OGS Design & Construction
Design Procedures
Manual

Issued April 2021
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CHAPTER 1: INTRODUCTION

A. The Design Procedures Manual

1. PURPOSE

The Design Procedures Manual (DPM) has been prepared to assist Project Managers (PM) and Consultant/Designers in the design and documentation of OGS D&C Projects. The DPM provides direction and guidance regarding OGS D&C and State Agency requirements. The DPM also provides expectations for the delivery of services for design services work performed for OGS D&C. The DPM consists of design procedures that are meant to guide both D&C In-house and Consultant/Designers through the design process and enable Consultant/Designers to more efficiently translate OGS D&C requirements into acceptable design solutions.

These guidelines are not intended to constrain PMs and Consultant/Designers with respect to design, solutions, code compliance, innovation or novel approaches. PMs and Consultant/Designers are encouraged to consider the merits and limitations of the guidelines in the context of the specific needs of individual projects.

2. DEVIATIONS

Should any of the DPM guidelines not be relevant for a particular project, written proposals to deviate from the procedures herein should be submitted for consideration to the OGS D&C Team Leader (TL). In the absence of written approval for a deviation from these guidelines, the TL will, however, assume that the requirements contained in the DPM have been fully addressed and incorporated in the proposed design solution and Contract Documents. The Agency Specific Standards and Requirements in Chapter 9 may modify or supplement the general guidelines.

3. BACKGROUND AND ACCESS

Documents prepared in accordance with this DPM are to provide clear and concise information to State Agencies and Contractors. PMs and Consultant/Designers are expected to make certain that the material is understandable to the intended audience.

The procedures outlined in the DPM are for projects which are to be bid and administered by OGS D&C. The DPM does not include procedures for projects bid and administered by other State Agencies.

The forms referenced in the DPM are available at the following locations:

Consultant/Designers should access them on the Office of General Services website, Design & Construction under forms, Consultant Contract, Design.

OGS D&C staff should access them in SharePoint.

4. CONTACT

Any questions, clarifications, improvements or suggestions should be directed to Mr. Dana Dostie at dana.dostie@ogs.ny.gov (518) 474-6111
B OGS D&C Organization and Structure

1. GENERAL

The State of New York owns and operates a large array of diverse facilities and properties. The Office of General Services Design and Construction Group (OGS D&C), an ISO 9001: 2015 certified organization, has the unique challenge of accommodating State Agency initiatives to refurbish and maintain existing buildings and infrastructure as well as to construct new buildings and infrastructure. State projects often have to be designed and built under tight schedules and cost constraints.

2. OGS D&C MISSION STATEMENT

The Office of General Services (OGS) Design and Construction Group (D&C) provides a full range of high-quality architectural, engineering, contracting and construction management services to state agency clients. Through an interdependent model of public- and private-sector resources, D&C delivers services in a timely, efficient, responsive and cost-effective manner, thereby enabling client agencies to fulfill their own diverse missions on behalf of the people of New York State.

3. THE DESIGN AND CONSTRUCTION GROUP (D&C)

OGS D&C provides a full range of professional architectural, engineering and construction management services to State Agencies. The OGS D&C is typically engaged in over 1000 active projects with a combined construction value of over $1 billion. The group performs its functions through multiple Divisions and Functional Departments and Groups.

4. FUNCTIONAL DIVISIONS

a) Division of Design (DOD)

This Division manages projects in design which provides architectural and engineering services including pre-design, site development, design, contract documents, bid-phase support and construction support. OGS D&C in-house staff and Consultants prepare contract documents and cost estimates for construction, alteration, and rehabilitation of State-owned buildings and infrastructure.

b) Division of Contract Management (CADM)

This Division handles procurement, award and administration of all D&C contracts for professional consultants, construction management, specialty services, and construction work (including for emergency projects). Its work includes audit and processing of all vendor payment requests, performance of vendor responsibility reviews, change order processing and enforcement of contract insurance requirements. The Division handles approximately 2,000 contract transactions per year.

c) Division of Construction (DOC)

This Division manages projects in construction and is responsible for project execution subsequent to contract award. Division field engineers and construction superintendents manage, coordinate, and document the work of prime contractors to ensure compliance with project plans and specifications during the project execution phase.

d) Division of Cost Management (DCM)
This Division is responsible for managing functions related to cost estimating, change management, project control, costing and finances across all divisions of D&C. The Division oversees the Offices of Project Cost Management, Financial Management and Personnel Coordination.

e) Division of Codes and Construction Permitting

The Division is responsible for managing functions related to constructability reviews, project code reviews and proper construction permitting processes. OGS D&C in-house staff and Consultants perform code reviews and related tasks for Division of Design projects and directly for agency clients. The OGS Authority Having Jurisdiction (AHJ) role resides in this Division.

f) Scheduling Division

The scheduling department is responsible for executing the operating procedures of the scheduling program and managing the distribution of regional scheduling and reporting responsibilities to staff within the scheduling department. The office updates the Executive Team in regard to the performance of the scheduling program and provides schedule delay analysis reports and required schedule recovery actions.

g) ISO

This is the group for Design and Construction’s quality program. The office of Project Control is responsible for the implementation and management of the D&C quality system relative to ISO 9001 certification and for identifying areas where quality improvement and critical initiatives will assist in continually improving services in an efficient and cost-effective manner to our clients’ satisfaction. The Quality Group will implement new tools and resources to aid D&C in progressing as a business and will assist the organization’s Divisions, Functional Departments and Groups.

5. DIVISION OF DESIGN (DOD)

The DOD consists of four (4) multidiscipline Business Units organized by the Client Agencies they serve. In addition to this client focus, each Business Unit provides Internal Services to support the missions of all other Business Units. The Division provides a wide range of services including planning, feasibility studies, project design and job order contracting (JOCS) projects, M projects, Constructability, Codes and Permitting. The staff within DOD is a diverse group of professionals, technicians, and support staff that includes Professional Engineers, Registered Architects, and Landscape Architects. The DOD makes significant use of private sector architectural and engineering consultants. The DOD’s practicing professional design staff oversees and provides guidance to Consultant Designers. The Business Units decide which projects are to be assigned to Consultants, D&C In-house design or both.

Each Business Unit is headed by a Business Unit Leader and divided into Design Teams, each of which is under the leadership of an OGS Team Leader. The OGS Team Leader assigns an OGS Project Manager (PM) to the project. The following section lists Business Units, the Client Agencies they serve and the Internal Support Services they provide:

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<th>Assistant Business Unit Leader</th>
<th>Assistant Director</th>
<th>Contact Number</th>
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<tbody>
<tr>
<td>Business Unit Leader</td>
<td>Kurt Arnold, P.E.</td>
<td></td>
<td>518-474-0290</td>
</tr>
<tr>
<td>Assistant Business Unit Leader</td>
<td>Michael Mitchell, P.E. GEO Technical</td>
<td></td>
<td></td>
</tr>
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| Clients: | Department of Corrections and Community Supervision  
|         | Department of Environmental Conservation |
| Internal Support Services: | Structural Engineering  
| | Physical Security  
| | Electronic Security  
| | Environmental Engineering  
| | Geotechnical Engineering  
| | Environmental Permitting  
| | Landscape Architecture  
| | Surveying  
| | Tank Program  
| | Petroleum Bulk Storage installation or modifications with associated remediation |

### BUSINESS UNIT 2

| Business Unit Leader | Subu Nair, P.E., MSEM LEED-AP (Acting) | 518-474-3169 |
| Assistant Director | | |
| Assistant Business Unit Leader | Brian Esperti, P.E.  
| Mechanical Design | 518-473-8464 |
| Clients: | Department of Corrections and Community Supervision |
| Internal Support Services: | Architectural Hardware Support |

### BUSINESS UNIT 3

| Business Unit Leader | Dana Dostie, P.E. | 518-474-6111 |
| Assistant Director | | |
| Assistant Business Unit Leader | Nate Walker, P.E. | 518-486-1438 |
| Clients: | Department of Transportation  
| | Department of State  
| | Dormitory Authority of The State Of New York  
| | Office for Information Technology Services  
| | Office of General Services  
| | Legislature  
| | State Emergency Management Office  
| | State Education Department  
| | State Insurance Fund  
| | State University Construction Fund  
| | State University Of New York  
| | State Senate  
| | State Assembly  
| | Division of Homeland Security and Emergency Services  
| | Supreme Court Appellate Division  
| | Division of Housing And Community Renewal |
| Internal Support Services: | Elevator Design |
BUSINESS UNIT 4

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Phone</th>
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<tbody>
<tr>
<td>Business Unit Leader</td>
<td>Bridget O’Hanlon, P.E.</td>
<td>518-474-2006</td>
</tr>
<tr>
<td>Assistant Director</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistant Business Unit Leader</td>
<td>Alexander D’Oelsnitz, P.E.</td>
<td>518-474-0263</td>
</tr>
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Clients:
- Adirondack Park Agency
- Department of Agriculture and Markets
- Division of Military and Naval Affairs
- Division of State Police
- Office of Alcoholism and Substance Abuse Services
- Office of Mental Health
- Office of Parks, Recreation and Historic Preservation
- Office for People with Developmental Disabilities
- Court of Appeals
- Department of Law / Attorney General
- Westchester Medical Center
- Department of Health
- Department of Labor
- Office of Children and Family Services
- Helen Hayes Hospital
- Roswell Park Cancer Institute
- Division of Veterans Affairs
- Racing and Wagering Board
- New York Racing Association
- Division of the Lottery

Internal Support Services:
- Architectural Hardware Support
  Service Team: Specialized Services for HVAC Equipment throughout the State, Inspect, Repair, and Calibrate HVAC controls
  Capitol Architect/Capitol Restoration

Job Order Contracting Services (JOCS) projects/contracts are implemented on an as-needed basis in meeting construction needs. The JOCS Program is an expedited construction delivery method for small projects for maintenance, repair and minor construction with urgent and time-sensitive requirements. JOCS Contractor(s) perform repair and construction projects at various locations within a defined geographic contract area. Under a JOC contract, the Contractor furnishes all management, documentation, scope definition services, labor, materials and equipment needed to perform the work. The work is accomplished by means of issuance of individual job orders against the contract which is a competitively bid term contract for construction utilizing a unit price book. See Chapter 3 Types of Contracts for more specific information on this type of contract.

M Program Services

Administers M projects that are initiated by the client’s submission of an Emergency Declaration. The M Program provides an expedited construction delivery method when projects do not meet the legal definition of “emergency”, requires a design to properly implement the needed repair/replacement, or
when construction costs are anticipated to exceed the $600,000 limitation on Emergency Contracts. See Chapter 3 Types of Contracts for more specific information on this type of contract.

c) Code Compliance and Permitting

The administrative and compliance office of the NYS building codes and other associated codes such as the Industrial Code Rules, Hospital Code, Sanitary Code, NYS Dept. of Health and NYS DEC regulations. The Code Compliance Manager is the Authority Having Jurisdiction (AHJ) that issues the applicable Construction Permits, Code Compliance Certificates and Temporary Approvals for Occupancy required for Design and Construction’s portfolio of projects that are prepared by design professionals managed by the Division of Design. The Permitting Office has the authority to evaluate code reviews, design, equipment, materials, special inspections and installations for compliance with the applicable codes. The Permitting Office is responsible for developing agency policy and interpretations of code.

d) Constructability

Performs enhanced reviews using a control process intended to improve the constructability and the quality of the design. The objective of the reviews is to minimize potential change orders and schedule delays during construction by ensuring that the construction documents are fully coordinated, complete, biddable and buildable. This office has staff expertise in general construction as well as mechanical / electrical proficiency to review the wide assortment of project types designed and managed by the Division of Design. This office coordinates field check reviews that are conducted by Division of Construction staff to check and verify physical conditions at the project site.

e) Roles and Responsibilities

Role of the OGS D&C Business Unit Leader: The DOD’s Business Unit Leader (BUL) provides overall unit supervisory management and leadership to several Design Teams serving the Client Agency(s) it serves. The Design Teams are comprised of architects, engineers, landscape designers and other professional and support staff who provide design and review services for in-house and consultant-designed projects. The BUL assigns new projects to a designated OGS Team Leader. The BUL is responsible for the Client Agency(s) programs, project workload and contract delivery methods. The BUL also monitors the unit’s design services, project milestones and construction support services provided to the DOC. The BUL interacts with other Business Units to ensure that resources are provided to deliver their client programs. The BUL reports directly to the Director of Design. The Assistant Business Unit Leader (ABUL) is an OGS Team Leader designated as such who performs a back-up role when the need occurs.

Role of the OGS D&C Team Leader: The DOD’s OGS Team Leader is the administrative point of contact responsible for their design group and works closely with agency representatives. The OGS Team Leader provides supervisory management and leadership to their staff, including extended staff such as Design Consultants, Specialty Designers and Testing Agencies. The OGS Team Leader oversees and manages their group’s agency programs and project workload. The OGS Team Leader is most often a Registered Architect, Professional Engineer, or Landscape Architect who may be the Designer of Record. The OGS Team Leader assigns specific projects to PMs when their team is the prime trade. The OGS Team Leader also assigns specific projects to a staff member (Designer) if their team is only providing trade assist to another Team. The OGS Team Leader assists the PM with project planning, monitors the projects progress and assists in minimizing obstacles impacting the design team. The OGS Team Leader directly reports to the BUL and provides weekly project status updates.
Role of the OGS D&C Project Manager (PM): The DOD’s PM is assigned specific projects by the OGS Team Leader (usually the lead trade discipline Designer). Some projects may be single-trade assignments (the PM is a single Designer) and some projects are multi-trade assignments where the PM coordinates the work of other Designers (in-house and Consultants) who may be providing design and/or review services. The PM reports to the OGS Team Leader (Designer of Record) or to the BUL. For some projects the OGS Team Leader may also provide the PM role. The PM’s duties include, but are not limited to, the following:

- Achieving the Client’s project intent and associated deliverables.
- Developing and executing the project plan and inputting information into DCNet.
- Ensuring that the staff directory with staffing roles and responsibilities are clearly defined for each project.
- Day-to-day monitoring of the project and managing the project from its inception (Client Contact / Site Visit / Program) through its construction (Physical Completion).
- Serving as the focal point of project team communication including dialog with the Client, scheduling team meetings as required.
- Securing Client approvals including any review comments of project submissions.
- Responsible for the project including project planning, staffing, communications, contracting method, scope, budget, schedule, quality, deliverables and documentation.

Role of the Designer: The Designer is a project team member performing architectural or engineering design or review services within his/her area of expertise. The Designer is an in-house staff member who performs design and review services under the direction of an OGS Team Leader or is a Consultant who performs these same services. The Designer may or may not be a licensed architect or engineer. Designers complete their assignments in a timely manner with high quality. They provide time estimates to perform work and communicate status updates to the PM. They coordinate their work with other team members and raise issues and risks for the team and PM to manage and resolve.

The PM or the OGS Team Leader may also be the Designer for a project.

6. DIVISION OF CONTRACT MANAGEMENT (CADM)

CADM administers OGS D&C procurements and contracts. CADM responsibilities include the processing of contracts for public bid and the processing of contract payments. CADM is also responsible for developing consultant contracts, making final determinations regarding Vendor Responsibility, conducting dispute hearings, handling terminations and surety takeovers, proposing and reviewing legislation and as supporting both OGS Counsel and Attorney General in legal actions.

