

ATTACHMENT A

In order to provide LACMTA with the services described in the Scope of Work, the CMSSC will need to provide highly qualified, specialized, technical and administrative staff with expertise in the following, but not limited to, areas. The Proposer should not assume they are restricted by the titles of the positions but focus should be trained on the qualifications and experience needed to perform the services as described in this Scope of Work. Labor rates must be commensurate with the role performed.

ADMINISTRATIVE PROJECT MANAGER

The CMSSC Project Manager is responsible for total Contract execution in accordance with the requirements of this Contract between CMSSC and LACMTA and is the primary point of contact for all management, financing and contractual issues.

Examples of Duties

- Maintain liaison with LACMTA representatives to ensure proper and timely involvement as well as maintain a professional and business-like relationship with LACMTA staff throughout the life of the Contract.
- Allocate resources in a timely manner.
- Manage Contract budget and prepare reports as required.
- Control and monitor all costs.
- Understand all aspects of the Contract.

Qualifications:

- Bachelor's Degree in Engineering, Construction Management or Business.
- Minimum of fifteen (15) years senior-level Project Management experience in engineering and construction projects.
- Possess organizational, technical and team building skills to manage and coordinate multi-disciplinary teams.

ADMINISTRATIVE (AIDE, ASSISTANT, ANALYST)

Qualifications:

- High School graduate, College course work or Bachelor's Degree is desirable, but not mandatory.
- Five (5) years General Office experience including two (2) years in the Engineering or Construction industry.
- A Bachelor's Degree may be substituted for three (3) of the five (5) years of General Office experience.
- Requires competence in using Microsoft Excel, Microsoft Word, Microsoft PowerPoint and Sharepoint.

CONFIGURATION MANAGEMENT ANALYST (SENIOR)

Examples of Duties:

- Enter data into Contract Management and MS Sharepoint databases. Create PDF files through scanning or conversion from other format.
- Assist in preparing contract changes.
- Assist in preparing project closeout documentation.

- Reviews contracts and various documents and records for compliance with policies and procedures.
- Coordinates the approval process for documents and contract changes.
- Manage the Document Control/Change Control process and files for all project documents including submittals, contract changes, RFIs/RFCs, correspondence, design documents, reports, meeting minutes and other records. Maintain document control/change control database systems using Primavera's Contract Management.
- Distribute documents and maintain controlled distribution lists.
- Prepares and presents various reports, minutes, and records regarding contract document control/change control issues.
- Assist in preparing project closeout documentation.

Qualifications:

- Five (5) years performing Configuration Management work.
- Experience with Primavera's Contract Management Document/Configuration control databases reporting preferred; experience with Adobe Acrobat writer desirable.
- Valid California Class C driver license.

CONSTRUCTION RELATIONS OFFICER

Example of Duties:

Serves as an assistant reporting to LACMTA Construction Relations Manager, contractor, elected officials, business, professional, civic, governmental and community stakeholder groups regarding construction of the Westside Subway Extension project.

- Coordinating communications and outreach efforts
- Providing regular project updates to diverse constituents
- Maintaining records and preparing routine and special reports and correspondence
- Attending relevant construction preparedness meetings and authoring construction notices for public dissemination
- Explore mitigation of construction impacts in collaboration with project team and contractor
- Coordinating with contractor and relevant government agencies on project related issues and activities

Qualifications:

- Three (3) years experience in Community Relations dealing with the interface of construction activities, government agencies, businesses and the general public.
- Bachelor's Degree in Marketing, Communications, Political Science or other related field is desirable.

CONSTRUCTION CLAIMS (ANALYST, ADMINISTRATOR, ENGINEER)

Qualifications:

- Ten (10) years experience in Engineering and Construction Project Control including preparation of Critical Path Method (CPM) scheduling.
- Five (5) years experience in Independent Impact Analysis associated with Contractor Delay Claims.

- Five (5) years experience in developing Cost Schedules, Financial Reporting and Forecasting.
- Bachelor's Degree in Engineering, Business or related subject is desirable.
- Successful track record in negotiating and resolving contractor claims.
- Ability to use advanced computer techniques to develop graphic presentations and schedules.
- Experience preparing and presenting arguments in front of a Disputes Review Board.

CONSTRUCTION CLAIMS LITIGATION SUPPORT SPECIALIST

Examples of Duties:

Provide support to resolve the backlog of outstanding claims on the projects, and assist in negotiations and settlement thereof. This task may include but is not limited to the following specific activities:

- Review documentation and perform analysis, including review of schedule, cost estimates, contract drawings, specifications and special studies.
- Assist in presentations to Disputes Review Board (DRB).
- Update the LACMTA claims file with pertinent data, using the LACMTA Change Control PMIS System.
- Value claims and prepare settlement strategies.
- Provide Claims Analysis support for LACMTA legal and outside counsel.

Qualifications:

- Bachelor's Degree in Engineering, Architecture, Construction Management, Business, or related field is desirable.
- Successful track record in negotiating and resolving Contractor Claims.
- Ability to use advanced computer techniques to develop graphic presentations and schedules.

CONSTRUCTION INSPECTION (SENIOR)

Examples of Duties:

- Issues non-conformances to contractors on process or materials not conforming to contract documents.
- Reviews construction records and daily inspection reports to monitor quality and quantity of the work of inspection staff and initiates corrective action as necessary.
- Reviews submitted shop drawings for any deviation from contract documents, notifying the project manager of any discrepancies found.
- Makes inspection reports on the quality of materials and workmanship entering into construction.
- Recommends, drafts, enforces, and outlines construction inspection policies and procedures as required.
- Performs inspection of building and facility projects to determine the quality of workmanship and materials used, such as foundations, building, electrical, plumbing, and mechanical systems conform to the contract documents, applicable codes and state and federal requirements.
- Confirm that structural and architectural changes, including changes to the mechanical electrical and plumbing systems have been approved by the appropriate authority.

- Arranges, coordinates, and oversees special inspections such as structural masonry, structural steel, welding, and reinforced concrete. Checks tests results for conformance to specification requirements.
- Approves or rejects construction materials based on conformance with specifications.

Qualifications:

- Ten (10) years experience in construction quality inspection in heavy civil construction projects.
- ICC Certificate of Reinforced Concrete or Masonry, ACIA Registered Construction Inspector License, or comparable Deputy Inspector License from a County or City agency is highly desirable.

CONSTRUCTION MANAGER (SENIOR)

Examples of Duties:

- Perform constructability reviews to assess consistency within, and between, the drawings, specifications, and other contract documents and to identify any inconsistencies between documents. Suggest revisions and/or mitigation efforts to reduce the probability of contract change orders and contractor claims. The reviews will also address construction staging; required construction techniques; alternative designs, methods and equipment; adequacy and appropriateness of materials and products specified; definition of easements and real estate requirements; and adequacy/layout of contractor storage and staging areas. Specific review and assessments will be conducted of the special conditions and provisions relating to time of completion, milestone dates, liquidated damages, Disadvantaged Business Enterprise (DBE) goals, temporary facilities and utilities, permits, and specialty items including historical landmarks, art work, archaeology, etc. If requested, provide assistance in the development of the Liquidated Damages cost data.
- Coordinate the interface between the Project and adjoining contracts, adjoining utility systems, and follow-on systems. Contracts shall be checked for appropriateness and to assure no duplication of work between contractors and no scope left unassigned to a contractor.

