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|   |  | Rev. No.:<br>版本号：        | 03              |
|   |  | Effective date:<br>生效日期： | 2025-12-01      |
| File name<br>文件名  | <b>Environmental factors management of construction project</b><br><b>施工环境因素控制</b> |                          |                 |

### Approval process

#### 审批过程

|                           | Name<br>姓名  | Title<br>职务  |
|---------------------------|---|--|
| <b>Drafted by</b><br>起草人  | Xu Guangxiang 许光祥<br>Guangshang Xie 谢冠上<br>Adam Dai 戴泽依 | EHS Officer<br>EHS Engineer<br>Engineer of CCD   |
| <b>Reviewed by</b><br>审阅人 | Yigal Cohen;<br>Shaogang Chen 陈少刚;<br>Sehoon Park;      | PVC & General Director;<br>PVC assistant & Safety coordinator;<br>Academy Safety Representative; |
| <b>Approved by</b><br>批准人 |   | Campus Safety Committee;   |

### Reversion records

#### 版本历史记录

| Rev.<br>No.<br>版本号 | Publication<br>date<br>出版日期 | Rev. reason/ content modified<br>再版原因/更改内容                |
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| 02                 | 2022-06-01                  | Regularly updated with no major changes.<br>定期更新，无重大变更内容。 |
| 03                 | 2025-12-01                  | Regular renew 周期审阅更新                                      |

### Relevant departments (select relevant departments with a “√”)

#### 相关部门 (用√勾选相关部门)

|                             |   |                          |   |                     |   |
|-----------------------------|---|--------------------------|---|---------------------|---|
| Construction Dept.<br>校园建设部 | √ | Operation Dept.<br>校园运营部 | √ | H.R. Dept.<br>人力资源部 | √ |
| RIGS<br>研究创新和研究生部           | √ | U.G. Dept.<br>本科教学部      | √ | I.T.Dept.<br>电脑信息部  | √ |

### Relevant documents 相关文件

No 无

### Distribution mode (black) 发放方式 (涂黑)

Electronic edition ☒ Paper edition ☐  
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## 1. Purpose 目标

In order to protect the construction project site and surrounding environment and prevent environmental pollution incidents, environmental protection measures on the construction site are formulated in accordance with relevant national and local environmental protection laws and regulations.

为保护施工项目现场及周边环境，防止发生环境污染事件，根据国家及地方相关的环保法律法规，制定施工现场环保措施。

Environmental protection goal: During the construction process of the project, the noise, vibration, waste water, exhaust gas and solid waste shall be comprehensively controlled to minimize the impact of these pollution emissions and meet the requirements of relevant national and local regulations.

环境保护目标:在工程施工期间，对噪声、振动、废水、废气和固体废弃物进行全面控制，尽量减少这些污染排放所造成的影响，并满足国家和地方有关法规的要求。

## 2. Scope 范围

This procedure is applicable to all construction projects related environmental factors in GTIIT.  
此程序适用于在广东以色列理工学院负责项目内建设项目施工所涉及的环境因素。

## 3. 术语

### **Environmental factors 环境因素**

Elements of an organization's activities, products, or services that interact with the environment.  
一个组织的活动、产品或服务中能与环境发生相互作用的要素。

### **Environmental impact 环境影响**

Any harmful or beneficial changes to the environment caused, in whole or in part, by the activities or services of the organization.

全部或部分地由组织活动或服务给环境造成的任何有害或有益的变化。

### **Normal industrial waste 一般工业废物**

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Indicate the waste except the hazardous waste that is listed in the national directory of hazardous wastes or determined as a substance of hazardous characteristic according to the national identification standard GB5085 and method for hazardous waste GB/T 15555 which is stipulated by the state, from production, facilities maintenance process or lab.

一般工业废物是指未被列入《国家危险废物名录》或者根据国家规定的GB5085鉴别标准和GB5086及GB/T 15555鉴别方法判定不具有危险特性的工业固体废物。

### **Hazardous Waste 危险废弃物**

Hazardous waste is the solid waste that is included in National hazardous wastes category (ref. National Catalogue of Hazardous Wastes) or identified by hazardous wastes identification standard and methods of GB5085, with one or more hazardous characters of corrosive, toxic, flammable, reactive, radioactive and infective or solid wastes which cannot be excluded to have above mentioned hazardous character.