- Contract Payment Processing & Audits
- Consultant Payment Review
- Review payment requests submitted by consultant firms providing Design, HazMat, Term Service, and Contract Management services.
- Ensure payment requests and any related supporting documentation, if applicable, are in accordance with the Terms and Conditions of the approved contract and established work order assignments.
- Send reviewed payment requests to project EIC/Team Leaders to ensure the services and deliverables invoiced have been received.
- Receive approved invoices back from EIC/Team Leaders.
• Construction Payment Processing
  • Receive Fixed Price Construction payment applications via the Electronic Contractor Payment (ECP) system following certification by the EIC and Area Supervisor.
  • Review submission to ensure payment applications are in compliance with the approved contract for insurance, labor, materials, stored materials, approved change orders/field orders and affidavit requirements.
  • Enter authorized payment information into DCNet for transmission to SFS/OSC.
  • Emergency Payment Review.
  • Receive Cost-Plus Emergency payment requests following certification by Division of Construction field representative (typically by EIC or Area Supervisor).
  • Review to ensure payment requests are in accordance to approved contract, prevailing wages, equipment rental cost standards, policies and office procedures.

a) Contract Awards
  • In the pre-bid stage, establishes project bid dates, processes ads, arranges for electronic contract document availability via Bid Express, addresses bidder questions, and issues addenda as appropriate.
  • Receives bids, conducts the formal bid openings and determines apparent low bidders.
  • Prepares agreements and bonds and transmits to low bidders for signatures.
  • Notifies client agencies of low bidders and amounts, requests funding codes; funding codes are used to enter contract encumbrance data in DCNet.
  • Prepares contract package for submission to the NYS Office of the Attorney General (AG) and the NYS Office of the State Comptroller (OSC).
  • Interfaces with AG and OSC as necessary to handle questions about pending contracts.
  • Conducts correspondence for bid withdrawals, disqualifications, and non-responsive bids.

b) Emergency Program Services
  Administrates the emergency contracting program which provides for immediate contractor response to client agency declarations of emergency situations. Most emergency contracts are prepared by DOC’s field staff due to the urgent need to prevent personal injury or property damage. See Chapter 3 Types of Contracts for more specific information on this type of contract.

c) Vendor Responsibility
  • Reviews all prime contractors and consultants, examining areas of financial viability, legal issues, integrity, and past performance to ensure award to responsible bidders. Prepare vendor responsibility profile for submission with all contracts to the AG and OSC.
  • Reviews all subcontractors and subconsultants for approval or disapproval.
  • Conducts regular reviews for pre-approval in the Emergency Contract Program.
  • Assists executive staff with disputes involving responsibility and participates in Responsibility and Show Cause meetings.

d) Change Orders
• Receive change order package from Division of Cost Management after client agency has approved the change order.
• Review documents for completeness and modify as needed.
• Enter encumbrance data into DCNet, using funding information provided by client agency.
• Prepare final change order package for submission to OSC.
• Interface with OSC as necessary to handle questions about pending change orders.
• Upon OSC approval, distribute final documents to vendor and other required recipients.

e) Consultant Procurement

• Oversees procurement of all consultants for design, construction management, inspection, testing, and other services.
• Facilitates selection process from development of advertisements through selection of vendor(s).
• Negotiates contracts and conducts financial reviews.
• Facilitates contracting process through OSC award.
• Appoints Term Consultant Liaison.
• Reviews all consultant evaluations and facilitates performance review where necessary.

7. DIVISION OF CONSTRUCTION (DOC)

The DOC administers and manages the construction of capital projects for various State Agencies and is responsible for the project’s construction phase from contract award through project completion. Projects are located throughout the state and as such the DOC is organized into seven (7) Regional Offices. The Regional Office provides local staff for management and inspection services. See Construction Regions, for each region and the counties they serve.

• Region 1 - Long Island
• Region 2 - New York City
• Region 3 - Mid-Hudson Valley
• Region 4 - Capital Region
• Region 5 - North Country
• Region 6 - Central New York
• Region 7 - Western New York

a) Roles and Responsibilities: Role of the Engineer-In-Charge (EIC)

Field engineers and construction superintendents are responsible for coordinating the work of multiple prime contractors and ensuring conformance with the contract provisions, plans and specifications. For each project under construction, a staff member is assigned to serve as the Director’s Representative or Engineer-in-Charge (EIC). This staff member will be responsible for the direct inspection, documentation and general administration of the project construction. The EIC serves as a point of contact for the Designer during the Construction Phase of a project. In addition, the EIC provides support to Designers in
the form of CPM analysis and scheduling, document review, constructability review, knowledge of facility infrastructure and Construction Manager oversight.

For further information on the DOC procedures, refer to The Construction Procedures Manual.

8. DIVISION OF COST MANAGEMENT (DCM)

The Cost Management Division manages functions related to cost estimating, change management, project control, costing and finances across all divisions of D&C. The Division oversees the Offices of Project Cost Management, Financial Management, and Personnel Coordination.

a) Project Cost Management

**Cost Control:** Cost control develops construction cost estimates and reviews consultant construction cost estimates for conformity to office standards. This unit completes post bid evaluations to assist Contract Management in the award of construction contracts. In addition, the unit reviews and approves contractor Detailed Estimates, maintains a construction cost database and produces the annual Construction Wage Rate Report that is used internally and by the public.

**Change Management (Cost Review Unit) & Claims:** Change Management manages the Change Order and Field Order process throughout the State, which involves the review and recommendation for approval in conjunction with the DOD and DOC. The Unit works closely with the Regional Estimators and field staff to interpret contracts to determine the fair market value of the orders on contract.

Change management also reviews construction claims and disputes related to Article 10, 12, 15 (disputes) and Article 17A (delay claims) with field staff to determine the State’s liability to determine the validity of the claim. The Unit reviews, audits and negotiates claims to finalize claims and associated cost settlements, reviews Notice of Claims, researches validity and compliance with the Contract documents and project schedule, and reviews with project staff to make recommendations to the Claims Review Board for mitigation opportunities or rejection, if applicable.

b) Financial Management

**Office Administration & Finance:** Manages accounts Payable and Receivables and responds to billing inquires. The unit will track the cost recovery performance of the various D&C units to ensure efficient delivery of services; will periodically audit and appropriately modify our cost recovery multiplier; and track the costs associated with basic vs. additional services to monitor our efficiency in managing our clients’ capital programs. Manages D&C annual budget including tracking expenditures. Provides input to OGS Finance in developing its annual budget. Office Administration & Finance is also responsible for the following:

- Oversees the purchasing and maintenance of equipment and software, fixed asset reporting, and surplus of equipment. It also maintains inventory control over computers, vehicles, cell phones, purchase cards, and telecommunications services.
- Supports and assists CADD Users, establishes CADD standards and procedures, and defines CADD training.
- Manages Plan File which serves as the storage facility for record copies of drawings that comprise construction contract documents. They represent a measure of fixed assets of
client agency facilities and infrastructure. The files also fulfill a legislative mandate regarding Code certification record holds.

- Manages IT developers who support, provide enhancements and develop new applications for DCNet, which is D&C’s information management system. Provides security and access rights for DCNet and D&C folders on the network.

**Project Control:** The Office of Project Control (OPC) receives requests for services and maintains project tracking related to staffing and consultant assignments, priorities, project schedules and costs. OPC provides status and exception reports to the business units, management, and clients. Project Control is also responsible for the following:

- Manages project requests for design, construction and professional services from Client Agencies. Project Control receives over 1,000 requests for services annually.
- Facilitates Workload Planning Meetings with the Division of Design. Assists with the determination of resource needs and resource allocation by conducting weekly workload update meetings.
- Manages the B1184 process for initiating and tracking budget requests and approvals.
- Manages and controls work order assignments to term and standalone consultant contracts, encumbers funds, and assists with closing out work order assignments.
- Maintains project tracking, in DCNet, related to staffing and consultant assignments, priorities, project schedules and costs. Maintains and tracks all design work, entering milestone data and providing project status reports.
- Processes contract documents for bidding. Wage rates are requested from the Department of Labor, front-end documents are added into the specifications, an advertisement is written, the bid form prepared, and the documents sent for printing.
- Manages Term and Standalone Consultant Contracts.
- Maintains critical correspondence in project files.
- Assists the Quality Office monitoring projects for ISO compliance.
- Assists the Permitting Office with code certifications and compliance.
- Issues Work Orders.

**c) Personnel Coordination (Human Resources)**

The Human Resources office coordinates the hiring, promotional opportunities, training, timesheet reporting, and human relations issues for state and contract employees.

**d) OGS D&C IT Group**

The IT Group coordinates the management, tracking, acquisition, setup and maintenance of OGS D&C’s electronic resources, including PC’s, CAD equipment, tablets, laptops, copiers, plotters and network resources.
C DEFINITIONS AND TERMINOLOGY

This Chapter contains a compilation of terms, definitions and acronyms used in the Design Procedures Manual (DPM).

**ABUL**: Assistant Business Unit Leader. The ABUL serves an assistant type role to the BUL. Also see BUL and BU definitions.

**ACOE**: Army Corp of Engineers.

**AHC**: Architectural Hardware Consultant - A Door and Hardware Institute credentialed specialist trained to recognize builder’s hardware requirements for door openings in public, commercial, industrial and institutional buildings. AHC coordinates builder's hardware items and options to ensure door openings comply with fire, life safety, accessibility and building code requirements and operate properly.

**AHJ**: Authority Having Jurisdiction.

**AS**: OGS Division of Construction Area Supervisor

**BoD or BOD**: Basis of Design.

**BU**: Business Unit. The Division of Design consists of four (4) multidiscipline Business Units (BU’s) organized by the Client Agencies they serve. The BU’s are divided into Design Teams under the leadership of the OGS Team Leader and staff made up of a diverse group of practicing professionals, technicians and support staff including professional engineers, registered architects and landscape architects.

**BUL**: Business Unit Leader. The BUL serves as ambassador to the Client Agencies they serve.

**CADD**: Computer Aided Design and Drafting.

**CADM**: The Division of Contract Management. CADM administers contracts including processing contracts for public bid and the processing of contract payments. The Division is also responsible for administering affirmative action requirements, developing consultant contracts, conducting dispute hearings, proposing and reviewing legislation, and supporting both OGS Counsel and Attorney General in legal actions.

**CAI**: Construction Acceleration Incentive. A cash amount earned by the contractor to expedite completion of the work on an accelerated schedule. See Chapter 3 Types of Contracts for more information.

**CEO**: Code Enforcement Official.

**Client or Client Agencies**: New York State Agencies considered as the Owner on a project (see Design Guide 9.7 for Client Agency listings).

**Consultant/Designer**: Either an OGS in-house design staff member or a Consultant, usually a design professional, providing architectural and/or engineering services for the Office of General Services Design and Construction Group.

**Contractor**: The individual or entity responsible for performing and completing the construction of a project as required by the contract documents.
Contract Documents: The OGS/Contractor agreement, the Conditions of the Contract (General, Supplementary, and other Conditions), drawings, specifications and all addenda issued prior to award. Contract Documents include all Change Orders issued after award of contract.

CM: Construction Manager.

CPM: Critical Path Method. A system of project planning, scheduling, and control which combines all relevant information into a single master plan, permitting the establishment of the optimum sequence and duration of operations; the interrelationship of all the efforts required to complete a construction project are shown; an indication is given of the efforts which are critical to timely completion of the project.

DCNet: OGS network database (available to OGS staff only).

DEC: Department of Environmental Conservation.

DOCCS: New York State Department of Corrections and Community Supervision.

Designer: See Consultant/Designer.

Design Discipline: A category of related professional services requiring licensure, such as electrical engineering, mechanical engineering, plumbing engineering, architecture, structural engineering, civil engineering and landscape architecture.

DD: Design Development Phase. Is a milestone phase determined by the project team as part of a submission for review.

Design Team: The group of individuals or firms representing the various design disciplines providing services on a project.


Director’s Representative: The employee or agent of OGS D&C designated by the Director as such. On most projects the EIC is the Director’s Representative.

DOB: New York State Division of the Budget.

DOC: OGS Division of Construction.

DOD: OGS Division of Design.

DOL: New York State Department of Labor.

DOS: New York State Department of State.

DOT: New York State Department of Transportation.

ECP: Electronic Contractor Payment system.


EO111: Executive Order No. 111 “Green and Clean” State Buildings and Vehicles (superseded by EO88).
EIC: Engineer-in-Charge. OGS Division of Construction representative on the project site. Most often the EIC will also be designated as the Director’s Representative.


LEED™: Leadership in Energy and Environmental Design™.

LS: Lump Sum contract amount.

MCC: Maximum Construction Cost.

M/WBE: Minority and Women-owned Business Enterprise.

NOI: Notice of Intent. Part of the SWPPP.

NTE: Not To Exceed contract amount.

NYS: New York State.

NYSERDA: New York State Energy Research and Development Authority.


OGS D&C: New York State Office of General Services Design & Construction.

OGS Team Leader (TL): See Chapter 1.2 OGS D&C Organization and Structure.

OPC: Office of Project Control. The OGS D&C Office of Project Control unit is charged with maintaining “official” hard copy and electronic files, as well as updating the project-tracking database for each project undertaken.

OSC: New York State Office of the State Comptroller.

PM: OGS Project Manager. See Chapter 1.2 OGS D&C Organization and Structure.

PMP: Project Management Plan. The PMP is developed as part of the PM’s project plan required by ISO.

PSU: OGS Pre-Construction Service Unit. This group is also known as the QA/QC or Constructability Group.

Project Manual: The written construction documents prepared for bidding or negotiating a construction contract and for constructing a project. The project manual typically contains bidding requirements, contract forms, conditions of the contract and specifications.

QA/QC: Quality Assurance/Quality Control.

RFI: Request For Information.

RFP: Request For Proposal. RFP’s provide a systematic control of the collection, analysis, review and resolution of contractor questions arising during the progress of the job.
RS: OGS Division of Construction Regional Supervisor.

SD: Schematic Development Phase. Is a milestone phase determined by the project team as part of a submission for review.

SED: New York State Education Department.

SEQR: State Environmental Quality Review.

SEQRA: State Environmental Quality Review Act.

SF: Square Feet or Square Footage.

SHPO: New York State Historic Preservation Office.

SOS: Schedule of Submittals. A submittal plan prepared by the PM and Consultant/Designer indicating the content and timing of each shop drawing and other submittals requiring the Consultant/Designer’s approval. The submission dates are filled in by the Contractor after award and should be updated on a periodic basis.

State: State of New York.

SWPPP: Storm Water Pollution Prevention Plan.

TCL: Term Consultant Liaison Assigned immediately following OSC approval of term consultant contract. The Consultant Liaison program has been established to mentor new term consultants. The liaison serves as an ambassador of OGS D&C to the consultant firm and provides detailed orientation. Senior staff is assigned to each term A/E or E/A consultant contract. An outreach meeting is held with principals of the firm to review procedures, resources, definitions, expectations, MWBE requirements, evaluations and compensation.