Qualifications:

- Bachelor's Degree in Engineering, Architecture or a closely related field is desirable but not mandatory.
- At least twenty (20) years experience in Heavy Civil Construction with five (5) years in construction of rail transit systems, five (5) years in tunnels, and five (5) years in Top Down Construction in an urban area.
- One staff member must also have at least five (5) years experience in Underground Tunnel Construction.
- State of California Professional Engineering registration is desirable.
- Cal-OSHA/OSHA 30 training certification.
- Experience in the management of construction of four of the following: Rail Transit, Tunnels, Deep Excavations, Urban Construction, and Major Utility Relocations.
- **Certified Construction Manager desirable.**

CONSTRUCTION MANAGER / RESIDENT ENGINEER

Examples of Duties:

- Support management of Rail Transit Tunnel project. Act as Construction Manager/Resident Engineer overseeing the activities of Office Engineers, Construction Inspectors, and Administrative personnel. Monitor contractors' work for compliance to schedule, Budget, Technical Specifications, and Legal Requirements. Resolve design and field construction problems. Attend progress meetings and reports on project status. Expedite design and field changes. Review contractor requests for change and, when appropriate, assist in the preparation of contract change orders/modifications. Assist the LACMTA Contracting Officer in the negotiation contract changes. Communicate and implement safety rules, policies, and procedures in support of LACMTA's safety vision and goals to contractors and subordinate personnel.

Qualifications

- Bachelor's degree in Engineering, Architecture, Construction Management or other related field.
- Twenty (20) years of experience in Construction Management of Large Complex Heavy Civil Engineering projects.
- Five (5) years of supervisory experience in the management of Major Construction Contracts.
- Valid California Class C driver's license.
- State of California Professional Engineering registration or ability to obtain within six (6) months.
- **Certified Construction Manager highly desirable.**
- Experience in the management of construction of four of the following: Rail Transit, Tunnels, Deep Excavations , Urban Construction, and Major Utility Relocations.
- Cal-OSHA/OSHA 30 training certification.

CONSTRUCTION RELATIONS SPECIALIST

- A professional with community outreach experience and excellent communication and issue resolution skills to be applied to the construction of a major transit project.
- Specialist shall be located at the Integrated Project Management Office and requires time in the field as well as at the Metro headquarters at Gateway Center in the Union Station complex of Los Angeles.
- Evening and weekend work may be required due to participation in community meetings and events.
- Proficiency in a 2nd language, such as Spanish and Korean, is a plus.

Example of Duties:

- Coordinate communications and outreach efforts Provide regular project updates to diverse constituents
- Lead a project-wide effort on way finding
- Maintain records and prepare routine and special reports and correspondence
- Attend relevant construction preparedness meetings and author construction notices for public dissemination
- In collaboration with the project team and contractor, explore mitigation of construction impacts
- Coordinate with contractor and relevant government agencies on project related issues and activities
- Other duties as assigned

Qualifications:

- Bachelor's degree - Communications, Journalism, Marketing, Political Science, or other related field
- 2 years journey-level experience performing community relations for a government or public agency

CONSTRUCTION SAFETY STAFF:**Examples of Duties:**

- Become familiar with the Construction Safety and Security requirements of the Project.
- Perform Site Safety and Security Reviews including, but not limited to, Construction Equipment, Personnel, Work Procedures and Traffic Control.
- Provide counseling and intervention to correct observed hazardous, at risk, or non-compliant work activities.
- Review identified uncontrolled hazards or security vulnerabilities with contractor supervision and establish agreement regarding future compliant controls for identified hazards.
- Provide daily reports with photographs, in a manner agreed to prior to the work, to LACMTA Construction Safety.
- When requested, respond to construction incident scene(s) and assist LACMTA Construction Safety personnel with major incident investigations.
- Provide other Construction Safety and Security field services, as directed.

CONSTRUCTION SAFETY PROFESSIONAL (HEAVY CIVIL)**Qualifications:**

- Ten (10) years experience in Heavy Civil Construction.
- Five (5) years experience in Heavy Civil Construction safety with progressively greater responsibilities.
- Bachelor's Degree in Safety Management, Basic Sciences, Engineering or related field is desirable.
- Construction Safety & Health Technician designation.
- Board Certified Safety Professional (CSP) designation.
- Current certification in First Aid, and CPR.
- Cal-OSHA/OSHA 30 training certification.

CONSTRUCTION SAFETY PROFESSIONAL (TUNNEL)**Qualifications:**

- Ten (10) years experience in Tunnel Construction or Heavy Civil construction.
- Five (5) years experience in Tunnel Construction Safety with progressively greater responsibilities.
- Bachelor's Degree in Safety Management, Construction Management, Basic Sciences, Engineering or related field is desirable.
- Board Certified Safety Professional (CSP).
- Licensed by the California Division of Occupational Safety and Health (Cal-OSHA), Mining & Tunneling Unit as an Underground Tunnel Safety Representative.
- Licensed by the California Division of Occupational Safety and Health (Cal-OSHA), Mining & Tunneling Unit as an Underground Tunnel Gas Tester.
- Current certification in First Aid, and CPR.

- Cal-OSHA/OSHA 30 training certification.

CONTRACT ADMINISTRATOR

Qualifications:

- Bachelor's Degree – Business, Public Administration, Engineering or Construction Management
- 4 Years experience performing contract administration work

CONTRACT ADMINISTRATOR (SENIOR)

Examples of Duties:

Assists in the following: Preparation of contract documents for pre-award solicitations and post award administration; monitoring contract compliance; preparation of modifications/change orders; preparation of cost analysis and pre-negotiation plans, evaluation and resolution of claims; participating in documenting final inspection, final acceptance, and preparation of close out documents; preparation of reports and other correspondence; interfacing with contractors and agency personnel; and other related work and duties.

Qualifications:

- Bachelor's degree – Business, Public Administration, or other related field
- Minimum of five (5) years journey-level experience performing contract administration work
- Valid California Class C Driver License

COST/SCHEDULE ANALYST (SENIOR)

Examples of Duties:

- Employ quantitative engineering models to implement Performance Measurement reporting and Forecasting of project budget, Finance and Schedule.
- Coordinate preparation of "what if" plans (sensitivity analysis) to mitigate cost overruns and/or schedule delays. Investigate opportunities to enhance schedule without affecting cost.
- Coordinate preparation of Cost Reduction, Value Engineering, and Risk Assessment recommendations for project cost effectiveness.
- Assist in determining the scheduling sequence for equipment procurement and all phases of construction, testing and start up to achieve the schedule project completion.
- Analyze and provide alternatives and expected outcomes to avoid potential project schedule delays and claims.
- Prepare and maintain detailed project schedules to establish optimal contract interfaces and determine activity relationships to accurately plan project completion.
- Prepare and review special studies, cost forecast and time impact analyses.

Qualifications:

- Ten (10) years project control experience in large civil projects.

- Bachelor's Degree in Engineering, Construction Management or Business or other related field is desirable.
- Knowledge of Spreadsheet– EcoSys desirable, Graphics, and DataBase Management, P6 Scheduling Program – including cost and resources - and word processing software.
- AACE International Certification is preferred, but not required.

