

Contractor's review, stamp, and statement certifying that submittal has been reviewed, and checked for compliance with Contract Documents.

- C. Contractor Signed Stamp: Indicates that Contractor has:
1. Verified field dimensions and quantities.
 2. Verified field construction criteria, materials, catalog numbers and similar data.
 3. Reviewed and coordinated submittal data with requirements of Work and Contract Documents.
 4. Certifies that submittal complies with Contract Documents.

3.2 COTR'S ACTION

- A. General: COTR will not review submittals that do not bear Contractor's review stamp and will return them without action.
- B. Except for submittals for record or for information, where action and return of submittals is required, COTR will review each submittal, mark to indicate action taken, and return.
1. Compliance with specified characteristics is Contractor's responsibility and not considered part of COTR's review and indication of action taken.
 2. Acceptance of submittals with deviations shall not relieve Contractor from responsibility for additional costs of changes required to accommodate such deviations. Deviations included in submittals without prior acceptance are excepted from review of submittals whether noted or not on returned copy.
 3. Review of separate item shall not indicate acceptance of assembly of which item is part.
 4. Make only those revisions required or accepted by COTR.
 5. Notations by COTR which increase Contract Cost or Contract Time shall be brought to COTR's attention, in writing, before proceeding with affected Work.
 6. When professional certification of performance criteria of materials, systems or equipment is required by Contract Documents, COTR shall be entitled to rely upon accuracy and completeness of such calculations and certifications.
- C. Action Submittals: COTR will review each submittal, make marks to indicate corrections or modifications required, and return submittal. COTR will stamp each submittal with action stamp and will mark stamp appropriately to indicate action taken, as follows:
1. Reviewed, No Exceptions: Means fabrication, manufacture, or construction may proceed providing submittal complies with Contract Documents.
 2. Reviewed, Exceptions Noted, Resubmission Not Required: Means fabrication, manufacture, or construction may proceed providing submittal complies with COTR's notations and Contract Documents. If Contractor cannot comply with notations, make revisions and resubmit as described for submittals stamped Reviewed, Exceptions Noted, Resubmission Required.
 3. Reviewed, Exceptions Noted, Resubmission Required: Means fabrication, manufacture, or construction may proceed, however; submittal did not fully demonstrate full extent of all conditions, details and coordination with other surrounding work and, therefore requires additional information, and rework as noted. Resubmit shop drawings for 'Reviewed, No Exceptions' or 'Reviewed, Exceptions Noted, Resubmission Required'. Do not fabricate, manufacture or construct specific areas requiring additional information prior to resubmittal.
 4. Rejected, Resubmission Required: Means submittal does not comply with design intent of Contract Documents. Do not use submittals stamped Rejected, Resubmission Required. Make revisions and resubmit.

5. Other: Means documents have not been reviewed by COTR and submittal is returned to Contractor for several possible reasons, including, but not limited to following: submittal not requested, submittal not complete, submittal not coordinated, or submittal bears no resemblance to design intent.
- D. Informational Submittals: COTR will review and return each submittal marked either "For Information Only" or indicating that submittal does not comply with requirements.
- E. Submittals not required by Contract Documents will not be reviewed and may be discarded.

END OF SECTION 013300

SEE CONDITIONS OF USE AGREEMENT FORM THAT FOLLOWS

ELECTRONIC DATA TRANSFER AGREEMENT

The CADD electronic files of the Contract Documents for the **<Insert Name of Project Here>** project, prepared for the District, a list of which is attached hereto (the "Files"), are being provided to **<Insert Name of Contractor Here>** as an accommodation to **<Insert Note Here: i.e., assist in the limited production of partial details of Contract Documents -- or make the inspection on the project more convenient for client's personnel -- or facilitate contractor's preparation of shop drawings on the project - etc.>**. It is acknowledged that only the Contract Documents should be relied on for accuracy. The Files are not warranted to be fit for the purpose or intended use, or to be complete, or free from defect. Due to the potential that the information set forth in the Files can be modified by subsequent users, unintentionally or otherwise, or altered by the computer system itself, all indications of [Architect/Engineer] (or its subconsultants) involvement have been removed from each electronic display. In consideration of the foregoing and by accepting the Files, **<Insert Name of Contractor Here>** agrees that:

1. It will not reenter in the Files, or any print made from the Files, any indication of the Files' source of origin;
2. It will be solely responsible for verification of the validity and correctness of the Files (i.e., to check the Files against the Contract Documents);
3. It releases the District from, and accepts responsibility for, any liability or damages arising in any manner from its use of the Files;
4. It acknowledges that the Files are owned by the District and/or the above stated client and that the Files, including any portion of the data contained therein, will not be used for any purpose other than stated above, and that it will not otherwise use the Files or data therein for its own profit; and

In consideration for the District's providing the Files, the foregoing premises and conditions are hereby acknowledged and accepted.

By: _____ Date: **<Insert Date Here>**

Printed Name: **<Insert Name Here>**

Title: **<Insert Title of Contractor Here>**

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes minimum requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities. Nothing in this section is intended to limit type and amounts of temporary work required, and no omission from this section will be recognized as an indication that such temporary activity is not required for successful completion of the work and compliance with requirements of the Contract Documents.

- B. Temporary utilities include, but are not limited to the following:

1. Sanitary facilities, including toilets, wash facilities, and drinking-water facilities.
2. Heating and cooling facilities.
3. Electric power service.
4. Lighting
5. Telephone service.

- C. Support facilities include, but are not limited to the following:

1. Field Offices
2. Storage and fabrication sheds
3. Lifts and hoists
4. Scaffolding.
5. Construction aids and miscellaneous services and facilities.

- D. Security and protection facilities include, but are not limited to the following:

1. Environmental protection.
2. Stormwater control.
3. Tree and plant protection.
4. Pest control.
5. Security enclosure and lockup
6. Fire protection
7. Personnel and public safety.

1.3 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, following:

1. Building code requirements.
 2. Health and safety regulations.
 3. Utility company regulations.
 4. Police, fire department, and rescue squad rules.
 5. Environmental protection regulations.
 6. Regulations for air rights over adjacent properties.
- B. Standards: At a minimum, comply with CFR 29, Part 1910 "Occupational Safety and Health Standards," Part 1926 "Safety and Health Regulations for Construction," and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
1. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."
 2. Scaffolding: Erect adequate scaffold as required to perform the work in accordance with the Safety Code of the D.C. Minimum wage and Industrial Safety Board requirements.
- B. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.3 PROJECT CONDITIONS

- A. Temporary Utilities: The Contractor is responsible for all costs, including usage costs, for utilities throughout the Contract until Substantial Completion by the District. The Contractor shall prepare schedule indicating dates for implementation and termination of each temporary utility. At earliest feasible time, when acceptable to District, change over from use of temporary service to use of permanent service.
- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in safe and efficient manner. Relocate temporary services and facilities as Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

1.4 USE CHARGES

- A. General: Cost or use charges for temporary facilities are not chargeable to District and shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to the following:
1. District's construction forces
 2. Occupants of building
 3. Testing Agencies
 4. Personnel of Authorities Having Jurisdiction
- B. Sewer Service: Pay all costs associated with sewer service by all entities engaged in construction activities at the project site until Final Acceptance by the District.

- C. Water Service: Pay all costs associated with water service, whether metered or otherwise, for water used by all entities engaged in construction activities at the project site until Final Acceptance by the District.
- D. Electric Power Service: Pay all costs associated with electric service, whether metered or otherwise, for electricity used by all entities engaged in construction activities at the project site until Final Acceptance by the District.