指列入国家危险废物名录或者根据国家规定的危险废物鉴别标准和鉴别方法GB-5085认定的具有腐蚀性、毒性、易燃性、反应性，放射性和感染性等一种或一种以上危险特性，以及不排除具有以上危险特性的固体废物。

## **4. Responsibilities 责任**

### **Campus Project management 校项目管理层**

- Make sure waste gas handling procedure to be implemented within GTIIT projects to fully follow up laws / regulations' requirements.  
确保管理程序在校内项目的实施，以完全达到法律法规\程序的要求。
- Provide necessary resources (manpower and finance etc.) to support implementation of this procedure.  
提供必需的人力物力资源支持此程序。
- Assure its critical environmental factors are always compliant with the discharging limit of legal requirement.  
确保关键环保因素得到定期正确的检测和监督，确保符合法规规定的各排放限值。

### **Project Leader of Campus Construction Department 校园建设部项目负责人**

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- Organize the regional supervisors or construction unit leaders to identify the environmental factors in the project.  
组织各区域主管或施工单位负责人对项目环境中环境因素进行识别。
- Regularly review the management directory of environmental factors of school projects.  
定期审核校内项目环境因素管理目录。
- Manage, establish, communicate, execute, and record environmental monitoring of projects under construction at school, and regularly review the monitoring plan.  
管理、建立、沟通、执行并记录校在建项目环保监测，定期回顾监测计划。
- Periodically organize external third party to handle environmental factors surveillance if necessary.  
如有必要，需根据环保局要求定期组织外部第三方检测机构对校内管理项目相关环境因素进行检测。
- Provide training including critical environmental factors, monitoring plan and standard.  
培训员工，包括校内环境因素监督计划和要求。

## 5. Procedure requirement 程序要求

### 5.1. Factors for environmental effect 对环境的影响应考虑下列因素：

- Emission to atmosphere 向大气的排放
- Discharge to water 向水体的排放
- Waste management 废物管理
- Soil pollution 土地污染
- Other environmental or community issue 其他当地环境问题和社区性问题

### 5.2. Environmental factors catalogue 校在建项目环境因素管理目录

CCD shall develop and maintain an inventory of air emission sources. This inventory shall include source location (with drawing reference), quantities, concentration, discharge methods and pollutant(s).

项目管理办公室制定并维护环境因素目录，各个部门根据相应因素制定检查机制，包括：监测频率、源位置(图)、量、浓度、排放方式及具体污染物。例如：

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| No<br>序号 | Envioronmental Factos<br>环境因素                           | Generation resources<br>产生源  | Impact<br>相应的环境影响  |
|----------|---|--|--|
| 1        | Production and domestic<br>sewage discharge<br>生产生活污水排放 | Domestic wastewater, mortar mixing and washing<br>vehicles, etc.<br>生活废水、砂浆搅拌冲洗车辆等   | Polluted water<br>污染水体   |
| 2        | Chemical spill<br>化学品泄漏                                 | Paint, gasoline, acetylene gas, other chemical<br>materials for construction;<br>油漆、汽油、乙炔气、施工用其他化学材料；  | Polluted soil<br>污染土壤  |
| 3        | Toxic and harmful<br>exhaust emissions<br>有毒有害废气排放      | Fuel oil machinery and equipment, waste engine oil,<br>waste plastics from construction, waste paint and<br>waste welding electrodes, etc. ;<br>燃油机械设备、废机油、施工产生废塑料、废油<br>漆废电焊条等等；  | Polluted soil and water<br>污染土壤和水体   |
| 4        | Dust emission<br>粉尘排放                                   | Earthwork, sand and cement transportation, mortar<br>mixing, grinding and cutting, etc. ;<br>土方工程、砂和水泥运输、砂浆搅拌、打磨切割<br>等；   | Pollute the atmosphere<br>污染大气环境   |
| 5        | Noise emission<br>噪声排放                                  | Construction equipment, concrete mixing,<br>scaffolding installation and disassembly, formwork<br>removal, noise from other construction activities,<br>vehicle activities, etc. ;<br>施工设备、混凝土搅拌、脚手架安装和拆卸、模<br>板拆除、其他建筑施工活动产生的噪声，车辆活<br>动等等； | Exceed the regional noise<br>standard and disturb the<br>people;<br>超出区域噪声标准，扰<br>民； |

### 5.3. Environmental monitoring and measurement 环境监测和测量：

#### 5.3.1. Environmental suveillance 环境监测

- The environmental monitoring at the construction site is organized and implemented by the person in charge of the project;  
施工现场的环境监测由项目负责人组织实施；

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- The monitoring objects include: project site noise, sewage discharge and dust, etc.; the monitoring frequency is once a month;  
监测的对象包括：项目场界噪声、污水排放及粉尘等；监测的频数为每月进行一次；（具体请根据实际因素及相关要求执行）
- The noise monitoring of the construction site of the project department is completed by the project department itself, and the monitoring records are made;  
项目部施工现场噪声监测由项目部自行完成，并做好监测记录；
- Sewage discharge and local environmental protection departments handle sewage permits, and the project is equipped with sedimentation tanks and other facilities, and conduct regular inspections.  
污水排放与地方环保部门办理排污许可证，项目配置沉淀池等设施，并作定期检查。

### 5.3.2. Environmental monitoring 环境监控

While implementing noise and sewage environmental monitoring, the project department conducts qualitative inspection of environmental factors such as dust emission and other difficult-to-quantify indicators, and monitors the implementation of environmental goals and indicators.

