

DECEMBER 1991

METRO RED LINE PROJECT

SEGMENT - 2

CONTRACT UNIT DESCRIPTIONS

REVISION 2



**Rail
Construction
Corporation**

 a Subsidiary of
the Los Angeles County
Transportation Commission



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RAIL CONSTRUCTION CORPORATION
818 WEST SEVENTH STREET
LOS ANGELES, CALIFORNIA 90017

METRO RED LINE PROJECT
SEGMENT-2
CONTRACT UNIT DESCRIPTIONS

This document contains the listing of Metro Red Line Project Segment 2 (Seg-2) design, construction, procurement, and professional services contracts. It includes descriptions of the scope of the contracts, and geographic references where applicable.

The Metro Red Line Project SEG-2 alignment extends from the Westlake/MacArthur Park Station northwest to Wilshire/Vermont, and west along Wilshire Boulevard to Western Avenue with a western terminus at the Wilshire/Western Station. The line continues north from Wilshire/Vermont along Vermont Avenue, turning west along Hollywood Boulevard to the Hollywood/Vine Station, and terminates at the tail track immediately west of the Hollywood/Vine Station.

Information concerning this document can be secured by contacting Jeffrey C. Christiansen, Vice-President of Program Management and Control for Rail Construction Corporation at (213) 236-9587.

Approved:



Joel Sandberg
SEG-2 Project Manager
Rail Construction Corporation
A Subsidiary of the Los Angeles
County Transportation Commission

12/17/91
Date

SEGMENT 2 CONTENTS

	<u>Page</u>
DEFINITIONS OF CONTRACT TYPES	iv
FACILITIES CONTRACT UNIT DESCRIPTIONS	1
SYSTEMWIDE CONTRACT UNIT DESCRIPTIONS	15
PROFESSIONAL SERVICES CONTRACT UNIT DESCRIPTIONS	30

FIGURE

	<u>Page</u>
ROUTE MAP	iii

ROUTE MAP

(Revision Pending)

DEFINITIONS OF CONTRACT TYPES

FACILITIES

CONSTRUCTION:

Station shell (Stage I) and/or line construction generally includes all civil and structural construction plus embedded items for installations of architectural finishes, embedded mechanical items, and electrical conduits, unless specifically included elsewhere. Other items of work include, but are not limited to, the following:

Demolition, site clearing, underpinning, compaction grouting, dewatering, excavation support systems, decking, instrumentation, excavation, access shafts, tunneling, crosspassages, tunnel lining, backfill, pavement, sidewalks, curbs and gutters, pavement markings, traffic stripes, signs, traffic signals, maintenance of traffic, fencing, maintenance of utilities, utility relocation, storm drainage, sanitary sewer lines, embedded electric and telephone ductbanks and lines, lighting, installation of HDPE membrane, structural concrete, structural steel, reinforcing steel, waterproofing, emergency access exterior doors, ventilation shaft gratings at street level, interior walls, sleeves through walls for conduit work, and magnetometer surveys.

Station finish (Stage II) construction includes all architectural work, site work, landscaping, and mechanical and electrical work, unless specifically included elsewhere. Other items of work include, but are not limited to, the following:

Irrigation systems, tree wells, landscape benches, topsoil, seedings, trees, shrubs, exterior slab on grade concrete, granite, unit masonry, stainless steel and aluminum assemblies, metal fabrication, steel stairs, ladders, railing, interior gratings and floor plates, custom sheet metal, carpentry, sprayed-on fireproofing, fillers, gaskets, sealants, doors and frames, overhead grilles, finish hardware, glazing, furring and lathing, floor and wall tiles, acoustical panels, coatings, painting, identifying devices, telephone enclosures, toilet accessories, trash and waste receptacles, plumbing, and mechanical and electrical work, including installation of some equipment such as ventilation fans, elevators and escalators, provided by systemwide procurements. Also included are Safety, Fire/Life Safety and Security items involving sprinklers, standpipes, undercar deluge systems, fire suppression systems, fire detection and alarm systems, emergency management and communications systems; ventilation, seismic and gas detection systems; CCTV, intrusion alarms and other security systems; handicapped access systems; warning and safety graphics and lighting systems and electrical safety and trip systems.

In Segment 2, all station contracts except one will consist of shell and finish construction consolidated within a single contract. Only the Wilshire/Vermont Station will have separate contracts for shell (Contract B211) and finish (Contract B215) construction.

AGENCY AGREEMENT:

Services related to the rearrangement of city, county, or state agency facilities so that Metro Red Line construction may be accomplished. Work is to be performed by agency personnel under a master agreement with the Rail Construction Corporation.

DEMOLITION:

Demolition and removal of existing structures and material from the Metro Red Line construction sites.

UTILITY AGREEMENT:

Services related to the rearrangement of privately-owned utility facilities or equipment so that Metro Red Line construction may be accomplished. Work is to be performed by each contractor and/or by agency personnel under a master agreement with the Rail Construction Corporation.

SYSTEMS/SYSTEMWIDE CONTRACTS

Systems/Systemwide contracts consist of contracts for procurement and/or installation of equipment. These contracts are defined below:

PROCUREMENT (Supply Only):

Procurement of equipment that does not require installation, such as passenger vehicles and auxiliary vehicles, or procurement of equipment for installation by another contractor, such as track fasteners, traction power equipment, ventilation fans, public address, closed circuit television, cable transmission, fire and emergency management, and gas monitoring.

PROCUREMENT AND INSTALLATION:

Procurement and installation of equipment under a single contract. These contracts include trackwork and third rail system, automatic train control, radio and SCADA, traction power installation, escalator and elevators and fare collection system.

INSTALLATION

Installation of equipment procured under a supply only or design and supply contract, including all installation materials. These include public address, closed circuit television, cable transmission, fire and emergency management, gas monitoring, and seismic detection (and equipment).

PURCHASE ORDER:

Direct procurement under a Purchase Order following evaluation of proposals or prices only from a minimum of three qualified suppliers based upon set specifications or data sheets.

SPECIALTY:

Provide specialty services such as hazardous material handling and disposal at various construction sites as required based on previously established unit prices.

PROFESSIONAL SERVICES

Services related to the preparation of design packages for the various facilities construction, procurement and installation contracts; the publication and distribution of bid documents; and construction management of those contracts.