OFFICE ASSISTANT

Qualification:

- Valid Class "C" driver's license.

DOCUMENT CONTROL/CONFIGURATION MANAGEMENT (CLERK, TECHNICIAN, SPECIALIST, ANALYST)

Qualification:

- Three (3) years experience performing Configuration Management work.

ENVIRONMENTAL OFFICER (SERVICES, COMPLIANCE)

Qualifications:

- Bachelor's Degree in Environmental Engineering, Environmental Planning, Urban Planning or other related field.
- Five (5) years experience in Environmental Engineering or Compliance.
- California Registration as a Professional Engineer. LEED Accredited Professional (with specialty designation for new construction, preferred).
- OSHA Hazardous Waste Operator 40-Hour Training with current 8-hour OSHA Hazardous Waste Operator Refresher Certification. OSHA Hazardous Waste Supervisor Certification preferred.

PRINCIPAL LEVEL ENVIRONMENTAL SPECIALIST

Qualifications:

10 + years experience with a minimum BS degree in engineering/environmental or Geology and PE or RG certifications. Experience with management of groundwater and soil site investigations, (Phase I and II ESA's) soil and groundwater treatment systems, NPDES and Sewer discharge permitting, construction dewatering, asbestos and lead paint abatement and demolition protocols, contaminated waste management, profiling, UST/FST removals and regulations, State and Local SWPPP stormwater regulations, SUSMP, Waste Water requirements, Construction Noise, CEQA and NEPA experience in a particular with historical buildings, archeology, paleo and native american interactions. Experience working with various regulatory agencies, RWQCB, AQMD, DTSC, LADPW ,LAFD. It is desired that Candidate has experience with transit related projects and should provide examples. FTA and Caltrans project experience is also desired. A strong geotech background and tunneling experience would be a bonus.

SENIOR LEVEL ENVIRONMENTAL SPECIALIST

Qualifications:

5 + yrs experience with an enviro science or engineering degree. Experience with groundwater and soil investigations, construction SWPPP BMPs, NPDES permitting,

dewatering, asbestos and lead based paint abatement on commercial structures, regulatory agency experience, waste management, environmental construction, mitigation plan monitoring and reporting, DTSC experience.

ESTIMATOR (UTILITY, CIVIL, STRUCTURAL, ELECTRICAL, MECHANICAL, TRACKWORK, TUNNEL, SYSTEMS)

Qualifications:

- Bachelor's Degree in Business, Finance, Engineering or Construction.
- At least seven (7) years experience in performing Cost Estimates, Reviewing Contractor's Price and Cost Proposals in the appropriate discipline for major engineering and construction projects.

GEOLOGIST

Qualifications:

- Must have a minimum of ten (10) years professional experience working with Tunnel or Deep Excavations.
- Capable of performing analysis of Borehole Logs and Laboratory Tests of soil samples.
- California registration as a Geologist.

GEOTECHNICAL ENGINEER INSTRUMENTATION SPECIALIST

Example of Duties:

- Responsible for overseeing, reviewing or developing a surveying and geotechnical instrumentation monitoring plan for Tunnels and Deep Excavations.
- Organizes teams of surveyors, geologists and engineers to oversee, verify or monitor ground and structure behavior during tunneling and cut and cover excavations to ensure structure stability and conformance with tunneling specifications.
- Insures timely review, interpretation and compilation of survey and geotechnical monitoring data -
- Utilize or develop software for collecting or presenting data in graphical form and electronic transfer of data to the parties involved to minimize reporting times. Includes analysis of data to compare to allowable values and observe trends.
- Communicates with LACMTA, Engineering Management Services Contractor and Design-build Geotechnical Engineer.
- .

Qualifications:

- Bachelor's Degree in Geology, Civil or Structural Engineering or related field. California registration as a Geotechnical Engineer.
- Must have a minimum of Ten (10) years Professional Engineering experience in Geotechnical/Tunnel and Cut and Cover design as well as a Geotechnical Instrumentation Installation and Monitoring.
- A strong knowledge of survey and geotechnical instrumentation that includes but is not limited to Multi-point Borehole Extensometers, Settlement Reference Points, Optical Prisms, Inclinometers, Groundwater Monitoring Wells, Strain Gages, Piezometers, and Extensometers
- Familiarity with Borehole Logging, Laboratory Testing of Soil Samples, installation and removal of instrumentation is essential.
- Three (3) years experience in managing a Geotechnical Instrumentation program on a tunnel project including TBM.

GEOTECHNICAL INSTRUMENTATION SPECIALIST

Example of Duties:

- Performs monitoring of geotechnical and survey instrumentation.
- Assists the CMSSC Geotechnical Engineer or the Engineering Management Support Services Contractor in the collecting, interpreting, analyzing and presenting geotechnical and survey monitoring data.

Qualifications:

- Bachelor's Degree in Geology, Civil or Structural Engineering or related field.
- Familiarity with Geotechnical/Tunnel and Cut and Cover design and construction.
- Familiarity with Geotechnical Instrumentation Installation and Monitoring. A knowledge of survey and geotechnical instrumentation that includes but is not limited to Multi-point Borehole Extensometers, Settlement Reference Points, Optical Prisms, Inclinedometers, Groundwater Monitoring Wells, Strain Gages, Piezometers, and Extensometers
- Familiarity with Borehole Logging, Laboratory Testing of Soil Samples, installation and removal of instrumentation is essential.
- Three (3) years experience in design and construction of large civil projects.

GRAPHICS SPECIALIST

Qualifications:

- Associate's Degree in Graphics, Art, Advertising or related field.
- Three (3) years experience in Graphic Design or Advertising and Production, and knowledge of a variety of graphics software.

INSPECTOR (ASSOCIATE, SENIOR, LEAD) For (UTILITIES, CIVIL, ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL, TRACKWORK, TUNNEL, SYSTEMS)

Examples of Duties:

- Visits construction sites and inspects each stage of construction up to completion. Interpret plans, specifications, and codes and verifies contract work is performed in accordance with them. Assist in obtaining approved designs and permits from utility companies for services to construction sites.
- Monitor construction sites for safety violations. Prepares Non-Conformance Reports when work is not performed to the approved standards. Maintains daily activity logs and reports.
- Review or prepare interim progress reports for contractor payments. Monitor contractor-testing activities. Prepare reports on labor, material, and equipment on site. Determine construction conforms to plans and specifications; if not issue Non-Conformance Reports for corrective action.

- Assist in maintaining, supporting, and promoting a safe work environment while complying with LACMTA's safety rules, policies, and procedures.
- Coordinates preparation of inspection cost estimates and maintenance records.
- Arranges, coordinates and oversees technical inspections such as electrical, mechanical, landscaping, soil testing, concrete, and asphalt mixes, and reinforcing steel for conformance to specification requirements.
- Coordinates Metro Test laboratory activities and compares verifications test results with result from Contractor's laboratory.
- May allocate inspection resources and supervise inspectors.