项目部在实施噪声和污水环境监测的同时，对粉尘排放等不易量化的指标的环境因素进行定性检查，监控环境目标和指标的落实情况。

#### **Pollution source (Inc. waste gas source and fugitive emission)**

**污染源 (包括废气、废渣、废水、气源及其无组织排放源)**

CCD shall establish and execute a monitoring plan (e.g. sampling/analytical testing required, frequency, responsibilities)

项目管理办公室必须建立并执行一个监测计划，内容包括:采样、分析测试、采样频率、相关责任等；

Fugitive emission identified in the routine inspection or walk through should be recognized and reported to CCD department. Measures should be taken to eliminate the emission and ensure the

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compliance with emission standards. Engineering options, if necessary, should be identified to prevent any toxic and hazardous gas fugitive emission.

在日常巡检中识别出的无组织废气排放应该记录，并向校园建设部项目办公室报告。

应该采取措施减少无组织排放及确保和法规的符合。

必要的时候采用工程控制手段，识别方案以预防任何有毒及有害废气的排放。

#### **Inspection for waste disposal废弃物的处理检查:**

CCD should organize all relevant subcontractor companies' representatives to inspect waste disposal regularly to ensure they follow legal and GTIIT requirement.

校园建设部项目办公室应定期组织对各施工区域的废弃物处理进行检查，以确定是否按照规定的程序进行处理。

#### **Noise testing 噪音监测**

CCD is responsible for workshop and boundary testing; the frequency should be more than one time per month.

校园建设部项目办公室负责组织监测校内和校界噪音，测试频率不低于每月一次；

The noise monitoring point at the boundary of the project school is one meter away from the wall in the southeast and northwest direction of the project boundary;

项目校边界噪音监测点为项目界东南西北方向围墙外一米；

CCD analyze the testing result and provide the report and suggestion to all subcontractor companies, and keep all these testing record in place.

校园建设部项目办公室负责分析测试结果，将结果通知各施工单位主管，并将记录存档。

If abnormal situation happens, find out the root cause, take the corrective action and retest until the result meet the legal requirement.

如有异常，应迅速查明原因并采取措施纠正，重新测试，直至合格。

### **5.4. Control measures 控制措施:**

#### **5.4.1. Wastewater control measures 废水控制措施**



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The wastewater discharged by the project mainly includes the following types: groundwater drained by foundation pit precipitation, rainwater, domestic wastewater, agitation, and various vehicle cleaning wastewater.

项目排放的废水主要有以下几种：基坑降水抽排的地下水、雨水、生活废水、搅拌及各种车辆清洗废水等。

- According to the direction and overload capacity of the drainage network in different construction areas, choose the appropriate outlet location and discharge method.  
根据不同施工地区排水网的走向和过载能力，选择合适的排口位置和排放方式。
- The groundwater pumped and drained from the foundation pit is discharged into the municipal pipeline after three-stage precipitation.  
基坑降水抽排的地下水经三级沉淀后排入市政管道。
- Before the start of the project, complete the construction of site drainage and wastewater treatment facilities, and ensure the effectiveness of site drainage and wastewater treatment facilities throughout the construction process, so that there is no water accumulation, drainage, overflow, clogging, and water quality standards.  
在工程开工前，完成工地排水和废水处理设施的建设，并保证工地排水和废水处理设施在整个施工过程的有效性，做到现场无积水、排水不外溢、不堵塞、水质达标。
- Develop effective drainage measures during the rainy season construction. There is effective waste slurry treatment equipment at the construction site of drilling (punching) hole piles. A fixed mud pool is used. The mud pool is piled with soil sand bags and outsourced with non-woven fabrics. Dispose in accordance with relevant environmental protection regulations.  
雨季施工时制定有效的排水措施，钻(冲)孔桩的施工现场有有效的废浆处理设备，采用固定泥浆池，泥浆池采用土砂袋堆砌，外包无纺布，废弃泥浆由泥浆车运出场外按照环保相关规定进行处理。
- According to the actual construction conditions, taking into account the rain characteristics of the city, formulate the rainy season, especially the flood season, to avoid the unorganized discharge of waste water, overflow, blockage of urban sewers and other pollution emergency response work plan, and implement when necessary.



