

General Decision Number: CA150031 02/20/2015 CA31

Superseded General Decision Number: CA20140031

State: California

Construction Types: Building, Heavy (Heavy and Dredging) and Highway

Counties: Inyo, Kern and Mono Counties in California.

BUILDING CONSTRUCTION PROJECTS; DREDGING PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS.

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/02/2015
1	01/16/2015
2	01/23/2015
3	02/06/2015
4	02/20/2015

ASBE0005-001 06/30/2014

INYO AND KERN

	Rates	Fringes
Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls, floors, ceilings and curtain walls).....	\$ 24.34	16.09
Insulator/asbestos worker (Includes the application of all insulating materials, protective coverings, coatings & finishes to all types of mechanical systems).....	\$ 35.44	19.36

ASBE0005-005 06/24/2013

INYO AND KERN

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not).....	\$ 16.95	10.23

ASBE0016-003 01/01/2014

MONO

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems).....	\$ 44.05	18.62

BOIL0092-005 10/01/2012

INYO AND KERN

	Rates	Fringes
BOILERMAKER.....	\$ 41.17	28.27

BOIL0549-003 01/01/2013

MONO COUNTY

	Rates	Fringes
BOILERMAKER.....	\$ 38.37	31.32

* BRCA0004-005 05/01/2014

	Rates	Fringes
BRICKLAYER; MARBLE SETTER.....	\$ 36.40	12.85

*The wage scale for prevailing wage projects performed in Blythe, China lake, Death Valley, Fort Irwin, Twenty-Nine Palms, Needles and 1-15 corridor (Barstow to the Nevada State Line) will be Three Dollars (\$3.00) above the standard San Bernardino/Riverside County hourly wage rate

BRCA0018-010 09/01/2013

	Rates	Fringes
TERRAZZO FINISHER.....	\$ 26.59	10.34

TERRAZZO WORKER/SETTER.....\$ 33.63 11.13

BRCA0018-011 06/01/2014

	Rates	Fringes
TILE LAYER.....	\$ 35.14	14.33

BRCA0018-012 06/01/2014

KERN

	Rates	Fringes
MARBLE FINISHER.....	\$ 28.45	11.38
TILE FINISHER.....	\$ 23.78	9.84

CARP0409-002 07/01/2008

	Rates	Fringes
Diver		
(1) Wet.....	\$ 663.68	9.82
(2) Standby.....	\$ 331.84	9.82
(3) Tender.....	\$ 323.84	9.82
(4) Assistant Tender.....	\$ 299.84	9.82

Amounts in "Rates" column are per day

CARP0409-005 07/01/2010

	Rates	Fringes
Drywall		
DRYWALL INSTALLER/LATHER.....	\$ 37.35	11.08
STOCKER/SCRAPPER.....	\$ 10.00	6.67

CARP0409-006 07/01/2008

	Rates	Fringes
CARPENTER		
(01) Carpenter, cabinet installer, insulation installer, floor worker and acoustical installer....	\$ 36.78	9.82
(02) Millwright.....	\$ 37.85	9.82
(03) Piledrivermen; Derrick barge; Bridge or Dock Carpenter; Heavy framer; Rockslinger; Rock Bargeman; Scowman.....	\$ 37.48	9.82
(04) Shingler (Commercial).\$	36.91	9.82
(05) Table Power Saw Operator.....	\$ 36.88	9.82
(06) Pneumatic Nailer or Power Stapler.....	\$ 37.03	9.82
(07) Roof Loader of Shingles (Commercial).....	\$ 25.84	9.82
(08) Saw Filer.....	\$ 36.87	9.82

(09) Scaffold Builder.....\$ 28.55 9.82

FOOTNOTE: Work of forming in the construction of open cut sewers or storm drains, on operations in which horizontal lagging is used in conjunction with steel H-Beams driven or placed in pre-drilled holes, for that portion of a lagged trench against which concrete is poured, namely, as a substitute for back forms (which work is performed by piledrivers): \$0.13 per hour additional.

 ELEC0428-001 12/01/2014

	Rates	Fringes
CABLE SPLICER		
China Lake Naval Weaons		
Center, Edwards AFB.....\$ 46.57	46.57	19.94
Remainder of Kern County....\$ 40.32	40.32	20.36
ELECTRICIAN		
China Lake Naval Weapons		
Center, Edwards AFB.....\$ 42.90	42.90	19.83
Remainder of Kern County....\$ 36.65	36.65	19.64

 * ELEC0428-003 12/01/2014

COMMUNICATIONS AND SYSTEMS WORK

KERN COUNTY

	Rates	Fringes
Communications System		
Installer.....\$ 29.51	29.51	12.74
Technician.....\$ 30.83	30.83	11.17

SCOPE OF WORK:

Installation, testing, service and maintenance of systems utilizing the transmission and/or transference of voice, sound, vision and digital for commercial, educational, security and entertainment purposes for the following: TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multi-media, multiplex, nurse call systems, radio page, school intercom and sound, burglar alarms, fire alarm (see last paragraph below) and low voltage master clock systems in commercial buildings. Communication Systems that transmit or receive information and/or control systems that are intrinsic to the above listed systems; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding all other data systems or multiple systems which include control function or power supply; excluding installation of raceway systems, conduit systems, line voltage work, and energy management systems. Does not cover work performed at China Lake Naval Ordnance Test Station. Fire alarm work shall be performed at the current inside wireman total cost package.

ELEC0440-003 05/26/2014

COMMUNICATIONS AND SYSTEMS WORK

INYO AND MONO COUNTIES

	Rates	Fringes
Communications System		
Installer.....	\$ 28.38	4%+11.45
Technician.....	\$ 30.18	4%+11.45

SCOPE OF WORK:

Installation, testing, service and maintenance of systems utilizing the transmission and/or transference of voice, sound, vision and digital for commercial, educational, security and entertainment purposes for the following: TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multi-media, multiplex, nurse call systems, radio page, school intercom and sound, burglar alarms, fire alarms, and low voltage master clock systems in commercial buildings. Communication Systems that transmit or receive information and/or control systems that are intrinsic to the above listed systems; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding all other data systems or multiple systems which include control function or power supply; excluding installation of raceway systems, conduit systems, line voltage work, and energy management systems. Does not cover work performed at China Lake Naval Ordnance Test Station.

ELEC0477-001 06/30/2014

INYO AND MONO

	Rates	Fringes
ELECTRICIAN.....	\$ 47.50	3%+19.78
CABLE SPLICER:	\$1.00 above Electrician.	
TUNNEL WORK:	10% above Electrician.	

ELEC1245-001 06/01/2013

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer..	\$ 50.30	15.00
(2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment).....	\$ 40.17	14.56

(3) Groundman.....	\$ 30.73	13.48
(4) Powderman.....	\$ 44.91	13.48

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day,
Independence Day, Labor Day, Veterans Day, Thanksgiving Day
and day after Thanksgiving, Christmas Day

ELEV0018-001 01/01/2014

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 49.03	26.785

FOOTNOTE:

PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.
PAID HOLIDAYS: New Years Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

ENGI0012-003 07/07/2014

	Rates	Fringes
OPERATOR: Power Equipment (All Other Work)		
GROUP 1.....	\$ 39.05	22.25
GROUP 2.....	\$ 39.83	22.25
GROUP 3.....	\$ 40.12	22.25
GROUP 4.....	\$ 41.61	22.25
GROUP 5.....	\$ 41.86	22.25
GROUP 6.....	\$ 41.83	22.25
GROUP 8.....	\$ 41.94	22.25
GROUP 9.....	\$ 42.19	22.25
GROUP 10.....	\$ 42.06	22.25
GROUP 11.....	\$ 42.31	22.25
GROUP 12.....	\$ 42.23	22.25
GROUP 13.....	\$ 42.33	22.25
GROUP 14.....	\$ 42.36	22.25
GROUP 15.....	\$ 42.44	22.25
GROUP 16.....	\$ 42.56	22.25
GROUP 17.....	\$ 42.73	22.25
GROUP 18.....	\$ 42.83	22.25
GROUP 19.....	\$ 42.94	22.25
GROUP 20.....	\$ 43.06	22.25
GROUP 21.....	\$ 43.23	22.25
GROUP 22.....	\$ 43.33	22.25
GROUP 23.....	\$ 43.44	22.25
GROUP 24.....	\$ 43.56	22.25
GROUP 25.....	\$ 43.73	22.25
OPERATOR: Power Equipment (Cranes, Piledriving & Hoisting)		
GROUP 1.....	\$ 40.40	22.25
GROUP 2.....	\$ 41.18	22.25
GROUP 3.....	\$ 41.47	22.25
GROUP 4.....	\$ 41.61	22.25

GROUP 5.....	\$ 41.83	22.25
GROUP 6.....	\$ 41.94	22.25
GROUP 7.....	\$ 42.06	22.25
GROUP 8.....	\$ 42.23	22.25
GROUP 9.....	\$ 42.40	22.25
GROUP 10.....	\$ 43.40	22.25
GROUP 11.....	\$ 44.40	22.25
GROUP 12.....	\$ 45.40	22.25
GROUP 13.....	\$ 46.40	22.25
OPERATOR: Power Equipment (Tunnel Work)		
GROUP 1.....	\$ 40.90	22.25
GROUP 2.....	\$ 41.68	22.25
GROUP 3.....	\$ 41.97	22.25
GROUP 4.....	\$ 42.11	22.25
GROUP 5.....	\$ 42.33	22.25
GROUP 6.....	\$ 42.44	22.25
GROUP 7.....	\$ 42.56	22.25

PREMIUM PAY:

\$3.75 per hour shall be paid on all Power Equipment Operator work on the following Military Bases: China Lake Naval Reserve, Vandenberg AFB, Point Arguello, Seely Naval Base, Fort Irwin, Nebo Annex Marine Base, Marine Corp Logistics Base Yermo, Edwards AFB, 29 Palms Marine Base and Camp Pendleton

Workers required to suit up and work in a hazardous material environment: \$2.00 per hour additional. Combination mixer and compressor operator on gunite work shall be classified as a concrete mobile mixer operator.

SEE ZONE DEFINITIONS AFTER CLASSIFICATIONS

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Bargeman; Brakeman; Compressor operator; Ditch Witch, with seat or similar type equipment; Elevator operator-inside; Engineer Oiler; Forklift operator (includes loed, lull or similar types under 5 tons; Generator operator; Generator, pump or compressor plant operator; Pump operator; Signalman; Switchman

GROUP 2: Asphalt-rubber plant operator (nurse tank operator); Concrete mixer operator-skip type; Conveyor operator; Fireman; Forklift operator (includes loed, lull or similar types over 5 tons; Hydrostatic pump operator; oiler crusher (asphalt or concrete plant); Petromat laydown machine; PJU side dum jack; Screening and conveyor machine operator (or similar types); Skiploader (wheel type up to 3/4 yd. without attachment); Tar pot fireman; Temporary heating plant operator; Trenching machine oiler

GROUP 3: Asphalt-rubber blend operator; Bobcat or similar type (Skid steer); Equipment greaser (rack); Ford Ferguson (with dragtype attachments); Helicopter radioman (ground); Stationary pipe wrapping and cleaning machine operator

GROUP 4: Asphalt plant fireman; Backhoe operator (mini-max or similar type); Boring machine operator; Boxman or mixerman

(asphalt or concrete); Chip spreading machine operator; Concrete cleaning decontamination machine operator; Concrete Pump Operator (small portable); Drilling machine operator, small auger types (Texoma super economatic or similar types - Hughes 100 or 200 or similar types - drilling depth of 30' maximum); Equipment greaser (grease truck); Guard rail post driver operator; Highline cableway signalman; Hydra-hammer-aero stomper; Micro Tunneling (above ground tunnel); Power concrete curing machine operator; Power concrete saw operator; Power-driven jumbo form setter operator; Power sweeper operator; Rock Wheel Saw/Trencher; Roller operator (compacting); Screed operator (asphalt or concrete); Trenching machine operator (up to 6 ft.); Vacuum or much truck

GROUP 5: Equipment Greaser (Grease Truck/Multi Shift).

GROUP 6: Articulating material hauler; Asphalt plant engineer; Batch plant operator; Bit sharpener; Concrete joint machine operator (canal and similar type); Concrete planer operator; Dandy digger; Deck engine operator; Derrickman (oilfield type); Drilling machine operator, bucket or auger types (Calweld 100 bucket or similar types - Watson 1000 auger or similar types - Texoma 330, 500 or 600 auger or similar types - drilling depth of 45' maximum); Drilling machine operator; Hydrographic seeder machine operator (straw, pulp or seed), Jackson track maintainer, or similar type; Kalamazoo Switch tamper, or similar type; Machine tool operator; Maginnis internal full slab vibrator, Mechanical berm, curb or gutter (concrete or asphalt); Mechanical finisher operator (concrete, Clary-Johnson-Bidwell or similar); Micro tunnel system (below ground); Pavement breaker operator (truck mounted); Road oil mixing machine operator; Roller operator (asphalt or finish), rubber-tired earth moving equipment (single engine, up to and including 25 yds. struck); Self-propelled tar pipelining machine operator; Skiploader operator (crawler and wheel type, over 3/4 yd. and up to and including 1-1/2 yds.); Slip form pump operator (power driven hydraulic lifting device for concrete forms); Tractor operator-bulldozer, tamper-scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types); Tugger hoist operator (1 drum); Ultra high pressure waterjet cutting tool system operator; Vacuum blasting machine operator

GROUP 8: Asphalt or concrete spreading operator (tamping or finishing); Asphalt paving machine operator (Barber Greene or similar type); Asphalt-rubber distribution operator; Backhoe operator (up to and including 3/4 yd.), small ford, Case or similar; Cast-in-place pipe laying machine operator; Combination mixer and compressor operator (gunite work); Compactor operator (self-propelled); Concrete mixer operator (paving); Crushing plant operator; Drill Doctor; Drilling machine operator, Bucket or auger types (Calweld 150 bucket or similar types - Watson 1500, 2000 2500 auger or similar types - Texoma 700, 800 auger or similar types - drilling depth of 60' maximum); Elevating grader operator; Grade checker; Gradall operator; Grouting machine operator; Heavy-duty repairman; Heavy equipment robotics operator;

Kalamazoo balliste regulator or similar type; Kolman belt loader and similar type; Le Tourneau blob compactor or similar type; Loader operator (Athey, Euclid, Sierra and similar types); Mobark Chipper or similar; Ozzie padder or similar types; P.C. slot saw; Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pumpcrete gun operator; Rock Drill or similar types; Rotary drill operator (excluding caisson type); Rubber-tired earth-moving equipment operator (single engine, caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator (multiple engine up to and including 25 yds. struck); Rubber-tired scraper operator (self-loading paddle wheel type-John Deere, 1040 and similar single unit); Self-propelled curb and gutter machine operator; Shuttle buggy; Skiploader operator (crawler and wheel type over 1-1/2 yds. up to and including 6-1/2 yds.); Soil remediation plant operator; Surface heaters and planer operator; Tractor compressor drill combination operator; Tractor operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar-bulldozer, tamper, scraper and push tractor single engine); Tractor operator (boom attachments), Traveling pipe wrapping, cleaning and bending machine operator; Trenching machine operator (over 6 ft. depth capacity, manufacturer's rating); trenching Machine with Road Miner attachment (over 6 ft depth capacity): Ultra high pressure waterjet cutting tool system mechanic; Water pull (compaction) operator

GROUP 9: Heavy Duty Repairman

GROUP 10: Drilling machine operator, Bucket or auger types (Calweld 200 B bucket or similar types-Watson 3000 or 5000 auger or similar types-Texoma 900 auger or similar types-drilling depth of 105' maximum); Dual drum mixer, dynamic compactor LDC350 (or similar types); Monorail locomotive operator (diesel, gas or electric); Motor patrol-blade operator (single engine); Multiple engine tractor operator (Euclid and similar type-except Quad 9 cat.); Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Pneumatic pipe ramming tool and similar types; Prestressed wrapping machine operator; Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Rubber tired earth moving equipment operator (multiple engine, Euclid, caterpillar and similar over 25 yds. and up to 50 yds. struck), Tower crane repairman; Tractor loader operator (crawler and wheel type over 6-1/2 yds.); Woods mixer operator (and similar Pugmill equipment)

GROUP 11: Heavy Duty Repairman - Welder Combination, Welder - Certified.

GROUP 12: Auto grader operator; Automatic slip form operator; Drilling machine operator, bucket or auger types (Calweld, auger 200 CA or similar types - Watson, auger 6000 or similar types - Hughes Super Duty, auger 200 or similar types - drilling depth of 175' maximum); Hoe ram or similar with compressor; Mass excavator operator less tha 750 cu.

yards; Mechanical finishing machine operator; Mobile form traveler operator; Motor patrol operator (multi-engine); Pipe mobile machine operator; Rubber-tired earth-moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Rubber-tired self-loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

GROUP 13: Rubber-tired earth-moving equipment operator operating equipment with push-pull system (single engine, up to and including 25 yds. struck)

GROUP 14: Canal liner operator; Canal trimmer operator; Remote-control earth-moving equipment operator (operating a second piece of equipment: \$1.00 per hour additional); Wheel excavator operator (over 750 cu. yds.)

GROUP 15: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine-up to and including 25 yds. struck)

GROUP 16: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 17: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck); Tandem tractor operator (operating crawler type tractors in tandem - Quad 9 and similar type)

GROUP 18: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

GROUP 19: Rotex concrete belt operator (or similar types); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck)

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps, and similar types in any

combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 21: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

GROUP 22: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, up to and including 25 yds. struck)

GROUP 23: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating with the tandem push-pull system (multiple engine, up to and including 25 yds. struck)

GROUP 24: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 25: Concrete pump operator-truck mounted; Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

CRANES, PILEDIVING AND HOISTING EQUIPMENT CLASSIFICATIONS

GROUP 1: Engineer oiler; Fork lift operator (includes loed, lull or similar types)

GROUP 2: Truck crane oiler

GROUP 3: A-frame or winch truck operator; Ross carrier operator (jobsite)

GROUP 4: Bridge-type unloader and turntable operator; Helicopter hoist operator

GROUP 5: Hydraulic boom truck; Stinger crane (Austin-Western or similar type); Tugger hoist operator (1 drum)

GROUP 6: Bridge crane operator; Cretor crane operator; Hoist operator (Chicago boom and similar type); Lift mobile operator; Lift slab machine operator (Vagtborg and similar types); Material hoist and/or manlift operator; Polar gantry crane operator; Self Climbing scaffold (or similar type); Shovel, backhoe, dragline, clamshell operator (over 3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

GROUP 7: Pedestal crane operator; Shovel, backhoe, dragline, clamshell operator (over 5 cu. yds. mrc); Tower crane repair; Tugger hoist operator (3 drum)

GROUP 8: Crane operator (up to and including 25 ton capacity); Crawler transporter operator; Derrick barge operator (up to and including 25 ton capacity); Hoist operator, stiff legs, Guy derrick or similar type (up to and including 25 ton capacity); Shovel, backhoe, dragline, clamshell operator (over 7 cu. yds., M.R.C.)

GROUP 9: Crane operator (over 25 tons and up to and including 50 tons mrc); Derrick barge operator (over 25 tons up to and including 50 tons mrc); Highline cableway operator; Hoist operator, stiff legs, Guy derrick or similar type (over 25 tons up to and including 50 tons mrc); K-crane operator; Polar crane operator; Self erecting tower crane operator maximum lifting capacity ten tons

GROUP 10: Crane operator (over 50 tons and up to and including 100 tons mrc); Derrick barge operator (over 50 tons up to and including 100 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 50 tons up to and including 100 tons mrc), Mobile tower crane operator (over 50 tons, up to and including 100 tons M.R.C.); Tower crane operator and tower gantry

GROUP 11: Crane operator (over 100 tons and up to and including 200 tons mrc); Derrick barge operator (over 100 tons up to and including 200 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 100 tons up to and including 200 tons mrc); Mobile tower crane operator (over 100 tons up to and including 200 tons mrc)

GROUP 12: Crane operator (over 200 tons up to and including 300 tons mrc); Derrick barge operator (over 200 tons up to and including 300 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 200 tons, up to and including 300 tons mrc); Mobile tower crane operator (over 200 tons, up to and including 300 tons mrc)

GROUP 13: Crane operator (over 300 tons); Derrick barge operator (over 300 tons); Helicopter pilot; Hoist operator, stiff legs, Guy derrick or similar type (over 300 tons); Mobile tower crane operator (over 300 tons)

TUNNEL CLASSIFICATIONS

GROUP 1: Skiploader (wheel type up to 3/4 yd. without attachment)

GROUP 2: Power-driven jumbo form setter operator

GROUP 3: Dinkey locomotive or motorperson (up to and including 10 tons)

GROUP 4: Bit sharpener; Equipment greaser (grease truck); Slip form pump operator (power-driven hydraulic lifting device for concrete forms); Tugger hoist operator (1 drum); Tunnel locomotive operator (over 10 and up to and including

30 tons)

GROUP 5: Backhoe operator (up to and including 3/4 yd.); Small Ford, Case or similar; Drill doctor; Grouting machine operator; Heading shield operator; Heavy-duty repairperson; Loader operator (Athey, Euclid, Sierra and similar types); Mucking machine operator (1/4 yd., rubber-tired, rail or track type); Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pneumatic heading shield (tunnel); Pumpcrete gun operator; Tractor compressor drill combination operator; Tugger hoist operator (2 drum); Tunnel locomotive operator (over 30 tons)

GROUP 6: Heavy Duty Repairman

GROUP 7: Tunnel mole boring machine operator

ENGINEERS ZONES

\$1.00 additional per hour for all of IMPERIAL County and the portions of KERN, RIVERSIDE & SAN BERNARDINO Counties as defined below:

That area within the following Boundary: Begin in San Bernardino County, approximately 3 miles NE of the intersection of I-15 and the California State line at that point which is the NW corner of Section 1, T17N, m R14E, San Bernardino Meridian. Continue W in a straight line to that point which is the SW corner of the northwest quarter of Section 6, T27S, R42E, Mt. Diablo Meridian. Continue North to the intersection with the Inyo County Boundary at that point which is the NE corner of the western half of the northern quarter of Section 6, T25S, R42E, MDM. Continue W along the Inyo and San Bernardino County boundary until the intersection with Kern County, as that point which is the SE corner of Section 34, T24S, R40E, MDM. Continue W along the Inyo and Kern County boundary until the intersection with Tulare County, at that point which is the SW corner of the SE quarter of Section 32, T24S, R37E, MDM. Continue W along the Kern and Tulare County boundary, until that point which is the NW corner of T25S, R32E, MDM. Continue S following R32E lines to the NW corner of T31S, R32E, MDM. Continue W to the NW corner of T31S, R31E, MDM. Continue S to the SW corner of T32S, R31E, MDM. Continue W to SW corner of SE quarter of Section 34, T32S, R30E, MDM. Continue S to SW corner of T11N, R17W, SBM. Continue E along south boundary of T11N, SBM to SW corner of T11N, R7W, SBM. Continue S to SW corner of T9N, R7W, SBM. Continue E along south boundary of T9N, SBM to SW corner of T9N, R1E, SBM. Continue S along west boundary of R1E, SMB to Riverside County line at the SW corner of T1S, R1E, SBM. Continue E along south boundary of T1s, SBM (Riverside County Line) to SW corner of T1S, R10E, SBM. Continue S along west boundary of R10E, SBM to Imperial County line at the SW corner of T8S, R10E, SBM. Continue W along Imperial and Riverside county line to NW corner of T9S, R9E, SBM. Continue S along the boundary between Imperial and San Diego Counties, along the west edge of R9E, SBM to the south boundary of Imperial County/California state line. Follow the California state line west to Arizona state line, then north to Nevada state line, then continuing NW back to start at the point which is the NW corner of Section 1,

T17N, R14E, SBM

\$1.00 additional per hour for portions of SAN LUIS OBISPO, KERN, SANTA BARBARA & VENTURA as defined below:

That area within the following Boundary: Begin approximately 5 miles north of the community of Cholame, on the Monterey County and San Luis Obispo County boundary at the NW corner of T25S, R16E, Mt. Diablo Meridian. Continue south along the west side of R16E to the SW corner of T30S, R16E, MDM. Continue E to SW corner of T30S, R17E, MDM. Continue S to SW corner of T31S, R17E, MDM. Continue E to SW corner of T31S, R18E, MDM. Continue S along West side of R18E, MDM as it crosses into San Bernardino Meridian numbering area and becomes R30W. Follow the west side of R30W, SBM to the SW corner of T9N, R30W, SBM. Continue E along the south edge of T9N, SBM to the Santa Barbara County and Ventura County boundary at that point which is the SW corner of Section 34. T9N, R24W, SBM, continue S along the Ventura County line to that point which is the SW corner of the SE quarter of Section 32, T7N, R24W, SBM. Continue E along the south edge of T7N, SBM to the SE corner to T7N, R21W, SBM. Continue N along East side of R21W, SBM to Ventura County and Kern County boundary at the NE corner of T8N, R21W. Continue W along the Ventura County and Kern County boundary to the SE corner of T9N, R21W. Continue North along the East edge of R21W, SBM to the NE corner of T12N, R21W, SBM. Continue West along the north edge of T12N, SBM to the SE corner of T32S, R21E, MDM. [T12N SBM is a think strip between T11N SBM and T32S MDM]. Continue North along the East side of R21E, MDM to the Kings County and Kern County border at the NE corner of T25S, R21E, MDM, continue West along the Kings County and Kern County Boundary until the intersection of San Luis Obispo County. Continue west along the Kings County and San Luis Obispo County boundary until the intersection with Monterey County. Continue West along the Monterey County and San Luis Obispo County boundary to the beginning point at the NW corner of T25S, R16E, MDM.

\$2.00 additional per hour for INYO and MONO Counties and the Northern portion of SAN BERNARDINO County as defined below:

That area within the following Boundary: Begin at the intersection of the northern boundary of Mono County and the California state line at the point which is the center of Section 17, T10N, R22E, Mt. Diablo Meridian. Continue S then SE along the entire western boundary of Mono County, until it reaches Inyo County at the point which is the NE corner of the Western half of the NW quarter of Section 2, T8S, R29E, MDM. Continue SSE along the entire western boundary of Inyo County, until the intersection with Kern County at the point which is the SW corner of the SE 1/4 of Section 32, T24S, R37E, MDM. Continue E along the Inyo and Kern County boundary until the intersection with San Bernardino County at that point which is the SE corner of section 34, T24S, R40E, MDM. Continue E along the Inyo and San Bernardino County boundary until the point which is the NE corner of the Western half of the NW quarter of Section 6, T25S, R42E, MDM. Continue S to that point which is the SW corner of the NW quarter of Section 6, T27S, R42E, MDM. Continue E in a straight line to the California and Nevada

state border at the point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Then continue NW along the state line to the starting point, which is the center of Section 18, T10N, R22E, MDM.

REMAINING AREA NOT DEFINED ABOVE RECIEVES BASE RATE

ENGI0012-004 08/01/2014

	Rates	Fringes
OPERATOR: Power Equipment (DREDGING)		
(1) Leverman.....	\$ 48.60	22.40
(2) Dredge dozer.....	\$ 42.63	22.40
(3) Deckmate.....	\$ 42.52	22.40
(4) Winch operator (stern winch on dredge).....	\$ 41.97	22.40
(5) Fireman-Oiler, Deckhand, Bargeman, Leveehand.....	\$ 41.43	22.40
(6) Barge Mate.....	\$ 42.04	22.40

IRON0377-002 01/01/2015

	Rates	Fringes
Ironworkers:		
Fence Erector.....	\$ 27.08	18.24
Ornamental, Reinforcing and Structural.....	\$ 33.50	28.20

PREMIUM PAY:

\$6.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland, Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB

\$4.00 additional per hour at the following locations:

Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center

\$2.00 additional per hour at the following locations:

Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

LABO0220-002 07/01/2014

KERN COUNTY

	Rates	Fringes
LABORER (TUNNEL)		
GROUP 1.....	\$ 35.74	16.48
GROUP 2.....	\$ 36.06	16.48
GROUP 3.....	\$ 36.52	16.48
GROUP 4.....	\$ 37.21	16.48
LABORER		
GROUP 1.....	\$ 30.19	16.48
GROUP 2.....	\$ 30.74	16.48
GROUP 3.....	\$ 31.29	16.48
GROUP 4.....	\$ 32.84	16.48
GROUP 5.....	\$ 33.19	16.48

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete screeding for rough strike-off; Concrete, water curing; Demolition laborer, the cleaning of brick if performed by a worker performing any other phase of demolition work, and the cleaning of lumber; Fire watcher, limber, brush loader, piler and debris handler; Flag person; Gas, oil and/or water pipeline laborer; Laborer, asphalt-rubber material loader; Laborer, general or construction; Laborer, general clean-up; Laborer, landscaping; Laborer, jetting; Laborer, temporary water and air lines; Material hose operator (walls, slabs, floors and decks); Plugging, filling of shee bolt holes; Dry packing of concrete; Railroad maintenance, repair track person and road beds; Streetcar and railroad construction track laborers; Rigging and signaling; Scaler; Slip form raiser; Tar and mortar; Tool crib or tool house laborer; Traffic control by any method; Window cleaner; Wire mesh pulling - all concrete pouring operations

GROUP 2: Asphalt shoveler; Cement dumper (on 1 yd. or larger mixer and handling bulk cement); Cesspool digger and installer; Chucktender; Chute handler, pouring concrete, the handling of the chute from readymix trucks, such as walls, slabs, decks, floors, foundation, footings, curbs, gutters and sidewalks; Concrete curer, impervious membrane and form oiler; Cutting torch operator (demolition); Fine grader, highways and street paving, airport, runways and similar type heavy construction; Gas, oil and/or water pipeline wrapper - pot tender and form person; Guinea chaser; Headerboard person - asphalt; Laborer, packing rod steel and pans; Membrane vapor barrier installer; Power broom sweeper (small); Riprap stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Sandblaster (pot tender); Septic tank digger and installer(lead); Tank scaler and cleaner; Tree climber, faller, chain saw operator, Pittsburgh chipper and similar type brush shredder; Underground laborer, including caisson bellower

GROUP 3: Buggymobile person; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2-1/2 ft. drill steel or longer; Dri-pak-it machine; Gas, oil and/or water pipeline wrapper, 6-in. pipe and over, by any method, inside and out; High scaler (including drilling of same); Hydro seeder and similar type; Impact wrench multi-plate; Kettle person,

pot person and workers applying asphalt, lay-kold, creosote, lime caustic and similar type materials ("applying" means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operator of pneumatic, gas, electric tools, vibrating machine, pavement breaker, air blasting, come-alongs, and similar mechanical tools not separately classified herein; Pipelayer's backup person, coating, grouting, making of joints, sealing, caulking, diapering and including rubber gasket joints, pointing and any and all other services; Rock slinger; Rotary scarifier or multiple head concrete chipping scarifier; Steel headerboard and guideline setter; Tamper, Barko, Wacker and similar type; Trenching machine, hand-propelled

GROUP 4: Asphalt raker, lute person, ironer, asphalt dump person, and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), grinder or sander; Concrete saw person, cutting walls or flat work, scoring old or new concrete; Cribber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Head rock slinger; Laborer, asphalt- rubber distributor boot person; Laser beam in connection with laborers' work; Oversize concrete vibrator operator, 70 lbs. and over; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit and any other stationary type of tubular device used for the conveying of any substance or element, whether water, sewage, solid gas, air, or other product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No-joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzle person), water blasting, Porta Shot-Blast

GROUP 5: Blaster powder, all work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Driller: All power drills, excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and any and all other types of mechanical drills without regard to the form of motive power; Toxic waste removal

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Batch plant laborer; Changehouse person; Dump person; Dump person (outside); Swamper (brake person and switch person on tunnel work); Tunnel materials handling person; Nipper; Pot tender, using mastic or other materials (for example, but not by way of limitation, shotcrete, etc.)

GROUP 2: Chucktender, cabledtender; Loading and unloading agitator cars; Vibrator person, jack hammer, pneumatic tools (except driller); Bull gang mucker, track person; Concrete crew, including rodder and spreader

GROUP 3: Blaster, driller, powder person; Chemical grout jet person; Cherry picker person; Grout gun person; Grout mixer person; Grout pump person; Jackleg miner; Jumbo person;

Kemper and other pneumatic concrete placer operator; Miner, tunnel (hand or machine); Nozzle person; Operating of troweling and/or grouting machines; Powder person (primer house); Primer person; Sandblaster; Shotcrete person; Steel form raiser and setter; Timber person, retimber person, wood or steel; Tunnel Concrete finisher

GROUP 4: Diamond driller; Sandblaster; Shaft and raise work

LABO0220-005 07/01/2014

KERN COUNTY

	Rates	Fringes
Brick Tender.....	\$ 29.12	15.78

LABO0300-005 01/01/2014

	Rates	Fringes
Asbestos Removal Laborer.....	\$ 28.00	15.25

SCOPE OF WORK: Includes site mobilization, initial site cleanup, site preparation, removal of asbestos-containing material and toxic waste, encapsulation, enclosure and disposal of asbestos- containing materials and toxic waste by hand or with equipment or machinery; scaffolding, fabrication of temporary wooden barriers and assembly of decontamination stations.

LABO0345-001 07/01/2014

	Rates	Fringes
LABORER (GUNITE)		
GROUP 1.....	\$ 34.79	17.92
GROUP 2.....	\$ 33.84	17.92
GROUP 3.....	\$ 30.30	17.92

FOOTNOTE: GUNITE PREMIUM PAY: Workers working from a Bosn'n's Chair or suspended from a rope or cable shall receive 40 cents per hour above the foregoing applicable classification rates. Workers doing gunite and/or shotcrete work in a tunnel shall receive 35 cents per hour above the foregoing applicable classification rates, paid on a portal-to-portal basis. Any work performed on, in or above any smoke stack, silo, storage elevator or similar type of structure, when such structure is in excess of 75'-0" above base level and which work must be performed in whole or in part more than 75'-0" above base level, that work performed above the 75'-0" level shall be compensated for at 35 cents per hour above the applicable classification wage rate.

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

LABO0783-001 07/01/2014

INYO AND MONO COUNTIES

	Rates	Fringes
LABORER (TUNNEL)		
GROUP 1.....	\$ 35.74	16.48
GROUP 2.....	\$ 36.06	16.48
GROUP 3.....	\$ 36.52	16.48
GROUP 4.....	\$ 37.21	16.48
LABORER		
GROUP 1.....	\$ 30.19	16.48
GROUP 2.....	\$ 30.74	16.48
GROUP 3.....	\$ 31.29	16.48
GROUP 4.....	\$ 32.84	16.48
GROUP 5.....	\$ 33.19	16.48

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete screeding for rough strike-off; Concrete, water curing; Demolition laborer, the cleaning of brick if performed by a worker performing any other phase of demolition work, and the cleaning of lumber; Fire watcher, limber, brush loader, piler and debris handler; Flag person; Gas, oil and/or water pipeline laborer; Laborer, asphalt-rubber material loader; Laborer, general or construction; Laborer, general clean-up; Laborer, landscaping; Laborer, jetting; Laborer, temporary water and air lines; Material hose operator (walls, slabs, floors and decks); Plugging, filling of shee bolt holes; Dry packing of concrete; Railroad maintenance, repair track person and road beds; Streetcar and railroad construction track laborers; Rigging and signaling; Scaler; Slip form raiser; Tar and mortar; Tool crib or tool house laborer; Traffic control by any method; Window cleaner; Wire mesh pulling - all concrete pouring operations

GROUP 2: Asphalt shoveler; Cement dumper (on 1 yd. or larger mixer and handling bulk cement); Cesspool digger and installer; Chucktender; Chute handler, pouring concrete, the handling of the chute from readymix trucks, such as walls, slabs, decks, floors, foundation, footings, curbs, gutters and sidewalks; Concrete curer, impervious membrane and form oiler; Cutting torch operator (demolition); Fine grader, highways and street paving, airport, runways and similar type heavy construction; Gas, oil and/or water pipeline wrapper - pot tender and form person; Guinea chaser; Headerboard person - asphalt; Laborer, packing rod steel and pans; Membrane vapor barrier installer; Power broom sweeper (small); Riprap stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Sandblaster (pot tender); Septic tank digger and installer(lead); Tank scaler and cleaner; Tree climber, faller, chain saw

operator, Pittsburgh chipper and similar type brush shredder; Underground laborer, including caisson bellow

GROUP 3: Buggymobile person; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2-1/2 ft. drill steel or longer; Dri-pak-it machine; Gas, oil and/or water pipeline wrapper, 6-in. pipe and over, by any method, inside and out; High scaler (including drilling of same); Hydro seeder and similar type; Impact wrench multi-plate; Kettle person, pot person and workers applying asphalt, lay-kold, creosote, lime caustic and similar type materials ("applying" means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operator of pneumatic, gas, electric tools, vibrating machine, pavement breaker, air blasting, come-alongs, and similar mechanical tools not separately classified herein; Pipelayer's backup person, coating, grouting, making of joints, sealing, caulking, diapering and including rubber gasket joints, pointing and any and all other services; Rock slinger; Rotary scarifier or multiple head concrete chipping scarifier; Steel headerboard and guideline setter; Tamper, Barko, Wacker and similar type; Trenching machine, hand-propelled

GROUP 4: Asphalt raker, lute person, ironer, asphalt dump person, and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), grinder or sander; Concrete saw person, cutting walls or flat work, scoring old or new concrete; Cribber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Head rock slinger; Laborer, asphalt- rubber distributor boot person; Laser beam in connection with laborers' work; Oversize concrete vibrator operator, 70 lbs. and over; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit and any other stationary type of tubular device used for the conveying of any substance or element, whether water, sewage, solid gas, air, or other product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No-joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzle person), water blasting, Porta Shot-Blast

GROUP 5: Blaster powder, all work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Driller: All power drills, excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and any and all other types of mechanical drills without regard to the form of motive power; Toxic waste removal

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Batch plant laborer; Changehouse person; Dump person; Dump person (outside); Swamper (brake person and switch person on tunnel work); Tunnel materials handling person; Nipper; Pot tender, using mastic or other materials (for example, but not by way of limitation, shotcrete, etc.)

GROUP 2: Chucktender, cabletender; Loading and unloading agitator cars; Vibrator person, jack hammer, pneumatic tools (except driller); Bull gang mucker, track person; Concrete crew, including rodder and spreader;

GROUP 3: Blaster, driller, powder person; Chemical grout jet person; Cherry picker person; Grout gun person; Grout mixer person; Grout pump person; Jackleg miner; Jumbo person; Kemper and other pneumatic concrete placer operator; Miner, tunnel (hand or machine); Nozzle person; Operating of troweling and/or grouting machines; Powder person (primer house); Primer person; Sandblaster; Shotcrete person; Steel form raiser and setter; Timber person, retimber person, wood or steel; Tunnel Concrete finisher

GROUP 4: Diamond driller; Sandblaster; Shaft and raise work

LABO0783-004 07/01/2014

INYO AND MONO COUNTIES

	Rates	Fringes
Brick Tender.....	\$ 29.12	15.78

LABO1184-001 07/01/2014

	Rates	Fringes
Laborers: (HORIZONTAL DIRECTIONAL DRILLING)		
(1) Drilling Crew Laborer...	\$ 31.65	13.33
(2) Vehicle Operator/Hauler.	\$ 31.82	13.33
(3) Horizontal Directional Drill Operator.....	\$ 33.67	13.33
(4) Electronic Tracking Locator.....	\$ 35.67	13.33
Laborers: (STRIPING/SLURRY SEAL)		
GROUP 1.....	\$ 32.56	16.28
GROUP 2.....	\$ 33.86	16.28
GROUP 3.....	\$ 35.87	16.28
GROUP 4.....	\$ 37.61	16.28

LABORERS - STRIPING CLASSIFICATIONS

GROUP 1: Protective coating, pavement sealing, including repair and filling of cracks by any method on any surface in parking lots, game courts and playgrounds; carstops; operation of all related machinery and equipment; equipment repair technician

GROUP 2: Traffic surface abrasive blaster; pot tender - removal of all traffic lines and markings by any method (sandblasting, waterblasting, grinding, etc.) and preparation of surface for coatings. Traffic control person: controlling and directing traffic through both conventional and moving lane closures; operation of all

related machinery and equipment

GROUP 3: Traffic delineating device applicator: Layout and application of pavement markers, delineating signs, rumble and traffic bars, adhesives, guide markers, other traffic delineating devices including traffic control. This category includes all traffic related surface preparation (sandblasting, waterblasting, grinding) as part of the application process. Traffic protective delineating system installer: removes, relocates, installs, permanently affixed roadside and parking delineation barricades, fencing, cable anchor, guard rail, reference signs, monument markers; operation of all related machinery and equipment; power broom sweeper

GROUP 4: Striper: layout and application of traffic stripes and markings; hot thermo plastic; tape traffic stripes and markings, including traffic control; operation of all related machinery and equipment

 PAIN0036-009 10/01/2014

	Rates	Fringes
DRYWALL FINISHER/TAPER.....	\$ 32.11	15.91

 PAIN0036-021 07/01/2014

INYO AND MONO COUNTIES

	Rates	Fringes
Painters: (Including Lead Abatement)		
(1) Journeyman Painter.....	\$ 26.02	12.28
(2) Repaint.....	\$ 23.84	12.28
(4) All other work.....	\$ 26.02	12.28
(5) Industrial.....	\$ 31.12	12.33

REPAINT of any previously painted structure. Exceptions: work involving the aerospace industry, breweries, commercial recreational facilities, hotels which operate commercial establishments as part of hotel service, and sports facilities.
 HIGH IRON & STEEL:

Aerial towers, towers, radio towers, smoke stacks, flag poles (any flag poles that can be finished from the ground with a ladder excluded), elevated water towers, steeples and domes in their entirety and any other extremely high and hazardous work, cooning steel, bos'n chair, or other similar devices, painting in other high hazardous work shall be classified as high iron & steel

 PAIN0169-002 01/01/2015

	Rates	Fringes
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GLAZIER.....	\$ 34.83	19.75
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* PAIN1247-001 01/01/2015

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 29.85	13.56

PLAS0200-007 08/06/2014

	Rates	Fringes
PLASTERER.....	\$ 37.43	13.28

U.S. MARINE CORPS-PICKLE MEADOW & MOUNTAIN WARFARE TRAINING
CENTER:
\$3.00 additinal per hour.

PLAS0500-002 07/07/2014

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER....	\$ 31.85	19.55

PLUM0345-001 07/01/2014

	Rates	Fringes
PLUMBER		
Landscape/Irrigation Fitter..	\$ 29.27	19.75
Sewer & Storm Drain Work....	\$ 33.24	17.13

PLUM0460-002 07/01/2013

	Rates	Fringes
PLUMBER (Plumber, Pipefitter, Steamfitter, Refrigeration)		
0 to 40 miles radius from 6718 Meany Avenue in Bakersfield.....	\$ 40.57	22.84
40 to 75 miles radius.....	\$ 45.07	22.84
75 miles to 100 miles radius.....	\$ 47.57	22.84
over 100 miles radius.....	\$ 51.07	22.84

FOOTNOTE: Work from a swinging scaffold, swinging basket,
spider or from a bosun chair: 10% above the regular rate of
pay for that day.

ROOF0027-001 09/01/2014

	Rates	Fringes
ROOFER.....	\$ 26.37	12.68

FOOTNOTE: Work with pitch, pitch base of pitch impregnated
products or any material containing coal tar pitch, on any

building old or new, where both asphalt and pitchers are used in the application of a built-up roof or tear off: \$2.00 per hour additional.

SFCA0669-007 07/01/2013

	Rates	Fringes
SPRINKLER FITTER.....	\$ 34.19	19.37

SHEE0105-003 01/01/2015

LOS ANGELES (South of a straight line drawn between Gorman and Big Pines)and Catalina Island, INYO, KERN (Northeast part, East of Hwy 395), MONO ORANGE, RIVERSIDE, AND SAN BERNARDINO COUNTIES

	Rates	Fringes
SHEET METAL WORKER		
(1) Commercial - New Construction and Remodel work.....	\$ 40.79	23.75
(2) Industrial work including air pollution control systems, noise abatement, hand rails, guard rails, excluding aritechtrual sheet metal work, excluding A-C, heating, ventilating systems for human comfort...	\$ 40.79	23.75

SHEE0105-004 01/01/2015

KERN (Excluding portion East of Hwy 395) & LOS ANGELES (North of a straight line drawn between Gorman and Big Pines including Cities of Lancaster and Palmdale) COUNTIES

	Rates	Fringes
SHEET METAL WORKER.....	\$ 30.91	23.71

TEAM0011-002 07/01/2014

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 27.99	24.14
GROUP 2.....	\$ 28.14	24.14
GROUP 3.....	\$ 28.27	24.14
GROUP 4.....	\$ 28.46	24.14
GROUP 5.....	\$ 28.49	24.14
GROUP 6.....	\$ 28.52	24.14
GROUP 7.....	\$ 28.77	24.14
GROUP 8.....	\$ 29.02	24.14
GROUP 9.....	\$ 29.22	24.14
GROUP 10.....	\$ 29.52	24.14

GROUP 11.....	\$ 30.02	24.14
GROUP 12.....	\$ 30.45	24.14

WORK ON ALL MILITARY BASES:

PREMIUM PAY: \$3.00 per hour additional.

[29 palms Marine Base, Camp Roberts, China Lake, Edwards AFB,
El Centro Naval Facility, Fort Irwin, Marine Corps
Logistics Base at Nebo & Yermo, Mountain Warfare Training
Center, Bridgeport, Point Arguello, Point Conception,
Vandenberg AFB]

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Truck driver

GROUP 2: Driver of vehicle or combination of vehicles - 2
axles; Traffic control pilot car excluding moving heavy
equipment permit load; Truck mounted broom

GROUP 3: Driver of vehicle or combination of vehicles - 3
axles; Boot person; Cement mason distribution truck; Fuel
truck driver; Water truck - 2 axle; Dump truck, less than
16 yds. water level; Erosion control driver

GROUP 4: Driver of transit mix truck, under 3 yds.; Dumpcrete
truck, less than 6-1/2 yds. water level

GROUP 5: Water truck, 3 or more axles; Truck greaser and tire
person (\$0.50 additional for tire person); Pipeline and
utility working truck driver, including winch truck and
plastic fusion, limited to pipeline and utility work;
Slurry truck driver

GROUP 6: Transit mix truck, 3 yds. or more; Dumpcrete truck,
6-1/2 yds. water level and over; Vehicle or combination of
vehicles - 4 or more axles; Oil spreader truck; Dump truck,
16 yds. to 25 yds. water level

GROUP 7: A Frame, Swedish crane or similar; Forklift driver;
Ross carrier driver

GROUP 8: Dump truck, 25 yds. to 49 yds. water level; Truck
repair person; Water pull - single engine; Welder

GROUP 9: Truck repair person/welder; Low bed driver, 9 axles
or over

GROUP 10: Dump truck - 50 yds. or more water level; Water
pull - single engine with attachment

GROUP 11: Water pull - twin engine; Water pull - twin engine
with attachments; Winch truck driver - \$1.25 additional
when operating winch or similar special attachments

GROUP 12: Boom Truck 17K and above

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

General Decision Number: CA150037 02/20/2015 CA37

Superseded General Decision Number: CA20140037

State: California

Construction Types: Building, Heavy (Heavy and Dredging) and Highway

County: San Bernardino County in California.

BUILDING CONSTRUCTION PROJECTS; DREDGING PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/02/2015
1	01/16/2015
2	01/23/2015
3	02/20/2015

ASBE0005-002 06/30/2014

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems).....	\$ 35.44	19.36
Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls, floors, ceilings and curtain walls).....	\$ 24.34	16.09

ASBE0005-004 06/24/2013

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes		

preparation, wetting,
stripping, removal,
scrapping, vacuuming, bagging
and disposing of all
insulation materials from
mechanical systems, whether
they contain asbestos or not).....\$ 16.95 10.23

BOIL0092-003 10/01/2012

	Rates	Fringes
BOILERMAKER.....	\$ 41.17	28.27

* BRCA0004-011 05/01/2014

	Rates	Fringes
BRICKLAYER; MARBLE SETTER.....	\$ 36.96	12.37

*The wage scale for prevailing wage projects performed in Blythe, China lake, Death Valley, Fort Irwin, Twenty-Nine Palms, Needles and 1-15 corridor (Barstow to the Nevada State Line) will be Three Dollars (\$3.00) above the standard San Bernardino/Riverside County hourly wage rate

BRCA0018-004 06/01/2014

	Rates	Fringes
MARBLE FINISHER.....	\$ 28.45	11.38
TILE FINISHER.....	\$ 23.78	9.84
TILE LAYER.....	\$ 35.14	14.33

BRCA0018-010 09/01/2013

	Rates	Fringes
TERRAZZO FINISHER.....	\$ 26.59	10.34
TERRAZZO WORKER/SETTER.....	\$ 33.63	11.13

CARP0409-001 07/01/2010

	Rates	Fringes
CARPENTER		
(1) Carpenter, Cabinet Installer, Insulation Installer, Hardwood Floor Worker and acoustical installer.....	\$ 37.35	11.08
(2) Millwright.....	\$ 37.85	11.08
(3) Piledrivermen/Derrick Bargeman, Bridge or Dock Carpenter, Heavy Framer, Rock Bargeman or Scowman, Rockslinger, Shingler (Commercial).....	\$ 37.48	11.08
(4) Pneumatic Nailer,		

Power Stapler.....	\$ 37.60	11.08
(5) Sawfiler.....	\$ 37.44	11.08
(6) Scaffold Builder.....	\$ 28.55	11.08
(7) Table Power Saw Operator.....	\$ 37.45	11.08

FOOTNOTE: Work of forming in the construction of open cut sewers or storm drains, on operations in which horizontal lagging is used in conjunction with steel H-Beams driven or placed in pre- drilled holes, for that portion of a lagged trench against which concrete is poured, namely, as a substitute for back forms (which work is performed by piledrivers): \$0.13 per hour additional.

