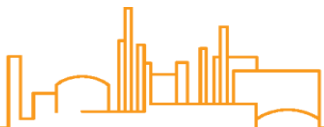


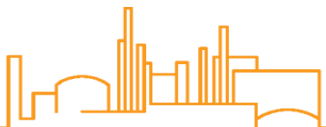


ES&H and Quality Management in Construction projects

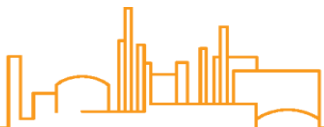




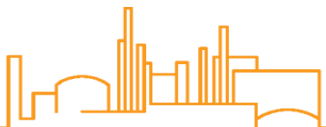
Introduction



What do we Manage in Construction Projects?

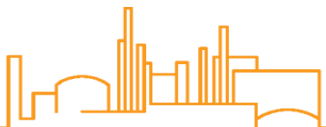


When does ES&H and Quality management start ?



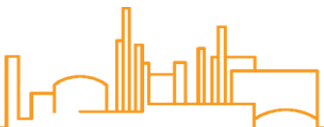


Pre-Bid Phase





Bidding Phase



Bid's Evaluation

Technical Package

01 Technical Criteria Evaluation

02 Site Visit evaluation

Commercial Package

01 Pay Item prices.

02 Commercial Criteria Evaluation

ROYAL COMMISSION FOR JUBAIL AND YANBU

Technical / Construction Tender Evaluation

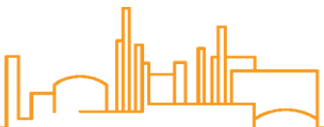
Insert bidder name here

Item No.	PART 1 CONSTRUCTION	
1.0 Storage		
1.1 Proper material labelling, warning signs, expiry date, MSDS etc		Not applicable
1.2 Chemical room temperature below 25C		Unacceptable
1.3 Flammable and hazardous material storage requirements		Needs Improvement
1.4 Protection of materials from UV, weather and chemical attack (epoxy resin, pipe, cable, equipment, etc.)		Acceptable
1.5 Appropriate fire protection system and lighting installed		Excellent
2.0 Excavation and Backfilling		
2.1 Approved excavation with competent person and permit		Not applicable
2.2 Appropriate cut slope/benches with stability		Unacceptable
2.3 Excavated/unstable material are placed at distance away		Needs Improvement
2.4 Appropriate edge protection, barricade, access ladders, signage are provided		Acceptable
2.5 Suitability backfilling material, proper layer thickness		Good
2.6 Effective dewatering system in use		Excellent
3.0 Roads		
3.1 Broken pavement or soft spot have been removed and patched		Not applicable
3.2 Suitability backfilling material, proper layer thickness		Unacceptable
3.3 Proper moisture, density, layer/elevation tests are performed		Needs Improvement
3.4 The sub-base /base(s) are well compacted		Acceptable
3.5 The mix is uniform by visual inspection		Good
3.6 Joints/edges are prepared and rolled properly		Excellent
4.0 Concrete Work (Cast In Situ)		
4.1 Area free from loose materials, latence and deleterious materials		Not applicable
4.2 Reinforcement bar sizes/cover/spacing/lap splicing/bar chairs are maintained		Unacceptable
4.3 Embeds, water stopper, anchor bolts, conduits are installed properly		Unacceptable
4.4 Formwork is installed and supported correctly. Surface of formwork facing concrete is clean/smooth/free of holes/and coated with release agent		Needs Improvement
4.5 Correct concrete Joints		Acceptable
4.6 Curing system (Water spray, double layers of burlaps/single layer of plastic sheet)		Acceptable
4.7 Proper frequency of slump test/concrete samples tests are performed		Good
4.8 Correct waterproofing system		Acceptable
4.9 Concrete finishing (finishing requirement/free from cracks, honeycomb, segregation)		Excellent
5.0 Concrete (Precast)		
5.1 Panels stored properly/free from chipped edges/spalling/stains/cracks		Good
5.2 Connections of panels to structure and most adjacent panels are in place		Good
5.3 Surfaces of panels are cleaned thoroughly after erection		Good
5.4 All bolts are installed/tightened as per IFC drawings		Good
5.5 Repairs of surface defects and imperfection match adjacent panels		Good
5.6 Joint between panels have uniform width/filled with sealant		Good
6.0 Concrete Blocks		
6.1 Reinforcement (horizontal and vertical) is spliced/doweled/headed		Good
6.2 Block walls/panels are clean and free of damage (chipped edges)		Good
6.3 Joint between blocks/panels have uniform width/filled with mortar		Good
6.4 Wall ties and control joints are installed		Good
6.5 Blocks/panels are properly aligned in both directions horizontal and vertical		Good
7.0 Steel Structures		
7.1 Steel members are free of defects, bends and torsion		Good
7.2 Installed members are plumb/aligned properly/supported properly		Good
7.3 All bolts (including structural bolts) are proper installed and tight		Good
7.4 Proper Touch-up of damaged galvanizing or painting is performed		Good
8.0 Electrical		
8.1 Conduits including elbows, junction boxes are aligned and levelled		Good
8.2 Appropriate embedded installation and patched upon completion		Good
8.3 Conduits/fitting material/sizes conform to the specified and approved		Good
8.4 Panels/switchgear are adequately protected from dust/dirt/moisture		Good
8.5 Installation of the switchgear and panels per the approved procedure		Good
8.6 Correct termination and splicing kits are used and installed per manufacturer instructions		Good
8.7 Non-current carrying metal parts of electrical equipment are grounded		Excellent
9.0 Mechanical		
9.1 Piping - cleanliness, free of debris, capped as required		Not applicable
9.2 Approved pipe materials, dimension, support, connection and complete with accessories		Unacceptable
9.3 Correct pipe installation, aligned, sloped, low point drains, high vent assemblies, etc		Needs Improvement
9.4 Pipe/system Leak test prior to backfill and correct bedded materials		Needs Improvement
9.5 Pipe/valve/pump correct label, flow direction label and equipment tag		Acceptable
9.6 HVAC/Duct cleanliness with opening are capped and free of dust and debris		Good
9.7 Sheet metal plenums/casing/blank-offs are smooth/even inside/airtight/reinforced to eliminate vibration and noise		Excellent
9.8 Joints are sealed with approved sealant/leak tested before covering/insulated		Excellent
Evaluation by:		
Date:		
CONSTRUCTION PERCENTAGE SCORE		66.1

