TABLE OF CONTENTS

Note to Specifier: The following are LBNL standard sections. Add or delete as appropriate for the project.

>> DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS
Section 000101 Project Manual Title Page
Section 000105 Certifications
Section 000110 Table of Contents
Section 000115 List of Drawings
Section 009113 Bidding Addenda

>> DIVISION 01 - GENERAL REQUIREMENTS
Section 010000 General Requirements (rev 01/26/2018)
Section 010000B Manufacturer Warranty Information (NEW 01/26/2018)
Section 011114 Phased Construction
Section 011200 Multiple Subcontract Summary
Section 012300 Alternates
Section 013500 Special Procedures (rev 05/20/2016)
Section 013500A Supplement for Equipment Energization Plan (NEW 01/23/2017)
Section 013500B Inspection, Test & Witness Hold Plan (NEW 05/24/2016)
Section 013513.10 Inclinometer Casing
Section 013513.11 Cleanroom Construction Procedures
Section 013513.12 Cleanroom Special Construction and Cleaning Procedures
Section 013513.13 Cleanroom Certification and Acceptance
Section 013513.14 Cleanroom EMI Abatement Recommendations
Section 013523.11 Lateral Force Provisions (rev 01/27/2016)
Section 013529 Environment, Safety, and Health Procedures (rev 05/23/2016)
Section 013529A Subcontractor Injury Reporting Requirements (rev 06/27/2016)
Section 013553.13 Computer Aided Design Files Procedures
Section 013553.14 Appendix A - Revocable Grant of License
Section 014339 Mockups
Section 015111 Temporary Utilities for Trailers
Section 015723 Stormwater Pollution Prevention Plan (SWPPP) (rev 06/30/2014)
Section 017329 Cutting and Patching
Section 017419 Construction Waste Management (rev 10/29/2012)
Section 017900 Demonstration and Training
Section 019113 General Commissioning Requirements (rev 09/25/2013)
Section 019113.1 Supplement 1 - Representative Construction Checklist
Section 019113.2 Supplement 2 - Sample Tests
Section 019113.3 Supplement 3 - Check and Testing Responsibility Tables (rev 09/25/2013)
Section 019113.4 Supplement 4 - Sample Sequence of Operation

>> DIVISION 02 - EXISTING CONDITIONS
Section 024116 Structure Demolition
Section 024119 Selective Structure Demolition
Section 026113 Excavation and Handling of Contaminated Material
Section 028200 Asbestos Abatement (rev 12/05/2012)
Section 028300 Lead Abatement (rev 12/05/2012)

>> DIVISION 03 - CONCRETE
Section 030100 Maintenance of Cast-in-Place Concrete
Section 031100 Concrete Forming
Section 031500 Concrete Accessories
Section 032000 Concrete Reinforcing
Section 033000 Cast-In-Place Concrete
Section 033053 Miscellaneous Cast-In-Place Concrete
Section 033713 Shotcrete
Section 035413 Cementitious Latex Underlayment
Section 036000 Grouting

>> DIVISION 04 - MASONRY
Section 040513 Masonry Mortar  
Section 042200 Concrete Unit Masonry

>> DIVISION 05 - METALS
Section 051200 Structural Steel Framing  
Section 051400 Structural Aluminum Framing  
Section 053113 Steel Floor Decking  
Section 053123 Steel Roof Decking  
Section 054000 Cold-Formed Metal Framing  
Section 055000 Metal Fabrications  
Section 055100 Metal Stairs  
Section 055213 Pipe and Tube Railings  
Section 055300 Metal Gratings

>> DIVISION 06 - WOOD, PLASTICS AND COMPOSITES
Section 061000 Rough Carpentry  
Section 064000 Architectural Woodwork  
Section 064100 Architectural Wood Casework  
Section 065213 Fiberglass-Reinforced Plastic (FRP)

>> DIVISION 07 - THERMAL AND MOISTURE PROTECTION
Section 071400 Fluid-Applied Waterproofing  
Section 071813 Pedestrian Traffic Coatings  
Section 072116 Blanket Insulation  
Section 072613 Above-Grade Vapor Retarders  
Section 074013 Roofing and Siding Metal Panels  
Section 075200 Modified Bituminous Membrane Roofing  
Section 075216 Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing  
Section 075419 Polyvinyl-Chloride (PVC) Roofing  
Section 076200 Sheet Metal Flashing and Trim  
Section 078413 Penetration Firestopping (rev 06/01/2015)  
Section 079200 Joint Sealants