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根据施工实际，考虑本市降雨特征，制定雨季、特别是汛期，避免废水无组织排放、外溢、堵塞城市下水道等污染事故发生的排水应急相应工作方案，并在需要时实施。

- Special paint and oil depots are set up on the construction site, and the ground walls of the warehouses are treated with anti-leakage treatment. Storage, use, and storage personnel are responsible for preventing oil from running, pouring, dripping, and leaking from contaminating the soil and water.

施工现场设置专用油漆油料库，库房地面墙面做防渗漏处理，储存、使用、保管专人负责，防止油料跑、冒、滴、漏污染土壤和水体。

- There is no concrete mixing at the construction site and no concrete mixing station.  
施工现场不搅拌混凝土，不设置混凝土搅拌站。
- Set up water supply and drainage facilities on site to avoid water accumulation and prevent running, running, dripping, and leakage of water pipelines.  
现场设置供、排水设施，避免积水，防止输水管道跑、冒、滴、漏。
- There are sedimentation tanks and flushing tanks in the site. After domestic sewage and other sewage are treated separately, they can be discharged into the municipal drainage pipe network through the drainage pipe. Special vehicles for transportation.  
场地内设沉淀池和冲洗池，生活污水和其他污水分别处理后方能经排水管道排入市政排水管网，施工中产生的泥浆未经沉淀不得排入市政排水管网，废浆和淤泥用封闭的专用车辆进行运输。

#### 5.4.2. Air pollution prevention measures 大气污染防治措施：

The main sources of air pollution in the project are: transportation, excavation, fuel oil machinery, stove, etc.

项目大气污染源主要有：运输、开挖、燃油机械、炉灶等。

- For operation surfaces and loading, unloading and transportation processes that are prone to dust and dust, operating procedures and watering and dust reduction systems shall be formulated. Under wind conditions of level 4 or higher, construction work that generates dust is not carried out.

对易产生粉尘、扬尘的作业面和装卸、运输过程，制定操作规程和洒水降尘制度。在4级以上风力条件下，不进行产生扬尘的施工作业。

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- Construction garbage is transported to the ground by containers, and the garbage should be cleared and transported in time, and water should be sprayed during the transportation to prevent dust.

施工垃圾采用容器吊运到地面，垃圾要及时清运，清运时要洒水，防止扬尘。
- The project needs to consider the concept of energy saving and environmental protection so that the garbage can be sorted and stacked, and the site should be cleared and transported in time.

项目需考虑节能、环保的理念做到垃圾分类堆放，及时清运出现场，现场不得堆积大量垃圾。
- Reasonably organize construction, optimize site layout, reduce or reduce the impact of dust and transportation operations on the environment.

合理组织施工、优化工地布局，减少或降低产生扬尘和运输作业对环境的影响。
- It is strictly forbidden to incinerate any waste and substances that can produce toxic and harmful gases, smoke, and odor at the construction site.

严禁在施工现场焚烧任何废弃物和会产生有毒有害气体、烟尘、臭气的物质。
- Commercially available concrete, cement and other easily-flyable fine-grained bulk materials used in the project should be stored and covered in the warehouse as much as possible.

项目中使用的商品混凝土、水泥等易飞扬细颗粒散体物料尽量安排库内存放实、覆盖。
- Choose a qualified transportation unit so that the transportation process will not be scattered.

选择合格的运输单位，做到运输过程不散落。
- When using and transporting cement, white ash, and other easily flying fine-grained bulk materials, it is necessary to prevent dust pollution caused by human factors.

在使用、运输水泥、白灰和其它易飞扬的细颗粒散体材料时，要防止人为因素造成扬尘污染。
- At the entrance of the construction site, a car flushing platform is set up, and the vehicles go out to wash the wheels to reduce the wheel carrying soil.

施工现场出入口设冲车台，车辆出场冲洗车轮，减少车轮携土。

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- When cleaning the construction site, spray and moisten the road surface and ground before sweeping to avoid dust during cleaning. When the wind force exceeds level 3 or higher, water should be sprayed at least once a day in the morning, middle and evening. The sprinklers should be equipped with sprinklers and designated persons to be responsible.

