













ALCON LLC

COMPANY PROFILE

زمرلہ ی دیر بلا، ۶۱۸، فتاھ، ۲۴۸۱۵۴۲۵ س کاف، ۲۴۸۱۵۴۳۶، تعمیر □ - ناماء قنطلا
ص.ب.: ۱۳۱۰

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COMPANY DETAILS

- COMPANY NAME : ALCON LLC
- LEGAL STATUS : LIMITED LIABILITY COMPANY
- NATRURE OF WORKS : ALL WORKS RELATED TO HIGHWAY AND CIVIL CONSTRUCTION INCLUDING SURVEY WORKS
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ABOUT US

INTRODUCTION

ALCON is a pioneering Sultanate of Oman Company established in 2008, built on a strong work ethic, honesty and a commitment to relationships. Today Alcon is one of the leading organizations in the field of Land, GIS, and Geographic Surveys which has International Standard and Quality. We have achieved a solid reputation for providing conscientious and reliable engineering survey solutions to a wide range of infrastructure, construction and development projects for International Clients, Government Sectors, Consultants & Constructions Companies in Oman With more than 8 years of experience, Alcon continues to improve its heritage by strengthening its dedication & sincerity to each & everyone.

Our firm has always attempted to work with the latest technological advances in the industry. We use sufficient quantity of the latest surveying equipments like GPS (Trimble R8, Leica VIVA 15, & Sokkia etc.) , Total Station (Leica, Topcon, Trimble, Nikon etc.), Auto level machine, computers, laptops, drafting/plotting instruments, vehicles etc, for projects like Infra Structure Developments, Major Roads & Bridges and towers in Oman and contractor for surveying services.

It is therefore rightly looking forward to be invited by your esteemed organizations, to provide surveying, drafting/plotting/Supply of manpower (Qualified Surveyors) with all surveying equipment etc, for your present and future projects, wishing to maintain best business relation all the time.

Mission

We strive to carry out jobs with a straightforward attitude, working closely with clients, and to provide prompt execution that result in a professional product at a cost-effective fee. We have been very successful in working with other professionals as part of a team to meet complex development challenges throughout Oman. Our policy is to anticipate any issues on a project and give our clients a fair and realistic

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cost and scheduling estimate. We dedicate at least one and sometimes several Professional Land Surveyors to the project.

VISION

To become a leader provider of Quality Surveying & Engineering Services in a sector, signing under the prestigious projects for tomorrow's world business, harmonizing innovative and progressive technology with its experience, excellence and high-caliber work.

OUR SERVICES

SURVEY ENGINEERING

If you are looking for precision GPS+ control for surveying and engineering application or layout and grade management on a construction job site (building and infrastructure), we are here with highly trained professionals with most modern equipments and technologies to do your job more quickly & accurate and provides following survey engineering services.

- Topographic Survey works
- Survey and design of Sewerage network
- Survey and design of water supply network
- Survey and design of asphalt roads
- Preparation of cross sections
- 3D laser scanning works
- GPS surveying
- GIS Data collection
- As built Surveys

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- Demarcation and boundary survey
- Quantity/Volume survey
- Hiring Survey teams

GIS SOLUTIONS & SERVICES

Government, Public utilities, and private business require GIS to be built upon accurate and complete geospatial data that supports the multiple uses and daily operations within an enterprise. Alcon will work as your partner to design, build, and implement a robust geospatial dataset to realize the full potential of GIS. Falcon's suite of products and services focus on all phases of building GIS, which includes:

- GIS Design
- GIS Data Creation
- GIS Implementation
- GIS Data Maintenance

SURVEY EQUIPMENTS

S.No	SURVEY INSTRUMENTS	MAKE	QUANTITY
1	Survey Drone Equipment –(UAV)	DJI	01 No
2	3D Laser Scanner station	Leica	01 No
3	Leica GPS RTK – Model GS15	Leica	6 Nos.
4	Trimble GPS RTK	Trimble	8 Nos.
5	Sokkia GPS RTK – Model GRX 2	Sokkia	2 Nos.
6	Leica Total Station – Model TC 1201	Leica	1 No.
7	Leica Total Station – Model TC 1202	Leica	2 Nos.
8	Leica Total Station – Model TS 11 R400	Leica	2 Nos.
9	Leica Digital sprinter Levelling Instrument	Leica	1 No.
10	Sokkia Total Station Set X	Sokkia	2 Nos.
11	Sokkia Auto Level B20	Sokkia	2 Nos.
12	Leica Auto Level	Leica	2 Nos.
13	Garmin Hand held GPS	Garmin	2 Nos.
14	Static data processing software	Sokkia	1 No.
15	Leica Geo Office Version 7.0.1.0	Leica	1 No.
16	Eagle point and AutoCAD civil 3D Auto Plotter software	Eagle point	1 No.