>> DIVISION 08 - OPENINGS
Section 081113 Hollow Metal Doors and Frames  
Section 081416 Flush Wood Doors  
Section 083113 Access Doors and Frames  
Section 087100 Door Hardware  
Section 088000 Glazing  
Section 088713 Solar Control Films

>> DIVISION 09 - FINISHES
Section 092216 Non-Structural Metal Framing  
Section 092900 Gypsum Board  
Section 093000 Tiling  
Section 095113 Acoustical Panel Ceilings  
Section 096500 Resilient Flooring  
Section 096816 Sheet Carpeting  
Section 096900 Access Flooring  
Section 099100 Painting  
Section 099727.11 Coating for Manholes  
Section 099727.13 Coating for Utility Piping

>> DIVISION 10 - SPECIALTIES
Section 101100 Visual Display Surfaces  
Section 102600 Toilet and Janitoria Accessories  
Section 104400 Fire Protection Specialties  
Section 105613 Metal Storage Shelving

>> DIVISION 11 - EQUIPMENT
Section 115313 Laboratory Fume Hoods  
Section 115313A Laboratory Fume Hoods Data Sheet

>> DIVISION 12 - FURNISHINGS
Section 122000 Window Treatments

DIVISION 13 - NOT USED

>> DIVISION 14 - CONVEYING EQUIPMENT
Section 142400 Hydraulic Elevators

DIVISION 15 THROUGH 20 - NOT USED

>> DIVISION 21 - FIRE SUPPRESSION
Section 210111.11 Operation of Fire-Suppression Systems
Section 210111.13 Testing and Maintenance of Fire-Suppression
Section 210500 Common Results for Fire-Suppression
Section 210513 Common Motor Requirements for Fire-Suppression Equipment
Section 210516.11 Expansion Fittings and Loops for Fire-Suppression Piping
Section 210529 Hangers and Supports for Fire-Suppression Piping and Equipment
Section 210548 Vibration and Seismic Controls for Fire-Suppression Piping and Equipment
Section 210553 Identification for Fire-Suppression Piping and Equipment
Section 210719 Fire Suppression Piping Insulation
Section 210800 Commissioning of Fire-Suppression
Section 211200 Fire-Suppression Standpipes
Section 211313 Wet-Pipe Sprinkler Systems, Fire Protection (rev 06/08/2015)
Section 211319 Pre-action Sprinkler Systems
Section 212100 Carbon-Dioxide Fire Extinguisher Systems
Section 212420 Halon Agent Fire Extinguishing Systems

>> DIVISION 22 - PLUMBING
Section 220111.11 Operation of Plumbing Systems
Section 220111.13 Testing and Maintenance of Plumbing
Section 220500 Common Results for Plumbing
Section 220513 Common Motor Requirements for Plumbing Equipment
Section 220516.11 Expansion Fittings and Loops for Plumbing Piping
Section 220529 Hangers and Supports for Plumbing Piping and Equipment
Section 220548 Vibration and Seismic Controls for Plumbing Piping and Equipment
Section 220553 Identification for Plumbing Piping and Equipment
Section 220719 Plumbing Piping Insulation
Section 220800 Commissioning of Plumbing
Section 221111 Facility Plumbing Piping
Section 221112 Facility Plumbing Piping Specialties
Section 221519.13 General Service Packaged Reciprocating Air Compressors
Section 223000 Plumbing Equipment
Section 224000 Plumbing Fixtures
Section 226300 Gas Systems for Laboratory Facilities (rev 02/13/2013)
Section 226710 Processed Water Systems for Laboratory (rev 02/13/2013)