Qualifications:

- Five (5) years experience for Associate positions, ten (10) years experience for Senior and Lead positions which reflect a progressively increasing level of responsibility on complex projects as a General Contractor, Building Construction Supervisor, Building Inspector of large commercial or industrial construction projects, heavy construction projects, transportation, or transit construction projects for the appropriate disciplines including utilities, civil, architectural, structural, electrical, mechanical trackwork, and tunnel systems.
- ICC Certificate of Reinforced Concrete or Masonry, ACI Registered Contracting Inspector License, comparable Deputy Inspection License for a county for city agency. NICET certification, or other alternative certification from an acceptable nationally recognized organization is highly desirable where applicable to Inspection of that particular trade.
- Cal-OSHA/OSHA 30 training certification.

Additional requirements for Tunnel Inspector:

- At least ten (10) years of recent experience in Construction Management, of which at least five (5) years in Tunnel Inspection of large and complex engineering/construction projects.
- Experience in two projects or more of relevant, verifiable Tunneling projects with features similar to those of the assigned project. This experience shall include Verifiable Earth Pressure Balance or Slurry TBM projects of diameter greater than 15 ft.
- Full knowledge of Tunnel Inspection methods and Current Tunnel Construction techniques; Construction Materials necessary to determine the quality and correct use in projects; and the safe working habits and regulations in relation to different phases of construction.

Additional requirements for Trackwork Inspector:

- A minimum of five (5) years of journey-level experience inspecting, constructing and performing installation, repair and maintenance of rail, track work (ballasted and direct fixation) and related facilities.

ITS NETWORK USER SUPPORT (TECHNICIAN, ANALYST, ENGINEER)

Qualification:

- Minimum three (3) years experience in Computer Hardware, Networking Diagnostic and Repair.

NEW MEDIA/COMMUNICATIONS OFFICER

- A professional with community outreach experience, social media and excellent communication skills to be applied to the construction of a major transit project.
- Position is located at the Integrated Project Management Office. Work will also be required in the field, as well as at the Metro headquarters at Gateway Center in the Union Station complex in Los Angeles.
- Evening and weekend work may be required, due to participation in community meetings and events.
- Proficiency in a 2nd language, such Spanish or Korean, is a plus.
- The selected New Media/Communications Officer will report to the Construction Relations Manager responsible for the construction impact program of a major transit project and to the Communications Manager in Construction Relations.
- Provide support to the Construction Relations team on a major capital project by coordinating and overseeing the production of major transit communications, promotional and educational materials, through online, hard copy and social media channels.

Example of Duties:

- Coordinates communications and outreach efforts through social media and project website
- Writes original content for project website, social outreach tools and collateral material
- Develops project-specific social media outreach plan
- Plans and implements publicity efforts, strategies and outreach campaigns utilizing social media tools
- Coordinates participation of the project team in alternative outreach efforts, such as online briefings, chats, etc., in collaboration with Media Relations
- Manages the visual communications for capital projects
- Provides verbal or written responses concerns from internal and external customers
- Recommends strategies to promote Metro's strategic goal and objectives
- Maintains records and prepares routine and special reports and correspondence
- Keeps abreast of current and proposed activities and project status by attending internal project team and external community meetings
- Promotes Metro construction projects by disseminating public information, assisting with special events, and interacting with community groups to obtain their input
- Conducts tours of Metro facilities
- May prepare reports, newsletters, correspondence or speaking points, as requested by project management, Media Relations or elected officials
- Photographs project milestones, meetings and other relevant events as needed
- Creates video clips used to educate the public about construction activities or other related topics
- Shares original content with blogs and posts to social media sites
- Other duties as assigned

Minimum Qualifications

- Bachelor's degree - Communications, Journalism, Marketing, English, or other related field
- Two years journey-level experience performing public affairs or community relations for a government or public agency
- Must have strong knowledge of social media applications and technologies
- Strong writing and communication skills
- Strong ability to self-manage schedule and project to meet deadlines and goals
- Graphic design experience

- Proficiency in Microsoft Office software and graphic design software

NON DESTRUCTIVE TESTING PERSONNEL (ASNT NDE LEVEL III)

Examples of Duties:

- Evaluate and approve contractor NDE personnel qualifications and nondestructive testing procedures; establish and approve techniques, interpret codes, standards, specifications and procedures; and as appropriate designate the particular NDE methods, techniques and procedures to be used.
- Interpret and evaluate results in terms of existing codes, standards and specifications.
- Assist the contractor to establish techniques and acceptance criteria when none are otherwise available.
- Assess the appropriateness of NDE methods, and evaluate the ability of nondestructive testing laboratories to comply with the requirements of national standards used for accreditation.
- Perform routine surveillance, inspection and monitoring of the NDE and welding activities carried out on the construction sites and/or contractor's facilities. Ensure implementation of all requirements of relevant codes & standards, welding specifications, and Method Statements, including audits and inspections of contractors.
- Evaluate the quality of products / consumables / materials to comply with requirements of established Standards & Specifications and issue Non-Conformance Reports as necessary.
- Evaluate all the personnel employed and operating in welding and NDE activities to determine they are duly skilled and qualified in accordance with the applicable specifications, codes and regulations.
- Determine that all the utilized equipment and consumables are of the appropriate and approved/certified type and are in a good status of maintenance and sufficient in number.
- Assist the contractors in the process of issuing, qualifying and implementing their NDE and welding procedures in accordance with approved relevant technical documents.
- Review / comment on submittals, procedures, specifications and other project technical documentation, including contractor's documentation, regarding NDE and Welding.
- Actively participate in maintaining and upgrading of LACMTA specifications, procedures and policies for compliance with Codes, Standards, industry and governmental requirements.
- Audit and inspect contractor equipment. Advise and assist contractors in maintaining and upgrading their equipment to ensure high quality job. Trouble shooting.

Qualifications:

ASNT Level III personnel must satisfy one of the following criteria:

- Minimum of a Bachelor's Degree in Engineering or Physical Science, plus one (1) year of experience in nondestructive testing in an assignment comparable to that of a Level II in the applicable test method(s), as defined in ASNT's Recommended Practice No. SNT-TC-1A, latest edition; or
- Completed with passing grades at least two (2) full academic school years of Engineering or a Physical Science study at a university, college, or technical school, plus two (2) years of experience in nondestructive testing in an assignment comparable to that of an Level II in the applicable test method(s), as defined in ASNT's *Recommended Practice No. SNT-TC-1A*, latest edition; or

- Four (4) years of experience in an assignment at least comparable to that of a Level II in the applicable test method(s), as defined in ASNT's *Recommended Practice No. SNT-TC-1A*, latest edition.
- Bachelor's Degree may be substituted for experience as indicated.

OFFICE ENGINEER

Examples of Duties:

- Review, track, process and distribute submittals, RFI's, RFC's, design submittals, shop drawings, product data, and work plans. Review submittals, deliverables and other construction documents for completeness and accuracy.
- Receive, record and compile review comments. Maintain a list of submittals, deliverables and other construction documents.
- Report on progress of submittal, RFI, and design submittal reviews at progress meetings.
- Develop and maintain spreadsheets. Update and utilize Primavera's Contract Management Software.
- Maintain a set of progress prints of all drawings and specifications that include but are not limited to scope and contract drawings, design progress drawings, AFC drawings, shop drawings, contract specifications and AFC specifications.
- Prepare work plans, drawings, safety guidelines, maintenance requirements, training requirements, specifications, estimates, and operational needs. Analyzes data, specifications, and drawings/blueprints. Assist in monitoring work for compliance with schedule, budget, technical, safety, and legal requirements. Review new rules, regulations, and codes for project applicability. Prepare technical reports, feasibility studies, economic analyses, and correspondence. Assist in coordinating services with outside agencies. Maintain projects files and records. Interpret contract specifications, codes and safety orders. Supervise subordinate staff.

