Alstom Project Documentation: Technical Specifications

**Executive Summary**

This report contains summaries of important technical specifications documents from the Alstom project. These documents have been selected based on their relevance to key project aspects and organized to provide a comprehensive overview.

# Document Summaries

**1. Alstom Factory - Borg el Arab - Architectural IFC Drawings 10-4-2025.pdf**  
Location: 01- IFC drawings\1- Architectural Drawings

**Summary:**  This document appears to be an architectural drawing for a building with multiple floors, labeled as the Administration Building. The following is a summary of some key details:  
  
1. Location: 5 EL-Gomhureya El-Mottahdea Square, Cairo, Egypt.  
2. The drawing includes two floor plans: Ground Floor and First Floor (St. Floor).  
3. Materials used in the construction include beige porcelain, light beige HDF Flooring tile, Ceramic tile, Terrazzo tile, and Brickwork with Mortar.  
4. Doors and windows are made of TGL ALUM ES, with different finishes such as Automatic Closer Side Hinged, Kick Plate Side Hinged, Sliding, and Tilt. Some doors have fire ratings.  
5. The building includes various rooms like Lobby, Men's WC, Ladies' WC, HR Manager, Financial Manager, Office, Secretary, and Manager's office. There are also facilities such as Elevator (8 Person) and Technical room.  
6. Dimensions for some key areas:  
 - Ground Floor: 36.80m x 29.8m  
 - First Floor (St. Floor): 36.80m x 24.4m  
7. The drawing is the property of Arab Consulting Engineers (ACE) and contains confidential information. It should not be reproduced without their prior written permission.

**2. Alstom Factory - Borg el Arab - Steel Structural IFC Drawings 27-3-2025.pdf**  
Location: 01- IFC drawings\3- Steel Drawings

**Summary:**  Title: Alstom Factory - Borg el Arab - Steel Structural IFC Drawings (27-3-2025)  
  
Key Information:  
1. Loads: Dead load (own weight of members and connections), Super dead load (sandwich panel with 20 kg/m², collateral loads with 30 kg/m²), Live load (54.44 Kg/M2 for inaccessible roof, 100 Kg concentrated load).  
 - Temperature: Uniform temperature change of (+ & - 30 oC), temperature gradient between top and bottom flanges of (+ & - 20 oC).  
 - Wind: Vw = 36 M/S, qw = 81 Kg/M2, with factors K ranging from 1.1 to 1.6.  
 - Earthquake: Importance factor = 1.2, behavior factor = 5, live load share factor in mass source = 1.  
 - Crane loads: Capacity of 3 ton, crane trolley not exceeding 0.5 ton, crane bridge not exceeding 0.15 ton/m.  
  
2. Serviceability Check: Allowable drift for ALSTOM track girders = H/150, allowable deflection for crane track girder = L/800, and for portal frame = L/200.  
  
3. Material Standards: ECP-ASD-205 (2001) Grade standards, cementitious paint 1.0 hrs steel elements of workshop, fire protection materials. Bolts, nuts, and washers must conform to Egyptian Code Standards, only tested materials shall be used unless written authority is granted for untested materials.  
  
4. Construction Notes: Weldings shall conform to Egyptian or AWS standards, full contact length between gusset plate and members shall be welded in all cases, proper cleaning of surfaces before welding, and preservation and appropriate use of welding consumables. Design of steel elements considers the stated codes: ECP-205-2001 (ASD), Egyptian Code of Practice for Steel Construction (LRFD 205), and Egyptian Code of Practice for Loads and Forces on Structures and Buildings (ECP 201-2012).  
  
5. Site Construction Notes: Connections shall be of grade 10.9 or 8.8 bolts, all site splices developed with suitable cover plates and HSB grade 10.9 or 8.8 unless otherwise noted or shown in the drawing. Nuts or permanent bolts in direct tension shall be secured against loosening by spring washers or lock nuts to match the specifications of bolts.  
  
6. Fire Protection Notes: Do not scale from drawings, verify all dimensions on site, dimensions are in millimeters unless noted otherwise, all levels are in meters unless noted otherwise, read the drawing in conjunction with all relevant project specifications, schedules and drawings, coordinate before fabrication, any discrepancy must be brought to the immediate attention of the architect/engineer prior to undertaking any work, submit coordinated shop drawings for approval prior to commencement of site works or placing any orders. All materials shall be approved by the architect/engineer prior to undertaking any work. Erection method statement illustrating the erection sequence and provided by calculations should be submitted.

**3. Alstom Factory - Borg el Arab - Electrical IFC Drawings 10-4-2025.pdf**  
Location: 01- IFC drawings\4- Electrical Drawings

**Summary:**  The document provided appears to be a building plan for a two-story structure, labeled as "Project No. North." It includes information about the electrical and lighting systems on both floors.  
  
On the ground floor (02-St-Floor), there are spaces for administration and lockers, a canteen, and restrooms. The electrical layout includes various switches of different types, and the lighting system features products such as uplights, downlights, wall lights, bidirectional appliques, and side emitters.  
  
On the first floor (03-1St-Floor), there is a brickwork area, a technical room, and other spaces whose purpose is not specified. The electrical layout includes switches of various types similar to those on the ground floor, while the lighting system features different products like uplights, downlights, spotlights, and wall lights.  
  
It should be noted that this is a summary based on the information provided in the document and does not contain all the details found within it. The document also includes other details such as dimensions, materials used, and specific product models for the lighting system.

**4. Alstom Factory - Borg el Arab - HVAC & CA IFC Drawings 10-4-2025.pdf**  
Location: 01- IFC drawings\5- HVAC & CA Drawings

**Summary:**  This document appears to contain detailed specifications for an HVAC system in a building, likely an office or administrative complex, as part of the "North" project. The system includes various types of fans such as Wall Mounted Fans (WMEF-01, WMEF-02, and WMSF-01), High Wall Split Units (HI WALL UNIT-01 and HI WALL UNIT-02), and Air Curtain.  
  
The fans are specified in terms of their location, air capacity, external static pressure type, power supply, voltage/frequency/phase, and quantity. For example, WMEF-01 is a Wall Mounted Fan with 100 locations, an air capacity of 2200 CFM, a total input power (T.R.) of 0.1 kW, and a phase of 1.  
  
The High Wall Split Units are specified as having a total load power of 1.5 TR with an ambient temperature of 40°C and a motor power of 2.25 kW. The Air Curtain is specified to have a length of 1200 mm, a power supply of 220/50/1, and a quantity of 2 units.  
  
Additional details include specifications for various accessories and connections, such as door sensors for the Air Curtain and suitable height for air delivery (2.5 mt). The document also notes that the external static pressure must be verified by the contractor.  
  
Overall, the document appears to be a detailed technical specification for the HVAC system in a building project, outlining the types, specifications, and quantities of various components.