>> DIVISION 23 - HVAC
Section 230111.11 Operation of HVAC Systems
Section 230111.13 Testing and Maintenance of HVAC
Section 230500 Common Results for HVAC (rev 04/30/2016)
Section 230513 Common Motor Requirements for HVAC Equipment
Section 230516.11 Expansion Fittings and Loops for HVAC Piping
Section 230529 Hangers and Supports for HVAC Piping and Equipment
Section 230548 Vibration and Seismic Controls for HVAC Piping and Equipment
Section 230553 Identification for HVAC Piping and Equipment (rev 11/22/2016)
Section 230593 Testing, Adjusting, and Balancing for HVAC (rev 11/29/2016)
Section 230713 Ductwork Insulation
Section 230716 HVAC Equipment Insulation
Section 230719 HVAC Piping Insulation
Section 230800 Commissioning of HVAC
Section 230913 Instrumentation and Control Devices for HVAC
Section 230943 Pneumatic Control for HVAC Systems
Section 232023 HVAC Pumps
Section 232113 Hydronic Piping (rev 11/29/2016)
Section 232120 Hydronic Specialties
Section 232213 Steam and Condensate Heating Piping
Section 232220 Steam and Condensate Specialties
Section 232300 Refrigeration Piping
Section 232500 HVAC Water Treatment
Section 233113.19 Metal Ducts Fittings
Section 233113 Metal Ducts
Section 233413 Axial HVAC Fans
Section 233416 Centrifugal HVAC Fans
Section 233600 Air Terminal Units
Section 233700 Air Outlets and Inlets
Section 235216 Condensing Boilers
Section 235223 Cast Iron Boilers
Section 235233 Water Tube Boilers
Section 235239 Fire Tube Boilers
Section 235411 Forced Air Furnaces
Section 235500 Fuel Fired Heaters
Section 235533.16 Gas-Fired Unit Heaters
Section 235700 Heat Exchangers for HVAC
Section 236116 Reciprocating Refrigerant Compressors
Section 236213 Packaged Air-Cooled Cooled Refrigerant Condenser Units
Section 236313 Air-Cooled Refrigerant Condensers
Section 236400 Packaged Water Chillers (Rotary, Scroll, Or Centrifugal)
Section 236421 Reciprocating and Scroll Water Chillers
Section 236427 Air-Cooled Water Chillers
Section 236511 Induced-Draft Cooling Towers
Section 236513 Forced-Draft Cooling Towers
Section 236533 Liquid Coolers
Section 237311 Central Station Air Handling Units with Coils
Section 237400 Packaged Outdoor HVAC Equipment
Section 238113.11 Through-The-Wall Packaged Terminal Air Conditioners
Section 238119.11 Water-Cooled Self-Contained Air Conditioners
Section 238123 Computer Room Air Conditioners
Section 238216 Air Coils
Section 238226 Induction Units
Section 238300 Radiant Heating Units
Section 238413.11 Evaporative Humidifier
Section 238413.13 Evaporative Pan Humidifier
Section 238416.11 Spray Coiled Dehumidifier

DIVISION 24 - NOT USED

>> DIVISION 25 - INTEGRATED AUTOMATION
Section 250100 ENERGY Monitoring and Control System Retrofit
Section 255000 Facilities Monitoring and Control System
Section 255011 Energy Monitoring and Control System for New Construction