1.8 SCAFFOLDING

- A. Contractor shall erect adequate scaffolds as required to perform the work in accordance with OSHA requirements. COTR may have use of scaffold to inspect Work.
 - 1. Do not erect scaffolds until required to be ready for use.
 - 2. Contractor shall promptly remove the scaffolding upon acceptance of the Work.
- B. Wherever possible, use swinging scaffolds for exterior Work. Where swinging scaffolds are not practicable, Contractor may be permitted to use other types of scaffolds provided that:
 - 1. Contractor prepares a list of areas and gives the types of scaffold(s) recommended for use of each area.
 - 2. The list shall be submitted not later than **15** days after the Contract is awarded.

1.9 ENVIRONMENTAL PROCEDURES

- A. Use care to prevent pollution of air, water, and soil, including but not limited to the following:
 - 1. Comply with environmental protection regulations.
 - 2. Do not dump contaminants in areas that will result in contamination.
 - 3. In partially occupied facilities where Work is to be performed, provide dustproof partitions to isolate Contractor's work activities from building occupants and the public.
 - 4. All access corridors requiring use by the Occupant shall be maintained in a clean condition and free of construction materials and debris.
- B. Minimize discharge of effluent and rainwater runoff into sewers, including but not limited to the following actions:
 - 1. Control sediment discharge into sewers; filter out construction debris, soil, and contaminants.
 - 2. Comply with regulations and orders of public utilities regarding use of sewers.
 - 3. Where disposal of effluent or rainwater by means of sewers is not lawful or is not possible, provide alternative methods of disposal.
- C. Prevent erosion due to rainwater runoff.
- D. Control windblown dust; prevent erosion to Site and nuisance to neighbors.
- E. Prevent flooding of excavations, below-grade construction, and adjacent properties due to rainwater runoff or water table.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. If acceptable to Contracting Officer's Technical Representative (COTR), Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
- B. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by American Lumber Standards Committee Board of Review.
 - 1. For job-built temporary offices, shops, and sheds within construction area, provide UL-labeled, fire-treated lumber for framing.
- C. Plywood: DOC PS 1:
 - 1. For job-built temporary offices, shops, and sheds within construction area, provide UL-labeled, fire-treated plywood for sheathing and siding.
 - 2. For signs and directory boards, provide exterior-type, Grade B-B high-density concrete form overlay plywood of sizes and thicknesses required.
 - 3. For safety barriers, and similar uses, provide minimum 5/8 inch thick exterior plywood.
- D. Paint: Paint exposed surfaces. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels. Provide primers, undercoats, and finish coat materials that are compatible with one another and substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 - 1. For job-built temporary offices, shops, sheds, fences, and other exposed lumber and plywood, provide exterior-grade acrylic-latex emulsion over exterior primer.
 - 2. For sign panels and applying graphics, provide exterior-grade alkyd gloss enamel over exterior primer.
 - 3. For interior walls of temporary offices, provide two coats interior latex-flat wall paint.
- E. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- F. Water: Provide potable water approved by local health authorities.
- G. Chain-Link Fencing: Minimum 2-inch, 0.148-inch galvanized steel, chain-link fabric fencing; minimum 8 feet high with galvanized steel pipe posts and rails.

2.2 EQUIPMENT

- A. General: Provide new equipment. If acceptable to COTR, Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.
- B. Water Hoses: Provide 3/4-inch, heavy-duty, abrasion-resistant, flexible rubber hoses, with pressure rating greater than maximum pressure of water distribution system. Provide adjustable shutoff nozzles at hose discharge.

- C. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- D. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- E. Lamps and Light Fixtures: Provide general service fluorescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- F. Heating and Cooling Units: Provide temporary heating and cooling units that have been tested and labeled by UL, FM, or another recognized trade association related to type of fuel being consumed.
- G. Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- H. Temporary Toilet Units: Where self-contained units used, provide self-contained, single-occupant toilet units of chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- I. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or combination of extinguishers of NFPA-recommended classes for exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve Project adequately and result in minimum interference with performance of Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 SUPPORT FACILITIES INSTALLATION

- A. Locate field offices, storage sheds, and other temporary construction and support facilities for easy access.
 - 1. Maintain support facilities until near Completion. Remove prior to Completion.