SEGMENT-2
FACILITIES CONTRACT UNIT DESCRIPTIONS

WESTLAKE/MACARTHUR PARK TO HOLLYWOOD/VINE

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
B200	Detailed design of the following packages:				
	Line Section, Westlake/MacArthur Park Station to Wilshire/Vermont Station with pocket track	B201	1121 LF (cut/cover pocket track and transitions) 3405 LF (twin tunnel)	Construction	Construct that portion of the line beginning at the easterly end of the Westlake/MacArthur Park proceeding under MacArthur Lake in cut/cover and continuing in tunnel in Wilshire Boulevard and private property, terminating at the Wilshire/Vermont Station. Work includes construction of pocket track under MacArthur Lake, emergency exit stairways, line tunnels, vertical crosspassages, restoration of the park and Alvarado Street, and all mechanical, electrical, and finish work in the tunnels and pocket track. (Axial flow fans supplied in B740 contract and installed in B215 contract.) Also construct all utility work not performed by City Agencies.
	City of Los Angeles	F208	Storm drains, sanitary sewers, street lights and signals, streets, and sidewalks Worksite Traffic Control Plan	Agency Agreement	Provide inspection services for impacted City facilities to accommodate the B201 contract of the SEG-2 segment of the Metro Red Line Project. Provide design for street lights, traffic and signals.
	Power Inspection	F102	Ductbanks and manholes, cables, service connections, vaults.	Agency Agreement	Provide inspection services, cable installation and service connections to accommodate Contract B201 of the SEG-2 segment of the Metro Red Line Project.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
	Water Relocation	F103	Mains, hydrants, vaults, and service connections.	Agency Agreement	Provide materials and inspection services to accommodate Contract B201 of the SEG-2 segment of the Metro Red Line Project.
	Telephone Relocation	F808	Ductbanks, man-holes, cables, vaults, and service connections.	Utility Agreement	Provide design, cable installation, service connections and inspection services to accommodate Contract B201 of the SEG-2 segment of the Metro Red Line Project.
	Gas Relocation	F854	Mains, valves, and service connections.	Utility Agreement	Provide design, construction and inspection services to accommodate Contract B201 of the SEG-2 segment of the Metro Red Line Project.
B210	Detailed design of the following packages:				
	Wilshire/Vermont Station, Stage I w/o the Entrance	B211	720 LF (cut/cover station plus line transition)	Demolition and Construction	Demolish and remove structures and clear site for construction. Construct Stage I of the Wilshire/Vermont Station, not including the Entrance, with turnouts to the north and west, including all civil and structural temporary and permanent construction. This contract also includes the embedment of all required architectural, mechanical, and electrical items. Also construct all utility work not performed by City agencies.
	Wilshire/Vermont Station, Stage II, and Entrance Stage I and II	B215	720 LF Station Finish	Construction	Construct Entrance Stage I and II, and Stage II finish of the Wilshire/Vermont Station, including all architectural, mechanical, and electrical work except for those items embedded in Stage I construction.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
	Wilshire/Vermont Site Restoration and Landscaping	B216	Station Site	Construction	Restore all surface features, including sitework, landscaping, and replacement of curbs, gutters, sidewalks, and streets, including some utility work due to street widening. Also furnish and install Auxiliary Power transformers.
	Demolition	B218	Station Site	Demolition	Demolish and remove structures and clear site for construction of B221.
	City of Los Angeles	F104	Storm drains, sanitary sewers, street lights and signals, streets and sidewalks.	Agency Agreement	Provide inspection services for impacted City facilities to accommodate Contract B211 of the SEG-2 segment of the Metro Red Line Project.
			Worksite Traffic Control Plan		Provide design for street lights, traffic and signals.
	Power Inspection	F102	Ductbanks and manholes, cables, service connections, vaults.	Agency Agreement	Provide inspection services, cable installation, and service connections to accommodate Contract B211 of the SEG-2 segment of the Metro Red Line Project.
	Water Relocation	F103	Mains, hydrants, vaults, and service connections.	Agency Agreement	Provide materials and inspection services to accommodate Contract B211 of the SEG-2 segment of the Metro Red Line Project.
	Telephone Relocation	F808	Ductbanks manholes, cables, vaults, and service connections	Utility Agreement	Provide design, cable installation, service connections and inspection services to accommodate Contract B211 of the SEG-2 segment of the Metro Red Line Project.
	Gas Relocation	F854	Mains, valves, and service connections.	Utility Agreement	Provide design, construction and inspection services to accommodate Contract B211 of the SEG-2 segment of the Metro Red Line Project.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
	Cable T.V. Relocation	F406	Ductbanks manholes and cables	Utility Agreement	Provide design, cable installation, and inspection services to accommodate Contract B211 of the SEG-2 segment of the Metro Red Line Project.
	Telegraph Relocation	F814	Ductbanks manholes and cables	Utility Agreement	Provide design, cable installation, and inspection services to accommodate Contract B211 of the SEG-2 segment of the Metro Red Line Project.
B220	Detailed design of the following packages:				
	Line Section, Wilshire/Vermont to Wilshire/Western, including Wilshire/Normandie Station, complete.	B221	120 LF (cut/cover line transition) 2,827 LF (twin tunnel) 604 LF (twin tunnel, primary support station area only) 1,342 LF (twin tunnel)	Construction	Construct that portion of the line beginning at the at the northwesterly end of the Wilshire/Vermont turnout, proceeding in tunnel southerwesterly to Wilshire Boulevard, continuing westerly through the Wilshire/-Normandie Station, and to the east bulkhead of the crossover at Wilshire/Western Station. This contract includes the cut and cover construction of the Wilshire/Normandie Station, complete, including dewatering. Work includes all mechanical, electrical, architectural, and finish work in both the tunnels and station. Also construct all utility work not performed by city agencies. Floating slab in the AL tunnel. Furnish and install the Auxiliary Power transformers.
	City of Los Angeles	F104	Storm drains, sanitary sewers, street lights and traffic signals, streets, curbs and sidewalks.	Agency Agreement	Provide inspection services for impacted City facilities to accommodate Contract B221 of the SEG-2 segment of the Metro Red Line Project.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
			Worksite Traffic Control Plan		Provide design for street lights, traffic and signals.
	County of Los Angeles	F208	Storm drains, highways.	Agency Agreement	Provide inspection services for impacted County facilities to accommodate Contract B221 of the SEG-2 segment of the Metro Red Line Project.
	Power Inspection	F102	Ductbanks and manholes, cables, service connections, vaults.	Agency Agreement	Provide inspection services, cable installation, and service connections to accommodate the B221 contract of the SEG-2 segment of the Metro Red Line Project.
	Water Relocation	F103	Mains, hydrants, vaults, and service connections.	Agency Agreement	Provide materials and inspection services to accommodate the B221 contract of the SEG-2 segment of the Metro Red Line Project.
	Telephone Relocation	F808	Ductbanks, manholes, cables, vaults, and service connections.	Utility Agreement	Provide design, Cable installation, service connections and inspection services to accommodate the B221 contract of the SEG-2 segment of the Metro Red Line Project.
	Telegraph Relocation	F814	Ductbanks, manholes, cables, vaults, and service connections.	Utility Agreement	Provide design, cable installation, service connections and inspection services to accommodate the B221 contract of the SEG-2 segment of the Metro Red Line Project.
	Cable T.V. Relocation	F406	Ductbanks, manholes, cables, vaults, and service connections.	Utility Agreement	Provide design, cable installation, service connections and inspection services to accommodate the B221 contract of the SEG-2 segment of the Metro Red Line Project.
	Gas Relocation	F854	Mains, valves, and service connections.	Utility Agreement	Provide design, construction and inspection services to accommodate Contract B221 of the SEG-2 segment of the Metro Red Line Project.
B230	Detailed design of the following packages:				