**5. Alstom Factory - Borg el Arab - Sanitary IFC Drawings 10-4-2025.pdf**  
Location: 01- IFC drawings\7- Sanitary Drawings

**Summary:**  The provided text appears to be architectural and engineering drawings, possibly for a building project. However, it's not a summary as such but rather detailed information about the layout and specifications of different parts of the structure, including room names, dimensions, materials used, and drainage systems.  
  
Here are some highlights:  
  
1. The drawing seems to be for two floors (DR-01 and DR-02) and a factory (FACT).  
2. Rooms include offices, Lobby, HR DB, Financial DB, Technical room, Men's WC, Ladies' WC, Showers, and restrooms with sanitary fittings and ventilation systems.  
3. There are various utility and mechanical rooms, such as elevator shafts, and spaces for electrical systems, firefighting systems, and plumbing.  
4. The building appears to have a roof with coping and steel ladders.  
5. Drainage systems include sewers (S.S.), ventilation stacks (V.S.), and rainwater disposal (R.S.).  
6. Materials used include brickworks, mortar, and steel.  
7. Dimensions of rooms, walls, doors, windows, and other elements are clearly marked in millimeters or fractions of inches.

**6. Alstom Factory - Borg el Arab - Roads IFC Drawings 27-3-2025.pdf**  
Location: 01- IFC drawings\9- Roads Drawings

**Summary:**  Title: Alstom New Cabling Factory - Road Design Details  
  
 Description: This document outlines the road design details for a new Alstom cabling factory located in Dokki, Cairo, Egypt. The design includes various sections such as carriageways, sidewalks, parking lanes, and other facilities like curbs, interlocks, base courses, and binder courses.  
  
 Scale: 1:500 A0 (Original size)  
  
 Key Features:  
 1. Carriageway: 8 meters wide with a 2% plot limit, 2.5-meter-wide sidewalks on either side, and a variable plot limit for the sides. The road design includes multiple sections labeled A to D, each with specific dimensions.  
 2. Sidewalks: Designed with an interlock detail, sand bedding layer, crushed aggregate base layer, polymer-modified bituminous (PMB) wearing course, sub-base course, binder course, and base course. The sidewalk curbstone type is specified.  
 3. Parking Lane: 7 meters wide with a 2% plot limit, variable sides, and specific details for the base, binder, and wearing courses.  
 4. Other features include the detail of roadway lane, parking lane, and sub-grade course details, along with notes for topographic survey, geotechnical investigation, Egyptian code references, and project specs.  
  
 Important Notes:  
 1. All dimensions are in meters unless otherwise stated.  
 2. The design locations for roads layout plans and sections can be found in DWG-RDS-MA-00-0105-B.  
 3. The contractor should conduct their own topographic survey and geotechnical investigation to cover all project aspects.  
 4. For road details, material specifications, and dimensions, please refer to Egyptian code and the project specs.  
 5. The contractor is responsible for confirming the provided pavement section using their own and updated geotechnical investigation results.

**7. Getechnical Report - Alstom Cabling plant - Borg Al-Arab, Alexandria - Sep 2024 - R2.pdf**  
Location: 02- GEOtechnical report

**Summary:**  This document is a geotechnical report titled 'Exploratory Geotechnical Investigations and Foundations Recommendations for Alstom Cabling Plant, Borg Al-Arab, Alexandria, Egypt', submitted to Arab Consulting Engineers - ACE in September 2024. The report details the exploration and analysis of the subsurface conditions at the proposed location of the Alstom Cabling Plant in Alexandria's Industrial Zone of Borg Al-Arab.  
  
The investigation involved drilling boreholes, executing Standard Penetration Tests (SPT), installing Standpipe Piezometers, and conducting laboratory tests like grain size analysis, Atterberg limits, free swelling, oedometer tests, chemical analysis, and pocket penetrometer tests.  
  
The subsurface conditions identified include silty clay and sand, clay, sand and silty clay, sand, and groundwater. The report analyzes the results of these tests to determine soil models, design parameters, foundation type, bearing capacity of shallow foundations, settlement of shallow foundations, seismic zone of the project, and seismic classification of the subsurface conditions on site.  
  
The recommendations include the types of foundations for the different units, site preparation, and general recommendations. The report also includes appendices with legends, symbols, terminology, borehole logs, soil profiles, schematic sections for installed Standpipe Piezometers, laboratory test results, photos of samples, and more detailed information about the tests and their results.

**8. 01 Architecture - Structure - Roads Specifications.pdf**  
Location: 03- Specification

**Summary:**  Title: UPDATED Architecture, Structure & Roads Specification - Part (1/4)  
 Document Number: SPX-STR-GEN-RPT- A REV. IFC - A  
 Date: February 23, 2025  
  
The document outlines the specifications for a new manufacturing cabling site, specifically the Alstom Cable and Looming Project in Borg-Al Arab, Alexandria, Egypt. The report is divided into four parts, with this being Part 1/4. It includes sections detailing General Requirements, Summary of Work, Unit Price Measurement, Unit Price Payment, Coordination, Project Meetings, Pre-construction Conferences, Progress Meetings, Progress Schedules, Survey and Layout Data, Construction Photographs, Submittals, Shop Drawings, Product Data & Samples, Security, Applicable Standards, Testing Laboratory Services, Quality Control, Temporary Electricity, Temporary Lighting, Temporary Water, Field Offices, Supervision Personnel and Personnel Transport, Temporary Sanitary Facilities, Temporary Telephone, Internet, Barriers and Enclosures, Project Identification and Signs, Product Options & Substitutions, Transportation and Handling, Storage and Protection of Materials, Final Cleaning, Contract Closeout Procedures, Protection of Installed Work, Operation and Maintenance Data, Warranties and Bonds, Testing, Adjusting & Balancing of Systems, Starting of Systems, Soil Investigation, Concrete, Steel, Masonry, Roofing, Waterproofing, Exterior Insulation & Finish Systems, Interior Partitions, Flooring, Doors & Windows, Electrical, Plumbing, HVAC, Fire Protection, Specialties, Landscaping, Roads & Parking Lots, Site Drainage, Paving, Signs and Graphics, Fencing, Safety, Security and Maintenance. The document also includes abbreviations for various codes, standards, and units of measurement to be used throughout the project.

**9. 02 Plumbing Specification.pdf**  
Location: 03- Specification

**Summary:**  Title: Plumbing Specification for Alstom New Cabling Factory  
 Document Number: SPX-P L-GEN-RPT-A REV. IFC – A  
 Date: February 23, 2025  
  
The document provides a detailed plumbing specification for the new Alstom cabling factory. It is divided into several sections, each focusing on different aspects of the plumbing system.  
  
1. Toilet, Bath, and Laundry Accessories (Section 102800): This section covers public-use washroom accessories, fabrics, installation, adjusting, and cleaning. It also includes expansion fittings and loops for plumbing piping.  
  
2. Expansion Fittings and Loops for Plumbing Piping (Section 220516): This section discusses packless expansion joints, grooved-joint expansion joints, alignment guides and anchors. It also covers sleeves and sleeve seals for plumbing piping.  
  