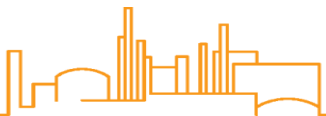
Contract No. _____



Executing Phase



Execution Monitoring cycle



Execution Phase

Required Pre-Approvals

- 01 | Encroachment Permits.
- 02 | Material /Vendor Approval
- 03 | Contractor team approval.
- 04 | Inspection & testing plans.
- 05 | Method Statement
- 06 | STARRT Cards \ Mock ups



SAFETY TASK ANALYSIS RISK REDUCTION TALK (STARRT)

According to **OHSAS 18001** Safety Task Analysis Risk Reduction Talks (STARRT), which have been running on warehouse site for a little over a year, are a 'foundation stone in the **Target Zero** campaign on the **MLS**.
'They assess the task that is about to be performed and take a 360 o look at the potential risks involved ensuring that those about to participate in the activity are aware of potential risks and hazards before they are affected by them'.
Daily shift STARRT Talk (where good & bad practices along with lessons learned are discussed) and MLS Supervisor select those nominated are

- B. Equipment & Materials
- C. Site Planning & Preparation
- D. Work Methodology
- E. Organization, Responsibility, & S
- F. Safety & Health
- G. Environmental Issues
- H. Quality Assurance / Quality conti
- Risk Assessment attached

Method Statement of Ceramic Tiles Installation

Page 0



OD OF STATEMENT

METHOD STATEMENT FOR
CERAMIC TILES INSTALLATION

SAMPLE

Execution Phase

Training & Recognition:

01 Annual training plan.

02 Qualification chart.

03 In house local workshops.

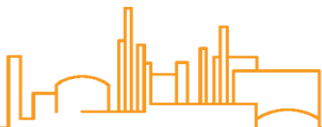
04 Engineers talent work.