 CARP0409-002 07/01/2008

	Rates	Fringes
Diver		
(1) Wet.....	\$ 663.68	9.82
(2) Standby.....	\$ 331.84	9.82
(3) Tender.....	\$ 323.84	9.82
(4) Assistant Tender.....	\$ 299.84	9.82

Amounts in "Rates" column are per day

 CARP0409-005 07/01/2010

	Rates	Fringes
Drywall		
DRYWALL INSTALLER/LATHER....	\$ 37.35	11.08
STOCKER/SCRAPPER.....	\$ 10.00	6.67

 CARP0409-008 08/01/2010

	Rates	Fringes
Modular Furniture Installer.....	\$ 17.00	7.41

 ELEC0440-004 05/26/2014

COMMUNICATIONS AND SYSTEMS WORK

	Rates	Fringes
Communications System		
Installer.....	\$ 28.38	4%+11.45
Technician.....	\$ 30.18	4%+11.45

SCOPE OF WORK:

Installation, testing, service and maintenance of systems utilizing the transmission and/or transference of voice, sound, vision and digital for commercial, educational, security and entertainment purposes for the following: TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multi-media, multiplex, nurse call systems, radio page, school intercom and sound,

burglar alarms, fire alarms, and low voltage master clock systems in commercial buildings. Communication Systems that transmit or receive information and/or control systems that are intrinsic to the above listed systems; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding all other data systems or multiple systems which include control function or power supply; excluding installation of raceway systems, conduit systems, line voltage work, and energy management systems. Does not cover work performed at China Lake Naval Ordnance Test Station.

ELEC0477-002 06/30/2014

	Rates	Fringes
Electricians:.....	\$ 35.50	3%+19.78
CABLE SPLICER: \$1.00 per hour above Electrician rate.		
TUNNEL WORK: 10% above Electrician rate.		

ZONE PAY:

Zone A - 80 road miles from Post Office, 455 Orange Show Lane, San Bernardino, will be a free zone for all contractors

Zone B - Any work performed outside Zone A's 80 road miles, shall add \$12.00 per hour to the current wage scale.

ELEC1245-001 06/01/2013

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer..	\$ 50.30	15.00
(2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment).....	\$ 40.17	14.56
(3) Groundman.....	\$ 30.73	13.48
(4) Powderman.....	\$ 44.91	13.48

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and day after Thanksgiving, Christmas Day

ELEV0018-001 01/01/2014

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 49.03	26.785

FOOTNOTE:

PAID VACATION: Employer contributes 8% of regular hourly

rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.
PAID HOLIDAYS: New Years Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

ENGI0012-003 07/07/2014

	Rates	Fringes
OPERATOR: Power Equipment		
(All Other Work)		
GROUP 1.....	\$ 39.05	22.25
GROUP 2.....	\$ 39.83	22.25
GROUP 3.....	\$ 40.12	22.25
GROUP 4.....	\$ 41.61	22.25
GROUP 5.....	\$ 41.86	22.25
GROUP 6.....	\$ 41.83	22.25
GROUP 8.....	\$ 41.94	22.25
GROUP 9.....	\$ 42.19	22.25
GROUP 10.....	\$ 42.06	22.25
GROUP 11.....	\$ 42.31	22.25
GROUP 12.....	\$ 42.23	22.25
GROUP 13.....	\$ 42.33	22.25
GROUP 14.....	\$ 42.36	22.25
GROUP 15.....	\$ 42.44	22.25
GROUP 16.....	\$ 42.56	22.25
GROUP 17.....	\$ 42.73	22.25
GROUP 18.....	\$ 42.83	22.25
GROUP 19.....	\$ 42.94	22.25
GROUP 20.....	\$ 43.06	22.25
GROUP 21.....	\$ 43.23	22.25
GROUP 22.....	\$ 43.33	22.25
GROUP 23.....	\$ 43.44	22.25
GROUP 24.....	\$ 43.56	22.25
GROUP 25.....	\$ 43.73	22.25
OPERATOR: Power Equipment		
(Cranes, Piledriving & Hoisting)		
GROUP 1.....	\$ 40.40	22.25
GROUP 2.....	\$ 41.18	22.25
GROUP 3.....	\$ 41.47	22.25
GROUP 4.....	\$ 41.61	22.25
GROUP 5.....	\$ 41.83	22.25
GROUP 6.....	\$ 41.94	22.25
GROUP 7.....	\$ 42.06	22.25
GROUP 8.....	\$ 42.23	22.25
GROUP 9.....	\$ 42.40	22.25
GROUP 10.....	\$ 43.40	22.25
GROUP 11.....	\$ 44.40	22.25
GROUP 12.....	\$ 45.40	22.25
GROUP 13.....	\$ 46.40	22.25
OPERATOR: Power Equipment		
(Tunnel Work)		
GROUP 1.....	\$ 40.90	22.25
GROUP 2.....	\$ 41.68	22.25
GROUP 3.....	\$ 41.97	22.25
GROUP 4.....	\$ 42.11	22.25
GROUP 5.....	\$ 42.33	22.25

GROUP 6.....	\$ 42.44	22.25
GROUP 7.....	\$ 42.56	22.25

PREMIUM PAY:

\$3.75 per hour shall be paid on all Power Equipment Operator work on the following Military Bases: China Lake Naval Reserve, Vandenberg AFB, Point Arguello, Seely Naval Base, Fort Irwin, Nebo Annex Marine Base, Marine Corp Logistics Base Yermo, Edwards AFB, 29 Palms Marine Base and Camp Pendleton

Workers required to suit up and work in a hazardous material environment: \$2.00 per hour additional. Combination mixer and compressor operator on gunite work shall be classified as a concrete mobile mixer operator.

SEE ZONE DEFINITIONS AFTER CLASSIFICATIONS

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Bargeman; Brakeman; Compressor operator; Ditch Witch, with seat or similar type equipment; Elevator operator-inside; Engineer Oiler; Forklift operator (includes loed, lull or similar types under 5 tons; Generator operator; Generator, pump or compressor plant operator; Pump operator; Signalman; Switchman

GROUP 2: Asphalt-rubber plant operator (nurse tank operator); Concrete mixer operator-skip type; Conveyor operator; Fireman; Forklift operator (includes loed, lull or similar types over 5 tons; Hydrostatic pump operator; oiler crusher (asphalt or concrete plant); Petromat laydown machine; PJU side dum jack; Screening and conveyor machine operator (or similar types); Skiploader (wheel type up to 3/4 yd. without attachment); Tar pot fireman; Temporary heating plant operator; Trenching machine oiler

GROUP 3: Asphalt-rubber blend operator; Bobcat or similar type (Skid steer); Equipment greaser (rack); Ford Ferguson (with dragtype attachments); Helicopter radioman (ground); Stationary pipe wrapping and cleaning machine operator

GROUP 4: Asphalt plant fireman; Backhoe operator (mini-max or similar type); Boring machine operator; Boxman or mixerman (asphalt or concrete); Chip spreading machine operator; Concrete cleaning decontamination machine operator; Concrete Pump Operator (small portable); Drilling machine operator, small auger types (Texoma super economatic or similar types - Hughes 100 or 200 or similar types - drilling depth of 30' maximum); Equipment greaser (grease truck); Guard rail post driver operator; Highline cableway signalman; Hydra-hammer-aero stomper; Micro Tunneling (above ground tunnel); Power concrete curing machine operator; Power concrete saw operator; Power-driven jumbo form setter operator; Power sweeper operator; Rock Wheel Saw/Trencher; Roller operator (compacting); Screed operator (asphalt or concrete); Trenching machine operator (up to 6 ft.); Vacuum or much truck

GROUP 5: Equipment Greaser (Grease Truck/Multi Shift).

GROUP 6: Articulating material hauler; Asphalt plant engineer; Batch plant operator; Bit sharpener; Concrete joint machine operator (canal and similar type); Concrete planer operator; Dandy digger; Deck engine operator; Derrickman (oilfield type); Drilling machine operator, bucket or auger types (Calweld 100 bucket or similar types - Watson 1000 auger or similar types - Texoma 330, 500 or 600 auger or similar types - drilling depth of 45' maximum); Drilling machine operator; Hydrographic seeder machine operator (straw, pulp or seed), Jackson track maintainer, or similar type; Kalamazoo Switch tamper, or similar type; Machine tool operator; Maginnis internal full slab vibrator, Mechanical berm, curb or gutter (concrete or asphalt); Mechanical finisher operator (concrete, Clary-Johnson-Bidwell or similar); Micro tunnel system (below ground); Pavement breaker operator (truck mounted); Road oil mixing machine operator; Roller operator (asphalt or finish), rubber-tired earth moving equipment (single engine, up to and including 25 yds. struck); Self-propelled tar pipelining machine operator; Skiploader operator (crawler and wheel type, over 3/4 yd. and up to and including 1-1/2 yds.); Slip form pump operator (power driven hydraulic lifting device for concrete forms); Tractor operator-bulldozer, tamper-scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types); Tugger hoist operator (1 drum); Ultra high pressure waterjet cutting tool system operator; Vacuum blasting machine operator

GROUP 8: Asphalt or concrete spreading operator (tamping or finishing); Asphalt paving machine operator (Barber Greene or similar type); Asphalt-rubber distribution operator; Backhoe operator (up to and including 3/4 yd.), small ford, Case or similar; Cast-in-place pipe laying machine operator; Combination mixer and compressor operator (gunite work); Compactor operator (self-propelled); Concrete mixer operator (paving); Crushing plant operator; Drill Doctor; Drilling machine operator, Bucket or auger types (Calweld 150 bucket or similar types - Watson 1500, 2000 2500 auger or similar types - Texoma 700, 800 auger or similar types - drilling depth of 60' maximum); Elevating grader operator; Grade checker; Gradall operator; Grouting machine operator; Heavy-duty repairman; Heavy equipment robotics operator; Kalamazoo balliste regulator or similar type; Kolman belt loader and similar type; Le Tourneau blob compactor or similar type; Loader operator (Athey, Euclid, Sierra and similar types); Mobark Chipper or similar; Ozzie padder or similar types; P.C. slot saw; Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pumpcrete gun operator; Rock Drill or similar types; Rotary drill operator (excluding caisson type); Rubber-tired earth-moving equipment operator (single engine, caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator (multiple engine up to and including 25 yds. struck); Rubber-tired scraper operator (self-loading paddle wheel type-John Deere, 1040 and similar single unit); Self-propelled curb and gutter machine operator; Shuttle buggy;

Skiploader operator (crawler and wheel type over 1-1/2 yds. up to and including 6-1/2 yds.); Soil remediation plant operator; Surface heaters and planer operator; Tractor compressor drill combination operator; Tractor operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar-bulldozer, tamper, scraper and push tractor single engine); Tractor operator (boom attachments), Traveling pipe wrapping, cleaning and bending machine operator; Trenching machine operator (over 6 ft. depth capacity, manufacturer's rating); trenching Machine with Road Miner attachment (over 6 ft depth capacity): Ultra high pressure waterjet cutting tool system mechanic; Water pull (compaction) operator

GROUP 9: Heavy Duty Repairman

GROUP 10: Drilling machine operator, Bucket or auger types (Calweld 200 B bucket or similar types-Watson 3000 or 5000 auger or similar types-Texoma 900 auger or similar types-drilling depth of 105' maximum); Dual drum mixer, dynamic compactor LDC350 (or similar types); Monorail locomotive operator (diesel, gas or electric); Motor patrol-blade operator (single engine); Multiple engine tractor operator (Euclid and similar type-except Quad 9 cat.); Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Pneumatic pipe ramming tool and similar types; Prestressed wrapping machine operator; Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Rubber tired earth moving equipment operator (multiple engine, Euclid, caterpillar and similar over 25 yds. and up to 50 yds. struck), Tower crane repairman; Tractor loader operator (crawler and wheel type over 6-1/2 yds.); Woods mixer operator (and similar Pugmill equipment)

GROUP 11: Heavy Duty Repairman - Welder Combination, Welder - Certified.

GROUP 12: Auto grader operator; Automatic slip form operator; Drilling machine operator, bucket or auger types (Calweld, auger 200 CA or similar types - Watson, auger 6000 or similar types - Hughes Super Duty, auger 200 or similar types - drilling depth of 175' maximum); Hoe ram or similar with compressor; Mass excavator operator less tha 750 cu. yards; Mechanical finishing machine operator; Mobile form traveler operator; Motor patrol operator (multi-engine); Pipe mobile machine operator; Rubber-tired earth- moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Rubber-tired self- loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

GROUP 13: Rubber-tired earth-moving equipment operator operating equipment with push-pull system (single engine, up to and including 25 yds. struck)

GROUP 14: Canal liner operator; Canal trimmer operator; Remote- control earth-moving equipment operator (operating a second piece of equipment: \$1.00 per hour additional); Wheel excavator operator (over 750 cu. yds.)

GROUP 15: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine-up to and including 25 yds. struck)

GROUP 16: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 17: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck); Tandem tractor operator (operating crawler type tractors in tandem - Quad 9 and similar type)

GROUP 18: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

GROUP 19: Rotex concrete belt operator (or similar types); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck)

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 21: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

GROUP 22: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, up to and including 25 yds. struck)

GROUP 23: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system

(single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating with the tandem push-pull system (multiple engine, up to and including 25 yds. struck)

GROUP 24: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 25: Concrete pump operator-truck mounted; Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

CRANES, PILEDIVING AND HOISTING EQUIPMENT CLASSIFICATIONS

GROUP 1: Engineer oiler; Fork lift operator (includes loed, lull or similar types)

GROUP 2: Truck crane oiler

GROUP 3: A-frame or winch truck operator; Ross carrier operator (jobsite)

GROUP 4: Bridge-type unloader and turntable operator; Helicopter hoist operator

GROUP 5: Hydraulic boom truck; Stinger crane (Austin-Western or similar type); Tugger hoist operator (1 drum)

GROUP 6: Bridge crane operator; Cretor crane operator; Hoist operator (Chicago boom and similar type); Lift mobile operator; Lift slab machine operator (Vagtborg and similar types); Material hoist and/or manlift operator; Polar gantry crane operator; Self Climbing scaffold (or similar type); Shovel, backhoe, dragline, clamshell operator (over 3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

GROUP 7: Pedestal crane operator; Shovel, backhoe, dragline, clamshell operator (over 5 cu. yds. mrc); Tower crane repair; Tugger hoist operator (3 drum)

GROUP 8: Crane operator (up to and including 25 ton capacity); Crawler transporter operator; Derrick barge operator (up to and including 25 ton capacity); Hoist operator, stiff legs, Guy derrick or similar type (up to and including 25 ton capacity); Shovel, backhoe, dragline, clamshell operator (over 7 cu. yds., M.R.C.)

GROUP 9: Crane operator (over 25 tons and up to and including 50 tons mrc); Derrick barge operator (over 25 tons up to and including 50 tons mrc); Highline cableway operator; Hoist operator, stiff legs, Guy derrick or similar type (over 25 tons up to and including 50 tons mrc); K-crane

operator; Polar crane operator; Self erecting tower crane operator maximum lifting capacity ten tons

GROUP 10: Crane operator (over 50 tons and up to and including 100 tons mrc); Derrick barge operator (over 50 tons up to and including 100 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 50 tons up to and including 100 tons mrc), Mobile tower crane operator (over 50 tons, up to and including 100 tons M.R.C.); Tower crane operator and tower gantry

GROUP 11: Crane operator (over 100 tons and up to and including 200 tons mrc); Derrick barge operator (over 100 tons up to and including 200 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 100 tons up to and including 200 tons mrc); Mobile tower crane operator (over 100 tons up to and including 200 tons mrc)

GROUP 12: Crane operator (over 200 tons up to and including 300 tons mrc); Derrick barge operator (over 200 tons up to and including 300 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 200 tons, up to and including 300 tons mrc); Mobile tower crane operator (over 200 tons, up to and including 300 tons mrc)

GROUP 13: Crane operator (over 300 tons); Derrick barge operator (over 300 tons); Helicopter pilot; Hoist operator, stiff legs, Guy derrick or similar type (over 300 tons); Mobile tower crane operator (over 300 tons)

TUNNEL CLASSIFICATIONS

GROUP 1: Skiploader (wheel type up to 3/4 yd. without attachment)

GROUP 2: Power-driven jumbo form setter operator

GROUP 3: Dinkey locomotive or motorperson (up to and including 10 tons)

GROUP 4: Bit sharpener; Equipment greaser (grease truck); Slip form pump operator (power-driven hydraulic lifting device for concrete forms); Tugger hoist operator (1 drum); Tunnel locomotive operator (over 10 and up to and including 30 tons)

GROUP 5: Backhoe operator (up to and including 3/4 yd.); Small Ford, Case or similar; Drill doctor; Grouting machine operator; Heading shield operator; Heavy-duty repairperson; Loader operator (Athey, Euclid, Sierra and similar types); Mucking machine operator (1/4 yd., rubber-tired, rail or track type); Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pneumatic heading shield (tunnel); Pumpcrete gun operator; Tractor compressor drill combination operator; Tugger hoist operator (2 drum); Tunnel locomotive operator (over 30 tons)

GROUP 6: Heavy Duty Repairman

GROUP 7: Tunnel mole boring machine operator

ENGINEERS ZONES

\$1.00 additional per hour for all of IMPERIAL County and the portions of KERN, RIVERSIDE & SAN BERNARDINO Counties as defined below:

That area within the following Boundary: Begin in San Bernardino County, approximately 3 miles NE of the intersection of I-15 and the California State line at that point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Continue W in a straight line to that point which is the SW corner of the northwest quarter of Section 6, T27S, R42E, Mt. Diablo Meridian. Continue North to the intersection with the Inyo County Boundary at that point which is the NE corner of the western half of the northern quarter of Section 6, T25S, R42E, MDM. Continue W along the Inyo and San Bernardino County boundary until the intersection with Kern County, as that point which is the SE corner of Section 34, T24S, R40E, MDM. Continue W along the Inyo and Kern County boundary until the intersection with Tulare County, at that point which is the SW corner of the SE quarter of Section 32, T24S, R37E, MDM. Continue W along the Kern and Tulare County boundary, until that point which is the NW corner of T25S, R32E, MDM. Continue S following R32E lines to the NW corner of T31S, R32E, MDM. Continue W to the NW corner of T31S, R31E, MDM. Continue S to the SW corner of T32S, R31E, MDM. Continue W to SW corner of SE quarter of Section 34, T32S, R30E, MDM. Continue S to SW corner of T11N, R17W, SBM. Continue E along south boundary of T11N, SBM to SW corner of T11N, R7W, SBM. Continue S to SW corner of T9N, R7W, SBM. Continue E along south boundary of T9N, SBM to SW corner of T9N, R1E, SBM. Continue S along west boundary of R1E, SBM to Riverside County line at the SW corner of T1S, R1E, SBM. Continue E along south boundary of T1S, SBM (Riverside County Line) to SW corner of T1S, R10E, SBM. Continue S along west boundary of R10E, SBM to Imperial County line at the SW corner of T8S, R10E, SBM. Continue W along Imperial and Riverside county line to NW corner of T9S, R9E, SBM. Continue S along the boundary between Imperial and San Diego Counties, along the west edge of R9E, SBM to the south boundary of Imperial County/California state line. Follow the California state line west to Arizona state line, then north to Nevada state line, then continuing NW back to start at the point which is the NW corner of Section 1, T17N, R14E, SBM

\$1.00 additional per hour for portions of SAN LUIS OBISPO, KERN, SANTA BARBARA & VENTURA as defined below:

That area within the following Boundary: Begin approximately 5 miles north of the community of Cholame, on the Monterey County and San Luis Obispo County boundary at the NW corner of T25S, R16E, Mt. Diablo Meridian. Continue south along the west side of R16E to the SW corner of T30S, R16E, MDM. Continue E to SW corner of T30S, R17E, MDM. Continue S to SW corner of T31S, R17E, MDM. Continue E to SW corner of T31S, R18E, MDM. Continue S along West side of R18E, MDM as it crosses into San Bernardino Meridian numbering area and becomes R30W. Follow the west side of R30W, SBM to the SW corner of T9N, R30W, SBM. Continue E along the south edge of T9N, SBM to the Santa

Barbara County and Ventura County boundary at that point which is the SW corner of Section 34.T9N, R24W, SBM, continue S along the Ventura County line to that point which is the SW corner of the SE quarter of Section 32, T7N, R24W, SBM. Continue E along the south edge of T7N, SBM to the SE corner to T7N, R21W, SBM. Continue N along East side of R21W, SBM to Ventura County and Kern County boundary at the NE corner of T8N, R21W. Continue W along the Ventura County and Kern County boundary to the SE corner of T9N, R21W. Continue North along the East edge of R21W, SBM to the NE corner of T12N, R21W, SBM. Continue West along the north edge of T12N, SBM to the SE corner of T32S, R21E, MDM. [T12N SBM is a think strip between T11N SBM and T32S MDM]. Continue North along the East side of R21E, MDM to the Kings County and Kern County border at the NE corner of T25S, R21E, MDM, continue West along the Kings County and Kern County Boundary until the intersection of San Luis Obispo County. Continue west along the Kings County and San Luis Obispo County boundary until the intersection with Monterey County. Continue West along the Monterey County and San Luis Obispo County boundary to the beginning point at the NW corner of T25S, R16E, MDM.

\$2.00 additional per hour for INYO and MONO Counties and the Northern portion of SAN BERNARDINO County as defined below:

That area within the following Boundary: Begin at the intersection of the northern boundary of Mono County and the California state line at the point which is the center of Section 17, T10N, R22E, Mt. Diablo Meridian. Continue S then SE along the entire western boundary of Mono County, until it reaches Inyo County at the point which is the NE corner of the Western half of the NW quarter of Section 2, T8S, R29E, MDM. Continue SSE along the entire western boundary of Inyo County, until the intersection with Kern County at the point which is the SW corner of the SE 1/4 of Section 32, T24S, R37E, MDM. Continue E along the Inyo and Kern County boundary until the intersection with San Bernardino County at that point which is the SE corner of section 34, T24S, R40E, MDM. Continue E along the Inyo and San Bernardino County boundary until the point which is the NE corner of the Western half of the NW quarter of Section 6, T25S, R42E, MDM. Continue S to that point which is the SW corner of the NW quarter of Section 6, T27S, R42E, MDM. Continue E in a straight line to the California and Nevada state border at the point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Then continue NW along the state line to the starting point, which is the center of Section 18, T10N, R22E, MDM.

REMAINING AREA NOT DEFINED ABOVE RECIEVES BASE RATE

 ENGI0012-004 08/01/2014

	Rates	Fringes
OPERATOR: Power Equipment (DREDGING)		
(1) Leverman.....	\$ 48.60	22.40

(2) Dredge dozer.....	\$ 42.63	22.40
(3) Deckmate.....	\$ 42.52	22.40
(4) Winch operator (stern winch on dredge).....	\$ 41.97	22.40
(5) Fireman-Oiler, Deckhand, Bargeman, Leveehand.....	\$ 41.43	22.40
(6) Barge Mate.....	\$ 42.04	22.40

IRON0377-002 01/01/2015

	Rates	Fringes
Ironworkers:		
Fence Erector.....	\$ 27.08	18.24
Ornamental, Reinforcing and Structural.....	\$ 33.50	28.20

PREMIUM PAY:

\$6.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland, Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB

\$4.00 additional per hour at the following locations:

Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center

\$2.00 additional per hour at the following locations:

Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

LABO0300-005 01/01/2014

	Rates	Fringes
Asbestos Removal Laborer.....	\$ 28.00	15.25

SCOPE OF WORK: Includes site mobilization, initial site cleanup, site preparation, removal of asbestos-containing material and toxic waste, encapsulation, enclosure and disposal of asbestos- containing materials and toxic waste by hand or with equipment or machinery; scaffolding, fabrication of temporary wooden barriers and assembly of decontamination stations.

LABO0345-001 07/01/2014

Rates	Fringes
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LABORER (GUNITE)

GROUP 1.....	\$ 34.79	17.92
GROUP 2.....	\$ 33.84	17.92
GROUP 3.....	\$ 30.30	17.92

FOOTNOTE: GUNITE PREMIUM PAY: Workers working from a Bosn'n's Chair or suspended from a rope or cable shall receive 40 cents per hour above the foregoing applicable classification rates. Workers doing gunite and/or shotcrete work in a tunnel shall receive 35 cents per hour above the foregoing applicable classification rates, paid on a portal-to-portal basis. Any work performed on, in or above any smoke stack, silo, storage elevator or similar type of structure, when such structure is in excess of 75'-0" above base level and which work must be performed in whole or in part more than 75'-0" above base level, that work performed above the 75'-0" level shall be compensated for at 35 cents per hour above the applicable classification wage rate.

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

LABO0783-002 07/01/2014

	Rates	Fringes
LABORER (TUNNEL)		
GROUP 1.....	\$ 35.74	16.48
GROUP 2.....	\$ 36.06	16.48
GROUP 3.....	\$ 36.52	16.48
GROUP 4.....	\$ 37.21	16.48
LABORER		
GROUP 1.....	\$ 30.19	16.48
GROUP 2.....	\$ 30.74	16.48
GROUP 3.....	\$ 31.29	16.48
GROUP 4.....	\$ 32.84	16.48
GROUP 5.....	\$ 33.19	16.48

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete screeding for rough strike-off; Concrete, water curing; Demolition laborer, the cleaning of brick if performed by a worker performing any other phase of demolition work, and the cleaning of lumber; Fire watcher, limber, brush loader, piler and debris handler; Flag person; Gas, oil and/or water pipeline laborer; Laborer, asphalt-rubber material loader; Laborer, general or construction; Laborer, general clean-up; Laborer, landscaping; Laborer, jetting; Laborer, temporary water and air lines; Material hose operator (walls, slabs, floors and decks); Plugging, filling of shee bolt holes; Dry packing of concrete; Railroad maintenance, repair track person and road beds; Streetcar and railroad

construction track laborers; Rigging and signaling; Scaler; Slip form raiser; Tar and mortar; Tool crib or tool house laborer; Traffic control by any method; Window cleaner; Wire mesh pulling - all concrete pouring operations

GROUP 2: Asphalt shoveler; Cement dumper (on 1 yd. or larger mixer and handling bulk cement); Cesspool digger and installer; Chucktender; Chute handler, pouring concrete, the handling of the chute from readymix trucks, such as walls, slabs, decks, floors, foundation, footings, curbs, gutters and sidewalks; Concrete curer, impervious membrane and form oiler; Cutting torch operator (demolition); Fine grader, highways and street paving, airport, runways and similar type heavy construction; Gas, oil and/or water pipeline wrapper - pot tender and form person; Guinea chaser; Headerboard person - asphalt; Laborer, packing rod steel and pans; Membrane vapor barrier installer; Power broom sweeper (small); Riprap stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Sandblaster (pot tender); Septic tank digger and installer(lead); Tank scaler and cleaner; Tree climber, faller, chain saw operator, Pittsburgh chipper and similar type brush shredder; Underground laborer, including caisson bellower

GROUP 3: Buggymobile person; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2-1/2 ft. drill steel or longer; Dri-pak-it machine; Gas, oil and/or water pipeline wrapper, 6-in. pipe and over, by any method, inside and out; High scaler (including drilling of same); Hydro seeder and similar type; Impact wrench multi-plate; Kettle person, pot person and workers applying asphalt, lay-kold, creosote, lime caustic and similar type materials ("applying" means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operator of pneumatic, gas, electric tools, vibrating machine, pavement breaker, air blasting, come-alongs, and similar mechanical tools not separately classified herein; Pipelayer's backup person, coating, grouting, making of joints, sealing, caulking, diapering and including rubber gasket joints, pointing and any and all other services; Rock slinger; Rotary scarifier or multiple head concrete chipping scarifier; Steel headerboard and guideline setter; Tamper, Barko, Wacker and similar type; Trenching machine, hand-propelled

GROUP 4: Asphalt raker, lute person, ironer, asphalt dump person, and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), grinder or sander; Concrete saw person, cutting walls or flat work, scoring old or new concrete; Cribber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Head rock slinger; Laborer, asphalt- rubber distributor boot person; Laser beam in connection with laborers' work; Oversize concrete vibrator operator, 70 lbs. and over; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit and any other stationary type of tubular device used for the conveying of any substance or element, whether

water, sewage, solid gas, air, or other product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No-joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzle person), water blasting, Porta Shot-Blast

GROUP 5: Blaster powder, all work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Driller: All power drills, excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and any and all other types of mechanical drills without regard to the form of motive power; Toxic waste removal

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Batch plant laborer; Changehouse person; Dump person; Dump person (outside); Swamper (brake person and switch person on tunnel work); Tunnel materials handling person; Nipper; Pot tender, using mastic or other materials (for example, but not by way of limitation, shotcrete, etc.)

GROUP 2: Chucktender, cabletender; Loading and unloading agitator cars; Vibrator person, jack hammer, pneumatic tools (except driller); Bull gang mucker, track person; Concrete crew, including rodder and spreader

GROUP 3: Blaster, driller, powder person; Chemical grout jet person; Cherry picker person; Grout gun person; Grout mixer person; Grout pump person; Jackleg miner; Jumbo person; Kemper and other pneumatic concrete placer operator; Miner, tunnel (hand or machine); Nozzle person; Operating of troweling and/or grouting machines; Powder person (primer house); Primer person; Sandblaster; Shotcrete person; Steel form raiser and setter; Timber person, retimber person, wood or steel; Tunnel Concrete finisher

GROUP 4: Diamond driller; Sandblaster; Shaft and raise work

LABO0783-005 07/01/2014

	Rates	Fringes
Brick Tender.....	\$ 29.12	15.78

LABO1184-001 07/01/2014

	Rates	Fringes
Laborers: (HORIZONTAL DIRECTIONAL DRILLING)		
(1) Drilling Crew Laborer...	\$ 31.65	13.33
(2) Vehicle Operator/Hauler.	\$ 31.82	13.33
(3) Horizontal Directional Drill Operator.....	\$ 33.67	13.33
(4) Electronic Tracking Locator.....	\$ 35.67	13.33

Laborers: (STRIPING/SLURRY SEAL)

GROUP 1.....	\$ 32.56	16.28
GROUP 2.....	\$ 33.86	16.28
GROUP 3.....	\$ 35.87	16.28
GROUP 4.....	\$ 37.61	16.28

LABORERS - STRIPING CLASSIFICATIONS

GROUP 1: Protective coating, pavement sealing, including repair and filling of cracks by any method on any surface in parking lots, game courts and playgrounds; carstops; operation of all related machinery and equipment; equipment repair technician

GROUP 2: Traffic surface abrasive blaster; pot tender - removal of all traffic lines and markings by any method (sandblasting, waterblasting, grinding, etc.) and preparation of surface for coatings. Traffic control person: controlling and directing traffic through both conventional and moving lane closures; operation of all related machinery and equipment

GROUP 3: Traffic delineating device applicator: Layout and application of pavement markers, delineating signs, rumble and traffic bars, adhesives, guide markers, other traffic delineating devices including traffic control. This category includes all traffic related surface preparation (sandblasting, waterblasting, grinding) as part of the application process. Traffic protective delineating system installer: removes, relocates, installs, permanently affixed roadside and parking delineation barricades, fencing, cable anchor, guard rail, reference signs, monument markers; operation of all related machinery and equipment; power broom sweeper

GROUP 4: Striper: layout and application of traffic stripes and markings; hot thermo plastic; tape traffic stripes and markings, including traffic control; operation of all related machinery and equipment

LABO1414-003 08/07/2013

	Rates	Fringes
LABORER		
PLASTER CLEAN-UP LABORER....	\$ 27.45	16.36
PLASTER TENDER.....	\$ 30.00	16.36

Work on a swing stage scaffold: \$1.00 per hour additional.

Work at Military Bases - \$3.00 additional per hour:
 Coronado Naval Amphibious Base, Fort Irwin, Marine Corps Air Station-29 Palms, Imperial Beach Naval Air Station, Marine Corps Logistics Supply Base, Marine Corps Pickle Meadows, Mountain Warfare Training Center, Naval Air Facility-Seeley, North Island Naval Air Station, Vandenberg AFB.

PAIN0036-001 07/01/2014

	Rates	Fringes
Painters: (Including Lead Abatement)		
(1) Repaint (excludes San Diego County).....	\$ 26.89	12.28
(2) All Other Work.....	\$ 30.27	12.28

REPAINT of any previously painted structure. Exceptions: work involving the aerospace industry, breweries, commercial recreational facilities, hotels which operate commercial establishments as part of hotel service, and sports facilities.

PAIN0036-008 10/01/2014

	Rates	Fringes
DRYWALL FINISHER/TAPER.....	\$ 35.18	15.91

PAIN0036-015 06/01/2014

	Rates	Fringes
GLAZIER.....	\$ 37.95	22.69

FOOTNOTE: Additional \$1.25 per hour for work in a condor, from the third (3rd) floor and up Additional \$1.25 per hour for work on the outside of the building from a swing stage or any suspended contrivance, from the ground up

* PAIN1247-002 01/01/2015

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 29.85	13.56

PLAS0200-008 08/06/2014

	Rates	Fringes
PLASTERER.....	\$ 37.43	13.28

FORT IRWIN; MARINE CORPS AIR STATION 29 PALMS, AND MARINE CORPS LOGISTICS SUPPLY BASE: \$3.00 additional per hour.

PLAS0500-002 07/07/2014

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER....	\$ 31.85	19.55

PLUM0016-002 07/01/2014

	Rates	Fringes
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PLUMBER, PIPEFITTER,
STEAMFITTER

Plumber and Pipefitter		
All other work except		
work on new additions and		
remodeling of bars,		
restaurant, stores and		
commercial buildings not		
to exceed 5,000 sq. ft.		
of floor space and work		
on strip malls, light		
commercial, tenant		
improvement and remodel		
work.....	\$ 44.71	20.36
Work at Edwards AFB.....	\$ 48.08	20.36
Work at Fort Irwin Army		
Base, Marine Corps		
Logistic Base at Nebo,		
Marine Corps Logistic Base		
at Yermo and Twenty-Nine		
Palms Marine Base.....	\$ 55.21	20.36
Work ONLY on new additions		
and remodeling of bars,		
restaurants, stores and		
commercial buildings, not		
to exceed 5,000 sq. ft. of		
floor space.....	\$ 43.33	19.38
Work ONLY on strip malls,		
light commercial, tenant		
improvement and remodel		
work.....	\$ 34.59	17.71

PLUM0345-001 07/01/2014

	Rates	Fringes
PLUMBER		
Landscape/Irrigation Fitter..	\$ 29.27	19.75
Sewer & Storm Drain Work....	\$ 33.24	17.13

ROOF0036-002 08/01/2014

	Rates	Fringes
ROOFER.....	\$ 35.02	13.57

FOOTNOTE: Pitch premium: Work on which employees are exposed to pitch fumes or required to handle pitch, pitch base or pitch impregnated products, or any material containing coal tar pitch, the entire roofing crew shall receive \$1.75 per hour "pitch premium" pay.

SFCA0669-009 07/01/2013

Does not include the northern part of the City of Chino, or the Cities of Montclair and Ontario

Rates	Fringes
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SPRINKLER FITTER.....\$ 34.19 19.37

* SFCA0709-004 01/01/2015

THE NORTHERN PART OF THE CITY OF CHINO, AND THE CITIES OF
MONTCLAIR AND ONTARIO:

	Rates	Fringes
SPRINKLER FITTER (Fire).....	\$ 40.46	24.17

SHEE0105-003 01/01/2015

LOS ANGELES (South of a straight line drawn between Gorman and
Big Pines)and Catalina Island, INYO, KERN (Northeast part, East
of Hwy 395), MONO ORANGE, RIVERSIDE, AND SAN BERNARDINO COUNTIES

	Rates	Fringes
SHEET METAL WORKER		
(1) Commercial - New Construction and Remodel work.....	\$ 40.79	23.75
(2) Industrial work including air pollution control systems, noise abatement, hand rails, guard rails, excluding aritechtrual sheet metal work, excluding A-C, heating, ventilating systems for human comfort....	\$ 40.79	23.75

TEAM0011-002 07/01/2014

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 27.99	24.14
GROUP 2.....	\$ 28.14	24.14
GROUP 3.....	\$ 28.27	24.14
GROUP 4.....	\$ 28.46	24.14
GROUP 5.....	\$ 28.49	24.14
GROUP 6.....	\$ 28.52	24.14
GROUP 7.....	\$ 28.77	24.14
GROUP 8.....	\$ 29.02	24.14
GROUP 9.....	\$ 29.22	24.14
GROUP 10.....	\$ 29.52	24.14
GROUP 11.....	\$ 30.02	24.14
GROUP 12.....	\$ 30.45	24.14

WORK ON ALL MILITARY BASES:

PREMIUM PAY: \$3.00 per hour additional.

[29 palms Marine Base, Camp Roberts, China Lake, Edwards AFB,
El Centro Naval Facility, Fort Irwin, Marine Corps
Logistics Base at Nebo & Yermo, Mountain Warfare Training
Center, Bridgeport, Point Arguello, Point Conception,

Vandenberg AFB]

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Truck driver

GROUP 2: Driver of vehicle or combination of vehicles - 2 axles; Traffic control pilot car excluding moving heavy equipment permit load; Truck mounted broom

GROUP 3: Driver of vehicle or combination of vehicles - 3 axles; Boot person; Cement mason distribution truck; Fuel truck driver; Water truck - 2 axle; Dump truck, less than 16 yds. water level; Erosion control driver

GROUP 4: Driver of transit mix truck, under 3 yds.; Dumpcrete truck, less than 6-1/2 yds. water level

GROUP 5: Water truck, 3 or more axles; Truck greaser and tire person (\$0.50 additional for tire person); Pipeline and utility working truck driver, including winch truck and plastic fusion, limited to pipeline and utility work; Slurry truck driver

GROUP 6: Transit mix truck, 3 yds. or more; Dumpcrete truck, 6-1/2 yds. water level and over; Vehicle or combination of vehicles - 4 or more axles; Oil spreader truck; Dump truck, 16 yds. to 25 yds. water level

GROUP 7: A Frame, Swedish crane or similar; Forklift driver; Ross carrier driver

GROUP 8: Dump truck, 25 yds. to 49 yds. water level; Truck repair person; Water pull - single engine; Welder

GROUP 9: Truck repair person/welder; Low bed driver, 9 axles or over

GROUP 10: Dump truck - 50 yds. or more water level; Water pull - single engine with attachment

GROUP 11: Water pull - twin engine; Water pull - twin engine with attachments; Winch truck driver - \$1.25 additional when operating winch or similar special attachments

GROUP 12: Boom Truck 17K and above

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses

(29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the

classifications was union data. EXAMPLE: UAVG-OH-0010
08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

PROJECT TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

01 11 00	SUMMARY OF WORK
01 14 00	WORK RESTRICTIONS
01 20 00.00 20	PRICE AND PAYMENT PROCEDURES
01 30 00	ADMINISTRATIVE REQUIREMENTS
01 32 16.00 20	CONSTRUCTION PROGRESS DOCUMENTATION
01 33 00	SUBMITTAL PROCEDURES
01 35 13	SPECIAL PROJECT PROCEDURES
01 35 26	GOVERNMENTAL SAFETY REQUIREMENTS
01 42 00	SOURCES FOR REFERENCE PUBLICATIONS
01 45 00.10 20	QUALITY CONTROL FOR MINOR CONSTRUCTION
01 50 00	TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS
01 57 19.00 20	TEMPORARY ENVIRONMENTAL CONTROLS
01 78 00	CLOSEOUT SUBMITTALS
01 78 23	OPERATION AND MAINTENANCE DATA

DIVISION 02 - SITE CONSTRUCTION

02 82 16.00 20	ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIALS
02 83 13.00 20	LEAD IN CONSTRUCTION

-- End of Project Table of Contents --

SECTION 01 11 00

SUMMARY OF WORK

04/12

PART 1 GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

1.1.1 Project Description

Note: This project description consist of a generic description of the work that may be covered in this Job Order Contract (JOC) contract. The Task Order (TO) will describe the summary of work for that Task Order.

The general intent of this Job Order Contract (JOC) contract is to provide a quick response contracting vehicle for non-complex Design Bid Build and Design Build (Design specifications for Design Build project shall be provided with the Task Order) projects in support of Naval Air Weapons Station, China Lake, California. It is intended that this contract shall provide a vehicle for the performance of various types of construction and maintenance projects by means of a Firm Fixed Price Indefinite Quantity Contract. The work contemplated under this contract will typically range from \$2,500.00 to \$350,000.00 in project size. However, the Government reserves the right to place task orders arger than this with mutual agreement of the Contractor. Bonding is required for any project over \$150,000.00.

1.1.1 Location

The work shall be located at the Naval Air Weapons Station, China Lake, California. The exact location will be indicated on each Task Order (TO).

1.2 TASK ORDERS

- a. All work to be performed under this contract shall be ordered by issuance of task orders on DD Form 1155, Order for Supplies or Services. The DD Form 1155 will be issued and signed by the Contracting Officer and shall indicate:
 - (1) Date of Order
 - (2) Contract Number and Order Number
 - (3) Delivery/Completion Date
 - (4) Place of Performance/Project Title
 - (5) Accounting and Appropriation Data
 - (6) Description of Services, Quantity and Total Price
 - (7) Drawings or Sketches
 - (8) Other Pertinent Information
- b. The Government makes no representation as to the number of orders or actual amount of services which will in fact be ordered, nor is the Government obligated to accept any specified amount of services. However, the Government shall order, during the term of this contract, work having an aggregate value at the price listed in the schedule made a part hereof not less than the contract minimum.
- c. Task orders will be issued for total costs necessary to accomplish

the statement of work requirements.

1.2.1 Ordering

Whenever the Government has work to be performed under this contract, the Contracting Officer shall notify the Contractor and provide a scope of work which shall include (I) the nature of the work to be performed, (II) the location of the job site, (III) the date the job site will be available to the Contractor, and (IV) the date the work is to be completed.

1.2.2 Proposal Submission and Pricing Requirements:

For each project a Request for Proposal (RFP) will be issued to the Contractor with a written project scope attached. Within five (5) working days after receipt of the RFP, the Contractor shall contact the Government technical representative to make arrangements to visit the site. The purpose of the site visit is to refine the elements of the project requirements and obtain mutual agreement on task objectives. The RFP will state the date and time required for the submission of the Contractor's proposal. Normally, proposals will be required within 21 calendar days of issuance of the agreed upon scope of work. In addition to pricing and pricing support, the Contractor's proposal shall provide the following:

- 1) A written record of the assumptions agreed to between the Contractor and Government representative during the job site visit and any special instructions or conditions.
- 2) Project title and FAR number.
- 3) Detailed priced proposal using R.S. Means line items.
- 4) The R.S. Means Unit Cost Data List File (.udl file) for the task order.
- 5) Subcontractors and, or Non Pre-Priced Line Item quotes when applicable.
- 6) Any reconciliation's and revisions as required.
- 7) Any required submittals.

The following items will normally be discussed during the job walk:

- 1) Site conditions and access to the site(s).
- 2) Methods and alternatives of accomplishing the work.
- 3) Definition and refinement of requirements.
- 4) Preliminary quantities or dimensions.
- 5) Initial or proposed unit priced line items.
- 6) Contractor's requirement for plans, sketches, shop drawings or Government provided plans, sketches, drawings, etc.
- 7) Design and construction submittal requirements.
- 8) Project start and completion dates.
- 9) Direct supervision labor hours requirements.

An amendment to the RFP will be issued to address any changes that may arise as a result of the job site visit.

Composite Labor Rates:

The Composite Labor Rates consists of the following elements of cost:

The Composite Labor Rate shall be compiled from General Decision Number: CA100031 and CA100037 Direct Labor and Fringe Rate, for the predetermined fixed craft's rate and the Payroll Burden Rate. The direct labor rate identified shall not be adjusted for each option year in accordance with

FAR Clause 52.222-30.

Payroll Burden Rate of ____%. This burden rate includes all payroll related taxes. This rate shall be fixed for the duration of the contract, including all option periods and will only be adjusted due to changes required by the incorporation of new wage decisions each contract year.

The Contractor shall utilize the following labor categories to determine the composite labor rate.

CRAFT	STANDARD RATE	NON-STANDARD RATE
CARPENTER	\$ _____	\$ _____
PLUMBER	\$ _____	\$ _____
PAINTER	\$ _____	\$ _____
CEMENT FINISHER	\$ _____	\$ _____
ELECTRICIAN	\$ _____	\$ _____
GENERAL CONSTRUCTION LABOR	\$ _____	\$ _____
LIGHT EQUIPMENT OPERATORS	\$ _____	\$ _____
COMPOSITE LABOR RATE	\$ _____	\$ _____

1.2.3 Proposal Pricing Format Requirements

The Contractor shall submit their pricing proposal to the Contracting Officer by the date and time specified in the RFP. Each pricing proposal shall be submitted in the following format and include the specified project pricing information:

Proposal Pricing Summary

Task order proposals shall be proposed in the following table format.

Direct Labor (per man hour)	\$ _____
Direct Material Costs	\$ _____
Direct Equipment Costs	\$ _____
Sales Tax (X%)	\$ _____
Subtotal	\$ _____
Subcontract(s) Proposal(s)	\$ _____
Subtotal	\$ _____
Total Coefficient (X%)	\$ _____
Subtotal	\$ _____
Bond (X%) (If over \$150K)	\$ _____
PROPOSED TASK ORDER PRICE	\$ _____

Direct Labor, Material and Equipment Cost:

The prime Contractor's direct labor, material, and equipment cost shall be based on the R.S. Means "Bare Costs" columns for each line item (this cost excludes any "R.S. Means" overhead, profit, or any City Cost Index factors) of each line item, multiplied by the Area Cost Factor (Identified below). Items not identified in the R.S. Means shall be identified as "NON PRE-PRICE LINE ITEMS". The Contractor's proposal shall identify all labor, material, and equipment requirements to complete the scope of work for each task order.

Area Cost Factor:

An Area Cost Factor of 30% shall be applied to the direct material and

equipment. No other factor shall be applied to these items including, but not limited to City Cost Index, General Construction City Cost Index, and unique location.

Sales Tax:

Applicable sales tax shall be applied to the total sum of the material and equipment, including the area cost factor and coefficient. Sales tax shall be priced as a separate line item.

Subcontractor Costs:

For subcontract costs exceeding \$2,500, the Contractor shall provide a minimum of two competitive quotes. If two competitive quotes are not provided, the Contractor shall provide a detailed cost breakdown of the subcontractor's proposal, showing how costs were obtained. The Contracting Officer reserves the right to request additional support documentation for subcontractor's price quotes. The Contractor shall maintain complete supporting documentation (including responsibility and responsive checks) necessary to provide a complete and accurate audit trail of all actions for the Contracting Officer's review. For subcontractor's costs less than \$2,500 per task order, pricing support is not required.

General Coefficient:

The Contractor's negotiated general coefficient of ___% is a numerical factor that represents indirect construction costs. The R.S. MEANS Cost Data shall be used by the Contractor to break down the work into individual work items by selecting unit priced tasks necessary to accomplish the detailed scope of work. The total price is calculated by combining the R.S. MEANS Bare Costs, applicable material taxes, and the Area Cost Factor, then multiplying that result by the Coefficient factor. The coefficient shall be applied to the pre-priced and non pre-priced line items. The Contractor shall submit a cost breakdown supporting the coefficient(s) proposed for the contract.

The coefficient shall be expressed as a numerical factor. For example, an Adjustment Factor of 115% would be expressed as 1.15. Carry the decimal to two places only. During the execution of the contract, the unit price task is multiplied by 1.15 to obtain the price to be paid for that task. Each unit price item in R.S. MEANS Cost Data is referred to as "Pre-priced items".

The Coefficient factor must include all cost (other than direct labor, material, equipment, and supervision incurred in the performance of work) that cannot be charged to any specific work elements. This category includes but is not limited to the items listed below. General and Administrative Overhead, including but not limited to:

~ Salaries of personnel required to operate and manage the contract (excluding job site supervision, which is covered under the "Supervision Coefficient"), Rapid Gate security program fees, information technology and computer equipment required to manage the contract, off base storage facilities, offices, administrative supplies, vehicle operations and maintenance expenses and telephone charges.

~ Overhead on subcontracts.

~ Insurance.