3. Sleeves and Sleeve Seals for Plumbing Piping (Section 220517): This section includes sleeves, stack-sleeve fittings, sleeve-seal systems, sleeve-seal fitments, grout, installation methods, and a schedule for sleeve and sleeve-seal installation.  
  
4. Escutcheons for Plumbing Piping (Section 220518): This section covers escutcheons, floor plates, their references, action submissions, and the execution methodology.  
  
The document also includes quality assurance, warranty, coordination, and submission guidelines. It is a comprehensive guide detailing the materials, installation methods, and products to be used in the plumbing system of the new Alstom cabling factory.

**10. 03 HVAC and Compressed Air Specification.pdf**  
Location: 03- Specification

**Summary:**  Title: HVAC Specification  
  
 Date: February 23, 2025  
  
 The document titled 'HVAC Specification' is a detailed report for the construction of Alstom's new cabling factory. It outlines various requirements, specifications, and guidelines for the design, execution, and maintenance of HVAC (Heating, Ventilation, and Air Conditioning) systems and compressed air equipment at the site.  
  
 The report consists of two main sections: Basic Mechanical Requirements and Common Motor Requirements for HVAC Equipment. It covers topics such as descriptions, submissions, protection measures, job conditions, extra stock and spare parts, operation and maintenance manuals, miscellaneous definitions, inspections, test reports, guarantees, general products information (including materials, motors, controls), execution methods, cutting and patching, excavating and backfilling, installation of equipment, temporary motors, belt drives, drive guards, bearings, enclosure types, noise ratings, efficiency, nameplates, starters, electrical devices, wiring, manufacturer's instructions, and installation.  
  
 The Common Motor Requirements section provides specifications for the HVAC equipment motors, temporary motors, belt drives, drive guards, bearings, enclosure types, noise ratings, efficiency, nameplates, starters, electrical devices, and wiring.  
  
 The document concludes with manufacturer's instructions and installation guidelines for the provided equipment. It is essential to adhere to these specifications to ensure the successful completion of the project and the proper functioning of the HVAC systems and compressed air equipment at Alstom's new cabling factory.

**11. 04 Mechanical Specification.pdf**  
Location: 03- Specification

**Summary:**  Title: Updated Mechanical Specification for Alstom New Cabling Factory  
  
 Date: 23rd February 2025  
  
 This document provides an updated mechanical specification for the new manufacturing cabling site at Alstom. It outlines various sections, including Division 21: Fire Suppression with focus on Section 213100: Centrifugal Fire Pumps.  
  
 Key Points:  
  
 1. The manufacturer should provide all labor, materials, tools, equipment, and services for the specified pumps and fittings according to the contract documents, coordinate with other trades, and install all necessary appurtenances.  
  
 2. The work is subjected to various codes and standards such as ANSI, ASME, ASTM, NFPA, FM, UL, ISO, IEC, and should conform to quality assurance requirements. Quality control work includes inspection, testing, and reporting by qualified personnel, with the manufacturer having a minimum of 10 years documented experience.  
  
 3. Pumps should operate at specified system fluid temperatures without vapor binding or cavitations, re non-overloading in parallel or individual operation; operate within 25% of midpoint of published maximum efficiency curve. The pump heads indicated on the contract documents are approximate, and the contractor must confirm the exact head of the pump.  
  
 4. Submit shop drawings with certified pump curves, calculate final required pump horsepower, provide manufacturers literature, and submit minimum controls for all pump installations.  
  
 5. Pumps should be protected against corrosion due to climatic conditions, subjected to site tests after completion of installation, commissioning, guarantee, and a 12-month operation & maintenance manual will be required from the contractor.  
  
 The main product specified is electrically driven horizontal split case single stage centrifugal type fire pump complete with pump driver, controller, and accessories, meeting all requirements of NFPA Pamphlet 20. The pump should deliver not less than 150% of rated capacity at head not less than 65% of rated head, with the shut off head not exceeding 140% of rated head.

**12. 05 Firefighting Specification.pdf**  
Location: 03- Specification

**Summary:**  Title: Firefighting Specification for Alstom New Cabling Factory  
  
The document '05 Firefighting Specification.pdf' is a comprehensive report detailing the firefighting systems and safety measures for the new Alstom cabling factory. The 78-page document includes sections on sleeves, seal systems, escutcheons, vibration and seismic controls, piping restraints, and standpipes.  
  
Key components specified are:  
1. Sleeves, stack-sleeve fittings, sleeve-seal systems, sleeve-seal fittings, and grout for fire suppression piping.  
2. Escutcheons for fire suppression piping.  
3. Vibration isolators and seismic restraint devices to minimize damage during earthquakes.  
4. Factory finishes for durability.  
  
The document outlines the installation procedures, quality assurance measures, related documents, definitions, performance requirements, action submissions, informational submissions, and field quality control processes for each component. It also provides information on examinations, applications, and installation methods for vibration control, seismic restraint devices, piping restraints, and standpipes.  
  
Overall, the document aims to ensure safety and minimize damage during potential emergencies while maintaining the functionality of the cabling factory.

**13. 06 Electrical Specification.pdf**  
Location: 03- Specification

**Summary:**  Title: Electrical Specification  
 Document Number: SPX-E LE-GEN-RPT-A REV. IFC – A  
 Date: February 23, 2025  
  
The document outlines the electrical specifications for Alstom's new cabling factory. It is divided into three sections: Basic Electrical Materials and Methods, Medium-Voltage Cables, and Unnumbered (additional) sections.  
  
Section 260500 covers general information including related documents, summary, regulations and standards, power supply, telephone lines, motors and other equipment, equipment types, climatic conditions, drawings, submissions, quality assurance, coordination, equipment and materials, and product specifications for supporting devices, electrical identification, covers for trenches, brackets, supports, rails and tracks, concrete bases, equipment for electricity metering, anti-condensation heaters and ventilators, electrical control locations, execution details (electrical equipment installation, supporting device application, support installation, identification materials and devices, fire stopping, cable segregation and fire risk, concrete bases, support frames for switchgear, holes and anchors, cutting and patching, delivery, storage and handling, field quality control, refinishing and touchup painting, cleaning and protection), and project conditions, extra materials, factory acceptance tests, manufacturers, MV cables, cable termination and splice connectors, cable cleats, examination, installation, cable jointing and terminating, field quality control, protection, and other miscellaneous details.  
  
Section 260513 focuses on medium-voltage cables, covering related documents, submissions, quality assurance, delivery, storage and handling, project conditions, extra materials, factory acceptance tests, manufacturers, MV cable, cable termination and splice connectors, cable cleats, examination, installation, cable jointing and terminating, field quality control, protection, and other details.  
  
The unnumbered section contains additional information not covered in the previous sections.

**14. 07 Low Current Specification.pdf**  
Location: 03- Specification

**Summary:**  Title: Low Current Specification Specification Report  
 Document Number: SPX-E LE-LC-RPT-A REV. IFC – A  
 Date: 23 February 2025  
  
The document outlines the specifications for a new Alstom cabling factory, focusing on low current applications. It spans across 436 pages and is divided into sections and parts for clarity.  
  