- B. Where acceptable to COTR provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet of building lines. Comply with requirements of NFPA 241.
- C. Contractor's Field Offices: Provide and maintain temporary field office for Contractor's personnel and representatives. Field offices shall be provided through project completion.
- D. District's Field Offices: Provide and maintain temporary field office for District personnel.
 - 1. Office: Provide insulated, weather-tight office trailer, with lighting, electrical outlets, heating, cooling, and ventilating equipment of sufficient size to accommodate required office personnel at Project Site.
 - 2. Size of office shall be the equivalent of (1) double wide (approximately 24-feet by 60-feet) portable trailer.
 - 3. The layout shall include: minimum of (3) standard sized lockable offices, (1) bathroom, security screens on windows, bar on doors.
 - 4. Work shall include all temporary utilities to trailer including 4 telephone/data lines.
 - 5. Office shall be provided no later than (1) month after NTP until Final Acceptance of the project. Keep office clean and orderly. Contractor may also provide Class B or better office space of equivalent size and scope in a local building within 3 blocks of the project site. Final layout and location of office trailers / office space shall be approved by the COTR.
- E. Storage and Fabrication Sheds: Install storage and fabrication sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces within building or elsewhere on-site.

3.3 TEMPORARY CONTROLS AND EQUIPMENT

- A. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
 - 1. Where heat or cooling is needed and permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat or cooling. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
 - 2. Mold Prevention: Provide temporary weathertight exterior enclosures as required to keep dry during construction operations.
 - 3. Install tarpaulins securely, with fire-retardant treated wood framing and other materials. Close openings of 25 square feet or less with plywood or similar materials.
 - 4. Close openings through floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
- B. Temporary Lifts and Hoists: Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- C. Temporary Elevator Use: Do not use elevators for construction purposes unless cars are provided with temporary enclosures, either within finished cars or in place of finished cars, to protect finishes from damage.
 - 1. Provide full maintenance service by skilled, competent employees of elevator Installer for elevators used for construction purposes. Include preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper elevator operation at rated speed and capacity. Use parts and supplies as used in manufacture and installation of original equipment.

2. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevators. If, despite such protection, elevators become damaged, engage elevator installer to restore damaged work so that no evidence remains of correction work. Return items that cannot be refinished in field to shop, make required repairs and refinish entire unit, or provide new units as required.
 3. If elevator is used during construction, remain responsible for full warranty from date of Notice of Acceptance of total project by District.
- D. Provide final protection and maintain conditions, in manner acceptable to elevator manufacturer, that ensure elevators are without damage or deterioration at time of Completion.
- E. Project Identification and Temporary Signs: Prepare project identification and other signs. Install signs to inform public and persons seeking entrance to Project. Support on posts or framing of preservative-treated wood or steel. Do not permit installation of unauthorized signs, and signs not approved by District of Columbia.
1. Project Identification Signs: Engage experienced sign painter to apply graphics.
 - a. Details: As indicated, or if not indicated, as directed by COTR.
 2. Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.
 3. Size: As indicated, or if not indicated, as directed by COTR.
 4. Location: As indicated, or if not indicated, as directed by COTR.

3.4 SITE CLEANING

- A. Cleaning During Construction: Execute periodic cleaning to keep building, site, and adjacent properties free of accumulations of waste materials, debris, rubbish, and wind blown debris resulting from construction operations.
1. Broom clean and vacuum interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
 2. Schedule cleaning operations so that dust and other contaminants will not fall on or adhere to wet or newly-coated surfaces.
 3. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing space.
- B. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.
1. Comply with Section 01 74 19 "Construction Waste Management and Disposal."

3.5 PROTECTION OF INSTALLED EQUIPMENT AND FINISHES

- A. Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished, permanent stairs with protective covering of plywood or similar material so finishes will be undamaged at time of acceptance.
- B. Protect installed Work in manner to prevent damage from subsequent construction operations.