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
	Wilshire/Western Station, with crossover and tail track, complete	B231	914 LF (cut/cover)	Construction	Demolish and remove structures, clear site for construction. Construct the Wilshire/Western Station with crossover and hand mined "stub", including all architectural, mechanical, electrical, and finish work in both the station and crossover, including floating slabs. Work includes surface restoration and entrance landscaping. Also construct all utility work not performed by City Agencies, and furnish and install Auxiliary Power transformers.
	City of Los Angeles	F104	Storm drains, sanitary sewers, street lights and traffic signals, streets, curbs and sidewalks.	Agency Agreement	Provide inspection services for impacted City facilities to accommodate Contract B231 of the SEG-2 segment of the Metro Red Line Project.
			Worksite Traffic Control Plan		Provide design for street lights, traffic and signals.
	Power Inspection	F102	Ductbanks, and manholes, cables, service connections, vaults.	Agency Agreement	Provide inspection services, cable installation, and service connections to accommodate the B231 contract of the SEG-2 segment of the Metro Red Line Project.
	Water Relocation	F103	Mains, hydrants, vaults, and service connections	Agency Agreement	Provide materials and inspection services to accommodate the B231 Contract of the SEG-2 segment of the Metro Red Line Project.
	Telephone Relocation	F808	Ductbanks, manholes, cables, vaults, and service connections.	Utility Agreement	Provide design, cable installation, service connections and inspection services to accommodate the B231 contract of the SEG-2 segment of the Metro Red Line Project.
	Gas Relocation	F854	Main, valves, and service connections	Utility Agreement	Provide design, construction and inspection services to accommodate the B231 contract of

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
					the SEG-2 segment of the Metro Red Line Project.
	Telegraph Relocation	F814	Ductbanks, man-holes, cables, vaults, and service connections	Utility Agreement	Provide design, cable installation, service connections and inspection services to accommodate the B231 contract of the SEG-2 segment of the Metro Red Line Project.
B240	Detailed design of the following packages:				
	Vermont/Beverly Station, complete	B241	589 LF (cut/cover)	Construction	Construct the Vermont/Beverly Station, complete. Includes all mechanical, electrical, architectural, and finish work in the station. Work also includes surface restoration, all utility work and landscaping. (Tunnel through station by others prior to excavation). Also furnish and install Auxiliary Power transformers.
	Demolition	B248	Station Entrance Site	Demolition	Demolish and remove structures, clear site site for construction.
	City of Los Angeles	F104	Storm drains, sanitary sewers, street lights and signals, streets and sidewalks.	Agency Agreement	Provide design, and inspection services for impacted City facilities to accommodate Contract B241 of the SEG-2 segment of the Metro Red Line Project.
			Worksite Traffic Control Plan		Provide design for street lights, traffic and signals.
	County of Los Angeles	F208	Storm drains, highways	Agency Agreement	Provide design, construction and/or inspection services for impacted County facilities to accommodate Contract B241 of the SEG-2 segment of the Metro Red Line Project.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
	Power Relocation	F102	Ductbanks, and manholes, cables, service connections, vaults.	Agency Agreement	Provide design, cable installation, service connections and inspection services to accommodate the B241 contract of the SEG-2 segment of the Metro Red Line Project.
	Water Relocation	F103	Mains, hydrants, vaults, and service connections.	Utility Agreement	Provide materials and inspection services to accommodate the B241 contract of the SEG-2 segment of the Metro Red Line Project.
	Telephone Relocation	F808	Ductbanks, manholes, cables, vaults, and service connections.	Utility Agreement	Provide design, cable installation, service connections and inspection services to accommodate the B241 contract of the SEG-2 segment of the Metro Red Line Project.
	Gas Relocation	F854	Mains, valves, and service connections.	Utility Agreement	Provide design, construction and inspection services to accommodate the B241 contract of the SEG-2 segment of the Metro Red Line Project.
	Caltrans	F816	Highways, storm drains, street lights, and bridges.	Utility Agreement	Provide design, construction and/or inspection services to accommodate the B241 contract of the SEG-2 segment of the Metro Red Line Project.
B250	Detailed design of the following packages:				
	Line Section Wilshire/Vermont to Hollywood/Vine (Segment 2) and from Hollywood/Vine to Station 630+00 (Segment 3)	B251	26,975 RF (twin tunnel) 3,506 RF (twin tunnel, primary support only)	Construction	Construct that portion of the line, for SEG 2, southward from the Barnsdall Park access shaft to the Wilshire/Vermont Station, including tunneling through Vermont/Sunset Station and Vermont/Santa Monica Station, but not Vermont/Beverly Station as it will already be excavated. Construct that portion of the line westward from Barnsdall Park access shaft to assumed rock interface in the Santa Monica mountains, at Station 630+00, including tunneling through