WO: Work Order. Work instructions regarding scope, deliverables and schedule issued to a consultant who has a contract with the State through a Stand-Alone or Term Contract.
CHAPTER 2: CONSULTANT SERVICES

In order to supplement the work of the OGS D&C professional design staff, private sector Architectural/Engineering (A/E) Consultants are frequently employed to supply design services for our Client Agency design and construction projects. Written agreements between OGS D&C and selected consultant firms are negotiated and drafted by Consultant Procurement. The selection process is open to all qualified firms. Firms may be selected for specific standalone contracts or term contracts with multiple work order assignments.

A  Consultant Procurement Unit

The Consultant Procurement Unit is typically the A/E Design Consultant’s first point of contact with OGS D&C. Consultant Procurement is primarily responsible for the selection, initiation and review of consultant agreements for OGS D&C. The selection process involves establishing the scope of services for Consultant Agreements, retaining qualified design consultants and ensuring compliance with the provisions of the Consultant Agreement. Questions relating to the specific provisions of a consultant agreement scope of services, submission requirements or fee proposals should be directed to:

Sukhjit Singh  
Director, Consultant Procurement  
OGS Design and Construction  
35th Floor, Corning Tower  
Empire State Plaza  
Albany, New York 12242  
Tel: (518) 474-0306

B  Consultant Liaison Program

An OGS Term Consultant Liaison (TCL) is assigned by the Consultant Procurement Unit immediately following OSC’s approval of a term consultant contract. The TCL is typically a senior staff employee who may have been on the consultant selection board.

The assigned TCL to a consultant contract can be found via the D&C Share Point / Contract Management page.

1.  TCL’S ROLE:

- Single point of contact for general contract questions.
- Provides general familiarization with OGS’s D&C process, procedures, guidelines and work process.
- Supplement information that is available in the Design Procedures Manual.
- Respond to or direct questions regarding OGS D&C procedures.
- Provide feedback to OGS D&C teams when valid concerns are raised (Consultant Services, Design Procedures Manual Committee, etc.).
- May assist consultant manager in resolving contract issues.
- Assist with identifying initial assignments (when necessary).
- Assist with resolution of impasse issues.
- NOT involved with each specific project assignment, fee negotiation or problems.
- The TCL is assigned as a resource for OGS D&C staff to assist in addressing appropriateness of specific assignments.
- Become familiar with specific consultant expertise and their access to specialty services.
- Familiarity with consultant workload (work orders) and anticipated assignments.
- May assist in prioritizing consultant efforts.
- Debrief OGS D&C management regarding prioritization of projects and advise consultant manager accordingly.
- Emphasize the importance of meeting deadlines and commitments for consultant work.
- The TCL may provide periodic feedback to consultant on overall performance.
- Review Performance Evaluations.
- Solicit feedback from staff and advise consultant manager accordingly.
- Check work order assignments to verify that evaluations are completed.
- Advise future consultant selection boards as to overall consultant performance.
- Review Consultants QA/QC program and evaluate effectiveness with regard to specific OGS D&C assignments.
- The TCL may solicit feedback from Consultant regarding OGS D&C performance in the form of suggestions for improvement opportunities. Distribute feedback as appropriate.
- Responsibilities that the TCL’s role does NOT include initiating assignments, scope preparation or review of fee negotiation and approval.

C Project Stakeholders
1. EFFECTIVE COMMUNICATIONS

Is about the right people getting the right information at the right time.

Information – determine who needs to know what.

Accuracy - the wrong message may be worse than none at all.

Timeliness - too early or too late may add to confusion.

Confirmation - make sure the right people have the information they need.

Coordination - keep others informed on what they need to know without overburdening them with unnecessary information.

2. THE CONSULTANT TEAM

a) Consultant Orientation Meeting

This meeting is held after award of contract with the principals of the firm and design team to provide an overview of OGS D&C’s expectations and important design procedures and guidelines. This meeting is conducted by an OGS D&C representative who is most often a senior manager.
b) **Expectations of the Consultant Team**

- Provide sufficient staffing resources with appropriate skills for all accepted assignments.
- Comply with D&C’s procedures, standards and formats. The Consultant is responsible to educate all team members on D&C’s policies and procedures.
- Focus on communication – provide frequent status updates to PMs and EICs.
- Comply with schedule commitments and work within budget.
- Focus on D&C’s clients’ needs.
- Comply with building codes and good-practice standards.
- Produce high quality design solutions and efficient execution of the work.
- Perform a Quality Assurance / Quality Control (QA/QC) review of all deliverables including sub-consultant document coordination.
- Hire sub-consultants / specialists as required.
- Accept project assignments ONLY when you can meet all listed criteria above.
- Quality Design.
- Provide technically sound design solutions.
- Follow firm’s internal QA/QC processes (OGS is NOT your QA/QC).
- Manage the low responsive bidder environment.
  - May at times reduce the quality of construction and puts more risk on the State and the Consultant/Designer.
  - Need a “tight” set of bid documents.
  - Need to show much greater detail than private work.

- **Bid Documents need to meet specific quality standards.**
  - Clear
  - Concise
  - Complete
  - Correct
  - Code Compliance

- Provide QA/QC Certification Letter(s) - principal of firm including sub-consultants
- Provide Quality Investigations: Consultant/Designer is tasked to resolve the many project unknowns. Some examples are included below:
  - Hazardous Materials
  - Geotechnical: borings, drilling, ground water levels
  - Non-invasive and invasive probes and testing
  - Subsurface Utility Engineering (SUE) - Determine appropriate Quality Level A, B, C or D
  - Environmental
  - Soil sampling and testing at underground fuel storage and piping, firing ranges, etc.
  - Topographic Surveys
  - Masonry and mortar testing: material analysis, absorption, etc.
May need contractor involvement with design phase investigations. (recommendation is to get 3 price quotes). Caution: Conflict of Interest - Contractors performing the work are not allowed to bid as a prime or sub-contract the project unless a waiver is granted.

Some Investigation Types: roof scans, cores, sanitary/storm video inspections, excavations, building cleaning mockups, dye testing, electric manhole as-builts, window removals, masonry investigations, mandreling spare conduit, etc.

c) What the Consultant Can Expect from D&C

- To be an essential member of the project team.
- Respect for consultant’s knowledge and professional expertise.
- Fair and reasonable fees for services rendered.
- Additional fee for significant additional scope.
- Feedback on consultant performance and improvement opportunities.
- Term assignments with clear technical scope, duration, fee, and description of deliverables.

D Getting Started

- Understand your contract.
- Become familiar with the Design Procedures Manual.

E Work Orders

- Types of projects / Work Order (WO) assignments which are most often less than $250,000 in value.
- Lump Sum (preferred) vs Not to Exceed assignments.
- Do not perform work without an approved WO.
- WO Forms: BDC 41 and BDC 41.1 Modifications (Mods).
- BDC 65 Consultant Fee Estimate Worksheet (good tool to use for fee breakdown; task, staff level, hours).
- Scope, deliverables, dates/duration of deliverables and fee breakdown.
- Basic vs Additional fees are segregated for review of fee breakdown.
- Sub-consultants need written approval from D&C prior to performing work.

F Invoices and Payments

Follow invoice and payments procedure guidelines provided at time of contract award to minimize delays. Do not send invoices to the PM.

G Scope of Services

A Scope of Services is required for all work involving a Consultant. The purpose is to set forth a common understanding regarding the deliverable(s) and the schedule.
The Scope of Services must include a description of the deliverable(s), required delivery dates or durations and fee breakdown. All consultant recommendations should be evaluated as options, including alternatives (if any) and cost estimates.

ELEMENTS TO BE INCLUDED:

a) Project number and title.

b) Identify OGS as the Client Agency. Identify the agency or department for whom the work is being performed. Use a format that clearly identifies that the agreement is solely between OGS and the consultant regardless of the identity of the facility end user.

c) Identify all types of work to be performed (i.e. study, program report, construction documents, etc.).

d) Maximum construction cost (MCC). Always indicate that the MCC includes a contingency allowance. Inclusion often ensures that the contingency allowance does not cause the project to exceed the MCC at the final document stage.

e) Program Objective. Identify the issue or problem to be resolved by answering the question: “Why are we doing this project?” This information requires client agency or end user input.

f) Project Scope:

- General Work: Provide a brief description of the facility, its purpose, and hours of operation. If it is a residential facility for wards of the State, identify the number of residents that are housed at the facility.
- Specific Work: Identify all specific work that is to be included in the project.
- Design Meetings: Identify all meetings, such as kick-off, presentations, etc., that will be required (best estimate). If additional meetings may be anticipated, provide a number for these meetings with a NTE amount.
- Submissions: Identify what submissions and deliverables will be required for the project. Identify the number of copies needed for each submission.
- Lump sum fees are preferred for design work and should be linked to the requested deliverable(s). These fees include all printing and copying costs so additional copies will cost additional money. Determine payment structure (i.e. 50% on delivery and 50% on approval).
- Identify the total number of copies needed by:

  - Field check of the 100% submission.
  - Client review.
  - Environmental permitting submission(s).

- Quality Review Certification: Upon submission of the 100% Submission Phase, the Design Consultant shall certify to OGS, in writing on the Consultant’s letterhead, that all Construction Documents have been thoroughly checked for constructability, for accuracy, for the coordination of all their parts and details, for conformity to all program requirements, and for conformity to all applicable laws, codes, and regulations. Where a
sub-consultant firm has provided a portion of the work, the prime consultant shall obtain a similar certification letter from the sub consultant to be forwarded to OGS together with the prime consultant's certification letter. These certification letters shall be signed by a Principal of the firm and accompany the 100% Submission.

g) Bid Period Services:
- Identify if attendance at a pre-bid meeting or site visit is required and if so, by whom (i.e. are representatives from all disciplines required).
- Review Chapter 7 Bid Phase Guidelines and identify any changes in Scope of Services.

h) Construction Period Services:
- Identify the number of site visits that will be required and incorporated into the basic fee structure. Is an initial job meeting needed? Are meetings to be held at the request of the Director’s Representative?
- Review Chapter 8 Construction Phase Guidelines and identify any changes in Scope of Services.

i) Testing:
- OGS D&C maintains term contracts for asbestos and lead paint testing. These contracts may be used for this testing. Coordinate requests for testing with the designated OGS D&C PM.
- Specific testing that will be required should be included in the Scope of Services. Coordinate with the designated OGS D&C PM.
- Access to the location of suspect materials for testing should be identified. A provision for area restoration may also be needed.

j) Information and Existing Conditions:
- Advise Consultant of the information that will be made available.
- Identify responsibility and include contact information for obtaining existing site information, geotechnical information and/or survey data. If a survey is required, coordinate with OGS Geotechnical Group. See Chapter 9.15 Geotechnical Guide for more detailed information.

k) Codes:
- Conform to all codes that are applicable to the project.
- This portion of the Scope of Services can be used to call attention to specific codes.
- See Chapter 9.9 Codes Guide for more detailed information.

l) Site Related Issues and Environmental Permits:
- Identify that OGS D&C prepares SEQRA documents.
- Identify Designer’s responsibility for providing site analysis for various issues including, but not limited to, storm water management compliance.
Identify any wetlands issues, identify those responsible for coordination with the Army Corp of Engineers and/or the Department of Environmental Conservation.

Identify responsibility for compliance with site permitting and changes that may be required as project progresses.

See Chapter 9.12 Environmental Guide.

m) Approval by Others:

Identify responsibility for obtaining necessary approvals and permits from other governmental entities and organizations.

Identify responsibility for modifying documents to obtain approvals and permits.

n) Design Time Period:

Identify design schedule for the project.

o) Basic Services

General Provisions - There are a number of general requirements and standards, which govern the basic services.

The Consultant shall prepare a schedule for each submission phase. This schedule shall be submitted to the designated OGS D&C PM for approval.

The Consultant shall attend all conferences required by OGS D&C and shall subsequently prepare and distribute minutes of such conferences.

The Consultant shall have a project representative responsible for coordinating all of the Consultants work and also, in some cases the work of OGS Designers. The Consultant project representative shall be available to OGS D&C.

The Consultant shall not retain any additional sub-consultants without the prior written approval of OGS D&C.

Design work shall not exceed the MCC noted in the Scope of Services.

p) Documentation:

Drawings and specifications for the project shall be prepared according to Wicks Law requirements and as approved by the OGS D&C PM.

The Consultant shall supply reproducible project drawings and copies of specifications and other materials prepared for each submission phase. All submissions shall be made in accordance with the Design Procedures Manual.

Submission documents shall be revised/corrected and reprinted/distributed without additional compensation, until the documents are approved by designated OGS D&C PM. Client revisions to documents after approval and incorporation of initial comments may merit additional compensation.

OGS D&C’s review does not in any way relieve the consulting firm and or design professional from full responsibility for insuring the design work as indicated on their final construction documents (drawings and specifications) meets all the requirements of the latest editions of the New York State Building Code and all applicable other codes referenced in the New York State Building Code.
OGS Design Procedures Manual
A Guide to Designing Projects for Design & Construction

- The costs for furnishing reproductions for all documents for all submissions including, the electronic versions, are included in the basic fee agreement.
- All materials, calculations, models, drafts, renderings, survey results, test data, and documents, including any furnished by OGS D&C or prepared in conjunction with the project are the property of OGS D&C. All documents, both hard copy and electronic versions, shall be provided to OGS D&C when the project is completed or terminated regardless of the project stage.
- See each Submission Phase for required Basic Services (reserved).

q) Additional Compensation

- The retention of a specialized sub-consultant, as directed and approved by OGS D&C, which is not ordinarily required for projects of comparable type shall merit additional compensation.
- Contract printing (when required by the designated OGS D&C PM) shall merit additional consultant compensation.
- Client modifications to work already approved shall merit additional compensation. However, any errors and omissions are not compensated.
- Preparation of Change Orders or Addenda not due to errors and omissions or other deficiencies in the documents shall merit additional compensation.

H Office of Business Diversity

The Commissioner of General Services requires that minority and women-owned Architectural/Engineering firms (MWBE) be given the opportunity to participate in the Consultant Services Program. Accordingly, percentage goals for MWBE participation are assigned to all consultant contracts with fees of $25,000 or more. Contractors are required to participate when all the construction contracts total $100,000 or more. Set-aside Consultant Term Contracts for MWBE primes may exist. Inquiries regarding project-specific M/WBE goals should be directed to:

OGS Design and Construction
Office of Business Diversity
Corning Tower Building, Room 3580
Empire State Plaza
Albany, New York 12242
Tel: (518) 473-7083

I Consultant Agreement and Fees

Consultant Agreement Process - Consultants retained by OGS D&C are required to comply with an executed Consultant Agreement (contract). OGS D&C uses both stand-alone (project specific) and term contracts depending on the size, complexity, and value of the project work to be accomplished. What follows is a description of the procedures followed in the development of a Consultant Agreement. Please note that the Consultant’s active participation in the initial and final steps is essential to facilitate this process. The following forms are used in developing the contract:

1. CONSULTANT MULTIPLIER CALCULATION FORM (BDC 63):
• The Consultant Multiplier Calculation Form provides a framework for calculation of a multiplier. It is based on billable direct labor and non-billable indirect labor and operating expenses. Refer to instructions on the form.