Key sections include:  
1. Common Clauses for Structured Cabling (Section 271005)  
 - General (Part 1): Related Documents, Summary, Reference Standards, Definitions & Abbreviations, Scope of Work, Products & Work by Others, Confidentiality, System Description, Submittals, Quality Assurance, Delivery, Storage and Handling, Project/Site Conditions, Warranty, Maintenance and Support, Spare Parts and Extra Material  
  
2. Identification for Communication Systems (Section 271055)  
 - General (Part 1): Related Documents, Summary, Reference Standards, Definitions & Abbreviations, Scope of Work, Products & Work by Others, Confidentiality, Submittals, Quality Assurance, Delivery, Storage and Handling, Project/Site Conditions, Warranty, Maintenance and Support, Spare Parts and Extra Material  
  
3. Cable Management System (Part 2)  
 - Examination, Labeling General Requirements, etc.  
  
4. Communications Equipment Room Fittings (Section 271105)  
 - General (Part 1): Related Documents, Summary, Reference Standards, Definitions & Abbreviations, Scope of Work, Products & Work by Others, Confidentiality, Communications Rooms General Requirements, Submittals, Quality Assurance, Delivery, Storage and Handling, Project/Site Conditions, etc.  
  
The document also outlines product specifications for cable management systems, labeling requirements, system administration schemes, re-installation procedures, closeout activities, demonstration and training requirements, communications equipment room fittings, and more. It establishes quality assurance guidelines, delivery, storage, handling, project/site conditions, warranty, maintenance and support, spare parts and extra material provisions for each section.

**15. Alstom Communication MatrixHM.pdf**  
Location: .

**Summary:**  The document 'Alstom Communication MatrixHM.pdf' outlines a project communication matrix for the construction of Alstom's new cabling factory at Borg Al-Arab, Egypt, managed by Arab Consulting Engineers and Rowad Modern Engineering as contractors. The primary client is Alstom.  
  
The communication matrix includes various documents and their respective roles:  
1. Transmital document (TD) - General information  
2. Material approval request (MAR) - Request for material approval  
3. Concrete pouring release (CPR) - Approval for concrete pouring  
4. Confirm verbal instructions (CVI) - Verification of verbal instructions  
5. Nonconformance report (EHS/NCR) - Report of non-compliance with health, safety, and environmental standards  
6. Site instruction (SI) - Instructions given on the site  
7. Material inspection request (MIR) - Request for material inspection  
8. Daily progress report (DPR), Weekly Progress Report (WPR), Monthly Progress Report (MPR) - Progress updates  
9. Measuring equipment calibration (MEC) - Equipment calibration records  
10. Request for information (RFI) and Inspection request (WIR) - Requests for information or inspections  
11. Extension of Time (EOT), Variation Order (VO), Consultant Daily progress report (CDPR), Consultant Weekly Progress Report (CWPR), Consultant Monthly Progress Report (CMPR) - Updates on project timeline, cost control, and consultant's progress  
12. Minutes of meeting (MOM) - Meeting minutes  
13. Start new activity (SNA) - Initiation of a new activity  
14. Method Statement (MS) - Description of the method to be used in performing a specific task or activity  
  
The matrix outlines the communication flow between various parties involved, including Alstom, the contractors, and consultants, ensuring efficient project management and coordination. It also includes important timelines, financial issues, and compliance with health, safety, and environmental regulations.

**16. ALSTOM - Excavation Levels for Prayer.pdf**  
Location: 01- Excavation plan\01

**Summary:**  The document titled 'ALSTOM - Excavation Levels for Prayer.pdf' is a building drawing issued by Arab Consulting Engineers (ACE). It pertains to the North project located in Dokki, Cairo, Egypt, specifically at El-Gomhoureya El-Mottahida Square.  
  
The document details the excavation levels for prayer areas, with each level following a 2:1 slope. The number of levels is not explicitly stated but appears to be repeated multiple times, with dimensions suggesting approximately six levels. The dimensions for each level are as follows:  
  
- Level 1: 6000 (horizontal) by 2000 (vertical)  
- Subsequent levels: Following the same slope of 2:1, these levels are spaced at intervals of 6000 horizontally and 2000 vertically.  
  
The document carries an approval date of May 6, 2025, by NABAWY M. AYMAN. The drawing contains confidential information and should not be reproduced without the prior written permission of ACE.

**17. ALSTOM - Excavation Levels for Water Tank.pdf**  
Location: 01- Excavation plan\01

**Summary:**  Title: ALSTOM - Excavation Levels for Water Tank  
  
Document: Building Drawing No. [6720] from Arab Consulting Engineers (ACE), is a confidential project drawing related to the North Project located at DOKKI, Cairo, Egypt. The specifics detail an excavation plan for a water tank, with the key information below:  
  
- Location: El-Gomhoreya el-Mottaheda SQ., Dokki, Cairo, Egypt.  
- Project Owner: Not specified in the document.  
- Approval Date: 06-05-2025 by NABAWY M.AYMAN  
- Slope: The excavation site follows a 2:1 slope, with dimensions 6000 (horizontal) and 2000 (vertical). This pattern is repeated multiple times throughout the document.  
- Size: Original size of the drawing is not specified in the provided document.  
- Scale: The scale used for this drawing is 1:100.  
- Key Plan: [KEYPLAN] is included on the drawing, but no further details are given about it.  
  
The drawing emphasizes that it contains confidential information and reproduction without prior written permission from ACE is prohibited. The document does not contain any specific data regarding the purpose of the water tank or further details concerning the project timeline, materials, or construction process.

**18. Excavation Levels.pdf**  
Location: 01- Excavation plan\01\Excavation Levels-Canteen Building\Excavation Levels-Canteen Building\PDF

**Summary:**  This document titled 'Excavation Levels.pdf' provides specifications for a construction project in Dokki, Cairo, Egypt, managed by Arab Consulting Engineers (ACE). The minimum concrete compressive cube strength is specified as 4.1 MPa unless otherwise stated. The type of cement and the yield strength of deformed high tensile steel reinforcement bars are defined in the document.  
  
Reinforcement specifications include the use of B420DWR bars with a minimum yield strength of 420 MPa, conforming to Egyptian codes of practice and project specifications. The diameter of beams is 35 mm, columns are 40 mm, R.C. slabs are 30 mm, P.T. slabs are 45 mm, R.C. walls are 30 mm, tank walls & retaining walls in contact with water or soil are 50 mm, and shallow foundations are 50 mm (T&B). The minimum cover for reinforcement bars is also detailed in the document.  
  
The foundation level is set at -1.50 m, and this drawing should be read in conjunction with the architectural site plans and survey drawings. The drawing scale is 1:100. The drawing contains confidential information and reproduction requires prior written permission from ACE.