清扫施工现场时，要先将路面、地面进行喷洒湿润后再进行清扫，以免清扫时扬尘。当风力超过三级以上时，每天早、中、晚至少各洒水一次，洒水降尘应配备洒水装置并指定专人负责。
- Set up spraying facilities along the side of the construction site that is enclosed or prone to dust.

沿施工现场围挡或易产生扬尘一侧设置喷淋设施。
- Using clean energy, the stove complies with smoke emission regulations.

使用清洁能源，炉灶符合烟尘排放规定。
- The flue gas emission of the stove used on site must be controlled below the Ringerman blackness level, monitored once a week, and records should be kept and subject to supervision.

现场使用炉灶的烟气排放必须控制在林格曼黑度一级以下，每周监控一次，并保存记录，接受监督。
- Natural gas, liquefied gas, electricity, and other clean energy sources must be used for steam cars and stoves used in the canteens on the construction site. The use of loose coal, wood, sawdust, and other non-clean fuels is strictly prohibited.

施工现场内食堂所使用的蒸车、炉灶等必须使用天然气、液化气、电等清洁能源，严禁使用散煤、木材、锯末等非清洁燃料。
- When using a slotting machine or grinding wheel saw, a dust shield must be installed to prevent flying splashes.

使用开槽机、砂轮锯施工时，必须设隔尘罩，防止飞溅物飞扬。
- Construction-related paints, preservatives, fire retardant paints, and other chemicals that are easily polluted by the atmosphere are managed in a unified manner. After use, cover them tightly to prevent atmospheric pollution.

施工用的油漆、防腐剂、防火涂料等易污染大气的化学物品统一管理，用后用盖盖严，防止污染大气。

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- Before construction, the construction road should be well planned and set up, and the temporary construction road base should be compacted and hardened.  
施工现场在施工前，做好施工道路的规划和设置，临时施工道路基层夯实路面硬化。
- The fluid material is covered with dense mesh to prevent dust. As much as possible in the warehouse.  
流体材料用密目网苫盖，防止扬尘。尽可能在仓库内进行。

#### 5.4.3. Noise pollution prevention measures 噪声污染防治措施

The construction noise sources of this project mainly include the following: construction machinery, construction activities, transportation vehicles, etc.;

本工程施工噪声源主要有以下几种:施工机械、施工活动、运输车辆等;

- 1、 Noise reduction measures are taken, and the noise emitted to the surrounding living environment during construction conforms to the emission standards of environmental noise construction site boundaries stipulated by the state and this city.  
采取降噪措施，施工过程中向周围生活环境排放的噪声符合国家和本市规定的环境噪声施工场界排放标准。

- 2、 Fifteen days before the start of the project, apply to the local government environmental protection department to explain the name of the project, the name of the builder, the construction site and the environmental noise intensity that may be emitted to the boundary of the construction site during the construction period, and the noise pollution prevention measures adopted Wait.  
工程开工十五日前，向当地政府环境保护部门提出申请，说明工程项目名称、建筑者名称、建筑施工场所及施工期可能排放到建筑施工场界的环境噪声强度和所采用的噪声污染防治措施等。

- 3、 Construction noise control standards 施工噪声的控制标准:

| construction<br>stage<br>施工阶段 | Main noise source<br>主要噪声源 | Noise limit (db)<br>噪声限值(分贝) |                 |
|-------------------------------|----------------------------|------------------------------|-----------------|
|                               |                            | Daytime<br>昼间                | Nighttime<br>夜间 |

|   |  |                          |                 |
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|                  |   |     |     |
|------------------|---|-----|-----|
| structure<br>结构  | Commercial concrete pump truck, vibrating rod, mixer, concrete tank truck, electric saw, etc.<br>商砼泵车、振捣棒、搅拌机、砼罐车、电锯等 | ≤70 | ≤55 |
| decoration<br>装饰 | Air compressor, electric hammer, electric saw, electric planer, etc.<br>空压机、电锤、电锯、电刨等                                 | ≤65 | ≤55 |

Note:

- 1) The noise limit listed in the table is the noise value at the boundary of the construction site;
- 2) 06: 00-22: 00 during the day and 22: 00-06: 00 at night