2. Consultant Employee Wage Rate Schedule (BDC 66.1).
   • The Consultant Employee Wage Rate Schedule is used as the basis for the Contract Wage Rate Schedule and establishes the maximum hourly rate to be billed (for those titles anticipated providing direct technical services) for the duration of the contract. If officers, partners, and/or principals will be providing technical services to the project, these should also be listed along with their hourly compensatory rates. Refer to instructions on the form.

3. FEE NEGOTIATION.
   • The OGS PM and TL and Consultant Procurement staff will work with the Consultant firm to reach an agreement on a fair and reasonable fee offer based on the scope of work to be accomplished and budgetary needs. Other terms of the contract are not negotiable. Various tools are available to facilitate design services and fees. One of those tools, the Consultant Fee Estimate Worksheet and Consultant Fee Breakdown can help develop a design plan for a specific project. Optional design services may also be included to formulate the plan and fee negotiation.
   • Consultant Fee Estimate Worksheet (Form BDC 65-66): The Consultant Fee Breakdown is designed to summarize the Estimate Worksheets and include any additional line item fees that may be required. This form also includes the Consultant Fee Estimate Worksheet that provides a framework for estimating employee hours, total direct cost, and total labor cost for each phase of a particular project.

If the selected consultant for a standalone project declines the work or is unable to negotiate a fair and reasonable fee, then the consultant firm ranked second by the slate selection board will be offered the project. If the second-ranked firm declines, the third-ranked firm will be offered the project. Declination does not negatively impact consideration for future opportunities.

Once a fee has been negotiated and the consultant employee wage rates and multiplier are approved, Consultant Procurement will initiate a request for funding and a request for a written Consultant Agreement. This process can require as much as three or four weeks.

If a term consultant declines a work assignment or is unable to negotiate a fair and reasonable fee, then another term consultant will be selected. Declination does not negatively impact consideration for future work orders.

J  Consultant Evaluation

Consultant evaluations are encouraged to be initiated for all phases of design. The Consultant Evaluation is a tool to be used by the PM or the TL when communicated expectations have not been met. At a minimum, the PM completes an evaluation at the end of the Program and the 100% Submission Phases using the electronic evaluation process in DCNet.
CHAPTER 3 - TYPES OF CONTRACT

OGS D&C utilizes several types of contracts in the construction contracting process. Rapid response contracts (E’s, J’s and M’s) are expedited through the design, bid and award phases. While standard contracts (40,000 series and Q’s) are usually more complex and have a longer schedule due to their submission requirements, reviews and approvals. A comparison of contracts and a brief description of each type are described in this chapter.

<table>
<thead>
<tr>
<th>Comparison of Contract Types</th>
<th>Less Duration</th>
<th>Greater Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>E</td>
<td>J</td>
</tr>
<tr>
<td>Project Initiation</td>
<td>BDC 318</td>
<td>BDC 318</td>
</tr>
<tr>
<td>Limitations</td>
<td>$ Amount</td>
<td>600K</td>
</tr>
<tr>
<td>Wicks Law</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Contract Type</td>
<td>Lump Sum; T&amp;M Cost +</td>
<td>Lump Sum from Unit Pricing</td>
</tr>
<tr>
<td>Design Time (if required)</td>
<td>0 - 2 weeks</td>
<td>2 - 4 weeks</td>
</tr>
<tr>
<td>Designer (NA = Not Applicable)</td>
<td>NA / EIC / Consultant / In-house</td>
<td>NA / EIC / Cons. / In-house</td>
</tr>
<tr>
<td>Scope Definition</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Program Report and Approval</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>SD &amp; DD Phases</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>100% Sub Phase</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Final Documents</td>
<td>Yes/No/Partial</td>
<td>Yes/No/Partial</td>
</tr>
<tr>
<td>Final DOCCS - Client Approval</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>QA/QC Review</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Bid Process</td>
<td>Qualification Based List</td>
<td>WO to On-Call Contractor</td>
</tr>
<tr>
<td>Print/Advertise</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Bid Time</td>
<td>0 - 2 weeks</td>
<td>2 - 4 weeks (proposal)</td>
</tr>
<tr>
<td>Award Time</td>
<td>Notice to Proceed</td>
<td>Notice to Proceed</td>
</tr>
<tr>
<td>Construction</td>
<td>Typical</td>
<td>Typical</td>
</tr>
</tbody>
</table>
The Standard Contract is the type most commonly used by OGS D&C. They are fixed-price contracts, meaning the contractor agrees to perform the work for one fixed price regardless of actual cost. Standard Contracts are publicly advertised and competitively bid. They are usually awarded to the lowest responsible and reliable bidder; however, the state may choose to reject all bids and re-advertise for new bids. The system for producing project manuals was designed around this type of contract. Additional documents were developed for other types of contracts and for modifications required by various Client Agencies. Most modifications take place in the bidding and contracting requirement sections rather than in the technical specifications. Some points to remember while assembling documents for a Standard Contract are the following:

- Drawings and Specifications are separate documents. Do not include specification items on the drawings.
- The Wicks Law applies to most projects. See item K in this chapter and Chapter 9.3 Multiple Prime Contracts Guide (Wicks Law) for specific requirements.
- As a general rule, projects require a program report with an estimate and 100% submission with a fully detailed estimate for each trade.
- Drawing size will be the standard 24” x 36” format unless bound in the Project Manual.
- For more detailed information on document requirements, review the other chapters in this Design Procedures Manual.
- Contact the project OGS Team Leader (TL) for deviations from these and other standard procedures.
- Some variations of Standard Contracts can include Q and M projects.

**Q PROGRAM CONTRACT (primarily DOCCS)**

Q projects are identified by a project number beginning with the letter Q (e.g. Q1234). They are intended for single trade with scope that is clear, straightforward and can be accomplished quickly. When DOCCS authorizes a Q project it is with the understanding that funding is in place and authorization has also been given to bid and award the work.

Due to the straightforward nature of a Q project most project milestones are not applicable. Although a Field Trip is usually necessary, neither the Program Report nor 100% Submission milestones are required. The Division of Construction Constructability Review Group should be provided a copy of the contract documents as soon as they are progressed to a point that will allow for review. The project should not be delayed while waiting for a response.

On rare occasions, Q projects can have a Program Submission and/or 100% Submission if deemed necessary by the TL. If a project requires both, it should be changed to a 40,000 series project.

Q projects do not have a higher priority than other DOCCS work.
EMERGENCY CONTRACT (administered by the Division of Construction)

An emergency contract is usually bid on a lump sum or cost-plus/percentage fee basis and is given priority over ordinary work except when instructions are received to the contrary. Most emergency contracts are prepared by Design and Construction’s Division of Construction Field Staff because of the urgent need to resolve a life safety or critical function risk. Usually, there is time to investigate the circumstances, arrange for written or telephone bids and assign the work to a low bidder. When design expertise is required, a Consultant/Designer may be asked to prepare the documents (tech specs and/or drawings only). In this case, the Director of Division of Construction should always be consulted regarding preparation of the Front-End Documents.

The documents for an emergency contract may be similar to a standard contract with the following exceptions:

- Advertisement for Bids is not required.
- Instructions to Bidders is not required.
- Bid security is not generally required.
- Neither performance bonds nor labor and material bonds are required.
- Liquidated damages are not required.

As soon as the PM is aware that an emergency may be declared they should contact the Division of Construction immediately and notify the Regional Supervisor.

All emergency declarations are distributed to the appropriate Business Units. If the TL or the PM has any knowledge of ongoing studies, Design of Scope or has met with the Client, that individual should contact or email the Division of Construction.

The contract value limit for emergency contracts was raised from $300,000 to $600,000 in April 2015.

Division of Construction contacts:
John Pupons (518) 257 2689
Michael Convertino (518) 474-0331 (alternate)

M PROGRAM CONTRACT (administered by the Division of Construction)

All “M” Projects are initiated by client submission of an Emergency Declaration (BDC 318). A project is directed to the “M” Program when it does not meet the legal definition of “emergency”, requires a design to properly implement the needed repair/replacement or when construction costs are anticipated to exceed the $600,000 limitation on Emergency Contracts.

The client provides concurrence when an “M” project is initiated with the understanding that, as an “M”, it will be handled in an expedited manner. When the client agrees to having an emergency request go to the “M” program, their opportunity for various milestone project reviews is waived as are any requirements on their part to provide additional project approvals for design and bidding.

In many instances, “M” projects are single-trade, straightforward projects with clearly defined scopes. In these cases, the initial consultant site visit can confirm existing conditions and required scope, and the fee can be easily agreed upon and design authorized quickly. There may be occasions where the original
emergency request is so vague that a more detailed follow-up investigation and program report may be required. But in keeping with the general “M” requirements, all is handled on a more expedited schedule.

“M” Projects can be multiple-trade contracts. There are no dollar limitations on “M” contracts. Since they are publicly advertised and bid, they are subject to all requirements of the Public Building and State Finance Laws and must adhere to Wicks Law limitations. To help achieve a rapid project turnaround, the M Project managers have utilized alternate delivery methods and, in some cases, have prepared abbreviated contract documents. The projects must, however, be “biddable” and “buildable”. Other shortcuts include, but are not limited to, the following:

- Projects have no required preliminary design or field check review process.
- No additional Budget authorizations required from the client beyond initial authorization.
- Abbreviated technical specs may be provided on the drawings with TL approval.
- Prevailing Wage Rates are requested from the Dept. of Labor at time project is initiated.
- Shortened Advertisement and Bidding periods are utilized.
- Have been authorized by CADM to select project bid dates.
- Although a PM is assigned to each project, a “team” management approach is utilized so that there is sufficient familiarity with all projects within the section. Each PM can help advance a given project in the absence of the assigned PM.

**JOB ORDER CONTRACT (administered by the Division of Construction)**

A Job Order Contract (JOC) is an indefinite quantity contract whereby the contractor(s) perform a series of individual real property repair and construction projects at different locations within a defined Geographic Contract Area.

Under a JOC contract, the Contractor furnishes all management, documentation, scope definition services, labor, materials and equipment needed to perform the Work. Ordering Work is accomplished by means of issuance of individual Job Orders against the Contract.

The State has published a Construction Task Catalog containing a series of work items with pre-established Unit Prices and corresponding Technical Specifications. The Contractor bids Adjustment Factors to be applied to these pre-established Unit Prices.

As individual projects are identified, the scope of work is discussed with a JOC Coordinator and/or EIC, a Facility and/or Client Representative and the Contractor at a Joint Scope Meeting. Following the Joint Scope Meeting, the State provides the Contractor with a draft Detailed Scope of Work for review by the Contractor. Once the Detailed Scope of Work is agreed upon, the State issues a Request for Proposal. The Contractor then develops a Job Order Cost Proposal using construction tasks from the Construction Task Catalog necessary to complete the Detailed Scope of Work. The price paid by the State for an individual Project is determined by multiplying the pre-established Unit Prices of the necessary construction tasks by the appropriate quantities and by the appropriate Adjustment Factor(s).

The State reviews the Job Order Cost Proposal, and if satisfied, may issue a Job Order. The resulting price is a lump sum, fixed price for the completion of the Detailed Scope of Work. Each successive Job Order is developed in a similar manner. At any given time, the Contractor is expected to be joint scoping and developing concurrent Job Order Cost Proposals; as well as concurrently performing Work on multiple Projects in the field.
The Contract Term of the Contract is one (1) year in duration or when an amount equal to the Maximum Contract Value has been ordered, whichever comes first. There are two (2) optional Contract Terms. Both the State and the Contractor must mutually agree to extend the Contract for any additional Contract Terms. Each additional Contract Term is one (1) year in duration or when an amount equal to the Maximum Contract Value has been ordered, whichever comes first.

The Maximum Contract Value for each Contract will vary dependent upon the trade (C, H, E, P). The Contractor may be issued Job Orders totaling the Maximum Contract Value during any Contract Term. The Contractor is not guaranteed to receive this value of Job Orders. The State has no obligation to issue Job Orders in excess of the Minimum Contract Value.

The total project cost using a Job Order shall not exceed the $500,000 threshold. If the threshold value will be exceeded, then the project is required to be bid as a standard contract. JOCS shall not be used as a project contract method to progress work that cannot stand alone from the work of concurrent, separately procured projects.

UNIT PRICE CONTRACT

Unit Price Contracts are used when the extent of work is not exactly determinable at the time of bidding. They are actually a combination of Fixed Price and Unit Price Contracts, as described below.

The purpose of the unit price format is to establish a method of paying for work on an assigned unit basis when the work is not accurately quantifiable, e.g. cubic yards of fill for swampland, or, lineal feet of new piping for connection to an existing underground line of unknown location. The bidder is given a schedule of the items of work along with corresponding estimated unit quantities. This schedule, namely the Unit Price Schedule, is contained in the Bid Form. The Contractor is required to submit a unit price bid for each item of work shown in the Unit Price Schedule. The total cost of the unit price portion of the work is calculated by multiplying the bid price submitted for each item by the corresponding quantity given in the schedule, and then adding all to form a sum total.

The bidder is also required to provide a fixed price for the remainder of the work. The fixed price includes the cost of the General Conditions, General Requirements, and all other work required by the documents that are not listed in the Unit Price Schedule.

The total bid price for the Contract is the sum of the unit and fixed price costs.

The Bid Form, complete with the unit price schedule, must be included with the 100% Submission Phase Project Manual. In addition to the Bid Form, Supplementary Instructions to Bidders - Unit Prices (002215) must be included. All items of work to be performed on a unit price basis must be listed on the unit price schedule attached to the 004143 Bid Form, along with the estimated quantities required and the specification section number of each item for cross referencing. The remaining items on the form will be filled in by the bidder.

Payment for unit price work must be accounted for by a payment clause in Section 012977 - Measurement and Payment. Payment paragraphs should be written to state: “Payment for the Work of this Section will be made at the Contract unit price per....” “Work of this Section” will tie the unit prices to the whole section thereby precluding the need to enumerate all unit prices individually. Certain sections, however, i.e., Section 310000 - Earthwork, require statements specifying payment limit lines.
Management of a Unit Price Contract requires a clear and comprehensive understanding of the Contract documents. First, the Project Manual will specify definitions for each and every item of unit work, as well as provide corresponding product and execution specifications. The Director’s Representative (EIC) must inspect all work activities and strictly categorize each in one of the defined items of unit work. If the work activity does not conform to any of the definitions, then the EIC must advise the Contractor that the work being performed is a non-unit price activity and a method of payment must be negotiated i.e. a fixed price agreement, if the work in question is deemed necessary for completion of the Work. Finally, drawings, when included, will show the location and details of the Work.

The Contractor Project Superintendent should submit a daily unit price sign-off sheet for EIC review and acceptance at the end of each workday. The EIC should compare the submitted quantities with those recorded during field inspection and resolve any noted discrepancies with the Superintendent. When the sign-off sheet is found acceptable, both the EIC and Superintendent should sign and keep copies for their record.

Q  COST-PLUS CONTRACT

A “cost-plus” contract is generally used only for emergency projects, projects that must be started before the scope of the work is fully defined or for long-term projects requiring small amounts of work at different locations. The contractual/legal requirements for this type of contract require special treatment with the direct involvement of the Director of Contract Administration. Under the terms of this contract, the contractor is paid the actual cost of labor, materials, equipment, etc., based upon proper documentation of those costs, plus a fee for contract administration, overhead, profit, etc. The terms “cost” and/or “fixed fee” or occasionally “percentage fee” are defined in the Supplementary Conditions. The actual estimated cost of the work, rather than the usual estimate range, is stated in the Advertisement for Bids and on the Bid Form. Bids are submitted for only the “fee” based upon the estimated cost of the work.