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
					Hollywood/Western and Hollywood/Vine Stations in Segment 2 and Highland Station in Segment 3. Work includes the construction of the Barnsdall Park shaft and tunnel concrete lining complete in Segment 2 and 3. Work also includes the cross-passages, but not the mechanical, electrical and finish work in Segment 3. Work includes all mechanical, electrical and finish work in SEG 2 tunnels and utility work at the vertical shaft exits. Work includes underpinning of parking structures prior to tunnel drive down Vermont.
Vermont/Santa Monica Station and Cross-over (Part)	B252	889 LF cut/cover station and crossover	Construction	Construct the Vermont/Santa Monica Station and crossover, complete. Includes all mechanical, architectural, electrical, and finish work in the station, and crossover. Work also includes surface restoration, landscaping, all utility work, and furnish and install Auxiliary Power transformers.	
Parking Structure Underpinning	B253	As needed	Specialty	Underpin columns of Fireman's Fund Building parking structure impacted by tunneling Contract B251.	
Demolition	B258	Station Entrance Site	Demolition	Demolish and remove structures, clear site for construction.	
City of Los Angeles	F104	Storm drains, sanitary sewers, street lights and signals, streets and sidewalks.	Agency Agreement	Provide design, construction and/or inspection services for impacted City facilities to Contracts B251 and B252 of the SEG-2 segment of the Metro Red Line Project.	
		Worksite Traffic Control Plan		Provide design for street lights, traffic and signals.	

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
	County of Los Angeles	F208	Storm drains, highways.	Agency Agreement	Provide design, construction and/or inspection services for impacted County facilities to accommodate Contracts B251 and B252 of the SEG-2 segment of the Metro Red Line Project.
	Power Relocation	F102	Ductbanks and manholes, cables, service connections, vaults.	Agency Agreement	Provide design, cable installation, service connections and inspection services to accommodate Contracts B251 and B252 of the SEG-2 segment of the Metro Red Line Project.
	Water Relocation	F103	Mains, hydrants, vaults, and service connections.	Agency Agreement	Provide materials and inspection services to accommodate Contracts B251 and B252 of the SEG-2 segment of the Metro Red Line Project.
	Telephone Relocation	F808	Ductbanks, manholes, cables, vaults, and service connections.	Utility Agreement	Provide design, cable installation, service connections and inspection services to accommodate Contracts B251 and B252 of the SEG-2 segment of the Metro Red Line Project.
	Gas Relocation	F854	Mains, valves, and service connections.	Utility Agreement	Provide design, construction and/or inspection services to accommodate Contracts B251 and B252 of the SEG-2 segment of the Metro Red Line Project.
	Caltrans	TBD	Highways, storm drains, street lights, and bridges.	Agency Agreement	Provide design, construction and/or inspection services to accommodate Contracts B251 of the SEG-2 segment of the Metro Red Line Project.
B260	Detailed design of the following packages:				
	Vermont/Sunset Station, complete	B261	573 LF (cut/cover)	Construction	Construct the Vermont/Sunset Station, complete. Includes all electrical, architectural, mechanical, and finish work in the station, as well as surface restoration, landscaping, and all utility work. (Tunnel