注： 1) 表中所列的噪声限值为施工场界处的噪声值；

- 2) 昼间为 06:00-22:00， 夜间22:00-06:00

#### **Monitoring of construction noise on site 场施工噪音的监控**

- Noise monitoring is conducted once a month on the construction site, and the measuring points are selected at the site wall, and four monitoring points are set on the site;  
施工现场每月进行一次噪音监测，测点选在现场围墙处，现场设四个监测点；
- Arranged around the site, set up special personnel for noise monitoring and recording, and accept social supervision;  
布置在场地四周，设专人做噪声监测并做记录，接受社会监督；
- At night, construction work that produces noise pollution and affects the rest of others will not be carried out, except for emergency repairs and emergency repairs.  
夜间不进行产生噪声污染、影响他人休息的建筑施工作业，但抢修、抢险作除外。
- If the construction requires continuous operation or must be continued for special needs, it shall be reported to the district environmental protection department for approval.  
施工如需连续作业的或者因特殊需要必须连续作业的，报区环境保护部门批准。
- Take effective measures to reduce noise pollution to a minimum, and negotiate with the organizations and relevant units polluted by them to reach an agreement.  
采取有效措施，把噪声污染减少到最小的程度，并与受其污染的组织和有关单位协商，达成协议。

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- Arrange the working time reasonably, place the noisy procedures such as concrete construction in the daytime, and avoid the noisy work at night. Use commercial concrete and concrete components as much as possible to reduce the amount of on-site processing.  
合理安排作业时间，将混凝土施工等噪音较大的工序放在白天进行，在夜间避免进行噪音较大的工作。使用商品混凝土，混凝土构件尽量工厂化，减少现场加工量。
- When using strong noise machines such as concrete floor pumps, electric planers, electric saws, etc. at the construction site, use sound insulation and sound absorbing materials for noise reduction and sealing before use, and use low-noise vibrating rods for concrete vibration  
施工现场在使用混凝土泵、电刨、电锯等强噪声机具时，在使用前采取隔声吸音材料进行降噪封闭，混凝土振捣采用低噪声振捣棒。
- The crane commander is equipped with a walkie-talkie. Reduce on-site production and modulation of air ducts, keep power tools intact, and use low-noise products.  
吊车指挥配套使用对讲机。减少风管的现场制作、调制工作，保持电动工具的完好，采用低噪声产品。
- Pipeline steel is handled lightly, put down sleepers, and avoid night construction; reduce on-site production of air ducts, and if required, the operation room should be located in the basement or closed room.  
管道型钢搬运轻拿轻放，下垫枕木，并避免夜间施工；减少风管现场制作，如需制作操作间应设在地下室或封闭房间内。
- When using a hand-held power tool (electric hammer, hand drill, hand grinding wheel, etc.) cutting machine, the surrounding is surrounded by sound insulation, the performance of the equipment is excellent, and the process is reasonably arranged not to be concentrated.  
使用手持电动工具(电锤、手电钻、手砂轮等)切割机时，周围设围挡隔音，使用设备性能优良，并合理安排工序不集中使用。
- The early disassembly support system is used to reduce the high noise caused by disassembly and assembly of fasteners.  
采用早拆支撑体系，减少因拆装扣件引发的高噪音。
- Monitor the handling of materials and equipment, handle gently.  
监控材料机具的搬运，轻拿轻放。

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- Strengthen the education of employees and prohibit loud noises.

加强对职工的教育，严禁大声喧哗。

#### 5.4.4. Solid waste pollution prevention measures 固体废物污染防治措施：

For the prevention and control of solid waste pollution, the principles of reducing the generation of solid waste, fully and rationally utilizing solid waste and harmlessly disposing of solid waste shall be implemented.

固体废物污染的防治，实行减少固体废物的产生，充分合理利用固体废物和无害化处置固体废物的原则。

The solid wastes generated during the construction of the project are mainly the following: engineering wastes such as concrete, mortar and broken bricks, thermal insulation coverings of concrete, packaging materials of various decorative materials, domestic wastes and temporary buildings after the construction is completed Waste, etc.

项目施工中产生的固体废物主要有以下几种:混凝土、砂浆、碎砖等工程垃圾，混凝土的保温覆盖物，各种装饰材料的包装物，生活垃圾及施工结束后临时建筑拆除产生的废弃物等。

#### Measures to reduce the generation of solid waste 减少固体废物产生的措施：

- Concentrated mixing of concrete and mortar to reduce the use of bagged cement;  
混凝土、砂浆等集中搅拌，减少袋装水泥使用量；
- Adopting a new template system, strictly implementing process standards, and reducing the generation of floor ash;  
采用新型模板体系，严格执行工艺标准，减少落地灰的产生；
- The steel bars are processed in a centralized manner by the processing plant to reduce the generation of waste materials;  
钢筋采用加工厂集中加工的方式，减少废料的产生；
- Temporary buildings use mobile homes and are used on a revolving basis to reduce construction waste;  
临时建筑采用活动房屋，周转使用，减少工程垃圾；



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- Comprehensive utilization of resources, full recovery, and reasonable utilization of solid waste.  
综合利用资源，对固体废物实行充分回收和合理利用。