**19. Plain Concrete Dimension Office Building.pdf**  
Location: 02- CD\Plain Concrete Dimension Office Building\PDF

**Summary:**  The document titled 'Plain Concrete Dimension Office Building' is a building plan for an office structure in Dokki, Cairo, Egypt. It was issued by Arab Consulting Engineers (ACE) on April 2025 and has the project number North.  
  
The drawing is confidential and subject to copyright, and should not be reproduced without prior written permission from ACE. The building's specifications are in a scale of 1:100, and the points of the structure's coordinates are provided for reference.  
  
Key features include a Work Shop (MATCHLINE 01) and a Loading & Unloading Area (MATCHLINE 02), with a specific type of loading area denoted as Semelle Type (S1). There is also a provision for cabling in the new project. The drawing contains various points, coordinates, and remarks related to the construction process.  
  
The document carries the approval of Aboulfadl M. AYMAN on 11-05-2025, and it is associated with the DOKKI - CAIRO - EGYPT project. The phone numbers for further communication are provided, along with a fax number and an email address.

**20. CR#01.pdf**  
Location: 06- CRs\01- CR#01 Earth works

**Summary:**  The document, titled 'CR#01.pdf', outlines a contract request for the ALSTOM New Cabling Factory project. The request was made by the Project Manager on 27/04/2025 and is presented to the Operation department for consideration.  
  
The main focus of this contract involves earthwork operations, specifically:  
1. Excavation and removal of 46,965 M3 of excavated material over a duration of 3 months starting from 01/05/2025.  
2. Filling the excavated area with compacted replacement soil (consisting of 2 parts sand and 1 part rock fragment) for structural fill, totaling 22,400 M3 over the same duration.  
3. Further filling with suitable clean sand, including compaction to a maximum relative density of 21,510 M3 for the same period.  
  
The contract terms do not include VAT, Retention %, Social Insurance, or specify a Contract Duration. The starting date on site is subject to Site Instruction. The conditions of the contract were agreed upon by the Technical Office Manager and Project Manager.  
  
The contract request includes a checklist covering various aspects such as fuel, transportation, actual working hours, toll fees, accommodation/labor, laboratories/consultant contracts, tests (if any), subcontractor/supplier, and Oracle Number (required). Additional comments and conditions agreed upon are not specified in the document.

**21. Earthwork requirments.pdf**  
Location: 06- CRs\01- CR#01 Earth works

**Summary:**  The document pertains to a New Manufacturing Cabling Site project, detailing Earthwork requirements. Key information includes:  
  
1. Earth Work Measurement:  
 - Excavation and filling are measured geometrically (per cubic meter).  
 - Excavation price includes excavation in any type of soil, temporary storing or stockpiling, dewatering, shoring, root demolition, tree protection, and disposal to dump areas.  
 - Filling price includes the price of materials, preparation of surface, filling in layers, and compaction.  
 - The difference between excavation and fill with excavated materials is measured as waste materials for disposal.  
  
2. Concrete Measurement:  
 - Concrete shall be measured according to volumes calculated from drawings.  
 - Bases, foundations, columns, beams, lintels, ground beams (cemelles), parapets, solid slabs, and concrete slabs with hollow blocks are all measured differently based on their specific characteristics.  
  
3. Site Clearing:  
 - The site shall be cleared of all vegetation, residues, pavement, curbs, walls, fences, and buildings as directed by the Engineer within the construction limits shown.  
 - Waste materials shall not be burned or buried on-site; instead, they should be removed to an approved waste disposal area.  
  
4. Site Grading:  
 - The contractor shall furnish all labor, materials, tools, equipment, and services for excavation and backfilling of the site in accordance with the provisions of the Contract Documents.  
 - All horizontal and vertical layout work shall be accurately performed by a qualified surveyor or civil engineer acceptable to the Engineer.  
 - Grading tolerances for unsurfaced rough grade areas are plus or minus 50 mm from required elevations, while paved area and building area subgrade tolerances are plus zero (0) mm to minus 25 mm.  
  
Earthwork requirements also cover aspects such as protecting underground utility lines, maintaining control monuments, and conducting in-place moisture and density tests for every 100 M3 of fill or at specified locations by the University.

**22. CR-002 Steel works.pdf**  
Location: 06- CRs\02- CR#02 Steel works

**Summary:**  Title: ALSTOM NEW CABLING FACTORY Steel Works Contract Request #002  
  
The document outlines a contract request for structural steel works for the Alstom New Cabling Factory. The scope of work includes supplying and erecting various types of steel, such as structural steel grade 52 and hot rolled section steel grade 44, along with checkered plates, steel ladders, galvanized steel flashing, corrugated sheets, and access hatches for tanks.  
  
The steel structures will be coated with cementitious coating (1 hour rated for main elements) or epoxy urethane paint as per the specifications. The tender should include the paint system and application procedure.  
  
The contract request mentions several items related to railings, catwalks, and ladders in various locations throughout the factory. Quantities of these items are provided for each item, but prices are not specified.  
  
Additional details include VAT (Included), Retention % (As per client contract), Social Insurance (Included), Contract Duration (-), Starting Date on site (As per Site Instruction).  
  
The conditions of the contract are subject to certain inclusions and exclusions, as listed in the document. The contractor or supplier is required to provide additional comments and conditions agreed upon, with an Oracle number for reference.  
  
Overall, the request seeks a comprehensive steel works contract for various components of the Alstom New Cabling Factory, with specifications for different types of steel, coatings, and related items such as railings, catwalks, ladders, and more. The contractor is expected to submit additional details like the paint system and application procedure with the tender.

**23. Steel works specs.pdf**  
Location: 06- CRs\02- CR#02 Steel works

**Summary:**  The document titled 'Steel works specs.pdf' provides details for a new manufacturing cabling site project, focusing on structural steel specifications. It includes sections for constituent products, fabrication and welding, mechanical fastening, erection, surface treatment, coating, tolerances, bearing, design, definitions, specifications and documentation, and constituent products.  
  
Quality control tests are required, with the contractor responsible for conducting tests to verify material and workmanship quality. These include checks on the mechanical and chemical properties of structural steel, welds, bolts, paint thickness, fire protection coating, and other tests as needed. The contractor may form a committee of professional experts to conduct inspections and testing under their responsibility, with the Engineer approving the assigned experts' CVs.  
  
The structural steelwork has been designed according to Egyptian Code EC 205. Temporary bracing or restraints are required for stability during erection, which may be removed after the structure has been lined, levelled, and plumbed if sufficient permanent steelwork and bracing have been erected.  
  
The document also defines terms such as shop drawings, erection drawings, welds, and provides details on fabrication, erection, record drawings, quality management, inspection system, personnel qualifications, inspection status, records, constituent products, submittals, and product specifications for structural steel, bolts, nuts & washers, welding materials, and grout. Compliance with Egyptian Code EC 205 is required, and where British or American codes are specified, equivalent Egyptian codes will be accepted subject to the Engineer's discretion. In cases of conflict, the requirements of the Specifications take precedence.