1. Provide special protection where specified in individual Specification sections.
2. Provide temporary and removable materials for protection of installed products. Control activity in immediate work area to minimize damage.
3. Ensure materials, systems, and components will be without damage or deterioration at time of Final Completion.
4. Protect finished Work from damage, defacements, stains, scratches, and wear.
5. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
6. Protect finished floors, stairs, and other surfaces from traffic dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
7. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
8. Prohibit traffic from lawn and landscaped areas.

3.6 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Completion as requested by COTR.
- B. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
 1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than 1 extinguisher on each floor at or near each usable stairwell.
 2. Store combustible materials in containers in fire-safe locations.
 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
 4. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
 5. Provide temporary standpipes for fire protection.
- C. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- D. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
 1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide secure lockup. Enforce discipline in connection with installation and release of material to minimize opportunity for theft and vandalism.
- F. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near site.

- G. Dust Control/Street Cleaning: Provide appropriate dust control/street cleaning operations for paved and unpaved areas utilized during construction operations to satisfaction of District. Dust Control: Wetting or other approved methods. Obtain approval by District for street cleaning method.
- H. Storm Water Control: Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.
- I. Site Security: Security of the site is solely the responsibility of the General Contractor until Final Acceptance by the District.
- J. Site-parked mobile equipment and operable machinery, and parts of new construction subject to mischief, shall be kept locked or otherwise made inoperable whenever left unattended.

3.7 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 - 2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Termination and Removal: Unless COTR requests that it be maintained longer, remove each temporary facility when need has ended, when replaced by authorized use of permanent facility, or no later than Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are Contractor's property. District reserves right to take possession of project identification signs.
 - 2. At Final Acceptance, clean and renovate permanent facilities used during construction period including, but not limited to, following:
 - a. Replace air filters and clean inside of ductwork and housings.
 - b. Replace significantly worn parts and parts subject to unusual operating conditions.
 - c. Replace lamps burned out or noticeably dimmed by hours of use.

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following administrative and procedural requirements: selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
 - 1. Section 013300 "Submittal Procedures."

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation, shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Section 01 33 00 "Submittal Procedures."
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.
- D. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to District.

- E. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for District.

1.4 SUBMITTALS

- A. Product List: Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
 - 1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 - 2. Form: Tabulate information for each product under the following column headings:
 - a. Delete and add headings below to suit Project. See Evaluations.
 - b. Specification Section number and title.
 - c. Generic name used in the Contract Documents.
 - d. Proprietary name, model number, and similar designations.
 - e. Manufacturer's name and address.
 - f. Supplier's name and address.
 - g. Installer's name and address.
 - h. Projected delivery date or time span of delivery period.
 - i. Identification of items that require early submittal approval for scheduled delivery date.
 - 3. Initial Submittal: Within 30 days after date of commencement of the Work, submit 3 copies of initial product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - a. Revise subparagraph below to suit Project.
 - b. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.
 - 4. Completed List: Within 15 days after date of commencement of the Work, submit three (3) copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - 5. COTR's Action: COTR will respond in writing to Contractor within 15 days of receipt of completed product list. COTR's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. COTR's response, or lack of response, does not constitute a waiver of requirement that products comply with the Contract Documents.
- B. Substitution Requests: Refer to Division 01 Section 01 33 00 "Submittal Procedures."

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

- B. COTR's Approval: Wherever the terms "or equal", or "or approved equal", or "or approved", are used in specifying products or naming manufacturers in the various specification sections, the COTR is the sole judge of equality and acceptability of products and manufacturers submitted as equals to the specified products and manufacturers.
- C. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view in occupied spaces or on the exterior.
 - 1. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface which is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:
 - a. Name of product and manufacturer.
 - b. Model and serial number.
 - c. Capacity.
 - d. Speed.
 - e. Ratings.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 - 5. Store products to allow for inspection and measurement of quantity or counting of units.
 - 6. Store materials in a manner that will not endanger Project structure.
 - 7. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - 8. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 9. Protect stored products from damage.
- B. Storage: Provide a secure location and enclosure at Project site for storage of materials and equipment by District's construction forces. Coordinate location with District.
- C. District reserves the right to protect stored materials to prevent damage and deterioration if the Contractor fails to protect the materials in a proper manner. The costs incurred by the District shall be paid by the Contractor.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: Forms are included with the Specifications. Prepare a written document using appropriate form properly executed.
 - 3. Refer to Divisions 02 through 26 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 1 Section 01 77 00 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT OPTIONS

