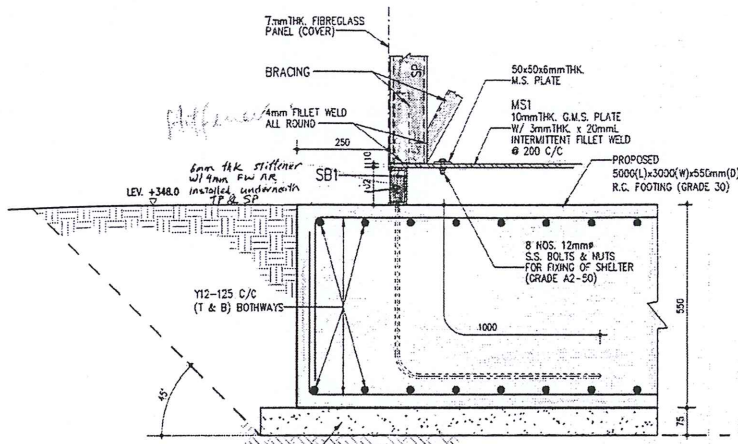
MARKS	SIZES
SP	100 x 100 x 8mm THK. RHS (POST)
TP	70 x 70 x 8mm THK. RHS (VERT. MEMBERS)
RHB1 & RHB2	100 x 60 x 8mm THK. RHS
BR	45 x 45 x 5mm THK. STEEL ANGLE (BRACINGS)
FG	7mm THK. FIBREGLASS PANEL

* WELDING TO BE 4mm FILLET WELD UNLESS OTHERWISE STATED.

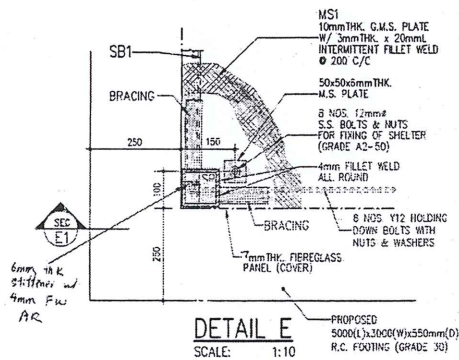
Fibreglass installation in accordance to manufacturer's recommendations

RECEIVED BY
7000 AUG 29 P 3 34
R.C.D. BISHOP
BUILDINGS DEPARTMENT

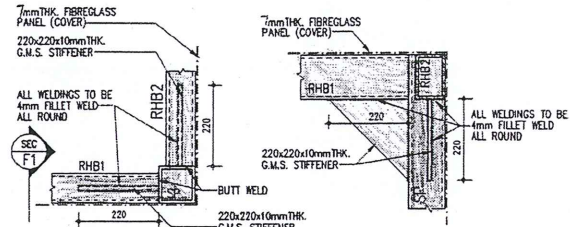
Handwritten signature/initials



SECTION E1
SCALE: 1:10

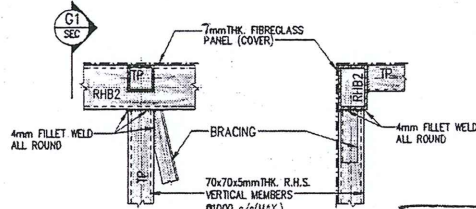


DETAIL E
SCALE: 1:10



DETAIL F
SCALE: 1:10

SECTION F1
SCALE: 1:10

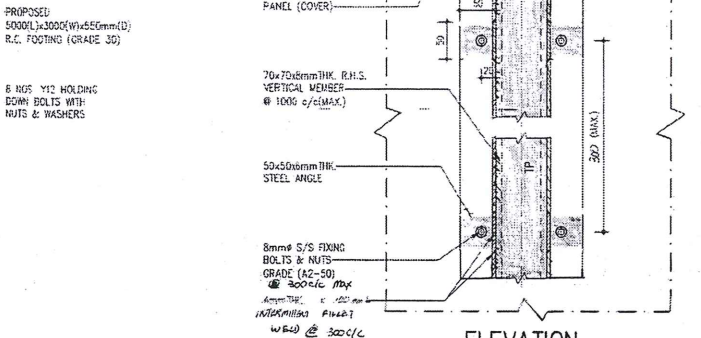


DETAIL G
SCALE: 1:10

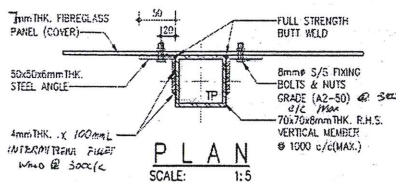
SECTION G1
SCALE: 1:10

Plan Approved
SHUM Luk-chung
Chief Building Surveyor
for BUILDING AUTHORITY
27 OCT 2008

Plan Approved
M Luk-chung
Chief Building Surveyor
for BUILDING AUTHORITY
27 OCT 2008


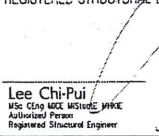


ELEVATION
SCALE: 1:5



PLAN
SCALE: 1:5

**TYP. FIXING DETAIL OF
7mm THK. FIBREGLASS PANEL**

CLIENT :				
CONSULTANT :  PRUDENTIAL SURVEYORS (INTL) LTD TEL. 25078333 FAX. 25986576				
AUTHORIZED PERSON : Dennis W.C. Wong BSc (Hons), MSc (Eng), MICE, MInstE, MInstC, MInstS, MInstR, RPE, RPS, RPE, RPS Authorized Person Registered Structural Engineer				
REGISTERED STRUCTURAL ENGINEER :  Lee Chi-Pui MSc (Eng), MICE, MInstE, MInstC, MInstS, MInstR, RPE, RPS, RPE, RPS Authorized Person Registered Structural Engineer				
PROJECT TITLE :				
DRAWING TITLE : EQUIPMENT SHELTER MOUNTING DETAILS				
DATE	DRAWN	DESIGNED	CHECKED	SCALE
8/08/08	R	ANTONIO	DW	AS SHOWN
JOB NO. :			DRAWING NO. :	
FILING CODE :			S2	
STATUS : 1ST SUBMISSION				