Qualifications:

- Five (5) years of experience working on large construction projects.
- Bachelor's degree in Engineering, Architecture, Construction Management or other related field.
- Valid California Class C driver's license.
- Engineer-in-training registration is required. Registration as a Professional Engineer is desirable.

OFFICE ENGINEER ASSISTANT (OR ASSISTANT OFFICE ENGINEER)

Examples of Duties:

- Provide clerical assistance to the office engineer.
- Develop and maintain spreadsheets. Update and utilize Primavera's Contract Management Software.

Qualifications:

- Bachelor's or Associates degree preferred.
- Valid California Class C driver's license.

- Three (3) years Clerical experience or Office Administration experience in construction field.
- Proficiency in using Microsoft Word, Excel and Power Point software.

QUALITY ENGINEER

Qualifications:

- Bachelor's Degree in Engineering or other related field, experience with Construction Engineering, Inspection and Testing for large infrastructure projects, understanding of Construction Testing Disciplines, such as welding, non-destructive testing, electrical systems design and testing, rail and rail systems design, tunnel construction, train control systems, including trackwork components and structures for transit systems.
- Five (5) years experience conducting Quality Assurance Audits/Surveillance of Engineering Design and Construction Activities.
- Registration as a Professional Engineer.
- Either a Certified Quality Auditor or a Registered Lead Assessor under ISO 9000.
- PC computer literate in word processing, spreadsheet, database and statistical analysis applications and possess well developed communication and analytical skills.
- In addition, specific individual positions will require additional certifications, in such disciplines as:
 - American Society of Non Destructive Testing (ASNT).
 - American Welding Society (AWS) as a Certified Weld Inspector.
 - American Concrete Institute (ACI) Level.

PRINCIPAL PALEONTOLOGIST

Qualifications:

- Qualified Principal Paleontologist with a Graduate Degree
- Ten (10) years experience as a principal paleontologist and having demonstrated expertise in vertebrate paleontology.

PRINCIPAL ARCHEOLOGIST

Qualifications:

- Registered Professional Archeologist with a Graduate Degree.
- Ten (10) years experience in Archeology.

PALEONTOLOGIST/ARCHEOLOGIST

Qualifications:

- Qualified Paleontologist or Qualified Archeologist and cross-trained Paleontologist with a Bachelors Degree.
- 5 years experience in the field of Paleontology and Archeology

QUALITY ENGINEER (SENIOR)

Examples of Duties:

- Perform construction audits for all transit construction projects.
- Evaluate quality systems and performance.
- Conduct audits of manufacturers, suppliers, installation contractors, systems integration and acceptance testing.
- Perform quality engineering for test and equipment acceptance.
- Conduct quality surveillance of specific quality related activities.
- Prepare narrative and statistical reports.
- Review and accept quality program submittals for compliance, as required by contract documents.
- Perform quality input to design documents.
- Provide quality engineering support to LACMTA construction managers, resident engineers, contractors, and equipment manufacturers as required.
- Analyzes data for development of quality trend reports.

Qualifications:

- Bachelor's Degree in Engineering or related field.
- Five (5) years experience in construction auditing, including three years as a Lead Auditor
- Registered Lead Assessor or Certified Lead Auditor.

QUALITY ASSURANCE INSPECTOR (SENIOR)

Examples of Duties:

- Meets with contractors, and representatives of other agencies to analyze problems and recommend solutions to immediate and longer range construction issues.
- Issues non-conformances to contractors on incorrect construction methods or materials found during audit, inspection, or surveillance.
- Arranges and conducts job site conferences with Technical Consultants, Engineers, Architects, and Subcontractors to review project requirements and clarify or resolve any questions or problems prior to commencing work.
- Advises Commissioned Architects, Engineers, and Contractors regarding LACMTA Construction requirements and policies.
- Coordinates preparation of inspection cost estimates and maintenance records, reviews construction records and reports to monitor quality and quantity of the work of inspection staff and initiates corrective action as necessary.
- Reviews submitted shop drawings for any deviations from contract documents, notifying the project manager of any discrepancies found.
- Makes inspection reports on the quality of materials and workmanship entering into construction.
- Recommends, drafts, enforces, and outlines construction inspection policies and procedures as required.
- Assists in the preparation of briefs on arbitration disputes.
- Performs inspections of building and facility projects to determine the quality of workmanship and materials used, such as foundations, building, electrical, plumbing, and mechanical systems conform to the contract documents, applicable codes and state and federal requirements.
- Confirm that structural and architectural changes, including changes to the mechanical, electrical, and plumbing systems have been approved by the appropriate authority.
- Arranges, coordinates, and oversees special inspections such as structural masonry, structural steel, welding, and reinforced concrete, technical inspections such as

electrical, mechanical, landscaping, soil testing, concrete and asphalt mixes, and reinforcing steel, checking test results for conformance to specification requirements.

- Approves or rejects construction materials based on conformance with specifications.

Qualifications:

- Five (5) years experience in construction quality inspection in heavy civil construction projects.
- Equivalent to a Bachelor's Degree from an accredited college with coursework in Engineering, Quality or Architecture is desirable
- Experience on a construction project as a lead/working supervisor or field superintendent, architectural/engineering project field coordinator or inspector of facility construction for compliance with building codes, plans, and specifications.
- Additional experience in Technical Inspection may be substituted for the required education on a year-for-year basis.
- Possession of a directly related postgraduate degree may substitute for one (1) year of the required experience.

Licenses and Certificates:

Must possess at least one of the following, as applicable to the type of inspection:

- Valid certification from the International Code Council (ICC) in Commercial Building Inspection.
- Valid certification as a Class 1, Class 2, or Class 3 General Inspector by the Division of the State Architect.
- Possession of a certificate in general building construction, inspection, or code enforcement from the American Construction Inspector's Association or other similar association or regulatory governmental organization.
- Valid certification to the latest standard from the American Welding Society as a certified welding inspector AWS QC1.
- Valid certification to the latest standard from the American Concrete Institute as an ACI Level II.
- Valid certification to the latest standard from the American Society for Nondestructive Testing as an ACCP level II.

RAIL ACTIVATION (ADMINISTRATOR, ENGINEER)

Qualifications:

- Five (5) years management-level experience in rail transit operations, maintenance, or start up.
- Bachelor's Degree - Business, Public Administration, Engineering, or other related field is desirable.
- Knowledge of theories, principles, and practices of public rail transit operations and maintenance.
- Knowledge of applicable local, state, and federal laws, rules, and regulations governing public transportation services including, but not limited to, California Public Utilities Commission requirements.
- Knowledge of staffing, training, rules, procedures, and activities involved in test and startup of rail transit systems.
- Knowledge of modern management theory.

- Any combination of training, education, and experience, which demonstrates the ability to perform this position's duties.
- Valid California Class C driver's license.