- ~ Costs for purchase of equipment and vehicles; tools of the trade.
- ~ Office equipment and supplies.
- ~ Compliance with safety standards and security requirements.
- ~ Compliance with environmental laws (overhead (indirect)) costs associated with performing work in compliance with EPA/OSHA, and individual Station regulations, including obtaining any necessary licenses and permits, Dig Permits, outages, reporting requirements, training, etc.
- ~ The Contractor's risk factor.
- ~ Escalation.
- ~ Company officers and support staff.
- ~ General Project Manager/project Coordinator.
- ~ Quality control, including daily Quality Control Reports.
- ~ Submittal preparation.
- ~ Employer's portion of taxes such as FICA, unemployment compensation, and fringe benefits; compensation for wage differential between the applicable Davis-Bacon hourly wage requirements and the prepriced unit line items (after adjustment for the Area Cost Factor).
- ~ Overhead and profit.
- ~ Differences in Federal and State Unemployment costs, Builders Risk Insurance and Public Liability costs.
- ~ Utility scopes, facility protection, safety, fire protection.
- ~ Work described in the contract that states the Contractor shall perform at no additional cost to the Government:
- ~ All costs associated with computer hardware/software applications.
- ~ All costs associated with computer hardware/software to enable electronic correspondence with the Government.
- ~ Waste and Excess Quantities included in Completed-in-Place Construction Quantities. (All prices in R.S. MEANS Cost Data Books are for completed-in-place construction unless explicitly described otherwise. Waste or excess material quantities are incidental costs that are included within the contract coefficient unless explicitly stated otherwise. Quantities used on individual task order proposals shall be taken from field measurement or design plans, as appropriate, without allowance for waste.)

The costs for preparation of Task Order proposals including scoping meetings shall be the responsibility of the Contractor and shall be included in the coefficient. Task Order proposal preparation is not reimbursable. Government requests for proposals shall not constitute an award or commitment.

The following is a representative listing of tools and equipment that apply to the various trades. These items are indicative of, but not limited to; those that the Contractor is expected to provide as part of normal overhead cost.

Airlines (drop line)	Scrapers (hand held)	Hot Tap (hand held)
All hand tools	Screw Drivers	Nailer, Pneumatic
Brushes	Screw Drivers, Electric	Nail Sets
Barricades, Safety	Scribers	Picks
Bolt cutters	Shears (hand held)	Planes, (hand held)
Barrier tape	Shovels	Planes, Electric, (hand held)
Broom	Sledgehammers	Pliers
Cable cutters	Squares	Powder Actuated Fastening Tools
Cable pullers/Hoist (hand held) Can Opener	Staplers, Air/Hand	Plumb Bob
Caulking Gun	Steel Framing Tools, Lightweight Steel Framing	Pot Hook
Caulking/Yarning	Chisels	Personal Protective Equipment
Irons	Clamps	Punches
Chain Saw	Cleaning Equipment (hand held)	Rake
Hammers, hand held	Compressor (sized as required to run tools)	Rasps (files)
Hammers, chipping	Conduit bender	Reinforcing steel, Shear and
Hammer, Jack	Crow Bars	Tool Boxes (personal)
Industrial and Hepa Vacuum	Dividers	Traffic cones
Jack, Hydraulic (12 tons or less	Drift Pins	Tubing Cutters (hand held, nonpowered)
Knives	Drill, pneumatic	Vacuum, wet/dry (5 gal)
Ladders (step to 12' and extension to 32')	Drill, pneumatic bits (up to 3 " dia.)	Vice
Lead Pot and Ladle	MiterBox	Volt Meter, volt/ohm meter
Levels	Tampers (hand held, nonpowered)	Wheel Barrow (non- powered)
Levels, Builders	Tapelines	Wire Strippers
Level, laser	Tarpaulins	Wrenches
Lighting, Temporary	Tarpauline (12' x 24" maximum	
Bender	Tin Slips	
Rivet Sets (Light, hand held)	Torch, hand	
Rollers-Flooring	Torch Igniters	
Rules	Trash Receptacles (35/gallon, 4 each)	
Safety Equipment (PPE)	Trowels (non-powered, hand held)	
Safety fencing (orange plastic)	Drill, Motors (hand held)	
Sanders (hand held)	Drill, Bits	
Saws, Hand	Drill, Hole Saw	
Saws, Electric hand, Circular	Drill, Rotary hammer (up to 1 ¼" dia.)	
Saws, electric Hand, Reciprocating	Extension Cords	
Saws, Backsaws	Files (hand held)	
Saws, Power Milter Box	Fish tapes	
Saw Horses	Gloves	
Scaffolding, Portable, (8' table height)	Flash Lights	
	Floats (hand held)	
	Groover, Pipe (hand held)	
	Hacksaws	

Supervision Coefficients:

The contractor's negotiated supervision coefficient is a numerical factor that represents all direct and indirect costs for anyone performing duties of the Quality Control (QC) Manager, Site Safety and Health Officer (SSHO), and Superintendent, "job site supervision". Any person performing the role of Site Safety and Health Officer (SSHO) shall not perform any direct labor.

Supervision Coefficient Rates are as follows:

(__%) One supervision person performing the roles of Superintendant, Quality Control Manager, and Site Safety and Health Officer roles for this Task Order may be performed by one person if that person is qualified for each roll in accordance with NAVFAC stated qualifications. This person shall not perform any construction type activities/work, and shall be on site at all times while work is being performed.

(__%) Two supervision personnel performing the roles of Superintendent and Quality Control Manager roles shall not be performed by the same person. The Site Safety and Health Officer Role may be performed by either person.

(__%) Three supervision personnel performing the roles of Superintendent, Quality Control Manager, and SSHO roles shall be performed by separate people.

The supervision coefficients shall be expressed as a numerical factor. For example, an Adjustment Factor of 115% would be expressed as 1.15. Carry the decimal to two places only.

The supervision coefficient factor shall include all standard and non-standard burdened labor cost for the life of the contract to manage the site supervision role(s) required per task order.

The composite supervision rate shall be applied to each individual person acting in a Superintendant, Quality Control, or Site Safety and Health Officer (SSHO) role as required per each individual Task Order.

Total Coefficient:

The contractor's negotiated total coefficient of ___% is a numerical factor that represents the sum of the general coefficient and supervision coefficients.

1.2.3.1 R.S. Means Co. Cost Data Guides

At the beginning of the contract and at the beginning of each calendar year, the contractor shall provide, at no additional cost to the Government, one copy of the following R.S. Means Co. Cost Data Books; Facilities Construction, Mechanical, Electrical, Plumbing, and Site Work & Landscape; one copy of R.S. Means CostWorks Software (CD Form) with the following unlocked modules; Facilities Construction, Mechanical, Electrical, Plumbing, and Site Work & Landscape. The contractor shall also provide (CD Form) quarterly updates for the R.S. Means CostWorks Software.

1.2.3.2 NON PRE-PRICE LINE ITEMS:

Non pre-priced items are defined as work that is not listed by the R.S. Means Cost Data Books. Non pre-priced items are subjected to the procedures described in the paragraph below. The Government will not accept non pre-priced work if the labor, materials, or equipment are listed in the Means Cost Data books. For non pre-priced items, the Contractor shall

provide the following for each component or task required:.

Item Description
 Direct Labor Hours
 Davis-Bacon wage rate for trade performing task
 Hourly fringe benefit rate for trade performing task
 Description of proposed material
 Number of units of material
 Cost per unit of material (direct bare costs only)
 Description of proposed equipment
 Time for which equipment will be required
 Rental rate for equipment (direct/bare costs only)
 Profit and overhead, if applicable
 Subcontractor's profit and overhead (if applicable)

Repetitive items may be negotiated and incorporated by an amendment to the Contract by the Contracting Officer.

1.2.4 Negotiation

Upon receipt of the Contractor's proposal, the Contracting Officer shall negotiate a firm-fixed price for the proposed work. Upon successful completion of the negotiations, the Contracting Officer shall issue a task order to the Contractor. No additional compensation shall be permitted for those elements of cost included in the fixed hourly rate (i.e., welfare, pension, vacation, education, bonds, state and federal payroll taxes, overhead, supervision and profit).

1.2.5 Special Equipment

As a part of the labor rates, the Contractor shall be expected to provide all tools and equipment which a tradesman is normally expected to provide. This list is only a representative listing of such tools and equipment but is not limited to these items. In the event a project requires the use of equipment which the Contractor may not be reasonably expected to keep as inventory, such equipment shall be referred to as "special equipment" and will be listed as such by the Government as a separate line item in scope of work. The cost to the Government for the Contractor's use of special equipment will be negotiated as part of the firm fixed price for the project and shall be governed by local equipment rental rates.

1.2.6 Special Trades

If a project requires the use of a trade not listed in the contract, the trade shall be referred to as a "Special Trade" and will be listed as such by the Contractor as a separate line item in the Contractors proposal. The cost to the Government for the Contractor's use of a special trade will be negotiated as part of the firm fixed price for the project.

1.2.7 Construction Practices and Quality of Materials

Unless otherwise specifically provided in the work order, all operational practices of the Contractor and all workmanship and material, equipment and articles used in the performance of work hereunder, shall be in accordance with Federal, State and applicable International Building Codes, Naval Facilities Engineering Command Guide Specifications (NFGS) and Local laws and the best Commercial Construction Practices. The Contractor shall be aware of and follow all Federal, State and Local laws and regulations, and divisions of applicable NFGS. Specific NFGS for each work order will be

appended to the initial notification to the Contractor of the proposed scope of work for each work order.

1.2.8 Drawings, Sketches and Specifications

Drawings or sketches may be issued with individual Task Orders, when considered applicable and necessary by the Contracting Officer. The drawings will be 8-1/2 inch by 11 inch line drawings to show particular features and not meant to be detailed project drawings. However, if or when drawings or sketches are issued the Contractor shall:

- 1) Check all drawings or sketches furnished immediately upon receipt;
- 2) Compare all drawings or sketches and verify the figures before laying out the work; and
- 3) Promptly notify the Contracting Officer of any discrepancies.

1.3 EXISTING WORK

In addition to "FAR 52.236-9, Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements".

- a. Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.
- b. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before new work started.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 01 14 00

WORK RESTRICTIONS
11/11

1 PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this section to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. Code (USC)

10 USC 6011 Navy Regulations

8 USC 1101 Definitions

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval and for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

List of Contact Personnel; G

1.3 SPECIAL SCHEDULING REQUIREMENTS

- a. Have materials, equipment, and personnel required to perform the work at the site prior to the commencement of the work.
- b. Permission to interrupt any Activity roads, railroads, and/or utility service must be requested in writing a minimum of 15 calendar days prior to the desired date of interruption.

1.4 CONTRACTOR ACCESS AND USE OF PREMISES

1.4.1 Activity Regulations

Ensure that Contractor personnel employed on the Activity become familiar with and obey Activity regulations including safety, fire, traffic and security regulations. Keep within the limits of the work and avenues of ingress and egress. Wear hard hats in designated areas. Do not enter any restricted areas unless required to do so and until cleared for such entry. Mark Contractor equipment for identification.

1.4.1.1 Subcontractors and Personnel Contacts

Provide a list of contact personnel of the Contractor and subcontractors including addresses and telephone numbers for use in the event of an emergency. As changes occur and additional information becomes available, correct and change the information contained in previous lists.

1.4.1.2 Identification Badges and Installation Access

Application for and use of badges will be as directed. Obtain access to the installation by participating in the Navy Commercial Access Control System (NCACS), or by obtaining passes each day from the Base Pass and Identification Office. Costs for obtaining passes through the NCACS are the responsibility of the Contractor. One-day passes, issued through the Base Pass and Identification Office, will be furnished without charge. Furnish a completed EMPLOYMENT ELIGIBILITY VERIFICATION (DHS FORM I-9) form for all personnel requesting badges. This form is available at <http://www.uscis.gov/portal/site/uscis> by searching or selecting Employment Verification (Form I-9) Immediately report instances of lost or stolen badges to the Contracting Officer.

- a. NCACS Program: NCACS is a voluntary program in which Contractor personnel who enroll, and are approved, are subsequently granted access to the installation for a period up to one year, or the length of the contract, whichever is less, and are not required to obtain a new pass from the Base Pass and Identification Office for each visit. The Government performs background screening and credentialing. Throughout the year the Contractor employee must continue to meet background screening standards. Periodic background screenings are conducted to verify continued NCACS participation and installation access privileges. Under the NCACS program, no commercial vehicle inspection is required, other than for Random Anti-Terrorism Measures (RAM) or in the case of an elevation of Force Protection Conditions (FPCON). Information on costs and requirements to participate and enroll in NCACS is available at <http://www.rapidgate.com> or by calling 1-877-727-4342. Contractors should be aware that the costs incurred to obtain NCACS credentials, or costs related to any means of access to a Navy Installation, are not reimbursable. Any time invested, or price(s) paid, for obtaining NCACS credentials will not be compensated in any way or approved as a direct cost of any contract with the Department of the Navy.

Delivery companies submitting NCACS applications must only be granted access if the prime Contractor has included the company on a participant's spreadsheet provided in advance to the Contracting Officer. This form must be provided by the Government upon request.

Delivery companies NOT participating in NCACS must have documentation identifying the destination location (building no., street, etc.), Project title, Contract No., Prime Contractor organization, Bill of Lading & Proof of Citizenship. Otherwise, no access will be allowed.

For those companies that do not have a bill of lading or proof of citizenship the prime contractor must fill out the Short Term Visitor Request form and provide to the Contracting Officer no less than 5 workdays prior to the delivery date.

- b. One-Day Passes: Participation in the NCACS is not mandatory, and if the Contractor chooses to not participate, the Contractor's personnel will have to obtain daily passes, be subject to daily mandatory vehicle inspection, and will have limited access to the installation. The Government will not be responsible for any cost or lost time associated with obtaining daily passes or added vehicle inspections incurred by non-participants in the NCACS.

1.4.1.3 No Smoking Policy

Smoking is prohibited within and outside of all buildings on installations under the cognizance of NAVFAC except in designated smoking areas. This applies to existing buildings, buildings under construction and buildings under renovation. Discarding tobacco materials other than into designated tobacco receptacles is considered littering and is subject to fines. The Contracting Officer will identify designated smoking areas.

1.4.2 Entry to Radiologically Controlled Areas

Contractor personnel must not, under any circumstances, enter a radiologically controlled area or cross any posted radiological boundary. This paragraph applies to all phases of contract work. Radiation areas are posted with signs consistent with OSHA requirements. Ensure that employees are familiar with the radiation signs and symbols. All personnel entering the shipyard for the first time are required to receive radiological indoctrination training.

Should contract workers encounter radiological postings and/or boundaries which appear to limit their ability to access or carry out their intended work, they must notify their contract administrator for resolution of the problem.

1.4.2.1 Radioactive Materials and Equipment

All testing equipment, containing a radioactive source, must be operated in accordance with an approved radioactive equipment plan. This plan must be submitted to the Contracting Officer and approved by the Radiation Officer (Code 105.5), prior to bringing the equipment into the shipyard. This plan must include:

- a. The name and type of equipment.
- b. The type and size of radiation source.
- c. The dates and locations of the equipment's usage.
- d. The radiological controls that the Contractor will use while operating the equipment.

A different radioactive equipment plan will be required for each different type of equipment, type of radioactive source, or size of radioactive source. A data sheet of for each piece of new radioactive equipment must be submitted to the Contracting Officer to forward to the shipyard's Radiation Safety Officer. The data sheet must contain the following information:

- a. Name of equipment.

- b. Name and address of equipment manufacturer.
- c. Type and size of radiation source.
- d. The location of the installed radioactive equipment (i.e. building no., floor, code/shop area).

1.4.3 Working Hours

Regular work hours are 7:00 a.m. to 5:00 p.m. Monday through Thursday and 7:00 a.m. to 4:00 p.m. every other Friday (Non-flex Fridays), excluding Government holidays (unless modified by the Restricted Access Areas Paragraph Requirements in Section 01 35 13 SPECIAL PROJECT PROCEDURES).

1.4.6 Work Outside Regular Hours

Work outside regular working hours requires Contracting Officer approval. Make application 15 calendar days prior to such work to allow arrangements to be made by the Government, giving the specific dates, hours, location, type of work to be performed, contract number and project title. Based on the justification provided, the Contracting Officer may approve work outside regular hours. During periods of darkness, the different parts of the work shall be lighted in a manner approved by the Contracting Officer.

1.4.7 Exclusionary Period

Any exclusionary periods required will be identified per task order.

1.4.8 Occupied and Existing Building(s)

The Contractor may be working in an existing building and around existing buildings which may be occupied. Do not enter the buildings without prior approval of the Contracting Officer. The existing buildings and their contents shall be kept secure at all times. Provide temporary closures as required to maintain security as directed by the Contracting Officer. Provide dust covers or protective enclosures to protect existing work that remains and Government material located in the area during the construction period.

1.4.9 Utility Cutovers and Interruptions

a. Make utility cutovers and interruptions after normal working hours or on Saturdays, Sundays, and Government holidays. Conform to procedures required in the paragraph "Work Outside Regular Hours".

b. Ensure that new utility lines are complete, except for the connection, before interrupting existing service.

c. Interruption to water, sanitary sewer, storm sewer, telephone service, electric service, air conditioning, heating, fire alarm, compressed air, shall be considered utility cutovers pursuant to the paragraph entitled "Work Outside Regular Hours".

d. Operation of Station Utilities: The Contractor shall not operate nor

disturb the setting of control devices in the station utilities system, including water, sewer, electrical, and steam services. The Government will operate the control devices as required for normal conduct of the work. The Contractor shall notify the Contracting Officer giving reasonable advance notice when such operation is required.

1.4.10 LOCATION OF UNDERGROUND UTILITIES

Obtain digging permits prior to start of excavation by contacting the Contracting Officer 21 calendar days in advance.

a. Notification Prior to Excavation: Notify the Contracting Officer at least 15 days prior to starting excavation work.

b. Digging permits shall be renewed every 30 calendar days after date of issuance of permit.

1.5 SECURITY REQUIREMENTS

Contract Clause "FAR 52.204-2, Security Requirements and Alternate II," "FAC 5252.236-9301, Special Working Conditions and Entry to Work Area,"

1.5.1 Passes

Submit request for personnel and vehicle passes together. Include the Certificate of Insurance for Contractor and Subcontractor(s) and the Statement of Acknowledgement Form SF 1413 with the submittal. Passes will normally be issued within 21 days.

1.5.2 Control

Maintain strict accountability over passes. Immediately report to the source of issue, passes missing or lost and the circumstances. If the Contractor has another active contract or one commencing immediately, employees' names may be transferred from one contract to the other. Final payment will not be effected until employees are transferred to another contract or the records are cleared. Furnish a signed letter, countersigned by the source of issue, stating that passes have been turned in.

2 PART 2 PRODUCTS

Not Used

3 PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 20 00.00 20

PRICE AND PAYMENT PROCEDURES
11/11

1 PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EP-1110-1-8 (2009) Construction Equipment Ownership and Operating Expense Schedule

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Earned Value Report; G

1.3 EARNED VALUE REPORT

1.3.1 Data Required

This contract requires the use of a cost-loaded Network Analysis Schedule (NAS). The information required for the Schedule of Prices will be entered as an integral part of the Network Analysis Schedule. Within 15 calendar days of notice of award, prepare and deliver to the Contracting Officer an Earned Value Report (construction contract) as directed by the Contracting Officer. Provide a detailed breakdown of the contract price, giving quantities for each of the various kinds of work, unit prices, and extended prices. Costs shall be summarized and totals provided for each construction category.

1.3.2 Schedule Instructions

Payments will not be made until the Earned Value Report from the cost-loaded NAS has been submitted to and accepted by the Contracting Officer. Identify the cost for site work, and include incidental work to the 5 ft line. Identify costs for the building(s), and include work out to the 5 ft line. Work out to the 5 ft line shall include construction encompassed within a theoretical line 5 ft from the face of exterior walls and shall include attendant construction, such as pad mounted HVAC cooling equipment, cooling towers, and transformers placed beyond the 5 ft line.

1.3.3 Real Property Assets

The Government will provide the Draft DD Form 1354, Transfer and Acceptance of Military Real Property filled in with the appropriate Real Property Unique Identifiers (RPUID) and related construction Category Codes to summarize the designed real property assets that apply to this contract. The Contractor shall meet with the Contracting Officer and the Real Property Accounting Officer during the Pre Construction Meeting and the Project Closeout Meetings to modify and include any necessary changes to the DD Form 1354. The Contractor shall provide the Interim DD Form 1354 that uses the appropriate division of the RPUIDs/ Category Codes to represent the final constructed facility and include all associated cost. Coordinate the Contractor's Price and Payment structure with the structure of the RPUIDs/ Category Codes.

Divide detailed asset breakdown into the RPUIDs and related construction Category Codes and populate associated costs which represent all aspects of the work. Where assets diverge into multiple RPUID/ Category Codes, divide the asset and provide the proportion of the assets in each RPUID/ Category Code. Assets and related RPUID/ Category Codes may be modified by the Contracting Officer as necessary during course of the work. Coordinate identification and proportion of these assets with the Government Real Property Accounting Officer.

Cost data accumulated under this section are required in the preparation of DD Form 1354.

1.3.4 Schedule Requirements for HVAC TAB

The field work Section 23 05 93 TESTING, ADJUSTING AND BALANCING shall be broken down in the Earned Value Report from the cost-loaded NAS by separate line items which reflect measurable deliverables. Specific payment percentages for each line item shall be determined on a case by case basis for each contract. The line items shall be as follows:

- a. Approval of Design Review Report: The TABS Agency is required to conduct a review of the project plans and specifications to identify any feature, or the lack thereof, that would preclude successful testing and balancing of the project HVAC systems. The resulting findings shall be submitted to the Government to allow correction of the design. The progress payment shall be issued after review and approval of the report.
- b. Approval of the pre-field engineering report: The TABS Agency submits a report which outlines the scope of field work. The report shall contain details of what systems will be tested, procedures to be used, sample report forms for reporting test results and a quality control checklist of work items that must be completed before TABS field work commences.
- c. Season I field work: Incremental payments are issued as the TABS field work progresses. The TABS Agency mobilizes to the project site and executes the field work as outlined in the pre-field engineering report. The HVAC water and air systems are balanced and operational data shall be collected for one seasonal condition (either summer or winter depending on project timing).

- d. Approval of Season I report: On completion of the Season I field work, the data is compiled into a report and submitted to the Government. The report is reviewed, and approved, after ensuring compliance with the pre-field engineering report scope of work.
- e. Completion of Season I field QA check: Contract QC and Government representatives meet the TABS Agency at the jobsite to retest portions of the systems reported in the Season I report. The purpose of these tests are to validate the accuracy and completeness of the previously submitted Season I report.
- f. Approval of Season II report: The TABS Agency completes all Season II field work, which is normally comprised mainly of taking heat transfer temperature readings, in the season opposite of that under which Season I performance data was compiled. This data shall be compiled into a report and submitted to the Government. On completion of submittal review to ensure compliance with the pre-field engineering report scope, progress payment is issued. Progress payment is less than that issued for the Season I report since most of the water and air balancing work effort is completed under Season I.

1.4 CONTRACT MODIFICATIONS

In conjunction with the Contract Clause "DFARS 252.236-7000, Modification Proposals-Price Breakdown," and where actual ownership and operating costs of construction equipment cannot be determined from Contractor accounting records, equipment use rates shall be based upon the applicable provisions of the EP-1110-1-8.

1.5 CONTRACTOR'S INVOICE AND CONTRACT PERFORMANCE STATEMENT

1.5.1 Content of Invoice

Requests for payment will be processed in accordance with the Contract Clause FAR 52.232-27, Prompt Payment Construction Contracts and FAR 52.232-5, Payments Under Fixed-Price Construction Contracts. The requests for payment shall include the documents listed below.

- a. The Contractor's invoice, on NAVFAC Form 7300/30 furnished by the Government, showing in summary form, the basis for arriving at the amount of the invoice. Form 7300/30 shall include certification by Quality Control (QC) Manager as required by the contract.
- b. The Earned Value Report from the cost-loaded NAS, showing in detail: the estimated cost, percentage of completion, and value of completed performance for each of the construction categories stated in this contract. Use NAVFAC LANT Form 4-330/110 (New 7/84) on NAVFAC LANT contracts when a Monthly Estimate for Voucher is required.
- c. Updated Project Schedule and reports required by the contract.
- d. Contractor Safety Self Evaluation Checklist.
- e. Other supporting documents as requested.
- f. Updated copy of submittal register.

- g. Invoices not completed in accordance with contract requirements will be returned to the Contractor for correction of the deficiencies.
- h. Contractor's Monthly Estimate for Voucher (NAVFAC LANT Form 4-330/110 (New 7/84)) with Subcontractor and supplier payment certification.
- i. Affidavit to accompany invoice (NAVFAC LANT NORVA Form 4-4235/4 (Rev.5/81)).
- j. Materials on Site.
- h. Monthly Work-hour report.
- i. Solid Waste Disposal Report.

1.5.2 Submission of Invoices

If NFAS Clause 5252.232-9301 is included in the contract, the documents listed in paragraph "CONTENT OF INVOICE" shall be provided in their entirety as attachments in Wide Area Work Flow (WAWF) for each invoice submitted. The maximum size of each WAWF attachment is two megabytes, but there are no limits on the number of attachments. If a document cannot be attached in WAWF due to system or size restriction it shall be provided as instructed by the Contracting Officer.

1.5.3 Final Invoice

- a. A final invoice shall be accompanied by the certification required by DFARS 252.247.7023 TRANSPORTATION OF SUPPLIES BY SEA, and the Contractor's Final Release. If the Contractor is incorporated, the Final Release shall contain the corporate seal. An officer of the corporation shall sign and the corporate secretary shall certify the Final Release.
- b. For final invoices being submitted via WAWF, the original Contractor's Final Release Form and required certification of Transportation of Supplies by Sea must be provided directly to the respective Contracting Officer prior to submission of the final invoice. Once receipt of the original Final Release Form and required certification of Transportation of Supplies by Sea has been confirmed by the Contracting Officer, the Contractor shall then submit final invoice and attach a copy of the Final Release Form and required certification of Transportation of Supplies by Sea in WAWF.
- c. Final invoices not accompanied by the Contractor's Final Release and required certification of Transportation of Supplies by Sea will be considered incomplete and will be returned to the Contractor.

1.6 PAYMENTS TO THE CONTRACTOR

Payments will be made on submission of itemized requests by the Contractor which comply with the requirements of this section, and will be subject to reduction for overpayments or increase for underpayments made on previous payments to the Contractor.

1.6.1 Obligation of Government Payments

The obligation of the Government to make payments required under the provisions of this contract will, at the discretion of the Contracting Officer, be subject to reductions and/or suspensions permitted under the FAR and agency regulations including the following in accordance with "FAR 32.503-6:

- a. Reasonable deductions due to defects in material or workmanship;
- b. Claims which the Government may have against the Contractor under or in connection with this contract;
- c. Unless otherwise adjusted, repayment to the Government upon demand for overpayments made to the Contractor; and
- d. Failure to provide up to date record drawings not current as stated in Contract Clause "FAC 5252.236-9310, Record Drawings."

1.6.2 Payment for Onsite and Offsite Materials

Progress payments may be made to the contractor for materials delivered on the site, for materials stored off construction sites, or materials that are in transit to the construction sites under the following conditions:

- a. FAR 52.232-5(b) Payments Under Fixed Price Construction Contracts.
- b. Materials delivered on the site but not installed, including completed preparatory work, and off-site materials to be considered for progress payment shall be major high cost, long lead, special order, or specialty items, not susceptible to deterioration or physical damage in storage or in transit to the construction site. Examples of materials acceptable for payment consideration include, but are not limited to, structural steel, non-magnetic steel, non-magnetic aggregate, equipment, machinery, large pipe and fittings, precast/prestressed concrete products, plastic lumber (e.g., fender piles/curbs), and high-voltage electrical cable. Materials not acceptable for payment include consumable materials such as nails, fasteners, conduits, gypsum board, glass, insulation, and wall coverings.
- c. Materials to be considered for progress payment prior to installation shall be specifically and separately identified in the Contractor's estimates of work submitted for the Contracting Officer's approval in accordance with Earned Value Report requirement of this contract. Requests for progress payment consideration for such items shall be supported by documents establishing their value and that the title requirements of the clause at FAR 52.232-5 have been met.
- d. Materials are adequately insured and protected from theft and exposure.
- e. Provide a written consent from the surety company with each payment request for offsite materials.
- f. Materials to be considered for progress payments prior to installation shall be stored either in Hawaii, Guam, Puerto Rico, or the Continental

United States. Other locations are subject to written approval by the Contracting Officer.

2 PART 2 PRODUCTS

Not Used

3 PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS
11/11

1 PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

15 CFR 772 Definition of Terms

15 CFR 773 Special Licensing Procedures

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.

1.3 MINIMUM INSURANCE REQUIREMENTS

Procure and maintain during the entire period of performance under this contract the following minimum insurance coverage:

- a. Comprehensive general liability: \$500,000 per occurrence
- b. Automobile liability: \$200,000 per person, \$500,000 per occurrence for bodily injury, \$20,000 per occurrence for property damage
- c. Workmen's compensation as required by Federal and State workers' compensation and occupational disease laws.
- d. Employer's liability coverage of \$100,000, except in States where workers compensation may not be written by private carriers,
- e. Others as required by State law.

1.4 CONTRACTOR SPECIAL REQUIREMENTS

1.4.1 Asbestos Containing Material

All contract requirements of Section 02 82 16.00 20, "Engineering Control of Asbestos Containing Materials" assigned to the Private Qualified Person (PQP) shall be accomplished directly by a first tier subcontractor.

1.4.2 Space Temperature Control, HVAC TAB, and Apparatus Inspection

All contract requirements shall be accomplished directly by a first tier subcontractor, including the Commissioning Agent.

1.5 SUPERVISION

Have at least one qualified supervisor capable of reading, writing, and conversing fluently in the English language on the job site during working hours. In addition, if a Quality Control (QC) representative is required on the contract, then that individual shall also have fluent English communication skills.

1.6 PRECONSTRUCTION CONFERENCE

After award of the contract but prior to commencement of any work at the site, meet with the Contracting Officer to discuss and develop a mutual understanding relative to the administration of the value engineering and safety program, preparation of the schedule of prices or earned value report, shop drawings, and other submittals, scheduling programming, prosecution of the work, and clear expectations of the "Interim DD Form 1354" Submittal. Major subcontractors who will engage in the work shall also attend.

1.7 PARTNERING

To most effectively accomplish this contract, the Government requires the formation of a cohesive partnership within the Project Team whose members are from the Government, the Contractor and their Subcontractors. Key personnel from the Supported Command, the End User (who will occupy the facility), NAVFAC (Echelon III and IV), the Navy Region/Installation, the Contractor and Subcontractors, and the Designer of Record will be invited to participate in the Partnering process. The Partnership will draw on the strength of each organization in an effort to achieve a project that is without any safety mishaps, conforms to the Contract, and stays within budget and on schedule.

The Contracting Officer will provide Information on the Partnering Process and a list of key and optional personnel who should attend the Partnering meeting.

1.7.1 Informal Partnering

The Contracting Officer will organize the Partnering Sessions with key personnel of the project team, including Contractor personnel and Government personnel.

The Initial Partnering session should be a part of the Pre-Construction Meeting. Partnering sessions will be held at a location agreed to by the Contracting Officer and the Contractor (typically a conference room provided by the PWD FEAD/ROICC office or the Contractor).

The Initial Informal Partnering Session will be conducted and facilitated using electronic media (a video and accompanying forms) provided by the Contracting Officer.

The Partners will determine the frequency of the follow-on sessions.

1.8 ELECTRONIC MAIL (E-MAIL) ADDRESS

The Contractor shall establish and maintain electronic mail (e-mail) capability along with the capability to open various electronic attachments in Microsoft, Adobe Acrobat, and other similar formats. Within 10 days after contract award, the Contractor shall provide the Contracting Officer a single (only one) e-mail address for electronic communications from the Contracting Officer related to this contract including, but not limited to contract documents, invoice information, request for proposals, and other correspondence. The Contracting Officer may also use email to notify the Contractor of base access conditions when emergency conditions warrant, such as hurricanes, terrorist threats, etc. Multiple email address will not allowed.

It is the Contractor's responsibility to make timely distribution of all Contracting Officer initiated e-mail with its own organization including field office(s). The Contractor shall promptly notify the Contracting Officer, in writing, of any changes to this email address.

2 PART 2 PRODUCTS

Not Used

3 PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 32 16.00 20

CONSTRUCTION PROGRESS DOCUMENTATION

11/09

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction schedule; G

1.2 ACCEPTANCE

Prior to the start of work, prepare and submit to the Contracting Officer for acceptance a construction schedule in the form of a Bar Chart in accordance with the terms in Contract Clause "FAR 52.236-15, Schedules for Construction Contracts," except as modified in this contract. Acceptance of an error free Baseline Schedule and updates is a condition precedent to processing the Contractor's pay request.

1.3 SCHEDULE FORMAT

1.3.1 Bar Chart Schedule

The Contractor shall utilize Primavera P-6 software to develop the Bar Chart Schedule. The Bar Chart shall show submittals, government review periods, material/equipment delivery, utility outages, on-site construction, inspection, testing, and closeout activities. The Bar Chart shall be time scaled and generated using an electronic spreadsheet program.

1.4 UPDATED SCHEDULE

Update the Construction schedule at monthly intervals or when the schedule has been revised. The updated schedule shall be kept current, reflecting actual activity progress and plan for completing the remaining work. Submit copies of purchase orders and confirmation of delivery dates as directed.

1.5 3-WEEK LOOK AHEAD SCHEDULE (AS REQUIRED PER TASK ORDER)

The Contractor shall prepare and issue a 3-Week Look Ahead schedule to provide a more detailed day-to-day plan of upcoming work identified on the Construction Schedule. The work plans shall be keyed to activity numbers when required and updated each week to show the planned work for the current and following two-week period. Additionally, include upcoming outages, closures, preparatory meetings, and initial meetings. Identify critical path activities on the Three-Week Look Ahead Schedule. The detail work plans are to be bar chart type schedules, maintained separately from the Construction Schedule on an electronic spreadsheet program and printed on 8 ½ by 11 sheets as directed by the Contracting Officer. Activities shall not exceed 5 working days in duration and have sufficient level of detail to assign crews, tools and equipment required to complete the work.

Three hard copies and one electronic file of the 3-Week Look Ahead Schedule shall be delivered to the Contracting Officer no later than 8 a.m. each Monday and reviewed during the weekly CQC Coordination Meeting.

1.6 CORRESPONDENCE AND TEST REPORTS:

All correspondence (e.g., letters, Requests for Information (RFIs), e-mails, meeting minute items, Production and QC Daily Reports, material delivery tickets, photographs, etc.) shall reference Schedule activities that are being addressed. All test reports (e.g., concrete, soil compaction, weld, pressure, etc.) shall reference schedule activities that are being addressed.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 01 33 00

SUBMITTAL PROCEDURES
05/11

1 PART 1 GENERAL

1.1 SUMMARY

The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections.

Units of weights and measures used on all submittals are to be the same as those used in the contract drawings.

Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

Contractor's Quality Control (CQC) System Manager and the Designer of Record, if applicable, to check and approve all items prior to submittal and stamp, sign, and date indicating action taken. Proposed deviations from the contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

Submittals requiring Government approval are to be scheduled and made prior to the acquisition of the material or equipment covered thereby. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

1.2 DEFINITIONS

1.2.1 Submittal Descriptions (SD)

Submittals requirements are specified in the technical sections. Submittals are identified by Submittal Description (SD) numbers and titles as follows:

SD-01 Preconstruction Submittals

Submittals which are required prior to start of construction (work) issuance of contract notice to proceed. or commencing work on site. or the start of the next major phase of the construction on a multi-phase contract, includes schedules, tabular list of data, or tabular list including location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.

Certificates of insurance

Surety bonds

List of proposed Subcontractors

List of proposed products

Construction progress schedule

Network Analysis Schedule (NAS)

Submittal register

Schedule of prices

Health and safety plan

Work plan

Quality Control(QC) plan

Environmental protection plan

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

SD-04 Samples

Fabricated or unfabricated physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged.

Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site establish standards by which the ensuring work can be judged. Includes assemblies or portions of assemblies which are to be incorporated into the project and those which will be removed at conclusion of the work.

SD-05 Design Data

Design calculations, mix designs, analyses or other data pertaining to a part of work.

Design submittals, design substantiation submittals and extensions of design submittals.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. (Testing must have been within three years of date of contract award for the project.)

Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports.

Daily logs and checklists.

Final acceptance test and operational test procedure.

SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a manufacturer, supplier, installer or Subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.

Text of posted operating instructions.

SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system or material, including special notices and (MSDS)concerning impedances, hazards and safety precautions.

SD-09 Manufacturer's Field Reports

Documentation of the testing and verification actions taken by manufacturer's representative at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation, to confirm compliance with manufacturer's standards or

instructions. The documentation must be signed by an authorized official of a testing laboratory or agency and must state the test results; and indicate whether the material, product, or system has passed or failed the test.

Factory test reports.

SD-10 Operation and Maintenance Data

Data that is furnished by the manufacturer, or the system provider, to the equipment operating and maintenance personnel, including manufacturer's help and product line documentation necessary to maintain and install equipment. This data is needed by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.

This data is intended to be incorporated in an operations and maintenance manual or control system.

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

Special requirements necessary to properly close out a construction contract. For example, Record Drawings and as-built drawings. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase contract.

Interim "DD Form 1354" with cost breakout for all assets 30 days prior to facility turnover.

1.2.2 Approving Authority

Office or designated person authorized to approve submittal.

1.2.3 Work

As used in this section, on- and off-site construction required by contract documents, including labor necessary to produce submittals, except those SD-01 Pre-Construction Submittals noted above, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor QC approval and for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with this section.

SD-01 Preconstruction Submittals

Submittal Register; G

1.4 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.4.1 Government Approved G

Government approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Government approval is required for any deviations from the Solicitation or Accepted Proposal and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled, "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.4.2 Information Only

Submittals not requiring Government approval will be for information only. For Design-build construction all submittals not requiring Designer of Record or Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

1.5 FORWARDING SUBMITTALS REQUIRING GOVERNMENT APPROVAL

1.5.1 Submittals Required from the Contractor

As soon as practicable after award of contract, and before procurement of fabrication, forward to the NAVFAC Design Manager via the Contracting Officer submittals required in the technical sections of this specification, including shop drawings, product data and samples. One copy of the transmittal form for all submittals shall be forwarded to the Resident Officer in Charge of Construction.

1.5.1.1 O&M Data

NAVFAC Design Manager will review and approve for the Contracting Officer O&M Data to verify the submittals comply with the contract requirements; submit data specified for a given item within 30 calendar days after the item is delivered to the contract site.

In the event the Contractor fails to deliver O&M Data within the time limits specified, the Contracting Officer may withhold from progress payments 50 percent of the price of the item with which such O&M Data are applicable.

1.6 PREPARATION

1.6.1 Transmittal Form

Transmit each submittal, except sample installations and sample panels to office of approving authority. Transmit submittals with transmittal form prescribed by Contracting Officer and standard for project. On the transmittal form identify Contractor, indicate date of submittal, and include information prescribed by transmittal form and required in paragraph entitled, "Identifying Submittals," of this section. Process transmittal forms to record actions regarding sample(s), installations.

Use the attached sample transmittal form (ENG Form 4025) for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. Properly complete this form by filling out all the heading blank spaces and identifying each item submitted. Exercise special care to ensure proper listing of the specification paragraph and sheet number of the contract drawings pertinent to the data submitted for each item.

1.6.2 Identifying Submittals

When submittals are provided by a Subcontractor, the Prime Contractor is to prepare, review and stamp with Contractor's approval all specified submittals prior to submitting for Government approval.

Identify submittals, except sample installations and sample panels, with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form. Mark each copy of each submittal identically, with the following:

- a. Project title and location.
- b. Construction contract number.
- c. Date of the drawings and revisions.
- d. Name, address, and telephone number of subcontractor, supplier, manufacturer and any other subcontractor associated with the submittal.
- e. Section number of the specification section by which submittal is required.
- f. Submittal description (SD) number of each component of submittal.
- g. When a resubmission, add alphabetic suffix on submittal description, for example, submittal 18 would become 18A, to indicate resubmission.
- h. Product identification and location in project.

1.6.3 Format for SD-02 Shop Drawings

Shop drawings are not to be less than 8 1/2 by 11 inches nor more than 30 by 42 inches, except for full size patterns or templates. Prepare drawings to accurate size, with scale indicated, unless other form is required. Drawings are to be suitable for reproduction and be of a quality to produce clear, distinct lines and letters with dark lines on a white background.

Present 8 1/2 by 11 inches sized shop drawings as part of the bound volume for submittals required by section. Present larger drawings in sets.

Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph entitled, "Identifying Submittals," of this section.

Number drawings in a logical sequence. Each drawing is to bear the number of the submittal in a uniform location adjacent to the title block. Place

the Government contract number in the margin, immediately below the title block, for each drawing.

Dimension drawings, except diagrams and schematic drawings; prepare drawings demonstrating interface with other trades to scale. Use the same unit of measure for shop drawings as indicated on the contract drawings. Identify materials and products for work shown.

Include the nameplate data, size and capacity on drawings. Also include applicable federal, military, industry and technical society publication references.

1.6.4 Format of SD-03 Product Data and SD-08 Manufacturer's Instructions

Present product data submittals for each section as a complete, bound volume. Include table of contents, listing page and catalog item numbers for product data.

Indicate, by prominent notation, each product which is being submitted; indicate specification section number and paragraph number to which it pertains.

Supplement product data with material prepared for project to satisfy submittal requirements for which product data does not exist. Identify this material as developed specifically for project, with information and format as required for submission of SD-07 Certificates.

Include the manufacturer's name, trade name, place of manufacture, and catalog model or number on product data. Also include applicable federal, military, industry and technical society publication references. Should manufacturer's data require supplemental information for clarification, submit as specified for SD-07 Certificates.

Where equipment or materials are specified to conform to industry and technical society reference standards of the organizations such as American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), and Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

Collect required data submittals for each specific material, product, unit of work, or system into a single submittal and marked for choices, options, and portions applicable to the submittal. Mark each copy of the product data identically. Partial submittals will be accepted for expedition of construction effort.

Submit manufacturer's instructions prior to installation.

1.6.5 Format of SD-04 Samples

Furnish samples in sizes below, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately same size as specified:

- a. Sample of Equipment or Device: Full size.
- b. Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.
- c. Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.
- d. Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
- e. Sample of Non-Solid Materials: Pint. Examples of non-solid materials are sand and paint.
- f. Color Selection Samples: 2 by 4 inches. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified. Sizes and quantities of samples are to represent their respective standard unit.
- g. Sample Panel: a minimum of 2 by 2 feet.
- h. Sample Installation: 100 square feet.

Samples Showing Range of Variation: Where variations in color, finish, pattern, or texture are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range. Mark each unit to describe its relation to the range of the variation.

Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples are to be in undamaged condition at time of use.

Recording of Sample Installation: Note and preserve the notation of area constituting sample installation but remove notation at final clean up of project.

When color, texture or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

1.6.6 Format of SD-05 Design Data and SD-07 Certificates

Provide design data and certificates on 8 1/2 by 11 inches paper. Provide a bound volume for submittals containing numerous pages.

1.6.7 Format of SD-06 Test Reports and SD-09 Manufacturer's Field Reports

Provide reports on 8 1/2 by 11 inches paper in a complete bound volume.

Indicate by prominent notation, each report in the submittal. Indicate specification number and paragraph number to which it pertains.

1.6.8 Format of SD-10 Operation and Maintenance Data (O&M)

Comply with the requirements specified in Section 01 78 23 OPERATION AND MAINTENANCE DATA for O&M Data format.

1.6.9 Format of SD-01 Preconstruction Submittals and SD-11 Closeout Submittals

When submittal includes a document which is to be used in project or become part of project record, other than as a submittal, do not apply Contractor's approval stamp to document, but to a separate sheet accompanying document.

1.7 QUANTITY OF SUBMITTALS

1.7.1 Number of Copies of SD-02 Shop Drawings

Submit six copies of submittals of shop drawings requiring review and approval only by QC organization and seven copies of shop drawings requiring review and approval by Contracting Officer.

1.7.2 Number of Copies of SD-03 Product Data and SD-08 Manufacturer's Instructions

Submit in compliance with quantity requirements specified for shop drawings.

1.7.3 Number of Samples SD-04 Samples

- a. Submit two samples, or two sets of samples showing range of variation, of each required item. One approved sample or set of samples will be retained by approving authority and one will be returned to Contractor.
- b. Submit one sample panel or provide one sample installation where directed. Include components listed in technical section or as directed.
- c. Submit one sample installation, where directed.
- d. Submit one sample of non-solid materials.

1.7.4 Number of Copies SD-05 Design Data and SD-07 Certificates

Submit in compliance with quantity requirements specified for shop drawings.

1.7.5 Number of Copies SD-06 Test Reports and SD-09 Manufacturer's Field Reports

Submit in compliance with quantity and quality requirements specified for shop drawings other than field test results that will be submitted with QC reports.

1.7.6 Number of Copies of SD-10 Operation and Maintenance Data

Submit Five copies of O&M Data to the Contracting Officer for review and approval.

1.7.7 Number of Copies of SD-01 Preconstruction Submittals and SD-11 Closeout Submittals

Unless otherwise specified, submit three sets of administrative submittals.

1.8 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe. For design-build construction the Government will retain three (3) copies of information only submittals.

1.9 VARIATIONS

Variations from contract requirements require both Designer of Record (DOR) and Government approval pursuant to contract Clause FAR 52.236-21 and will be considered where advantageous to Government.

1.9.1 Considering Variations

Discussion with Contracting Officer prior to submission, after consulting with the DOR, will help ensure functional and quality requirements are met and minimize rejections and re-submittals. When contemplating a variation which results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

Specifically point out variations from contract requirements in transmittal letters. Failure to point out deviations may result in the Government requiring rejection and removal of such work at no additional cost to the Government.

1.9.2 Proposing Variations

When proposing variation, deliver written request to the Contracting Officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to Government, including the DOR's written analysis and approval. If lower cost is a benefit, also include an estimate of the cost savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

Check the column "variation" of ENG Form 4025 for submittals which include proposed deviations requested by the Contractor. Set forth in writing the reason for any deviations and annotate such deviations on the submittal.

The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

1.9.3 Warranting That Variations Are Compatible

When delivering a variation for approval, Contractor, including its Designer(s) of Record, warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

1.9.4 Review Schedule Is Modified

In addition to normal submittal review period, a period of 10 working days will be allowed for consideration by the Government of submittals with variations.

1.10 SUBMITTAL REGISTER AND DATABASE

Prepare and maintain submittal register, as the work progresses. Use electronic submittal register program furnished by the Government or any other format. Do not change data which is output in columns (c), (d), (e), and (f) as delivered by Government; retain data which is output in columns (a), (g), (h), and (i) as approved. A submittal register showing items of equipment and materials for which submittals are required by the specifications is provided as an attachment. This list may not be all inclusive and additional submittals may be required. Maintain a submittal register for the project in accordance with Section 01 45 00.10 10 QUALITY CONTROL SYSTEM (QCS).

1.10.1 Use of Submittal Register

Submit submittal register as an electronic database, using submittals management program furnished to Contractor. Submit with QC plan and project schedule.

1.10.2 Action Codes

Entries for columns (j) and (o), are to be used are as follows (others may be prescribed by Transmittal Form):

1.10.2.1 Government Review Action Codes

"A" - "Approved as submitted"; "Completed"

"B" - "Approved, except as noted on drawings"; "Completed"

"C" - "Approved, resubmission required"; "Resubmit"

"D" - "Returned by correspondence"; "Completed"

"E" - "Disapproved (See attached)"; "Resubmit"

"F" - "Receipt acknowledged"; "Completed"

"G" - "Other (Specify)"; "Resubmit"

"X" - "Receipt acknowledged, does not comply"; "Resubmit"

1.10.4.2 Contractor Action Codes

NR - Not Received

AN - Approved as noted

A - Approved

RR - Disapproved, Revise, and Resubmit

1.10.5 Copies Delivered to the Government

Deliver one copy of submittal register updated by Contractor to Government with each invoice request. Deliver in electronic format, unless a paper copy is requested by Contracting Officer.

1.11 SCHEDULING

Schedule and submit concurrently submittals covering component items forming a system or items that are interrelated. Include certifications to be submitted with the pertinent drawings at the same time. No delay damages or time extensions will be allowed for time lost in late submittals.

- a. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential resubmittal of requirements.
- b. Submittals called for by the contract documents will be listed on the register. If a submittal is called for but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Contracting Officer does not relieve the Contractor of supplying submittals required by the contract documents but which have been omitted from the register or marked "N/A."
- c. Re-submit register and annotate monthly by the Contractor with actual submission and approval dates. When all items on the register have been fully approved, no further re-submittal is required.
- d. Carefully control procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."
- e. Except as specified otherwise, allow review period, beginning with receipt by approving authority, that includes at least 15 working days for submittals for QC Manager approval and 20 working days for submittals for Contracting Officer approval. Period of review for submittals with Contracting Officer approval begins when Government receives submittal from QC organization.
- f. For submittals requiring review by fire protection engineer, allow review period, beginning when Government receives submittal from QC organization, of 30 working days for return of submittal to the Contractor.

- g. Period of review for each resubmittal is the same as for initial submittal.

1.11.1 Reviewing, Certifying, Approving Authority

The QC organization is responsible for reviewing and certifying that submittals are in compliance with contract requirements. Approving authority on submittals is QC Manager unless otherwise specified for specific submittal. At each "Submittal" paragraph in individual specification sections, a notation "G," following a submittal item, indicates Contracting Officer is approving authority for that submittal item.

