MINISTRY OF MUNICIPALITY AND ENVIRONMENT

INFRASTRUCTURE PLANNING DEPARTMENT

Procedure for Building Permit for Deep excavations and for structures within Qatar Rail Protection Zones

January 2019

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1.0 INTRODUCTION

1.1 Purpose

The purpose of this Infrastructure Planning Department of the Ministry of Municipality and Environment (IPD-MME) document is to provide guidelines for obtaining a building permit (BP) for Land Parcels that are subject to the following conditions:

a. Land Parcels with excavation depth greater than or equal to 10 m bgs.

b. Land Parcels located within RPZ of QRail Rail alignment.

The intend audience for this document including, without limitation, architectural, structural, geotechnical and construction specialists involved with the design, constructions, contracting and inspection of construction projects in the State of Qatar.

1.2 Document Control and Distribution

Updates and modifications to this document are controlled by IPD-MME. Users of this document should check that they have the most current version. Users are encouraged to provide feedback, which will be reviewed, assessed and possibly included in the next version.

1.3 Abbreviations

Table 1 – Abbreviation

Abbreviations	
AGS	Association of Geotechnical and Environmental Specialists
PWA	Public Work Authority (Ashghal)
BGS	Below Ground Surface
BP	Building Permit
IPD	Infrastructure Planning Department
Kahramaa	Qatar General Electricity & Water Corporation
m	Meter(s)
MME	Ministry of Municipality & Environment
NOC	No-Objection Certificate
PDF	Portable Document Format (Adobe)
RPZ	Rail Protection Zone
ROW	Right-of-Way
QCS	Qatar Construction Specifications
QND(95)	Qatar National Datum (95) / Qatar National Grid
QRail	Qatar Rail Company

1.4 Procedures for Submission

All applications shall be sent through the Building Permit Complex online system or written application to the Director of Infrastructure Planning Department of the Ministry of Municipality and Environment. The Applicant shall provide design drawings including location plan, site plan, floor plans and elevations as required in QND(95) levels.

1.5 Applicable Laws

This document is developed by IPD of MME based on the relevant laws and regulations indicated below:

- ✓ Article No. 839, Law No. 22 of 2004.
- ✓ Article No. 3, Law No. 1 of 2013.
- ✓ Law No. 10 of 2014.

2.0 PROCEDURE STEPS

The following sections outline IPD procedure steps which are required to be followed by property owners and/or their representatives in order to apply for and obtain a building permit (BP) for Land Parcels subject to the conditions listed below.

Case I	Land Parcels with excavation depth ≥ 10 m bgs
Case II	Land Parcels located within RPZ of QRail Rail alignment

2.1 Case I: Land Parcels with excavation depth ≥ 10 m bgs

The following steps shall be followed by property owners and/or their representatives for all Land Parcels that require excavation works extend to a depth of 10 m below ground level, or deeper:

1- Prior to starting any excavation work at the Land Parcel, the Applicant shall appoint a geotechnical consultant to undertake a detailed geotechnical investigation for the design of the excavation (including the excavation support) and retaining walls at the site and prepare a detailed Geotechnical Design Report containing recommendations for excavation and groundwater dewatering. The report should also include an Integrated Instrumentation and Monitoring Program to protect buildings, roads and adjacent utility service lines and to provide safety for site workers.

1. The Applicant shall pledge to send all geotechnical information and soil/rock tests data to the IPD to be approved and added to the Geotechnical Database at the MME. Geotechnical data shall be provided in AGS4 format and high quality PDF format. The copy of the undertaking is attached herein.

2. The Applicant shall appoint an experienced contractor utilizing appropriate techniques and construction equipment to carry out the excavation works and dewatering of groundwater at the subject Land Parcel. The contractor is responsible to provide safely sloped

excavations or an adequately constructed shoring system, in compliance with the guidelines outlined in the latest version of QCS and/or other similar governing specifications.

3. The Applicant shall use the QND (95) datum to determine the depth level of all excavation work on the subject Land Parcel.

4. Prior to commencement of any excavation work, the contractor shall coordinate with the utility services providers (PWA, Kahramaa, Ooredoo, etc.) in order to locate all existing utility lines that may be impacted during the construction works. Utility lines adjacent to the proposed excavation area may include, but not limited, to the following:

   a. Water main lines,

   b. Sewer lines,

   c. Treated Sewage Effluent (TSE)

   d. Electrical cables, and

   e. Water services pipe.

5. If ground anchors are used to stabilize excavation sidewalls, it is the responsibility of the Applicant to include information about these anchors in the Design Geotechnical Report. The required information may include, but not limited, to the following:

   f. Type and specifications of these anchors (diameter, length, angle of inclination, horizontal distance, etc….)

   g. Installation locations

   h. Methodology of installation

   i. Required tests

   j. Inspection and observation by a qualified geotechnical consultant during anchors installation.

   k. Detailed instrumentation and monitoring program in order to protect utility service lines and adjacent properties.

   l. The methodology of removing the ground anchors after completion of underground levels (the use of Removable Anchors) and the resulting voids/holes shall be sealed properly with non-expansive cement grout.

6. In case that ground anchors will extend to the adjacent properties, ROW and utility lines corridors, it is the responsibility of the Applicant to obtain a NOC from the property owner, utility service providers and relevant government entity. In addition, the Applicant shall obtain an approval from IPD for all ground anchors details in order to avoid conflict with existing and future infrastructures.

7. A well-defined program of site instrumentation and monitoring of the temporary work during construction shall be implemented by the contractor. Monitoring is required to check the safety of the work and assess the effects of construction on surrounding ground and existing facilities (buildings, roads and utility lines).