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
					through station prior to excavation). Also furnish and install Auxiliary Power transformers.
	Demolition	B268	Station Entrance Site	Demolition	Demolish and remove structures, clear site for construction.
	City of Los Angeles	F104	Storm drains, sanitary sewers, street lights and signals, streets and sidewalks.	Agency Agreement	Provide design, construction and/or inspection services for impacted City facilities to accommodate Contract B261 of the SEG-2 segment of the Metro Red Line Project.
			Worksite Traffic Control Plan		Provide design for street lights, traffic and signals.
	County of Los Angeles	F208	Storm drains, highways.	Agency Agreement	Provide design, construction, and/or inspection services for impacted County facilities to accommodate Contract B261 of the SEG-2 segment of the Metro Red Line Project.
	Power Relocation	F102	Ductbanks and manholes, cables, service connections, vaults.	Agency Agreement	Provide design, cable installation, service connections and inspection services to accommodate Contract B261 of the SEG-2 segment of the Metro Red Line Project, and design and construction for DWP dedicated feeder.
	Water Relocation	F103	Mains, hydrants, vaults, and service connections.	Agency Agreement	Provide materials and inspection services to accommodate Contract B261 of the SEG-2 segment of the Metro Red Line Project.
	Telephone Relocation	F808	Ductbanks, manholes, cables, vaults, and service connections.	Utility Agreement	Provide design, cable installation, service connections and inspection services to accommodate Contract B261 of the SEG-2 segment of the Metro Red Line Project.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
	Gas Relocation	F854	Main, valves, and service connections.	Utility Agreement	Provide design, construction and inspection services to accommodate Contract B261 of the SEG-2 segment of the Metro Red Line Project.
B270	Detailed design of the following package:				
	Hollywood/Western Station, complete.	B271	584 LF (cut/cover station)	Construction	Construct the Hollywood/Western Station, including all mechanical, electrical, architectural, finish work, and all utility work. Also furnish and install Auxiliary Power transformers.
	City of Los Angeles	F104	Storm drains, sanitary sewers, street lights and signals, streets and sidewalks.	Agency Agreement	Provide design, construction and/or inspection services for impacted City facilities to accommodate Contract B271 of the SEG-2 segment of the Metro Red Line Project.
			Worksite Traffic Control Plan		Provide design for street lights, traffic and signals.
	County of Los Angeles	F208	Storm drains, highways.	Agency Agreement	Provide design, construction and/or inspection services for impacted County facilities to accommodate Contract B271 of the SEG-2 segment of the Metro Red Line Project.
	Power Relocation	F102	Ductbanks and manholes, cables, service connections, vaults.	Agency Agreement	Provide design, cable installation, service connections and inspection services to accommodate Contract B271 of the SEG-2 segment of the Metro Red Line Project.
	Water Relocation	F103	Mains, hydrants, vaults, and service connections.	Agency Agreement	Provide materials and inspection services to accommodate Contract B271 of the SEG-2 segment of the Metro Red Line Project.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
	Telephone Relocation	F808	Ductbanks, man-holes, cables, vaults, and service connections.	Utility Agreement	Provide design, cable installation, service connections and inspection services to accommodate Contract B271 of the SEG-2 segment of the Metro Red Line Project.
	Gas Relocation	F854	Mains, valves, and service connections.	Utility Agreement	Provide design, construction and inspection services to accommodate Contract B271 of the SEG-2 segment of the Metro Red Line Project.
	Cable TV Relocation	F406	Conduits and Cables	Utility Agreement	Provide design, cable installation and inspection services to accommodate Contract B271 of the SEG-2 segment of the Metro Red Line Project.
	Caltrans	F816	Highways, storm drains, street lights, and bridges.	Agency Agreement	Provide design, and inspection services to accommodate contract B271 of the SEG-2 segment of the Metro Red Line Project.
B280	Detailed design of the following packages:				
	Hollywood/Vine Station and crossover	B281	889 LF (cut/cover)	Construction	Construct the Hollywood/Vine Station, hand mined stub and crossover, including all mechanical, architectural, electrical, and finish work in the station and crossover. Work also includes all surface restoration, landscaping and all utility work. Also furnish and install Auxiliary Power transformers.
	Demolition	B288	Station Entrance and Bus Intercept	Demolition	Demolish and remove structures, clear sites for construction.
	City of Los Angeles	F104	Storm drains, sanitary sewers, street lights and	Agency Agreement	Provide design, construction, and/or inspection services for impacted City facilities to accommodate Contract B281 of the SEG-2 segment of the Metro Red Line Project.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
			signals, streets and sidewalks.		
			Worksite Traffic Control Plan		Provide design for street lights, traffic and signals.
County of Los Angeles		F208	Storm drains, highways.	Agency Agreement	Provide design, construction, and/or inspection services for impacted County facilities to accommodate Contract B281 of the SEG-2 segment of the Metro Red Line Project.
Power Relocation		F102	Ductbanks, and manholes, cables, service connections, vaults.	Agency Agreement	Provide design, cable installation, service connections and inspection services to accommodate Contract B281 of the SEG-2 segment of the Metro Red Line Project.
Water Relocation		F103	Mains, hydrants, vaults, and service connections.	Agency Agreement	Provide materials and inspection services to accommodate Contract B281 of the SEG-2 segment of the Metro Red Line Project.
Telephone Relocation		F808	Ductbanks, manholes, cables, vaults, and service connections.	Utility Agreement	Provide design, cable installation, service connections and inspection services to accommodate Contract B281 of the SEG-2 segment of the Metro Red Line Project.
Gas Relocation		F854	Mains, valves, and service connections.	Utility Agreement	Provide design, construction and inspection services to accommodate Contract B281 of the SEG-2 segment of the Metro Red Line Project.
Telegraph Relocation		F814	Ductbanks, manholes, cables, vaults, and service connections.	Utility Agreement	Provide design, cable installation and inspection services to accommodate Contract B281 of the SEG-2 segment of the Metro Red Line Project.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
<u>SYSTEMWIDE CONTRACT UNIT DESCRIPTIONS</u>					
B610	Trackwork: Design and prepare bid documents for procurement and installation of trackwork and contact rail system for storage yard expansion and line segments including running rail, ties, special trackwork, contact rail, insulators, and coverboards for SEG-2.	B610	Main Line 71,600 TLF, Yard Storage- 7,500 TLF	Procurement and Installation	Furnish and install ties and trackwork for storage yard expansion and main line segments for SEG-2. Manufacture, test, and install contact rail, support insulators, and associated hardware, including side and end approach sections, anchor assemblies expansion joint assemblies, and splice joint assemblies for storage yard expansion and mainline segments for SEG-2. Manufacture, test, and install contact rail protective coverboard, support brackets, and associated hardware, including fastener assemblies and expansion joint assemblies for storage yard expansion and mainline segments for SEG-2. Install Commission furnished direct-fixation rail fasteners.
B616	Direct Fixation Rail Fasteners: SEG-2 fastener quantities provided in Contract A616 to be verified based on alignment.	A616	58,000 (Option 1A)	Procurement	Procure and deliver direct fixation rail fasteners required for SEG-2. Includes unloading after shipment, but does not include handling and storage after delivery. Furnished under option to SEG-1 Contract A616.
B620	Automatic Train Control (ATC): Determine requirements and prepare bid documents for additional ATC equipment for SEG-2.	B620	9 sets train control and communication room equipment, additional yard equipment, and 16	Procurement and Installation	Design, furnish, and install mainline and storage yard expansion Automatic Train Control (ATC) system for SEG-2. Provide proper interfacing with the SEG-1 ATC system already in place. Provide required training. The system consists of station and wayside equipment and interconnecting

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
			sets of carborne equipment. (Note: The 16 sets of carborne equipment is below the miminum of 17 sets per the current option and will have to be negotiated with the A620 Contractor.)		<p>cabling, including all switch machines. It does not include vehicle ATC equipment (which will be furnished under an option to SEG-1 Contract A620), or furnishing or installing insulated track joints.</p> <p>The work includes installation of the communication cables (except the lossy lines) and gas monitoring tubing in the tunnels, and laying of the 34.5 kV tunnel feeder cable in the circular tunnel sections. The contract also includes procurement and installation of the conduit for the 34.5 kV-tunnel feeder cable. All radio antennae and Yard Communications apparatus located in tunnels and crosspassages are to be provided under Contract B640. Completion of the 34.5kV tunnel feeder installation is to be done under B631. B620 also includes installation of wayside ATO equipment furnished under an option to A650 or a new contract B650. The main line elements include equipment along the trackway (including track switch machines) and in equipment rooms at passenger stations and midline locations. Vehicle elements will be installed under an option to A650 or a new contract B650.</p> <p>The work also includes startup, testing, and complete integration of the SEG-2 system with the operating SEG-1 system.</p>
B630	Traction Power System: Determine requirements for, design, and prepare bid documents for procurement of additional traction	B630	Full complement of equipment at 8 power substations (1 at each SEG-2 station. 2 stations will not have traction	Procurement	<p>Design and furnish traction power equipment and auxiliary power electrical equipment for SEG-2. Equipment may include ac-to-dc conversion equipment deferred for SEG-1.</p> <p>Traction power equipment includes high voltage ac switchgear assemblies, ac-to-dc con-</p>