R  SOLE-SOURCE CONTRACT

This method of contracting for work is rarely used because it does not meet the normal legal requirement for competitive bidding. The contract fee is negotiated beforehand, and the contract is awarded to the “sole-source” contractor. Therefore, preliminary approval for this type of contract must be obtained from the Director of Contract Administration. The Office of the State Comptroller will approve a sole-source contract only when it can be documented that only one contractor is capable of doing the required work.

The documents for a sole-source contract are similar to a standard contract with the following exceptions:

- Advertisement for Bids is not required.
- Instructions to Bidders are not required.
- The Bid Form is not required.
- Usually only 25 copies of the contract documents are printed, and distribution is handled by Contract Administration.

[NOTE: Sole-source procurement of items which are part of the work for a project can be included in a standard contract by means of a Cash Allowance. This is described in further detail in Chapter 5.2 – Project Manuals. The same rules apply in terms of documentation and prior approval.]
CONSTRUCTION ACCELERATION INCENTIVE CONTRACT

Time is the essence for every Contract. The Specified Completion Date, however, is sometimes modified and extended for valid reasons such as change orders, delay in delivery of materials, or for other reasons specified in Article 13 of the General Conditions. The Construction Acceleration Incentive (CAI) contract does not consider any such extension to the Specified Completion Date. The goal behind the CAI is to compel the contractor to make the best effort possible to complete the Work ahead of schedule or by an aggressively scheduled date and with acceptable quality, as well as to influence and cause the others dependent on the contractor to make a similar effort.

A CAI is a payment earned by a contractor as compensation for achieving expedited project completion above and beyond the basic requirements of a contract. OGS has successfully used incentives to complete projects ahead of schedule and to complete critical project phases in a manner to minimize impacts on operating facilities.

There are a variety of CAI Contract structures that can be developed during design to support the intent of the construction acceleration / completion requirements for a specific project. A CAI Contract is typically structured to pay a set premium for each day a contract milestone is met in advance of the contract’s specified milestone completion date, up to some maximum premium amount. An alternative CAI Contract structure could be a set premium amount tied to a specific milestone or phase completed. In all types of CAI Contract structures, milestone completion criteria and/or substantial completion should be clearly defined in the contract documents.

The amount of premium is based on a number of factors. The most significant factor is an assessment of the value to the owner of the benefits of early completion. Benefits might include avoided costs for temporary provisions (for example a temporary kitchen, temporary lease, temporary chillers, etc.); avoided penalties (environmental fines, court-ordered fines, etc.); or avoided costs related to support of an ongoing construction project (construction management costs, fire watch costs, security coverage, tenant disruption, etc.) The CAI benefits may allow the owner to gain beneficial occupancy set by an aggressive critical date. The CAI is earned when the milestone is achieved; however, the incentive is not paid until the project reaches final completion. Significant liquidated damages would typically accompany a CAI, justified by the same analysis of owner’s costs used to justify the CAI.

The specifications, 011000 Summary of Work defines the CAI Contract structure milestones and 007305 Supplementary Conditions – Construction Acceleration Incentives and Liquidated Damages defines the payment value and method of the CAI Contract.

A CAI Contract can be recommended by the PM, BUL, EIC, Area or Regional Supervisor. However, the CAI needs to be approved by the Design and Construction Directors and the Client. The Quality Manager shall review the CAI Contract scope and milestones prior to forwarding to the CADM, Construction and Design Directors for final approval of the specifications.

When change orders are issued under a CAI Contract, the contractor is expected to perform the work at the same time with the scheduled contract work by using additional manpower. If this is not possible, then the contractor should work overtime or second shift as necessary to complete the change order work during the time allowed for the contract work. The additional costs required to incorporate the changes into the Work should be reimbursed to the contractor, including labor costs for overtime premiums and
shift differentials. If the delay is due to other reasons, the contractor is expected to take the initiative and responsibility for resolving such delays by virtue of his CAI.

A CAI is offered when the client is in urgent need of the contract work. It is important that every effort is made to provide timely responses to the contractor’s inquiries and submittals. When possible, field staff should give direct responses to all questions and resolve problems in the most expeditious manner possible. The EIC must also work closely with the facility representative to assure that the project activities conform to the client’s needs.

The EIC must take a stern but fair approach to managing a CAI project. The project schedule forms the road map for the project and must be strictly enforced by the EIC. The actual work progress and quality must be closely monitored, and prompt corrective action must be dictated to correct deficiencies when necessary. A proactive approach must be taken in inspecting the quality of the work in progress and deficiencies must be brought to the contractor’s attention before they become widespread. It is recommended that materials be inspected for compliance with approved submittals prior to installation, and that benchmarks are established for work activities where possible. Schedule deficiencies must also be brought to the contractor’s attention as soon as possible, and the contractor must take prompt action in accelerating deficient activities as necessary to regain the schedule.

All CAI projects are put on the OGS D&C Priority Projects List which is reviewed at the Design and Construction’s Bi-Weekly Construction Review meetings.

It is essential that the EIC maintain and enhance communication between all parties, including the Contractors, the Client, the Consultant/Designer, the administrator, and the construction supervisor. This is accomplished by holding frequent site meetings and by generating substantial correspondence. It is recommended that weekly project coordination meetings be held with the principals and field representatives of each of the aforementioned parties. In addition, daily “tool-box” meetings should be held between the field personnel- such as the contractor and subcontractor superintendents, and OGS inspection and management personnel. Correspondence should be transmitted electronically when possible, otherwise, faxing the correspondence and following with a hard copy via US mail or overnight delivery is necessary.

Contract interpretation should follow normal channels where possible. If, however, the work progress is contingent upon any such interpretation, the EIC is expected to render a prompt determination and provide direction. Risks should be taken but minimized. The resultant impact is also a consideration. The primary objective is to complete the project on time, but not without consideration for work quality and the budget.

**WICKS EXEMPT CONTRACTS**

Projects with costs lower than the thresholds noted below shall be considered for Wicks Exemption and a single contract shall be utilized which includes the work of multiple trades. The use of a single contract is highly recommended to reduce OGS’s field staff management, oversight and coordination effort associated with multiple contractors on a project site. However, the PM should use caution when the estimated construction value is very close to the threshold levels. If the project bid exceeds the threshold value, then the project will need to be repackaged and rebid as a multi-prime project. It is highly recommended that these projects be organized by C, H, P and E subcontractor trade disciplines.
- $3 million in Bronx, Kings, New York, Queens and Richmond counties
- $1.5 million in Nassau, Suffolk and Westchester counties
- $0.5 million in all other counties

(In rare instances this requirement can be waived using a Project Labor Agreement. See Section 222 Project labor agreements).

Wicks-Exempt Projects require a completed BDC 59 Contractor’s List of Subcontractors to be filled out and submitted (included in a separate, sealed envelope) in accordance with Document 002220, Supplemental Instructions to Bidders – Wicks-Exempt. Any changes by the low bidder to subcontractors or agreed-upon amounts to be paid to each subcontractor shall require the approval of the Contracting Officer.

See Chapter 9.3 Multiple Prime Contracts Guide for more related information.

**INMATE LABOR CONTRACT (DOCCS only and rarely used)**

These are special contracts where the work is performed by DOCCS inmates through the DOCCS Division of Industries. The commissioners of both DOCCS and OGS must approve a project as an inmate labor contract. A project may be designated “inmate labor” at any time during the design process.

The primary differences between an “approved inmate labor” and a standard contract are:

- The contract designation (suffix) is always “K”. If the project was started as a standard contract the “K” suffix does not have to replace the existing suffix, the “K” suffix would only be used on the cover, certification page, and any new or reedited sections.
- The bidding requirements, contract forms, and conditions of the contract are not included in the project manual. (If Document 003126 - Existing Hazardous Material Information is required it is listed in the table of contents under the introductory information.)
- Sections 012100 and 015633 and BDC 450 and BDC 451 forms are not included in the project manual.

See Inmate Labor Procedures for additional information.

**LABOR ONLY CONTRACT**

This type of contract is used only when time constraints do not permit the preparation of proper contract documents and the scope of the work is indefinable by drawings or a narrative description. If this type of contract must be used, the following requirements apply for the Front-End Documents:

- The actual estimate, instead of an estimate range, is to be included in the Advertisement for Bids.
- The period of time (calendar days) when labor is to be furnished is used instead of project “days of completion.” This should also be included in the Bid Form.
- Technical specifications may be included when necessary.
Chapter 4 Submission Guidelines

4.1......... General Information
4.2......... Project initiation
4.3.1....... Schematic Design Phase
4.3.2....... Design Development
4.4.1....... 80% Constructability Review
4.4.2....... 100% Constructability Review
4.5 .......... Final Submission
CHAPTER 4 – SUBMISSION PHASE GUIDELINES

4.1 GENERAL INFORMATION

A INTRODUCTION

Projects follow a variety of paths from inception to bidding. OGS D&C has multiple types of contract methods to deal with most design and construction situations. Depending on the Client’s project schedule, size, complexity and funding method the required project submission(s) may vary.

<table>
<thead>
<tr>
<th>PROJECT TYPES and SUBMISSIONS TABLE</th>
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Legend:

FI = Field Investigation (Site Visit see Chapter 4.02)
P = Program (see Chapter 4.2)
SD = Schematic Design (see Chapter 4.3.1)
DD = Design Development (see Chapter 4.3.2)
R = Required
O = Optional (coordinate with the PM)
NR = Not Required
X = Design support, technical documents, may be sketches, portions of specifications, brand X.
Co ordinate with the PM
100% = 100% Submission (see Chapter 4.4.2)
Final = Final Submission (see Chapter 4.5)

To ensure the success of each project the PM and the Design Team shall be familiar with all the submission phases and incorporate applicable components of each phase into the next required submission. The work of each phase shall be based on the work of the previous phase.

Each Submission Phase described herein includes the preparation of a submission, and its review and approval. The sections of this chapter outline for each phase the specific minimum performance required of the PM and Consultant/Designers including the minimum level of detail to be achieved, and the content and format of the report or phase to be submitted. As described in detail throughout this part, the PM and Consultant/Designers shall engage in an intense, systematic analysis of the project requirements, limitations and risk during all phases of design. The goal shall be that the resultant project work, its systems and equipment, are truly responsive to the functional and budgetary demands of the project,
adhere to the standards and guidelines set forth in the DPM, and offer the highest level of performance, responsibility and quality.

Failure to adhere to the standards and guidelines set forth in the DPM will compromise OGS D&C’s ability to provide quality projects in a timely manner to meet forecasted submission dates.

Format - Documents submitted electronically should be delivered in a format that is directly compatible with Microsoft Office Professional (2013 Edition) software.

Design Services - Design is a continuous process; it is hard to define when it begins and when it ends. For the purpose of milestone submissions, design is commonly broken into discrete phases, allowing the Consultant/Designer to present an integrated design package to which the Client can respond and approve.

Design generally progresses in a linear fashion from the Program Report through a series of steps / phases / milestones – each of which results in a more complete definition of the design until the project is sufficiently detailed to go into documentation for bidding and construction. However, the design team must be continuously cognizant of evolving program requirements, revealed project risks, value-engineering opportunities, increasing knowledge of site/facility considerations and other holistic factors. This may compel adding, modifying or deleting designed elements on-the-fly in favor of the evolving final product.

Most 40,000 series projects begin with Predesign Services (Program Report) and progress through to Construction Documents Services.

The TL, PM and the Client need to identify when a project should include additional interim submissions such as Schematic Design (SD) and Design Development (DD) Phases. Project size, complexity and other issues may dictate that these submissions and related services are justified.

Submissions:

- Professional Consultation Reports and Studies (See Chapter 4.1)
- Program Phase (See Chapter 4.2)
- Schematic Design Phase (See Chapter 4.3.1)
- Design Development Phase (See Chapter 4.3.2)
- 80% Submission Phase (see Chapter 4.4.1)
- 100% Submission Phase (See Chapter 4.4.2)
- Final Submission Phase (See Chapter 4.5)

1. BASIC PROJECT FLOW (HIGHLIGHTS PRIMARY TASKS, ABRIDGED FOR CLARITY)

a) STEP 1: Client Request for Services (BDC 153):
   - Includes proposed scope and estimate
   - Determine contract delivery method (Q, 40,000, M, JOCS project)
   - See Chapter 4.0.1

b) STEP 2: Workload Planning Meeting:
   - Assignment to Business Unit Leader who assigns TL
c) **STEP 3: OGS D&C Project Received Letter**
   - By OPC; alternately a Project Acceptance Letter if client DOB authorization (B-1184) has been confirmed.

d) **STEP 4: Business Unit Work Planning:**
   - Assignment to TL and PM and assign an initial project cost estimate.
   - Determine assignment to In-house staff or Consultant
   - See Chapter 4.0.1 Project Initiation for more detailed information

e) **STEP 5: Client Contact:**
   - PM to make Client Contact to acknowledge/discuss project and request client DOB authorization (B-1184).
   - Clarify scope from Client Request (PM with Design Team / Consultant).

For Consultant assignments, initiate work order for, at minimum, initial preprogram services, including field trip (at minimum a field trip).

f) **STEP 6: Field Trip:**
   - Schedule and visit site to verify the proposed scope and add necessary associated scope
   - See Chapter 4.0.2

For Consultant assignments, confirm or initiate a work order for program phase services as required.

g) **STEP 7: Program Phase Submission (required for 40,000 series projects):**
   - Establish Program Submission dates
   - Develop scope based on Site Visit observations
   - Submit Draft Program for Program Review
   - Incorporate comments and submit Final Program to Client
   - Client Program Approval
   - See Chapter 4.2

For Consultant assignments, initiate work order for Design, Bid Phase and Construction Phase services as required.

h) **STEP 8: Design Phase**
   - Develop project schedule milestones and interim submissions (if required):
     - Schematic Design Submission and Approval
     - Design Development Submission and Approval
     - 80% Submission and Approval
   - 100% Submission Phase (required for 40,000 series projects):
- 100% Documents Submission
- Constructability Review and Comments
- Field Check Review and Comments
- TL / PM Review and Comments
- Trade Discipline Reviewers
- Client Agency Review and Comments
- Scheduling Meeting
- See Chapter 4.4.2

i) STEP 9: Client Approval

j) STEP 10: Authorization to Advertise from Client, including updated DOB authorization (B-1184)

k) STEP 11: Consultant/Designer to finalize the Documents and Estimate:
   - PM / Consultant/Designers resolve all comments and documents resolution of all comments.
   - Coordinate with trades (if any).
   - Produce Final Estimate.
   - See Chapter 4.5.

l) STEP 12: Submit Final Documents and Final Estimate to Division of Contract Administration Contract Awards for bid processing.

m) STEP 13: Bid Phase:
   - Pre-bid site visit
   - Bidder Questions answered
   - Addenda (if required)
   - See Chapter 7

n) STEP 14: Bids Received:
   - Post bid report
   - Pre-Award Meeting
   - Generally, 5-6 weeks after Final Documents submission
   - See Chapter 7

o) STEP 15: Contract Award:
   - Generally, 5-6 weeks after bids received
   - PM to initiate a Design and Construction Pre-Construction Teleconference with EIC

p) STEP 16: Construction Start
   - Initial Job Meeting

2. BASIC PROJECT FLOW – M PROJECTS (HIGHLIGHTS PRIMARY DESIGN TASKS, ABRIDGED FOR CLARITY)
a) STEP 1: Client Submits an Emergency Declaration (BDC 318):
   • Declaration meets at least one of the criteria for inclusion in the “M” program.
     ▪ Work does not meet the legal definition of an “emergency” but is urgently needed.
     ▪ Work would exceed the Emergency Contract threshold of $600,000.
     ▪ Design is required.

b) STEP 2: Project Acceptance:
   • Document with Client to confirm that project is being assigned an “M” project number.
   • Discussion of any additional requirements, etc not indicated on emergency declaration.
   • Client requested to provide a DOB authorization (B-1184 Attachment A or B).
   • Establish a project number in DCNet.
   • OPC sends acceptance letter to client.
   • Request labor rates.
   • Review request with applicable DOC field office.

c) STEP 3: Rapid Response review of request - Determine method for completing design (either Term Consultant or D&C in-house. For purposes of this basic outline, we will utilize the consultant model).
   • Consultant/Designer is the primary resource for completing bid documents.
   • D&C in-house designers are utilized when their workload can accommodate schedule requirements, or a special area of expertise is required and available.