2.2 Case II: Land Parcels located within RPZ of QRail Rail Alignment

The following steps shall be followed for all Land Parcels located within Rail Protection Zone (RPZ) of QRail Rail alignment despite the depth of excavation. Protection Zones are defined in the law as " *Zones determined to protect the track of the tunnels in order to prevent any entity from carrying out construction works that may affect the safety of the tunnels*". RPZ are determined based on the Rail alignment approved by Government stakeholders.

1- Prior to commencement of any construction works at the Land Parcel, the owner and/or his representatives shall directly contact QRail in order to obtain a formal NOC. QRail's NOC is considered mandatory for all works within RPZ subject to Law No. 10 of 2014.

1. The Applicant shall provide QRail with the proposed design details including, but not limited to, the following:
    a. Architectural plans,
    b. Location plan with coordinates,
    c. Structural plans including the design loading plan, foundation details and shoring system, and
    d. Borehole details.
2. The Applicant shall use the QND (95) datum to determine the depth levels of all excavation and drilling works on the subject Land Parcel.
3. Prior to starting any excavation work at the Land Parcel, the Applicant shall appoint a geotechnical consultant to undertake a detailed geotechnical investigation for the design of the excavation (including the excavation support) and retaining walls at the site and prepare a detailed Geotechnical Design Report containing recommendations for excavation and groundwater dewatering. The report should also include an Integrated Instrumentation and Monitoring Program to protect buildings, roads and adjacent utility service lines and to provide safety for site workers.
4. All drilling and boring operations within the RPZ require a separate approval from QRail.
5. The Applicant shall pledge to send all geotechnical information and soil/rock tests data to the IPD-MME to be approved and added to the Geotechnical Database at the MME. Geotechnical data shall be provided in AGS4 format and high quality PDF format. The copy of the undertaking is attached hereto.
6. The Applicant shall appoint an experienced contractor utilizing appropriate techniques and construction equipment to carry out the excavation works and dewatering of groundwater at the subject Land Parcel. The contractor is responsible to provide safely sloped excavations or an adequately constructed shoring system, in compliance with the guidelines outlined in the latest version of QCS and/or other similar governing specifications.
7. Prior to commencement of any excavation work, the contractor shall coordinate with the utility services providers (PWA, Kahramaa, Ooredoo, etc.) in order to locate all existing

utility lines that may be impacted during the construction works. Utility lines adjacent to the proposed excavation area may include, but not limited, to the following:

e. Water main lines,

f. Sewer lines,

g. Treated Sewage Effluent (TSE)

h. Electrical cables, and

i. Water services pipe.

8. If ground anchors are used to stabilize excavation sidewalls, it is the responsibility of the Applicant to include information about these anchors in the Design Geotechnical Report. The required information may include, but not limited, to the following:

j. Type and specifications of these anchors (diameter, length, angle of inclination, horizontal distance, vertical space of the anchors, etc….)

k. Installation locations

l. Methodology of installation

m. Required tests

n. Inspection and observation by a qualified geotechnical consultant during anchors installation.

o. Detailed instrumentation and monitoring program in order to protect utility service lines and adjacent properties.

p. The methodology of removing the ground anchors after completion of underground levels (the use of Removable Anchors) and the resulting voids/holes shall be sealed properly with non-expansive cement grout.

9. In case that ground anchors will extend to the adjacent properties, ROW and utility lines corridors, it is the responsibility of the Applicant to obtain a NOC from the property owner, utility service providers and relevant government entity. In addition, the Applicant shall obtain an approval from IPD for all ground anchors details in order to avoid conflict with existing and future infrastructures.

10. A well-defined program of site instrumentation and monitoring of the temporary work during construction shall be implemented by the contractor. Monitoring is required to check the safety of the work and assess the effects of construction on surrounding ground and existing facilities (buildings, roads and utility lines).

3.0 DISCLAIMER

This document is intended to be used only in its entirety. IPD-MME should be contacted if the Applicant requires additional information or has questions regarding the content or completeness of this document.

The use of IPD-MME's approval for any work, does not relieve the Applicant (or anyone who acts on his behalf) from his responsibilities, nor does it entitle the Applicant (or anyone who acts on his behalf) to claim any kind of compensation for damages or losses during construction

or thereafter. IPD-MME accepts no responsibility for any damages, if any, during construction or thereafter for the structures, properties and any investment of the properties.

Attachments

تعهد شركة مقاولات (حفريات جيوتقنية)

Commitment of Geotechnical Investigation Contractor

Company Name:	_____	إسم الشركة:
Company Address:	_____	عنوان الشركة:
Project Name:	_____	اسم المشروع:
Project Number:	_____	رقم المشروع:
Work Site:	_____	موقع العمل:

نتعهد بإرسال جميع المعلومات الجيوتقنية و فحوصات التربة و الصخور بما في ذلك التقارير الجيوتقنية والمسوحات الجيوفيزيائية وتقارير رصد المياه الجوفية الخاصة بالمشروع الوارد ذكره أعلاه إلى إدارة تخطيط البنية التحتية في وزارة البلدية و البيئة و ذلك فور الانتهاء منها و بدون أي تأخير و تسليمها بصيغة AGS4 و صيغة PDF عالي الجودة.

Kindly note that we undertake to submit all geotechnical information, soil and rock test results, including the geotechnical reports, geophysical surveys and groundwater monitoring results of the project mentioned above, to the Infrastructure Planning Department at the Ministry of Municipality and Environment, immediately after completion without any delay, and delivered in AGS4 format and high quality PDF format.

Name	: _____	:	الاسم:
Designation	: _____	:	الصفة
ID number	: _____	:	رقم البطاقة الشخصية
Signature	: _____	:	التوقيع:
Date	: _____	:	التاريخ
Company Stamp	: _____	:	ختم الشركة