1.11.2 Constraints

Conform to provisions of this section, unless explicitly stated otherwise for submittals listed or specified in this contract.

Submit complete submittals for each definable feature of work. Submit at the same time components of definable feature interrelated as a system.

When acceptability of a submittal is dependent on conditions, items, or materials included in separate subsequent submittals, submittal will be returned without review.

Approval of a separate material, product, or component does not imply approval of assembly in which item functions.

1.11.3 QC Organization Responsibilities

- a. Note date on which submittal was received from Contractor on each submittal.
- b. Review each submittal; and check and coordinate each submittal with requirements of work and contract documents.
- c. Review submittals for conformance with project design concepts and compliance with contract documents.
- d. Act on submittals, determining appropriate action based on QC organization's review of submittal.
 - (1) When QC Manager is approving authority, take appropriate action on submittal from the possible actions defined in paragraph entitled, "Approved/Accepted Submittals," of the section."
 - (2) When Contracting Officer is approving authority or when variation has been proposed, forward submittal to Government with certifying statement or return submittal marked "not reviewed" or "revise and resubmit" as appropriate. The QC organization's review of submittal determines appropriate action.
- e. Ensure that material is clearly legible.

- f. Stamp each sheet of each submittal with QC certifying statement or approving statement, except that data submitted in bound volume or on one sheet printed on two sides may be stamped on the front of the first sheet only.

(1) When approving authority is Contracting Officer, QC organization will certify submittals forwarded to Contracting Officer with the following certifying statement:

"I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated with contract and task order Number, is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is submitted for Government approval.

Certified by Submittal Reviewer _____, Date _____
(Signature when applicable)

Certified by QC Manager _____, Date _____"
(Signature)

(2) When approving authority is QC Manager, QC Manager will use the following approval statement when returning submittals to Contractor as "Approved" or "Approved as Noted."

"I hereby certify that the (material) (equipment) (article) shown and marked in this submittal and proposed to be incorporated with contract task order Number, is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is approved for use.

Certified by Submittal Reviewer _____, Date _____
(Signature when applicable)

Approved by QC Manager _____, Date _____"
(Signature)

- g. Sign certifying statement or approval statement. The QC organization member designated in the approved QC plan is the person signing certifying statements. The use of original ink for signatures is required. Stamped signatures are not acceptable.
- h. Update submittal register as submittal actions occur and maintain the submittal register at project site until final acceptance of all work by Contracting Officer.
- i. Retain a copy of approved submittals at project site, including Contractor's copy of approved samples.

1.12 GOVERNMENT APPROVING AUTHORITY

When approving authority is Contracting Officer, the Government will:

- a. Note date on which submittal was received from QC Manager.

- b. Review submittals for approval within scheduling period specified and only for conformance with project design concepts and compliance with contract documents.
- c. Identify returned submittals with one of the actions defined in paragraph entitled, "Review Notations," of this section and with markings appropriate for action indicated.

Upon completion of review of submittals requiring Government approval, stamp and date approved submittals. 3 hard and 1 electronic copies of the approved submittal will be retained by the Contracting Officer and 3 hard and 1 electronic copies of the submittal will be returned to the Contractor. If the Government performs a conformance review of other Designer of Record approved submittals, the submittals will be so identified and returned, as described above.

1.12.1 Review Notations

Contracting Officer review will be completed within 21 calendar days after date of submission. Submittals will be returned to the Contractor with the following notations:

- a. Submittals marked "approved" or "accepted" authorize the Contractor to proceed with the work covered.
- b. Submittals marked "approved as noted" "or approved except as noted, resubmittal not required," authorize the Contractor to proceed with the work covered provided he takes no exception to the corrections.
- c. Submittals marked "not approved" or "disapproved," or "revise and resubmit," indicate noncompliance with the contract requirements or design concept, or that submittal is incomplete. Resubmit with appropriate changes. No work shall proceed for this item until resubmittal is approved.
- d. Submittals marked "not reviewed" will indicate submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by Contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.

1.13 DISAPPROVED OR REJECTED SUBMITTALS

Contractor shall make corrections required by the Contracting Officer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications; notice as required under the clause entitled, "Changes," is to be given to the Contracting Officer. Contractor is responsible for the dimensions and design of connection details and construction of work. Failure to point out deviations may result in the Government requiring rejection and removal of such work at the Contractor's expense.

If changes are necessary to submittals, the Contractor shall make such revisions and submission of the submittals in accordance with the procedures

above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

1.14 APPROVED/ACCEPTED SUBMITTALS

The Contracting Officer's approval or acceptance of submittals is not to be construed as a complete check, and indicates only that the general method of construction, materials, detailing and other information are satisfactory. design, general method of construction, materials, detailing and other information appear to meet the Solicitation and Accepted Proposal.

Approval or acceptance will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work design, dimensions, all design extensions, such as the design of adequate connections and details, etc., and the satisfactory construction of all work.

After submittals have been approved or accepted by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.15 APPROVED SAMPLES

Approval of a sample is only for the characteristics or use named in such approval and is not be construed to change or modify any contract requirements. Before submitting samples, the Contractor to assure that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.

Match the approved samples for materials and equipment incorporated in the work. If requested, approved samples, including those which may be damaged in testing, will be returned to the Contractor, at his expense, upon completion of the contract. Samples not approved will also be returned to the Contractor at its expense, if so requested.

Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make of that material. Government reserves the right to disapprove any material or equipment which previously has proved unsatisfactory in service.

Samples of various materials or equipment delivered on the site or in place may be taken by the Contracting Officer for testing. Samples failing to meet contract requirements will automatically void previous approvals. Contractor to replace such materials or equipment to meet contract requirements.

Approval of the Contractor's samples by the Contracting Officer does not relieve the Contractor of his responsibilities under the contract.

1.16 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained. No payment for materials incorporated in the work will be made if all required Designer of Record or required Government approvals have not been obtained. No payment will be made for any materials incorporated into the work for any conformance review submittals or information only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

1.17 PROGRESS SCHEDULE

1.17.1 Bar Chart

- a. Submit the progress chart, for approval by the Contracting Officer, at the Preconstruction Conference in one reproducible and 4 copies.
- b. Prepare the progress chart in the form of a bar chart utilizing form "Construction Progress Chart" or comparable format acceptable to the Contracting Officer.
- c. Include no less than the following information on the progress chart:
 - (1) Break out by major headings for primary work activity.
 - (2) A line item break out under each major heading sufficient to track the progress of the work.
 - (3) A line item showing contract finalization task which includes punch list, clean-up and demolition, and final construction drawings.
 - (4) A materials bar and a separate labor bar for each line item. Both bars will show the scheduled percentage complete for any given date within the contract performance period. Labor bar will also show the number of men (man-load) expected to be working on any given date within the contract performance period.
 - (5) The estimated cost and percentage weight of total contract cost for each materials and labor bar on the chart.
 - (6) Separate line items for mobilization and drawing submittal and approval. (These items are to show no associated costs.)
- d. Update the progress schedule in one reproduction and 4 copies every 30 calendar days throughout the contract performance period.

2 PART 2 PRODUCTS

Not Used

3 PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 35 13

SPECIAL PROJECT PROCEDURES
11/11

1 PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. FEDERAL AVIATION ADMINISTRATION (FAA)

FAA AC 150/5300-13	(2012; Rev A; Errata 2013) Airport Design
FAA AC 70/7460-1	(2007; Rev K) Obstruction Marking and Lighting

1.2 DEFINITIONS

1.2.1 Landing Areas

"Landing Areas" means:

- a. The primary surfaces, comprising the surface of the runway, runway shoulders, and lateral safety zones. The length of each primary surface is the same as the runway length. The width of each primary surface is 2000 feet (1000 feet on each side of the runway centerline). Exceptions: Some airfields are based on a primary width of 1500 feet (750 feet on each side of the runway centerline). In such instances, substitute the proper width in the applicable statements.
- b. The "clear zone" beyond the ends of each runway is the extension of the primary surface for a distance of 1000 feet beyond each end of each runway.
- c. All taxiways, plus the lateral clearance zones along each side for the length of the taxiways (the outer edge of each lateral clearance zone is laterally 250 feet from the far or opposite edge of the taxiway (example: a 75 foot wide taxiway must have a combined width and lateral clearance zone of 425 feet.)
- d. All aircraft parking aprons, plus the area 125 feet in width extending beyond each edge all around the aprons.

1.2.2 Safety Precaution Areas

"Safety Precaution Areas" means those portions of approach-departure clearance zones and transitional zones where placement of objects incident to contract performance might result in vertical projections at or above the approach-departure clearance, or the transitional surface.

- a. The "approach-departure clearance surface" is an extension of the primary surface and the clear zone at each end of each runway, for a distance of 50,000 feet, first along an inclined (glide angle) and then along a horizontal plane, both flaring symmetrically about the runway centerline extended.
 - (1) The inclined plane (glide angle) begins in the clear zone 200 feet past the end of the runway (and primary surface) at the same elevation as the end of the runway. It continues upward at a slope of 50:1 (1 foot vertically for each 50 feet horizontally) to an elevation of 500 feet above the established airfield elevation. At that point the plane becomes horizontal, continuing at that same uniform elevation to a point 50,000 feet longitudinally from the beginning of the inclined plane (glide angle) and ending there.
 - (2) The width of the surface at the beginning of the inclined plane (glide angle) is the same as the width of the clear zone. It then flares uniformly, reaching the maximum width of 16,000 feet at the end.
- b. The "approach-departure clearance zone" is the ground area under the approach-departure clearance surface.
- c. The "transitional surface" is a sideways extension of all primary surfaces, clear zones, and approach-departure clearance surfaces along inclined planes.
 - (1) The inclined plane in each case begins at the edge of the surface.
 - (2) The slope of the incline plane is 7:1 (1 foot vertically for each 7 feet horizontally). It continues to the point of intersection with the:
 - (a) Inner horizontal surface (which is the horizontal plane 150 feet above the established airfield elevation); or
 - (b) Outer horizontal surface (which is the horizontal plane 500 feet above the established airfield elevation), whichever is applicable.
- d. The "transitional zone" is the ground area under the transitional surface. (It adjoins the primary surface, clear zone, and approach-departure clearance zone.)

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.][for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Heavy Equipment and Vehicle List

Construction Operations Plan

Safety Plan

Schedule of Work

2 PART 2 PRODUCTS

2.1 AIRFIELD OBSTRUCTION LIGHTS

Airfield obstruction lights must conform to FAA AC 70/7460-1 and have red or white lenses.

3 PART 3 EXECUTION

3.1 HAZARDS TO AIRFIELD AND HELIPORT OPERATION

In addition to "DFARS 252.236-7005, Airfield Safety Precautions," the following paragraphs apply.

3.1.1 Work in Proximity to Landing Areas, Landing Strips, Landing Pad(s)

Place nothing upon the landing area or applicable portions of safety precaution areas without authority of the Contracting Officer.

Use of landing areas, landing strips, landing pads for purposes other than aircraft operation, is prohibited without permission of the Contracting Officer, and the landing areas, landing strips, landing pads is closed by order of the Contracting Officer and marked as indicated herein.

Accomplish all construction work on the runways, taxiways, and parking aprons and in the end zones of the runways and 75 feet to each side of the runways, taxiways and the landing strip, 75 feet to each side thereof, and on the taxiways and parking aprons and the landing pad(s) with extreme care regarding the operation of aircraft. Cooperate closely, and coordinate with the Contracting Officer. Park equipment in an area designated by the Contracting Officer. Parking of equipment, vehicles, or any type of storage overnight or for any extended period of time in the proximity of the landing areas or taxiways, landing strip, landing pad is strictly prohibited. Leave no material in areas where extreme care is to be taken regarding the operation of aircraft.

During periods of active performance of work on the airfield by the Contractor, govern all operations of mobile equipment per the safety provisions.

3.1.2 Schedule of Work/Aircraft Operating Schedules

Schedule work to conform to aircraft operating schedules. The Government will exert every effort to schedule aircraft operations so as to permit the maximum amount of time for the Contractor's activities; however, in the event of emergency, intense operational demands, adverse wind conditions,

and other such unforeseen difficulties, the Contractor must cease operations at the specified locations in the aircraft operational area for the safety of the Contractor and military personnel and Government property. Submit a schedule of the work to the Contracting Officer describing the work to be accomplished; the location of the work, noting distances from the ends of landing areas, taxiways, landing strips, landing pads and buildings and other structures as necessary; and dates and hours during which the work is to be accomplished. Keep the approved schedule of work current, and notify the Contracting Officer of any changes prior to beginning each day's work.

Prior to commencement of work, submit the following to the Contracting Officer:

- Construction Operations Plan
- Safety Plan
- Heavy Equipment and Vehicle List

Where flying is controlled, additional permission must be obtained from the control tower operator to enter a landing area unless such area is marked as hazardous to aircraft.

3.1.3 Daytime Markings

During daylight, mark stationary and mobile equipment with international orange and white checkered flags, mark the material, and work with yellow flags.

Vehicles operating in the landing area, must be identified by means of a flag on a staff attached to and flying above the vehicle. Flag size must be not less than 3 feet square and consist of a checkered pattern of international orange and white squares not less than 1 foot on each side. Flags varying in any dimension by not more than 10 percent of the specified dimensions are considered to comply with the stated requirements.

3.1.4 Nighttime Markings

During nighttime, which begins 2 hours before sundown and ends 2 hours after sunrise, mark stationary and mobile equipment and material, and work with red lanterns. Where the Operations Officer determines that the red lanterns may confuse pilots approaching for landings, the Operations Officer may direct that the red lanterns be left off or that the color of the globes be changed.

Light construction and installation must comply with FAA AC 70/7460-1. Lights must be operational during periods of reduced visibility, darkness, and as directed by the Contracting Officer.

No separate payments will be made for lighting and protection necessitated by the safety provisions.

3.1.5 Excavation

Open only those trenches for which material is on hand and ready for placing therein. As soon as possible after the material has been placed and work approved, backfill and compact the trenches as specified.

Maintain [landing areas][landings strips][landing pads] at all times free from hazards, holes, material piles, or projecting shoulders that might damage tires or landing gear. Paved surfaces must be kept clean at all times and free from small stones or other objects which could cause damage to propellers, craft, and personnel.

3.1.6 Contractor Safety Precautions

The Contractor is advised that aircraft operations will produce extremely high noise levels and will induce vibrations in pavements, structures, and equipment in the vicinity, and may result in high velocity flying debris in the area. The Contractor is responsible for providing all necessary protective eye and ear gear and other safety devices for his personnel, for insuring protection of his equipment, and for scheduling the work to eliminate hazards to his personnel and equipment and to prevent damage to work performed by him.

Boundary areas for hazardous work locations and restrictions are defined in FAA AC 150/5300-13. Construction activity within the limits of the boundary areas without approval of the Contracting Officer is prohibited.

Provide a minimum of 2 aviation red or high intensity white obstruction lights on temporary structures (including cranes) over 100 feet above ground level.

3.1.7 Radio Contact

Provide necessary battery powered portable radios, including one radio for the tower. During work within the landing area, have an operator (who speaks fluent English) available for radio contact with the tower at all times. Radio frequency must be approved by the tower.

3.1.8 Restricted Access Areas

The Government will monitor work in areas listed below. Notify Contracting Officer at least 14 calendar days prior to starting work in these areas.

REQUIREMENTS FOR THE JUNCTION RANCH AREA

- a. SCHEDULING OF WORK: The Contractor shall submit a tentative schedule of work for approval 7 calendar days prior to commencement of the work, but must be able to vary his work schedule according to the actual testing and range closure requirements of the Radar Cross Section (RCS) Range Office. The Contractor shall contact the RCS Range Office, Code 520000D, at (760)939-6055 every Thursday afternoon after 4:00 p.m. to receive the proposed testing and range closure for the following week or contact Microspeech at (760) 939-6954. Regular work hours are 6:00 a.m. to 6:00 p.m. Monday through Thursday. The Contractor must always go through the Contracting Officer to schedule work.
- b. ACCESS: The contractor is advised that all work to be performed at the Junction Ranch area requires strict compliance with Naval Air Weapons Station Security Instructions. These instructions include requirements for check-in/check-out with range personnel for each entry into the junction Ranch area and special badging of all contractor employees.

All Contractor employees must report to the Range headquarters, Building 31457, Room 108, to receive these badges. The Contractor is also advised that in case of evacuation of the area he must immediately stop all work and all employees must leave the area according to the instruction of Range Control personnel.

- c. EXCLUSIONS: Persons wearing pacemakers will not be permitted entry into the Junction Ranch area; radar emissions may cause these devices to malfunction. It shall be the contractor's responsibility to enforce this requirement and to certify in writing, to the Contracting Officer, compliance with it.

REQUIREMENTS FOR THE DARWIN WASH AREA

- a. SCHEDULING OF WORK: The area north of the China Lake mainsite administration area is a weapons testing range. For safety and security reasons access through the ranges is controlled. The ranges will set aside a time period each day to allow contractor personnel to access the project site in the morning and return in the evening. Because of the testing schedule the access times to the project site will vary and could be early morning (~6:00 am) with narrow windows of opportunity. Contractor is requested to schedule material and equipment deliveries to the project site with the Range Scheduling at (760) 939-6807. Requests for deliveries shall be made on the Wednesday prior to the proposed delivery to allow the Range Department to work the delivery into their testing schedule.

Contractors are required to log in and out of the ranges by contacting Microspeech, at (760) 939-6945.

The road through the range to the project site is subject to closure at times during the day due to weapons testing on the range. Microspeech can provide proposed test schedules for the following day after 4:00 pm the day prior and on Thursday after 4:00 p.m. for the following week. Range test schedules are subject to change and should be monitored daily.

Range test schedules for station Flex Fridays, Saturdays, Sundays, and Mondays are not as full as other days and may offer the contractor easier access to the project site.

- b. ACCESS: The Contractor shall access to the project site shall be through the Naval Air Weapons Station, China Lake. Access will not be allowed from the north through the town of Darwin.

REQUIREMENTS FOR THE BURRO CANYON AREA

- a. SCHEDULING OF WORK: The Contractor shall submit a tentative schedule of work for approval 7 calendar days prior to commencement of the work, but must be able to vary his work schedule according to the actual testing and range closure requirements of the RCS Range Office. The Contractor shall contact the Range Office Code 520000D, (760) 939-6055, every Thursday afternoon after 4:00 p.m. to receive the proposed testing and range closure plan for the following week. The Contractor shall anticipate range closures totaling 8 hours per week. Regular work hours are 0700-1700 Monday through Thursday and 0700-1600 every other Friday. The Contractor must always go through the Contracting

Officer to schedule work.

- b. ACCESS: The Contractor is advised that all work to be performed at the Burro Canyon area requires strict compliance with Naval Air Weapons Station Security Instructions. The instruction include requirements for check-in/check-out with range personnel for each entry into Burrow Canyon area and special badging of all Contractor employees. The Contractor is also advised that in case of evacuation of the area, he must immediately stop all work and all employees must leave the area according to the instructions of Range Control personnel.

REQUIREMENTS FOR THE AIRFIELD

- a. Work in this area requires special attention to the scheduling and conduct of work in connection with the existing operating systems. The following conditions apply and each factor which relates to a potential shut-down or interruption to normal service or operations shall be identified on the progress schedule.
 - (1) NO UTILITIES SHALL BE INTERRUPTED.
 - (2) At least one lane of traffic on the access road to the site shall be open at all times.
- b. All work outside regular hours (6:00 a.m. to 6:00 p.m.), or on weekends, every other Friday, or on Federal holidays, requires the Contracting Officer's approval to schedule work.
- c. All Contractor access (personnel and vehicles) to fenced and flight lines areas at Armitage Field shall be coordinated through the Airfield Facilities coordinator's Office, Building 20000, Room 3268, phone (760) 939-5479/5032. For access to the flight line area after regular working hours (6:00 a.m. to 6:00 p.m.), contact Air Traffic Control Branch, phone (760) 939-5475. approval for access to the flight line shall be granted on a case by case basis.
- d. All Contractor and Sub-contractor personnel who operate vehicles on the flight lines areas at the Armitage Field are required to obtain an Armitage Airfield Flight Line Operators License prior to start of work. Contractor and Sub-contractors shall make arrangements through the Base Operations office, Building 20000, Room 3213, phone (760) 939-5475.

REQUIREMENTS FOR WORKING WITHIN THE HANGAR 4 COMPOUND

All work within this area requires an escort. No cell phone, cameras or any other type of recording device will be allowed inside the fenced area. Any potential interruption of utilities or communications must be scheduled in advance. Due to this environment, the potential exist that on a moments notice, you and your entire crew will be escorted outside the fence. Depending on the situation, this could last for minutes or the remainder of the day. This will be addressed on a case by case basis.

The deliver road that runs from the delivery gate to the line shack must be kept operational at all times.

Regular work hours are 7:00 a.m. to 5:00 p.m. Monday through Thursday and 7:00 a.m. to 4:00 p.m. every other Friday. All work outside

regular hours, or on weekends, or Federal Holidays, requires Contracting Officer approval and coordination with the Facility Manager.

REQUIREMENTS FOR WORKING WITHIN THE HANGAR 5 COMPOUND

All work within this area requires either compound access or an escort. To have access to the compound, you must have a secret clearance or higher, valid need, and approval of the Facility Manager. No cell phone, cameras or any other type of recording device will be allowed inside the fenced area. Any potential interruption of utilities or communications must be scheduled in advance with the Facility Manager.

Access to the tarmac is very limited. We have FOD concerns, so the road is secured. Access is granted on a case by case basis by the Facility Manager. The deliver road must be accessible at all times.

Regular work hours are 7:00 a.m. to 5:00 p.m. Monday through Thursday and 7:00 a.m. to 4:00 p.m. every other Friday. All work outside regular hours, or on weekends, or Federal Holidays, requires Contracting Officer approval and coordination with the Facility Manager.

REQUIREMENTS OF MICHELSON LAB COMPOUND/LAURITSEN LAB

The work in this area requires special attention to scheduling and conduct of work in connection with the existing operation systems. The following conditions apply and each factor which relates to a potential shut-down or interruption to normal service or operations shall be identified on the progress schedule.

- a. No utilities shall be interrupted.
- b. At least one lane of traffic on the access road to the site shall be open at all times.
- c. Regular work hours are 7:00 a.m. to 5:00 p.m. Monday through Thursday and 7:00 a.m. to 4:00 p.m. every other Friday. All work outside regular hours, or on weekends, or Federal Holidays, requires Contracting Officer approval.
- d. All Contractor vehicles needing access to the West Gate of Michelson or Lauritsen Laboratories must be cleared by the Facilities Coordinators Office in Room 1023, Michelson Laboratory, Phone (760) 939-1212. Approval will be on a case by case basis. If access time will exceed one hour time limit or if the access is needed after hours the vehicles shall be logged in and out and be allowed access on a case by case basis only.
- e. Due to limited available space and to keep interference to a minimum, the Contractor will be given a limited number of permits for vehicle entry to the Michelson/Lauritsen Laboratory compounds. Permits will be issued only for vehicles that, in the opinion of the Contracting Officer, are essential to the on-site work. Vehicles that are essential to the on-site work are the superintendent's vehicle and those vehicles that are necessary to deliver materials, carry essential tools, etc. Vehicles that are used only for transportation of personnel and/or personal hand tools are not considered essential and will not be allowed into the compounds.

REQUIREMENTS OF RANDSBURG WASH AREA

- a. Scheduling of Work: As an exception to other sections of the specifications the Contractor shall submit a schedule of work for approval seven (7) calendar days prior commencement of the work. The normal work hours are 6:30 a.m. to 4:30 p.m., Monday through Thursday. work outside of these hours will be permitted only after approval by the Contracting Officer. Request for approval to work outside of the stated normal work hours shall be made in writing at least 7 calendar days prior to commencement of such work.
- b. Interruption of Utility Services; The Contractor shall submit for approval a schedule, 14 calendar days in advance, indicating each shutdown or interruption, or potential interruption of utilities. Each shutdown or interruption shall be limited to the absolute minimum time practicable. Each shutdown or interruption shall be performed during the hours of 6:00 a.m. on Friday through 4:00 p.m. on Sunday.
- c. Access: The Contractor is advised that all work to be performed requires strict compliance with NAWS Security Instructions. The instructions include requirements for check-in/check-out with range personnel, down range travel, and badging of employees. Continuous government escorts for Contractor personnel are required. The Contractor shall provide 7 calendar days notice for all work in indicated area requiring continuous escort.
- d. Safety: The contractor shall limit his operations to the work site as indicated and specified. Ingress and egress to work site shall be done using the approved route at approved times.
- e. Exclusions: Persons wearing pacemakers will not be permitted entry to the EWTES FACILITY; radar emissions may cause these devices to malfunction. It shall be the Contractor's responsibility to enforce this requirement and to certify in writing, to the Contracting Officer, compliance with it.

REQUIREMENTS FOR WEAPONS SURVIVABILITY LAB

- a. Working Hours: Regular working hours shall consist of a period established by the Contracting Officer between 7:00 a.m. and 5:00 p.m. Monday through Friday, except alternate Fridays and Government Holidays.
- b. Work Outside Regular Hours: work outside regular working hours requires contracting Officer approval. Provide written request 15 calendar days prior to such work to allow arrangements to be made by the Government for inspecting the work in progress. During periods of darkness, the difference parts of the work shall be lighted in a manner approved by the Contracting Officer. The Contractor must submit a NAVWPNCEN 4330/133 (1-88) "Contractor's Request to Work Outside Normal Working Hours", to the OICC. The Contractor shall allow 15 working days to enable the government to attempt to make satisfactory arrangements for inspecting the work in progress. For normal contract work, the Contractor's request is subject to disapproval if satisfactory arrangements can't be made. All utility cutovers shall be made during other than normal working hours. Anticipated costs shall be included in the bid.

c. Utility Cutovers and Interruptions: Make utility cutovers and interruptions after normal working hours or on Saturdays, Sundays, or Government Holidays. Conform to procedures required in the paragraph "Work Outside Regular Hours".

REQUIREMENTS FOR PROPULSION LAB (CLPL)

a. Scheduling of Work: Access to CLPL is through a guarded gate. The normal work hours for CLPL are 6:30 a.m. to 5:30 p.m. Normal work days are Monday through Thursday and non-flex Fridays. The gate remains locked on flex Fridays, weekends or Federal Holidays. The CLPL access gate is locked promptly at 6:00 p.m. each working day. The CLPL access gate is unlocked at approximately 6:00 a.m. each work day. Work outside of these hours will be permitted only after approval by the Contracting Officer. Request for approval to work outside of the stated normal work hours shall be made in writing at least 7 calendar days prior to commencement of such work. The contractor shall be responsible to coordination with the China Lake Police Department for access through the gate in other than normal working hours. In this case the contractor should expect significant delays to get the gate opened.

b. Interruption of Utility Services; The Contractor shall submit for approval a schedule, 14 calendar days in advance, indicating each shutdown or interruption, or potential interruption of utilities. Each shutdown or interruption shall be limited to the absolute minimum time practicable. Make utility cutovers and interruptions after normal working hours or on Saturdays, Sundays, or Federal Holidays.

c. Safety & Security: All contractor employees shall be U.S. citizens. The Contractor is advised that all work to be performed requires strict compliance with NAWS Safety and Security Instructions. No cell phone are permitted to be operated inside the CLPL gate. Radios and satellite broadcast equipment may not be operated inside the CLPL gate without prior approval with NAWS Explosive Safety Officer and Frequency Management approval. Matches and lighters are not permitted inside the CLPL gate. The contractors field managers are required to attend a 15 minute CLPL safety brief. All other workers shall be provided the same safety brief by the contractor's managers. The contractor shall limit his operations to the work site as indicated and specified. Ingress and egress to work site shall be done using the approved route at approved times.

-- End of Section --

SECTION 01 35 26

GOVERNMENTAL SAFETY REQUIREMENTS
02/12

1 PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)

- ASSE/SAFE A10.32 (2012) Fall Protection
- ASSE/SAFE A10.34 (2001; R 2012) Protection of the Public on or Adjacent to Construction Sites
- ASSE/SAFE Z359.1 (2007) Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components

ASME INTERNATIONAL (ASME)

- ASME B30.22 (2010) Articulating Boom Cranes
- ASME B30.3 (2012) Tower Cranes
- ASME B30.5 (2011) Mobile and Locomotive Cranes
- ASME B30.8 (2010) Floating Cranes and Floating Derricks

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

- NASA NPG 8621.1 (2004a) NASA Mishap Reporting, Investigating and Record Keeping Policy
- NASA NPG 8715.3 (2004) NASA Safety Manual
- NASA-STD 8719.12 (2011; Change 2) Safety Standard for Explosives, Propellants, and Pyrotechnics

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

- NFPA 10 (2013) Standard for Portable Fire Extinguishers
- NFPA 241 (2013) Standard for Safeguarding Construction, Alteration, and Demolition Operations
- NFPA 306 (2009) Standard for Control of Gas Hazards on Vessels

NFPA 51B (2009; TIA 09-1) Standard for Fire Prevention During Welding, Cutting, and Other Hot Work

NFPA 70 (2011; Errata 2 2012) National Electrical Code

NFPA 70E (2012; Errata 2012) Standard for Electrical Safety in the Workplace

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2008; Errata 1-2010; Changes 1-3 2010; Changes 4-6 2011; Change 7 2012) Safety and Health Requirements Manual

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

10 CFR 20 Standards for Protection Against Radiation

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1910.146 Permit-required Confined Spaces

29 CFR 1910.147 Control of Hazardous Energy (Lock Out/Tag Out)

29 CFR 1915 Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment

29 CFR 1919 Gear Certification

29 CFR 1926 Safety and Health Regulations for Construction

29 CFR 1926.1400 Cranes & Derricks in Construction

29 CFR 1926.16 Rules of Construction

29 CFR 1926.450 Scaffolds

29 CFR 1926.500 Fall Protection

CPL 2.100 (1995) Application of the Permit-Required Confined Spaces (PRCS) Standards, 29 CFR 1910.146

U.S. NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)

NAVFAC P-307 (2009; Change 1 Mar 2011; Change 2 Aug 2011) Management of Weight Handling Equipment

1.2 DEFINITIONS

- a. Competent Person for Fall Protection. A person who is capable of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as their application

- and use with related equipment, and has the authority to take prompt corrective measures to eliminate the hazards of falling.
- b. High Visibility Accident. Any mishap which may generate publicity or high visibility.
 - c. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.
 - d. Operating Envelope. The area surrounding any crane. Inside this "envelope" is the crane, the operator, riggers and crane walkers, rigging gear between the hook and the load, the load and the crane's supporting structure (ground, rail, etc.).
 - e. Recordable Injuries or Illnesses. Any work-related injury or illness that results in:
 - (1) Death, regardless of the time between the injury and death, or the length of the illness;
 - (2) Days away from work (any time lost after day of injury/illness onset);
 - (3) Restricted work;
 - (4) Transfer to another job;
 - (5) Medical treatment beyond first aid;
 - (6) Loss of consciousness; or
 - (7) A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (6) above.
 - f. "USACE" property and equipment specified in USACE EM 385-1-1 should be interpreted as Government property and equipment.
 - g. Weight Handling Equipment (WHE) Accident. A WHE accident occurs when any one or more of the eight elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; or collision, including unplanned contact between the load, crane, or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.) Any mishap meeting the criteria described above shall be documented in both the Contractor Significant Incident Report (CSIR) and using the NAVFAC prescribed Navy Crane Center (NCC) form submitted within five days both as provided by the Contracting Officer. Comply

with additional requirements and procedures for accidents in accordance with NAVFAC P-307, Section 12.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval and for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00
SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G
Activity Hazard Analysis (AHA); G
Crane Critical Lift Plan; G
Proof of qualification for Crane Operators; G

SD-06 Test Reports

Notifications and Reports

Submit reports as their incidence occurs, in accordance with the requirements of the paragraph, "Notifications and Reports."

Accident Reports; G
Crane Reports
Gas Protection for NASA projects

SD-07 Certificates

Confined Space Entry Permit
Hot work permit
License Certificates
Contractor Safety Self-Evaluation Checklist; G

Certificate of Compliance (Crane)

Submit one copy of each permit/certificate attached to each Daily Report.

1.4 CONTRACTOR SAFETY SELF-EVALUATION CHECKLIST

Contracting Officer will provide a "Contractor Safety Self-Evaluation checklist" to the Contractor at the pre-construction conference. Complete the checklist monthly and submit with each request for payment voucher. An acceptable score of 90 or greater is required. Failure to submit the completed safety self-evaluation checklist or achieve a score of at least 90 may result in retention of up to 10 percent of the voucher. Additionally, provide a Monthly Exposure Report and attach to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. Failure to submit the report may result in retention of up to 10 percent of the voucher. The Contracting Officer will submit a copy of the Contractor Safety Self-Evaluation and Monthly Exposure Report to the local safety and occupational health office.

1.5 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this contract, comply with the most recent edition of USACE EM 385-1-1, and the following federal, state, and local laws, ordinances, criteria, rules and regulations. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements govern.

1.6 SITE QUALIFICATIONS, DUTIES AND MEETINGS

1.6.1 Personnel Qualifications

1.6.1.1 Site Safety and Health Officer (SSHO)

The SSHO must meet the requirements of EM 385-1-1 section 1 and ensure that the requirements of 29 CFR 1926.16 are met for the project. Provide a Safety oversight team that includes a minimum of one (1) person at each project site to function as the Site Safety and Health Officer (SSHO). The SSHO or an equally-qualified Designated Representative/alternate shall be at the work site at all times to implement and administer the Contractor's safety program and government-accepted Accident Prevention Plan. The SSHO's training, experience, and qualifications shall be as required by EM 385-1-1 paragraph 01.A.17, entitled SITE SAFETY AND HEALTH OFFICER (SSHO), and all associated sub-paragraphs.

A Competent Person shall be provided for all of the hazards identified in the Contractor's Safety and Health Program in accordance with the accepted Accident Prevention Plan, and shall be on-site at all times when the work that presents the hazards associated with their professional expertise is being performed. Provide the credentials of the Competent Persons(s) to the Contracting Officer for acceptance in consultation with the Safety Office.

1.6.1.1.1 Contractor Quality Control (QC) Person:

The Contractor Quality Control Person

1.6.1.1.2 Additional Site Safety and Health Officer (SSHO) Requirements and Duties

The SSHO shall have completed the "40 Hour Construction Safety Hazard Awareness Training Course for Contractors".

1.6.1.1.3 Qualified Trainer Requirements

Qualified Trainer Requirements for 40 Hour Construction Safety Hazard Awareness Training Course for Contractors and 16 hours of classroom training on the requirements of the latest version of the EM 385-1-1:

Completed the following courses:

- a. OSHA 510, Occupational Safety and Health Standards for Construction
- b. OSHA 500, Trainer Course in OSHA Standards for Construction
- c. OSHA 3095, Electrical Standards
- d. OSHA 7115, Lockout/Tagout
- e. OSHA 3110, Fall Arrest Systems
- f. OSHA 2264, Permit-Required Confined Space Entry
- g. OSHA 3010, Excavation, Trenching and Soil Mechanics
- h. Scaffolds in accordance with 29 CFR 1926.450, Subpart L
- i. NAVFAC 40-hour Construction Safety Hazard Awareness Training

Responsibilities of Authorized Trainers:

- a. Prepare class presentations that cover construction-related safety requirements and includes topics covered in the NAVFAC Construction Safety Hazard Awareness Course for Contractors.
- b. Ensure that all attendees attend all sessions by using a class roster signed daily by each attendee. Maintain copies of the roster for at least five (5) years. This is a certification class and must be attended 100 percent. In cases of emergency where an attendee cannot make it to a session, the attendee can make it up in another class session for the same subject.
- c. Update training course materials whenever an update of the EM 385-1-1 becomes available.
- d. Provide a written exam of at least 50 questions. Students shall be required to answer 80 percent correctly to pass.

Copies of test and student answers shall be retained for five (5) years and will be made available for inspection by the NAVFAC Pacific, Site Safety and Health Manager upon request.

1.6.1.1.5 The Contractor Quality Control (QC) Personnel

The Contractor Quality Control (QC) person cannot be the SSHO on this project, although the QC has safety inspection responsibilities as part of the QC duties.

The Project Superintendent or other Contractor personnel may act on behalf of the SSHO for a period of no more than thirty (30) days annually, provided that the individual meets the same competency level of the SSHOs,

demonstrates the proficiency required, and is approved by the Contracting Officer in consultation with the NAVFAC MARIANAS Site Safety and Health Manager.

1.6.1.1.6 Requirements for all Contractor Jobsite Personnel Holding H-1B or H-2B Visas:

All Contractor jobsite workers holding an H-1B or H-2B visa shall complete a minimum 16 hours of classroom training on the requirements of the latest version of the U.S. Army Corps of Engineers Safety & Health Requirements Manual (EM 385-1-1) prior to their first day on the jobsite to include but not limited to the following topics: Sanitation; Medical and First Aid Requirements; Temporary Facilities; Personal Protective Equipment; Electrical; Hand and Power Tools; Material Handling and Storage; Motor Vehicles; Fall Protection; Work Platforms and Scaffoldings; Demolition; Safe Access, Ladders, Floor & Wall Openings, Stairs and Railing Systems; Excavations and Trenching; and Confined Spaces, prior to reporting to the jobsite.

Submit a list of workers who have completed the training to the Contracting Officer prior to them reporting to the jobsite. Update the list as additional workers are added. Maintain the updated list at the jobsite for review by the government's designated authority. Include the qualifications of qualified trainer(s) that provided the training. Personnel who have taken the 40 Hour Construction Safety Hazard Awareness Training Course for Contractors are not required to take the 16 hours of classroom training on the requirements of the latest version of the EM 385-1-1.

The 16 hours classroom training may be provided by the Guam Contractors Association Trades Academy (GCA Trades Academy) or other qualified trainers as outlined in the subpart titled "Qualified Trainer Requirements".

1.6.1.3 Competent Person for Confined Space Entry

Provide a "Competent Person" to supervise the entry into each confined space. That individual must meet the requirements and definition of Competent Person as contained in EM 385-1-1.

1.6.1.4 Crane Operators

Meet the crane operators requirements in USACE EM 385-1-1, Section 16 and Appendix I. In addition, for mobile cranes with Original Equipment Manufacturer (OEM) rated capacities of 50,000 pounds or greater, designate crane operators as qualified by a source that qualifies crane operators (i.e., union, a government agency, or an organization that tests and qualifies crane operators). Provide proof of current qualification.

1.6.2 Personnel Duties

1.6.2.1 Site Safety and Health Officer (SSHO)

The SSHO shall:

- a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of

corrections. Attach safety inspection logs to the Contractors' daily production and/or quality control report.

- b. Conduct mishap investigations and complete required reports. Maintain the OSHA Form 300 and Daily Production reports for prime and sub-contractors.
- c. Maintain applicable safety reference material on the job site.
- d. Attend the pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic in-progress meetings.
- e. Implement and enforce accepted APPS and AHAs.
- f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. Post a list of unresolved safety and health deficiencies on the safety bulletin board.
- g. Ensure sub-contractor compliance with safety and health requirements.
- h. Maintain a list of hazardous chemicals on site and their material safety data sheets.

Failure to perform the above duties will result in dismissal of the superintendent, QC Manager, and/or SSHO, and a project work stoppage. The project work stoppage will remain in effect pending approval of a suitable replacement.

1.6.3 Meetings

1.6.3.1 Preconstruction Conference

- a. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).
- b. Discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer's representative as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, review, and acceptance of AHAs to preclude project delays.
- c. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Do not begin work until there is an accepted APP.
- d. The functions of a Preconstruction conference may take place at the Post-Award Kickoff meeting for Design Build Contracts.

1.6.3.2 Safety Meetings

Conduct and document meetings as required by EM 385-1-1. Attach minutes showing contract title, signatures of attendees and a list of topics discussed to the Contractors' daily report.

1.7 ACCIDENT PREVENTION PLAN (APP)

Use a qualified person to prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of USACE EM 385-1-1 and as supplemented herein. Cover all paragraph and subparagraph elements in USACE EM 385-1-1, Appendix A, "Minimum Basic Outline for Accident Prevention Plan" and show compliance with NASA NPG 8715.3. Specific requirements for some of the APP elements are described below. The APP shall be job-specific and address any unusual or unique aspects of the project or activity for which it is written. The APP shall interface with the Contractor's overall safety and health program. Include any portions of the Contractor's overall safety and health program referenced in the APP in the applicable APP element and made site-specific. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated site safety and health officer, the Contractor Quality control Manager, and any designated CSP or CIH.

Submit the APP to the Contracting Officer 15 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP.

Once accepted by the Contracting Officer, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSSH and quality control manager. Should any severe hazard exposure, i.e. imminent danger, become evident, stop work in the area, secure the area, and develop a plan to remove the exposure and control the hazard. Notify the Contracting Officer within 24 hours of discovery. Eliminate/remove the hazard. In the interim, take all necessary action to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by ASSE/SAFE A10.34,) and the environment.

Copies of the accepted plan will be maintained at the Contracting Officer's office and at the job site.

Continuously review and ammend the APP, as necessary, throughout the life of the contract. Incorporate unusual or high-hazard activities not identified in the original APP as they are discovered.

1.7.1 EM 385-1-1 Contents

In addition to the requirements outlined in Appendix A of USACE EM 385-1-1, the following is required:

- a. Names and qualifications (resumes including education, training, experience and certifications) of all site safety and health personnel designated to perform work on this project to include the designated site safety and health officer and other competent and qualified personnel to be used such as CSPs, CIHs, STSs, CHSTs. Specify the duties of each position.
- b. Qualifications of competent and of qualified persons. As a minimum, designate and submit qualifications of competent persons for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; personal protective equipment and clothing to include selection, use and maintenance.
- c. Confined Space Entry Plan. Develop a confined and/or enclosed space entry plan in accordance with USACE EM 385-1-1, applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, OSHA Directive CPL 2.100, and any other federal, state and local regulatory requirements identified in this contract. Identify the qualified person's name and qualifications, training, and experience. Delineate the qualified person's authority to direct work stoppage in the event of hazardous conditions. Include procedure for rescue by contractor personnel and the coordination with emergency responders. (If there is no confined space work, include a statement that no confined space work exists and none will be created.)
- d. Crane Critical Lift Plan.
Prepare and sign weight handling critical lift plans for lifts over 75 percent of the capacity of the crane or hoist (or lifts over 50 percent of the capacity of a barge mounted mobile crane's hoists) at any radius of lift; lifts involving more than one crane or hoist; lifts of personnel; and lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks. Submit 15 calendar days prior to on-site work and include the requirements of USACE EM 385-1-1, paragraph 16.H. and the following:
 - (1) For lifts of personnel, demonstrate compliance with the requirements of 29 CFR 1926.1400.
- e. Fall Protection and Prevention (FP&P) Program Documentation. The program documentation shall be site specific and address all fall hazards in the work place and during different phases of construction. Address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 6 feet. A qualified person for fall protection shall prepare and sign the program documentation.

Include fall protection and prevention systems, equipment and methods employed for every phase of work, responsibilities, assisted rescue, self-rescue and evacuation procedures, training requirements, and monitoring methods. Revise the Fall Protection and Prevention Program documentation every six months for lengthy projects, reflecting any changes during the course of construction due to changes in personnel, equipment, systems or work habits. Keep and maintain the accepted Fall Protection and Prevention Program documentation at the job site for the duration of the project. Include the Fall Protection and Prevention Program documentation in the Accident Prevention Plan (APP).

The FP&P Plan shall include a Rescue and Evacuation Plan in accordance with USACE EM 385-1-1, Section 21.M. The plan shall include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. Include the Rescue and Evacuation Plan in the Fall Protection and Prevention (FP&P) Plan, and as part of the Accident Prevention Plan (APP).

- f. Occupant Protection Plan. The safety and health aspects of lead-based paint removal, prepared in accordance with Section 02 83 19.00 10 LEAD BASED PAINT HAZARD ABATEMENT, TARGET HOUSING & CHILD OCCUPIED FACILITIES 02 82 33.13 20 REMOVAL/CONTROL AND DISPOSAL OF PAINT WITH LEAD.
 - g. Lead Compliance Plan. The safety and health aspects of lead work, prepared in accordance with Section 02 83 13.00 20 LEAD IN CONSTRUCTION.
 - h. Asbestos Hazard Abatement Plan. The safety and health aspects of asbestos work, prepared in accordance with Section 02 82 14.00 10 ASBESTOS HAZARD CONTROL ACTIVITIES 02 82 16.00 20 ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIALS.
 - i. Site Safety and Health Plan. The safety and health aspects prepared in accordance with Section 01 35 29.13 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES FOR CONTAMINATED SITES.
 - j. PCB Plan. The safety and health aspects of Polychlorinated Biphenyls work, prepared in accordance with Sections 02 84 33 REMOVAL AND DISPOSAL OF POLYCHLORINATED BIPHENYLS (PCBs) and 02 61 23 REMOVAL AND DISPOSAL OF PCB CONTAMINATED SOILS.
 - k. Site Demolition Plan. The safety and health aspects prepared in accordance with Section 02 41 00 DEMOLITION AND DECONSTRUCTION and referenced sources.
 - l. Excavation Plan. The safety and health aspects prepared in accordance with Section 31 00 00 EARTHWORK.
- 1.8 ACTIVITY HAZARD ANALYSIS (AHA)

The Activity Hazard Analysis (AHA) format shall be in accordance with USACE EM 385-1-1, Section 1. Submit the AHA for review at least 15 calendar days prior to the start of each phase. Format subsequent AHAs as amendments to

the APP. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

The AHA list will be reviewed periodically (at least monthly) at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change.

Develop the activity hazard analyses using the project schedule as the basis for the activities performed. Any activities listed on the project schedule will require an AHA. The AHAs will be developed by the contractor, supplier or subcontractor and provided to the prime contractor for submittal to the Contracting Officer.

1.9 DISPLAY OF SAFETY INFORMATION

Within one calendar day(s) after commencement of work, erect a safety bulletin board at the job site. Where size, duration, or logistics of project do not facilitate a bulletin board, an alternative method, acceptable to the Contracting Officer, that is accessible and includes all mandatory information for employee and visitor review, shall be deemed as meeting the requirement for a bulletin board. Include and maintain information on safety bulletin board as required by EM 385-1-1, section 01.A.06. Additional items required to be posted include:

- a. Confined space entry permit.
- b. Hot work permit.

1.10 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in the article "References." Maintain applicable equipment manufacturer's manuals.

1.11 EMERGENCY MEDICAL TREATMENT

Contractors will arrange for their own emergency medical treatment. Government has no responsibility to provide emergency medical treatment.

1.12 NOTIFICATIONS AND REPORTS

1.12.1 Accident Notification

Notify the Contracting Officer as soon as practical, but no more than four hours after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than \$2,000, or any weight handling equipment accident. Within notification include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (to include type of construction equipment used, PPE used, etc.). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and Government investigation is conducted.

1.12.2 Accident Reports

- a. Conduct an accident investigation for recordable injuries and illnesses, for Medical Treatment defined in paragraph DEFINITIONS, property damage accidents resulting in at least \$20,000 in damages, and near misses as defined in EM 385-1-1, to establish the root cause(s) of the accident. Complete the applicable NAVFAC Contractor Incident Reporting System (CIRS), and electronically submit via the NAVFAC Enterprise Safety Applications Management System (ESAMS). The Contracting Officer will provide copies of any required or special forms.
- b. Near Misses: Complete the applicable documentation in NAVFAC Contractor Incident Reporting System (CIRS), and electronically submit via the NAVFAC Enterprise Safety Applications Management System (ESAMS).
- c. Conduct an accident investigation for any weight handling equipment accident (including rigging gear accidents) to establish the root cause(s) of the accident, complete the WHE Accident Report (Crane and Rigging Gear) form and provide the report to the Contracting Officer within 30 calendar days of the accident. Do not proceed with crane operations until cause is determined and corrective actions have been implemented to the satisfaction of the contracting officer. The Contracting Officer will provide a blank copy of the accident report form.

1.12.3 Crane Reports

Submit crane inspection reports required in accordance with USACE EM 385-1-1, Appendix I and as specified herein with Daily Reports of Inspections.

1.12.4 Certificate of Compliance

Provide a Certificate of Compliance for each crane entering an activity under this contract (see Contracting Officer for a blank certificate). State within the certificate that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance comply with 29 CFR 1926 and USACE EM 385-1-1 Section 16 and Appendix I. Certify on the Certificate of Compliance that the crane operator(s) is qualified and trained in the operation of the crane to be used. For cranes at DOD activities in foreign countries, certify that the crane and rigging gear conform to the appropriate host country safety standards. Also certify that all of its crane operators working on the DOD activity have been trained in the proper use of all safety devices (e.g., anti-two block devices). Post certifications on the crane.

1.13 HOT WORK

Submit and obtain a written permit prior to performing "Hot Work" (welding, cutting, etc.) or operating other flame-producing/spark producing devices, from the Fire Division. A permit is required from the Explosives Safety Office for work in and around where explosives are processed, stored, or handled. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS

ISSUED. Provide at least two (2) twenty (20) pound 4A:20 BC rated extinguishers for normal "Hot Work". All extinguishers shall be current inspection tagged, approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch shall be trained in accordance with NFPA 51B and remain on-site for a minimum of 30 minutes after completion of the task or as specified on the hot work permit.