RAIL ACTIVATION COORDINATOR

Examples of Duties:

- Support LACMTA's operation and maintenance planning; line planning, integrated test plan, testing, and other assignments as required. Update, as necessary, the activation plan, operating schedules and staffing levels. Prepare final estimate of O & M costs
- Review and support system safety certification, fire/life, system security, and operational safety plans.
- Review, operating and maintenance of manual submittals for approval, conditional approval, or disapproval. Provide list of manual delivery dates, from contractors to LACMTA Operations. Coordinate timely delivery of manuals from construction manager and contractors to LACMTA Operations.

Qualifications:

- Five (5) years management level experience in rail transit operations, maintenance, or start up.
- Bachelor's Degree in Business, Public Administration, Engineering, or other related field is desirable.
- Knowledge of theories, principles, and practices of public rail transit operations and maintenance.
- Knowledge of applicable local, state, and federal laws, rules, and regulations governing public transportation services.
- Knowledge of staffing, training, rules, procedures, and activities involved in test and startup of rail transit systems.
- Knowledge of modern management theory.
- Any combination of training, education, and experience, which demonstrates the ability to perform this position's duties.
- Valid California Class C driver's license.

RECEPTIONIST

Qualification:

- One (1) year clerical experience and ability to answer telephones in a professional manner as well as ability to coordinate visitors to the office.

REPORTS COORDINATOR

Qualification:

- Three (3) years experience developing reports using Microsoft Word, PowerPoint, Access Database, and Excel.

RESIDENT ENGINEER/CONSTRUCTION MANAGER (Transit/Systems)

Qualifications:

- Bachelor's Degree in Construction Management or Engineering is desirable.
- An additional five years experience may be substituted for the Bachelor's degree in addition to the fifteen (15) years minimum required experience.

- At least fifteen (15) years experience in Civil Construction with ten (10) years experience in construction of transit systems.
- Experience as a Resident Engineer/Construction Manager on a design-build project of at least \$100 million.
- Cal-OSHA/OSHA 30 training certification.

RESIDENT ENGINEER/CONSTRUCTION MANAGER (TUNNELS)

Qualifications:

- Bachelor's Degree in Construction Management or Engineering.
- At least fifteen (15) years experience in Heavy Civil Construction with ten (10) years experience in Construction of Tunnels.
- An additional five years experience may be substituted for the Bachelor's degree in addition to the fifteen (15) years minimum required experience.
- Two or more projects using Verifiable Earth Pressure Balance or Slurry TBMs of diameter greater than 15 ft.
- Experience as a Resident Engineer/Construction Manager on a design-build project of at least \$100 million.
- Cal-OSHA/OSHA 30 training certification.
- Certification of training on Title 8 Tunnel Safety Orders.

RESIDENT ENGINEER/CONSTRUCTION MANAGER (STATIONS)

Qualifications:

- Bachelor's Degree in Construction Management or Engineering.
- At least fifteen (15) years experience in Heavy Civil Construction with ten (10) years in construction of Rail Transit Systems.
- An additional five years experience may be substituted for the Bachelor's degree in addition to the fifteen (15) years minimum required experience.
- Experience of Top Down Construction in an urban area.
- Experience as a Resident Engineer/Construction Manager on a design-build project of at least \$100 million.
- Cal-OSHA/OSHA 30 training certification.

RESIDENT ENGINEER/CONSTRUCTION MANAGER (CUT AND COVER TUNNELS)

Qualifications:

- Bachelor's Degree in Construction Management or Engineering.
- At least fifteen (15) years experience in Heavy Civil Construction with ten (10) years experience in Construction of Tunnels.
- An additional five years experience may be substituted for the Bachelor's degree in addition to the fifteen (15) years minimum required experience.
- Two (or more) projects using Top Down Construction in an urban area.
- Experience as a Resident Engineer/Construction Manager on a design-build project of at least \$100 million.
- Cal-OSHA/OSHA 30 training certification.

RESIDENT ENGINEER/CONSTRUCTION MANAGER (SEQUENTIAL EXCAVATION METHOD)

Qualifications:

- Bachelor's Degree in Civil, Mining or Geotechnical Engineering.
- Fifteen (15) years experience in Tunnel Engineering or Construction of which five (5) years in Field Engineering of Sequential Excavation of large caverns of span greater than 50 ft.
- An additional five years experience may be substituted for the Bachelor's degree in addition to the fifteen (15) years minimum required experience.
- Experience as a Resident Engineer/Construction Manager on a design-build project of at least \$30 million.
- Cal-OSHA/OSHA 30 training certificate.

RESIDENT ENGINEER/CONSTRUCTION MANAGER (UTILITY DIVERSIONS)

Qualifications:

- Bachelor's Degree in Construction Management or Engineering highly desirable.
- At least fifteen (15) years experience in Civil Engineering Construction with ten (10) years Construction of Utilities.
- An additional five years experience may be substituted for the Bachelor's degree in addition to the fifteen (15) years minimum required experience.
- Experience in relocation of all utilities including water, natural gas, power, sanitary sewers, storm drains, and communications.
- Local Los Angeles experience in coordination with utility owners highly desirable.
- Experience in Street Restoration including Road Pavement, Curb and Gutter.
- Experience as a Resident Engineer/Construction Manager on a design-build project of at least \$30 million.
- Cal-OSHA/OSHA 30 training certification.

ASSISTANT RESIDENT ENGINEER/ASSISTANT CONSTRUCTION MANAGER

- Assist the Resident Engineer/Construction Manager in their duties.
- Assist in obtaining approved designs and permits from utility companies for services to construction sites.
- Participate in submittal, RFI, RFC, design submittal, claim reviews and responses.
- Monitor and report on construction progress. Participate in meetings.
- Provide technical scope and justification for Contract Changes.

Qualifications:

- Bachelor's Degree in Construction Management or Engineering.

- At least ten (10) years experience in Civil Construction with five (5) years in Construction of Transit Systems.
- Experience as an RE Assistant on projects valued over \$30 million dollars.

SECRETARY

Qualifications:

- Two (2) years Secretarial or Clerical experience or Associate's Degree or equivalent units in Office Administration.
- Proficiency in using Microsoft Word, Excel and Power Point software.

SOCIAL MEDIA/COMMUNICATIONS OFFICER

Example of Duties:

Provides support to the Construction Relations team on a major capital project by coordinating and overseeing the production of major transit communications, promotional and educational materials, through online, hard copy and social media channels. Such as:

- Coordinating communications and outreach efforts through social media and project website
- Writing original content for project website, social outreach tools and collateral material
- Develops project-specific social media outreach plan
- Planning and implementing publicity efforts, strategies and outreach campaigns utilizing social media tools
- Coordinating participation of the project team in alternative outreach efforts, such as online briefings, chats, etc., in collaboration with Media Relations
- Preparing and managing the visual communications for the Project
- Providing verbal or written responses concerns from internal and external customers
- Recommending strategies to promote LACMTA's strategic goal and objectives
- Maintaining records and preparing routine and special reports and correspondence
- Keeping abreast of current and proposed activities and project status by attending internal project team and external community meetings
- Promoting LACMTA construction projects by disseminating public information, assisting with special events, and interacting with community groups to obtain their input
- Conducting tours of LACMTA facilities
- Preparing reports, presentation, newsletters, correspondence or speaking points, as requested by project management, Media Relations or elected officials
- Photographing project milestones, meetings and other relevant events as needed
- Creating video clips used to educate the public about construction activities or other related topics
- Sharing original content with blogs and posts to social media sites
- Other duties as assigned.