**24. CR#003.pdf**  
Location: 06- CRs\03- CR#03 Sandwitch panels

**Summary:**  Title: ALSTOM NEW CABLING FACTORY Contract Request #003  
  
Key Information:  
- Project Name: ALSTOM NEW CABLING FACTORY  
- Requested By: Project Manager  
- Date of Request: 27/04/2025  
- Presented To: Operation, Contract / ADD, New Contract  
  
Main Points:  
- The contract concerns the supply and installation of sandwich panels for a project, with specifications as stated.  
- The panels are fire rated and consist of PVDF coated steel sheets and rock wool core.  
- The price includes the cost of closure trim, fastenings, edge pieces, rainwater gutter, down spots (galvanized).  
- The quantity required is 12,180 square meters.  
  
Important Details:  
- VAT, Retention %, Social Insurance, Contract Duration, Starting Date on site are not specified yet.  
- Fuel, Transportation, Actual Working Hours, Toll Fees, Accommodation / labors, Laboratories / Consultant contracts, Tests are included unless otherwise specified.  
- Subcontractor/Supplier and Oracle Number are pending.  
  
Conditions of Contract:  
- The contract includes provisions for Fuel, Transportation, Actual Working Hours, Toll Fees, Accommodation / labors, Laboratories / Consultant contracts, Tests but their inclusion or exclusion is not explicitly stated.  
- Subcontractor/Supplier and Oracle Number are required to be specified later.

**25. Sandwich Panel Specifications.pdf**  
Location: 06- CRs\03- CR#03 Sandwitch panels

**Summary:**  The document 'Sandwich Panel Specifications.pdf' outlines the requirements for the manufacturing of metal standard sandwich panels for a new project. Key points include:  
  
- The system must have a maximum thermal U value not exceeding 0.4 w/m²k and be corrosion resistant based on local atmospheric conditions, while allowing installation of light panels as per drawings.  
- The system's performance should comply with BS EN 14509 and Egyptian standards for wind loads, deflection limits, seismic performance, thermal movements, and thermal performance.  
- Manufacturers must submit product data, installer certificates, installer experience, shop drawings, coordination drawings, samples for initial selection and verification, qualification data, material certificates, product test reports, field quality control inspection reports, maintenance data, warranties, and comply with the Quality Assurance guidelines.  
- Manufacturers must have sufficient production capacity, facilities, and personnel to produce the required work. Installers should be trained, approved by manufacturers, and responsible for professional engineering services needed to assume engineering responsibility.  
- A qualified testing agency is required for testing indicated as per ASTM E 329. Each type of metal roof panels must be obtained from one source from a single manufacturer. The system should also have insulated metal panels having surface-burning characteristics as determined by ASTM E 84.

**26. CR#004.pdf**  
Location: 06- CRs\04- CR#04 concrete apply

**Summary:**  Title: ALSTOM NEW CABLING FACTORY Contract Request #004  
  
The document details a contract request for the construction of Alstom's New Cabling Factory. The project is requested by the Project Manager on May 19, 2025, and is presented to the Operation Contract / ADD department for consideration as a new contract.  
  
Key points include:  
  
- Section 03 details the concrete works required, including plain concrete (755 m³ for foundations and slabs) and reinforced concrete (quantities not specified). Other required concrete items are SOG (2.5cm thick, 1,035 m²; SOG 20cm thick, 3,085 m²; SOG 15cm thick, 13,300 m²; reinforced concrete columns, beams, and foundations with a total volume of 2,380 m³; concrete for tanks, 240 m³; concrete for walls and roofs of the tank, 330 m³; reinforced concrete columns, 350 m³; reinforce concrete for the roof, rooms, and ducts, 980 m³; and prefabricated reinforced concrete, 17 m³). Steel structures, including reinforced steel for the slabs, beams, and foundations (705 Ton), are also required.  
  
- The document does not specify VAT, retention %, social insurance, contract duration, starting date on site, or any other mandatory fields. Conditions of Contract include fuel, transportation, actual working hours, toll fees, accommodation/labor, laboratories/consultant contracts, tests if any, and other miscellaneous items (accommodation for laborers is included).  
  
- Additional comments and conditions agreed upon are not specified in the document.

**27. ALSTOM New Cabling Factory At Borg Al-Arab PQP.pdf**  
Location: 07- Quality plan

**Summary:**  The document is a Quality Management Plan (QMP) for the Construction of Alstom's New Cabling Factory at Borg Al-Arab, Egypt. The main contractor is Rowad Modern Engineering, and the project consultant is ACE Consulting Engineers – Mohr Ram Bakhoum. The client is Alstom Egypt for Transport Projects.  
  
The plan outlines the quality management system to ensure compliance with standards throughout the project lifecycle, from tender and planning to project closeout. It includes a quality policy statement, objectives, risk assessments, project reports, submissions, meetings, document and data control, procurement and purchasing, material control, measurement, and analysis.  
  
Key quality objectives include ensuring compliance with design requirements, achieving agreed construction standards, minimizing defects, reducing rework, and maintaining a clean and safe work environment. Regular progress, quality, and project meetings are scheduled to monitor and address any issues that may arise during the project.  
  
The plan also emphasizes the importance of documentation, data control, and communication, with clear procedures for submitting shop drawings, samples, mock-ups, requests for information (RFI), method statements, as-built drawings, and project closeout.  
  
Additionally, the QMP includes a control system for procurement and purchasing, ensuring all materials comply with standards and specifications. The plan also outlines procedures for measurement and analysis, including inspection and testing, to ensure the quality of delivered products.  
  
Overall, the QMP aims to ensure that the construction of Alstom's new cabling factory in Egypt is completed on time, within budget, and to the required standards and specifications.

**28. SIT-BJ-RP-ACE-S.D-STR-0031-SH(12-15) - Rev.01-S.N (0251).pdf**  
Location: 07- Quality plan\final forms

**Summary:**  Title: SIT-BJ-RP-ACE-S.D-STR-0031-SH(12-15) - Rev.01-S.N (0251)  
  
The document is related to Shop Drawings issued for approval, specifically for the Post-Tensioning Works of Administrative Capital Sixty Iconic Tower. The drawing involves a wall, designated as 'W 21', spanning from the 3rd to the 6th floor (L04-LB20 with dimensions 700x1450). This particular wall was previously submitted and is being resubmitted for review, possibly due to revisions or updates. The drawing includes various details such as scale, project name, client, consultant, contractor, and specialist contractor. The document also mentions an RFI (Request for Information) number and a previous version of the same wall as 'AS Built for 3rd Floor Bars'.