When starting work in the facility, require personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency Fire Division phone number. ANY FIRE, NO MATTER HOW SMALL, SHALL BE REPORTED TO THE RESPONSIBLE FIRE DIVISION IMMEDIATELY.

1.14 FACILITY OCCUPANCY CLOSURE

Streets, walks, and other facilities occupied and used by the Government shall not be closed or obstructed without written permission from the Contracting Officer.

1.15 GAS PROTECTION

Contractor shall have one or more employees properly trained and experienced in operation and calibration of gas testing equipment and formally qualified as gas inspectors who shall be on duty during times workers are in confined spaces. Their primary functions shall be to test for gas and operate testing equipment. Unless equipment of constant supervisory type with automatic alarm is employed, gas tests shall be made at least every 2 hours or more often when character of ground or experience indicates gas may be encountered. A gas test shall be made before workmen are permitted to enter the excavation after an idle period exceeding one-half hour.

Readings shall be permanently recorded daily, indicating the concentration of gas, point of test, and time of test. Submit copies of the gas test readings to the Contracting Officer at the end of each work day.

Special requirements, coordination, and precautions will apply to areas that contain a hazardous atmosphere or, by virtue of their use or physical character, may be oxygen deficient. A check by Government is required prior to entering confined space. Surveillance and monitoring shall be required in these types of work spaces by both Contractor and Government personnel. oved in writing by the Contracting Officer prior to commencement of work.

1.16 SEVERE STORM PLAN

In the event of a severe storm warning, the Contractor must:

- a. Secure outside equipment and materials and place materials that could be damaged in protected areas.
- b. Check surrounding area, including roof, for loose material, equipment, debris, and other objects that could be blown away or against existing facilities.
- c. Ensure that temporary erosion controls are adequate.

1.17 CONFINED SPACE ENTRY REQUIREMENTS.

Contractors entering and working in confined spaces while performing general industry work are required to follow the requirements of OSHA 29 CFR 1926 and comply with the requirements in Section 34 of EM 385-1-1, OSHA 29 CFR 1910, and OSHA 29 CFR 1910.146. Contractors entering and working in confined spaces while performing shipyard industry work are required to follow the requirements of OSHA 29 CFR 1915 Subpart B.

2 PART 2 PRODUCTS

2.1 CONFINED SPACE SIGNAGE

Provide permanent signs integral to or securely attached to access covers for new permit-required confined spaces. Signs wording: "DANGER--PERMIT-REQUIRED CONFINED SPACE - DO NOT ENTER -" in bold letters a minimum of one inch in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" shall be red and readable from 5 feet.

3 PART 3 EXECUTION

3.1 CONSTRUCTION AND OTHER WORK

Comply with USACE EM 385-1-1, NFPA 70, NFPA 70E, NFPA 241, the APP, the AHA, Federal and State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard prevails.

PPE is governed in all areas by the nature of the work the employee is performing. Use personal hearing protection at all times in designated noise hazardous areas or when performing noise hazardous tasks. Safety glasses must be carried/available on each person.

Mandatory PPE includes:

- a. Hard Hat
- b. Appropriate Safety Shoes
- c. Reflective Vests

3.1.1 Hazardous Material Use

Each hazardous material must receive approval from the Contracting Office or their designated representative prior to being brought onto the job site or prior to any other use in connection with this contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material.

3.1.2 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with USACE EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated

biphenyls, di-isocyanates, lead-based paint are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials. Low mercury lamps used within fluorescent lighting fixtures are allowed as an exception without further Contracting Officer approval. Notify the Radiation Safety Officer (RSO) prior to excepted items of radioactive material and devices being brought on base.

3.1.3 Unforeseen Hazardous Material

The design should have identified materials such as PCB, lead paint, and friable and non-friable asbestos and other OSHA regulated chemicals (i.e. 29 CFR Part 1910.1000). If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions."

3.2 PRE-OUTAGE COORDINATION MEETING

Apply for utility outages at least 15 days in advance. As a minimum, the request should include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Special requirements for electrical outage requests are contained elsewhere in this specification section. Once approved, and prior to beginning work on the utility system requiring shut down, attend a pre-outage coordination meeting with the Contracting Officer and the Installation representative to review the scope of work and the lock-out/tag-out procedures for worker protection. No work will be performed on energized electrical circuits unless proof is provided that no other means exist.

3.3 CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

Ensure that each employee is familiar with and complies with these procedures and USACE EM 385-1-1, Section 12, Control of Hazardous Energy.

3.4 FALL HAZARD PROTECTION AND PREVENTION PROGRAM

Establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. Within the program include company policy, identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures in accordance with ASSE/SAFE Z359.1.

3.4.1 Training

Institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, provide training for each employee who might be exposed to fall hazards. Provide training by a competent person for fall protection in accordance with USACE EM 385-1-1, Section 21.B.

3.4.2 Fall Protection Equipment and Systems

Enforce use of the fall protection equipment and systems designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA at all times when an employee is exposed to a fall hazard. Protect employees from fall hazards as specified in EM 385-1-1, Section 21. In addition to the required fall protection systems, safety skiff, personal floatation devices, life rings etc., are required when working above or next to water in accordance with USACE EM 385-1-1, Paragraphs 21.N through 21.N.04. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall arrest systems are required when operating other equipment such as scissor lifts if the work platform is capable of being positioned outside the wheelbase. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, or travel. Fall protection must comply with 29 CFR 1926.500, Subpart M, USACE EM 385-1-1 and ASSE/SAFE A10.32.

3.4.2.1 Personal Fall Arrest Equipment

Personal fall arrest equipment, systems, subsystems, and components shall meet ASSE/SAFE Z359.1. Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. Body belts may only be used as a positioning device system (for uses such as steel reinforcing assembly and in addition to an approved fall arrest system). Harnesses shall have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment shall not exceed 6 feet. The total fall distance and any swinging of the worker (pendulum-like motion) that can occur during a fall shall always be taken into consideration when attaching a person to a fall arrest system.

3.4.3 Fall Protection for Roofing Work

Implement fall protection controls based on the type of roof being constructed and work being performed. Evaluate the roof area to be accessed for its structural integrity including weight-bearing capabilities for the projected loading.

a. Low Sloped Roofs:

- (1) For work within 6 feet of an edge, on low-slope roofs, protect personnel from falling by use of personal fall arrest systems, guardrails, or safety nets. A safety monitoring system is not adequate fall protection and is not authorized.
- (2) For work greater than 6 feet from an edge, erect and install warning lines in accordance with 29 CFR 1926.500 and USACE EM 385-1-1.

b. Steep-Sloped Roofs: Work on steep-sloped roofs requires a personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also includes residential or housing type construction.

3.4.4 Horizontal Lifelines

Design, install, certify and use under the supervision of a qualified person horizontal lifelines for fall protection as part of a complete fall arrest system which maintains a safety factor of 2 (29 CFR 1926.500).

3.4.5 Guardrails and Safety Nets

Design, install and use guardrails and safety nets in accordance with EM 385-1-1 and 29 CFR 1926 Subpart M.

3.4.6 Rescue and Evacuation Procedures

When personal fall arrest systems are used, ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. Prepare a Rescue and Evacuation Plan and include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. Include the Rescue and Evacuation Plan within the Activity Hazard Analysis (AHA) for the phase of work, in the Fall Protection and Prevention (FP&P) Plan, and the Accident Prevention Plan (APP).

3.5 SCAFFOLDING

Provide employees with a safe means of access to the work area on the scaffold. Climbing of any scaffold braces or supports not specifically designed for access is prohibited. Access scaffold platforms greater than 20 feet maximum in height by use of a scaffold stair system. Do not use vertical ladders commonly provided by scaffold system manufacturers for accessing scaffold platforms greater than 20 feet maximum in height. The use of an adequate gate is required. Ensure that employees are qualified to perform scaffold erection and dismantling. Do not use scaffold without the capability of supporting at least four times the maximum intended load or without appropriate fall protection as delineated in the accepted fall protection and prevention plan. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward. Give special care to ensure scaffold systems are not overloaded. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material is prohibited. The first tie-in shall be at the height equal to 4 times the width of the smallest dimension of the scaffold base. Place work platforms on mud sills. Scaffold or work platform erectors shall have fall protection during the erection and dismantling of scaffolding or work platforms that are more than six feet. Delineate fall protection requirements when working above six feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

3.6 EQUIPMENT

3.6.1 Material Handling Equipment

- a. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless

specifically delineated in the manufacturer's printed operating instructions.

- b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions. Additionally, when material handling equipment is used as a crane it must meet NAVFAC P-307 requirements in Sections 1.7.2, "Contractor Operated Cranes," and 12, "Investigation and Reporting of Crane and Rigging Gear Accidents."
- c. Operators of forklifts or power industrial trucks shall be licensed in accordance with OSHA.

3.6.2 Weight Handling Equipment

- a. Equip cranes and derricks as specified in EM 385-1-1, section 16.
- b. Notify the Contracting Officer 15 days in advance of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated. Contractor's operator shall remain with the crane during the spot check.
- c. Comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30.5). Perform all testing in accordance with the manufacturer's recommended procedures.
- d. Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, and ASME B30.8 for floating cranes and floating derricks.
- e. Under no circumstance shall a Contractor make a lift at or above 90 percent of the cranes rated capacity in any configuration.
- f. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and follow the requirements of USACE EM 385-1-1 Section 11, NAVFAC P-307 Figure 10-3 and ASME B30.5 or ASME B30.22 as applicable.
- g. Do not crane suspended personnel work platforms (baskets) unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Do not lift personnel with a line hoist or friction crane.
- h. Inspect, maintain, and recharge portable fire extinguishers as specified in NFPA 10, Standard for Portable Fire Extinguishers.
- i. All employees must keep clear of loads about to be lifted and of suspended loads.
- j. Use cribbing when performing lifts on outriggers.
- k. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.

- l. A physical barricade must be positioned to prevent personnel from entering the counterweight swing (tail swing) area of the crane.
- m. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by Contracting Officer personnel.
- n. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.
- o. Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).
- p. Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. Prior to conducting lifting operations set a maximum wind speed at which a crane can be safely operated based on the equipment being used, the load being lifted, experience of operators and riggers, and hazards on the work site. This maximum wind speed determination shall be included as part of the activity hazard analysis plan for that operation.

3.6.3 Equipment and Mechanized Equipment

- a. Proof of qualifications for operator shall be kept on the project site for review.
- b. Manufacture specifications or owner's manual for the equipment shall be on-site and reviewed for additional safety precautions or requirements that are sometimes not identified by OSHA or USACE EM 385-1-1. Incorporate such additional safety precautions or requirements into the AHAs.

3.6.4 USE OF EXPLOSIVES

Explosives shall not be used or brought to the project site without prior written approval from the Contracting Officer. Such approval shall not relieve the Contractor of responsibility for injury to persons or for damage to property due to blasting operations.

Storage of explosives, when permitted on Government property, shall be only where directed and in approved storage facilities. These facilities shall be kept locked at all times except for inspection, delivery, and withdrawal of explosives.

Explosive work shall be performed in accordance with NASA-STD 8719.12. This document is available at:

<http://www.hq.nasa.gov/office/codeq/doctree/871912.htm>

3.7 EXCAVATIONS

Soil classification must be performed by a competent person in accordance with 29 CFR 1926 and EM 385-1-1.

3.7.1 Utility Locations

All underground utilities in the work area must be positively identified by a third party, independent, private utility locating company in addition to any station locating service and coordinated with the station utility department.

3.7.2 Utility Location Verification

Physically verify underground utility locations, including utility depth, by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system.

3.7.3 Utilities Within and Under Concrete, Bituminous Asphalt, and Other Impervious Surfaces

Utilities located within and under concrete slabs or pier structures, bridges, parking areas, and the like, are extremely difficult to identify. Whenever contract work involves chipping, saw cutting, or core drilling through concrete, bituminous asphalt or other impervious surfaces, the existing utility location must be coordinated with station utility departments in addition to location and depth verification by a third party, independent, private locating company. The third party, independent, private locating company shall locate utility depth by use of Ground Penetrating Radar (GPR), X-ray, bore scope, or ultrasound prior to the start of demolition and construction. Outages to isolate utility systems must be used in circumstances where utilities are unable to be positively identified. The use of historical drawings does not alleviate the contractor from meeting this requirement.

3.8 ELECTRICAL

3.8.1 Portable Extension Cords

Size portable extension cords in accordance with manufacturer ratings for the tool to be powered and protected from damage. Immediately removed from service all damaged extension cords. Portable extension cords shall meet the requirements of EM 385-1-1, NFPA 70E, and OSHA electrical standards.

3.9 WORK IN CONFINED SPACES

Comply with the requirements in Section 34 of USACE EM 385-1-1, OSHA 29 CFR 1910, OSHA 29 CFR 1910.146, OSHA Directive CPL 2.100 and OSHA 29 CFR 1926. Any potential for a hazard in the confined space requires a permit system to be used.

- a. Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. (See Section 34 of USACE EM 385-1-1 for entry procedures.) All hazards pertaining to the space shall be reviewed with each employee during review of the AHA.

- b. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.
- c. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

-- End of Section --

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS
08/10

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization, (e.g. ASTM B 564 Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the standards producing organization should be ordered from the source by title rather than by number.

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA)
2700 Prosperity Ave., Suite 250
Fairfax, VA 22031
Tel: 703-849-8888
Fax: 703-207-3561
E-mail: infonet@aiha.org
Internet <http://www.aiha.org>

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)
1800 East Oakton Street
Des Plaines, IL 60018-2187
Ph: 847-699-2929
Fax: 847-768-3434
E-mail: customerservice@asse.org
Internet: <http://www.asse.org>

AMERICAN WATER WORKS ASSOCIATION (AWWA)
6666 West Quincy Avenue
Denver, CO 80235
Ph: 800-926-7337
Fax: 303-347-0804
E-mail: smorrison@awwa.org
Internet: <http://www.awwa.org>

ASME INTERNATIONAL (ASME)
Three Park Avenue, M/S 10E
New York, NY 10016-5990
Ph: 800-854-7179 or 800-843-2763
Fax: 212-591-7674
E-mail: infocentral@asme.org

Internet: <http://www.asme.org>

ASTM INTERNATIONAL (ASTM)
100 Barr Harbor Drive, P.O. Box C700
West Conshohocken, PA 19428-2959
Ph: 610-832-9585
Fax: 610-832-9555
E-mail: service@astm.org
Internet: <http://www.astm.org>

FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH
(FCCCHR)
University of South California
Kaprielian Hall 200
Los Angeles, CA 90089-2531
Ph: 213-740-2032 or 866-545-6340
Fax: 213-740-8399
E-mail: fccchr@usc.edu
Internet: <http://www.usc.edu/dept/fccchr>

GREEN SEAL (GS)
1001 Connecticut Avenue, NW
Suite 827
Washington, DC 20036-5525
Ph: 202-872-6400
Fax: 202-872-4324
E-mail: green seal@green seal.org
Internet: <http://www.green seal.org>

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

Superintendent of Documents at
U.S. Government Printing Office
732 North Capitol Street, NW
Washington, DC 20401-0001
Ph: 202-783-3238
Fax: 202-512-1800
E-mail: ContactCenter@gpo.gov
Internet: <http://www.gpoaccess.gov/help>

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
1 Batterymarch Park
Quincy, MA 02169-7471
Ph: 617-770-3000 or 800-344-3555
Fax: 617-770-0700
E-mail: webmaster@nfpa.org
Internet: <http://www.nfpa.org>

UNDERWRITERS LABORATORIES (UL)
2600 N.W. Lake Road
Camas, WA 98607-8542
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Fax: 360-817-6278
E-mail: CEC.us@us.ul.com
Internet: <http://www.ul.com/>

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Department of Defense Single Stock Point (DODSSP)
Document Automation and Production Service (DAPS)
Building 4/D
700 Robbins Avenue
Philadelphia, PA 19111-5094
Ph: 215-697-6396 - for account/password issues
Internet: <http://assist.daps.dla.mil/online/start/>; account
registration required
Obtain Unified Facilities Criteria (UFC) from:
Whole Building Design Guide (WBDG)
National Institute of Building Sciences (NIBS)
1090 Vermont Avenue NW, Suite 700
Washington, DC 20005
Ph: 202-289-7800
Fax: 202-289-1092
Internet: http://www.wbdg.org/references/docs_refs.php

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)
Order from:
HUD User
P.O. Box 23268
Washington, DC 20026-3268
Ph: 800-245-2691 or 202-708-9981
Fax: 202-708-9981
E-mail: helpdesk@Huduser.org
Internet: <http://www.huduser.org>

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.

Washington, DC 20004
Ph: 202-272-0167
for Fax and E-mail see below
Internet: <http://www.epa.gov>
--- Some EPA documents are available only from:
National Technical Information Service (NTIS)
5301 Shawnee Road
Alexandria, VA 22312
Ph: 703-605-6050 or 1-688-584-8332
Fax: 703-605-6900
E-mail: info@ntis.gov
Internet: <http://www.ntis.gov>

U.S. FEDERAL AVIATION ADMINISTRATION (FAA)
Order for sale documents from:
Superintendent of Documents
U.S. Government Printing Office (GPO)
732 North Capitol Street, NW
Washington, DC 20401
Ph: 202-512-1800
Fax: 202-512-2104
E-mail: contactcenter@gpo.gov
Internet: <http://www.gpoaccess.gov>
Order free documents from:
Federal Aviation Administration
Department of Transportation
800 Independence Avenue, SW
Washington, DC 20591
Ph: 1-866-835-5322
Internet: <http://www.faa.gov>

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)
FHWA, Office of Safety
1200 New Jersey Ave., SE
Washington, DC 20590-
Ph: 202-366-0411
Fax: 202-366-2249
E-mail: contactcenter@gpo.gov
Internet: <http://www.safety.fhwa.dot.gov>
Order from:
Superintendent of Documents
U. S. Government Printing Office (GPO)
732 North Capitol Street, NW
Washington, DC 20401
Ph: 202-512-1800
Fax: 202-512-2104
E-mail: contactcenter@gpo.gov
Internet: <http://www.gpoaccess.gov>

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
8601 Adelphi Road
College Park, MD 20740-6001
Ph: 866-272-6272
Fax: 301-837-0483
E-mail: contactcenter@gpo.gov
Internet: <http://www.archives.gov>
Order documents from:
Superintendent of Documents
U.S. Government Printing Office (GPO)

732 North Capitol Street, NW
Washington, DC 20401
Ph: 202-512-1800
Fax: 202-512-2104
E-mail: contactcenter@gpo.gov
Internet: <http://www.gpoaccess.gov>

U.S. NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)
1322 Patterson Ave. SE, Suite 1000
Washington Navy Yard, DC 20374
Ph: 757-322-4200
Fax: 757-322-4416
Internet: <http://www.navfac.navy.mil>

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not used

-- End of Section --

SECTION 01 45 00.10 20

QUALITY CONTROL FOR MINOR CONSTRUCTION

02/10

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2008; Change 1-2010; Change 3-2010; Errata 1-2010) Safety and Health Requirements Manual

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval and for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

QC Plan; G

Submit a QC plan within 15 calendar days after receipt of Notice of Award.

1.3 INFORMATION FOR THE CONTRACTING OFFICER (KO)

Prior to commencing work on construction, the Contractor can obtain a single copy set of the current report forms from the KO. The report forms will consist of the Contractor Production Report, Contractor Production Report (Continuation Sheet), Contractor Quality Control (CQC) Report, CQC Report (Continuation Sheet), Preparatory Phase Checklist, Initial Phase Checklist, Rework Items List, and Testing Plan and Log.

Deliver the following to the KO:

- a. CQC Report: Electronic or original and one copy, by 10:00 AM the next working day after each day that work is performed;
- b. Contractor Production Report: Electronic or original and one copy by 10:00 AM the next working day after each day that work is performed;
- c. Preparatory Phase Checklist: Electronic or original attached to the original CQC Report and one copy attached to each copy;
- d. Initial Phase Checklist: Electronic or original attached to the original CQC Report and one copy attached to each copy;

- e. Field Test Reports: One copy, within two working days after the test is performed, attached to the CQC Report;
- f. QC Meeting Minutes: One copy, within two working days after the meeting; and
- g. QC Certifications: As required by the paragraph entitled "QC Certifications."

1.4 QC PROGRAM REQUIREMENTS

Establish and maintain a QC program as described in this section. The QC program consists of a QC Manager, a QC plan, a Coordination and Mutual Understanding Meeting, QC meetings, three phases of control, submittal review and approval, testing, and QC certifications and documentation necessary to provide materials, equipment, workmanship, fabrication, construction and operations which comply with the requirements of this contract. The QC program shall cover on-site and off-site work and shall be keyed to the work sequence. No work or testing may be performed unless the QC Manager is on the work site.

1.4.1 Preliminary Work Authorized Prior to Acceptance

The only work that is authorized to proceed prior to the acceptance of the QC plan is mobilization of storage and office trailers, temporary utilities, and surveying.

1.4.2 Acceptance

Acceptance of the QC plan is required prior to the start of construction. The KO reserves the right to require changes in the QC plan and operations as necessary, including removal of personnel, to ensure the specified quality of work. The KO reserves the right to interview any member of the QC organization at any time in order to verify the submitted qualifications.

1.4.3 Notification of Changes

Notify the KO, in writing, of any proposed change, including changes in the QC organization personnel, a minimum of seven calendar days prior to a proposed change. Proposed changes shall be subject to the acceptance by the KO.

1.5 QC ORGANIZATION

1.5.1 QC Manager

1.5.1.1 Duties

Provide a QC Manager at the work site to implement and manage the QC program. In addition to implementing and managing the QC program, the QC Manager may perform the duties of project superintendent. The QC Manager is required to attend the Coordination and Mutual Understanding Meeting, conduct the QC meetings, perform the three phases of control, perform submittal review and approval, ensure testing is performed and provide QC certifications and documentation required in this contract. The QC Manager is responsible for managing and coordinating the three phases of control and documentation performed by others.

1.5.1.2 Qualifications

An individual with a minimum of 5 years combined experience as a superintendent, inspector, QC Manager, project manager, or construction manager on similar size and type construction contracts which included the major trades that are part of this contract. The individual must be familiar with the requirements of the EM 385-1-1 and have experience in the areas of hazard identification and safety compliance.

1.5.1.3 Construction Quality Management Training

In addition to the above experience and education requirements, the QC Manager shall have completed the course Construction Quality Management for Contractors and will have a current certificate.

1.5.2 Alternate QC Manager Duties and Qualifications

Designate an alternate for the QC Manager to serve in the event of the designated QC Manager's absence. The period of absence may not exceed two weeks at one time, and not more than 30 workdays during a calendar year. The qualification requirements for the Alternate QC Manager shall be the same as for the QC Manager.

1.6 QC PLAN

1.6.1 Requirements

Provide, for acceptance by the KO, a QC plan submitted in an electronic format that covers both on-site and off-site work and includes the following with a table of contents listing the major sections identified with tabs.

I. QC ORGANIZATION: A chart showing the QC organizational structure and its relationship to the production side of the organization.

II. NAMES AND QUALIFICATIONS: In resume format, for each person in the QC organization. Include the CQM for Contractors course certification required by the paragraph entitled "Construction Quality Management Training".

III. DUTIES, RESPONSIBILITY AND AUTHORITY OF QC PERSONAL: Of each person in the QC organization.

IV. OUTSIDE ORGANIZATIONS: A listing of outside organizations such as architectural and consulting engineering firms that will be employed by the Contractor and a description of the services these firms will provide.

V. APPOINTMENT LETTERS: Letters signed by an officer of the firm appointing the QC Manager and Alternate QC Manager and stating that they are responsible for managing and implementing the QC program as described in this contract. Include in this letter the QC Manager's authority to direct the removal and replacement of non-conforming work.

VI. SUBMITTAL PROCEDURES AND INITIAL SUBMITTAL REGISTER: Procedures for reviewing, approving and managing submittals. Provide the name(s) of the person(s) in the QC organization authorized to review and certify submittals prior to approval.

VII. TESTING LABORATORY INFORMATION: Testing laboratory information required by the paragraphs "Accredited Laboratories" or "Testing Laboratory Requirements", as applicable.

VIII. TESTING PLAN AND LOG: A Testing Plan and Log that includes the tests required, referenced by the specification paragraph number requiring the test, the frequency, and the person responsible for each test.

IX. PROCEDURES TO COMPLETE REWORK ITEMS: Procedures to identify, record, track and complete rework items.

X. DOCUMENTATION PROCEDURES: Use Government formats.

XI. LIST OF DEFINABLE FEATURES: A Definable Feature of Work (DFOW) is a task, which is separate and distinct from other tasks, has the same control requirements and work crews. The list shall be cross-referenced to the Contractor's Construction Schedule and the specification sections. For projects requiring a Progress Chart, the list of definable features of work shall include but not be limited to all items of work on the schedule.

XII. PROCEDURES FOR PERFORMING THREE PHASES OF CONTROL: For each DFW provide Preparatory and Initial Phase Checklists. Each list shall include a breakdown of quality checks that will be used when performing the quality control functions, inspections, and tests required by the contract documents. The preparatory and initial phases shall be conducted with a view towards obtaining quality construction by planning ahead and identifying potential problems.

XIII. PERSONNEL MATRIX: Not Applicable.

XIV. PROCEDURES FOR COMPLETION INSPECTION: See the paragraph entitled "COMPLETION INSPECTIONS".

XV. TRAINING PROCEDURES AND TRAINING LOG: Not Applicable.

1.7 COORDINATION AND MUTUAL UNDERSTANDING MEETING

During the Pre-Construction conference and prior to the start of construction, discuss the QC program required by this contract. The purpose of this meeting is to develop a mutual understanding of the QC details, including documentation, administration for on-site and off-site work, and the coordination of the Contractor's management, production and the QC personnel. At the meeting, the Contractor will be required to explain how three phases of control will be implemented for each DFW. Contractor's personnel required to attend shall include the QC Manager, project manager, and superintendent. Minutes of the meeting will be prepared by the QC Manager and signed by both the Contractor and the KO. The Contractor shall provide a copy of the signed minutes to all attendees. Repeat the coordination and mutual understanding meeting when a new QC Manager is appointed.

1.8 QC MEETINGS

After the start of construction, the QC Manager shall conduct QC meetings once every week at the work site with the superintendent and the foreman responsible for the ongoing and upcoming work. The QC Manager shall prepare the minutes of the meeting and provide a copy to the KO within two

working days after the meeting. As a minimum, the following shall be accomplished at each meeting:

- a. Review the minutes of the previous meeting;
- b. Review the schedule and the status of work and rework;
- c. Review the status of submittals;
- d. Review the work to be accomplished in the next two weeks and documentation required;
- e. Resolve QC and production problems (RFIs, etc.);
- f. Address items that may require revising the QC plan; and
- g. Review Accident Prevention Plan (APP).

1.9 THREE PHASES OF CONTROL

The three phases of control shall adequately cover both on-site and off-site work and shall include the following for each DFOV.

1.9.1 Preparatory Phase

Notify the KO at least two work days in advance of each preparatory phase. Conduct the preparatory phase with the superintendent and the foreman responsible for the definable feature of work. Document the results of the preparatory phase actions in the daily CQC Report and in the QC checklist. Perform the following prior to beginning work on each definable feature of work:

- a. Review each paragraph of the applicable specification sections;
- b. Review the contract drawings;
- c. Verify that appropriate shop drawings and submittals for materials and equipment have been submitted and approved. Verify receipt of approved factory test results, when required;
- d. Review the testing plan and ensure that provisions have been made to provide the required QC testing;
- e. Examine the work area to ensure that the required preliminary work has been completed;
- f. Examine the required materials, equipment and sample work to ensure that they are on hand and conform to the approved shop drawings and submitted data;
- g. Review the APP and appropriate Activity Hazard Analysis (AHA) to ensure that applicable safety requirements are met, and that required Material Safety Data Sheets (MSDS) are submitted; and
- h. Discuss specific controls used and the construction methods and the approach that will be used to provide quality construction by planning ahead and identifying potential problems for each DFOV.

1.9.2 Initial Phase

Notify the KO at least two work days in advance of each initial phase. When construction crews are ready to start work on a DFOW, conduct the Initial Phase with the foreman responsible for that DFOW. Observe the initial segment of the work to ensure that it complies with contract requirements. Document the results of the Initial Phase in the daily CQC Report and in the QC checklist. Perform the following for each DFOW:

- a. Establish the quality of workmanship required;
- b. Resolve conflicts;
- c. Ensure that testing is performed by the approved laboratory; and
- d. Check work procedures for compliance with the APP and the appropriate AHA to ensure that applicable safety requirements are met.

1.9.3 Follow-Up Phase

Perform the following for on-going work daily, or more frequently as necessary, until the completion of each DFOW and document in the daily CQC Report and in the QC checklist:

- a. Ensure the work is in compliance with contract requirements;
- b. Maintain the quality of workmanship required;
- c. Ensure that testing is performed by the approved laboratory;
- d. Ensure that rework items are being corrected; and
- e. Assure manufacturers representatives have performed necessary inspections, if required.

1.9.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same DFOW if the quality of on-going work is unacceptable, if there are changes in the applicable QC organization, if there are changes in the on-site production supervision or work crew, if work on a DFOW is resumed after substantial period of inactivity, or if other problems develop.

1.9.5 Notification of Three Phases of Control for Off-Site Work

Notify the KO at least two weeks prior to the start of the preparatory and initial phases.

1.10 SUBMITTAL REVIEW AND APPROVAL

Procedures for submission, review, and approval of submittals are described in the submittal section of the specification.

1.11 TESTING

Except as stated otherwise in the specification sections, perform sampling and testing required under this contract.

1.11.1 Accreditation Requirements

Construction materials testing laboratories must be accredited by a laboratory accreditation authority and will be required to submit a copy of the Certificate of Accreditation and Scope of Accreditation. The laboratory's scope of accreditation must include the appropriate ASTM standards (i.e.; E 329, C 1077, D 3666, D 3740, A 880, E 543) listed in the technical sections of the specifications. Laboratories engaged in Hazardous Materials Testing shall meet the requirements of OSHA and EPA. The policy applies to the specific laboratory performing the actual testing, not just the "Corporate Office."

1.11.2 Laboratory Accreditation Authorities

Laboratory Accreditation Authorities include the National Voluntary Laboratory Accreditation Program (NVLAP) administered by the National Institute of Standards and Technology, the American Association of State Highway and Transportation Officials (AASHTO), International Accreditation Services, Inc. (IAS), U. S. Army Corps of Engineers Materials Testing Center (MTC), the American Association for Laboratory Accreditation (A2LA), the Washington Association of Building Officials (WABO) (Approval authority for WABO is limited to projects within Washington State), and the Washington Area Council of Engineering Laboratories (WACEL) (Approval authority by WACEL is limited to projects within the EFA Chesapeake and Public Works Center Washington geographical area).

1.11.3 Capability Check

The KO retains the right to check laboratory equipment in the proposed laboratory and the laboratory technician's testing procedures, techniques, and other items pertinent to testing, for compliance with the standards set forth in this contract.

1.11.4 Test Results

Cite applicable Contract requirements, tests or analytical procedures used. Provide actual results and include a statement that the item tested or analyzed conforms or fails to conform to specified requirements. If the item fails to conform, notify the KO immediately. Conspicuously stamp the cover sheet for each report in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements, whichever is applicable. Test results shall be signed by a testing laboratory representative authorized to sign certified test reports. Furnish the signed reports, certifications, and other documentation to the KO.

1.12 QC CERTIFICATIONS

1.12.1 Contractor Quality Control Report Certification

Each CQC Report shall contain the following statement: "On behalf of the Contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report."

1.12.2 Invoice Certification

Furnish a certificate to the KO with each payment request, signed by the QC Manager, attesting that as-built drawings are current and attesting that

the work for which payment is requested, including stored material, is in compliance with contract requirements.

1.12.3 Completion Certification

Upon completion of work under this contract, the QC Manager shall furnish a certificate to the KO attesting that "the work has been completed, inspected, tested and is in compliance with the contract."

1.13 COMPLETION INSPECTIONS

1.13.1 Punch-Out Inspection

Near the completion of all work or any increment thereof established by a completion time stated in the Contract clause "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the QC Manager shall conduct an inspection of the work and develop a punch list of items which do not conform to the approved drawings and specifications. Include in the punch list any remaining items of the "Rework Items List", which were not corrected prior to the Punch-Out inspection. The punch list shall include the estimated date by which the deficiencies will be corrected. A copy of the punch list shall be provided to the KO. The QC Manager or staff shall make follow-on inspections to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government "Pre-Final Inspection".

1.13.2 Pre-Final Inspection

The Government and QC manager will perform this inspection to verify that the facility is complete and ready to be occupied. A Government pre-final punch list may be developed as a result of this inspection. The QC Manager shall ensure that all items on this list are corrected prior to notifying the Government that a "Final" inspection with the customer can be scheduled. Any items noted on the "Pre-Final" inspection shall be corrected in a timely manner and shall be accomplished before the contract completion date for the work or any particular increment thereof if the project is divided into increments by separate completion dates.

1.13.3 Final Acceptance Inspection

The QC Manager, the superintendent, or other Contractor management personnel and the KO will be in attendance at this inspection. Additional Government personnel may be in attendance. The final acceptance inspection will be formally scheduled by the KO based upon results of the "Pre-Final Inspection". Notice shall be given to the KO at least 14 days prior to the final inspection. The notice shall state that all specific items previously identified to the Contractor as being unacceptable will be complete by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the KO to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause "Inspection of Construction".

1.14 DOCUMENTATION

Maintain current and complete records of on-site and off-site QC program operations and activities. The forms identified under the paragraph "INFORMATION FOR THE CONTRACTING OFFICER (KO)" shall be used. Reports are

required for each day work is performed. Account for each calendar day throughout the life of the contract. Every space on the forms must be filled in. Use N/A if nothing can be reported in one of the spaces. The superintendent and the QC Manager must prepare and sign the Contractor Production and CQC Reports, respectively. The reporting of work shall be identified by terminology consistent with the construction schedule. In the "remarks" section in this report which will contain pertinent information including directions received, problems encountered during construction, work progress and delays, conflicts or errors in the drawings or specifications, field changes, safety hazards encountered, instructions given and corrective actions taken, delays encountered and a record of visitors to the work site. For each remark given, identify the Schedule Activity No. that is associated with the remark.

1.14.1 Quality Control Validation

Establish and maintain the following in a series of three ring binders. Binders shall be divided and tabbed as shown below. These binders shall be readily available to the Government's Quality Assurance Team during all business hours.

- a. All completed Preparatory and Initial Phase Checklists, arranged by specification section.
- b. All milestone inspections, arranged by Activity/Event Number.
- c. A current up-to-date copy of the Testing and Plan Log with supporting field test reports, arranged by specification section.
- d. Copies of all contract modifications, arranged in numerical order. Also include documentation that modified work was accomplished.
- e. A current up-to-date copy of the Rework Items List.
- f. Maintain up-to-date copies of all punch lists issued by the QC Staff on the Contractor and Sub-Contractors and all punch lists issued by the Government.

1.14.2 As-Built Drawings

The QC Manager is required to review the as-built drawings, required by Section 01 78 00 CLOSEOUT SUBMITTALS, are kept current on a daily basis and marked to show deviations, which have been made from the Contract drawings. Ensure each deviation has been identified with the appropriate modifying documentation, e.g. PC number, modification number, RFI number, etc. The QC Manager shall initial each deviation or revision. Upon completion of work, the QC Manager shall submit a certificate attesting to the accuracy of the as-built drawings prior to submission to the KO.

1.15 NOTIFICATION ON NON-COMPLIANCE

The KO will notify the Contractor of any detected non-compliance with the foregoing requirements. The Contractor shall take immediate corrective action. If the contractor fails or refuses to correct the non-compliant work, the KO will issue a non compliance notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the KO may issue an order stopping all or part of the work

until satisfactory corrective action has been taken. The Contractor shall make no part of the time lost due to such stop orders the subject of claim for extension of time, for excess costs, or damages.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 50 00

TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS
08/09

PART 1 GENERAL

1.1 SUMMARY

Requirements of this Section apply to, and are a component of, each section of the specifications.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C511 (2007) Standard for Reduced-Pressure
Principle Backflow Prevention Assembly

FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH
(FCCCHR)

FCCCHR List (continuously updated) List of Approved
Backflow Prevention Assemblies

FCCCHR Manual (1988e9) Manual of Cross-Connection Control

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 241 (2009) Standard for Safeguarding
Construction, Alteration, and Demolition
Operations

NFPA 70 (2011) National Electrical Code

U.S. FEDERAL AVIATION ADMINISTRATION (FAA)

FAA AC 70/7460-1 (2007; Rev K) Obstruction Marking and
Lighting

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)

MUTCD (2009) Manual of Uniform Traffic Control
Devices

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval and information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submitted the following in accordance with Section 01 33 00
SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction site plan; G
Traffic control plan; G

SD-03 Product Data

Backflow preventers; G

SD-06 Test Reports

Backflow Preventer Tests; G

SD-07 Certificates

Backflow Tester Certification; G

Backflow Preventers Certificate of Full Approval

1.4 CONSTRUCTION SITE PLAN

Prior to the start of work, submit a site plan showing the locations and dimensions of temporary facilities (including layouts and details, equipment and material storage area (onsite and offsite), and access and haul routes, avenues of ingress/egress to the fenced area and details of the fence installation. Identify any areas which may have to be graveled to prevent the tracking of mud. Indicate if the use of a supplemental or other staging area is desired. Show locations of safety and construction fences, site trailers, construction entrances, trash dumpsters, temporary sanitary facilities, and worker parking areas.

1.5 BACKFLOW PREVENTERS CERTIFICATE

Certificate of Full Approval from FCCCHR List, University of Southern California, attesting that the design, size and make of each backflow preventer has satisfactorily passed the complete sequence of performance testing and evaluation for the respective level of approval. Certificate of Provisional Approval will not be acceptable.

1.5.1 Backflow Tester Certificate

Prior to testing, submit to the Contracting Officer certification issued by the State or local regulatory agency attesting that the backflow tester has successfully completed a certification course sponsored by the regulatory agency. Tester must not be affiliated with any company participating in any other phase of this Contract.

1.5.2 Backflow Prevention Training Certificate

Submit a certificate recognized by the State or local authority that states the Contractor has completed at least 10 hours of training in backflow preventer installations. The certificate must be current.

PART 2 PRODUCTS

2.1 TEMPORARY SIGNAGE

2.1.1 Bulletin Board

Immediately upon beginning of work, provide the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. Locate the bulletin board at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer.

2.1.2 Project and Safety Signs

The requirements for the signs, their content, and location are as shown on the drawings. Erect signs within 15 days after receipt of the notice to proceed. Correct the data required by the safety sign daily, with light colored metallic or non-metallic numerals.

2.2 TEMPORARY TRAFFIC CONTROL

2.2.1 Haul Roads

At contractors expense construct access and haul roads necessary for proper prosecution of the work under this contract. Construct with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic are to be avoided. Provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, must be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and hauling roads are subject to approval by the Contracting Officer. Lighting must be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations.

2.2.2 Barricades

Erect and maintain temporary barricades to limit public access to hazardous areas. Whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic barricades will be required. Securely place barricades clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

2.2.3 Fencing

As per Task Order.

2.2.4 Temporary Wiring

Provide temporary wiring in accordance with NFPA 241 and NFPA 70, Article 305-6(b), Assured Equipment Grounding Conductor Program. Include frequent inspection of all equipment and apparatus.

2.2.5 Backflow Preventers

Reduced pressure principle type conforming to the applicable requirements AWWA C511. Provide backflow preventers complete with 150 pound flanged

bronze mounted gate valve and strainer, 304 stainless steel or bronze, internal parts. The particular make, model/design, and size of backflow preventers to be installed must be included in the latest edition of the List of Approved Backflow Prevention Assemblies issued by the FCCCHR List and be accompanied by a Certificate of Full Approval from FCCCHR List. After installation conduct Backflow Preventer Tests and provide test reports verifying that the installation meets the FCCCHR Manual Standards.

PART 3 EXECUTION

3.1 EMPLOYEE PARKING

Contractor employees will park privately owned vehicles in an area designated by the Contracting Officer. This area will be within reasonable walking distance of the construction site. Contractor employee parking must not interfere with existing and established parking requirements of the government installation.

3.2 AVAILABILITY AND USE OF UTILITY SERVICES

3.2.1 Temporary Utilities

Provide temporary utilities required for construction. Materials may be new or used, must be adequate for the required usage, not create unsafe conditions, and not violate applicable codes and standards.

3.2.2 Payment for Utility Services

- a. The Government will make all reasonably required utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed will be charged to or paid for by the Contractor at prevailing rates charged to the Government or, where the utility is produced by the Government, at reasonable rates determined by the Contracting Officer. Carefully conserve any utilities furnished without charge.
- b. Reasonable amounts of the following utilities will be made available to the Contractor without charge.
 - (1) Water
 - (2) Electrical
 - (3) Sanitation
- c. The point at which the Government will deliver such utilities or services and the quantity available is as indicated. Pay all costs incurred in connecting, converting, and transferring the utilities to the work. Make connections, including providing backflow-preventing devices on connections to domestic water lines; and providing transformers; and make disconnections.

3.2.3 Water

Make connections to existing facilities to provide water for construction purposes. Water used may be furnished by the Government.

3.2.4 Sanitation

- a. Provide and maintain within the construction area minimum

field-type sanitary facilities approved by the Contracting Officer and periodically empty wastes into a municipal, district, or station sanitary sewage system, or remove waste to a commercial facility. Obtain approval from the system owner prior to discharge into any municipal, district, or commercial sanitary sewer system. Any penalties and / or fines associated with improper discharge will be the responsibility of the Contractor. Coordinate with the Contracting Officer and follow station regulations and procedures when discharging into the station sanitary sewer system. Maintain these conveniences at all times without nuisance. Include provisions for pest control and elimination of odors. Government toilet facilities will not be available to Contractor's personnel.

b. Provide temporary sewer and sanitation facilities that are self-contained units with both urinals and stool capabilities. Ventilate the units to control odors and fumes and empty and clean them at least once a week or more often if required by the Contracting Officer. The doors shall be self-closing. The exterior of the unit shall match the base standard color. Locate the facility behind the construction fence or out of the public view.

3.2.5 Telephone

Make arrangements and pay all costs for telephone facilities desired.

3.2.6 Obstruction Lighting of Cranes

Provide a minimum of 2 aviation red or high intensity white obstruction lights on temporary structures (including cranes) over 100 feet above ground level. Light construction and installation must comply with FAA AC 70/7460-1. Lights must be operational during periods of reduced visibility, darkness, and as directed by the Contracting Officer.

3.2.7 Fire Protection

Provide temporary fire protection equipment for the protection of personnel and property during construction.

3.3 TRAFFIC PROVISIONS

3.3.1 Maintenance of Traffic

- a. Conduct operations in a manner that will not close any thoroughfare or interfere in any way with traffic on railways or highways except with written permission of the Contracting Officer at least 15 calendar days prior to the proposed modification date, and provide a Traffic Control Plan detailing the proposed controls to traffic movement for approval. The plan must be in accordance with State and local regulations and the MUTCD, Part VI. Make all notifications and obtain any permits required for modification to traffic movements outside Station's jurisdiction. Contractor may move oversized and slow-moving vehicles to the worksite provided requirements of the highway authority have been met.
- b. Conduct work so as to minimize obstruction of traffic, and maintain traffic on at least half of the roadway width at all times. Obtain approval from the Contracting Officer prior to starting any activity that will obstruct traffic.
- c. Provide, erect, and maintain, at contractors expense, lights, barriers,

signals, passageways, detours, and other items, that may be required by the Life Safety Signage, overhead protection authority having jurisdiction.

3.3.2 Protection of Traffic

Maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment the work, and the erection and maintenance of adequate warning, danger, and direction signs, will be as required by the State and local authorities having jurisdiction. Protect the traveling public from damage to person and property. Minimize the interference with public traffic on roads selected for hauling material to and from the site. Investigate the adequacy of existing roads and their allowable load limit. Contractor is responsible for the repair of any damage to roads caused by construction operations.

3.3.3 Rush Hour Restrictions

Do not interfere with the peak traffic flows preceding and during normal operations without notification to and approval by the Contracting Officer.

3.3.4 Dust Control

Dust control methods and procedures must be approved by the Contracting Officer. Treat dust abatement on access roads with applications of calcium chloride, water sprinklers, or similar methods or treatment.

3.4 CONTRACTOR'S TEMPORARY FACILITIES

3.4.1 Safety

Protect the integrity of any installed safety systems or personnel safety devices. If entrance into systems serving safety devices is required, the Contractor must obtain prior approval from the Contracting Officer. If it is temporarily necessary to remove or disable personnel safety devices in order to accomplish contract requirements, provide alternative means of protection prior to removing or disabling any permanently installed safety devices or equipment and obtain approval from the Contracting Officer.

3.4.2 Administrative Field Offices

Provide and maintain administrative field office facilities within the construction area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

3.4.3 Storage Area

Construct a temporary 6 foot high chain link fence around trailers and materials. Fence posts may be driven, in lieu of concrete bases, where soil conditions permit. Do not place or store Trailers, materials, or equipment outside the fenced area unless such trailers, materials, or equipment are assigned a separate and distinct storage area by the Contracting Officer away from the vicinity of the construction site but within the installation boundaries. Trailers, equipment, or materials must not be open to public view with the exception of those items which are in support of ongoing work on any given day. Do not stockpile materials

outside the fence in preparation for the next day's work. Park mobile equipment, such as tractors, wheeled lifting equipment, cranes, trucks, and like equipment within the fenced area at the end of each work day.

3.4.4 Supplemental Storage Area

Upon Contractor's request, the Contracting Officer will designate another or supplemental area for the Contractor's use and storage of trailers, equipment, and materials. This area may not be in close proximity of the construction site but will be within the installation boundaries. Fencing of materials or equipment will not be required at this site; however, the Contractor is responsible for cleanliness and orderliness of the area used and for the security of any material or equipment stored in this area. Utilities will not be provided to this area by the Government.

3.4.5 Appearance of Trailers

- a. Trailers utilized by the Contractor for administrative or material storage purposes must present a clean and neat exterior appearance and be in a state of good repair. Trailers which, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed on installation property.

3.4.6 Maintenance of Storage Area

- a. Keep fencing in a state of good repair and proper alignment. Grassed or unpaved areas, which are not established roadways, will be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways, should the Contractor elect to traverse them with construction equipment or other vehicles; gravel gradation will be at the Contractor's discretion. Mow and maintain grass located within the boundaries of the construction site for the duration of the project. Grass and vegetation along fences, buildings, under trailers, and in areas not accessible to mowers will be edged or trimmed neatly.
- b. Cut grass (or annual weeds) within the construction and storage sites to a maximum 4 inch height at least once a week during the growing season unless the grass area is not visible to the public. Trim the grass around fences at time of grass cutting. Maintain grass or weeds on stockpiled earth as described above.

3.4.7 Security Provisions

Provide adequate outside security lighting at the Contractor's temporary facilities. The Contractor will be responsible for the security of its own equipment; in addition, the Contractor will notify the appropriate law enforcement agency requesting periodic security checks of the temporary project field office.

3.4.8 Storage Size and Location

Shall be determined, if required, at the scoping meeting of each Task Order, and reflected into the Scoping Meeting Notes.

3.4.9 Storage in Existing Buildings

Shall be determined, if required, at the scoping meeting of each Task Order, and reflected into the Scoping Meeting Notes.

3.4.10 Weather Protection of Temporary Facilities and Stored Materials

Take necessary precautions to ensure that roof openings and other critical openings in the building are monitored carefully. Take immediate actions required to seal off such openings when rain or other detrimental weather is imminent, and at the end of each workday. Ensure that the openings are completely sealed off to protect materials and equipment in the building from damage.

3.4.10.1 Building and Site Storm Protection

When a warning of gale force winds is issued, take precautions to minimize danger to persons, and protect the work and nearby Government property. Precautions must include, but are not limited to, closing openings; removing loose materials, tools and equipment from exposed locations; and removing or securing scaffolding and other temporary work. Close openings in the work when storms of lesser intensity pose a threat to the work or any nearby Government property.

3.5 GOVERNMENT FIELD OFFICE

3.5.1 Trailer-Type Mobile Office

The Contractor may, at its option, furnish and maintain a trailer-type mobile office acceptable to the Contracting Officer and providing as a minimum the facilities specified above. Securely anchor the trailer to the ground at all four corners to guard against movement during high winds.

3.6 PLANT COMMUNICATION

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor must install a satisfactory means of communication, such as telephone or other suitable devices and made available for use by Government personnel.

3.7 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, furnish and erect temporary project safety fencing at the work site. The safety fencing must be a high visibility orange colored, high density polyethylene grid or approved equal, a minimum of 42 inches high, supported and tightly secured to steel posts located on maximum 10 foot centers, constructed at the approved location. Maintain the safety fencing during the life of the contract and, upon completion and acceptance of the work, will become the property of the Contractor and be removed from the work site.

3.8 CLEANUP

Remove construction debris, waste materials, packaging material and the like from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways must be cleaned away. Store within the fenced area described above or at the supplemental storage area any materials resulting from demolition activities which are salvageable. Neatly stacked stored materials not in trailers, whether new or salvaged.

