

Statement of Qualifications

Design Build Experience



Irvine ▲ Torrance ▲ Ontario ▲ San Diego ▲ El Centro



Company Profile

Company Profile

Geotechnical Engineering

Geology

Earthquake Engineering

*Materials Testing and
Inspection*

Forensic Services



Group Delta Consultants, Inc. (GDC) is a consulting engineering firm with seven certified laboratories and offices located in the counties of Orange, Los Angeles, San Bernardino, San Diego and Imperial. The firm has a staff of 106 highly skilled professionals consisting of civil and geotechnical engineers, engineering geologists, laboratory and field technicians, deputy inspectors, drafting/CADD, and drilling and support personnel specialized in their respective fields. We offer a broad range of services to serve the needs of our clients. Our capabilities and services include geotechnical feasibility study, geotechnical field investigation, in-situ testing, foundation design, construction monitoring and materials testing, ground improvement and design, slope stability investigation and analyses, preparation of plans and specifications, coastal engineering, instrumentation, seismic studies and earthquake engineering.

We have established a record of completing projects on schedule and within budget for major clients in the public and private sectors since 1986. Our laboratories are licensed as an approved testing facility by various agencies including AASHTO and Caltrans. The involvement of our principals and senior managers in each project and particularly our focus on developing innovative design solutions to reduce overall construction cost has resulted in repeat business. The evidence of our work indicating the unique benefits of our approach and methodologies are provided in various awards and recommendations from well-known organizations in the public and private sectors.

Corporate Summary

Firm's Name:	Group Delta Consultants, Inc.
Firm Type:	California Corporation
Year Established:	1986
Small Business:	(SBE) State of California
Minority Business:	(MBE) City of Los Angeles



Services



Geotechnical Services



Geotechnical Engineering – Our services include:

- Feasibility Study
- Field Investigation
- Laboratory Testing
- Shallow Foundation Design
- Pile Foundation Design
- Settlement Analyses
- Ground Improvement & Design
- Slope Stability Investigation & Analyses
- Preparation of Plans & Specifications
- Earthwork & Grading Specifications
- Pavement Design
- Pile Drivability & Load Tests
- Instrumentation & Monitoring
- Forensic Engineering

Geologic and Seismic Hazard Evaluation - Our services include:

- Geologic Mapping
- Landslide Studies & Mitigation
- Groundwater Investigations
- Fault Hazard Investigations
- Geophysical Investigations
- Deterministic/Probabilistic Ground Motion Analyses
- Liquefaction & Lateral Spreading Analyses

Earthquake Engineering - Our services include:

- Liquefaction & Lateral Spreading Analyses
- Seismic Earth Pressure
- Seismic Deformation Analysis
- Seismically Induced Settlement
- Liquefaction Mitigation Measures
- Design Recommendations for New And Retro-fit Projects
- Seismic Design Criteria
- Earthquake Response Spectra

Laboratory Services



Laboratory Testing Services

Group Delta Consultants, Inc. has in-house geotechnical and materials testing laboratory facilities to conduct a variety of testing on soils and other building materials. Our laboratories are equipped with state-of-the-art equipment to perform tests in accordance with the American Society of Testing and Materials (ASTM) and other applicable standards. Our laboratories are certified by Caltrans and the City of Los Angeles. Our service capabilities in geotechnical and materials laboratory testing include the following:

Materials Testing & Special Inspection

- Moisture Content
- Dry Density
- Maximum Density & Optimum
- Moisture Content
- Specific Gravity
- Atterberg Limits
- Sieve Analysis
- Hydrometer Analyses
- Sand Equivalent
- Corrosion Potential (pH, Sulfate, Chloride, and Resistivity)
- Consolidation/Collapse
- R-Value
- California Bearing Ratio (CBR)
- Los Angeles Abrasion
- Shear Shrinkage
- Swell Expansion Index
- Direct Shear
- Asphaltic Concrete (AC)
- Concrete
- Epoxy
- Masonry
- Structural Steel
- Reinforcing Steel
- Welding
- Fireproofing
- Batch Plant
- FRP

Laboratory Services (Continued)



Asphalt Concrete Testing

- Stripping test
- Ash Content
- Asphalt Concrete density tests (nuclear)
- Density of asphalt cores
- Index of retained strength
- Hveem mix design and laboratory testing
- Marshall density
- Theoretical maximum specific gravity (Rice)
- Stability and Flow
- Moisture content
- Stabilometer value
- Swell
- Moisture-Vapor susceptibility
- Extraction (Ignition oven, vacuum, reflux, hot solvent)
- Extracted sample sieve analysis