#### **Measures for comprehensive utilization of solid waste 固体废物综合利用的措施:**

- The engineering waste soil is sieved and reused, the sieve residue is crushed with a grinder, and the unusable engineering waste is disposed of centrally; a cement bag recycling system is established;  
工程废土集中过筛，重新利用，筛余物用粉碎机粉碎，不能利用的工程垃圾集中处置;建立水泥袋回收制度;
- A waste area is set up on the construction site, and it is managed by a dedicated person. The available waste is sent first and used first; the packaging materials of decorative materials are recycled uniformly.  
施工现场设立废料区，专人管理，可利用的废料先发先用；装饰材料的包装物统一回收。
- Measures for the centralized disposal of solid waste that are conducive to environmental protection: a fixed garbage storage area is set up at the construction site to promptly clear and transport and dispose of the garbage generated during the construction process to prevent environmental pollution.  
有利于保护环境的集中处置固体废物的措施:施工现场设固定的垃圾存放区域，及时清运、处置建筑施工过程中产生的垃圾，防止污染环境。
- Develop disposal plans for mud and waste residues, select a qualified transportation unit, promptly remove construction spoils and residues, and take measures to prevent spreading and loss during the process of collection, storage, transportation, utilization, and disposal of solid waste, Prevent leakage or other measures to prevent environmental pollution.  
制定泥浆和废渣的处理、处置方案，选择有资质的运输单位，及时清运施工弃土和渣土，在收集、贮存、运输、利用、处置固体废物的过程中，采取防扬尘防流失、防渗漏或者其他防止污染环境的措施。
- Establish a registration system to avoid that solid wastes are not discarded or scattered along the way.

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建立登记制度，在运输过程中沿途不丢弃、遗撒固体废物。

- The concrete hopper cleans the lower hopper every time before leaving the field. Earthwork, muck dump trucks, garbage trucks are all enclosed trucks. Wash the vehicle body and wheels before leaving the transportation vehicle to avoid polluting the road surface.

混凝土罐车每次出场前清洗下料斗。土方、渣土自卸车、垃圾运输车全密闭运输车。

运输车辆的出场前清洗车身、车轮，避免污染场外路面。

- Strengthen the management and maintenance of facilities, equipment, and places for collecting, storing, transporting and disposing of solid waste to ensure its normal operation and use.

对收集、贮存、运输、处置固体废物的设施、设备和场所，加强管理和维护，保证其正常运行和使用。

- Educate construction personnel to develop good hygiene habits, do not throw garbage and debris anywhere, and keep the work and living environment clean.

教育施工人员养成良好的卫生习惯，不随地乱丢垃圾杂物，保持工作和生活环境的整洁。

- Construction waste and domestic waste generated during construction shall be sorted and piled up at designated points, and a contract shall be signed with the environmental sanitation company. The environmental sanitation company shall carry out professional and timely removal and transportation, and shall not be piled up randomly

施工中产生的建筑垃圾和生活垃圾，应当分类、定点堆放，并与环卫公司签订合同，由环卫公司进行专业化及时清运，不得乱堆乱放；

- The garbage in the building must be cleared and transported in bags, and it is strictly prohibited to throw away.

建筑物内的垃圾必须袋清运，严禁向外扬弃。

#### 5.4.5. Control of oil and chemicals 油料、化学品的控制：

- Special warehouses should be set up for the storage of oil and chemicals. All closed and container-type management and use should be implemented, and the solid toxic and hazardous waste on the construction site should be packed in special hazardous waste bags;

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油料、化学品贮存要设专用库房；一律实行封闭式、容器式管理和使用，施工现场固体有毒有害废弃物应使用专用危废袋集装；

- The liquids are managed in closed containers; try to avoid leakage and spillage. If the oil drum is dumped, the operator should quickly lift the drum, place it in a safe place after the lid, and recycle the spilled paint as much as possible.

液体物采用封闭式容器管理；尽量避免泄露、遗撒，如发生油桶倾倒，操作者应迅速将桶扶起，盖盖后放置安全处，将倾洒油漆尽量回收。

- Treat the leaked paint on the ground with adsorbent materials, and treat the adsorbent materials as toxic and hazardous waste.

用吸附材料将地面上泄露油漆处理干净，将吸附材料作为有毒有害废弃物予以处理。

- Before using chemicals and toxic substances, work instructions should be prepared and operators should be trained.

化学品及有毒物质使用前应编制作业指导书，并对操作者进行培训。

- Hazardous waste must be handed over to a unit with qualified hazardous waste disposal.