3.9 RESTORATION OF STORAGE AREA

Upon completion of the project remove the bulletinboard, signs, barricades, haulroads, and any other temporary products from the site. After removal of trailers, materials, and equipment from within the fenced area, remove the fence that will become the property of the Contractor. Restore to the original or better condition, areas used by the Contractor for the storage of equipment or material, or other use. Gravel used to traverse grassed areas must be removed and the area restored to its original condition, including top soil and seeding as necessary.

-- End of Section --

SECTION 01 57 19.00 20

TEMPORARY ENVIRONMENTAL CONTROLS

05/09

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
29 CFR 1910.1200	Hazard Communication
36 CFR 800	Protection of Historic and Cultural Properties
40 CFR 112	Oil Pollution Prevention
40 CFR 59	National Volatile Organic Compound Emission Standards for Architectural Coatings
40 CFR 82	Protection of Stratospheric Ozone
43 CFR 10	Native American Graves Protection and Repatriation Act
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
49 CFR 173	General Requirements for Shipments and Packaging
49 CFR 178	Specifications for Packaging/UN Performance Oriented Packaging Standards
49 CFR 180	Continuing Qualifications and Maintenance of Packaging

CA CODE OF REGULATIONS (CCR)

13 CCR	CA Department of Transportation/Highway Patrol
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14 CCR	Natural Resources
17 CCR	Abrasive Blasting
22 CCR 66260	Hazardous Waste Management System: General
22 CCR 66261	Identification and Listing of Hazardous Waste
22 CCR 66262	Standards Applicable to Generators of Hazardous Waste
22 CCR 66263	Standards Applicable to Transporters of Hazardous Waste
22 CCR 66264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
22 CCR 66265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
22 CCR 66266	Recyclable Materials (Recyclable Hazardous Wastes)
22 CCR 66268	Land Disposal Restrictions
22 CCR 66272	Enforcement, Inspections, and Informant Rewards
22 CCR 66273	Standards For Universal Waste Management
22 CCR 66279	Standards for the Management of Used Oil
27 CCR	Environmental Protection

KERN COUNTY AIR POLLUTION CONTROL DISTRICT (KCAPCD)

KCAPCD Rule 410.1	Architectural Coatings
KCAPCD Rule 410.5	Cutback, Slow Cure, and Emulsified Asphalt-Paving and Maintenance Operations

MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT (MDAQMD)

MDAQMD Rule 1103	Cutback and Emulsified Asphalt
MDAQMD Rule 1113	Architectural Coatings

1.2 DEFINITIONS

1.2.1 Solid Waste

Any discarded material in any form (i.e., solid, liquid, semisolid, or contained gas) resulting from domestic, industrial, commercial, mining, or agricultural operations. "Discarded material" is defined in 22 CCR 66261. Materials which are not wastes are listed in 22 CCR 66261. Typical solid wastes that may be generated from this project include but are not limited

to the following:

- a. Green waste: Vegetative matter (e.g., grass, bushes, roots, stumps, small trees) from landscaping, land clearing, and grubbing. Marketable trees, plants, and grasses that can be re-located or re-used are not classified as waste but reusable items.
- b. Surplus soil: Soil generated from the project that is without contaminants and is in excess of what is required for this work, including aggregates intended, but not used, for on-site mixing of concrete, mortars, and paving. Contaminated soil is defined as hazardous waste or regulated waste, not solid waste.
- c. Construction and demolition debris: Per 14 CCR 17381 that portion of construction and demolition waste (defined in 14 CCR 17225 as waste building materials, packaging and rubble generated from construction, renovation, repair, and demolition on pavements, houses, commercial building, and other structures) that is source separated or separated for reuse solid waste and recyclable materials, including commingled and separated materials, that result from construction work, that are not defined as hazardous waste per 22 CCR 66261 and contains no more than 1 percent putrescible wastes by volume (monthly basis).
- d. Wood: Dimension and non-dimension lumber, plywood, chipboard, hardboard. Chemically and pressure treated woods may be defined as hazardous waste depending on the waste characterization of the treated wood. Per CA Health & Safety Code, removed telephone poles and crossbars are not defined as hazardous waste but must be disposed in a lined Class 3 landfill permitted by the Water Board to accept the waste. Telephone poles and crossbars cannot be disposed in the local Kern County Class 3 landfill, since this landfill is not lined.
- e. Scrap metal: Ferrous and non-ferrous metals, such as reinforcing steel, structural shapes, pipe and wire, that are recovered or collected and sold as scrap. Scrap metal meeting the definition of hazardous waste (e.g., containing asbestos or containing chipping, peeling, or flaking lead-based paint or paint with other heavy metals, such as barium, nickel, chromium or zinc) per 22 CCR 66260 & 22 CCR 66261 must be managed as hazardous waste and is not recyclable.
- f. Recyclables: Materials, equipment, and assemblies, such as doors, windows, door and window frames, plumbing fixtures, glazing and mirrors that are recovered and reused or sold as recyclable. Certain construction and demolition debris are also recyclable. Metal can also be recyclable and is addressed above.
- g. Debris: Solid material as defined in 22 CCR 66260 that exceeds 60 mm particle size and is: a manufactured object, plant or animal matter, or natural geologic material (e.g. cobbles and boulders). A mixture of debris and other material, such as soil or sludge, is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection. Debris does not include lead acid batteries, cadmium batteries, radioactive lead solids, process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludge's,

air emissions, and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. Any debris that is defined as hazardous waste in 22 CCR 66261 must be managed as hazardous waste.

- h. Domestic trash: Garbage typically generated in a home, including but not limited to food waste, paper, glass, cardboard, and plastics. Dried painting supplies without solvents (e.g. rags, tarps, rollers, brushes) are included as domestic trash, while excess dried paint is not.

1.2.2 Hazardous Waste

Any solid waste which meets the definition of "hazardous" per 22 CCR 66261 or is designated hazardous waste by the EPA or State Hazardous Control Authority and is not excluded per 22 CCR 66261.

1.2.2.1 Hazardous Debris

"Debris" as defined in this section that contains listed hazardous waste (either on its surface, or in its interstices) per 22 CCR 66261 or debris that exhibits a characteristic of hazardous waste per 22 CCR 66261. Debris from construction and demolition projects containing chipping, peeling, or flaking lead-based paint or paint with other heavy metals, such as barium, nickel, chromium, or zinc paint, or containing asbestos may be defined as hazardous waste depending on the waste characterization of the debris.

1.2.2.2 Waste Oil

Oil of any kind or in any form, including fuel oil, oil refuse, crude oils, and refined oils. Waste oil is defined as hazardous waste unless the waste oil meets the definition of "used oil" in 22 CCR 66279. However, at China Lake all used oil will be managed as waste oil. Wastewater and solids that contain enough oil of any kind or form to fail the toxicity characteristic in 22 CCR 66261 are also hazardous wastes.

1.2.2.3 Universal Wastes

Certain hazardous wastes that are more common, generated by a wide variety of people rather than by industrial businesses, and pose a lower risk to people and the environment than other hazardous wastes. Management of Universal Wastes is simpler than management of hazardous wastes. Universal Wastes currently include the following but may be expanded in the future: batteries, lamps, aerosol cans, electronic devices, mercury-containing items, and cathode ray tubes.

1.2.2.4 Empty Containers

Certain containers that held hazardous materials or hazardous wastes as outlined in the paragraph entitled "Management of Containers" are defined as hazardous waste.

1.2.3 State Water Resources Control Board (SWRCB) Waste Classifications

The following classifications are presented in 27 CCR for discharge and disposal purposes.

1.2.3.1 Hazardous Waste

Definition is presented in paragraph entitled "Hazardous Waste".

1.2.3.2 Designated Waste (Regulated Waste)

Nonhazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a landfill could be released in concentrations exceeding applicable water quality objectives or could affect beneficial uses of the waters of the state.

1.2.3.3 Nonhazardous Solid Waste

Nonhazardous solid waste means all putrescible and nonputrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes and other discarded wastes. These wastes cannot contain wastes that are defined as hazardous or designated.

1.2.3.4 Inert Waste

Inert waste does not contain hazardous wastes or soluble pollutants at concentrations in excess of applicable water quality objectives and does not contain significant quantities of decomposable waste.

1.2.4 Ozone Depleting Substances (ODS)

Per 40 CFR 82 ODS (e.g., coolants and refrigerants) are divided into two categories based on their "ozone depleting potential". By definition Class I ODS have a greater ozone depleting potential than Class II ODS. Therefore, Class I ODS are subject to more stringent requirements.

1.2.4.1 Class I ODS

The most prevalent Class I ODSs in Navy applications are CFC-11, CFC-12, CFC-113, CFC-114, CFC-500, Halon 1211, Halon 1301, methyl chloroform and carbon tetrachloride.

1.2.4.2 Class II ODS

The most commonly used Class II ODSs are HCFC-22, HCFC-123, HCFC-141b.

1.2.5 Hazardous Materials

Per 49 CFR 171, a substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. Per Department of Transportation (DoT) definition, hazardous materials also include hazardous wastes. However, for clarification "materials" typically refer to unused products and "wastes" refer to unwanted or spent materials.

1.3 SUBMITTALS

Submittals shall be provided in accordance with Section 01 30 00 SUBMITTAL PROCEDURES. All records shall be maintained at the project site or at the local Contractor office. Government approval is required for submittals

with a "G" designation.

SD-01 Preconstruction Submittals

Environmental protection plan; G

SD-11 Closeout Submittals

Solid waste disposal report

1.3.1 Environmental Protection Plan

The plan consists of the two separate submittals:

- a. List of hazardous wastes, on the "List of Hazardous Waste to be Generated from Project" form that will be generated from the project, along with estimated quantities and proposed disposal/recycling facilities. A hard copy or electronic version of the form is available from the Contracting Officer or the Environmental Division (760-939-3219). Environmental via the Contracting Officer reserves the right to reject a disposal/recycling facility and to request proof that a disposal/recycling facility is permitted or licensed to accept waste.
- b. Solid (Non-Hazardous) Waste Management Plan using the template provided by the Contracting Officer or by the Station Recycling Program Manager (939-2522).

The Contractor shall provide the two submittals to the Contracting Officer 3 days before the pre-construction meeting. Work will not begin until the plan is approved by Environmental.

1.3.2 Solid Waste Disposal Report

For the disposal and/or recycling of solid waste, including items that were reused, the Contractor shall submit the "Construction & Demolition Debris Diversion Summary Report (Monthly & Closeout)" form to the Contracting Officer. For each waste the report will provide the type of waste, amount, and receiving facility name and address. The report should be submitted with the final Contractor invoice.

1.3.2.1 Monthly Waste Disposal Reports

For jobs that will last more than two months, the Contractor shall submit a "Construction & Demolition Debris Diversion Summary Report (Monthly & Closeout)" at the end of each month.

1.4 HAZARDOUS WASTE/HAZARDOUS MATERIALS PROHIBITION

No hazardous waste shall be disposed on Government property. No hazardous material shall be brought onto Government property that does not directly relate to the performance of this contract. The Government is not responsible for disposal of Contractor material brought on the job site and not required in the performance of this contract. Removal of unused materials and equipment used to support the contract are the responsibility of the Contractor.

The Contractor is not authorized to discharge any unwanted materials or

wastes to the domestic sewer, storm drains or ground on Government property without approval from the Contracting Officer. However, latex paint supplies (e.g. brushes) may be cleaned with water and discharged to the domestic sewer.

Treatment by evaporation or drying of chemicals (including paints, resins, and urethanes) by removal of container lids or other method is prohibited. Treatment by mixing chemicals or mixing with other solid wastes (e.g., soil, water) is also prohibited.

Vehicle maintenance (e.g., oil changes) on-Station is prohibited. However, repair of unforeseen breakdowns of vehicles and equipment is allowed on-Station to maintain work schedule.

Once an item containing chipping, peeling, or flaking lead-based paint (or paint with other heavy metals, such as barium, nickel, chromium, or zinc) is declared a waste, encapsulating the lead-based paint by painting over it is prohibited.

The Contractor shall provide Hazard Communication training per 29 CFR 1910.1200 for any hazardous materials used during the job to applicable employees. The Contractor shall maintain applicable MSDS' at the job site.

1.5 MANAGEMENT OF OZONE DEPLETING SUBSTANCES (ODS)

1.5.1 Background

Production of chlorofluorocarbons (CFC) was banned as of 31 Dec 95 (Halons as of 1 Jan 94). Because Class I ODS are harder to obtain and much more expensive, Department of Defense (DOD) is stockpiling Class I ODS for mission-critical uses. All Class I ODS (CFC-11, CFC-12, CFC-114, and CFC-500) are designated as "Navy mission critical" and must be turned-in to the Navy portion of the DoD ODS Reserve. Used ODS is not defined as hazardous wastes per 22 CCR 66261, if the ODS is reclaimed for further use. At China Lake all equipment that use Class I ODSs are no longer in service. Therefore, Class I ODS will not be reused on-Station.

1.5.2 Management Requirements

- a. All Class I ODS must be deposited in the Navy portion of the ODS Reserve in Virginia. ODS approved containers must be used and may be available from the ODS Reserve.
- b. Transfer of ownership of Class I ODSs to the Contractor is not allowed.
- c. Only EPA-certified refrigerant recovery equipment shall be used to recover refrigerant by the Contractor.
- d. Contractor personnel who service the refrigerant equipment or recover refrigerants shall be certified per 40 CFR 82. A copy of the card shall be provided to the Contracting Officer prior to the start of the job.
- e. ODS refrigerants are considered hazardous materials. Transport of ODS must be according to DoT regulations specified in 49 CFR 173. Environmental must sign all Contractor-prepared shipping documents and approve packaging, etc, prior to Contractor transport.

- f. The Contractor shall transfer any ODS-containing item that is reusable to the Department Reutilization Marketing Office (DRMO) for sale. The Contractor shall contact the local DRMO representative at 760-939-2424 for evaluation of the item. If DRMO accepts the item, the Contractor shall label the item to indicate that it contains an ODS per DRMO guidance.
- g. If the ODS-containing item is not reusable (rejected by DRMO), then the ODS must be recovered and the item transferred to the China Lake Recycling Metal Sorting Area located at the DRMO Yard for sale as scrap metal. For access to the area, the Contractor shall contact the Recycling Program Manager at 760-939-2522. If the Contractor is required to remove the ODS per the project's scope of work, the Contractor shall provide to the Contracting Officer and to the Recycling Program Manager DTSC Form 1430 from a Certified Appliance Recycler (CAR) indicating that the refrigerant was properly removed from the units per CA Assembly Bill 2277. If necessary, the Environmental Division will provide a list of CARs to the Contractor or the Contractor may submit an application to DTSC with DTSC Form 1428 to become a CAR.

1.5.3 Disposal/Reuse Options

The Contractor shall provide documentation on the attached "List of Wastes to be Generated from Project" form detailing the proposed final disposition of all ODS materials (both Class I and Class II) to the Contracting Officer prior to the start of work for Environmental Division review and approval.

1.5.3.1 Class I ODS

The Contractor ships the container of removed ODS to the ODS Reserve at the following address:

Defense Depot Richmond VA
SWO400
ATTN: Cylinder Operations
800 Jefferson Davis Highway
Richmond, VA 23297-5000

Phone number for the ODS Reserve is 804-279-4865. Transfer of ODS to the Environmental Division for handling is allowed only with prior approval by the Contracting Officer.

1.5.3.2 Class II ODS

If the Government does not plan on reusing the removed Class II ODS at China Lake, the Contractor may retain the ODS for reuse. If the Contractor does not reuse the ODS, the Contractor shall transport the ODS to a reclaiming facility. Note that R-22 is now accepted at the ODS Reserve and should be transferred to the ODS Reserve as the reclaiming facility. As a last option, the Contractor shall transport the ODS to a permitted off-Station disposal facility. The Contractor shall manage ODS that are disposed (not reused or reclaimed) as hazardous waste.

1.6 AIR QUALITY REQUIREMENTS

All use of chemicals, solvents, cleaners, spray equipment, grinding methods, portable or fixed internal combustion engine generators, and any

other air emission operations shall conform to permits and regulations issued by Federal, State, County, District or local regulatory agencies. The cost of compliance for these permits is the responsibility of the Contractor.

1.6.1 Architectural Coatings

- a. In Kern County, architectural coating operations must comply with KCAPCD Rule 410.1.
- b. In San Bernardino County, architectural coating operations must comply with MDAQMD Rule 1113.
- c. In Inyo County, architectural coating operations must comply with 40 CFR 59 Subpart D.

1.6.2 Asphalt

- a. In Kern County, asphalt must comply with KCAPCD Rule 410.5.
- b. In San Bernardino, County asphalt must comply with MDAQMD Rule 1103.

1.6.3 Abrasive Blasting Operations

Abrasive blasting must comply with 17 CCR Chapter 1, Subchapter 6 "Abrasive Blasting". The use of silica sand is prohibited in sandblasting. Provide tarpaulin drop cloths and windscreens to enclose abrasive blasting operations to confine and collect dust, abrasive, agent, paint chips, and other debris. Perform work involving removal of hazardous material in accordance with 29 CFR 1910. Manage generated blasting waste in accordance with the provisions in this specification.

1.6.4 Equipment

Equipment used by the Contractor must be permitted with the air district for the county in which the project takes place, or be registered with the California Air Resources Board, as applicable. For permits obtained by the Contracting Officer, whether or not required by the permit, the Contractor is responsible to perform quality control inspections of the work in progress.

1.6.5 Dust Control

The Contractor shall take reasonable precautions to prevent visible particulate matter from being airborne from the construction site, under normal wind conditions (sustained winds less than 25 mph). Reasonable precautions may include, but are not limited to:

- a. The contractor shall have available a minimum of one watering truck to apply water to construction areas and unpaved access roads and haul roads. More than one water truck may be needed depending on the size of the construction site, the length of the road(s), and/or the amount and type of traffic on the road(s). Water shall be applied to these areas in the amount (and at the frequency) necessary to prevent them from becoming sources of fugitive dust. Rainfall may be considered an "application" of water if it made the site adequately wet to prevent the site from becoming a source of fugitive dust.

- b. The contractor shall post and observe a speed limit of 25 mph at the project site. (This means the actual construction site and any unpaved access to the site. It does not include paved roads in the vicinity of the project site.) During normal daily activity this speed limit will be strictly enforced by the contractor.
- c. Water or other dust suppressants shall be used to prevent particulate matter from becoming airborne in handling dusty materials to open stockpiles and mobile equipment. All stockpiles of topsoil, sand, and other like materials shall be covered to prevent airborne fugitive dust.
- d. The contractor shall be responsible for removing (at least once per week during construction) materials tracked onto paved roadways from dirt roadways by construction vehicles associated with the project.
- e. All bulk materials being hauled on paved roadways shall be covered during transit.
- f. Earth movement shall be limited to the minimum required to achieve project objectives.

If wind conditions are such that the contractor cannot control dust, the contractor shall shut down soil disturbing operations (except for equipment used for dust control).

Under no circumstances will visible fugitive dust from the construction site or haul road(s) be allowed to blow off of Station property.

1.7 STORAGE TANKS

To meet the requirements of 40 CFR 112, any aboveground storage tank that is to hold petroleum product shall have the following features

- a. No part of the tank shall be below the ground surface.
- b. The tank shall have secondary containment that holds 110% of the tank's volume.
- c. Drainage from the secondary containment shall normally be in the closed position.
- d. The tank shall have markings for the material stored.
- e. Daily visual inspections of the tank shall be performed and documented to verify that the tank is not leaking and the surrounding area is free of spills.
- f. The tank shall have a form of overflow protection (e.g. Float indicator, Dial gauge, High-level alarm).
- g. The tank shall have overflow catchment (e.g. Catch pan at fill port, Fill port inside secondary containment).
- h. Tank piping shall be protected from vehicles.
- i. Tank piping shall be aboveground.

- j. The general area shall be well lit so that spills or leaks can easily be observed.

Tanks that hold hazardous waste must meet the requirements in 22 CCR 66262 and 22 CCR 66265 and managed as 90-day accumulation areas.

Contractor-operated underground storage tanks are not allowed for completion of the project.

1.8 MANAGEMENT OF HAZARDOUS WASTE (HW)

All HW as defined in this specification must be managed per 22 CCR 66261, 22 CCR 66262, 22 CCR 66263, and as follows. Specifically, standards for "Large Quantity Generators" of HW shall be followed. Technical questions regarding hazardous waste management may be directed to the Environmental Division at 760-939-3219. Technical questions regarding HW documentation for off-site transport may be directed to the on-Station HW Storage Facility (HWSF) at 760-939-3836.

1.8.1 Identification of HW

1.8.1.1 Waste Determination

The Contractor shall identify all wastes that have the potential of being HWs and need to be managed according to this specification. The waste determination must be based upon one or more of the following. Upon request by the Environmental Division via the Contracting Officer, the Contractor shall provide proof of the waste determinations:

- a. Manufacturer information or Material Safety Data Sheets (MSDS);
- b. Process generating the waste;
- c. Knowledge of the waste; and/or
- d. Laboratory analysis. The Contractor shall only use CA-certified laboratories and EPA or State approved analytical methods.

1.8.1.2 Possible HWs Generated

Items that may be generated from this contract and defined as HW either by regulation or Station policy include but are not limited to:

- a. Waste oil, as defined in the paragraph entitled "Hazardous Waste";
- b. Empty (or partially empty) containers of coatings, adhesives, and sealants;
- c. Empty (or partially empty) paint containers;
- d. Spent rags with oil, tar, solvent, or other chemical or residue;
- e. Contaminated personal protective equipment (e.g. gloves);
- f. Used absorbent contaminated with a hazardous substance;
- g. Spill cleanup residues;
- h. Items with peeling, flaking, or chipping lead-based paint or other

heavy metals above the regulatory limits, such as barium, chromium, nickel, and zinc, as well as removed paint that is regulated; and

1.8.2 Accumulation of HW

Depending on the quantity and type of HWs generated, HWs shall be accumulated in a 90-day or satellite area that meets all requirements listed in 22 CCR 66262. The Contractor shall notify the Contracting Officer of the location of the accumulation area prior to its setup. Once the accumulation area is setup, the Environmental Division shall approve its use prior to HW being placed in the accumulation area. The Contractor shall inspect 90-day areas according to the regulations and provide copies of these inspections upon request by the Environmental Division via the Contracting Officer. The Environmental Division prefers that the Contractor use the Environmental Division's 90-day inspection form.

1.8.3 Containers

Each container of waste will meet 49 CFR 172, 49 CFR 173, 49 CFR 178 and 13 CCR requirements be structurally sound, remain closed except when removing or adding waste, compatible with the waste, and marked with a properly completed HW label using the Station's EPA identification number.

1.8.4 HW Documentation

For large quantities of HWs (e.g. asbestos-containing waste and lead-based paint containing waste) that are placed in bulk containers as defined by DoT, the Contractor shall prepare all Hazardous Waste Manifests, Land Disposal Restriction forms, and Waste Profile documentation for approval and signature by the Environmental Division. The Contractor shall use the Station's EPA Identification Number and generator address on HW manifests. The Contractor shall transport HWs only to a Treatment, Storage, Disposal facility that is permitted to accept the specific type(s) of HW, and which has been approved by the Environmental Division. The Contractor shall also complete the Station's HW Disposal Request Form which can be provided by the Environmental Division upon request. Because improperly completed documentation can delay completion of a project, the Contractor shall meet with the HWSF operator at 760-939-3836 before the HW is generated.

1.8.5 Training Requirements

Training requirements for handling and management of HW follow:

- a. The Contractor shall ensure that workers generating, managing, and/or handling HW are trained according to 22 CCR 66265. Upon request by the Environmental Division via the Contracting Officer, the Contractor shall provide a copy of the training package or a training certificate.
- b. OSHA HAZWOPER training (29 CFR 1910.120) may also be applicable to the project but is required only for specific applications as written in the regulation. Upon request, the Contractor will provide reasons why the training is needed.
- c. The Contractor shall ensure that workers are trained according to "Hazardous Communication" training in 29 CFR 1910.1200.
- d. The Contractor shall ensure that workers are adequately trained

according to any other applicable regulations (e.g. respirators, confined space) for the project by providing a copy of the training certificate.

1.8.6 Transfer of HWs to the Station Storage Facility

Except for large quantities of HWs (e.g. asbestos-containing waste and lead-based paint containing waste) that are placed in bulk containers as defined by DoT, the Contractor shall transfer Contractor-generated HWs to the on-Station HWSF for storage and final disposal. The Contractor may not separate HW designated for bulk containers into small containers in order to avoid Contractor responsibility for the HW. Depending on the amount, type and circumstance, transfer of spill cleanup residues will be decided on a case-by-case basis.

The Contractor shall complete the Station Hazardous Waste Disposal Request form (available to the Contractor upon request) and provide the form to the HWSF personnel at least 15 working days prior to the end of the accumulation time period or the end of the job. As the requestor on the form, the Contractor shall provide name and phone number of the person in charge of the HW and Contractor company name. The Contractor shall contact HWSF personnel at 760-939-3836 to schedule drop-off of the wastes. The Contractor shall not drop-off wastes without facility personnel present. The Contractor is still responsible for proper accumulation of the HWs prior to transfer to the HWSF.

1.8.7 Transport of HWs

For large quantities of HWs (e.g. asbestos-containing waste and lead-based paint containing waste) that are placed in bulk containers as defined by DoT, the Contractor shall transport HWs according to the regulations specified in 22 CCR 66263 and according to 49 CFR 171, 49 CFR 172, 49 CFR 173, 49 CFR 178, and 49 CFR 180. The Contractor shall provide copies of all applicable documentation for Environmental Division review and approval. The Contractor (or the designated transporter) shall maintain copies of manifests per 22 CCR 66263.

1.9 MANAGEMENT OF UNIVERSAL WASTE

All Universal Waste as defined in paragraph entitled "Universal Wastes" (batteries, lamps, aerosol cans, electronic devices, mercury-containing items, and cathode ray tubes) must be managed per 22 CCR 66273 and as follows. Specifically, standards for "Large Quantity Handlers" of Universal Wastes will be followed. Technical questions regarding Universal Waste management may be directed to Environmental at 760-939-3219. Technical questions regarding documentation for off-site transport may be directed to the on-Station HW Storage Facility (HWSF) at 760-939-3836.

1.9.1 Identification of Universal Wastes

The Contractor shall identify all wastes that are listed in 22 CCR 66273 as Universal Wastes.

1.9.2 Accumulation of Universal Wastes

The Contractor shall notify the Contracting Officer of the location of the area where the Universal Waste will be accumulated prior to its setup. When HW is also generated, the Universal Waste and HW shall be accumulated in the same area. Once the accumulation area is setup, Environmental will

approve its use prior to waste being placed in the area. The Contractor shall accumulate the Universal Waste no longer than one year.

1.9.3 Transfer of Universal Wastes to the Station Storage Facility

The Contractor shall transfer Contractor-generated Universal Wastes to the on-Station HWSF for storage and final disposal. The Contractor shall complete the Station Hazardous Waste Disposal Request form (available to the Contractor upon request) and provide the form to the HWSF personnel at least 15 working days prior to the end of the accumulation time period or the end of the job. As the requestor on the form, the Contractor shall provide name and phone number of the person in charge of the Universal Waste and Contractor company name. The Contractor shall contact HWSF personnel at 760-939-3836 to schedule drop-off of the wastes. The Contractor shall not drop-off wastes without facility personnel present. The Contractor is still responsible for proper accumulation of the Universal Wastes prior to transfer to the HWSF.

1.9.4 Containers

Containers will meet 49 CFR 172, 49 CFR 173, 49 CFR 178 and 13 CCR requirements, be structurally sound and compatible with the waste. Containers will remain closed, except when adding or removing waste. The Contractor will mark each container with the initial date of accumulation. Each container will be marked per the regulation and the type of Universal Waste generated e.g., marking for containers of fluorescent light tubes is "Universal Waste - Lamps" or "Waste Lamps" or "Used Lamps".

1.9.5 Training Requirements

- a. The Contractor shall ensure that each employee handling the Universal Waste is familiar with proper waste handling and emergency procedures according to 22 CCR 66273. Upon request by Environmental via the Contracting Officer, the Contractor shall provide a copy of the training package or a training certificate to the Contracting Officer.
- b. OSHA HAZWOPER training (29 CFR 1910.120) may also be applicable to the project but is required only for specific applications as written in the regulation. Upon request, the Contractor will provide reasons why the training is needed.
- c. The Contractor shall ensure that workers are trained according to "Hazardous Communication" training in 29 CFR 1910.1200.
- d. The Contractor shall ensure that workers are adequately trained according to any other applicable regulations (e.g. respirators, confined space) for the project.

1.10 MANAGEMENT OF CONTAINERS

Per Station policy, a container that:

- a. Held hazardous materials or HWs but does not meet the definition of "empty" in 22 CCR 66261;
- b. Held hazardous materials or HWs listed as an acute or extremely HW in 22 CCR 66261 (whether empty or not); or

- c. Held hazardous materials or HWS and is equal to or less than 5 gallons (whether empty or not)

must be managed as HW as outlined in the paragraph entitled "Management of Hazardous Wastes".

Note that empty 1 quart plastic motor oil containers with no free flowing oil are an exception to the above requirement. These containers may be managed as domestic trash or turned into the Station Recycling Facility.

A container that held hazardous materials or HWS, meets the definition of "empty", has a volume greater than 5 gallons, and did not hold acute or extremely HW is not hazardous waste but must be managed as follows:

- a. Close the lid or bung;
- b. Remove the HW label;
- c. Mark with "Empty" and the date the container was emptied; and
- d. Transfer to the Station HWSTF with a properly completed HW Disposal Request Form within 90 calendar days after emptied or reused on-Station for the same construction project with the same material or waste derived from the same material.

1.11 PRIORITIES FOR FINAL DISPOSITION OF SOLID WASTE AND REUSABLE ITEMS

Disposition of solid waste and reusable items will be documented by the Contractor on the "Construction & Demolition Debris Diversion Summary Report (Monthly & Closeout)" form and prioritized as follows. The Contractor shall use the Microsoft Excel version of this form. The Microsoft Excel version of the form is available from the Contracting Officer, Environmental Division at 760-939-3219, or the Station Recycling Program Manager at 760-939-2522. Weight tickets shall be submitted with the form. The Contractor shall segregate wastes to optimize the implementation of each option.

1.11.1 Reuse

First consideration will be given to reuse of the item in its original form in the following order:

- a. Reuse on-Station. The Contracting Officer will notify the Contractor if the item will be reused on-Station. Only concrete and asphalt crushed to 2 inch diameter or less may be transferred to the on-Station "Y Site" for Government reuse;
- b. Sale by DRMO. The Contractor shall contact the local DRMO representative at 760-939-2424 for evaluation of the item. If the item has value for resale, DRMO will take possession of the item. The Contractor shall transport the items to the DRMO yard; and
- c. Reuse by the Contractor. Method of reuse must be approved by the Contracting Officer.

1.11.2 Recycle

Solid wastes that are not suitable for reuse, but have value as being recyclable, shall be recycled whenever economically feasible. Recyclable

items include but are not limited to concrete, asphalt, cardboard packaging, and scrap metal. The Contractor shall coordinate with the Station Recycling Program Manager at 760-939-2522. Depending on the type of item(s), the Recycling Program Manager can provide bins for item(s) and can transfer the item(s) from the job site. All cardboard packing must be recycled through the Station Recycling Facility.

1.11.2.1 Scrap Metal

All scrap metal, as defined in the paragraph entitled "Definitions", that is generated from the project and is not defined as Hazardous Waste (e.g., containing asbestos or containing chipping, peeling, or flaking lead-based paint or other heavy metals, such as barium, nickel, chromium, or zinc) shall be transported to the Recycling Metal Sorting Area located at the DRMO Yard. For access to the area the Contractor shall contact the Recycling Program Manager at 760-939-2522.

Unusable appliances, as defined in CA Assembly Bill 2277, include but are not limited to washers, dryers, refrigerators, freezers, water & space heaters, furnaces, boilers, air-conditioners, dehumidifiers, and trash compactors shall be turned in to the Station Recycling Facility. The Recycling Program Manager's Contractor shall transfer the units to a Certified Appliance Recycler (CAR) for removal of the hazardous materials, including but not limited to mercury switches or temperature control devices, oil from compressors, ODS, and capacitors with PCBs, per CA Assembly Bill 2277.

In addition, unusable metal equipment that is not defined as an "appliance" per CA Assembly Bill 2277, may also be turned into the Station Recycling Facility after removal of hazardous materials and recycling.

1.11.3 Off-Station Disposal

Items with no practical use or economic benefit shall be disposed at a landfill permitted to accept the waste. For concrete and asphalt, this option may only be used with prior approval by the Contracting Officer.

1.12 WASH WATER FROM CONCRETE TRUCKS

Wash water from concrete trucks may be discharged into any open utility trenches which will be or is being filled with concrete slurry or into a shallow basin big enough to contain the water. After the washout water has dried, the Contractor shall remove the concrete residue and handled as construction debris. The basin will be restored to surrounding grade.

1.13 MANAGEMENT OF IONIZATION SMOKE DETECTORS AND TRITIUM EXIT SIGNS

Ionization smoke detectors contain Americium 241 and exit signs without light-emitting diodes contain radioactive materials. Removed detectors generated from this job shall be shipped by the Contractor to the manufacturer for dismantling. The Contractor shall arrange with the manufacturer for proper management of the detectors. Technical questions regarding their handling shall be directed to John Bradford at 760-939-3071.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work. Plans for restoration should be approved before project initiation with the Environmental Division which includes seed mix, area to be reclaimed, and methods. Confine construction activities to within the limits of the work indicated or specified.

3.1.1 Land Resources

Except in areas to be cleared, do not remove, cut, deface, injure, or destroy trees or shrubs without the Contracting Officer's permission. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorages unless authorized by the Contracting Officer. Where such use of attached ropes, cables, or guys is authorized, the Contractor will be responsible for any resultant damage. Project sites must be clearly marked and all activities, including material and equipment staging/parking must be confined to the project site.

3.1.2 Fish and Wildlife Resources

Do not disturb fish and wildlife. Do not alter water flows or otherwise significantly disturb the native habitat adjacent to the project and potentially essential to the survival of fish and wildlife, except as indicated or specified. Do not remove bird nests containing eggs or young. The Environmental Division must be consulted to resolve questions concerning activities which may impact natural resources.

3.1.3 Threatened and Endangered Species

It is not permissible to kill, harm, harass, or otherwise "take" any federally listed threatened or endangered species. Endangered species that may be encountered at China Lake include the Desert Tortoise, the Inyo California towhee (bird), and Mohave Tui Chub (fish). Contracting Officers, in consultation with the EMD, must be consulted regarding construction operations which may potentially impact these species. It is mandatory that all potential conflicts with these species be strictly avoided.

Depending on project location, a Desert Tortoise Awareness briefing may be required for all project personnel.. Inyo Towhees primarily inhabit willows along Mountain Springs Canyon Road, and all work along that road will need to be coordinated with EMD. Mohave Tui Chub occupy deep channels running from Lark Seep to G-1 Seep. Work in or near those channels will need to be coordinated with EMD. Tortoise inhabit 40 percent of China Lake lands and are primarily located in most all areas below 4500 foot elevation. Contact the Contracting Officer for more information on the awareness briefings. In addition, projects located within Desert Tortoise Habitat, as determined by EMD, will require that the EMD complete a final site clearance survey for desert tortoises within seven calendar days of starting any construction activity, including staging, at the job site.

3.2 HISTORICAL AND ARCHAEOLOGICAL RESOURCES

Through field inventory and/or documentation of cultural resource on site atlases, ensure that the project will not impact (effect) extant cultural

resources per 36 CFR 800. These resources include paleontologist, archaeological, historical sites, historical buildings, the cultural landscape and traditional cultural properties.

Carefully protect sites in-place and report immediately to the Contracting Officer historical and archaeological items or human skeletal remains discovered in the course of work per 43 CFR 10. In the event that historic, e.g., obsidian flakes, human remains, basketry, etc., are encountered during the project, the Contractor immediately shall stop all work in the area and contact the Contracting Officer and an Environmental specialist at 939-1350. Within 7 calendar days the Government will assess the site and provide this information to the Contractor. The Government retains ownership and control over historical and archaeological resources.

3.3 BURNOFF

Burnoff of the ground cover is not permitted.

3.4 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the contract, environmental protection. Plan for and provide environmental protective measures required to correct adverse conditions that develop during construction.

Failure to perform and document environmental compliance and quality control measures required by environmental regulations, permits obtained by the Contractor, or permits obtained by the Contracting Officer for implementation by the Contractor, shall be cause for retaining up to 10 percent of the amount invoiced to the Government, until such time as quality control measures and/or environmental specification violations are resolved to the satisfaction of the Contracting Officer.

3.5 ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

The Contractor shall perform work consistent with the relevant policy and objectives identified in NAWS China Lake's Environmental Management System (EMS) outlined in NAWSINST 5090.2. The Contractor shall perform work in a manner that conforms to all appropriate Environmental Management Programs and Operational Controls identified by the EMS, including pollution prevention, waste reduction, energy use, and natural resource protection. The Contractor shall provide monitoring and measurement information as necessary for the organization to address environmental performance relative to the environmental, energy, and transportation management goals. In addition, the Contractor shall advise their employees of their roles and responsibilities identified by the EMS and how these requirements affect their work performed under this contract.

In the event of any environmental nonconformance or noncompliance associated with the contracted services, the contractor shall take corrective and/or preventative actions. In the event of any noncompliance with any federal, state, or local environmental law, regulation or requirement, the Contractor shall immediately respond by taking all appropriate corrective action and notifying the Contracting Officer's Representative (COR). For any nonconformance with the EMS, the Contractor shall take corrective action and initiate further preventative action, as required by the Environmental Management Division (EMD).

All on-site contractor personnel shall complete yearly environmental awareness training specified for the type of work conducted on-site. Upon

contract award, the COR will notify the EMD to arrange training for appropriate staff.

Additionally, when ordering supplies for use on NAWS China Lake or for use by NAWS China Lake personnel, all contractor personnel must favor energy-efficient, recycled or reclaimed material whenever practicable.

The responsibilities of all contractor personnel include, but are not limited to:

- a. Recycling all eligible material, including glass, paper (including magazines), plastic, aluminum, and cardboard to the maximum extent practicable.
- b. Reducing the amount of hazardous material and/or solvent used by purchasing fewer hazardous materials and by increasing the use of products with recycled content.
- c. Reducing the amount of solid waste from construction and demolition debris, and scrap metal sent to municipal and rubble landfills by reducing, reusing, and recycling.
- d. Conserving energy and water usage by turning off lights and equipment when not in use and using only the necessary amount of water needed to complete the required tasks. Continuous conservation of our natural resources is a must.

3.6 INSPECTIONS BY REGULATORY AGENCIES

The Contractor is advised that the Contractor's activities and the Station are subject to Federal, State, and local regulatory agency inspections for compliance with environmental laws and regulations. The Contractor will fully cooperate with representatives from any regulatory agency who may contact the Contractor or visit the job site. If contacted by a regulatory agency, the Contractor will provide immediate notification to the Contracting Officer. The Contractor will complete, maintain, and make available to the Contracting Officer all related documentation.

The Contractor will be responsible for all damages to persons or property resulting from Contractor fault or negligence as well as for the payment of any civil fines or penalties which may be assessed by any regulatory agency as a result of the Contractor's or any subcontractor's violation of any applicable Federal, State or local environmental laws or regulations. Penalties for hazardous waste violations are presented in 22 CCR 66272. Should a Notice of Violation (NOV), Notice of Noncompliance (NON), Notice of Deficiency (NOD), or similar regulatory agency notice be issued to the Government as facility owner/operator on account of the actions or inactions of the Contractor or one of its subcontractors in the performance of work under this contract, the Contractor will fully cooperate with the Government in defending against regulatory assessment of any civil fines or penalties arising out of such actions or inactions.

3.7 UNKNOWN CONTAMINATION

The Contractor shall cease work on that portion of the project if any unusual odors or stained soil are discovered by the Contractor. The Contractor shall report this occurrence immediately to the Contracting Officer and Environmental. Within 14 calendar days the Government will characterize the contamination and provide this information to the

Contractor. Based on this information, the Contractor will propose health & safety protection for workers (if needed). If the Government agrees to the Contractor proposal, then a contract modification will be issued.

3.8 CONTROL AND DISPOSAL OF SOLID WASTES

The Contractor shall collect solid wastes and place in covered containers supplied by the Contractor or manage solid wastes as approved by the Contracting Officer for the specific project. The containers must be regularly emptied and not overflowing. The Contractor shall prevent contamination of the site or other areas when handling and disposing of wastes. The Contractor is responsible to handle all solid waste per the paragraph entitled "Priorities for Final Disposition of Solid Waste and Reusable Items". Solid waste disposal off-site must comply with the most stringent local, State, and Federal requirements. The Contractor can dispose waste in Government-operated dumpster's on-Station only with approval by the Contracting Officer.

3.9 CONTROL AND DISPOSAL OF HAZARDOUS WASTES

Hazardous waste will be managed and disposed in accordance with the requirements in this Section, all Federal, State, and local regulations including 22 CCR 66261, 22 CCR 66262, 22 CCR 66263, 22 CCR 66264, 22 CCR 66265, 22 CCR 66266, 22 CCR 66268 and 22 CCR 66279, and with the paragraph entitled "Management of Hazardous Wastes".

3.10 RELEASES/SPILLS OF HAZARDOUS SUBSTANCES

The Contractor will take precautions to prevent releases of hazardous substances, including hazardous wastes. In the event that the Contractor causes the release of any hazardous substances, including gases, and the release is not considered "incidental" as defined below, the Contractor shall immediately call 911 (NAWS Dispatch) and notify the Contracting Officer to provide available information on the spill. Under no circumstances will the Contractor contact Federal or State regulatory agencies to report the spill.

If the release is considered to be "incidental", then the Contractor does not call 911, but still notifies the Contracting Officer. An incidental release is a release of a hazardous substance that:

- (1) Does not pose a significant safety or health hazard to employees in the immediate vicinity of the release (i.e. minor safety or health hazards are presented to employees in the immediate work areas);
- (2) Does not pose a significant safety or health hazard to the employee conducting the cleanup;
- (3) Does not have the potential to become an emergency within a short timeframe; and
- (4) Limited in quantity, exposure potential, and toxicity.

The Contractor will contain and clean up these spills without cost to the Government. The Contractor shall maintain spill cleanup equipment and materials at the work site. If Government assistance (e.g., labor, material, equipment, clothing, sample analysis) is requested or required, the Contractor will reimburse the Government for such assistance.

The Government must initiate its own spill cleanup procedures, for Contractor responsible spills, when:

- a. The Contractor has not begun spill cleanup procedure within one (1) hour of spill discovery/occurrence, or
- b. If, in the Government's judgment, the Contractor's spill cleanup is not adequately abating life threatening situation and/or is a threat to any body of water or environmentally sensitive areas.

If the Contractor discovers a spill not caused by the Contractor, the Contractor shall notify the Contracting Officer immediately.

-- End of Section --

SECTION 01 78 00

CLOSEOUT SUBMITTALS
08/11

1 PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM E1971 (2005; R 2011) Stewardship for the Cleaning of Commercial and Institutional Buildings

GREEN SEAL (GS)

GS-37 (2012) Cleaning Products for Industrial and Institutional Use

U.S. ARMY CORPS OF ENGINEERS (USACE)

TR-06-X (2006; Supplement 2009) A/E/C (Architectural, Engineering, and Construction) CADD Standard - Release 3.0

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-300-08 (2009, with Change 2) Criteria for Transfer and Acceptance of DoD Real Property

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval and information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-08 Manufacturer's Instructions

Preventative Maintenance
Condition Monitoring (Predictive Testing)
Inspection

SD-10 Operation and Maintenance Data

Operation and Maintenance Manuals

SD-11 Closeout Submittals

Record Drawings (as required per task order)
Certification of EPA Designated Items (as required
per task order); G
Interim Form DD1354 (as required per task order); G
Checklist for Form DD1354 (as required per task order); G

1.3 PROJECT RECORD DOCUMENTS

1.3.1 Record Drawings

Drawings showing final as-built conditions of the project. This paragraph covers record drawings complete, as a requirement of the contract. The terms "drawings," "contract drawings," "drawing files," "working record drawings" and "final record drawings" refer to contract drawings which are revised to be used for final record drawings showing as-built conditions. The final CAD record drawings must consist of one set of electronic CAD drawing files in 2010 format, 2 sets of prints, and one set of the approved working Record drawings.

1.3.1.1 Government Furnished Materials

One set of electronic CADD files in the 2010 format revised to reflect all bid amendments will be provided by the Government at the preconstruction conference for projects requiring CADD file record drawings.

1.3.1.2 Working Record and Final Record Drawings

Revise 3 sets of paper drawings by red-line process to show the as-built conditions during the prosecution of the project. Keep these working as-built marked drawings current on a weekly basis and at least one set available on the jobsite at all times. Changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction must be accurately and neatly recorded as they occur by means of details and notes. Prepare final record (as-built) drawings after the completion of each definable feature of work as listed in the Contractor Quality Control Plan (Foundations, Utilities, Structural Steel, etc., as appropriate for the project). The working as-built marked prints and final record (as-built) drawings will be jointly reviewed for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of each monthly pay estimate. If the Contractor fails to maintain the working and final record drawings as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of maintaining the record drawings. This monthly deduction will continue until an agreement can be reached between the Contracting Officer and the Contractor regarding the accuracy and completeness of updated drawings. Show on the working and final record drawings, but not limited to, the following information:

- a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, show by offset dimensions to two permanently fixed surface features the end of each run including each change in direction on the record drawings. Locate valves, splice boxes and

similar appurtenances by dimensioning along the utility run from a reference point. Also record the average depth below the surface of each run.

b. The location and dimensions of any changes within the building structure.

c. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

d. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

e. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.

f. Changes or modifications which result from the final inspection.

g. Where contract drawings or specifications present options, show only the option selected for construction on the final as-built prints.

h. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, furnish a contour map of the final borrow pit/spoil area elevations.

i. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.

j. Modifications (include within change order price the cost to change working and final record drawings to reflect modifications) and compliance with the following procedures.

- (1) Follow directions in the modification for posting descriptive changes.
- (2) Place a Modification Delta at the location of each deletion.
- (3) For new details or sections which are added to a drawing, place a Modification Delta by the detail or section title.
- (4) For minor changes, place a Modification Delta by the area changed on the drawing (each location).
- (5) For major changes to a drawing, place a Modification Delta by the title of the affected plan, section, or detail at each location.
- (6) For changes to schedules or drawings, place a Modification Delta either by the schedule heading or by the change in the schedule.
- (7) The Modification Delta size shall be 1/2 inch diameter unless the area where the circle is to be placed is crowded. Smaller size circle shall be used for crowded areas.

1.3.1.3 Drawing Preparation

Modify the record drawings as may be necessary to correctly show the features of the project as it has been constructed by bringing the contract set into agreement with approved working as-built prints, and adding such additional drawings as may be necessary. These working as-built marked prints must be neat, legible and accurate. These drawings are part of the permanent records of this project and must be returned to the Contracting Officer after approval by the Government. Any drawings damaged or lost by the Contractor must be satisfactorily replaced by the Contractor at no expense to the Government.

1.3.1.4 Computer Aided Design and Drafting (CADD) Drawings

Only employ personnel proficient in the preparation of CADD drawings to modify the contract drawings or prepare additional new drawings. Additions and corrections to the contract drawings must be equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols must be the same as the original line colors, line weights, lettering, layering conventions, and symbols. If additional drawings are required, prepare them using the specified electronic file format applying the same graphic standards specified for original drawings. The title block and drawing border to be used for any new final record drawings must be identical to that used on the contract drawings. Accomplish additions and corrections to the contract drawings using CADD files. The Contractor will be furnished "as-designed" drawings in AutoCad Release 2010 format compatible with a Windows XP operating system. The electronic files will be supplied on optical disk. Provide all program files and hardware necessary to prepare final record drawings. The Contracting Officer will review final record drawings for accuracy and return them to the Contractor for required corrections, changes, additions, and deletions.

a. Provide CADD "base" colors of red, green, and blue. Color code for changes as follows:

- (1) Deletions (Red) - Over-strike deleted graphic items (lines), lettering in notes and leaders.
- (2) Additions (Green) - Added items, lettering in notes and leaders.
- (3) Special (Blue) - Items requiring special information, coordination, or special detailing or detailing notes.

b. Rename the Contract Drawing files in a manner related to the contract number (i.e., 98-C-10.DGN) as instructed in the Pre-Construction conference. Use only those renamed files for the Marked-up changes. All changes shall be made on the layer/level as the original item.

c. When final revisions have been completed, show the wording "RECORD DRAWINGS / AS-BUILT CONDITIONS" followed by the name of the Contractor in letters at least 3/16 inch high on the cover sheet drawing. Mark all other contract drawings either "Record" drawing denoting no

revisions on the sheet or "Revised Record" denoting one or more revisions. Date original contract drawings in the revision block.

d. Within 10 days for contracts less than \$5 million after Government approval of all of the working record drawings for a phase of work, prepare the final CADD record drawings for that phase of work and submit two sets of blue-lined prints of these drawings for Government review and approval. The Government will promptly return one set of prints annotated with any necessary corrections. Within 7 days for contracts less than \$5 million revise the CADD files accordingly at no additional cost and submit one set of final prints for the completed phase of work to the Government. Within 10 days for contracts less than \$5 million of substantial completion of all phases of work, submit the final record drawing package for the entire project. Submit one set of electronic files on optical disk, two sets of blue-line prints and one set of the approved working record drawings. They must be complete in all details and identical in form and function to the contract drawing files supplied by the Government. Any transactions or adjustments necessary to accomplish this is the responsibility of the Contractor. The Government reserves the right to reject any drawing files it deems incompatible with the customer's CADD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit final record drawing files and marked prints as specified will be cause for withholding any payment due the Contractor under this contract. Approval and acceptance of final record drawings must be accomplished before final payment is made to the Contractor.