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged, and unless otherwise indicated, that are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. District reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - 4. Where products are accompanied by the term "as selected," COTR will make selection.
 - 5. Where products are accompanied by the term "match sample," sample to be matched is COTR's.
 - 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
 - 7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures: Procedures for product selection include the following:
 - 1. Product: Where Specification paragraphs or subparagraphs titled "Product" name a single product and manufacturer, provide the product named.
 - a. Substitutions may be considered, unless otherwise indicated.

2. Manufacturer/Source: Where Specification paragraphs or subparagraphs titled "Manufacturer" or "Source" name single manufacturers or sources, provide a product by the manufacturer or from the source named that complies with requirements.
 - a. Substitutions may be considered, unless otherwise indicated.
3. Products: Where Specification paragraphs or subparagraphs titled "Products" introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
 - a. Substitutions may be considered, unless otherwise indicated.
4. Manufacturers: Where Specification paragraphs or subparagraphs titled "Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
 - a. Substitutions may be considered, unless otherwise indicated.
5. Available Products: Where Specification paragraphs or subparagraphs titled "Available Products" introduce a list of names of both products and manufacturers, provide one of the products listed or another product that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
6. Available Manufacturers: Where Specification paragraphs or subparagraphs titled "Available Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed or another manufacturer that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
7. Product Options: Where Specification paragraphs titled "Product Options" indicate that size, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide either the specific product or system indicated or a comparable product or system by another manufacturer. Comply with provisions in "Product Substitutions" Article.
8. Basis-of-Design Products: Where Specification paragraphs or subparagraphs titled "Basis-of-Design Product" are included and also introduce or refer to a list of manufacturers' names, provide either the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
 - a. Substitutions will not be considered, unless otherwise indicated.
9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product (and manufacturer) that complies with requirements and matches COTR's sample. COTR's decision will be final on whether a proposed product matches satisfactorily.

- a. If no product available within specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents on "substitutions" for selection of a matching product.
10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product (and manufacturer) that complies with other specified requirements.
- a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, COTR will select color, pattern, or texture from manufacturer's product line that does not include premium items.
 - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, COTR will select color, pattern, or texture from manufacturer's product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

- A. General: Refer to Section 01 33 00 "Submittal Procedures."

2.3 COMPARABLE PRODUCTS

- A. Where products or manufacturers are specified by name, submit the following, in addition to other required submittals, to obtain approval of an unnamed product:
 1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

2.4 PAINT PRODUCTS

- A. Environmentally Preferable Products Goals
 1. The District is seeking contractors to provide environmentally preferable and effective paint products that support the District's environmentally preferable purchasing (EPP) contracting initiative.
 2. Environmentally preferable products are products and services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison considers the life cycle of the product from raw material acquisition, production, manufacturing, packaging, distribution, re-use, operation, maintenance and disposal.
- B. The requirements and restrictions contained in this clause shall apply to all architectural and anti-corrosive paints used during the course of this contract.

- C. Due to the documented health risks associated with high Volatile Organic Compound (VOCs) levels, the Contractor shall use only paint and paint products that do not exceed the maximum allowable VOC content in the table below for each type of paint:

Product Type	Type of Paint	VOCs (grams/liter)	VOCs (pounds/gallon)
Category I	Interior		
	Architectural		
	a. Flat	50 g/l	0.42 lb/gal
	b. Non-Flat	150 g/l	1.25 lb/gal
Category II	Exterior		
	Architectural		
	a. Flat	100 g/l	0.83 lb/gal
	b. Non-Flat	200 g/l	1.66 lb/gal
Category III	Anticorrosive		
	a. Flat	250 g/l	2.1 lb/gal
	b. Semi-Gloss	250 g/l	2.1 lb/gal
	c. Gloss	250 g/l	2.1 lb/gal