对于危险废弃物必须交由具备危废处理资质单位进行回收处理。

## 6. Annex 附件

### Index of GTIIT Project Environmental Factors Surveillance and Management

#### 校项目相关环境因素监测及管理目录

|   |  |                          |                 |
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**Surveillance for Off Gas 废气监测：**

| <b>Environmental factors surveillance list 环境污染物监测目录</b> |  |                          |                                 |
|--|--|--------------------------|---------------------------------|
| <b>Monitoring Area</b><br>监测范围                           | <b>Monitoring Item</b><br>监测内容   | <b>Frequency</b><br>监测频率 | <b>Reference Value</b><br>参考标准值 |
| Dust 扬尘  | Dust in the air;<br>Status of water mist spraying equipment at the boundary of the construction site<br>空气中扬尘情况;<br>施工场地边界水雾喷洒设备状态 | Time/ day<br>次/天         | Visual status<br>目测状态           |

**Surveillance for Waste water 废水监测：**

| <b>environmental factors surveillance list 环境污染物监测目录</b> |  |                          |   |
|--|--|--------------------------|---|
| <b>Monitoring Area</b><br>监测范围                           | <b>Monitoring Item</b><br>监测内容   | <b>Frequency</b><br>监测频率 | <b>Reference Value</b><br>参考标准值   |
| Warehouse<br>化学品仓库(油漆施工区域)                               | chemical leakage in waste yard/temporary warehouse/dangerous goods warehouse<br>废料堆场/临时仓库/仓库/危险品仓库是否存在化学品泄露现象  | Time/Day<br>次/天          | Is there any leakage or damaged package?<br>是否存在泄漏/包装破损等情况  |
| <b>environmental factors surveillance list 环境污染物监测目录</b> |  |                          |   |
| Waste water collection pool<br>废水收集池                     | <b>Index: COD</b><br>指标为：COD - 化学需氧量<br><b>BOD5-Determination of biochemical oxygen demand after 5 days</b><br>BOD5 – 五日生化需氧量<br><b>SS-Suspended solids</b><br>SS - 悬浮物<br><b>PH- hydrogen ion concentration</b><br>pH - 酸碱性<br>NH <sub>3</sub> -N-Ammonia<br>NH <sub>3</sub> -N - 氨氮<br>TP- total phosphorus<br>TP – 总磷 | Time/ 3 months<br>次/3个月  | Base on 3 <sup>rd</sup> . level standard of “water contamination discharge limited value”<br>根据«水污染物排放限值»三级排放标准<br>COD <sub>Cr</sub> ≤ 46.69t/a<br>NH <sub>3</sub> -N氨氮 ≤ 0.07t/a<br>6 ≤ PH ≤ 8 |

|   |  |                          |                 |
|---|--|--------------------------|-----------------|
|  | <b>GTIIT_EHS_ISO file</b>  | File No.:<br>文件编号：       | GTIIT_EHS_05_08 |
|   |  | Rev. No.:<br>版本号：        | 03              |
|   |  | Effective date:<br>生效日期： | 2025-12-01      |
| <b>File name</b><br>文件名   | <b>Environmental factors management of construction project</b><br><b>施工环境因素控制</b> |                          |                 |

**Surveillance for Waste solid 固废监测：**

| 化学品及废弃物仓库环境污染物监测目录                        |  |                   |   |
|---|--|-------------------|---|
| Monitoring Area<br>监测范围                   | Monitoring Item<br>监测内容  | Frequency<br>监测频率 | Reference Value<br>参考标准值  |
| Warehouse and waste warehouse<br>仓库及废弃物仓库 | Dust, industrial waste, waste batteries, waste lamps tube, waste pallets,<br>粉尘、工业垃圾、废电池、废灯管、废旧木托盘 | Time/ Day<br>次/天  | Storage in good order according to defined category.<br>Package is at good condition, no scatter.<br>堆放是否整齐，按类存放，包装良好不导致散落于环境 |

**Surveillance for Noise 噪音监测：**

| 环境污染物监测目录                         |   |                    |  |
|-----------------------------------|---|--------------------|--|
| Monitoring Area<br>监测范围           | Monitoring Item<br>监测内容   | Frequency<br>监测频率  | Reference Value<br>参考标准值   |
| Campus project boundary<br>校园项目边界 | Boundary noise<br>校项目界噪音<br>The monitor point includes the area 1m away from plant boundary.<br>(校外噪音监测点为校界东南西北方向围墙外一米) | Time/ month<br>次/月 | Does it exceed the limited value<br>校界距离围墙外1米以上是否超过限值<br>Day昼:65db, night 夜:55db |