1.3.1.5 Manually Prepared Drawings

Employ only personnel proficient in the preparation of manually prepared drawings to modify the original contract drawing or prepare additional new drawings. Additions and corrections to the contract drawings must be neat, clean and legible, shall be done to the same level of detail, and match the adjacent existing line work, and lettering being annotated in type, density, size and style. Drafting work must be done using the same medium (pencil, plastic lead or ink) that was employed on the original contract drawings and with graphite lead on paper base material. The Contracting Officer will review record drawings for accuracy and conformance to the above specified drafting standards. Corrections, changes, additions, and deletions required must meet these standards. The title block to be used for any new record drawings must be similar to that used on the original drawings.

a. When final revisions have been completed, Letter or stamp each drawing with the words "RECORD DRAWINGS / AS-BUILT CONDITIONS" followed by the name of the Contractor in letters at least 3/16 inch high. Mark original contract drawings either "Record" drawings denoting no revisions on the sheet or "Revised Record" denoting one or more revisions Date all original contract drawings in the revision block.

b. Within 10 days for contracts less than \$5 million after Government approval of all of the working record drawings for a phase of work, prepare the final record drawings for that phase of work and submit two sets of blue-line prints of these drawings for Government review and approval. The Government will promptly return one set of prints annotated with any necessary corrections. Within 7 days for contracts

less than \$5 million revise the drawings accordingly at no additional cost and submit one set of final prints for the completed phase of work to the Government. Within 10 days for contracts less than \$5 million of substantial completion of all phases of work, submit the final record drawing package for the entire project. Submit two blue-line prints of these drawings and the return of the approved marked record prints, complete in all details. Paper prints and reproducible drawings will become the property of the Government upon final approval. Failure to submit final record drawings and marked prints, as required herein, will be cause for withholding any payment due the Contractor under this contract. Approval and acceptance of final record drawings must be accomplished before final payment is made to the Contractor.

1.3.1.6 Payment

No separate payment will be made for record drawings required under this contract, and all costs accrued in connection with such drawings are considered a subsidiary obligation of the Contractor.

1.3.2 Final Approved Shop Drawings

Furnish final approved project shop drawings 30 days after transfer of the completed facility.

1.3.3 Construction Contract Specifications

Furnish final record (as-built) construction contract specifications, including modifications thereto, 30 days after transfer of the completed facility.

1.4 PREVENTATIVE MAINTENANCE

Submit Preventative Maintenance, Condition Monitoring (Predictive Testing) and Inspection schedules with instructions that state when systems should be retested.

- a. Define the anticipated length of each test, test apparatus, number of personnel identified by responsibility, and a testing validation procedure permitting the record operation capability requirements within the schedule. Provide a signoff blank for the Contractor and Contracting Officer for each test feature; e.g., gpm, rpm, psi. Include a remarks column for the testing validation procedure referencing operating limits of time, pressure, temperature, volume, voltage, current, acceleration, velocity, alignment, calibration, adjustments, cleaning, or special system notes. Delineate procedures for preventative maintenance, inspection, adjustment, lubrication and cleaning necessary to minimize corrective maintenance and repair.
- b. Repair requirements must inform operators how to check out, troubleshoot, repair, and replace components of the system. Include electrical and mechanical schematics and diagrams and diagnostic techniques necessary to enable operation and troubleshooting of the system after acceptance.

1.5 CERTIFICATION OF EPA DESIGNATED ITEMS

Submit the Certification of EPA Designated Items as required by FAR 52.223-9, "Certification and Estimate of Percentage of Recovered Material Content for EPA Designated Items". Include on the certification form the following information: project name, project number, Contractor name, license number, Contractor address, and certification. The certification will read as follows and be signed and dated by the Contractor. "I hereby certify the information provided herein is accurate and that the requisition/procurement of all materials listed on this form comply with current EPA standards for recycled/recovered materials content. The following exemptions may apply to the non-procurement of recycled/recovered content materials: 1) The product does not meet appropriate performance standards; 2) The product is not available within a reasonable time frame; 3) The product is not available competitively (from two or more sources); 4) The product is only available at an unreasonable price (compared with a comparable non-recycled content product)." Record each product used in the project that has a requirement or option of containing recycled content in accordance with Section 01 62 35 RECYCLED/RECOVERED/BIOBASED MATERIALS, noting total price, total value of post-industrial recycled content, total value of post-consumer recycled content, exemptions (1, 2, 3, or 4, as indicated), and comments. Recycled content values may be determined by weight or volume percent, but must be consistent throughout.

1.6 WARRANTY MANAGEMENT

1.6.1 Warranty Management Plan

Develop a warranty management plan which contains information relevant to the clause Warranty of Construction in. Include within the warranty management plan all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan must be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below must include due date and whether item has been submitted or was accomplished. Warranty information made available during the construction phase must be submitted to the Contracting Officer for approval prior to each monthly pay estimate. Assemble approved information in a binder and turn over to the Government upon acceptance of the work. The construction warranty period will begin on the date of project acceptance and continue for the full product warranty period. A joint 4 month and 9 month warranty inspection will be conducted, measured from time of acceptance, by the Contractor, Contracting Officer and the Customer Representative. Include within the warranty management plan , but not limited to, the following:

- a. Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, subContractors, manufacturers or suppliers involved.
- b. Furnish with each warranty the name, address, and telephone number of each of the guarantor's representatives nearest to the project location.

c. Listing and status of delivery of all Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc.

d. A list for each warranted equipment, item, feature of construction or system indicating:

- (1) Name of item.
- (2) Model and serial numbers.
- (3) Location where installed.
- (4) Name and phone numbers of manufacturers or suppliers.
- (5) Names, addresses and telephone numbers of sources of spare parts.
- (6) Warranties and terms of warranty. Include one-year overall warranty of construction, including the starting date of warranty of construction. Items which have extended warranties must be indicated with separate warranty expiration dates.
- (7) Cross-reference to warranty certificates as applicable.
- (8) Starting point and duration of warranty period.
- (9) Summary of maintenance procedures required to continue the warranty in force.
- (10) Cross-reference to specific pertinent Operation and Maintenance manuals.
- (11) Organization, names and phone numbers of persons to call for warranty service.
- (12) Typical response time and repair time expected for various warranted equipment.

e. The Contractor's plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.

f. Procedure and status of tagging of all equipment covered by extended warranties.

g. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.6.2 Performance Bond

The Contractor's Performance Bond must remain effective throughout the construction period.

a. In the event the Contractor fails to commence and diligently pursue any construction warranty work required, the Contracting Officer will have the work performed by others, and after completion of the work, will charge the remaining construction warranty funds of expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.

b. In the event sufficient funds are not available to cover the construction warranty work performed by the Government at the Contractor's expense, the Contracting Officer will have the right to recoup expenses from the bonding company.

c. Following oral or written notification of required construction warranty repair work, respond in a timely manner. Written verification will follow oral instructions. Failure of the Contractor to respond will be cause for the Contracting Officer to proceed against the Contractor.

1.6.3 Contractor's Response to Construction Warranty Service Requirements

Following oral or written notification by the Contracting Officer, respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List" and the three categories of priorities listed below. Submit a report on any warranty item that has been repaired during the warranty period. Include within the report the cause of the problem, date reported, corrective action taken, and when the repair was completed. If the Contractor does not perform the construction warranty within the timeframes specified, the Government will perform the work and backcharge the construction warranty payment item established.

a. First Priority Code 1. Perform onsite inspection to evaluate situation, and determine course of action within 4 hours, initiate work within 6 hours and work continuously to completion or relief.

b. Second Priority Code 2. Perform onsite inspection to evaluate situation, and determine course of action within 8 hours, initiate work within 24 hours and work continuously to completion or relief.

c. Third Priority Code 3. All other work to be initiated within 3 work days and work continuously to completion or relief.

d. The "Construction Warranty Service Priority List" is as follows:

Code 1-Life Safety Systems

- (1) Fire suppression systems.
- (2) Fire alarm system(s) in place in the building.

Code 1-Air Conditioning Systems

- (1) Recreational support.
- (2) Air conditioning leak in part of building, if causing damage.
- (3) Air conditioning system not cooling properly.

Code 1-Doors

- (1) Overhead doors not operational, causing a security, fire, or safety problem.
- (2) Interior, exterior personnel doors or hardware, not functioning properly, causing a security, fire, or safety problem.

Code 3-Doors

- (1) Overhead doors not operational.
- (2) Interior/exterior personnel doors or hardware not functioning properly.

Code 1-Electrical

- (1) Power failure (entire area or any building operational after 1600 hours).
- (2) Security lights
- (3) Smoke detectors

Code 2-Electrical

- (1) Power failure (no power to a room or part of building).
- (2) Receptacle and lights (in a room or part of building).

Code 3-Electrical

Street lights.

Code 1-Gas

- (1) Leaks and breaks.
- (2) No gas to family housing unit or cantonment area.

Code 1-Heat

- (1) Area power failure affecting heat.
- (2) Heater in unit not working.

Code 2-Kitchen Equipment

- (1) Dishwasher not operating properly.
- (2) All other equipment hampering preparation of a meal.

Code 1-Plumbing

- (1) Hot water heater failure.
- (2) Leaking water supply pipes.

Code 2-Plumbing

- (1) Flush valves not operating properly.
- (2) Fixture drain, supply line to commode, or any water pipe leaking.
- (3) Commode leaking at base.

Code 3 -Plumbing

Leaky faucets.

Code 3-Interior

- (1) Floors damaged.
- (2) Paint chipping or peeling.
- (3) Casework.

Code 1-Roof Leaks

Temporary repairs will be made where major damage to property is occurring.

Code 2-Roof Leaks

Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

Code 2-Water (Exterior)

No water to facility.

Code 2-Water (Hot)

No hot water in portion of building listed.

Code 3-All other work not listed above.

1.7 OPERATION AND MAINTENANCE MANUALS

Submit 6 copies of the project operation and maintenance manuals 30 calendar days prior to testing the system involved. Update and resubmit data for final approval no later than 30 calendar days prior to contract completion.

1.7.1 Configuration

Operation and Maintenance Manuals must be consistent with the manufacturer's standard brochures, schematics, printed instructions, general operating procedures, and safety precautions. Bind information in manual format and grouped by technical sections. Test data must be legible and of good quality. Light-sensitive reproduction techniques are acceptable provided finished pages are clear, legible, and not subject to fading. Pages for vendor data and manuals must have 0.3937-inch holes and be bound in 3-ring, loose-leaf binders. Organize data by separate index and tabbed sheets, in a loose-leaf binder. Binder must lie flat with printed sheets that are easy to read. Caution and warning indications must be clearly labeled.

1.8 CLEANUP

Provide final cleaning in accordance with ASTM E1971 and submit two copies of the listing of completed final clean-up items. Leave premises "broom clean." Comply with GS-37 for general purpose cleaning and bathroom cleaning. Use only nonhazardous cleaning materials, including natural cleaning materials, in the final cleanup. Clean interior and exterior glass surfaces exposed to view; remove temporary labels, stains and foreign substances; polish transparent and glossy surfaces; vacuum carpeted and soft surfaces. Clean equipment and fixtures to a sanitary condition. Clean or replace filters of operating equipment and comply with the Indoor Air Quality (IAQ) Management Plan. Clean debris from roofs, gutters, downspouts and drainage systems. Sweep paved areas and rake clean landscaped areas. Remove waste and surplus materials, rubbish and construction facilities from the site. Recycle, salvage, and return construction and demolition waste from project in accordance with the Waste Management Plan. Promptly and legally transport and dispose of any trash. Do not burn, bury, or otherwise dispose of trash on the project site.

1.9 REAL PROPERTY RECORD

Near the completion of Project, but a minimum of 60 days prior to final acceptance of the work, complete, update draft DD Form 1354 attached to this section, and submit an accounting of all installed property with Interim Form DD1354 "Transfer and Acceptance of Military Real Property." Include any additional assets/improvements/alterations from the Draft DD Form 1354. Contact the Contracting Officer for any project specific information necessary to complete the DD Form 1354. Refer to UFC 1-300-08 for instruction on completing the DD Form 1354. For information purposes, a blank DD Form 1354 (fill-able) in ADOBE (PDF) may be obtained at the following web site:

<http://www.dtic.mil/whs/directives/infomgt/forms/eforms/dd1354.pdf>

Submit the completed Checklist for Form DD1354 of Installed Building Equipment items. Attach this list to the updated DD Form 1354.

1.12 NAVFAC SUSTAINABLE & ENERGY DATA RECORD CARD

Within 60 days of the completion of Project, complete an electronic copy of the NAVFAC Sustainable & Energy Data Record Card, and submit to the Contracting Officer. Draft Record card for this project should be available from Designer of Record (DOR) or Contracting Officer. Instructions and a blank DD Form (fill-able) in ADOBE (PDF) may be obtained at the Whole Building Design Guide web site by navigating:

Home > Participating Agencies > Department of Defense (DoD) > NAVFAC Sustainable Development Program > Contract Documents > NAVFAC Sustainable & Energy Data Record Card; or directly at
http://www.wbdg.org/pdfs/navfac_sustainable_energy_data_record_card.pdf.

2 PART 2 PRODUCTS

Not Used

3 PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 78 23

OPERATION AND MAINTENANCE DATA

07/06

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM E 1971 (2005) Stewardship for the Cleaning of Commercial and Institutional Buildings

1.2 SUBMISSION OF OPERATION AND MAINTENANCE DATA

Submit Operation and Maintenance (O&M) Data specifically applicable to this contract and a complete and concise depiction of the provided equipment, product, or system, stressing and enhancing the importance of system interactions, troubleshooting, and long-term preventative maintenance and operation. The subcontractors shall compile and prepare data and deliver to the Contractor prior to the training of Government personnel. The Contractor shall compile and prepare aggregate O&M data including clarifying and updating the original sequences of operation to as-built conditions. Organize and present information in sufficient detail to clearly explain O&M requirements at the system, equipment, component, and subassembly level. Include an index preceding each submittal. Submit in accordance with this section and Section 01 33 00 SUBMITTAL PROCEDURES.

1.2.1 Package Quality

Documents must be fully legible. Poor quality copies and material with hole punches obliterating the text or drawings will not be accepted.

1.2.2 Package Content

Data package content shall be as shown in the paragraph titled "Schedule of Operation and Maintenance Data Packages." Comply with the data package requirements specified in the individual technical sections, including the content of the packages and addressing each product, component, and system designated for data package submission.

1.2.3 Changes to Submittals

Manufacturer-originated changes or revisions to submitted data shall be furnished by the Contractor if a component of an item is so affected subsequent to acceptance of the O&M Data. Changes, additions, or revisions required by the Contracting Officer for final acceptance of submitted data, shall be submitted by the Contractor within 30 calendar days of the notification of this change requirement.

1.2.4 Review and Approval

The Contractor's Commissioning Authority (CA) shall review the commissioned

systems and equipment submittals for completeness and applicability. The CA shall verify that the systems and equipment provided meet the requirements of the Contract documents and design intent, particularly as they relate to functionality, energy performance, water performance, maintainability, sustainability, system cost, indoor environmental quality, and local environmental impacts. The CA shall communicate deficiencies to the Contracting Officer. Upon a successful review of the corrections, the CA shall recommend approval and acceptance of these O&M manuals to the Contracting Officer. This work shall be in addition to the normal review procedures for O&M data.

1.3 TYPES OF INFORMATION REQUIRED IN O&M DATA PACKAGES

1.3.1 Operating Instructions

Include specific instructions, procedures, and illustrations for the following phases of operation for the installed model and features of each system:

1.3.1.1 Safety Precautions

List personnel hazards and equipment or product safety precautions for all operating conditions.

1.3.1.2 Operator Prestart

Include procedures required to install, set up, and prepare each system for use.

1.3.1.3 Startup, Shutdown, and Post-Shutdown Procedures

Provide narrative description for Startup, Shutdown and Post-shutdown operating procedures including the control sequence for each procedure.

1.3.1.4 Normal Operations

Provide narrative description of Normal Operating Procedures. Include Control Diagrams with data to explain operation and control of systems and specific equipment.

1.3.1.5 Emergency Operations

Include Emergency Procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment. Include Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of all utility systems including required valve positions, valve locations and zones or portions of systems controlled.

1.3.1.6 Operator Service Requirements

Include instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gage readings.

1.3.1.7 Environmental Conditions

Include a list of Environmental Conditions (temperature, humidity, and other relevant data) that are best suited for the operation of each

product, component or system. Describe conditions under which the item equipment should not be allowed to run.

1.3.2 Preventive Maintenance

Include the following information for preventive and scheduled maintenance to minimize corrective maintenance and repair for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials.

1.3.2.1 Lubrication Data

Include preventative maintenance lubrication data, in addition to instructions for lubrication provided under paragraph titled "Operator Service Requirements":

- a. A table showing recommended lubricants for specific temperature ranges and applications.
- b. Charts with a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities.
- c. A Lubrication Schedule showing service interval frequency.

1.3.2.2 Preventive Maintenance Plan and Schedule

Include manufacturer's schedule for routine preventive maintenance, inspections, tests and adjustments required to ensure proper and economical operation and to minimize corrective maintenance. Provide manufacturer's projection of preventive maintenance work-hours on a daily, weekly, monthly, and annual basis including craft requirements by type of craft. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.

1.3.2.3 Cleaning Recommendations

Provide environmentally preferable cleaning recommendations in accordance with ASTM E 1971.

1.3.3 Corrective Maintenance (Repair)

Include manufacturer's recommended procedures and instructions for correcting problems and making repairs for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials.

1.3.3.1 Troubleshooting Guides and Diagnostic Techniques

Include step-by-step procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or require replacement.

1.3.3.2 Wiring Diagrams and Control Diagrams

Wiring diagrams and control diagrams shall be point-to-point drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job specific wiring and

control work. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type, identically to actual installation configuration and numbering.

1.3.3.3 Maintenance and Repair Procedures

Include instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards.

1.3.3.4 Removal and Replacement Instructions

Include step-by-step procedures and a list required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings and adjustments required. Instructions shall include a combination of text and illustrations.

1.3.4 Appendices

Provide information required below and information not specified in the preceding paragraphs but pertinent to the maintenance or operation of the product or equipment. Include the following:

1.3.4.1 Product Submittal Data

Provide a copy of all SD-03 Product Data submittals required in the applicable technical sections.

1.3.4.2 Manufacturer's Instructions

Provide a copy of all SD-08 Manufacturer's Instructions submittals required in the applicable technical sections.

1.3.4.3 O&M Submittal Data

Provide a copy of all SD-10 Operation and Maintenance Data submittals required in the applicable technical sections.

1.3.4.4 Parts Identification

Provide identification and coverage for all parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Include special hardware requirements, such as requirement to use high-strength bolts and nuts. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification. Provide clear and legible illustrations, drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing shall show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Parts shown in the listings shall be grouped by components, assemblies, and subassemblies in accordance with the manufacturer's standard practice. Parts data may cover more than one model or series of equipment, components, assemblies, subassemblies, attachments, or accessories, such as typically shown in a master parts catalog

1.3.4.5 Warranty Information

List and explain the various warranties and clearly identify the servicing

and technical precautions prescribed by the manufacturers or contract documents in order to keep warranties in force. Include warranty information for primary components such as the compressor of air conditioning system.

1.3.4.6 Personnel Training Requirements

Provide information available from the manufacturers that is needed for use in training designated personnel to properly operate and maintain the equipment and systems.

1.3.4.7 Testing Equipment and Special Tool Information

Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components.

1.3.4.8 Testing and Performance Data

Include completed prefunctional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting and blank test forms.

1.3.4.9 Contractor Information

Provide a list that includes the name, address, and telephone number of the General Contractor and each Subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturer's representative and service organization that can provide replacements most convenient to the project site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

1.4 SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES

Furnish the O&M and warranty data packages as they apply to each individual Task Order, or unless specified different in individual Task Order.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 02 82 16.00 20

ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIALS

11/12

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA)

ANSI/AIHA Z88.6 (2006) Respiratory Protection - Respirator Use-Physical Qualifications for Personnel

ANSI/AIHA Z9.2 (2006) Fundamentals Governing the Design and Operation of Local Exhaust Ventilation Systems

ASTM INTERNATIONAL (ASTM)

ASTM C732 (2006) Aging Effects of Artificial Weathering on Latex Sealants

ASTM D1331 (1989; R 1995) Surface and Interfacial Tension of Solutions of Surface-Active Agents

ASTM D2794 (1993; R 2010) Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)

ASTM D522 (1993a; R 2008) Mandrel Bend Test of Attached Organic Coatings

ASTM E119 (2011a) Standard Test Methods for Fire Tests of Building Construction and Materials

ASTM E1368 (2011) Visual Inspection of Asbestos Abatement Projects

ASTM E1494 (1992; R 2010) Encapsulants for Spray- or Trowel-Applied Friable Asbestos-Containing Building Materials

ASTM E736 (2000; R 2011) Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members

ASTM E84 (2011b) Standard Test Method for Surface Burning Characteristics of Building Materials

ASTM E96/E96M (2010) Standard Test Methods for Water

Vapor Transmission of Materials

CALIFORNIA CODE OF REGULATIONS (CCR)

13 CCR	CA Department of Transportation/Highway Patrol
22 CCR 66260	Hazardous Waste Management System: General
22 CCR 66261	Identification and Listing of Hazardous Waste
22 CCR 66262	Standards Applicable to Generators of Hazardous Waste
22 CCR 66263	Standards Applicable to Transporters of Hazardous Waste
22 CCR 66264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
22 CCR 66265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
22 CCR 66268	Land Disposal Restrictions

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 560/5-85-024	(1985) Guidance for Controlling Asbestos-Containing Materials in Buildings (Purple Book)
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1926.103	Respiratory Protection
29 CFR 1926.1101	Asbestos
29 CFR 1926.200	Accident Prevention Signs and Tags
29 CFR 1926.51	Sanitation
29 CFR 1926.59	Hazard Communication
40 CFR 61-SUBPART A	General Provisions
40 CFR 61-SUBPART M	National Emission Standard for Asbestos
40 CFR 763	Asbestos Containing Material in Schools
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

49 CFR 173	General Requirements for Shipments and Packaging
49 CFR 178	Specifications for Packaging/UN Performance Oriented Packaging Standards
49 CFR 180	Continuing Qualifications and Maintenance of Packaging

U.S. NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)

ND OPNAVINST 5100.23	(2005; Rev G) Navy Occupational Safety and Health (NAVOSH) Program Manual
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UNDERWRITERS LABORATORIES (UL)

UL 586	(2009) Standard for High-Efficiency Particulate, Air Filter Units
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1.2 DEFINITIONS

1.2.1 Asbestos Containing Material (ACM)

Any material or product which contains more than 1 percent asbestos.

1.2.2 Amended Water

Water containing a wetting agent or surfactant with a maximum surface tension of 0.00042 psi, when tested in accordance with ASTM D1331.

1.2.3 Area Sampling

Sampling of asbestos fiber concentrations which approximates the concentrations of asbestos in the theoretical breathing zone but is not actually collected in the breathing zone of an employee.

1.2.4 Asbestos

The term asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, and actinolite asbestos and any of these minerals that has been chemically treated or altered.

1.2.5 Asbestos Control Area

That area where asbestos removal operations are performed which is isolated by physical boundaries which assist in the prevention of the uncontrolled release of asbestos dust, fibers, or debris.

1.2.6 Asbestos Fibers

Those fibers having an aspect ratio of at least 3:1 and longer than 5 micrometers as determined by National Institute for Occupational Safety and Health (NIOSH) Method 7400.

1.2.7 Asbestos Permissible Exposure Limit

0.1 fibers per cubic centimeter of air as an 8-hour time weighted average measured in the breathing zone as defined by 29 CFR 1926.1101 or other

Federal legislation having legal jurisdiction for the protection of workers health.

1.2.8 Background

The ambient airborne asbestos concentration in an uncontaminated area as measured prior to any asbestos hazard abatement efforts. Background concentrations for other (contaminated) areas are measured in similar but asbestos free locations.

1.2.9 Category I Nonfriable ACM

Asbestos-containing packing, gaskets, resilient floor coverings, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in Appendix E, Subpart E, 40 CFR 763, Section 1, Polarized Light Microscopy.

1.2.10 Category II Nonfriable ACM

Any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos as determined using the methods specified in Appendix E, Subpart E, 40 CFR 763, Section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

1.2.11 Contractor

The Contractor is that individual, or entity under contract to the Navy to perform the herein listed work.

1.2.12 Competent Person

A person meeting the requirements for competent person as specified in 29 CFR 1926.1101 including a person capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, and is specifically trained in a training course which meet the criteria of EPA's Model Accreditation Plan (40 CFR 763) contractor/supervisor, or its equivalent. The competent person shall have a current asbestos contractor/supervisor accreditation certificate.

1.2.13 Encapsulation

The abatement of an asbestos hazard through the appropriate use of chemical encapsulants.

1.2.14 Encapsulants

Specific materials in various forms used to chemically or physically entrap asbestos fibers in various configurations to prevent these fibers from becoming airborne. There are four types of encapsulants as follows which must comply with performance requirements as specified herein.

- a. Removal Encapsulant (can be used as a wetting agent);
- b. Bridging Encapsulant (used to provide a tough, durable surface coating to asbestos containing material);
- c. Penetrating Encapsulant (used to penetrate the asbestos containing

material encapsulating all asbestos fibers and preventing fiber release due to routine mechanical damage); and

- d. Lock-Down Encapsulant (used to seal off or "lock-down" minute asbestos fibers left on surfaces from which asbestos containing material has been removed).

1.2.15 Friable Asbestos Material

ACM that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

1.2.16 Glovebag Technique

Those asbestos removal and control techniques put forth in 29 CFR 1926.1101 Appendix G.

1.2.17 HEPA Filter Equipment

High efficiency particulate air (HEPA) filtered vacuum and/or exhaust ventilation equipment with a filter system capable of collecting and retaining asbestos fibers. Filters shall retain 99.97 percent of particles 0.3 microns or larger as indicated in UL 586.

1.2.18 Navy Consultant (NC)

That qualified person employed directly by the Government to monitor, sample, inspect the work or in some other way advise the Contracting Officer. The NC is normally a private consultant, but can be an employee of the Government.

1.2.19 Negative Pressure Enclosure (NPE)

That engineering control technique described as a negative pressure enclosure in 29 CFR 1926.1101.

1.2.20 Nonfriable Asbestos Material

ACM that can be crumbled, pulverized, or reduced to powder by hand pressure when dry. In nonfriable ACMs, asbestos fibers have been immobilized by a bonding agent, coating, binder, or other material so that the asbestos is well bound and will not normally release asbestos fibers during any appropriate use, handling, storage or transportation. It is understood that asbestos fibers may be released under other conditions such as demolition, removal, or mishap.

1.2.21 Personal Sampling

Air sampling which is performed to determine asbestos fiber concentrations within the breathing zone of a specific employee, as performed in accordance with 29 CFR 1926.1101.

1.2.22 Private Qualified Person (PQP)

That qualified person hired by the Contractor to perform the herein listed tasks.

1.2.23 Qualified Person (QP)

A Registered Architect, Professional Engineer, Certified Industrial Hygienist, consultant or other qualified person who has successfully completed training and is therefore accredited under a legitimate State Model Accreditation Plan as described in 40 CFR 763 as a Building Inspector, Contractor/Supervisor Abatement Worker, and Asbestos Project Designer; and has successfully completed the National Institute of Occupational Safety and Health (NIOSH) 582 course "Sampling and Evaluating Airborne Asbestos Dust" or equivalent. The QP must be qualified to perform visual inspections as indicated in ASTM E1368. The QP shall also be licensed in the State of California as a Certified Asbestos Consultant (CAC).

1.2.24 Regulated Asbestos Containing Material (RACM)

ACM that is regulated under 40 CFR 61-SUBPART M and is:

- a. Friable asbestos material;
- b. Category I nonfriable ACM that has become friable;
- c. Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or
- d. Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

1.2.25 TEM

Refers to Transmission Electron Microscopy.

1.2.26 Time Weighted Average (TWA)

The TWA is an 8-hour time weighted average airborne concentration of asbestos fibers.

1.2.27 Wetting Agent

A chemical added to water to reduce the water's surface tension thereby increasing the water's ability to soak into the material to which it is applied. An equivalent wetting agent must have a surface tension of at most 0.00042 psi, when tested in accordance with ASTM D1331.

1.3 REQUIREMENTS

1.3.1 Description of Work

The work covered by this section includes the handling and control of asbestos containing materials and describes some of the resultant procedures and equipment required to protect workers, the environment and occupants of the building or area, or both, from contact with airborne asbestos fibers. The work also includes the disposal of any asbestos containing materials generated by the work. More specific operational procedures shall be outlined in the Asbestos Hazard Abatement Plan called for elsewhere in this specification. All asbestos removal work shall be supervised by a competent person as specified herein.

1.3.2 Medical Requirements

Provide medical requirements including but not limited to medical surveillance and medical record keeping as listed in 29 CFR 1926.1101.

1.3.2.1 Medical Examinations

Before exposure to airborne asbestos fibers, provide workers with a comprehensive medical examination as required by 29 CFR 1926.1101 or other pertinent State or local directives. This requirement must have been satisfied within the 12 months prior to the start of work on this contract. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos and within 30 calendar days before or after the termination of employment in such occupation. Specifically identify x-ray films of asbestos workers to the consulting radiologist and mark medical record jackets with the word "ASBESTOS."

1.3.2.2 Medical Records

Maintain complete and accurate records of employees' medical examinations, medical records, and exposure data for a period of 50 years after termination of employment and make records of the required medical examinations and exposure data available for inspection and copying to: The Assistant Secretary of Labor for Occupational Safety and Health (OSHA), or authorized representatives of them, and an employee's physician upon the request of the employee or former employee.

1.3.3 Employee Training

Submit certificates, prior to the start of work but after the main abatement submittal, indicating that the employee has received training in the proper handling of materials and wastes that contain asbestos in accordance with 40 CFR 763; understands the health implications and risks involved, including the illnesses possible from exposure to airborne asbestos fibers; understands the use and limits of the respiratory equipment to be used; and understands the results of monitoring of airborne quantities of asbestos as related to health and respiratory equipment as indicated in 29 CFR 1926.1101 on an initial and annual basis. Certificates shall be organized by individual worker, not grouped by type of certification. Train all personnel involved in the asbestos control work in accordance with United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) training criteria or State training criteria whichever is more stringent. The Contractor shall document the training by providing: dates of training, training entity, course outline, names of instructors, and qualifications of instructors upon request by the Contracting Officer. Furnish each employee with respirator training and fit testing administered by the PQP as required by 29 CFR 1926.1101. Fully cover engineering and other hazard control techniques and procedures.

1.3.4 Permits, Licenses, and Notifications

Obtain necessary permits and licenses in conjunction with asbestos removal, encapsulation, hauling, and disposition, and furnish notification of such actions required by Federal, State, regional, and local authorities prior to the start of work. Notify the appropriate local air pollution control district/agency and the Contracting Officer in writing 10 working days

prior to commencement of work, if required by 40 CFR 61-SUBPART M. Also notify other appropriate Government agencies prior to the start of asbestos work as indicated in applicable laws, ordinances, criteria, rules, and regulations. Submit copies of all Notifications to the Contracting Officer. Notify the local fire department 3 days prior to removing fire-proofing material from the building including notice that the material contains asbestos.

1.3.5 Environment, Safety and Health Compliance

In addition to detailed requirements of this specification, comply with those applicable laws, ordinances, criteria, rules, and regulations of Federal, State, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials. Comply with the applicable requirements of the current issue of 29 CFR 1926.1101, 40 CFR 61-SUBPART A, 40 CFR 61-SUBPART M, and ND OPNAVINST 5100.23. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting the work. Where the requirements of this specification, applicable laws, rules, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirement as defined by the Government shall apply.

1.3.6 Respiratory Protection Program

Establish and implement a respirator program as required by ANSI/AIHA Z88.6, 29 CFR 1926.1101, and 29 CFR 1926.103. Submit a written description of the program to the Contracting Officer. Submit a written program manual or operating procedure including methods of compliance with regulatory statutes.

1.3.6.1 Respirator Program Records

Submit records of the respirator program as required by ANSI/AIHA Z88.6, 29 CFR 1926.103, and 29 CFR 1926.1101.

1.3.7 Asbestos Hazard Control Supervisor

The Contractor shall be represented on site by a supervisor, trained using the model Contractor accreditation plan as indicated in the Federal statutes for all portions of the herein listed work.

1.3.8 Hazard Communication

Adhere to all parts of 29 CFR 1926.59 and provide the Contracting Officer with a copy of the Material Safety Data Sheets (MSDS) for all materials brought to the site.

1.3.9 Asbestos Hazard Abatement Plan

Submit a detailed plan of the safety precautions such as lockout, tagout, tryout, fall protection, and confined space entry procedures and equipment and work procedures to be used in the project. The plan, not to be combined with other hazard abatement plans, shall be prepared, signed, and sealed by the PQP. Provide a Table of Contents for each abatement submittal, which shall follow the sequence of requirements in the contract. Such plan shall include but not be limited to the precise personal protective equipment to be used including, but not limited to, respiratory protection, type of whole-body protection and if reusable coveralls are to be employed decontamination methods (operations and

quality control plan), the location of asbestos control areas including clean and dirty areas, buffer zones, showers, storage areas, change rooms, removal and/or encapsulation method, interface of trades involved in the construction, sequencing of asbestos related work, disposal plan, type of wetting agent and asbestos sealer to be used, locations of local exhaust equipment, planned air monitoring strategies, and a detailed description of the method to be employed in order to control environmental pollution. The plan shall also include (both fire and medical emergency) response plans. The Asbestos Hazard Abatement Plan must be approved in writing prior to starting any asbestos work. The Contractor, Asbestos Hazard Control Supervisor, and PQP shall meet with the Contracting Officer prior to beginning work, to discuss in detail the Asbestos Hazard Abatement Plan, including work procedures and safety precautions. Once approved by the Contracting Officer, the plan will be enforced as if an addition to the specification. Any changes required in the specification as a result of the plan shall be identified specifically in the plan to allow for free discussion and approval by the Contracting Officer prior to starting work.

1.3.10 Testing Laboratory

Submit the name, address, and telephone number of each testing laboratory selected for the analysis, and reporting of airborne concentrations of asbestos fibers along with evidence that each laboratory selected holds the appropriate State license and/or permits and certification that each laboratory is American Industrial Hygiene Association (AIHA) accredited and that persons counting the samples have been judged proficient by current inclusion on the AIHA Asbestos Analysis Registry (AAR) and successful participation of the laboratory in the Proficiency Analytical Testing (PAT) Program. Where analysis to determine asbestos content in bulk materials or transmission electron microscopy is required, submit evidence that the laboratory is accredited by the National Institute of Science and Technology (NIST) under National Voluntary Laboratory Accreditation Program (NVLAP) for asbestos analysis. The testing laboratory firm shall be independent of the asbestos contractor and shall have no employee or employer relationship which could constitute a conflict of interest.

1.3.11 Medical Certification

Provide a written certification for each worker and supervisor, signed by a licensed physician indicating that the worker and supervisor has met or exceeded all of the medical prerequisites listed herein and in 29 CFR 1926.1101 and 29 CFR 1926.103 as prescribed by law. Submit certificates prior to the start of work but after the main abatement submittal.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Local exhaust equipment; G

Vacuums; G

Respirators; G

Pressure differential automatic recording instrument; G

Amended water; G

Glovebags; G

Encapsulants; G

SD-06 Test Reports

Air sampling results; G

Pressure differential recordings for local exhaust system; G

Encapsulation test patches; G

Clearance sampling; G

SD-07 Certificates

Asbestos hazard abatement plan; G

Testing laboratory; G

Private qualified person documentation; G

Contractor's license; G

Competent person documentation; G

Asbestos worker documentation; G

Employee training; G

Medical certification requirements; G

Respiratory Protection Program; G

Vacuums; G

Water filtration equipment; G

Ventilation systems; G

Show compliance with ANSI/AIHA Z9.2 by providing manufacturers' certifications.

Other equipment used to contain airborne asbestos fibers; G

Chemical encapsulants sealers; G

SD-11 Closeout Submittals

Notifications; G

Rental equipment notifications; G

Respirator program records; G

Permits and licenses; G

Protective clothing decontamination quality control records; G

Protective clothing decontamination facility notification; G

1.5 QUALITY ASSURANCE

1.5.1 Private Qualified Person Documentation

Submit the name, address, and telephone number of the Private Qualified Person (PQP) selected to prepare the Asbestos Hazard Abatement Plan, direct monitoring and training, and documented evidence that the PQP is a licensed California Asbestos Consultant and has successfully completed training and is accredited as a Building Inspector, Contractor/Supervisor Abatement Worker, and Asbestos Project Designer as described by 40 CFR 763 and has successfully completed the National Institute of Occupational Safety and Health (NIOSH) 582 course "Sampling and Evaluating Airborne Asbestos Dust" or equivalent. The PQP and the asbestos contractor shall not have an employee/employer relationship or financial relationship which could constitute a conflict of interest. The PQP shall be a first tier subcontractor.

1.5.2 Competent Person Documentation

Submit a copy of the current State of California Asbestos Contractor/Supervisor accreditation certificate for the competent person.

1.5.3 Asbestos Worker Documentation

Submit a copy of the current State of California Asbestos worker accreditation certificate for all asbestos workers.

1.5.4 Contractor's License

Submit a copy of the contractor's current State of California asbestos contractor's license.

1.5.5 Air Sampling Results

Complete fiber counting and provide results to the PQP and NC for review within 16 hours of the "time off" of the sample pump. Notify the Contracting Officer immediately of any airborne levels of asbestos fibers in excess of the acceptable limits. Submit sampling results to the Contracting Officer and the affected Contractor employees where required by law within 3 working days, signed by the testing laboratory employee performing air sampling, the employee that analyzed the sample, and the PQP and NC. Notify the Contractor and the Contracting Officer immediately of any variance in the pressure differential which could cause adjacent unsealed areas to have asbestos fiber concentrations in excess of 0.01 fibers per cubic centimeter or background whichever is higher. In no circumstance shall levels exceed 0.1 fibers per cubic centimeter.

1.5.6 Pressure Differential Recordings for Local Exhaust System

If a local exhaust system is required for the project, provide a system that creates a negative pressure of at least 0.02 inches of water relative to the pressure external to the enclosure and operate it continuously, 24

hours a day, until the temporary enclosure of the asbestos control area is removed. Submit pressure differential recordings for each work day to the PQP and NC for review and to the Contracting Officer within 24 hours from the end of each work day.

1.5.7 Protective Clothing Decontamination Quality Control Records

If applicable, provide all records that document quality control for the decontamination of reusable outer protective clothing.

1.5.8 Protective Clothing Decontamination Facility Notification

If applicable, submit written evidence that persons who decontaminate, store, or transport asbestos contaminated clothing used in the performance of this contract were duly notified in accordance with 29 CFR 1926.1101.

1.6 EQUIPMENT

1.6.1 Rental Equipment

Provide a copy of the written notification to the rental company concerning the intended use of the equipment and the possibility of asbestos contamination of the equipment.

PART 2 PRODUCTS

2.1 ENCAPSULANTS

Shall conform to current USEPA requirements, shall contain no toxic or hazardous substances as defined in 29 CFR 1926.59, and shall conform to the following performance requirements.

2.1.1 Removal Encapsulants

<u>Requirement</u>	<u>Test Standard</u>
Flame Spread - 25, Smoke Emission - 50	ASTM E84
Life Expectancy - 20 years	ASTM C732 Accelerated Aging Test
Permeability - Minimum 0.4 perms	ASTM E96/E96M
Fire Resistance - Negligible effect on fire resistance rating over 3 hour test (Classified by UL for use over fibrous and cementitious sprayed fireproofing)	ASTM E119
Impact Resistance - Minimum 43 in/lb	ASTM D2794 Gardner Impact Test
Flexibility - no rupture or cracking	ASTM D522 Mandrel Bend Test

2.1.2 Bridging Encapsulant

<u>Requirement</u>	<u>Test Standard</u>
Flame Spread - 25, Smoke Emission - 50	ASTM E84
Life Expectancy - 20 years	ASTM C732 Accelerated Aging Test
Permeability - Minimum 0.4 perms	ASTM E96/E96M
Fire Resistance - Negligible effect on fire resistance rating over 3 hour test (Classified by UL for use over fibrous and cementitious sprayed fireproofing)	ASTM E119
Impact Resistance - Minimum 43 in/lb	ASTM D2794 Gardner Impact Test
Flexibility - no rupture or cracking	ASTM D522 Mandrel Bend Test

2.1.3 Penetrating Encapsulant

<u>Requirement</u>	<u>Test Standard</u>
Flame Spread - 25, Smoke Emission - 50	ASTM E84
Life Expectancy - 20 years	ASTM C732 Accelerated Aging Test
Permeability - Minimum 0.4 perms	ASTM E96/E96M
Cohesion/Adhesion Test - 50 pounds of force/foot	ASTM E119
Fire Resistance - Negligible effect on fire resistance rating over 3 hour test (Classified by UL for use over fibrous and cementitious sprayed fireproofing)	ASTM E119
Impact Resistance - Minimum 43 in/lb	ASTM D2794 Gardner Impact Test
Flexibility - no rupture or cracking	ASTM D522 Mandrel Bend Test

2.1.4 Lock-Down Encapsulant

<u>Requirement</u>	<u>Test Standard</u>
Flame Spread - 25, Smoke Emission - 50	ASTM E84
Life Expectancy - 20 years	ASTM C732 Accelerated Aging Test
Permeability - Minimum 0.4 perms	ASTM E96/E96M
Fire Resistance - Negligible effect on fire resistance rating over 3 hour test (Tested with fireproofing over encapsulant applied directly to steel member)	ASTM E119
Bond Strength: 100 pounds of force/foot	ASTM E736
(Tests compatibility with cementitious and fibrous fireproofing)	

PART 3 EXECUTION

3.1 EQUIPMENT

At all times, provide the Contracting Officer or the Contracting Officer's Representative, with at least two complete sets of personal protective equipment, including decontaminating reusable coveralls if applicable, as required for entry to and inspection of the asbestos control area. Provide equivalent training to the Contracting Officer or a designated representative as provided to Contractor employees in the use of the required personal protective equipment. Provide manufacturer's certificate of compliance for all equipment used to contain airborne asbestos fibers.

3.1.1 Respirators

Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.

3.1.1.1 Respirators for Handling Asbestos

Provide personnel engaged in pre-cleaning, cleanup, handling, encapsulation removal, and/or demolition of asbestos materials with respiratory protection as indicated in 29 CFR 1926.1101 and 29 CFR 1926.103.

3.1.2 Exterior Whole Body Protection

3.1.2.1 Outer Protective Clothing

Provide personnel exposed to asbestos with disposable or reusable "non-breathable," whole body outer protective clothing, head coverings, gloves, and foot coverings. Provide disposable plastic or rubber gloves to

protect hands. Cloth gloves may be worn inside the plastic or rubber gloves for comfort, but shall not be used alone. Make sleeves secure at the wrists, make foot coverings secure at the ankles, and make clothing secure at the neck by the use of tape. If used, reusable whole body outer protective clothing shall be either disposed of as asbestos contaminated waste upon exiting from the asbestos regulated work area or be properly decontaminated.

3.1.2.2 Work Clothing

Provide cloth work clothes for wear under the outer protective clothing and foot coverings and either dispose of or properly decontaminate them as recommended by the PQP after each use.

3.1.2.3 Personal Decontamination Unit

If required by the project, provide a temporary, negative pressure unit with a separate decontamination locker room and clean locker room with a shower that complies with 29 CFR 1926.51(f)(4)(ii) through (V) in between for personnel required to wear whole body protective clothing. Provide two separate lockers for each asbestos worker, one in each locker room. Keep street clothing and street shoes in the clean locker. HEPA vacuum and remove asbestos contaminated disposable protective clothing while still wearing respirators at the boundary of the asbestos work area and seal in impermeable bags or containers for disposal. If applicable, HEPA vacuum and remove asbestos contaminated reusable protective clothing while still wearing respirators at the boundary of the asbestos work area, seal in two impermeable bags, label outer bag as asbestos contaminated waste, and transport for decontamination. Do not wear work clothing between home and work. Locate showers between the decontamination locker room and the clean locker room and require that all employees shower before changing into street clothes. Collect used shower water and filter with approved water filtration equipment to remove asbestos contamination. Dispose of filters and residue as asbestos waste. Discharge clean water to the sanitary system. Dispose of asbestos contaminated work clothing as asbestos contaminated waste or properly decontaminate as specified in the Contractor's Asbestos Hazard Abatement Plan. Decontamination units shall be physically attached to the asbestos control area. Build both a personnel decontamination unit and an equipment decontamination unit onto and integral with each asbestos control area.

3.1.2.4 Decontamination of Reusable Outer Protective Clothing

When reusable outer protective clothing is used, transport the double bagged clothing to a previously notified commercial/industrial decontamination facility for decontamination. Perform non-destructive testing to determine the effectiveness of asbestos decontamination. If representative sampling is used, ensure the statistical validity of the sampling results. If representative sampling is used, reject any entire batch in which any of the pieces exceed 40 fibers per square millimeter. Inspect reusable protective clothing prior to use to ensure that it will provide adequate protection and is not or is not about to become ripped, torn, deteriorated, or damaged, and that it is not visibly contaminated. Notify, in writing, all personnel involved in the decontamination of reusable outer protective clothing as indicated in 29 CFR 1926.1101.

3.1.2.5 Eye Protection

Provide goggles to personnel engaged in asbestos abatement operations when

the use of a full face respirator is not required.

3.1.3 Warning Signs and Labels

Provide bilingual warning signs printed in English and Spanish at all approaches to asbestos control areas. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all asbestos materials, scrap, waste, debris, and other products contaminated with asbestos.

3.1.3.1 Warning Sign

Provide vertical format conforming to 29 CFR 1926.200, and 29 CFR 1926.1101 minimum 20 by 14 inches displaying the following legend in the lower panel:

<u>Legend</u>	<u>Notation</u>
Danger	one inch Sans Serif Gothic or Block
Asbestos	one inch Sans Serif Gothic or Block
Cancer and Lung Disease Hazard	1/4 inch Sans Serif Gothic or Block
Authorized Personnel Only	1/4 inch Sans Serif Gothic or Block
Respirators and Protective Clothing are Required in this Area	1/4 inch Sans Serif Gothic or Block

Spacing between lines shall be at least equal to the height of the upper of any two lines.

3.1.3.2 Warning Labels

Provide labels conforming to 29 CFR 1926.1101 of sufficient size to be clearly legible, displaying the following legend:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

BREATHING ASBESTOS DUST MAY
CAUSE SERIOUS BODILY HARM

3.1.4 Local Exhaust System

When a local exhaust system is required for the project, provide a system in the asbestos control area in accordance with ANSI/AIHA Z9.2 and 29 CFR 1926.1101 that will provide at least four air changes per hour inside of the negative pressure enclosure. Local exhaust equipment shall be operated 24 hours per day, until the asbestos control area is removed and shall be leak proof to the filter and equipped with HEPA filters. Maintain a minimum pressure differential in the control area of minus 0.02 inch of water column relative to adjacent, unsealed areas. Provide continuous 24-hour per day monitoring of the pressure differential with a pressure differential automatic recording instrument. In no case shall the building ventilation system be used as the local exhaust system for the asbestos control area. Filters on exhaust equipment shall conform to ANSI/AIHA Z9.2 and UL 586. The local exhaust system shall terminate out of doors and remote from any public access or ventilation system intakes.

3.1.5 Tools

Vacuums shall be leak proof to the filter and equipped with HEPA filters. Filters on vacuums shall conform to ANSI/AIHA Z9.2 and UL 586. Do not use power tools to remove asbestos containing materials unless the tool is equipped with effective, integral HEPA filtered exhaust ventilation systems. Remove all residual asbestos from reusable tools prior to storage or reuse.

3.1.6 Rental Equipment

If rental equipment is to be used, furnish written notification to the rental agency concerning the intended use of the equipment and the possibility of asbestos contamination of the equipment.

3.1.7 Glovebags

When glovebag use is appropriate and approved by the PQP and NC for the project, submit written manufacturers proof that glovebags will not break down under expected temperatures and conditions.