Qualifications:

- Bachelor's degree – Communications, Journalism, Marketing, English, Political Science or other related field
- Two years journey-level experience performing public affairs or community relations for a government or public agency
- Must have strong knowledge of social media applications and technologies
- Strong writing and communication skills

- Strong ability to self-manage schedule and project to meet deadlines and goals
- Graphic design experience
- Proficiency in Microsoft Office software and graphic design software

SURVEYOR

Qualifications:

- Licensed Surveyor in the State of California
- Ten (10) years experience in Heavy Construction
- Three (3) years experience in Tunnel Surveying
- Knowledge of Survey Control, Survey Monitoring and Survey for Cut and Cover Stations and Tunnel Construction

SURVEY PARTY (INSTRUMENT PERSON, ROD/CHAIN PERSON, PARTY CHIEF)

Qualification:

- Must work under the direction of a Licensed Surveyor. Survey Party must possess a minimum seven (7) years Transit experience in Highways, Light Rail and Tunnel.

SUSTAINABILITY OFFICER

Qualifications:

- Bachelor's Degree in Engineering or ten (10) years Construction experience.
- Five (5) or more years of direct or related experience as a Commissioning Agent.
- Certified as LEED® Accredited Professional by the United States Green Building Council (USGBC) with specialty certification for new construction.

SYSTEMS INTEGRATION ENGINEER

Qualifications:

- Bachelor's Degree in Electrical Engineering.
- Five (5) years experience in integrating the various System Components on large transit projects of \$30 million dollars or more.

SYSTEMS SAFETY CERTIFICATION (COORDINATOR, ADMINISTRATOR, SPECIALIST)

Qualifications:

- Minimum of five (5) years experience in Rail Transit and Safety (ten (10) years experience desirable)
- Bachelor's Degree in Engineering, Safety or related field is desirable.
- Knowledge of Rail Transit Design, Construction and Operations. Proven experience and ability to perform Safety Certification activities. Familiarity with Bus Transit desirable. Ability to communicate clearly and effectively and to make presentations to affected groups.

PRINCIPAL TECHNICAL SPECIALIST

Example of Duties:

- Reviews engineering, construction and project deliverables - such as submittals, plans and specifications - for constructability, safety, quality, cost, schedule and technical adequacy
- Interfaces with engineering and contractor staff
- Provides technical expertise on technical issues
- Provides technical leadership for construction, constructability, safety, quality, cost and schedule
- Provides claim analysis on technical issues.

Qualifications:

- Bachelor of Science is preferred.
- Professional License, Accreditations or Qualifications in field of expertise
- 10+ years experience in technical field

TEST AND STARTUP ENGINEER**Qualification:**

- Five (5) years experience performing Testing and Startup activities on large transit projects.

THIRD-PARTY ADMINISTRATOR**Examples of Duties:**

- Coordinate the preparation of engineering plans, drawings, specifications, procedures, and schedules necessary for utility rearrangement and restoration work with project teams, as well as City, County, State, and Utility Agencies. Develop technical reports, feasibility studies, economic analyses, and other forms of correspondence, including letters, notices, and design reviews that apply to project utility service requirements, utility rearrangement configurations and construction permitting. Assist in the negotiation and preparation of agreements with outside agencies and public/private utilities for all services and works necessary to support LACMTA's construction and operation activities.

Qualifications:

- Bachelor's Degree in Engineering, Construction Project Management, or other related field.
- Valid California Class C driver's license.
- California Professional Engineering registration highly desirable.
- A minimum of five (5) years of Construction experience including at least three (3) years of experience performing Third Party Administration work.

TUNNEL BORING MACHINE SPECIALIST**Example of Duties:**

- Responsible for overseeing and reviewing a TBM monitoring program with pressurized face TBM,(either Slurry-TBM or EPB-TBM)

- Works with Geotechnical instrumentation specialist, and tunnel resident engineers/construction managers, verify or monitor performance of TBM during tunneling operations to ensure conformance with tunneling specifications.
- Insures timely review, interpretation and compilation of TBM performance data and reporting of data to LACMTA
- Utilize software for collecting and presenting data in graphical form and electronic transfer of data to the parties involved to minimize reporting times. Includes analysis of data to compare to allowable values and observe trends.
- Communicates with LACMTA, Engineering Management Services Contractor and Design-build Geotechnical Engineer.

Qualifications:

- Bachelor's Degree in Geology, Engineering or related field.
- Ten (10) years Professional Engineering experience in Tunnel Boring Machine technology. Experience with a TBM manufacturer is preferable.
- Knowledge and experience in constructing segmentally lined tunnels in soil.
- Familiar with software for presenting data in graphical form and electronic transfer of data to the parties involved to minimize reporting times. Includes analysis of data to compare to allowable values and observe trends.
- Familiarity with TBM body and trailing gear systems, including grouting, soil conditioning, pressurizing of tunnel face and ground around shield body, underground safety requirements, mechanical and electrical systems, and diagnostic testing.
- Three (3) years experience in review and management of TBM performance.
- OSHA 30-Hr Safety training.
- Experience of and ability to work in low pressure compressed air preferable.

WELDING ENGINEER (SENIOR)

Perform functions to provide support to Projects, Engineering, and Quality Management departments on matters related to materials and processes.

Examples of Duties:

- Review and comment on contractor welding related submittals.
- Review specifications for welding and materials.
- Maintain project and ongoing welding engineering records and files for future availability.
- Work on projects in support of Engineering and Construction as appropriate.
- Assist LACMTA in participating in industry organizations and professional societies, as requested.
- Evaluate and promote the use of new materials and processes to enhance LACMTA construction projects.
- Assist LACMTA on compliance with all applicable quality, health, safety, and environmental regulations.

Qualifications:

- Bachelor's Degree in Metallurgical Engineering, Welding Engineering, Materials Engineering, or Materials Science with three (3) years minimum experience or equal experience with Basic Metallurgical Laboratory Equipment and AWS Certified welding Engineer is desirable.
- Must have basic knowledge of Metallurgy and Welding processes, with broad based knowledge of materials production and selection criteria. Knowledge of the performance