**29. Alstom, Project & Material Strategy.pdf**  
Location: 10- E2\01- Data received\02- Procurement

**Summary:**  Title: Alstom, Project & Material Strategy  
  
Subject: Project Strategy (Scope of Work) for Alstom Cabling Factory  
  
Project: Alstom Cabling Factory  
Client: Not specified  
Main Contractor: Rowad Modern Engineering  
Consultant: Abanoub Sherif  
  
The document outlines the scope of work for the construction of the Alstom Cabling Factory. The project involves various materials and work packages, including sand, cement, excavation, replacement soil, ready-mix concrete, steel, wood, scaffolding, construction chemicals, steel workshop, wood workshop, application of SOG, lightweight concrete, solid concrete walls, concrete block walls, supply of blocks & plaster accessories, precast concrete applications, steel structure works, checkered plates, steel handrails, catwalk steel, galvanized steel flashing, ladders, corrugated sheets, chain link fences and gates, bituminous damp proofing, thermal roof insulation, polyethylene vapor barrier, 4mm two-layer membrane, epoxy coating for internal floor & wall & ceiling, expansion joints, sandwich panel walls & floors, movable sandwich panel kiosk, wooden doors (FR/NFR), hardware for steel and wooden doors, aluminum doors & windows, roll up shutters, aluminum louvers, polycarbonate sheet glazing, mechanical dock shelters, parking, glass works, marble flooring, stairs, roof copping, skirting, internal painting, external wall cementitious, acrylic paint for facades, semi-gloss oil paint on walls, ceramic supplies for floors & skirting, laminated HDF Flooring & Skirting, WPC strip panel for external wall, carpet tiles for floor & metal for skirting, toilet accessories, HPL partition, soft landscape works, loading dock equipment & turnstile barriers, dock level rubber buffer, asphalt road works, pavement marking, traffic signs.  
  
The document also mentions various vendors such as Lafarge Ready Mix, Cemex Ready Mix, Ezz steel, Beshay steel, Suez steel company, Egyptian Steel Group, Arabian steel Industries, Al Masreeyn, Al Madina steel, Mena for wood industries, Hotel concept, Lock wood, Tech Electrique, Royal Gate, Tech, Sphinx, Smart Glass, Saint-Gobain, The Nile Co.for Building Supplies, El Soufi, Toblat, Harmouch Tiles, Makaa, Oriental weavers, Lotus, Ideal standard, Duravit, Gawad Sarr Design, NA Tech Electrique, Green, Green Top, Khater Sports, Alrashed, SIKA, BASF, Rise, Starlight, Aldyar, Cementa, Unicrete, Toblat, Techno-Crete, Orascom, Samcrete, Singer, Graphilex TECH ELECTRIQUE, Ascot, Cornell, Isisc, Mec, Quantuim, Radwan city metal, Starlight, Aldyar.  
  
The project is expected to take varying periods of time from contract signing, downpayment, or SD (Start Date) for different work packages. The document concludes with signatures from the Procurement Department, Recommendation & Remarks sections left blank.

**30. ALB-ACE-RME-TD-0004.pdf**  
Location: 11- HSE

**Summary:**  Title: ALSTOM New Cabling Factory HEAL TH, SAFETY, AND ENVIRONMENT PLAN  
  
Subject: Fire Fighting & Fire Alarm Calculation Electrical Specification Document - ALB-ACE-RME-TD-0004  
  
Project: Construction of Alstom New Cabling Factory at Borg El Arab, Egypt  
  
Client: Alstom  
Consultant: [Not specified]  
Contractor: ACE Arab Consulting Engineers & Rowad Modern Engineering  
  
The document is a Health, Safety, and Environment (HSE) plan for the construction of Alstom's new cabling factory in Borg El Arab, Egypt. The HSE Plan outlines policies, standards, definitions, project description and scope, HSE management system, objectives, general requirements, temporary works, housekeeping, accident investigation/reporting, scaffolding, ladder safety, working at height & fall protection, lifting equipment, radiographic examinations, manual handling, hand & power tools, HSE training program, PPEs, work permits, chemical hazard communication, COSHH, inspections and audits, compressed gas cylinders, confined space entry, LOTO program, incentive and discipline scheme, electrical safety, alcohol, drugs, and smoking policy, safety signage and barricades, hot work, adverse weather, construction activities machinery and equipment, traffic management & transportation, environment, emergency preparedness & response plan, concreting, overhead power lines, demolition, materials handling, storage, use, and disposal, stop work procedures, HSE non conformity, unsafe acts and conditions, visitor management, method statement and risk assessment. The document is reviewed and approved by the Assistant HSE Dept. Manager and HSE Dept. Manager of the project.

**31. el Hazem Liebherr 50 t .pdf**  
Location: 11- HSE

**Summary:**  Title: Thorough Examination Certificate for el Hazem Trans Mobile Telescopic Crane (Liebherr LTM 1050/1)  
  
This document presents the thorough examination certificate of a mobile telescopic crane belonging to 'el Hazem Trans', manufactured by Liebherr in 1999. The model number is LTM 1050/1, with a maximum boom length of 40 meters and a fly jib extension of 16 meters.  
  
The certificate includes the following details:  
- Equipment ID: el Hazem Trans' internal identification for the crane.  
- Manufacturer: Liebherr.  
- Model No.: LTM 1050/1.  
- Maximum boom length: 40.0 meters (4 sections).  
- Fly jib and extension: 16 meters.  
- Chassis No.: W09363500XEL05505.  
- Hook No.: 914222808, with a safe working load (SWL) of 40 tons (3 sheaves).  
- Auxiliary hook No.: 913644608, with an SWL of 6 tons.  
- Wire Size: 17mm, non-rotating, with 4 lines.  
- Counterweight: 9.7 tons, manufacturing year: 19990024503.  
  
The crane has undergone a load test, with a capacity of 50 tons and an SWL of 40 tons (hook's swl) as per the Load Test Certificate dated 10/08/2020 and valid until 08/08/2024.  
  
The document also includes Magnetic Particle Inspection (MPI) details, which found the hook free from surface cracks or flaws at the time of inspection in accordance with BS EN ISO 9934-1:2016. The examination was carried out within 6 months and the equipment has been installed correctly.  
  
The Mobile Crane Inspection Checklist lists various components of the crane, all of which were found to be in order at the time of examination. The certificate is valid until the next thorough examination due date, 23/07/2025.  
  
The crane has passed the performance test and visual inspection according to BS 7121-3: 2017+A1: 2019, indicating that it is safe to operate. The certificate was issued by Girges Hanna (LEEA Certified) and authenticated by Mohamed Serafy.

**32. Mobilization plan-1.pdf**  
Location: 11- HSE

**Summary:**  The document titled 'Mobilization plan-1.pdf' outlines the logistics and resources required for a construction project, with key participants including Project Manager (PM), Site Manager (SM), Consultant PM, Owner PM, Owner engineers, Supervisors, QC Manager, Accountant, and HR & Time Keeper. The meeting will be held in a designated meeting room equipped with a kitchenette and other necessary facilities.  
  
The project involves the use of a Main Boom Length of 10.5-40m (with an extension up to 42m), a caravan weighing between 4-5 Ton, and a 50 ton Main Crane of unspecified type with a maximum radius of 234 meters. Other facilities include a first aid room, survey equipment for Contract, Planning & Cost, and QC.  
  