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
	power and auxiliary power electrical equipment to support SEG-2.		power equipment but will require auxiliary power equipment.)		version equipment assemblies, and metal-enclosed dc switchgear assemblies. Auxiliary power electrical equipment provided by this contract includes the high voltage switchgear unit for the auxiliary power rooms at each station. The Auxiliary Power transformers are furnished and installed by the station contractors. The contract includes technical assistance for installation, startup, and testing. The contract does not include installation of the procured equipment, the structures in which the equipment is to be installed, or the central supervisory control equipment.
B631	Traction Power System Installation: Design and prepare bid documents for installing the traction power and auxiliary power electrical equipment procured under Contract B630 for SEG-2.	B631	Installation of equipment and material at 8 power substations (1 at each SEG-2 station).	Installation	Install Commission-furnished traction power equipment. Furnish and install associated miscellaneous substation and power distribution equipment and material. This material includes, but is not limited to, distribution panelboards, annunciator panels, wire and cable to contact rail locations, raceway systems, supports and accessories, negative bus boxes, dc disconnect switches, and substation negative return cables to wayside locations. Procure 34.5-kV feeder cable for installation by others in tunnel sections. Complete installation of the 34.5-kV feeder in station areas and make connections of the feeder to the traction power equipment. The installation work includes furnishing labor for handling, storing, installing, and

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
					field testing material furnished under this contract and Contract B630.
					This contract also includes the furnishing and installing of dieselgenerator sets and appurtenances to supply emergency power to the tunnel ventilation fans.
4239	Telephone System: Determine requirements and prepare bid documents for procurement and installation of additional telephone equipment for SEG-2. This is an extension of an existing RTD contract.	4239	8 EPABX systems and associated equipment and instruments, as required.	Procurement and Installation	Manufacture, furnish, and install telephone equipment for passenger stations, tunnels, and expansion of EPABX located at the Rail Control Center.
B641	Radio: Prepare performance specifications, develop standard and directive drawings, and determine equipment quantities to support SEG-2 requirements.	B641	8 passenger stations and central control equipment	Design, Procurement and Installation	Design, furnish, and install to performance specifications. The Radio system for SEG-2 is comprised of base stations, distributed antenna and two-way broadband amplifiers, portable radios and chargers, paging equipment, distributed antenna, and control center equipment. The control center equipment is proposed to be installed by SCADA in the consoles and the Mobile Radio equipment will be procured by SEG-1 option in A640.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
B642	Public Address: Prepare detailed equipment specifications, develop standard and directive drawings, and determine specific equipment quantities to support SEG-2 requirements.	B642	8 passenger stations and central control equipment	Procurement	Furnish to detailed specifications. Installation by others (B648). Equipment consists of amplifiers, speakers, and tape decks in stations, and control equipment in Central Control.
B643	Closed Circuit Television (CCTV): Prepare detailed equipment specifications, develop standard and directive drawings, and determine equipment quantities to support SEG-2 requirements.	B643	8 passenger stations and central control equipment	Procurement	Furnish to detailed specifications. Installation by others (B648). Major equipment consists of cameras, mounts, recorders, monitors, tuners, video transmission equipment, and CCTV workstation and console(s).
B644	Fiber Optics and Cable Transmission: Prepare detailed performance specifications, develop standard and directive drawings, and determine equipment quantities to support SEG-2 requirements.	B644	8 passenger stations and central control equipment	Design and Procure	Design and furnish to specifications with limited design freedom by the contractor for selection of equipment types. The cable transmission contract will provide for fiber cable, copper cable, digital and optical transmission equipment, and channel bank equipment. Installation of cables in tunnels by B620. Installation of cable transmission equipment by others (B648).

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
B645	Transit Automatic Controls and SCADA (TRACS): Prepare performance specifications, develop standard and directive drawings, and determine equipment quantities to support SEG-2 requirements.	B645	8 passenger stations and central control computer	Design, Procure and Install	Design and furnish and install to performance requirements and SEG-1 compatibility requirements. For SEG-2 the system will provide for expanded operation consoles, displays, computer equipment, and software modifications and necessary RTU equipment.
B646	Fire and Emergency Management: Prepare detailed specifications, develop standard and directive drawings, and determine equipment quantities to support SEG-2 requirements.	B646	8 passenger stations	Design and Procure	Design and Furnish to detailed specifications with limited design freedom to allow use of multiple supplier designs. Equipment consists of Emergency Management Panels (EMP), Command Posts (CP), Fire Control Terminals (FCT), Fire/Smoke detection devices, and gas type Fire Suppression Equipment. Installation is by others (B648).
B647	Gas Monitoring: Prepare detailed specifications, develop standard and directive drawings, and determine equipment quantities to support SEG-2 requirements.	B647	8 passenger stations	Design and Procure	Design and furnish equipment to performance specifications which will control envelope and external interface as well as sensitivity. Equipment is anticipated to consist of pumps, valves, sensors, methane and hydrogen sulfide analyzers with cabinetry and calibration equipment. Rapidly changing technology may result in an electronic approach instead of mechanical. Installation is by others (B648).

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
B648	<p>Communications Installation: Establish requirements for installation and testing and prepare specifications for contractor to install all communication equipment, except Radio (B641) and SCADA computers at central control (B645).</p>	B648	8 passenger stations	Installation	<p>Install and test the following equipment: public address, CCTV, cable transmission, fire and emergency management, and gas monitoring. Procure all installation materials, including tubing and wire and cable associated with gas monitoring system. Procure and install seismic switches and recorder.</p>
B650	<p>Passenger Vehicle: Review and comment on SEG-2 design criteria, facilities designs, and systems designs, to ensure compatibility with passenger vehicles procured for SEG-1. Prepare new specification for passenger vehicles that are compatible with A650 vehicles and other system interfaces.</p>	A650	32 each	Procurement	<p>Design, manufacture, test, and deliver 32 vehicles (16 dependent pairs) along with spare parts, maintenance manuals, special tools, and vehicle testing services. Provide and install speed-maintaining and carborne station-stopping control equipment. Also, furnish wayside ATO equipment for installation by ATC contractor under B620. The contract will require the installation of Commission-furnished train control equipment (i.e., automatic train protection, interfaced train-to-wayside radio, and antennae). Participation and technical assistance is required during testing. Contract should have an option for 32 additional vehicles for SEG-3.</p>