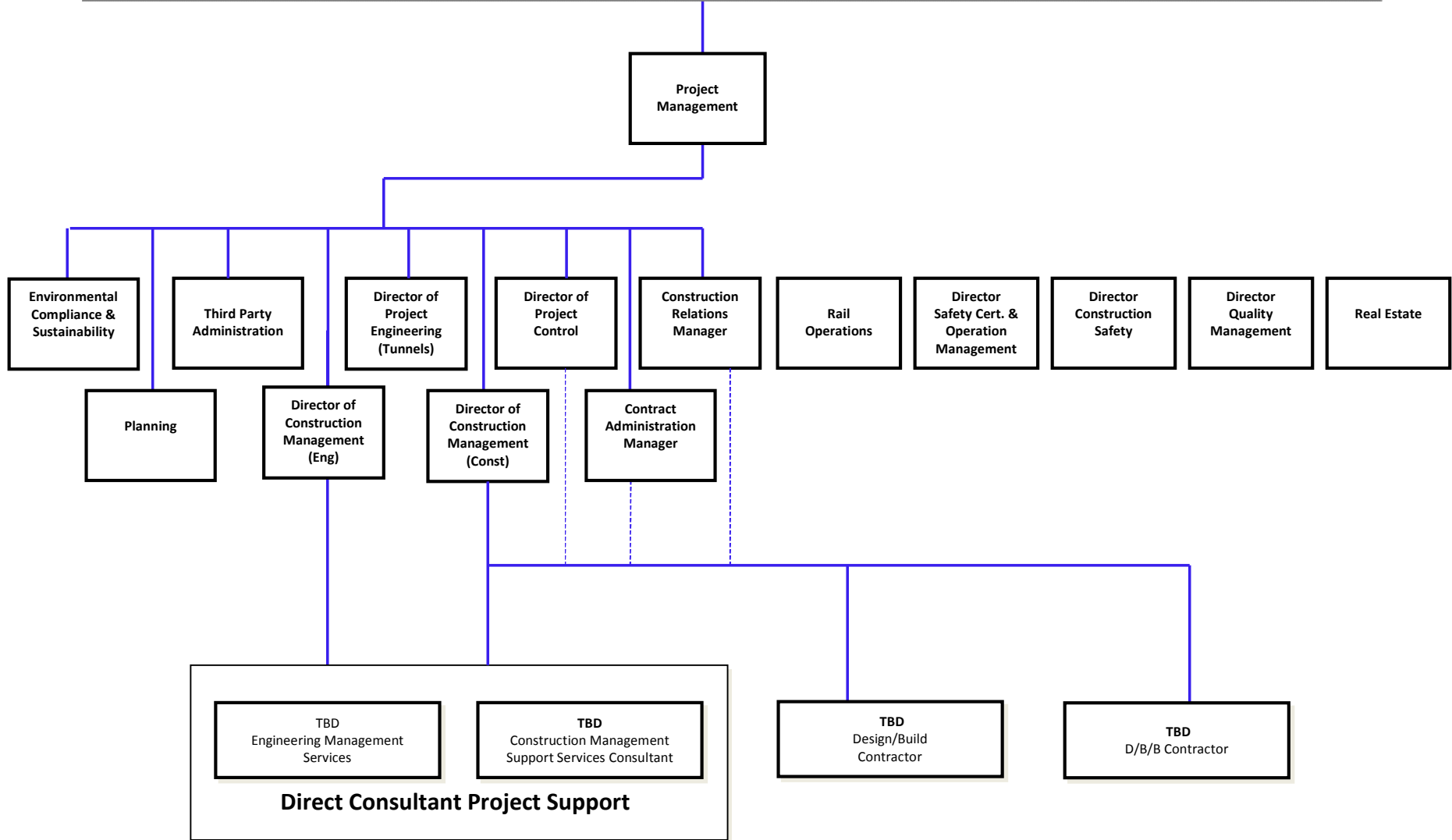
characteristics and processing methods of metallic materials in transportation applications preferred. Must communicate effectively, both written and verbal.

- Basic knowledge of personal computers and computer software, such as MS Windows, AutoCAD, MS Word, and MS Excel is preferred.

ATTACHMENT B

(See following page)

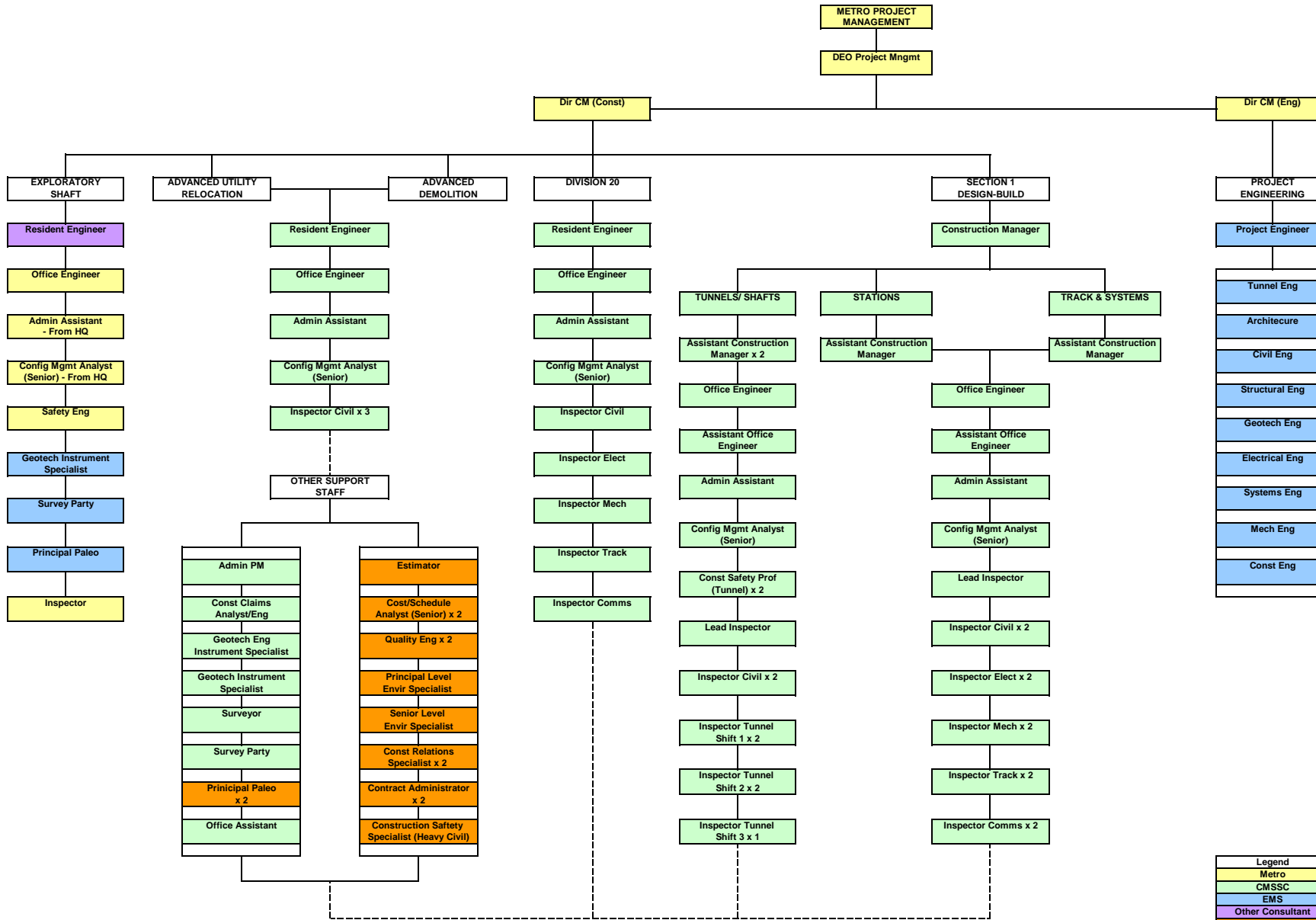
INTEGRATED PROJECT MANAGEMENT OFFICE TEAM



ATTACHMENT C

(See following page)

WSE Organizational Chart - Section 1 Integrated Project Management Office (CMSSC Level)



Legend	
	Metro
	CMSSC
	EMS
	Other Consultant
	TBD - Metro or CMSSC