17	Trimble Total Station S5	Trimble	1 No
18	Total Station TS 09	Leica	1 No

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LIST OF MAJOR SURVEY PROJECTS EXECUTED

S.no.	Project	Client	Length
1.	Survey & design of internal roads at Al Mabella	MM	178 Km
2.	Survey & design of internal roads at Sumail	MRMERW	52 Km
3.	Survey & design of internal roads at Saham	MRMERW	62 Km
4.	Survey & design of internal roads at Adam & Manaha	MRMERW	78 Km
5.	Water pipe line work at Yiti	MRMERW	45 Km
6.	Alignment fixing at Al Sharqiyah sands	DRC	15 Km
7.	Topography survey at Manah	DGR	35 Km
8.	Sewerage Pipeline 200km & 3500 house connection at Barka	MRMERW	200 Km
9.	Survey & design of internal roads at Al Khoud & Al Amerat	MM	125 Km
10.	Sewerage Pipeline 130km & 1850 house connection at Musannah	MRMERW	130 Km
11.	Sewerage Pipeline 120km & 1700 house connection at Suwaiq	Mott MacDonald	120 Km
12.	Topography survey & OGL's at Bid Bid - Sur road, Ph-3	DGR	55 Km
13.	Survey & design of internal roads at Ibra & Sur	MRMERW	95 Km
14.	Relocation of 11KV OH lines and earthwork cut fill quantity	MOTC	5.2 Km
15.	Trench excavation survey for cable laying	PDO	10 Km
16.	Topographic survey & route marking for 33KV line at Salalah	Al Wataniyah	22 Km
17.	Topographic survey for Al Maha pump at Shinas & Lakbi	AL Maha	20000 m2
18.	Hill Cutting survey & 11 KV relocation at Wadi Mistal	KAS LLC	12km
19.	Topography survey at Hijiri Lahaban Road	KAS LLC	32 Km
20.	Topography survey from Al Ushavah to Al Gaydhranh-Adam	PIP LLC	70 Km
21.	Construction survey for OXY Safah site at Fahud	PDO	40000 m2

22.	Topography for roads at Hijari, Kehnat Hill and Al Khoud	Marmul LLC	106 Km
23.	Topography for STP facilities at Barka	Al Wataniyah	300 Km
24.	Topography survey for R/A at Samad Shan, Mudaibi, Kamil	Dar Al Mushriq	-
25.	Construction survey for Amal Steam Project at PDO	PDO	-
26.	Topographic survey & design for Sinaw Water line network	SMC L.L.C	254 Km
27	Topographic survey & design for Duqam – Haima PAEW Water line network	PAEW	270 Km
28	Haya House connection and pipe line survey for Seeb network	Haya	1500 Nos 210Km pipeline
29	Aswad Border post for Royal Oman Police	ROP	70 Hect
30	Road Inventory Survey	ONSS	4200 Km
31	Journey Time Survey	ONSS	15000 Km
32	Proposed Crusher Road at Al Wajajah	Modern Crusher	5 Km
33	Topographic Survey for ROP Building at Jalan Bani Buwah	ROP	65 Hect
34	Expansion of Nizwa Industrial Area phase 3 and 4	NIE	42 Hect
35	Topographic Survey for Ruysal Industrial Estate entrance	IEPE	7 Km
36	Snake Canyon Survey at Rustaq	Oman Tourism	4.0 Km
37	Topographic Survey for ROP RHQ at Sur	ROP	60 Hect
38	Topographic and Route survey for Dualization of Ibri Southern bypass Road	MOTC	70 Km
39	Topographic Survey for ROP Junctions at Tumrait, Hasik and Maqshan	ROP	5.00 Km