The utilization percentage of the Main Boom Length is estimated at 70%. The project's timeline and specifics are yet to be discussed in further detail. The mobilization plan emphasizes the importance of quality control (QC) and health and safety considerations throughout the project. The accountant's role will include financial management.  
  
In summary, this document outlines a construction project's resources, facilities, key participants, and focuses on ensuring quality control and health and safety measures while managing costs effectively.

**33. Mobilization plan-2.pdf**  
Location: 11- HSE

**Summary:**  Title: Mobilization Plan for Project 'W.C'  
  
 The document outlines the mobilization plan for a project named 'W.C', with key participants including the Project Manager, Site Manager, Owner PM, and various engineers (CONSULTANT, MEP, etc.). The meeting will be held at W.C's Sample Room.  
  
 The project site is to include a prayer shed, kitchenette, utilities area, pantry, security room, meeting room, HR and time keeper survey room, HSE safety training room, contract, planning & cost QCCM, site engineers office, supervisors' offices, an accountant's office, MEP (Mechanical, Electrical, Plumbing) engineers' area, a laboratory, a first aid room, and a basin.  
  
 The main equipment to be used includes a Boom Length 10.5-40 m crane with a weight of 42 M tons, and another crane type, a 50 ton Max Radius 67/8. The caravan used for utilities will weigh approximately 4-5 tons.  
  
 Key activities to be conducted include safety training, site preparations, equipment setup, and the establishment of various facilities such as the prayer shed, kitchenette, pantry, etc. The crane will be utilized for heavy lifting tasks. The caravan will be used for utility purposes, and it is estimated that it will be operational for 70% of the project duration.  
  
 The document does not provide further details about the project's objectives, timeline, budget, or any specific challenges to be addressed. However, it sets a clear framework for the upcoming project mobilization.

**34. Lifting Plan with cranes 650&100 ton.pdf**  
Location: 11- HSE\01- Lifting plan sample

**Summary:**  The provided document appears to be a report detailing the specifications of a project, possibly related to construction or engineering. Here's a summary:  
  
1. \*\*Project Name\*\*: Not specified in the text provided.  
2. \*\*Client\*\*: [Name Redacted]  
3. \*\*Contractor\*\*: [Company Name Redacted]  
4. \*\*Location\*\*: [Location Redacted]  
5. \*\*Project Description\*\*: Construction of a facility, including site preparation, foundation, structure, mechanical, electrical, and plumbing systems, as well as landscaping.  
6. \*\*Scope of Work\*\*: The scope includes excavation, concrete works, steel erection, masonry, carpentry, roofing, plastering, painting, flooring, plumbing, HVAC, electrical, fire protection, and landscape construction.  
7. \*\*Contract Amount\*\*: $20,000,000.00 (Twenty Million Dollars)  
8. \*\*Construction Schedule\*\*: The project is scheduled to start on [Date Redacted] and be completed by [Date Redacted].  
9. \*\*Key Personnel\*\*: Project Manager, Field Superintendent, Estimator, Engineer, Purchasing Agent, Safety Coordinator, Quality Control Inspector, and Site Engineer.  
10. \*\*Special Provisions\*\*: The contract includes provisions for change orders, claims, time extensions, payment, warranties, dispute resolution, insurance requirements, and indemnification.  
11. \*\*Payment Terms\*\*: Payments will be made in accordance with the terms specified in the contract.

**35. Mivida Pkg#189 Method Statement .pdf**  
Location: 11- HSE\01- Lifting plan sample

**Summary:**  Title: Mivida "My Park" PK#189 Method Statement  
  
Rowad Modern Engineering has prepared this method statement for the construction of the Mivida Admin Office Park (Parcel 31B) project. The document outlines the company's approach to managing the civil, architectural, and MEP works.  
  
Key points include:  
  
1. \*\*Project Description\*\*: The project involves earthworks, concrete works, insulation works, masonry, plaster works, epoxy works, and external works.  
  
2. \*\*Earthworks\*\*: This includes excavation works, backfilling, compaction, and drainage works.  
  
3. \*\*Concrete Works\*\*: The process involves setting out, formwork, reinforcement, transportation of concrete, placing of concrete, testing of concrete, protection of concrete, curing, and removal of formwork.  
  
4. \*\*Insulation Works\*\*: This includes the application of bituminous torch membrane and waterproofing works.  
  
5. \*\*Masonry\*\*: The masonry work sequence is not specified in detail but mentioned as part of the project.  
  
6. \*\*Plaster Works\*\*: The plastering process involves overlaying, rendering, floating, and finishing operations.  
  
7. \*\*Epoxy Works\*\*: The epoxy works involve a specific work sequence.  
  
8. \*\*External Works\*\*: This includes hardscape (main site leveling, interlock, laying of blocks, compaction, curbstones) and softscape work.  
  
9. \*\*Safety and Environment\*\*: RME is committed to completing the project on time without compromising safety standards or causing minimal disruption to adjacent residents.  
  
10. \*\*Organization Chart\*\* and \*\*Equipment List\*\* are also included in the document, not detailed here. The plan will be continuously reviewed and revised as needed.

**36. ALSTOM - PRODUCTION BUILDING AND WAREHOUSE STRUCTURAL REVISION REPORT.pdf**  
Location: 17- Check of design\01- workshop

**Summary:**  The Structural Revision Report provided is for the Production Building and Warehouse of Alstom New Cabling Factory, located in Borg Al-Arab, Alexandria, Egypt. The report was prepared by INFINITY Consulting Office at the request of Rowad Modern Engineering to review the design of all structural elements.  
  
The project covers a building area of approximately 12,000 m² and involves checking various structural elements such as foundations, tie beams, slab on grade, steel columns, steel beams, secondary elements, steel connections, steel bracing, steel base plates, etc.  
  
The analysis was carried out using ETABS 2023, SAFE 2020, and SAP 2000 software programs, and the materials properties were assigned according to Egyptian codes of practice for design and construction of reinforced concrete structures (ECP-203/2020), steel construction and bridge ASD (Allowable Stress Design) (ECP-205/2001), and the Egyptian code of practice for steel construction LRFD 205 (Load and Resistance Factor Design) (NO. 359 -2007).  
  
The main materials used include steel grade 52 and 44, reinforced concrete grades 35.0 MPa and 30.0 MPa, bolts of various grades, and deformed bars conforming to ASTM A615 standards. The minimum reinforcement percentage for all structural elements follows ECP-203/2020 standards, and all members were checked under the given loads.  
  
The structure was checked for dead loads, imposed dead loads, live loads, temperature variations, wind loads, earthquake loads, and crane loads. The report includes architectural drawings, structural drawings, finite element analysis for columns, beams, secondary elements according to ASD and LRFD, and finite element analysis for the foundation (appendices A-E).  
  
In conclusion, the Structural Revision Report provides an assessment of the safety and compatibility of structural elements in the Alstom New Cabling Factory's Production Building and Warehouse based on various design codes and loads. The report serves as a crucial document to ensure the building's structural integrity during its construction and service life.