3.2 WORK PROCEDURE

Perform asbestos related work in accordance with 29 CFR 1926.1101, 40 CFR 61-SUBPART M, and as specified herein. Use wet removal procedures, appropriate encapsulation procedures and/or negative pressure enclosure techniques as specified by the asbestos hazard abatement plan. If safety or practical considerations require the use of dry removal or non-standard techniques, the Contractor shall submit to the PQP and NC a written variance request along with written approval of the technique from the regulatory agency with jurisdiction over the project. Personnel shall wear and utilize protective clothing and equipment as specified herein. Eating, smoking, drinking, chewing gum, tobacco, or applying cosmetics shall not be permitted in the asbestos work or control areas. Personnel of other trades not engaged in the abatement or handling of asbestos containing material shall not be exposed at any time to airborne concentrations of asbestos unless all the personnel protection and training provisions of this specification are complied with by the trade personnel. As appropriate, seal all roof top penetrations, except plumbing vents, prior to asbestos roofing work, shut down the building heating, ventilating, and air conditioning system, cap the openings to the system, and provide temporary heating, ventilation, and/or air conditioning prior to the commencement of asbestos work. Disconnect electrical service when encapsulation or wet

removal is performed and provide temporary electrical service with verifiable ground fault circuit interrupter (GFCI) protection prior to the use of any water or encapsulant. If an asbestos fiber release or spill occurs outside of any asbestos control area, stop work immediately, correct the condition to the satisfaction of the Contracting Officer including clearance sampling, prior to resumption of work.

3.2.1 Protection of Existing Work to Remain

Perform work without damage or contamination of adjacent work. Where such work is damaged or contaminated as verified by the Contracting Officer using visual inspection or sample analysis, it shall be restored to its original condition or decontaminated by the Contractor at no expense to the Government as deemed appropriate by the Contracting Officer. This includes inadvertent spill of dirt, dust, or debris in which it is reasonable to conclude that asbestos may exist. When these spills occur, stop work immediately. Then clean up the spill. When satisfactory visual inspection and air sampling results are obtained from the PQP or NC work may proceed at the discretion of the Contracting Officer.

3.2.2 Furnishings

If the scope of work specifies that furniture and/or equipment is to remain in the building, cover and seal furnishings with 6-mil plastic sheet or remove from the work area and store in a location on site approved by the Contracting Officer.

3.2.3 Precleaning

Wet wipe and HEPA vacuum all surfaces potentially contaminated with asbestos prior to establishment of an enclosure.

3.2.4 Asbestos Control Area Requirements

Comply with the following procedures if applicable to the project work scope.

3.2.4.1 Negative Pressure Enclosure

Block and seal openings in areas where the release of airborne asbestos fibers can be expected. Establish an asbestos negative pressure enclosure with the use of curtains, portable partitions, or other enclosures in order to prevent the escape of asbestos fibers from the contaminated asbestos work area. Negative pressure enclosure development shall include protective covering of uncontaminated walls, and ceilings with a continuous membrane of two layers of minimum 6-mil plastic sheet sealed with tape to prevent water or other damage. Provide two layers of 6-mil plastic sheet over floors and extend a minimum of 12 inches up walls. Seal all joints with tape. Provide local exhaust system in the asbestos control area. Openings will be allowed in enclosures of asbestos control areas for personnel and equipment entry and exit, the supply and exhaust of air for the local exhaust system and the removal of properly containerized asbestos containing materials. Replace local exhaust system filters as required to maintain the efficiency of the system.

3.2.4.2 Glovebag

Establish designated limits for the asbestos regulated area with the use of caution tape or other continuous barrier, and maintain all appropriate

requirements for asbestos control areas. The PQP shall conduct personal samples of each worker engaged in asbestos handling (removal, disposal, transport and other associated work) throughout the duration of the project. If the quantity of airborne asbestos fibers monitored at the breathing zone of the workers at any time exceeds background or 0.01 fibers per cubic centimeter whichever is greater, stop work, evacuate personnel in adjacent areas or provide personnel with approved protective equipment at the discretion of the Contracting Officer. This sampling may be duplicated by the Government at the discretion of the Contracting Officer. If the air sampling results obtained by the Government differ from those obtained by the Contractor, the Government will determine which results predominate. If adjacent areas are contaminated as determined by the Contracting Officer, clean the contaminated areas, monitor, and visually inspect the area as specified herein.

3.2.5 Removal Procedures

Wet asbestos material with a fine spray of amended water or wetting agent (per 40 CFR 61-SUBPART M and as specified in the Asbestos Hazard Abatement Plan) during removal, cutting, or other handling so as to reduce the emission of airborne fibers. Remove material and immediately place in 6 mil plastic disposal bags. Remove asbestos containing material in a gradual manner, with continuous application of the amended water or wetting agent in such a manner that no asbestos material is disturbed prior to being adequately wetted. Where unusual circumstances prohibit the use of 6 mil plastic bags, submit an alternate proposal for containment of asbestos fibers to the Contracting Officer for approval. For example, in the case where both piping and insulation are to be removed, the Contractor may elect to wet the insulation, wrap the pipes and insulation in plastic and remove the pipe by sections. Asbestos containing material shall be containerized while wet. At no time shall asbestos material be allowed to accumulate or become dry. Lower and otherwise handle asbestos containing material as indicated in 40 CFR 61-SUBPART M.

3.2.5.1 Sealing Contaminated Items Designated for Disposal

Remove contaminated architectural, mechanical, and electrical appurtenances such as venetian blinds, full-height partitions, carpeting, duct work, pipes and fittings, radiators, light fixtures, conduit, panels, and other contaminated items designated for removal by completely coating the items with an asbestos lock-down encapsulant at the demolition site before removing the items from the asbestos control area. These items need not be vacuumed. The asbestos lock-down encapsulant shall be tinted a contrasting color. It shall be spray-applied by airless method. Thoroughness of sealing operation shall be visually gauged by the extent of colored coating on exposed surfaces. Lock-down encapsulants shall comply with the performance requirements specified herein.

3.2.5.2 Exposed Pipe Insulation Edges

Contain edges of asbestos insulation to remain that are exposed by a removal operation. Wet and cut the rough ends true and square with sharp tools and then encapsulate the edges with a 1/4 inch thick layer of non-asbestos containing insulating cement troweled to a smooth hard finish. When cement is dry, lag the end with a layer of non-asbestos lagging cloth, overlapping the existing ends by at least 4 inches. When insulating cement and cloth is an impractical method of sealing a raw edge of asbestos, take appropriate steps to seal the raw edges as approved by the Contracting Officer.

3.2.6 Encapsulation Procedures

3.2.6.1 Preparation of Test Patches

Install three test patches of encapsulant. Use airless spray at the lowest pressure and as recommended by the encapsulant manufacturer. Follow exactly the manufacturer's instructions for thinning recommendations, application procedures and rates. Curing time shall be not less than five days or that recommended by the manufacturer, whichever is more. A test patch shall be 9 square feet in size.

3.2.6.2 Field Testing

Field test the encapsulation test patches in accordance with ASTM E1494, paragraph "Required Field Test," in the presence of the Contracting Officer.

Keep a written record of the testing procedures and test results. Upon successful testing of the encapsulant, submit a signed statement to the Contracting Officer certifying that the encapsulant is suitable for installation on the particular asbestos containing material.

3.2.6.3 Large-Scale Application

Apply encapsulant using the same equipment and procedures as employed for the test patches. Keep the encapsulant material stirred to prevent settling. Keep a clean work area. Change pre-filters in the ventilation equipment as soon as they appear clogged by encapsulant aerosol or pressure differential drops below 0.02 inches of water.

3.2.7 Air Sampling

Sampling of airborne concentrations of asbestos fibers shall be performed in accordance with 29 CFR 1926.1101 and as specified herein. Sampling performed in accordance with 29 CFR 1926.1101 shall be performed by the PQP. Unless otherwise specified, use NIOSH Method 7400 for sampling and analysis. Monitoring may be duplicated by the Government at the discretion of the Contracting Officer. If the air sampling results obtained by the Government differ from those results obtained by the Contractor, the Government will determine which results predominate.

3.2.7.1 Sampling Prior to Asbestos Work

Provide area air sampling and establish the baseline one day prior to the masking and sealing operations for each demolition, removal, or encapsulation site. Establish the background by performing area sampling in similar but uncontaminated sites in the building.

3.2.7.2 Sampling During Asbestos Work

The PQP shall provide personal and area sampling as indicated in 29 CFR 1926.1101 and governing environmental regulations. In addition, provided the same type of work is being performed, provide area sampling at least once every work shift close to the work inside the enclosure, outside the clean room entrance to the enclosure, and at the exhaust opening of the local exhaust system. If sampling outside the enclosure shows airborne levels have exceeded background or 0.01 fibers per cubic centimeter, whichever is greater, stop all work, correct the condition(s) causing the increase, and notify the Contracting Officer immediately. Where alternate methods are used, perform personal and area air sampling at locations and

frequencies that will accurately characterize the evolving airborne asbestos levels.

The PQP shall provide personal sampling as indicated in 29 CFR 1926.1101. At the same time the NC will provide area sampling close to the work inside the enclosure, outside the clean room entrance to the enclosure, and at the exhaust opening of the local exhaust system. In addition, provided the same type of work is being performed, the NC will provide area sampling once every work shift close to the work inside the enclosure, outside the clean room entrance to the enclosure, and at the exhaust opening of the local exhaust system. If sampling outside the enclosure shows airborne levels have exceeded background or 0.01 fibers per cubic centimeter, whichever is greater, stop all work, correct the condition(s) causing the increase, and notify the Contracting Officer immediately. Where alternate methods are used, perform personal and area air sampling at locations and frequencies that will accurately characterize the evolving airborne asbestos levels.

3.2.7.3 Sampling After Final Clean-Up (Clearance Sampling)

Provide area sampling of asbestos fibers use aggressive air sampling technique as defined in the EPA 560/5-85-024 and establish an airborne asbestos concentration of less than 0.01 fibers per cubic centimeter after final clean-up but before removal of the enclosure or the asbestos work control area. After final cleanup and the asbestos control area is dry but prior to clearance sampling, the PQP and NC shall perform a visual inspection in accordance with ASTM E1368 to ensure that the asbestos control and work area is free of any accumulations of dirt, dust, or debris. Prepare a written report signed and dated by the PQP documenting that the asbestos control area is free of dust, dirt, and debris and all waste has been removed. Collect at least 5 samples. The asbestos fiber counts from these samples shall be less than 0.01 fibers per cubic centimeter or be not greater than the background, whichever is greater. Should any of the final samples indicate a higher value, the Contractor shall take appropriate actions to re-clean the area and shall repeat the sampling and analysis at the Contractor's expense.

3.2.8 Lock-Down

Prior to removal of plastic barriers and after pre-clearance clean up of gross contamination, the PQP and NC shall conduct a visual inspection of all areas affected by the removal and/or encapsulation in accordance with ASTM E1368. Inspect for any visible fibers. As dictated by the Asbestos Hazard Abatement Plan, a post removal (lock-down) encapsulant shall then be spray applied to ceiling, walls, floors and other areas exposed in the removal area. The exposed area shall include but not be limited to plastic barriers, furnishings and articles to be discarded as well as dirty change room, air locks for bag removal and decontamination chambers.

3.2.9 Site Inspection

While performing asbestos engineering control work, the Contractor shall be subject to on-site inspection by the Contracting Officer who may be assisted by or represented by safety or industrial hygiene personnel. If the work is found to be in violation of this specification, the Contracting Officer or his representative will issue a stop work order to be in effect immediately and until the violation is resolved. All related costs including standby time required to resolve the violation shall be at the Contractor's expense.

3.3 CLEAN-UP

3.3.1 Housekeeping

Essential parts of asbestos dust control are housekeeping and clean-up procedures. Maintain surfaces of the asbestos control area free of accumulations of asbestos fibers. Give meticulous attention to restricting the spread of dust and debris; keep waste from being distributed over the general area. Use HEPA filtered vacuum cleaners. DO NOT BLOW DOWN THE SPACE WITH COMPRESSED AIR. When asbestos removal is complete, all asbestos waste is removed from the work-site, and final clean-up is completed, the Contracting Officer will attest that the area is safe before the signs can be removed. After final clean-up and acceptable airborne concentrations are attained but before the HEPA unit is turned off and the enclosure removed, remove all pre-filters on the building HVAC system and provide new pre-filters. Dispose of filters as asbestos contaminated materials. Reestablish HVAC mechanical, and electrical systems in proper working order. The Contracting Officer will visually inspect all surfaces within the enclosure for residual material or accumulated dust or debris. The Contractor shall re-clean all areas showing dust or residual materials. If re-cleaning is required, air sample and establish an acceptable asbestos airborne concentration after re-cleaning. The Contracting Officer must agree that the area is safe in writing before unrestricted entry will be permitted. The Government shall have the option to perform monitoring to determine if the areas are safe before entry is permitted.

3.4 PACKAGING OF ASBESTOS WASTE

Collect asbestos waste, asbestos contaminated water, scrap, debris, bags, containers, equipment, and asbestos contaminated clothing which may produce airborne concentrations of asbestos fibers and place in sealed fiber-proof, waterproof, non-returnable containers (e.g. double plastic bags 6 mils thick, cartons, drums or cans). Wastes within the containers must be adequately wet in accordance with 40 CFR 61-SUBPART M. Affix a warning and Department of Transportation (DOT) label to each container including the bags or use at least 6 mils thick bags with the approved warnings and DOT labeling preprinted on the bag. The name of the waste generator and the location at which the waste was generated shall be clearly indicated on the outside of each container. Prevent contamination of the transport vehicle (especially if the transport vehicle is a rented truck likely to be used in the future for non-asbestos purposes). These precautions include lining the vehicle cargo area with plastic sheeting (similar to work area enclosure) and thorough cleaning of the cargo area after transport and unloading of asbestos debris is complete. For temporary storage, store sealed impermeable bags in asbestos waste drums or skids. An area for interim storage of asbestos waste-containing drums or skids will be assigned by the Contracting Officer or his authorized representative. Procedure for hauling and disposal shall comply with 40 CFR 61-SUBPART M, State, regional, and local standards, and as specified below. Sealed plastic bags may be dumped from drums into the burial site unless the bags have been broken or damaged. Damaged bags shall remain in the drum and the entire contaminated drum shall be buried.

3.5 MANAGEMENT OF ASBESTOS WASTE

Prior to generating any waste, the Contractor shall meet with the on-Station Hazardous Waste Storage Facility (HWSF) (760-939-3836) to coordinate manifesting, storage and disposal procedures.

3.5.1 Training Requirements for Handling Asbestos Waste

The Contractor shall ensure that workers generating, managing, and/or handling asbestos waste are trained according to 22 CCR 66265 by providing a copy of the training package or a training certificate in the Asbestos Hazard Abatement Plan.

3.5.2 Asbestos Disposal Quantity Report

Direct the PQP to record and report, to the Contracting Officer, the amount of asbestos containing material removed and released for disposal. Deliver the report for the previous day at the beginning of each day shift with amounts of material removed during the previous day reported in linear feet or square feet as described initially in this specification and in cubic feet for the amount of asbestos containing material released for disposal. Also allow the NC to inspect, record and report the amount of asbestos containing material removed and released for disposal on a daily basis.

3.5.3 Hazardous Waste Management

All RACM waste generated by this project is defined as hazardous waste and must be managed by the Contractor per 22 CCR 66260, 22 CCR 66261, 22 CCR 66262, 22 CCR 66263 and as follows. Specifically, standards for "Large Quantity Generators" of hazardous waste shall be followed. Technical questions regarding hazardous waste management may be directed to the Station's Environmental Department at 760-939-3219. Technical questions regarding hazardous waste documentation for off-site transport may be directed to the HWSF at 760-939-3836.

3.5.3.1 Accumulation of Hazardous Waste

Asbestos hazardous waste shall be accumulated in a 90-day area that meets all requirements listed in 22 CCR 66262. The Contractor shall inspect 90-day areas according to 22 CCR 66265 and provide copies of these inspections when requested. The Environmental Department requires that the Contractor use the Environmental Department's 90-day inspection form.

3.5.3.2 Containers

Each container of hazardous waste will meet applicable 40 CFR 763, 49 CFR 172, 49 CFR 173, 49 CFR 178 and 13 CCR requirements be structurally sound, remain closed except when removing or adding waste, compatible with the waste, and marked with a properly completed hazardous waste.

3.5.3.3 Hazardous Waste Documentation

The Contractor shall prepare all Hazardous Waste Manifests, Land Disposal Restriction forms per 22 CCR 66268, and Waste Profile documentation for approval and signature by the Environmental Department. The Contractor shall use the Station's EPA Identification Number and generator address on hazardous waste manifests. The Contractor shall also complete the Station's Hazardous Waste Disposal Request Form which can be provided by the Environmental Department upon request. The Contractor shall provide copies of all applicable documentation for Environmental Department review and approval. The Contractor (or the designated transporter) shall maintain copies of manifests per 22 CCR 66263.

3.5.3.4 Transport of Hazardous Wastes

The Contractor shall transport asbestos hazardous waste according to the regulations specified in 22 CCR 66263 and according to applicable 49 CFR 171, 49 CFR 172, 49 CFR 173, 49 CFR 178 and 49 CFR 180 as well as 40 CFR 61-SUBPART M. The Contractor shall transport hazardous wastes only to a Treatment, Storage, Disposal facility that is permitted per 22 CCR 66264 to accept asbestos hazardous waste, and which has been approved by the Environmental Department.

3.5.4 Non-Hazardous Waste Management

All Non-RACM waste generated by this project is defined as non-hazardous asbestos waste and must be managed by the Contractor as specified below. Technical questions regarding non-hazardous waste management may be directed to the Environmental Department at 760-939-3219. Technical questions regarding non-hazardous waste documentation for off-site transport may be directed to the on-Station Hazardous Waste Storage Facility (HWSF) and 760-939-3836.

3.5.4.1 Accumulation of Non-Hazardous Asbestos Waste

Non-hazardous asbestos waste shall be accumulated in a secure area pre-approved by the Environmental Department for storage of solid waste.

3.5.4.2 Containers

Each container of asbestos waste will meet applicable 40 CFR 763, 49 CFR 172, 49 CFR 173, 49 CFR 178 and 13 CCR requirements, be structurally sound, remain closed except when removing or adding waste, be compatible with the waste, and marked with a properly completed non-hazardous asbestos waste label.

3.5.4.3 Non-Hazardous Waste Documentation

The Contractor shall prepare all Non-Hazardous Waste Manifests and Waste Profile documentation for approval and signature by the Environmental Department. The Contractor shall use the Station's EPA Identification Number and generator address on non-hazardous waste manifests.

3.5.4.4 Transport of Non-Hazardous Wastes

The Contractor shall transport non-hazardous asbestos waste according to the regulations specified in 13 CCR and other applicable Federal, State and local agency regulations.

3.5.4.5 Final Disposal

The Contractor shall transport non-hazardous wastes only to a landfill approved by both the California Regional Water Quality Control Board - Lahonton Region and the Environmental Department and shall provide copies of all applicable documentation, including weight tickets and completed manifests, to the Environmental Department.

-- End of Section --

SECTION 02 83 13.00 20

LEAD IN CONSTRUCTION
11/12

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA)

ANSI/AIHA Z88.6 (2006) Respiratory Protection - Respirator Use-Physical Qualifications for Personnel

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

HUD 6780 (1995; Errata Aug 1996; Rev Ch. 7 - 1997) Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
29 CFR 1926.103	Respiratory Protection
29 CFR 1926.21	Safety Training and Education
29 CFR 1926.33	Access to Employee Exposure and Medical Records
29 CFR 1926.55	Gases, Vapors, Fumes, Dusts, and Mists
29 CFR 1926.59	Hazard Communication
29 CFR 1926.62	Lead
29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 745	Lead-Based Paint Poisoning Prevention in Certain Residential Structures
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials

Communications, Emergency Response Information, Training Requirements, and Security Plans

- 49 CFR 173 General Requirements for Shipments and Packagings
- 49 CFR 178 Specifications for Packagings
- 49 CFR 180 Continuing Qualifications and Maintenance of Packagings

CA CODE OF REGULATIONS (CCR)

- 8 CCR 1532.1 Lead
- 13 CCR CA Department of Transportation/Highway Patrol
- 17 CCR 35001-36100 Accreditation, Certification, and Work Practices For Lead-Based Paint and Lead Hazards
- 22 CCR 66260 Hazardous Waste Management System; General
- 22 CCR 66261 Identification and Listing of Hazardous Waste
- 22 CCR 66262 Standards Applicable to Generators of Hazardous Waste
- 22 CCR 66263 Standards Applicable to Transporters of Hazardous Waste
- 22 CCR 66264 Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- 22 CCR 66265 Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- 22 CCR 66268 Land Disposal Restrictions

UNDERWRITERS LABORATORIES (UL)

- UL 586 (2009) Standard for High-Efficiency Particulate, Air Filter Units

1.2 DEFINITIONS

1.2.1 Action Level

Employee exposure, without regard to use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air averaged over an 8 hour period.

1.2.2 Area Sampling

Sampling of lead concentrations within the lead control area and inside the physical boundaries which is representative of the airborne lead concentrations but is not collected in the breathing zone of personnel (approximately 5 to 6 feet above the floor).

1.2.3 Competent Person (CP)

As used in this section, refers to a person employed by the Contractor who is trained in the recognition and control of lead hazards in accordance with current federal, State, and local regulations and has the authority to take prompt corrective actions to control the lead hazard. At minimum, the competent person shall be certified as a Lead-Related Construction Supervisor in the State of California per 17 CCR 35001-36100.

1.2.4 Contaminated Room

Refers to a room for removal of contaminated personal protective equipment (PPE).

1.2.5 Decontamination Shower Facility

That facility that encompasses a clean clothing storage room, and a contaminated clothing storage and disposal rooms, with a shower facility in between.

1.2.6 High Efficiency Particulate Air (HEPA) Filter Equipment

HEPA filtered vacuuming equipment with a UL 586 filter system capable of collecting and retaining lead-contaminated particulates. A HEPA filter demonstrates at least 99.97 percent efficiency against 0.3 micron or larger size particles.

1.2.7 Lead

Metallic lead, inorganic lead compounds, and organic lead soaps. Excludes other forms of organic lead compounds.

1.2.8 Lead Control Area

A system of control methods to prevent the spread of lead dust, paint chips or debris to adjacent areas that may include temporary containment, floor or ground cover protection, physical boundaries, and warning signs to prevent unauthorized entry of personnel. HEPA filtered local exhaust equipment may be used as engineering controls to further reduce personnel exposures or building/outdoor environmental contamination.

1.2.9 Lead Permissible Exposure Limit (PEL)

Fifty micrograms per cubic meter of air as an 8 hour time weighted average as determined by 29 CFR 1926.62. If an employee is exposed for more than eight hours in a work day, the PEL shall be determined by the following formula:

$$\text{PEL (micrograms/cubic meter of air)} = 400/\text{No. hrs worked per day}$$

1.2.10 Material Containing Lead/Paint with Lead (MCL/PWL)

Any material, including paint, which contains lead as determined by the testing laboratory using a valid test method. The requirements of this section does not apply if no detectable levels of lead are found using a quantitative method for analyzing paint or MCL using laboratory instruments with specified limits of detection (usually 0.01 percent). Analysis using an X-Ray Fluorescence (XRF) instrument may not be considered a valid test method.

1.2.11 Personal Sampling

Sampling of airborne lead concentrations within the breathing zone of an employee to determine the 8 hour time weighted average concentration in accordance with 29 CFR 1926.62. Samples shall be representative of the employees' work tasks. Breathing zone shall be considered an area within a hemisphere, forward of the shoulders, with a radius of 6 to 9 inches and centered at the nose or mouth of an employee.

1.2.12 Physical Boundary

Area physically roped or partitioned off around lead control area to limit unauthorized entry of personnel.

1.3 DESCRIPTION OF WORK

1.3.1 Work Scope

Construction activities covered by this specification include the demolition, stabilization, and/or removal of MCL or PWL or described in the contract scope of work.

1.3.2 Coordination with Other Work

The contractor shall coordinate with work being performed in adjacent areas. Coordination procedures shall be explained in the Lead Compliance Plan and shall describe how the Contractor will prevent lead exposure to other contractors and/or Government personnel performing work unrelated to lead activities.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Occupational and Environmental Assessment Data Report (if objective data is used to justify excluding the initial occupational exposure assessment); G

Lead Compliance Plan including CP approval
(signature, date, and certification number); G

Competent Person qualifications; G

Training Certification of workers and supervisors; G

Lead Waste Management Plan; G

Written evidence that the TSD is approved for lead disposal; G

Certification of Medical Examinations; G

SD-06 Test Reports

Sampling Results; G

Occupational and Environmental Assessment Data Report; G

SD-07 Certificates

Testing laboratory qualifications; G

Third party consultant qualifications; G

Clearance Certification; G

SD-11 Closeout Submittals

Completed and signed hazardous waste manifests from treatment or disposal facility; G

Waste turn-in documents or weight tickets for non-hazardous wastes that are disposed of at sanitary or construction and demolition landfills; G

1.5 QUALITY ASSURANCE

1.5.1 Qualifications

1.5.1.1 Competent Person (CP)

Submit name, address, and telephone number of the CP selected to perform responsibilities specified in paragraph entitled "Competent Person (CP) Responsibilities." Provide documented construction project-related experience with implementation of OSHA's Lead in Construction standard (29 CFR 1926.62) which shows ability to assess occupational and environmental exposure to lead, experience with the use of respirators, personal protective equipment and other exposure reduction methods to protect employee health. Submit proper documentation that the CP is trained and certified in California as a Lead Supervisor as specified in 17 CCR 35001-36100.

1.5.1.2 Training Certification

Submit a certificate for each worker and supervisor, signed and dated by the accredited training provider, stating that the employee has received the required lead training specified in 17 CCR 35001-36100.

1.5.1.3 Testing Laboratory

Submit the name, address, and telephone number of the testing laboratory selected to perform air and wipe sample analysis, testing, and reporting of airborne concentrations of lead. Use a laboratory participating in the EPA National Lead Laboratory Accreditation Program (NLLAP) by being accredited by either the American Association for Laboratory Accreditation (A2LA) or the American Industrial Hygiene Association (AIHA) and that is successfully participating in the Environmental Lead Proficiency Analytical Testing (ELPAT) program to perform sample analysis. The testing laboratory firm shall be independent of the Contractor and shall have no employee or employer relationship which could constitute a conflict of interest. Laboratories selected to perform blood lead analysis shall be OSHA approved.

1.5.1.4 Third Party Consultant Qualifications

Submit the name, address and telephone number of the third party consultant selected to perform the wipe sampling for determining concentrations of lead in dust. Submit proper documentation that the consultant is trained and certified in California as a Lead Inspector/Assessor, as specified in 17 CCR 35001-36100. The third party shall be hired by the Prime Contractor, but shall be independent of both the Prime and abatement contractors and shall have no employee or employer relationship which could constitute a conflict of interest.

1.5.2 Requirements

1.5.2.1 Competent Person (CP) Responsibilities

- a. Verify training meets all federal, State, and local requirements.
- b. Review and approve Lead Compliance Plan for conformance to the applicable referenced standards.
- c. Continuously inspect PWL or MCL work for conformance with the approved Lead Compliance Plan.
- d. Perform (or oversee performance of) air sampling. Recommend upgrades or downgrades (whichever is appropriate based on exposure) on the use of PPE (respirators included) and engineering controls.
- e. Ensure work is performed in strict accordance with specifications at all times.
- f. Control work to prevent hazardous exposure to human beings and to the environment at all times.
- g. Supervise final cleaning of the lead control area, take clearance wipe samples if necessary; review clearance sample results and make recommendations for further cleaning.
- h. Certify the conditions of the work as called for elsewhere in this specification.

1.5.2.2 Lead Compliance Plan

Submit a detailed job-specific plan of the work procedures to be used in the disturbance of PWL or MCL. The plan shall include a sketch showing the location, size, and details of lead control areas, critical barriers, physical boundaries, location and details of decontamination facilities, viewing ports, and mechanical ventilation system. Include a description of equipment and materials, work practices, controls and job responsibilities for each activity from which lead is emitted. Include in the plan, eating, drinking, smoking, hygiene facilities and sanitary procedures, interface of trades, sequencing of lead related work, collected waste water and dust containing lead and debris, air sampling, respirators, personal protective equipment, and a detailed description of the method of containment of the operation to ensure that lead is not released outside of the lead control area. Include site preparation, cleanup and clearance procedures. Include occupational and environmental sampling, training and strategy, sampling and analysis strategy and methodology, frequency of sampling, duration of sampling, and qualifications of sampling personnel in the air sampling portion of the plan. Include a description of arrangements made among contractors on multi-contractor worksites to inform affected employees and to clarify responsibilities to control exposures.

The plan shall be developed by a Lead-Related Construction Supervisor/Project Monitor certified individual as specified by 17 CCR 35001-36100.

In occupied buildings, the plan shall also include an occupant protection program that describes the measures that will be taken during the work to notify and protect the building occupants.

1.5.2.3 Occupational and Environmental Assessment Data Report

If initial monitoring is necessary, submit occupational and environmental **sampling results** to the Contracting Officer within three working days of collection. The sampling results shall be signed by the testing laboratory employee performing the analysis, the employee that performed the sampling, and the CP.

Before a reduction in the full implementation of 29 CFR 1926.62 in the Lead Compliance Plan can be considered, the Contractor shall provide a report to the Contracting Officer that adequately justifies the reduction.

- a. The initial monitoring shall represent each job classification, or if working conditions are similar to previous jobs by the same employer, provide previously collected exposure data that can be used to estimate worker exposures per 29 CFR 1926.62. The data shall represent the worker's regular daily exposure to lead for stated work.
- b. Submit worker exposure data gathered during the task based trigger operations of 29 CFR 1926.62 with a complete process description. This includes manual demolition, manual scraping, manual sanding, heat gun, power tool cleaning, rivet busting, cleanup of dry expendable abrasives, abrasive blast enclosure removal, abrasive blasting, welding, cutting and torch burning where lead containing coatings are present.

- c. The initial assessment shall determine the requirement for further monitoring and the need to fully implement the control and protective requirements outlined by the Lead Compliance Plan per 29 CFR 1926.62.

1.5.2.4 Medical Examinations

Initial medical surveillance as required by 29 CFR 1926.62 and 8 CCR 1532.1 shall be made available to all employees exposed to lead at any time (1 day) above the action level. Full medical surveillance shall be made available to all employees on an annual basis who are or may be exposed to lead in excess of the action level for more than 30 days a year or as required by 29 CFR 1926.62 and 8 CCR 1532.1. Adequate records shall show that employees meet the medical surveillance requirements of 29 CFR 1926.33, 29 CFR 1926.62, 29 CFR 1926.103 and 8 CCR 1532.1. Provide medical surveillance to all personnel exposed to lead as indicated in 29 CFR 1926.62 and 8 CCR 1532.1. Maintain complete and accurate medical records of employees for the duration of employment plus 30 years.

1.5.2.5 Training

Train each employee performing work that disturbs lead, who performs MCL/PWL disposal, and air sampling operations prior to the time of initial job assignment and annually thereafter, in accordance with 29 CFR 1926.21, 29 CFR 1926.62, 8 CCR 1532.1, 17 CCR 35001-36100, and local regulations where appropriate.

1.5.2.6 Respiratory Protection Program

- a. Provide each employee required to wear a respirator a respirator fit test at the time of initial fitting and at least annually thereafter as required by 29 CFR 1926.62 and 8 CCR 1532.1.
- b. Establish and implement a respiratory protection program as required by ANSI/AIHA Z88.6, 29 CFR 1926.103, 29 CFR 1926.62, 29 CFR 1926.55 and 8 CCR 1532.1.

1.5.2.7 Hazard Communication Program

Establish and implement a Hazard Communication Program as required by 29 CFR 1926.59 and 8 CCR 1532.1.

1.5.2.8 Lead Waste Management Plan

The Lead Waste Management Plan shall comply with applicable requirements of federal, State, and local hazardous waste regulations and address:

- a. Identification and classification of wastes associated with the work.
- b. Estimated quantities of wastes to be generated and disposed of.
- c. Names and qualifications of each contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location and operator and a 24-hour point of contact.
- d. Names and qualifications (experience and training) of personnel who will be working on-site with hazardous wastes.

- e. List of waste handling equipment to be used in performing the work, to include cleaning, volume reduction, and transport equipment.
- f. Spill prevention, containment, and cleanup contingency measures including a health and safety plan to be implemented in accordance with 29 CFR 1926.65.
- g. Work plan and schedule for waste containment, removal and disposal. Proper containment of the waste includes using acceptable waste containers (e.g., 55-gallon drums) as well as proper marking/labeling of the containers. Wastes shall be cleaned up and containerized daily.
- h. Include any process that may alter or treat waste rendering a hazardous waste non-hazardous.
- i. Unit cost for hazardous waste disposal according to this plan.

1.5.2.9 Environmental, Safety and Health Compliance

In addition to the detailed requirements of this specification, comply with laws, ordinances, rules, and regulations of federal, State, and local authorities regarding lead. Comply with the applicable requirements of the current issues of 29 CFR 1926.62 and 8 CCR 1532.1. Submit matters regarding interpretation of standards to the Contracting Officer for resolution before starting work. Where specification requirements and the referenced documents vary, the most stringent requirement shall apply.

1.5.2.10 Pre-Construction Conference

Along with the CP, meet with the Contracting Officer to discuss in detail the Lead Waste Management Plan and the Lead Compliance Plan, including procedures and precautions for the work.

1.6 EQUIPMENT

1.6.1 Respirators

Furnish appropriate respirators approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, for use in atmospheres containing lead dust, fume and mist.

Respirators shall comply with the requirements of 29 CFR 1926.62 and 8 CCR 1532.1.

1.6.2 Special Protective Clothing

Furnish personnel who will be exposed to lead-contaminated dust with proper disposable protective whole body clothing, head covering, gloves, eye, and foot coverings as required by 29 CFR 1926.62 and 8 CCR 1532.1. Furnish proper disposable plastic or rubber gloves to protect hands. Reduce the level of protection only after obtaining approval from the CP.

1.6.3 Rental Equipment Notification

If rental equipment is to be used during PWL or MCL handling and disposal, notify the rental agency in writing concerning the intended use of the equipment.

1.6.4 Vacuum Filters

Use UL 586 labeled HEPA filters.

1.6.5 Equipment for Government Personnel

Furnish the Contracting Officer with two complete sets of Personal Protective Equipment (PPE) daily, as required herein, for entry into and inspection of the lead removal work within the lead controlled area. Personal protective equipment shall include disposable whole body covering, including appropriate foot, head, eye, and hand protection. PPE shall remain the property of the Contractor. The Government will provide respiratory protection for the Contracting Officer.

1.7 PROJECT/SITE CONDITIONS

1.7.1 Protection of Existing Work to Remain

Perform work without damage or contamination of adjacent areas. Where existing work is damaged or contaminated, restore work to its original condition or better as determined by the Contracting Officer.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 PREPARATION

3.1.1 Protection

3.1.1.1 Notification

Notify the Contracting Officer 20 days prior to the start of any lead work.

3.1.1.2 Lead Control Area

- a. Physical Boundary - Provide physical boundaries around the lead control area by roping off the area designated in the Lead Compliance Plan or providing curtains, portable partitions or other enclosures to ensure that lead will not escape outside of the lead control area.
- b. Warning Signs - Provide warning signs at approaches to lead control areas. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the area. Signs shall comply with the requirements of 29 CFR 1926.62.

3.1.1.3 Furnishings

Refer to the contract scope of work regarding protecting, removing and/or disposing of furnishings from the work area.

3.1.1.4 Heating, Ventilating and Air Conditioning (HVAC) Systems

Shut down, lock out, and isolate HVAC systems that supply, exhaust, or pass through the lead control areas. Seal intake and exhaust vents in the lead control area with 6 mil plastic sheet and tape. Seal seams in HVAC components that pass through the lead control area. Provide a temporary HVAC system if required by the contract scope of work.

3.1.1.5 Decontamination Shower Facility

Provide clean and contaminated change rooms and shower facilities in accordance with this specification and 29 CFR 1926.62.

3.1.1.6 Eye Wash Station

Where eyes may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes shall be provided within the work area.

3.1.1.7 Mechanical Ventilation System

- a. To the extent feasible, use local exhaust ventilation or other collection systems, approved by the CP. Local exhaust ventilation systems shall be evaluated and maintained in accordance with 29 CFR 1926.62.
- b. Vent local exhaust outside the building and away from building ventilation intakes or ensure system is connected to HEPA filters.
- c. Use locally exhausted, power actuated tools or manual hand tools.

3.1.1.8 Personnel Protection

Personnel shall wear and use protective clothing and equipment as specified herein. Eating, smoking, or drinking or application of cosmetics is not permitted in the lead control area. No one will be permitted in the lead control area unless they have been appropriately trained and provided with protective equipment.

3.2 ERECTION

3.2.1 Lead Control Area Requirements

If full containment is not required, establish a lead control area by completely establishing barriers and physical boundaries around the area or structure where PWL or MCL removal operations will be performed.

If full containment is required, contain removal operations by the use of critical barriers, HEPA filtered exhaust, a negative pressure enclosure system with decontamination facilities and with HEPA filtered exhaust as necessary to prevent uncontrolled migration of lead-containing dust or

debris. For containment areas larger than 1,000 square feet install a minimum of two 18 inch square viewing ports. Locate ports to provide a view of the required work from the exterior of the enclosed contaminated area. Glaze ports with laminated safety glass. The Designer should consider using viewing ports for lead control areas under 1,000 square feet to save inspection time.

3.3 APPLICATION

3.3.1 Lead Work

Perform lead work in accordance with approved Lead Compliance Plan. Use procedures and equipment required to limit occupational exposure and environmental contamination with lead when the work is performed in accordance with 29 CFR 1926.62 or 40 CFR 745 as applicable and as specified herein. Dispose of all PWL or MCL and associated waste in compliance with federal, State, and local requirements.

3.3.2 Paint with Lead or Material Containing Lead Removal

If manual or power sanding or grinding of lead surfaces or materials is allowed by the Contracting Officer, tools must be equipped with HEPA filter attachments and include wet methods. These work methods are generally prohibited in family housing, child care facilities, administrative buildings, kitchens, barracks, and other sensitive areas. The dry sanding or grinding of surfaces that contain lead is prohibited. Provide methodology for removing lead in the Lead Compliance Plan. Select lead removal processes to minimize contamination of work areas outside the control area with lead-contaminated dust or other lead-contaminated debris or waste and to ensure that unprotected personnel are not exposed to hazardous concentrations of lead. Describe this removal process in the Lead Compliance Plan.

3.3.2.1 Paint with Lead or Material Containing Lead - Indoor Removal

Perform manual and/or mechanical removal and thermal cutting in the lead control areas using appropriate enclosures, barriers, containments, and powered locally exhausted tools. Collect residue and debris for disposal in accordance with federal, State, and local requirements.

3.3.2.2 Paint with Lead or Material Containing Lead - Outdoor Removal

Perform outdoor removal as indicated in federal, State, and local regulations and in the Lead Compliance Plan. The worksite preparation, including barriers and/or containments, shall be job dependent and presented in the Lead Compliance Plan.

3.3.3 Personnel Exiting Procedures

Whenever personnel exit the lead-controlled area, they shall perform the following procedures and shall not leave the work place wearing any clothing or equipment worn in the control area:

- a. Vacuum all clothing before entering the contaminated change room.
- b. Remove protective clothing in the contaminated change room, and place them in an approved impermeable disposal bag.

- c. If a shower cannot feasibly be placed adjacent to the contaminated change room, wash hands and face at the site, don appropriate disposable or uncontaminated reusable clothing, move to an appropriate shower facility and shower.
- d. Change to clean clothes prior to leaving the clean clothes storage area.

3.4 FIELD QUALITY CONTROL

3.4.1 Tests

3.4.1.1 Air and Wipe Sampling

Conduct sampling for lead in accordance with 29 CFR 1926.62 and as specified herein. Air and wipe sampling shall be directed or performed by the CP.

- a. The CP shall be on the job site directing the air and wipe sampling and inspecting the PWL or MCL removal work to ensure that the requirements of the contract have been satisfied during the entire PWL or MCL operation.
- b. Collect personal air samples on employees who are anticipated to have the greatest risk of exposure as determined by the CP. In addition, collect air samples on at least twenty-five percent of the work crew or a minimum of two employees, whichever is greater, during each work shift.
- c. Submit results of air samples, signed by the CP, within 72 hours after the air samples are taken.
- d. Conduct area air sampling daily, on each shift in which lead-based paint removal operations are performed, in areas immediately adjacent to the lead control area. Sufficient area monitoring shall be conducted to ensure unprotected personnel are not exposed at or above 30 micrograms per cubic meter of air. If 30 micrograms per cubic meter of air is reached or exceeded, stop work and notify the Contracting Officer immediately, and correct the condition(s) causing the increased levels. Determine if work condition(s) require any further change in work methods. Removal work shall resume only after the CP and the Contracting Officer give approval.
- e. For work in sensitive areas such as family housing, child care facilities, administrative buildings, kitchens, barracks, etc., prior to work begins, a third party consultant shall collect and analyze baseline wipe samples (and soil samples if applicable) in accordance with methods defined by federal, State, and local standards inside and outside of the physical boundary to assess the degree of dust contamination in the facility prior to lead disturbance or removal.
- f. If required by the contract scope of work, collect surface wipe samples on floors at a location no greater than 10 feet outside the lead control area at a frequency of once per day while lead removal work is conducted in occupied buildings. Surface wipe results shall meet criteria in paragraph "Clearance Certification."

3.4.1.2 Sampling After Removal

After the visual inspection, conduct soil sampling if bare soil is present during external removal operations and collect wipe samples according to the HUD protocol contained in HUD 6780 to determine the lead content of settled dust. Analytical results shall be reported in units of micrograms per square meter foot for hard surface areas and milligrams per kilogram or parts per million for soil.

3.4.1.3 Testing of Material Containing Lead Residue

If required by State or Local regulations, test residue in accordance with 40 CFR 261 for hazardous waste.

3.5 CLEANING

3.5.1 Cleanup

Maintain surfaces of the lead control area free of accumulations of dust and debris. Restrict the spread of dust and debris; keep waste from being distributed over the work area. Do not dry sweep or use pressurized air to clean up the area. At the end of each shift and when the lead operation has been completed, clean the controlled area of visible contamination by vacuuming with a HEPA filtered vacuum cleaner, wet mopping the area and wet wiping the area as indicated by the Lead Compliance Plan. Re-clean areas showing dust or debris. After visible dust and debris is removed, wet wipe and HEPA vacuum all surfaces in the controlled area. If adjacent areas become contaminated at any time during the work, clean, visually inspect, and then wipe sample all contaminated areas. The CP shall then certify in writing that the area has been cleaned of lead contamination before clearance testing.

3.5.2 Clearance Certification

The CP shall certify in writing that air samples collected outside the lead control area during paint removal operations are less than 30 micrograms per cubic meter of air; the respiratory protection used for the employees was adequate; the work procedures were performed in accordance with 29 CFR 1926.62; and that there were no visible accumulations of material and dust containing lead left in the work site. Do not remove the lead control area or roped off boundary and warning signs prior to the Contracting Officer's acknowledgement of receipt of the CP certification. For the project types described below, comply with the listed requirements or with more stringent requirements promulgated by Federal, State or Local entities with authority over the project.

For projects involving family housing, child care facilities, kitchens, or other sensitive areas, the third party consultant shall certify surface wipe sample results collected inside and outside the work area are less than 40 micrograms per square foot on floors, less than 250 micrograms per square foot on interior window sills and less than 400 micrograms per square foot on window troughs or not significantly greater than the initial surface loading determined prior to work, whichever concentrations are less.

For work in administrative buildings or the conversion of industrial lead work areas (e.g., firing ranges) into non-industrial work areas open for public access, the third party consultant shall certify surface wipe sample results collected inside and outside the work area are less than 200 micrograms per square foot on floors or horizontal surfaces.

For work in industrial facilities, clear the lead control area of all visible dust and debris.

For exterior work, soil samples taken at the exterior of the work site shall be used to determine if soil lead levels had increased at a statistically significant level (significant at the 95 percent confidence limit) from the soil lead levels prior to the operation. If soil lead levels either show a statistically significant increase above soil lead levels prior to work or soil lead levels above any applicable federal or state standard for lead in soil, the soil shall be remediated.

3.6 MANAGEMENT OF LEAD HAZARDOUS WASTE (HW)

All lead HW as defined in this specification must be managed per 22 CCR 66260, 22 CCR 66261, 22 CCR 66262, 22 CCR 66263, and as follows. Specifically, standards for "Large Quantity Generators" of HW shall be followed. Technical questions regarding hazardous waste management may be directed to the Environmental Division at 760-939-3219. The Contractor shall meet with the on-Station HW Storage Facility (HWSF) operator (760-939-3836) before any HW is generated to coordinate manifesting, storage and disposal procedures.

3.6.1 Identification of HW

The Contractor shall identify all lead wastes that have the potential of being HWs. The waste determination must be based upon one or more of the following:

- (1) Manufacturer information or Safety Data Sheets (SDS);
- (2) The process generating the waste;
- (3) Knowledge of the waste; and/or
- (4) Laboratory analysis. The Contractor shall only use CA-certified laboratories and EPA or State approved analytical methods.

Upon request by the Environmental Division via the Contracting Officer, the Contractor shall provide proof of the waste determinations.

3.6.2 Accumulation of HW

Depending on the quantity of lead HWs generated, HWs shall be accumulated in a 90-day or satellite area that meets all requirements listed in 22 CCR 66262. The Contractor shall notify the Contracting Officer of the location of the accumulation area prior to its setup. Once the accumulation area is setup, the Environmental Division shall approve its use prior to HW being placed in the accumulation area. The Contractor shall inspect 90-day areas according to the regulations and provide copies of these inspections upon request by the Environmental Division via the Contracting Officer. The

Environmental Division requires that the Contractor use the Environmental Division's 90-day inspection form.

3.6.3 Containers

Each container of waste will meet 49 CFR 172, 49 CFR 173, 49 CFR 178 and 13 CCR requirements, be structurally sound, remain closed except when removing or adding waste, be compatible with the waste, and be marked with a properly completed HW label using the Station's EPA identification number.

3.6.4 HW Documentation

For large quantities of HWs that are placed in bulk containers as defined by DoT, the Contractor shall prepare all Hazardous Waste Manifests, Land Disposal Restriction forms (per 22 CCR 66268), and Waste Profile documentation for approval and signature by the Environmental Division. The Contractor shall use the Station's EPA Identification Number and generator address on HW manifests and shall provide copies of all applicable documentation for Environmental Division review and approval. The Contractor (or the designated transporter) shall also maintain copies of manifests per 22 CCR 66263. The Contractor shall submit written evidence to demonstrate that the treatment, storage, disposal facility (TSD) is permitted per 22 CCR 66264 to accept the specific type(s) of HW. The TSD must also be approved by the Environmental Division. The Contractor shall also complete the Station's HW Disposal Request Form which can be provided by the Environmental Division upon request.

3.6.5 Training Requirements

Training requirements for handling and management of HW are as follows:

- a. The Contractor shall ensure that workers generating, managing, and/or handling HW are trained according to 22 CCR 66265. Upon request by the Environmental Division via the Contracting Officer, the Contractor shall provide a copy of the training package or a training certificate.
- b. OSHA HAZWOPER training (29 CFR 1910.120) may also be applicable to the project but is required only for specific applications as written in the regulation. Upon request, the Contractor will provide reasons why the training is not needed.
- c. The Contractor shall ensure that workers are trained according to "Hazard Communication" training in 29 CFR 1910.120.
- d. The Contractor shall ensure that workers are adequately trained according to any other applicable regulations (e.g. respirators, confined space) for the project by providing a copy of the training certificate.

3.6.6 Transfer of HWs to the Station Storage Facility

Except for large quantities of HWs that are placed in bulk containers as defined by the California Department of Transportation (DoT), the Contractor shall transfer Contractor-generated HWs to the on-Station HWSF for storage and final disposal. The Contractor may not separate HW designated for bulk containers into small containers in order to avoid Contractor responsibility

for the HW. Depending on the amount, type and circumstance, transfer of spill cleanup residues will be decided on a case-by-case basis.

The Contractor shall complete the Station Hazardous Waste Disposal Request form (available to the Contractor upon request) and provide the form to the HWSF personnel at least 15 working days prior to the end of the accumulation time period or the end of the job. As the requestor on the form, the Contractor shall provide name and phone number of the person in charge of the HW and Contractor company name. The Contractor shall contact HWSF personnel at 760-939-3836 to schedule drop-off of the wastes. The Contractor shall not drop-off wastes without facility personnel present. The Contractor is responsible for proper accumulation of the HWs prior to transfer to the HWSF.

3.6.7 Transport of HWs

For large quantities of HWs that are placed in bulk containers as defined by DoT, the Contractor shall transport HWs according to the regulations specified in 22 CCR 66263 and according to 49 CFR 171, 49 CFR 172, 49 CFR 173, 49 CFR 178, and 49 CFR 180.

3.7 MANAGEMENT OF LEAD-CONTAINING NON-HAZARDOUS WASTE

The Contractor shall store non-hazardous lead-containing waste in covered containers supplied by the Contractor or manage solid waste as approved by the Contracting Officer for the specific project. The containers must be regularly emptied and not allowed to overflow. The Contractor shall prevent contamination of the site or other areas when handling and disposing of waste. The Contractor shall provide **turn-in documents or weight tickets** for non-hazardous waste disposal.

3.8 PAYMENT FOR WASTE

Payment for disposal of hazardous and non-hazardous waste will not be made until a signed copy of the manifest from the treatment or disposal facility certifying the amount of lead-containing materials or non-hazardous waste delivered is returned and a copy is furnished to the Government.

-- End of Section --