For consultant assignments, initiate work order for, at minimum, initial pre-design services, including field trip.

d) STEP 4: Field Trip:
   • Site visit to be made and a scoping report provided within two weeks of consultant receipt of work order.

e) STEP 5: Submission of Scoping Report:
   • Comparable to a 40,000 series Program Report but abbreviated and less structured.
   • Basic requirement is to provide a statement of findings, recommendation for repair/replacement and an order-of-magnitude construction estimate to complete recommended Work.
   • In instances where the original emergency request was very vague and/or there may be options to restore services, a more detailed report of findings and recommendations is produced, more closely resembling a typical Program Report.
   • In either case, no Draft submission is made prior to a Final Submission.

f) STEP 5A: Scoping Report Reviewed with Client:
• When the expanded report is warranted, the report is presented to the client for consideration and authorization to proceed with a given option.

For Consultant assignments, confirm or initiate work order for Design, Bid Phase and Construction Phase services as required.

g) **STEP 6: Design Phase:**
• Typically, no interim submissions are made.
• 100% Submission made for review by PM / TL (1 week for review).
• Review comments provided to designer.
• Consultant allowed one week to submit Final Documents after their receipt of review comments.
• Schedule for completion of Final Documents, including estimate, typically 6 to 12 weeks from client approval of scoping report. (At the discretion of TL/PM, specifications for minor, ancillary work may be included on drawings. Also, smaller drawing sized may be authorized for use.)

h) **STEP 6A: Design Phase – Additional Review may be required for the following:**
• Projects pertaining to unique client programs/requirements.
• Security-related projects.
• OMH energy-related Work.

i) **STEP 7: Bid Phase:**
• Since the project was initiated by Emergency, no formal client or DOB approvals required to proceed to bid processing.
• M/WBE goals are to be used for contracts with estimates in excess of $100,000; goal percentages have been pre-determined.
• TL / PM schedules a pre-bid site visit with appropriate Regional Office or Area Supervisor. The design consultant is required to attend the pre-bid site visit.
• TL / PM schedules bid date in cooperation with CADM.
• TL / PM finalizes Project Manual, including all front-end sections (except for Advertisement, Bid Form & Bid Bond) and submits for bid processing.
• TL / PM creates ECP Project Manual.

j) **STEP 8: Bid Phase:**
• Pre-bid site visit
• Bidders Questions answered
• Addenda (if required)

k) **STEP 9: Bids Received:**
• General 4-6 weeks after Final Documents submission
• Post-Bid report completed
• Pre-Award Meeting

I) STEP 10: Contract Award:
• Generally, 3 to 4 weeks after bids received

m) STEP 11: Construction Start:
• Initial Job Meeting

CHAPTER 4
4.2 PROJECT INITIATION

What is the PURPOSE of the Project Initiation Phase?

This chapter primarily focuses on OGS’s processes and procedures. Therefore, the Consultant is not involved during this phase.

The project initiation phase is a process involving the Client State Agencies and OGS D&C Office of Project Control (OPC). Client Agencies formally request OGS D&C to provide design, permitting and/or construction services. Most often, this request is done by using the BDC 153 – Request for Services form. Sometimes this can be in the form of an email request. OPC reviews all requests, assigns a project number and formally receives or accepts the project by issuing a corresponding letter to the Client.

What are the Project Initiation ROLES & RESPONSIBILITIES?

n) Client Agency

• Initiates project request with OGS via BDC153 - Request for Services.
• Provides relevant supporting information pertaining to the request.
• Provides facility contact information.
• Provides initial B1184 budget documentation.

o) Office of Project Control (OPC)

• Assigns project number.
• Enters BU and TL roles based on input at Workload Planning Meeting.
• Enters project estimate into DCNet project plan (client estimate or BUL estimate if no client estimate is provided).
• Enters preliminary project scope from the BDC 153.
• At initiation, DCNet automatically populates Regional Supervisor staffing information and creates the standard project folders on the “V” drive.
• Files the BDC 153 in the RecordCorrespondence folder.
• Acknowledges receipt of project request by sending either:
  ▪ Acceptance Letter to Client when B1184 budget documentation is included (Attachment A, B or C).
OGS Design Procedures Manual

A Guide to Designing Projects for Design & Construction

- Project Request Received Letter to Client when B1184 budget documentation is not included.
- Files the letter in the Record Correspondence folder.
- Records Project Acceptance date in DCNet when both Client Contact is made and Client B1184 budget documentation is received.
- Records Client Contact upon notification by the TL/PM.

p) OGS Project Manager RESPONSIBILITIES

P1 Client Contact

- **P1.1** The PM makes Client Contact within two (2) weeks of project request received by OPC (DCNet “Project Received” Actual date) to discuss project. The PM shall discuss the following:
  - Client Request for Services (BDC 153) with the Client to determine the accuracy of scope and budget.
  - Discuss need for B1184 budget documentation (Attachment A, B or C) if it has not been received by OPC.
  - Discuss any specific scheduling requirements and/or budgetary stipulations. For example, DMNA with 50% federally funding and 50% State funding that requires award by end of the fiscal year.
  - The PM should discuss Field Trip forecast date.
  - Establish/confirm facility contact information.
- **P1.2** The PM shall notify OPC when Client Contact is completed.

P2 Define Project Team

- **P2.1** DCNet Staffing/Roles: The applicable BUL and Regional Supervisor are recorded by OPC. The BUL assigns a TL, often at the Director of Design’s weekly workload planning meeting. By default, the TL is the PM. The TL may remain as the PM or the TL may assign a PM to the project and input this information into DCNet.
- **P2.2** PM assembles the project team:
  - Identify in-house and/or Consultants.
  - Define Client representatives and roles for the project (facility staff, plant superintendents, planners, specialists, etc.).
  - Best Practice: Determine if project will be done with in-house or Consultant staff:
  - Are there any Client staffing expectations?
  - Use of in-house staff due to the sensitive nature of the project.
  - Use of in-house or Consultant staff due to specialty design services and experience.
  - Are there any staffing workload and schedule concerns?
  - Best Practice: The PM is responsible for the assembly of the project team designers/reviewers through discussions with the TL’s for each trade discipline. The TL and PM may base staff assignments more on experience than availability. Define Consultant’s team roles and responsibilities for the project.
P2.3 The PM shall input in-house assigned staff, client representatives and consultant’s team members contact information into DCNet staffing.

- Best Practice: The maintenance of the project staffing record is an ongoing effort as the scope of work is established and the project progresses. Team member roles and activities shall be defined, coordinated, and continually monitored and updated. The PM may need to assess the capability and experience of the personnel assigned to the project.

P3 Existing Data

- P3.1 PM should investigate and review all available existing drawings and documentation that pertain to the project. Assemble documentation and forward to the design team prior to the initial site visit.

What happens NEXT?

The PM will contact the Client representatives and facility staff, Consultant/Designers, and Division of Construction staff to schedule a project site visit. See Chapter 4.0.2 Initial Site Visit - P1.4 Develop Site Visit Work Order for details if a Consultant/Designer will be required.

B PROFESSIONAL CONSULTATION REPORTS AND STUDIES

1. GENERAL INFORMATION

Professional Consultations and Studies are services that differ from the Program Phase process in that the conclusions reached do not necessarily include design options and costs intended as a design phase scope of services. In some cases, the recommendations of work will be performed by the Client Agency.

Professional Consultations and Studies are generally requested by the Client Agency and are assigned an S project number.

Professional Consultation Reports are based on forensic investigations, inspections, evaluations, surveys, peer reviews, analysis, needs assessment, code reviews or field reports. The services are often investigative in nature, such as to research a facility problem or situation and recommend possible courses of action, if any. Such a Professional Consultation may indicate:

- No problem exists and/or no remedial action is required (as in a structural analysis).
- An indeterminate number of remedial recommendations are warranted (as in a code review).
- May include an estimate.

Studies normally address a range of programming services and deliverables. They have been historically referred to as Budget Studies.

- The deliverable recommendations and estimates are wanted as part of a specific Client Agency capital planning effort, with no expectation that the recommendations will be progressed to the Design Phase in the short term.
The Request for Services is broad and general enough where the study itself becomes a planning tool for future projects.

There is a need for a supplemental service to an existing project either in Design or Construction. Analysis, conclusions, and/or new estimates may be required to address a field condition, technical problem, or improvement opportunity.

Professional Consultation Reports and Studies shall be subject to the same formal program review committee process and conditions defined for program reports in the Program Phase.

EXAMPLES

Professional Consultation Reports and Study examples are available upon request.

2. FORMAT

The content and format guidelines for Program Reports should be followed for Professional Consultation Reports. However, depending on the specific needs of the Professional Consultation or Study, it is expected that certain standard sections will be eliminated or reduced, and others added or expanded.

- For small or single discipline projects, the Professional Consultation may be a Field Report that will focus on reporting the existing conditions and recommendations.
- Budget Studies may reflect a focused effort to present cost details with options, perhaps with less detail in other areas.
- A Professional Consultation focusing on code review will obviously be detailed with respect to existing conditions but may not necessarily offer any estimate or cost information.
- Certain Professional Consultations requiring specialized expertise or highly technical analysis may often default to the providers’ standard testing/reporting formats so as to maintain uniformity with industry norms.

C PROGRAM PHASE

1. WHAT IS THE PURPOSE OF THE PROGRAM PHASE?

The Program Phase is a critical component of the project and defines the Client’s new construction or facility repair/rehabilitation/improvement needs. The purpose of the Program Phase is to further clarify the scope of work, identify design options, construction implications, and the associated costs information that was gained during the Initial Site Visit. The Program Report communicates these findings and recommendations to the Client. The Program Report and estimate may be used by the Client to develop a capital spending plan. The Program Report recommendations as modified by the Client’s approval comments define the scope of work for the balance of the project. When scope is modified by the Client after Program Approval, the PM shall document and file scope changes in the Record Correspondence folder.

2. WHAT IS THE PROGRAM REPORT?
The Program Report is a stand-alone document that details important aspects of the project. It will usually include the project objective, space requirements, functional requirements, site considerations, architectural/engineering features, code review, EO88 review, SEQRA and/or any environmental permits required, HAZMAT requirements and testing, options, recommendations, estimated construction costs, scheduling concerns, and significant constructability issues. The Program Report shall be the primary design reference for the development of the project.

The following are essential elements of the Program Report and must be addressed for every project:

- Clear and concise project intent: Include the original project intent in the report. Any additional scope should be captured in a subsequent paragraph in the report. Discuss the project intent with the Client representative (and the facility, if appropriate) to ensure that a common understanding is reached.
- Clear recommendation: If options are presented, recommend the preferred option and summarize the criteria used to select the recommended option.
- Valid estimate: The Client will use the estimate for capital planning purposes. Carefully review the estimate to ensure that adequate funding is identified. Check for design contingency, field order allowance, phasing impacts, security impacts, escalation, etc.

The Program Review Committee must review all 40,000 series programs for projects $200,000 or greater. However, a program review of all 40,000 series projects including S’s and Q’s is highly recommended.

Infrequently, a project schedule may be very aggressive, and expediting the project is critical. In this case, the Program Review Committee process may be waived by the BUL. For these projects the BUL shall designate an internal peer review within the Business Unit to review the Program Report prior to sending the report to the Client. Peer reviewers may include the BUL or Deputy BUL. The BUL shall waive the review (remove the requirement from DCNet) and input a project comment in DCNet stating their approval and justification for the waiver. The Program Report may be submitted to the Program Review Committee as a “lessons learned” review / evaluation.

3. WHAT ARE THE TRADITIONAL REPORT FEATURES?

Each Program Report shall be a complete, high quality, coordinated presentation consistent in treatment, appearance, and terminology. The Consultant/Designer’s report shall include the proper report cover form with unbound copies. The report shall be bound in a way that it can later be deconstructed, and all parts recycled or reused.

Each Program Report shall, as a minimum standard, be based on the Program Report Template, Instructions, and Checklist, modified and expanded as necessary to suit the particular scope of work. The template is a guide that offers direction on content and a preferred format, including executive summary, statement of objectives, analysis, recommended scope of work, construction cost estimates, etc. The template and support documents are available from your PM or Team Leader.

The requirements of a particular project vary and include some or all of the following components:

- Drawings, where necessary for clarity, preferably 8½ x 11 or 11 x 17 (folded).
- Photos, where required for clarity.
- Code Analysis see Chapter 9.9 Codes Guide.
- Catalog-type information on recommended products.
4. WHAT ARE THE ESTIMATE REQUIREMENTS?

Program Phase Estimates are used by Client Agencies to prioritize projects and plan their capital construction budgets. These estimates are considered order-of-magnitude level estimates. They should, to the greatest extent possible, reflect a thorough, conservative account of anticipated costs. At this phase, lump sums, means industry data, and costs-per-square foot type methods are utilized when the project scope is not fully defined.

Program Phase Estimates in particular include predetermined Design Development Contingencies for unknown conditions. Contingencies vary depending on project size and complexity and are explained in Chapter 6 Cost Control of the Design Procedures Manual.

- BDC 178 Consultant Estimate Forms
- BDC 50 - Request for Estimate (OGS staff access this form through DCNet).

5. CONSULTANT/DESIGNER RESPONSIBILITIES

C1 Program Commencement

- **C1.1** Review the Design Procedures Manual (DPM) and become familiar the requirements within this chapter. Direct any questions regarding the requirements to the PM.
- **C1.2** Do not perform work until an approved Program Phase Work Order has been issued for this phase.
- **C1.3** The Consultant/Designer shall be responsible for taking all meeting minutes for this phase and following phases. Provide a draft copy of meeting minutes for the PM’s review and input prior to issuing final meeting minutes. The Program Report may include meeting minutes within an appendix.
- **C1.4** Review all available drawings and documentation that pertain to the project.
- **C1.5** Review the Program Report Template Instructions and use the standard template for the report, modified or expanded as directed by the D&C PM.
- **C1.6** The Consultant/Designer should review Chapter 4.2.2 Program Report Checklist, as appropriate for the individual project. This document is not meant to be an all-inclusive...
checklist but is meant to assist the Consultant/Designer in the development of the Program Report.