Construction Phase Services



Construction Inspection & Materials Testing Services

Group Delta offers a full range of construction phase inspection and materials testing services. Our services during the construction phase are directed towards strict compliance of regulatory guidelines. Adherence to specifications is monitored and documented by registered geotechnical engineers, licensed inspectors and certified laboratories. Our service capabilities in construction monitoring and materials testing areas include:

Materials Testing

- Concrete & Masonry
- Beams
- Blocks
- Cubes
- Cylinders
- Grout/Mortar
- Prisms
- Vapor Emissions Testing

Design Build Project Experience



State Route 22 Design Build Improvement

Orange County, California

*Geotechnical
Engineering*

Geology

Earthquake Engineering

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Forensic Services



2006 ASCE Project of the Year

OCTA and Caltrans proposed to construct improvements for the SR-22 freeway in Orange County consisting of widening the freeway and construction of HOV lanes.

GDC performed laboratory testing on the samples recovered from the borings and developed 33 Post Advanced Planning Study Geotechnical Data Reports for 33 bridges along the alignment. These reports included compilation of existing and new boring and laboratory data, foundation conditions, assessment of liquefaction potential and discussion of various foundation types. Group Delta's responsibilities also included review of the design build contractor's submittals, and QA/QC testing during the construction. All work was performed under a formal QA/QC program in accordance with the ISO 9000 and was audited by Parsons Transportation, the team leader.

Key Geotechnical Issues:

- Coordination with multiple agencies, traffic control, night work, restrictive work hours and working on an operating freeway with narrow shoulders
- Moderate seismic accelerations and shallow groundwater
- High liquefaction potential along a significant portion of the alignment
- Bridges over Santa Ana River and Santiago Creek with shallow groundwater and difficult pile driving conditions due to presence of cobbles
- Working with Caltrans in-house geotechnical personnel to clarify foundation design criteria where liquefaction and downdrag are present

State Route 125 Design Build

San Diego, California

Geotechnical Engineering

Geology

Earthquake Engineering

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The SR-125 project consists of four segments: the Gap, Connector, Toll Road, and Otay River Bridge. GDC has been involved in all four segments of the project since 1999 either alone (The Gap) or as a team member with others. In addition to performing preliminary studies for the bridges on the Toll Road and Otay River Bridge, GDC completed two Geotechnical Design Reports (GDRs) for the Gap and Connector and five Structure Foundation Reports (SFRs). GDC backed up its recommendations by performing field observations and developing construction-period recommendations for excavations, embankment construction and foundation subgrade preparation.

GDC also completed SFRs for special design retaining walls (soil nail, rock nail and MSE walls) for the Gap and Connector projects. As part of the field investigation programs GDC performed hollow stem auger borings, rock coring, air-track borings, test pits, seismic refraction lines, bucket borings with down hole logging, and geologic mapping. GDC has experience with environmental issues regarding drilling, safety and drug testing, permitting, sound barriers, and other drilling and sampling controls. For the SR-125 Toll Road project, GDC performed one boring at each of the bridge sites and prepared Preliminary Foundation Reports (PFRs). GDC also reviewed the preliminary GDR for the Toll Road prepared by Ninyo and Moore.

Group Delta performed geotechnical evaluations for bridge foundation and retaining wall design, rock stability analysis for steep cut slopes, developed recommendations and design criteria for excavation stabilization using rock anchors, evaluated rock fall potential and coordinated analysis and investigations with designers and Caltrans, and provided field observation and construction support engineering services



LDK Design Build Solar Plant Site Phase 1

Xinyu, Jiangxi Province, China

Geotechnical Engineering

Geology

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Group Delta is providing a geotechnical investigation at the site of the proposed LDK Solar Plant located in Xinyu, Jiangxi Province, Peoples Republic of China. This investigation shall provide complete subsurface soil properties and parameters for the site in accordance with the specification.

LA to Pasadena Gold Line Design Build

Los Angeles County, California

Geotechnical Engineering

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The Los Angeles to Pasadena Gold Line Extension project consisted of a 13.7-mile extension of the Blue Line beginning at Union Station in Los Angeles and ending east of Sierra Madre Villa Avenue in Pasadena. This light rail transit (LRT) line consists of a double tracked system using electric current overhead wire. The project is primarily at-grade following the abandoned Atchison Topeka & Santa Fe (ATSF) Railroad right-of-way. There are a total of 13 stations. The extension includes an aerial structure in Chinatown, and depressed box sections in Highland Park and in the Old Town area of Pasadena. Near the southern portion of the alignment, a new yard and shop was developed. The overall project had been divided into ten (10) segments by the design-build Contractor.

Group Delta Consultants, Inc. (GDC) was a subconsultant to the Joint Venture of Parsons, Washington, and Kiewit, the design-build Contractor.