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
B670	Auxiliary vehicles: Establish requirements for additional auxiliary vehicles. Prepare procurement documents as required.	B670	2 self-propelled rail-borne maintenance vehicles.	Procurement	Design, manufacture, and deliver additional auxiliary vehicles for SEG-2.
B680	Operational Graphics: Prepare specifications and sign location drawings and calculate quantities of each type of sign requirement for SEG-2.	B680	SEG-2 requirements	Purchase Order	Fabricate and install signs.
B710	Escalators and Elevators: Determine requirements for, design, and prepare bid documents for procurement of escalators and elevators to support SEG-2 stations.	B710	8 passenger stations	Procurement and Installation	Design, furnish, install, test, and place into operation escalators and elevators for all SEG-2 stations. The escalators and elevators deferred from the SEG-1 stations will be procured and installed in SEG-3.
B715	Art in Transit/- Design Development: Contract artists to develop design solutions and architectural enhancements in conjunction with each section designer.	B715	8 passenger stations	Specialty	Multiple contracts to manufacture, procure, and install architectural enhancements as needed, by either the prime contractor for the station, the artist or other independent contractors.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
B730	Fixed Shop Equipment: Establish requirements for additional fixed shop equipment to support SEG-2 in accordance with the System Operating and Maintenance Plans. Include equipment deferred from SEG-1. Identify available standard equipment, where possible, and prepare procurement specifications when required.	B730	16 pcs., deferred from SEG-1, plus additional equipment.	Purchase Order	Furnish and deliver additional fixed shop equipment. Included are such items as welders, hydraulic presses, drill presses, band saws, power hacksaws, and equipment for parts cleaning. Equipment will be used to outfit air brake shop, welding shop, metals shop, battery shop, and for maintenance-of-way. Quantities will be based upon the System Operating and Maintenance Plans, the Yard and Shop Functional Plan, and the System Design Criteria and Standards.
B731	Major Shop Equipment: Establish requirements for procurement and installation of deferred major shop equipment. Determine as-built A112 interfaces for turntables, bridge cranes, vehicle hoists, and carbody supports and other major equipment. Prepare specification for contractor to procure, install, and test the equipment.	B731	See () under contract scope.	Procurement and Installation	Furnish, deliver, install, and test the following items: two-ton bridge crane (1), turntables (2), 10-ton bridge crane (1), vehicle hoists (12), and carbody supports (24) and other major equipment. Equipment will be used to complete the main shop building based upon Contract A112 deferred items requirements.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
B735	Portable Shop Equipment: Establish requirements for additional freestanding and portable shop equipment to support SEG-2 in accordance with the System Operating and Maintenance Plans. Include equipment deferred from SEG-1. Identify available standard equipment, where possible, and prepare procurement specifications when required.	B735	300 pcs., including sets of tools, deferred from SEG-1, plus additional equipment.	Purchase Order	Manufacture and deliver additional free-standing and portable shop equipment. Included are such items as hand tools and boxes, work benches, carbody stairs, carbody stands, pneumatic and electric tools, equipment racks, and other related equipment. This equipment will be used in all areas of the Main Shop and for maintenance-of-way. Quantities will be based on the System Operating and Maintenance Plans, the Yard and Shops Functional Plan, and the System Design Criteria and Standards.
B740	Ventilation Equipment: Determine requirements for, design, and prepare bid documents for procurement of additional subway tunnel ventilation equipment to support SEG-2.	B740	Equipment for 8 passenger stations, and pocket track booster fans at MacArthur Park.	Procurement	Manufacture and deliver subway emergency, underplatform, and smoke exhaust fans, dampers, and sound attenuators for SEG-2. Quantities and sizes of fans will be based on the System Design Criteria and Standards, primarily the Fire/Life Safety emergency ventilation requirements. (Installation by station contractors.)

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
B745	Air Handling Equipment: Determine requirements for, design, and prepare bid documents for procurement of additional traction power substation air handling equipment to support SEG-2.	B745	Equipment for 8 passenger stations.	Procurement	Manufacture and deliver additional station air supply, traction power substation ventilation equipment, consisting of supply fans, filters, and dampers, for SEG-2. Quantities and sizes of fans will be based on the System Design Criteria and Standards. (Installation by station contractors.)
B750	Hazardous Material Removal: Preparation of bid documents for procurement of specialty services for removal of hazardous materials.	B752 B754 B756	As required by site conditions.	Specialty	Abate hazardous wastes by removal, treatment, or other means on the Metro Red Line Project. If necessary, haul, dispose of, and treat in certified facilities.
B760	Signs and Graphics: Determine requirements for, design, and prepare specifications and drawings for fabrication of additional station signs and graphics to support SEG-2.	B760	8 passenger stations. TBD	Procurement	Furnish station non-luminated signs, graphics, fixtures, and other appurtenances for SEG-2 stations. Quantities and locations of signs and graphics will be based on the System Design Criteria and Standards. (Installation by station contractors.)

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
B761	Illuminated Signs and Edgelights: Determine requirements for design and prepare specifications and drawings for fabrication of station illuminated signs and edgelights to support SEG-2.	B761	8 passenger stations.	Procurement	Furnish station platform edgelight assemblies complete with signs, and overhead illuminated signs for SEG-2 stations. Quantities and locations of edgelights and illuminated signs will be based on the System Design Criteria and Standards. (Installation by station contractors.)
B770	Rubber Tired Vehicles: Preparation of specifications and bid documents for the following procurement contracts:				
	Automobiles and light trucks	B771*	10	Purchase Order	Furnish maintenance vans, pick-up trucks, and supervisory sedans.
	Lift trucks	B772*	3	Purchase Order	Furnish electric fork lifts with 4,000-lb capacity and non-powered hi-lift truck.
	Shop Cleaning, Maintenance, and Materials Handling Equipment.	B773	2	Purchase Order	Furnish wet dry shop vacuum cleaners, hand trucks, and materials cart.
	Yard and Shop Cleaning and Maintenance Vehicles	B774	4 pcs.	Purchase Order	Furnish electric ride-on floor scrubber and electric personnel carts.
	*Standard Vehicles: Use existing procurement documents.				