05 Monthly construction Meeting

06 Top ten Quality Club

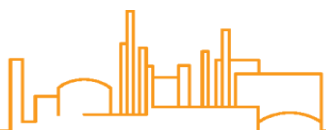


Royal Commission Jubail Industrial City Project - FIELD ENGINEER - 2016 GOALS					Jan 2016
Item	Category	Goal Title	Description	Measure	Weight
1.1	Business	Technical Documentation (TD, Quality and Quantity reports)	Submit daily reports (based on daily work or provide input to daily work)	1.1.1. Submit to complete daily report 1.1.2. Complete daily report on time	10%
1.2		Technical Documentation (TD, Quality and Quantity reports)	Review 1) Technical Submittals (TS), 2) Technical Design Package Review and 3) Technical Design Package Review and 4) Technical Design Package Review	1.2.1. Review turnaround time = 7 days 1.2.2. Review turnaround time = 7 days 1.2.3. Review turnaround time = 7 days	10%
1.3		Technical Documentation (TD, QCD)	Review 1) Technical Submittals (TS) and 2) Field Change Document (FCD)	1.3.1. Review turnaround time = 7 days 1.3.2. Review turnaround time = 7 days 1.3.3. Review turnaround time = 7 days	10%
1.4		Technical Documentation (TD, QCD and FCD)	Review 1) Technical Submittals (TS) and 2) Field Change Document (FCD)	1.4.1. Review turnaround time = 7 days 1.4.2. Review turnaround time = 7 days 1.4.3. Review turnaround time = 7 days	10%
2.1	Quality	Quality - Senior Management Quality Evaluation (SMQE)	Attend in-house work of 50% or more on Senior Management Quality Evaluation (SMQE) on my contract. (See SMQE) (Please attach)	2.1.1. SMQE score = 90% 2.1.2. SMQE score = 90% 2.1.3. SMQE score = 90%	1%
2.2		Quality - Department Audit - QMS	Implementing of Quality Action Review (QAR)	2.2.1. QAR score = 90% 2.2.2. QAR score = 90% 2.2.3. QAR score = 90%	1%
2.3		Quality - Department Audit - NCR	Implementing of Non-Conformance Report (NCR)	2.3.1. NCR score = 90% 2.3.2. NCR score = 90% 2.3.3. NCR score = 90%	1%
2.4		Quality - Zero Risk Program (ZRP)	Plan for Risk Register and Implementation of Zero Risk Program (ZRP) (See ZRP) (Please attach)	2.4.1. ZRP score = 90% 2.4.2. ZRP score = 90% 2.4.3. ZRP score = 90%	1%
2.5	Quality	Quality - Lessons Learned (LL)	Provide and record lesson learned related to my assigned TSD-CD (Please attach your assigned contract)	2.5.1. LL score = 90% 2.5.2. LL score = 90% 2.5.3. LL score = 90%	1%
2.6		Quality - Monthly Quality Meeting	Participation and Presentation - Monthly Quality Meeting	2.6.1. Attendance = 90% 2.6.2. Attendance = 90% 2.6.3. Attendance = 90%	1%
3.1		Safety - Zero Statutes on my area of Projects	Participation to achieve Zero Statutes on my area of Projects	3.1.1. Safety score = 90% 3.1.2. Safety score = 90% 3.1.3. Safety score = 90%	1%
3.2		Safety - Safety Support/Training	Implementing of FRC program Implementing of ES&H program Implementing of ES&H program	3.2.1. FRC score = 90% 3.2.2. FRC score = 90% 3.2.3. FRC score = 90%	1%
3.3	Safety	ES&H - Senior Management ES&H Evaluation	Attend in-house work of 50% or more on Senior Management ES&H Evaluation on my contract	3.3.1. ES&H Evaluation score = 90% 3.3.2. ES&H Evaluation score = 90% 3.3.3. ES&H Evaluation score = 90%	1%
3.4		ES&H - Production Matrix	Attend Safety Production Matrix and participation of ES&H (Please attach your assigned contract)	3.4.1. Safety Production Matrix score = 90% 3.4.2. Safety Production Matrix score = 90% 3.4.3. Safety Production Matrix score = 90%	1%
4.1	People	Employees - Superior Engagement	Participate four (4) discussions of 1-1 performance review/evaluation	4.1.1. Engagement score = 90% 4.1.2. Engagement score = 90% 4.1.3. Engagement score = 90%	1%
4.2		Learning and Knowledge Management and Talent development	Complete Senior University (SU) mandatory and 3-Cat course D (Please attach your assigned contract)	4.2.1. SU score = 90% 4.2.2. SU score = 90% 4.2.3. SU score = 90%	1%
4.3		Learning and Knowledge Management and Talent development	Complete Senior University (SU) mandatory and 3-Cat course D (Please attach your assigned contract)	4.3.1. SU score = 90% 4.3.2. SU score = 90% 4.3.3. SU score = 90%	1%
4.4		Learning and Knowledge Management and Talent development	Complete Senior University (SU) mandatory and 3-Cat course D (Please attach your assigned contract)	4.4.1. SU score = 90% 4.4.2. SU score = 90% 4.4.3. SU score = 90%	1%
100%					





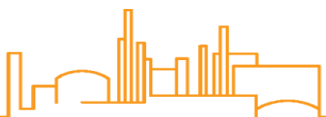
Close out Phase



Close Out Stage

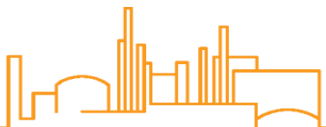
Red Zone

Warranty

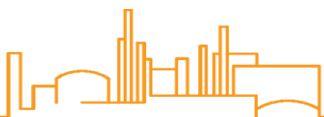




Sustaining Success



Success Foundations





THANK YOU