- **C1.7** Become familiar with DPM Chapter 9.7 Agency Specific Standards and Requirements.

C2 Work Orders

- **C2.1** Consultant/Designer shall initiate a proposal using percentage fee, or task/hours. The proposal should be based upon agreed scope of services and deliverables. Clarify the scope of work; identify design options, construction implications, and the associated costs.

- **C2.2** It is the responsibility of the Consultant/Designer to evaluate the overall project and scope of work prior to fee negotiation for the Program Phase. Identification of possible requirements for the project should be included in this evaluation, for example:

  - Core drilling for material depth, make up and condition of shower room floors and roof decks.
  - Structural testing required for portions of building structure
  - Masonry conditions investigation
  - Mortar analysis
  - Soil borings, analysis and geotechnical report.
  - Hazardous materials sampling and testing.
  - Code analysis
  - Utility investigations and analysis
  - SEQR
  - SHPO archaeological/historical significance

Early consideration and confirmation of these types of issues will result in fewer problems to be resolved as the project progresses and allow for more accurate construction estimate to be provided to the Client Agency. Discuss scheduling and the extent of analysis with the PM / TL.

- **C2.3** If needed, the BDC 65 Consultant Fee Estimate Worksheet may be submitted as backup to understand fee breakdown of staffing level and hours per task. It is also utilized when the fee offer, and consultant fee proposal vary significantly.

C3 Schedule

- **C3.1** Adhere to the Program Report due date and project schedule as determined by the PM.

C4 Cost Estimate

- **C4.1** Provide cost estimate in the report. See Chapter 6 Cost Control for more detailed information and instructions.

C5 Preliminary Draft Program Report

- **C5.1** The Preliminary Draft Program Report shall be submitted to the PM for review prior to submitting the Draft Program Report.
C6 Draft Program Report

- **C6.1** The Draft Program Report shall be a complete, high quality, coordinated document and should be considered the final version of the report.

The report shall be the primary design reference for the development of the project.

The report shall, as a minimum standard, be based on the Program Report Template Instructions, modified and expanded as necessary to suit the particular scope of work. The template is a guide that offers direction on content and a preferred format, including executive summary, statement of objectives, analysis, recommended scope of work, construction cost estimates, etc.

Provide all information pertinent to the project design, including the articulation of all background and existing conditions relevant to the recommendations for the project. Information may include relevant history of a building, facility or site, the construction type, or the recent failure of a system, etc.

Perform on-site investigations, testing and samplings as required for developing a complete scope of work. This includes destructive investigative testing to determine unknowns such as masonry conditions, mortar analysis, hazardous materials conditions, concrete slab integrity, etc.

Best Practice: For roofing investigations and program reports use the BDC 45 Roofing Design Checklist and Roofing Template.

Submit the report as indicated in the Distribution section of this chapter. This submission shall include both electronic and hard copies.

C7 Final Program Report

- **C7.1** Provide responses to all comments to the PM. Incorporate review comments into the Final Program Report.
- **C7.2** Submit the report as indicated in the Distribution section of this chapter.

6. **OGS PROJECT MANAGER RESPONSIBILITIES**

P1 Program Commencement

- **P1.1** Reference Chapter 4.0.2 Initial Site Visit.
- **P1.2** Review deliverables (usually site visit report and meeting minutes) required from the Initial Site Visit.
- **P1.3** Verify that the Consultant/Designer has all existing information and documentation related to the project.
- **P1.4** Best Practice: After the Site Visit Report has been submitted, discuss the PMP with the Team Leader or the Business Unit Leader.
- **P1.5** No work shall be started by a Consultant without a WO.
- **P1.6** LATS function code Design-200 Pre-Design / Planning Services should be used for this phase. DCNet Project Cost Summary can be reviewed and should only indicate Additional Fees for this phase.

P2 Work Orders
• **P2.1** The PM shall initiate a fee offer or review a Consultant’s proposal using percentage fee, task/hours, or request the Consultant’s Services Group to assist in fee negotiations. The WO should be based upon agreed scope of services and deliverables.

• **P2.2** It is the responsibility of the PM to evaluate the overall project and scope of work prior to consultant fee negotiation for the Program Phase. Identification of possible requirements for the project should be included in this evaluation, for example:

  - Core drilling for depth and make up of shower room floors and roof decks.
  - Structural testing required for portions of building structure
  - Masonry conditions investigation
  - Mortar analysis
  - Soil borings, analysis and geotechnical report.
  - Best Practice: The PM shall determine if there is a need to do a Geotechnical Investigation. The PM shall consult with the OGS Geotechnical Group to review existing soils records/data to determine whether there is a need to supplement existing data or conduct a full soils investigation or determine if testing is required. For Consultant projects the PM shall facilitate discussion between in-house and consultant geotechnical engineers to plan on how samplings and design will be conducted.
  - Hazardous materials sampling and testing.
  - Best Practice: The PM shall determine if there is a need to do Hazardous Materials Testing. The PM shall consult with an OGS Hazmat Designer to determine if testing is required on the project. For Consultant projects the PM shall facilitate a dialog between the OGS Hazmat Designer and Consultant to determine whether there may be hazardous materials present and how samplings and design will be conducted
  - Code analysis
  - Utility investigations and analysis
  - SHPO archaeological/historical significance.

Early consideration and confirmation of these types of issues will result in fewer problems to be resolved as the project progresses and allow for more accurate construction estimate to be provided to the Client Agency

• **P2.3** It is recommended that the PM identify factors that require additional fee and factors that would make the project easier to design for less fee. For example, a study previously completed by the Consultant/Designer would reduce fee or a prototype project would also reduce fee.

• **P2.4** The Program Phase Work Order is most often a modification to the term assignment originated by the Initial Site Visit investigation. This requires the use of a BDC 41.1 - Request for Modification to a Term Assignment for consultant projects to advance the project to the Program Phase and writing of the Program Report. See Guideline and Sample Scope for Typical Program Phase.doc in DCNet Forms/Consultant Forms.

• **P2.5** Best Practice: If available, use sample Program Reports that can be used as benchmarks when discussing quality level of the project report.

• **P2.6** Ensure that scope, milestone dates, deliverables and fee payment (NTE, LS or combination) are included in the Work Order.
• **P2.7** Discuss report due date with the Consultant/Designer. This is usually two weeks prior to the Program Review due date indicated in DCNet.

• **P2.8** If needed, the BDC 65 Consultant Fee Estimate Worksheet may be submitted as back-up to understand the consultant’s fee breakdown of staffing level and hours per task. It is also utilized when the fee offer, and consultant fee proposal vary significantly.

• **P2.9** OPC inputs WO data in DCNet - General Project Information / Related Consultants and files WO’s in the Consultant Contract folder.

**P3 Project Management**

• **P3.1 Scope Management**
  - Project scope is the work that must be performed to meet a client's program goals for space, function, features, impact and level of quality. Scope management helps identify the work tasks and their requirements for completion. Effective scope management requires accurate definition of a client's requirements in the planning and development phases and a systematic process for monitoring and managing all the factors that may impact or change the program requirements throughout the project design and construction phases through delivery of the finished project.
  - Review and update scope in DCNet as required.
  - Coordinates discussions with Client, facility, and Consultant/Designers regarding scope including added scope.
  - Document added scope.
  - Best Practice: Change DCNet special project conditions: environmental permits; geotechnical; and hazardous materials data from “U” unknown to either “required” or “not required” as these items are defined.
  - Ensure DCNet Scope of Project is adjusted when scope is refined, revised or when scope is added. Scope descriptions should be distilled to 4-5 sentences.

• **P3.2 Schedule Management**
  - The project schedule defines the processes and establishes a timeline for delivering the project. Project schedules should identify and measure key dates for milestones, phases and activities to track work progress.
  - Best Practice: Discuss the following project schedule information with design team:
    - Fiscal year dates (if not already indicated on Client Request or DCNet). Note: fiscal year dates are Client specific and some Clients do not use them.
    - Project priority (if not already indicated in DCNet by OPC). Note: priority levels are Client specific and some Clients do not use them.
    - Project milestones / submissions such as 100%, Final, bid and award dates.
    - Determine if there are high risk factors such as lapsing funding that require an expedited schedule.
    - Determine if phasing or restricted work periods impact the schedule. Examples include: seasonal work - roofing, school sessions, power house rehab; cell take down; kitchen operations.
- Review Preliminary Forecast dates in DCNet and adjust using Project Manager Milestone Update. Specifically, discuss Program Submission date with the Consultant/Designer and input date into DCNet.
- Ensure DCNet Project Milestones are kept up to date and inform Project Team of changes.
- Consider a Construction Acceleration Incentive (CAI) Contract when the schedule is very aggressive. See Chapter 3 Contract Types for more detailed information.

### P3.3 Cost Management

- Best Practice: Discuss the following project cost information:
  - Determine if there is a Maximum Construction Cost (MCC) if none indicated in the Client Request for Services.
  - If a Client MCC is provided, discuss accuracy of budget or how the budget was developed.
  - The PM / TL / BUL may determine there is a need to discuss budget soft costs with the Client. This is usually done at the Client’s request
  - Is the budget realistic? Does it align with scope and quality requirements?
  - Comparing the budget to actual costs throughout the building process is critical. The process continues with milestone estimates, value engineering, procurement strategies, and change order management to ensure the project is timely and cost effective.
- Monitor project costs at all submission milestones.

### P3.4 Confirm Contract Method

- Best Practice: Confirmation of the contract delivery method (40,000 series, M, J, etc.) There may be an opportunity to modify the contract method based on client need or project advancement.

### P3.5 Project Communications

- The key function of the PM is to communicate.
- The PM serves as the focal point for project team communications. The PM assures the ongoing dialog that is essential to healthy relationships among all the parties including the Client occurs during the project’s life.
- The PM shall communicate Client expectations, review scope, review tasks, schedule, budget constraints, and special requirements with the Project Team. The PM shall involve the Client when the Project Team needs Client input, guidance or resolution.
- The PM shall establish Team communications protocols.
- Best Practice: The PM should have the Consultant/Designer conduct periodic Team progress meetings to provide project updates, facilitate the exchange of important information, design changes, coordination the work and schedule. These meetings should be well planned with a distributed agenda. The meeting should include the following:
  - old business
  - progress of work since last meeting
- interfaces, critical items, current and potential problems
- action items, due dates, responsible parties
- new business
- The PM shall ensure that all important project communications such as Client meetings and Client project decisions be documented and properly filed in the project folder.
- Ensure that the DCNet Project Team Directory is up to date and distribute directory to team members who do not have access to DCNet.

P3.6 Define Project Quality

- Best Practice: Discuss level of quality of materials; buildings expected life; level of inspections and building commissioning.

P4 Preliminary Draft Program Report

- **P4.1** The PM shall review a Preliminary Draft Program Report with the TL prior to submitting the Draft Program Report to the Program Review Committee.
  - Compare Preliminary Draft Report to Program Report Checklist.
  - Works with Consultant/Designers to address format concerns.
  - Ensure D&C supports recommended option.
  - Ensure project intent is per the BDC 153 Request for Services and if scope is added it is clearly identified as such in a second paragraph in the report and that it is approved by the client prior to submission of report.
  - Ensure findings, options and recommendations are logical and rational.
  - Review estimate to ensure reasonableness.
  - Determine whether an Executive Summary is needed when a short report is submitted.

- **P4.2** Provide review comments to the Consultant/Designer.
- **P4.3** The Preliminary Draft Program Report shall be revised before queuing into the Program Review Committee process.
- **P4.4** On rare occasions, the Program Review Committee process may be waived by the BUL if schedule is critical and scope is not very complex. For example: a roofing project that needs to start construction in summer and no time for a formal program submission. When this is the case, the BUL formally approves the program review waiver after the Initial Site Visit has been made. The PM shall request the BUL to input the granted waiver comment in DCNet PM Remarks or request the BUL to request OPC to add a comment into Remarks.

P5 Final Draft Program Report

- **P5.1** The PM shall submit the Final Draft Program Report to the Program Review Committee Coordinator when the report is deemed worthy of submission. The PM shall ensure that the electronic copy is in the Submissions/Program file folder, labeled as the “FinalDraftProgramReport” and notify the Program Review Coordinator to initiate an
email with document link for distribution to the AS and RS. The Program Review Coordinator will input the assigned AS into DCNet staffing.

- **P5.2** The PM shall present the report to the Review Committee.
- **P5.3** The PM shall ensure that relevant comments made during the program review session are documented to the project file and addressed in the Final Program Report.
- Regardless of the method chosen to document comments, the decision as to which comments made during the program review session are significant and applicable shall be made with input from the appropriate BUL. Acceptable documentation shall take one of the following four forms:
  - BDC 35.3
  - Scanned PDF of marked-up draft program report
  - Correspondence to consultant or other party responsible for developing draft program report
  - Notes to file
  - Use of Bluebeam Revu Studio
  - The documentation of comments shall be filed in the project folder on the V:drive; in the ReviewComments sub-folder. The documentation shall include "Program" in the title.
  - If no relevant comments were made during the program review this fact must be documented in the ReviewComments sub-folder. A scanned copy of the Program Report cover sheet with a TL or BUL signature and note indicating the review date and the fact that no substantial comments were identified is sufficient. A separate note to that effect is also acceptable.
  - A review of the final program report submission will serve as the means of providing evidence that the comments have been addressed.

- **P5.4** The PM shall compile relevant review comments from the review session and forward to the Consultant/Designer for incorporation into the report.

### P6 Final Program Report

- **P6.1** The PM shall perform a back-check review to ensure that all comments have been properly addressed.
- **P6.2** Distribute the Final Program Report per the distribution section of this chapter.

### P7 Phase Close-out

- **P7.1** File electronic Final Program Report source documents (Word, Excel, AutoCAD, etc.) and the Final Program Report document bundled in PDF format, as delivered to Client, in the Submissions/Program folder.
  - Name the file YYYYMMDD_FinalProgramReport.pdf where YYYYMMDD represents the year, month and day of the submission
  - (i.e., 20060201_FinalProgramReport.pdf).
• **P7.2** Coordinate any follow-up concerns or questions with Client and Consultant/Designers.

• **P7.3** Ensure that the required Consultant Evaluations are completed for this phase of work.

• **P7.4** After an appropriate timeframe, follow-up with the Client regarding status of review and approval and update DCNet remarks.

• **P7.5** Project Management Plans

  ▪ An automatic email notification is sent to the PM, TL and BUL after Client approval of the program report is received. PMP’s are required for 40,000 series and Q projects greater than $200,000. However, PMP’s are highly recommended for 40,000 series, Q projects under $200,000 and S projects.
  ▪ The PM shall develop the PMP with their supervisor and ensure that the PMP is approved in DCNet by either the TL or BUL.
  ▪ For projects with a contract value in excess of $5 million, the plan is approved by the Director of Design or the BUL.
  ▪ The PMP should clearly identify the following:
    ▪ **STAFFING:** Team members by name and contact information, including specific consultants, clients and peer reviewers
    ▪ **SCOPE:** Current scope including selected program options
    ▪ **SCHEDULE:** Forecast all design milestones. Determine if an interim submission will benefit the project (Schematic Design, Design Development, 80% Constructability Review), update DCNet interim submission date(s) and include PM Remarks notes.
    ▪ Special project requirements such as geotechnical, hazardous materials, environmental permits, etc. (the ‘U’ column in DCNet)
    ▪ **Costs:** client’s construction budget and understanding of soft costs
    ▪ Related projects
    ▪ Project risks and risk management strategies
    ▪ Updated relevant project remarks
    ▪ Ensure that program review comments have been incorporated, documented and properly filed.
    ▪ Complete the required consultant evaluation(s) at this time.