GDC provided 10 segment reports, 13 station reports, two seismic retrofit reports, and one new pedestrian overcrossing report. Reports for Segments 4 and 8 included the Figueroa and Colorado boxes, which are being constructed using cut-and-cover method. The reports provided recommendations for retaining walls, MSE walls, stations and platforms, track design, excavation and shoring, probabilistic seismic hazard assessment, static and seismic earth pressures for temporary shoring and permanent walls, racking displacement of the tunnel sections during seismic event, slope stability, Caltrans Structure Foundation reports, etc.

Gold Line Iconic Bridge Design-Build

Los Angeles County, CA

Client
Skanska USA and
AECOM Technical
Services

Client Contact
John Yen

Construction Start

2012



- Bridge crosses an active fault
- 13 Ft diameter piles
- Long span light rail bridge over Caltrans right-of-way (SR-210)
- First Design-Build project for Gold Line Authority



Los Angeles Unified School District - Dorsey High School Design-Build Project Los Angeles, CA



Client:

*Los Angeles Unified
School District
Doc Nghiem
213-622-7656*

Project Components

- First LAUSD Design-Build Project
- First auger cast piles project for LAUSD
- Organic and soft soils
- Low noise/vibration pile installed in an active school campus

Group Delta Consultants, Inc. has been selected to provide materials testing and construction inspection support services for LAUSD's first design-build project – the \$28 million Dorsey High School Redevelopment. The major components of the project include a new Ninth Grade Academy Classroom Building, a new Competition Gymnasium, and renovation and refitting of the original Gymnasium Building.



San Fernando Bus Rapid Transit Design Build

Los Angeles County, California

Geotechnical Engineering

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This MTA project included construction of a dedicated roadway exclusively for bus lanes, as well as the utilization of the old Southern Pacific Right-of-Way between Warner Center in Woodland Hills and the North Hollywood Metro Rail Station. The project alignment is 14 miles and the main features of the project included:

- A 26-foot wide bus way along the entire alignment;
- Replacement of three bridges;
- Construction of a retaining wall where the alignment crosses below the I-405 freeway;
- Approximately 30,500 linear feet of 12-foot high sound walls;
- Twelve BRT stations; and,
- Six park and ride facilities providing a total of 4,000 parking spaces.

Scope of Work:

Performed engineering analyses to develop geotechnical recommendations for the project and provided support during construction

Eastside LRT Design Build

Los Angeles County, California

Geotechnical Engineering

Geology

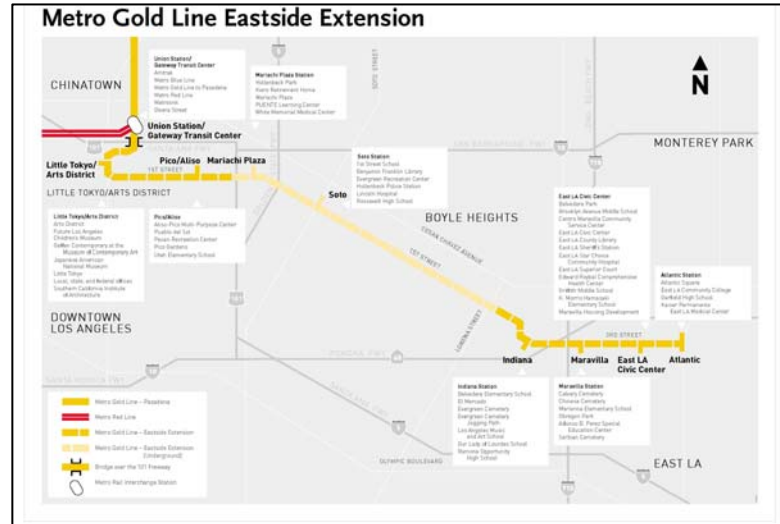
Earthquake Engineering

Materials Testing and
Inspection

Forensic Services

Client

Metropolitan Transit Authority
c/o East Side Partners
444 South Flower St.
Los Angeles, CA 90071
Amanda Eliooff, 213-922-9319



The Eastside LRT is a southeasterly extension of the Pasadena Gold Line from Union Station passing through the cities of Los Angeles and East Los Angeles, and is 5.8 miles long. The project consists of at-grade alignment, four existing bridges, and one 456-ft long new bridge across US 101, and a tunnel section (1.8 miles).