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
B775	Mobile Maintenance Equipment: Determine requirements for, design, and prepare specifications for procurement of additional mobile maintenance equipment in accordance with the System Operating and Maintenance Plans.	B775	TBD	Purchase Order	Furnish mobile maintenance equipment for SEG-2. Quantities will be based on the System Operating and Maintenance Plans.
B780	Furniture: Determine requirements for and prepare bid documents for procurement of additional station furniture to support SEG-2.	B780	8 passenger stations	Procurement	Furnish station furniture for the SEG-2, under multiple contracts. Quantities will be based on the System Operating Plan and the System Design Criteria and Standards.
B785	Fire Suppression and Emergency Equipment: Prepare specifications for procurement of fire extinguishers, fire hose and nozzles to support SEG-2.	B785	180 Fire Extinguishers 80 Nozzles and Hoses, 16 Stretchers, 16 First-Aid Kits, 16 Track Carts, 16 100 Ft Sections of Rope	Purchase Order	Manufacture, test, and deliver fire extinguishers, hose, and nozzles and emergency equipment. Includes unloading after shipment but does not include handling and storage after delivery. Quantities will be based on the System Design Criteria and Standards, primarily the Fire/Life Safety requirements.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
B790	Stores and Consumables: Establish requirements for additional stores and consumables to support SEG-2. Consider SEG-1 inventories when making determination of needs. Identify readily available standard supplies to be procured and recommend stocking levels. Assist, as requested, with preparation of purchasing documents.	B790		Procurement	Furnish stores and consumables under multiple contracts to augment SEG-1 and support SEG-2. Include cleaning supplies, lubricants, solvents, carwash detergents, etc.
B795	Uninterruptible Power Supplies: Determine requirements for, design, and prepare bid documents for procurement of additional uninterruptible power electrical equipment to support SEG-2.	B795	16 units (2 at each SEG-2 station).	Procurement	Manufacture, deliver, and support installation of uninterruptible power electrical equipment for all SEG-2 stations. Each uninterruptible power supply (UPS) shall include the electronic and batteries needed to provide emergency power, station and tunnel emergency lighting, and control power supply for the electrical substation switchgear and communications equipment as required by the System Design Criteria and Standards. (Installation by station contractors.)

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
H840	Fare Collection: Calculate quantity of Ticket Vending Machines (TVMs) required by final SEG-2 alignment. Prepare plan for installation of fare collection equipment. Specify additional equipment required in SEG-1 stations by the expansion of Metro Red Line to SEG-2. Modify equipment quantities listed in Option No. 3 of H840 Contract in accordance with the updated requirements. Develop conduit and underfloor duct requirements for SEG-2 stations.	H840	TBD	Procurement	Furnish equipment supplied under Option No. 3 of Contract H840 as modified in accordance with final SEG-2 design. Option No. 3 can be exercised up to January 14, 1991.
B661	Prepare contract documents for the installation of the H840 equipment.	B661	TBD	Installation	Install equipment supplied by H840 contractor under Option No. 3 to Contract H840.

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
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PROFESSIONAL SERVICES CONTRACT UNIT DESCRIPTIONS

E002	The Metro Red Line is a two-track rail line in subway configuration. Construction is being accomplished in stages. The Segment 2 stage includes two branches beginning just west of the Segment 1 Westlake/McArthur Park Station. One branch alignment terminates at Wilshire Boulevard and Western Avenue, the other at Hollywood Boulevard and Vine Street. Segment 2 contains eight stations designed for unattended operations.	E002	1 LOT	Professional Services	The MRTC contract provides professional and other services for design and construction of the Metro Red Line, including: preliminary-design and management of the final design efforts, systems/facilities integration, project capital cost estimating, project cost and schedule reporting and control, technical coordination, preparation of all camera-ready construction and design/furnish/install bid documents, design services during construction, preparation of project record drawings, and implementation of a design phase QA/QC program.
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Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
MC01	<p>The Metro Red Line is a two-track rail line in subway configuration. Construction is being accomplished in stages. The Segment 2 stage includes two branches beginning just west of the Segment 1 Westlake/McArthur Park Station. One branch alignment terminates at Wilshire Boulevard and Western Avenue, the other at Hollywood Boulevard and Vine Street. Segment 2 contains eight stations designed for unattended operations.</p>	MC01	1 LOT	Professional Services	<p>Parsons-Dillingham provides construction management (CM) services with responsibility for preconstruction and construction management services for the construction, testing and startup of the Metro Red Line Project.</p> <p>Services include constructibility and claims avoidance reviews; reviews of cost estimates; assistance in procurement of long lead materials and equipment; assistance in evaluating bids from construction contractors; implementation of a safety program; supervision, administration, and inspection surveillance of facilities construction and systems contracts; the scheduling and cost control of construction; configuration management; and field contract administration.</p> <p>The CM is also responsible for certain systems aspects of the project and CM support services.</p>

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K001	<p>The Metro Red Line is a two-track rail line in subway configuration. Construction is being accomplished in stages. The Segment 2 stage includes two branches beginning just west of the Segment 1 Westlake/McArthur Park Station. One branch alignment terminates at Wilshire Boulevard and Western Avenue, the other at Hollywood Boulevard and Vine Street. Segment 2 contains eight stations designed for unattended operations.</p>	K001	1 LOT	Professional Services	<p>Booz-Allen & Hamilton's scope of services for the Metro Rail segment include systems analysis of: Operations/Maintenance/Rail Activation, Safety/Security/Systems Assurance, Fare Collection Equipment Procurement Management, Administration Support, and Special Studies</p> <p>Management of the passenger vehicle procurement involves: Program Management, Design Reviews, Interface Management, Q.A. Monitoring, TTC Testing, and Vehicle Acceptance.</p>

Design Unit	Design Scope	Contract Unit	Approx. Quantities	Contract Type	Contract Scope
MY005	The Metro Red Line is a two-track rail line in subway configuration. Construction is being accomplished in stages. The Segment 2 stage includes two branches beginning just west of the Segment 1 Westlake/-McArthur Park Station. One branch alignment terminates at Wilshire Boulevard and Western Avenue, the other at Hollywood Boulevard and Vine Street. Segment 2 contains eight stations designed for unattended operations.	MY005	1 LOT	Professional Services	For Segment 2, LKG has the responsibility to meet all contract services requirements to facilitate the sale and distribution of bid documents.