>> DIVISION 26 - ELECTRICAL
Section 260500 Common Work Results for Electrical (rev 06/03/2015)
Section 260501 Inspections and Testing for Electrical Work (rev 06/03/2015)
Section 260513 Medium Voltage Cable (rev 06/03/2015)
Section 260519.11 600 Volt Conductors and Cable (rev 06/03/2015)
Section 260519.12 Metal Clad Cable (rev 06/03/2015)
Section 260523 Low-Voltage Electrical Power Conductors and Cables (rev 06/04/2015)
Section 260526 Secondary Grounding For Electrical Systems (rev 06/03/2015)
Section 260533 Electrical Conduit (rev 06/04/2015)
Section 260533.11 Surface Raceways For Electrical Systems (rev 06/03/2015)
Section 260533.13 Boxes for Electrical Systems (rev 06/03/2015)
Section 260536 Cable Trays for Electrical Systems (rev 06/04/2015)
Section 260553 Identification for Electrical Services (rev 06/04/2015)
Section 260573 Electrical System Studies (rev 10/24/2017)
Section 260800 Commissioning of Electrical Systems (rev 06/04/2015)
Section 260923 Lighting Control Devices (rev 06/04/2015)
Section 261116 Secondary Unit Substations (rev 05/18/2015)
Section 261213 Liquid-Filled Medium-Voltage Transformers (rev 05/18/2015)
Section 261300 Medium Voltage Outdoor Metal Clad Switchgear (rev 05/19/2015)
Section 261323 SF6 Gas Insulated Switches (05/18/2015)
Section 262213 Low-Voltage Distribution Transformers (05/18/2015)
Section 262416 Panelboards (rev 05/19/2015)
Section 262419 Motor-Control Centers (rev 05/19/2015)
Section 262423 Enclosed Low-Voltage Motor Controllers (05/18/2015)
Section 262600 Power Distribution Units (PDUs) (rev 05/18/2015)
Section 262713 Electricity Metering (05/18/2015)
Section 262713.11 Non-Revenue Metering (05/18/2015)
Section 262726 Wiring Devices (rev 05/19/2015)
Section 262816 Enclosed Low Voltage Circuit Breakers (rev 05/19/2015)
Section 262816.11 Safety Disconnect Switches (rev 05/20/2015)
Section 262923 Variable Frequency Drives (rev 05/20/2015)
Section 263213 Stationary Packaged Engine Generator (rev 01/09/2017)
Section 263213.11 Engine-Generator Load Test Bank (07/14/2016)
Section 263213.13 Mobile Engine Generator (05/19/2015)
Section 263313 Batteries and Battery Chargers (05/19/2015)
Section 263323 Central Battery Inverter Equipment (05/19/2015)
Section 263333 Static Uninterruptible Power Supply (05/19/2015)
Section 263533 Automatic Power Factor Correction Capacitor Bank (05/19/2015)
Section 263623 Automatic Transfer Switch with Bypass-Isolation Feature (05/19/2015)
Section 264200 Cathodic Protection (05/19/2015)
Section 265000 Lighting (05/19/2015)

>> DIVISION 27 - COMMUNICATIONS
Section 275116 Public Address Systems (rev 05/19/2015)
Section 275123 Intercommunications and Program Systems (05/19/2015)
DIVISION 28 - ELECTRONIC SAFETY AND SECURITY
Section 281313.11 Card Access System (05/19/2015)
Section 282300 Video Surveillance (05/19/2015)
Section 283100 Fire Detection and Alarm (05/19/2015)
Section 283110 MXL Fire Detection and Alarm System (05/19/2015)
Section 283146.11 High Sensitivity Air Sampling Smoke Detection System (05/19/2015)
Section 283176 Interior Fire Alarm and Mass Notification System (05/19/2015)

DIVISION 29 - NOT USED

DIVISION 30 - NOT USED

DIVISION 31 - EARTHWORK
Section 311000 Site Clearing
Section 312213 Rough Grading
Section 312316 Excavation
Section 312316.13 Trenching
Section 312323 Backfilling
Section 313500 Slope Protection (11/17/2015)
Section 314000 Shoring and Underpinning
Section 314119 Hydraugers
Section 315000 Excavation Support and Protection
Section 315100 Tieback Anchors
Section 316213 Concrete Piers
Section 316216.11 Steel Helical Piles
Section 316216.16 Steel H Piles
Section 316616.23 Concrete Cribbing Foundation Walls

DIVISION 32 - EXTERIOR IMPROVEMENTS
Section 321123 Aggregate Base Courses
Section 321216 Asphalt Paving
Section 321313 Concrete Paving
Section 321540 Crushed Stone Surfacing
Section 321723 Pavement Markings
Section 323113 Chain Link Fences and Gates
Section 329219.16 Hydraulic Seeding

DIVISION 33 - UTILITIES
Section 330110 Operation and Maintenance of Utilities
Section 330130.51 Corrosion Protection of Utilities
Section 330130.52 Fusion Epoxy Lining and Coating for Utilities
Section 330500 Common Work Results for Utilities
Section 330600.10 Schedules for Utility Piping
Section 330600.11 Schedules for Utility Valves
Section 330600.13 Schedules for Valve Boxes
Section 331100 Water Distribution For Domestic and Fire Protection Service (rev 03/04/2016)
Section 333100 Sanitary Sewerage Utilities
Section 333913 Sanitary Utility Sewerage Manholes, Frames and Covers
Section 334000 Storm Drainage Utilities
Section 334913 Electrical Utility, Ductbanks and Manholes

DIVISION 34 THROUGH 40 - NOT USED

DIVISION 41 - MATERIAL PROCESSING AND HANDLING EQUIPMENT
Section 412213.13 Bridge Cranes

DIVISION 42 THROUGH 50 - NOT USED