In addition to geotechnical evaluation for the at-grade section, GDC provided PFRs for the bridges, plus an SFR and ISA for the 101 bridge. The proposed bridge (332.51 meter long, 9-span bridge over US101), will be a cast-in-place pre-stressed concrete box girder with span lengths ranging from 26 to 47 meters. Each bend consists of a single column supported on a large diameter Cast-in-Drilled-Hole (CIDH) pile. Abutment 1 and 10 will be supported on groups of several smaller diameter CIDH piles. The geotechnical design was performed in accordance with Caltrans standards.

GDC completed a Preliminary Foundation Report (which provides preliminary geotechnical design information for the seismic evaluation of the existing structures) for the following bridges:

- The First Street Viaduct Bridge was built in 1927 and consists of a 10-segment, 28-span concrete structure that carries traffic along First Street and runs across the Los Angeles River and A.T. & S.F. railroads. The bridge is about 70 ft wide and 1,290 ft long.
- Third Street Overcrossing. The bridge site is located along Third Street in Los Angeles, California. The Third Street Overcrossing was built in 1959 and consists of two-span concrete box girder structure that carries traffic along Third Street and crosses over the I-710 Freeway. The bridge is about 82 ft wide and 265 ft long



Key Staff

GROUP DELTA CONSULTANTS

TECHNICAL STAFF QUALIFICATIONS AND EXPERIENCE

NAME	FUNCTION	REGISTRATION	YRS OF EXP.
Mike Reader	Principal Geotechnical Engineer	RCE, GE	23
Shah Ghanbari	Principal Engineer	RCE	25
Dr. Kul Bhushan	Principal Geotechnical Engineer	RCE, GE	40
Tom Swantko	Principal Geotechnical Engineer	RCE, GE	35
Lee Vanderhurst	Associate Geologist	CEG	25
Opjit Ghuman	Associate Environmental Engineer	RCE, GE	33
Curt Scheyhing	Senior Geotechnical Engineer	RCE, GE	14
John Theissen	Senior Geotechnical Engineer	RCE, GE	30
Dick Roberts	Senior Geologist		25
James Cunneen	Senior Project Engineer	JD, RCE, REA 1	21
Matthew Fagan	Senior Geotechnical Engineer	RCE, GE	16
Vesna Petrilla	Senior Project Engineer	RCE	8
John Thune	Field Services Manager	Caltrans Certified	24
Jim Sanders	Project Geologist	PG, CEG	10
Eugene Lewis	Project Geologist	CEG	10
Dr. Ying Liu	Project Seismic Engineer	RCE	12
Nava Navaratnarajah	Project Engineer	RCE	5
Salvador Ortiz	Project Engineer	RCE	7
Vesna Glisic	Project Engineer	RCE	8
Thomas Canady	Project Engineer	RCE	21
Anthony Belfast	Project Engineer	RCE	32
Eric Holliday	Staff Geologist		5
Richard Reed	Staff Engineer	RCE	4
Raymund Frigillana	Staff Geologist	EIT	10
Sean Prenovost	Staff Engineer	EIT	1
Erek Deutscher	Staff Engineer		2
Richard Mahoney	Manager of Soils Testing	Deputy Inspector	15
Eric Ycoy	Soils Lab Manager-Torrance	Caltrans Certified	15
Henry Kim	Soils Lab Manager-Irvine	Caltrans Certified	34
Ronnie Schmitz	Laboratory-Ontario	Caltrans Certified	5
Janice Krehbiel	Laboratory Mgr – San Diego	Caltrans Certified	21
Douglas Gamblin	Senior Field Technician	Soil/ACI Technician	10
Ray Basilio	Senior Geotechnical Technician	Deputy Inspector	25

GROUP DELTA CONSULTANTS TECHNICAL STAFF QUALIFICATIONS AND EXPERIENCE

NAME	FUNCTION	REGISTRATION	YRS OF EXP.
Mike Jacobs	Senior Geotechnical Technician	Deputy Inspector	20
Arnold Ramirez	Senior Geotechnical Technician	Deputy Inspector	15
Howard Kuzminski	Senior Geotechnical Technician	NICET/ACI	16
Linwood Hayman	Special Inspector	Deputy Inspector	6
Thomas Estes	Special Inspector	Deputy Inspector	35
Daniel Ferguson	Field Technician	NICET/ACI/ICBO	10
Garry Harris	Field Technician		32
Felipe Cisneros	Field Technician	ACI/ICBO/Caltrans	9
Michael Redela	Field Technician	ACI	12
Robert Clevenger	Laboratory Technician	NCMA	3
Tony Echeverria	Laboratory Technician		7
George Stanton	Field Technician	ACI	9
Jason Barron	Field Technician	ACI	9
Jerry Jimenez	CAD-Technical Illustrator		5
Marty Fountain	Field Technician	ACI	12
Support Personnel (50)	Technicians, Inspectors, CADD		5-20