- D. Prohibited Paint Components: Paints often contain inorganic and organo-metallic components used as preservatives, additives and pigments. The following is a list of organic compounds and components prohibited under this contract:

Trichloroethane	Formaldehyde
Dichlorobenzene	Hexavalent chromium
Acrolein	Isophorone
Acrylonitrile	Lead
Antimony	Mercury
Benzene	Methylene chloride
Butyl benzyl phthalate	Methyl ethyl ketone
Cadmium	Methyl isobutyl ketone
Di (2-ethylhexyl) phthalate	Naphthalene
Dimethyl phthalate	Toluene (Methylbenzene)
Di-n-butyl phthalate	Vinyl Chloride
Ethylbenzene	

- E. Packaging: Paint cans and their components shall not be fabricated with lead.
- F. Product Safety: Contractor shall be responsible for:
1. Any damage to personnel, buildings, furniture or equipment directly traceable to their use of prohibited paint.
 2. Evacuating and warning individuals that might be affected by any spills or leakages directly traceable to their use of prohibited paint.
 3. Any spills or leaks that occur during the use or transportation of their products.
 4. Paying the clean up cost for any spills or leaks that occur while they are unloading, transporting or otherwise using their products.

2.5 SOLVENT PRODUCTS

A. Environmentally Preferable Products Goals

1. The District is seeking contractors to provide environmentally preferable and effective solvent products that support the District's environmentally preferable purchasing (EPP) contracting initiative.
2. Environmentally preferable products are products and services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose.
3. This comparison considers the life cycle of the product from raw material acquisition, production, manufacturing, packaging, distribution, re-use, operation, maintenance and disposal.

B. Environmentally Preferable Solvent Products

1. Solvents are fluids or a mixture of fluids capable of dissolving substances to produce compositions for industrial value.
2. Solvent products subject to the requirements of this clause include, but are not limited to, the following classes:
 - a. Alcohols are solvents that dissolve substances such as shellacs, vinyls, acrylics, epoxies and silicones.
 - b. Aliphatic hydrocarbons are solvents often found in coatings and insecticides. Commonly used as degreasers and solvents for acrylics and epoxies. Common aliphatics include mineral spirits, paint thinner, petroleum distillates, VM&P Naphtha, kerosene, gasoline and heptane (all of which are extremely flammable).
 - c. Aromatic hydrocarbons are substances used in printing, fiberglass-reinforced products, glues and veneers. Common aromatics include toluene (toluol), xylene (xylol), coal-tar naphtha, styrene and benzene.
 - d. Chlorinated hydrocarbons are commonly used degreasers, dry cleaning agents, rubber solvents and paint strippers found in coatings, resins and tars. Common chemicals in this class include perchloroethylene, methylene chloride, carbon tetrachloride, methyl chloroform and trichloroethylene.
 - e. Glycols, which are water-soluble solvents used as lubricants, are found in cosmetics, coatings, resins and dyes. Glycol ethers include butyl cellusolve (2-butoxyethanol), cellusolve (2-ethoxyethanol), methyl cellusolve (2-methoxyethanol), and cellusolve acetate (2-ethoxyethyl acetate). Most common glycol ethers are combustible.
 - f. Esters have differing chemical properties depending on their use including methyl formate, ethyl acetate, isopropyl acetate, methyl acetate, secamylacetate, and isoamyl acetate (banana oil).
 - g. Ethers are ingredients in dyes, resins, waxes, cellulose nitrate and fuels, including ethyl ether, tetrahydrofuran, dioxane and isopropyl ether.
 - h. Ketones are solvents for dyes, resin and waxes that are used to manufacture plastics, synthetic fibers, explosives, cosmetics and medicines. Some examples of ketones include acetone, methyl ethyl ketone, cyclohexanon and isophorone.
 - i. Other types of solvents include freon, turpentine, dimethylformamide and carbon disulfide.