40	Drainage Projects for Ministry of Defence near Lulu Al Mawalah	MOD	50 Hect
41	Topographic Survey for Marah Land at Quram Park	Oman Tourism	30 Hecy
42	Survey and design for HSBC head office Car parking at Al Khuwair	HSBC	7000 Sqm
43	Topographic survey and layout marking of Boys School at Al Mabelah	Ministry of Education	25 Hect
44	Dualization of Wadi Saa Road	MOTC	On going
45	Topographic Survey for School building at Jalan Bani Buwah	Ministry of Education	05 Hect
46	Topographic Survey for Internal Roads at Behla, Hamra	MRMERW	110 Km
47	Topographic Survey for Internal roads at Ibra and Sur	MRMERW	65 Km
48	Topographic Survey for Internal Roads at Izki	MRMERW	75 Km
49	Topographic Survey for Internal Roads at Al kamil	MRMERW	40 Km
50	Topographic Survey for Internal Roads at Al Musannah	MRMERW	32 Km
<u>INDIA WORKS</u>			
1	Munnar to Bodimettu NH	PWD	42.12 Km
2	Punnalur – Kottavasal	PWD	36.00 Km
3	Mahi to Thalassery NH Bypass project	PWD	18.00 Km
4	Alappuzha – Thanneermukkom	RICK	23.60 Km

5	Erattupettai to Kuttikanam	RICK	50.00 km
6	Moolebadam Bridge to Kozhippara Fall	PWD	15.00 Km
7	Kakkkad Curve - Perambra to Kozhikide	PWD	75236 Sqm
8	Theuvathukadavu Bridge Curve	PWD	68235 Sqm
9	Shyju Road Curve	PWD	53184 Sqm
10	Anjolimukku Road Curve	PWD	50450 Sqm
11	Velliyur Road Curve	PWD	62155 Sqm
12	Vadakara -Thiruvallur -Perambra Junction	PWD	3.50 Km
13	Chalikkara Road Curve	PWD	82000 Sqm
14	Chembra-Perambra Junction	PWD	110450 Sqm
15	Chenoli-Perambra Junction	PWD	86525 Sqm
16	Paithoth - Perambra Junction	PWD	92646 Sqm
17	Thanikkandy -Perambra Junction	PWD	10105 Sqm
18	Koothally - Road Curve	PWD	88560 Sqm
19	Paduthodu to Vaipur Road	PWD	6.55 Km
20	Beach Road Highway –kannur	PWD	33.30 Km
21	kannanalloor Junction Road (kollam)	PWD	4.50 km

22	Chengannur Ring Road	PWD	1.60 Km
23	Marayoor School	PWD	25156.754 Sqm
24	Byson valley School	PWD	10907.028 Sqm
25	Erattiyar School	PWD	22739.966 Sqm
26	Pynaav SchoolIAL	PWD	4243.919 Sqm
27	Adoor Ring Road	PWD	8.87 Km
28	Ayurvedic Hospital -Ayirur	PWD	913.596 Sqm
29	Chengannur Bypass road	PWD	1.73 Km
30	Anchal Road - Yeroor to Edamon	PWD	14.11 Km
31	Chadayamangalam(Ambalakkunnu to Velinellur)	PWD	13.73 Km
32	ITI Building -Ranni	PWD	7179.688
33	PWD Rest house at Ranni	PWD	3768.462
34	Velinelloor to charipparambu to Pothiyaruvila Road	PWD	12.45 Km
35	Erattupettai MES Junction	PWD	12568 Sqm
36	Port Cochin – Mattancherry for total internal road	KMR	54.50 Km
37	Ernakulam Internal Roads	KMR	25.00 Km

SURVEY METHODOLOGIES

GPS SURVEY

The GPS (Global Positioning System) is a "constellation" of 24 well-spaced satellites that orbit the Earth and make it possible for people with ground receivers to pinpoint their geographic location. The location accuracy is anywhere from 100 to 10 meters for most equipment. Accuracy can be pinpointed to within one (1) meter with special military-approved equipment.

The GPS is owned and operated by the U.S. Department of Defense but is available for general use around the world. Briefly, here's how it works:

21 GPS satellites and three spare satellites are in orbit at 10,600 miles above the Earth. The satellites are spaced so that from any point on Earth, four satellites will be above the horizon. Each satellite contains a computer, an atomic clock, and a radio. With an understanding of its own orbit and the clock, it continually broadcasts its changing position and time. (Once a day, each satellite checks its own sense of time and position with a ground station and makes any minor correction.)

On the ground, any GPS receiver contains a computer that "triangulates" its own position by getting bearings from three of the four satellites. The result is provided in the form of a geographic position - longitude and latitude - to, for most receivers, within 100 meters.

If the receiver is also equipped with a display screen that shows a map, the position can be shown on the map. If a fourth satellite can be received, the receiver/computer can figure out the altitude as well as the geographic position.

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TOTAL STATION SURVEY

A Total Station is an electronic/optical instrument used in modern surveying. The total station is an electronic theodolite (transit) integrated with an electronic distance meter (EDM) to read slope distances from the instrument to a particular point.

Robotic total stations allow the operator to control the instrument from a distance via remote control. This eliminates the need for an assistant staff member as the operator holds the reflector and controls the total station from the observed point.

Technology:

- Coordinate Measurement
- Angle Measurement
- Distance Measurement
- Data Processing

Coordinate Measurement

Coordinates of an unknown point relative to a known coordinate can be determined using the total station as long as a direct line of sight can be established between the two points. Angles and distances are measured from the total station to points under survey, and the coordinates (X, Y, and Z or northing, easting and elevation) of surveyed points relative to the total station position are calculated using trigonometry and triangulation. To determine an absolute location a Total Station requires line of sight observations and must be set up over a known point or with line of sight to 2 or more points with known location.

For this reason, some total stations also have a Global Navigation Satellite System (G.N.S.S) interface, which do not require a direct line of sight to determine the coordinates. However, GNSS measurements may require longer occupation periods and offer relatively poor accuracy in the vertical axis.

Angle Measurement

Most modern total station instruments measure angles by means of electro-optical scanning of extremely precise digital bar-codes etched on rotating glass cylinders or discs within the instrument. The best quality total stations are capable of measuring angles to 0.5 arc-second. Inexpensive "construction grade" total stations can generally measure angles to 5 or 10 arc-seconds.

Distance Measurement

Measurement of distance is accomplished with a modulated microwave or infrared carrier signal, generated by a small solid-state emitter within the instrument's optical path, and reflected by a prism reflector or the object under survey. The modulation pattern in the returning signal is read and interpreted by the computer in the total station. The distance is determined by emitting and receiving multiple frequencies, and determining the integer number of wavelengths to the target for each frequency. Most total stations use purpose-built glass corner cube prism reflectors for the EDM signal. A typical total station can measure distances with an accuracy of about 1.5 millimetres (0.0049 ft) + 2 parts per million over a distance of up to 1,500 meters (4,900 ft). Reflector less total stations can measure distances to any object that is reasonably light in colour, to a few hundred meters.

Data Processing

Some models include internal electronic data storage to record distance, horizontal angle, and vertical angle measured, while other models are equipped to write these measurements to an external data collector, such as a handheld computer. When data is downloaded from a total station onto a computer, application software can be used to compute results and generate a map of the surveyed area.

AUTO LEVEL SURVEY

An automatic level is an optical instrument used to establish or checkpoints in the same horizontal plane. It is used in surveying and building to transfer, measure, or set horizontal levels.

The level instrument is set up on a tripod and, depending on the type, either roughly or accurately set to a levelled condition using foot screws (levelling screws). The operator looks through the eyepiece of the telescope while an assistant holds a tape measure or graduated staff vertical at the point under measurement. The instrument and staff are used to gather and/or transfer elevations (levels) during site surveys or building construction. Measurement generally starts from a benchmark with known height determined by a previous survey, or an arbitrary point with an assumed height.

Photographs.



Leica GS15 Viva RTK GPS System



Leica Total Stations TS 11



Leica GS15 Viva RTK GPS System



Construction Survey for Amal Steam Project (PDO)





Construction Survey at Sulphur plant at PDO project







Surveying works at Salalah by using GPS







Construction Survey for Engineered sanitary land fill in Khashab Musandam governerate of Oman.