C. Solvent Environmental Requirements - The Contractor shall avoid the following hazards when using solvent products during the performance of this contract:

1. Health Hazards:
 - a. Bodily Contact: Contractor shall not use solvent products that irritate or harm the skin, eyes, nose and throat from direct contact with the solvents;

- b. Inhalation: Contractor shall not use solvent products that when inhaled causes headaches, nausea, vomiting and dizziness from contact with the solvents; and,
- c. Ingestion: Contractor shall not use solvent products that if ingested or exposed to for a period of time cause damage to the brain, liver, kidney, respiratory system and nervous systems.

2. Physical Hazards:

- a. Flammable materials are substances that will easily ignite, burn and serve as fuel for a fire. The flash point is the lowest temperature at which a liquid gives off enough vapors which, when mixed with air, can be easily ignited by a spark. The lower the flash point, the greater the risk of fire or explosion.
- b. Contractor shall not use solvent products that are a potential fire hazard or have a low flash point. A solvent is flammable and a serious fire hazard if its flash point is below 37.8C (100F).

D. Prohibited Solvents: The following solvent products are recognized by the National Institute for Occupational Safety and Health (NIOSH) as carcinogens, ozone-depleting solvents or as reproductive hazards in the workplace and shall not be used:

Benzene	Carbon tetrachloride
Trichloroethylene	1,1,2,2-tetrachloroethane
2-methoxyethanol	2-ethoxyethanol
Methyl chloride	Trichlorotrifluoroethane
Chlorinated Fluorocarbon Compounds	

E. Packaging Reduced/Recyclable: If possible, Contractor shall use products that are in reusable, refillable, or recyclable containers or are otherwise made from recycled content products.

- 1. No products shall be delivered in aerosol cans.
- 2. All products must be available in non-aerosol containers such as ready-to-use pump action sprays, air-charged refillable containers, or spray bottles.

Product Safety: Contractor shall be responsible for:

- 3. Any damage to personnel, buildings, furniture or equipment directly traceable to their use or transportation of prohibited products.
- 4. Any spills or leaks that occur during the use or transportation of their products.
- 5. Evacuating and warning individuals that might be affected by any spills or leaks that occur when their products are being used or transported.
- 6. Paying the clean up cost for any spills or leaks that occur while they are using or transporting their products.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

1. General installation of the Work.
2. Cutting and patching.
3. Progress cleaning.
4. Site Documentation Requirements.
5. Starting and adjusting.
6. Protection of installed construction.
7. Correction of the Work.

- B. Related Sections include the following:

1. Section 01 33 00 "Submittal Procedures" for final survey submittal requirements. List below only procedures that the reader might expect to find in this Section but are specified elsewhere. See Evaluations about first subparagraph below.
2. Section 01 31 00 "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
3. Section 01 78 39 "Project Record Documents" for submittal requirements of work and record survey data.

1.3 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For land surveyor or professional engineer to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- B. Certificates: Submit certificate signed by land surveyor or professional engineer certifying that location and elevation of improvements comply with requirements.
- C. Cutting and Patching Plan: Submit plan describing procedures at least **10** days prior to the time cutting and patching will be performed. Include the following information:
 1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.

3. Products: List products to be used for patching and firms or entities that will perform patching work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.

1.4 QUALITY ASSURANCE

Revise below if necessary to comply with local requirements. See Evaluations.

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 1. Structural Elements: When cutting and patching structural elements, notify COTR of locations and details of cutting and await directions from COTR before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety
 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety
 4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in COTR's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated.

1.5 SITE DOCUMENTATION REQUIREMENTS

- A. Contractor shall maintain one current, updated copy of the following documents:
 1. Issued for Construction Drawings, including separate 3-ring binder for supplemental details.
 2. Specifications.
 3. Written interpretations and supplemental instructions.
 4. Addenda or Amendments to Contract Documents.
 5. Reviewed, approved shop drawings, samples, and product data.
 6. Certifications.
 7. Field Test Records.
 8. Permits for Construction.