• **P7.6** The PM shall determine if any interim submissions will be required for the project. See Chapters 4.3.1 Schematic Design Phase (SD) and 4.3.2 Design Development Phase (DD).

  a) **OGS Team Leader Responsibilities**

  • Reviews the Preliminary Draft Program Report with the PM to ensure that the Draft Program Report is a “final” product prior to submission to the Program Review Committee.
  • Attend Program Review meeting with the PM.
  • Prior to approving the PMP, ensure that program review comments have been incorporated into the report, properly identified and filed in the Review Comments folder.
Program Review waivers need to be approved by the BUL and documented in DCNet.

b) What are Common Items of Caution?

- Use of the OGS Project Number and official project title is important for maintaining project recognition and for assuring proper handling and tracking of the project documentation. Reference to a Client’s separate project number should be included as a convenience.
- Reports assembled from multiple contributors often lack consistent format and continuity, detracting from a professional appearance. Reports with multiple sources of input shall read in a style as if generated by a single author.
- Hazardous material testing should be initiated sufficiently in advance of the program due date to ensure the inclusion of accurate information in the program report.
- If unknowns or outstanding issues are identified in the report, professional judgment should be used to determine how these issues should be addressed in the estimate. In general, program estimates should not be artificially low because optimistic assumptions are made regarding outstanding issues.
- Consultant reports shall not include the name of the firm and/or logos in the header or footer of the document.
- An option must be clearly recommended.

7. WHAT IS THE PROPER DISTRIBUTION FOR THE PROGRAM REPORT?

a) Preliminary Draft Program Report:

Consultant/Designer submits a preliminary electronic copy of the report for the PM to review prior to actual Draft Program Report submission.

b) Draft Program Report:

Consultant/Designer submits an electronic copy and 10 printed hard copies (preferably double sided) to the PM. The PM retains 2 copies and distributes 8 copies to the Program Review Committee (BU1, BU2, BU3, BU4, Cost Control, Constructability Review Group, Quality Manager and Program Review TL) for their examination.

The PM properly names the document as the draft report and files the electronic copy in the Submissions/Program folder.

The Program Review Coordinator will email a link of the electronic draft version to the RS and the AS when the hard copy reports are distributed.

It is best practice for the RS and AS to review the report and forward comments to the PM within 5 business days of email notification from the Program Review Coordinator.

c) Final Program Report:
After incorporating the comments of the Program Review Committee, the Consultant/Designer transmits the total number of corrected Final Program Reports to the PM. The PM will distribute the reports.

Printed hard copies:

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Document in PDF format. Include the entire appendix in the PDF document and bookmark the document.

Electronic source documents (all original documents including but not limited to the following: Word, Excel, AutoCAD, sketch ups, etc.)

The PM distributes the following to the Client:

Hard copy reports including any additional copies noted in the above table.

- Electronic PDF copy
- Program Report Transmittal Letter (original to Client and copies to report recipients).

PM files an electronic copy to the V:\ Drive and notifies the BU Administration staff to send an email with link to the contributing trade designers, Division of Construction’s Constructability Review Group, Regional Supervisor and when identified in DCNet the Area Supervisor.

PM / BU Administration staff sends an electronic copy of the Program Report Transmittal Letter and estimate to OPC.

Client Survey Card (BDC 53) in Word format, is filled out and emailed to the Client by the BU Administration staff with a standardized email message.

8. WHAT OTHER TOOLS & RESOURCES ARE AVAILABLE?

- Agency-Specific Guidelines
- Guideline and Sample Scope for Typical Kick-off Meeting-Initial Site Visit.doc.
- Guideline and Sample Scope for Typical Program Phase.doc.
- Sample Program Reports (may be used to discuss quality and level of detail agreed upon by the Designer, PM, and OGS Team Leader).
- Interviews: Client, facility personnel, OGS Division of Construction
- Equipment Vendors / Manufacturers’ Representatives
- OGS Project Manager PowerPoint presentation tool
- Program Report Transmittal Letter Templates (reserved)
- See Chapter 9.8 Hazardous Materials Guide
- See Chapter 9.6 State Records and Documentation Guide. OGS possesses various forms of information on many of the existing State facilities and properties.
Frequently Asked Questions is a document that attempts to address some common questions about the Program Review Process.

9. WHAT HAPPENS NEXT?

Submitting the Program Report to the Client is a stopping point for the Design. Once submitted to the Client, furthering the design of the Report’s recommendations is not pursued until a formal direction is given by the Client. Often an Approval Letter comes to the PM through OPC. This letter may indicate additional requirements, a selection among presented options, and perhaps other conditions relating to project value, schedule, etc. The PM should be prepared to respond to questions from the Client, Division of Construction, etc. using the BDC 35.3 - Document Review / Response Form.

Best Practice: At a minimum it is recommended that The PM and Consultant/Designer conduct a meeting after the Program has been approved by the Client. Discussion should include selected project options, Client comments or added scope (when applicable).

10. PROGRAM REPORT TEMPLATE INSTRUCTIONS

The Program Report generally sets forth the important aspects of the project – the project’s objective, space requirements, functional requirements, site considerations, architectural/engineering features, budget, risks and time constraints. The needs will usually be identified and defined by the Client, but sometimes the scope of the project will need to be developed by investigating the project site, or by interviewing the facility staff or program managers. The report should be a self-contained standalone document written so people unfamiliar with the project (consultants, facility planners or other OGS designers) will be able to advance the work if necessary.

For small or single discipline projects, the Program Report may be a Professional Consultation Report or Study that will focus on reporting the existing conditions and recommendations. See Chapter 4.1 for more information.

The template is provided as a tool to prompt the Consultant/Designer to provide narratives on applicable issues. This tool should be modified to fit specific project requirements.

Refer to the Program Report Template, Program Report Checklist and Program Phase Guidelines for further information.

Provide a Table of Contents if the Program Report is lengthy.

The final Program Report is, by definition, a product of OGS D&C. As such, all references to third-party consultant providers should be purged wherever practicable in favor of a style that establishes OGS D&C as the report’s primary offeror. Program reports generally should include the consultants’ name(s) on the report cover and in the orientation meeting content. Specialty subconsultant reports and test reports are generally acceptable on company letterhead when included as appendices to the report.

Run spellchecker and grammar check software tools before sending draft Program Report for Program Review process.

Use the standard OGS Program Report Template for all submissions.

a) Consultant Designers use Program Report Template found on the OGS website.
b) In-house Designers are to access the Program Report Template through DCNet.

11. PROGRAM REPORT CHECKLIST

a) General

• The Program Report Checklist is an all-encompassing checklist because many of OGS D&C’s projects can proceed directly to the 100% Submission Phase without interim submissions.
• Many of the Design Guides contained in Chapter 9 provide useful information that complements this checklist.

b) State Records / Documentation

• Review all available documentation that pertains to the project. OGS D&C possesses various forms of information on many of the existing State facilities and properties. Copies of this information may be made available to the Designer upon request. See Chapter 9.6 State Records and Documentation Guide.

c) Field Survey

• The PM shall review the project intent and scope with the Client and the appropriate facility staff during the initial site visit.

• The Consultant/Designer is responsible for all field investigations needed to confirm and document the existing conditions prior to design. The Consultant/Designer shall provide all information pertinent to the project design, including the articulation of all background and existing conditions relevant to the recommendations for the project. Information may include relevant history of a building, facility or site, the construction type, or the recent failure of a system, etc.
• The P shall invite OGS field staff to participate in the initial site visit and field investigation. Field surveys shall be taken by persons with appropriate knowledge to assess issues that affect the project scope and recommendations. Review work is to be completed in the proposed area and to ensure familiarity with factors and restrictions that may affect the project. Sufficient field surveys shall be taken to identify risks and issues that affect the proposed recommendations for the project.
• The Consultant/Designers shall perform a detailed analysis of the project in order to identify all of its important or significant aspects. The Consultant/Designers shall Identify and assess all site features that affect the ability and cost of using the site for the project including thorough assessment of significant risks. The Consultant/Designers shall document when the project site was visited, what information was obtained as well as any other field surveys authorized, requested and/or as directed.
• Access to materials or system components. The collection of information shall include, but not be limited to, information that can be gained in the following ways:
  • Looking above ceilings that are accessible without destruction of existing materials
Opening access doors
- Entering pipe chases
- Entering crawl spaces
- Removing manhole covers
- Accessing roof
- Performing measurement

- Analyze the existing systems to meet project requirements:
  - Size, age, condition, and adequacy of existing systems
  - Heating and/or air conditioning system
  - Electrical system
  - Water distribution system
  - Sanitary system
  - Structural system adequacy to meet project requirements
  - Identify other related ongoing projects

- Consider or indicate multiple options
- Identify all project stakeholders and invite to the kick-off meeting
- Identify similar projects and reference them as a benchmark

d) Site Conditions

- Environmental Assessment:
  - SEQR (State Environmental Quality Review) - type I action, unlisted action, type II action (air quality, surface or groundwater quality, noise levels, existing traffic patterns, solid waste production or disposal, erosion potential, drainage or flooding problems, archaeological, historic significance, vegetation or fauna, wildlife species and habitats, change in use or intensity of use of land)
  - See Chapter 9.12 Environmental Assessment and Permitting Guide
  - See Chapter 9.14 Historical Preservation Guide (reserved)
  - Involved Agencies / Permit Checklist:
    - DEC (Department of Environmental Conservation) - joint application with ACOE (Army Corp of Engineers) - freshwater wetlands, tidal wetlands, protection of waters,
    - DEC - sanitary effluent, fuel storage tanks, SEQR, SPDES permit, air permit.
    - SHPO (State Historic Preservation Office)
      - Archaeological review
      - Historical review including preliminary judgment of whether a structure has a historical significance
      - For DOCCS projects: Confirm use of Memorandum of Understanding (MOU)
  - DOS (Department of State)
    - NYS Coastal Assessment
    - Federal Consistency Assessment
OGS Design Procedures Manual

A Guide to Designing Projects for Design & Construction

- APA (Adirondack Park Agency)
  - General Information Request
  - Special Information Request

- DEP (Dept of Environment Protection)
  - Projects within NYC watershed

- DOH (Department of Health) - water treatment facility, water storage and piping, septic system, swimming pool, sanitary discharge, kitchens, etc.
- EPA / NPDES (storm water management)
- ACOE (US Army Corps of Engineers) – nationwide and individual permit program
- EPA/DEC – NSPS – New Source Performance Standards (required for new boilers w/ input rating greater than 10 million BTU’s)
- Office of Child and Family Services (OCFS) - day care facilities
- Local Authorities involvement

- Subsurface Conditions:
  - Coordinate review with the OGS Geotechnical Group - see Chapter 9.15 Geotechnical Guide
  - Soil report (review seismic soils classification)
  - Utilities and municipal services
  - Ground contaminants – asbestos, fuel, oil, PCB’s, chemicals, toxins
  - Geotechnical information - water table, rock, soil conditions, soil borings, bearing capacities, fill, unsuitable material, radon
  - Existing drill well logs
  - Archeological information
  - Abandoned structures – foundations, utilities, tanks, tunnels
  - Septic systems
  - Unknown conditions
  - Sheeting / shoring
  - Seismic evaluation
  - Stockpiles
  - No reuse of backfill

- Topography and Drainage:
  - Topographic survey
  - Unusual design requirements (size, shape, topography)
  - Stormwater Management and Sediment Control (1 acre or 5 acres?)
  - Flood plain
  - Wetlands
  - Cut/fill
  - Retaining walls
Snowplowing

- Zoning / Code Criteria:
  - Property lines
  - Zoning requirements
  - Setbacks
  - Distance separations
  - Right of ways
  - Easements
  - Local municipality regulations / rules / approvals
  - Hydrant locations and requirements

Utility Connections (underground/overhead):

The Consultant/Designer is responsible for coordinating the utility design with local utility companies and/or other service providers. The Consultant/Designer must be sure the utility systems have sufficient capacity and reliability to meet the building design requirements. Utilities – determine if on site or to be provided by the Contractor

- Power – identify utility, if new building. On existing site, verify that capacity of existing service can handle load
- Sanitary
- Storm
- Gas – insure that pressure, pipe size, and capacity are available from main and branch lines
- Water
- Telephone
- Fiber optic
- Cable TV
- Steam lines / tunnels – determine both summer and winter steam pressure and flow capacity
- Central system tie-ins and upgrades
- Utility shut downs

Construction Issues

- Site Concerns:
  - Staging and laydown areas
  - Phasing
  - Access roads – usage and maintenance
  - Temporary roads, sidewalks and parking
  - Local road use
  - Neighborhood impact
  - Temporary power, fencing, heat, cooling, water, lighting, toilets
  - Stockpiles
- Security
- Maintenance and protection of traffic (vehicle and pedestrian)
- Material lifts and hoists
- OGS project trailers and equipment
- Protection of properties
- Sedimentation and erosion control measures
- Sheeting / Shoring
- Fire truck access
- Dust, dirt, debris mitigation
- Contract limit lines
- Grading limit lines

  - Building Concerns:

- Occupied facility during construction
- Restricted access
- Restricted work hours
- Associated phasing (cell takedown, office relocations, kitchen rehabs, etc.) due to security
  or access
- Are there security regulations?
- Maintain fire detection system
- Are there any facility regulations?
- Project Phasing (due to budget, schedule, cost, convenience, etc.)
- Ventilation
- Dust control measures
- Rubbish removal – rubbish chutes
- Is Construction Waste Management specification (recycling) to be used?
- Use of existing elevator during renovations
- Temporary enclosures
- Temporary heat or cooling – facility tie ins
- Temporary ventilation of temporary heat combustion products, welding
- Temporary light and power – facility tie-ins
- Temporary water – facility tie-ins
- Temporary facilities
- Protection of properties
- OSHA standards
- Skill of local work force
- Hazardous Materials: Asbestos, Lead Paint / Lead, Radon, PCB’s, Guano, Mold
- Existing asbestos and lead surveys
- Abatement analysis / request testing
- Air monitoring
- Mold growth / mold testing
- Construction loads - floor dead and live loads
- Roofing Considerations
- Drainage capacity
- Deck sloped or tapered insulation
- Parapets
- Edge protection
- Accessibility of installation for large equipment
- Occupied space renovations – determine removal of furnishings, phone, and data cabling, etc.

- Demolition Work
  - Hazmat materials, see Chapter 9.8 Hazardous Materials Guide.
  - Abatement analysis
  - Salvaging items
  - Recycling materials (LEED)
  - Surplus building procedures
  - Depth of foundation removal
  - Air monitoring

- Applicable Standards / Codes / Regulations
  - Accreditation standards such as:
    - ACA (DOCCS)
    - ASCLAD (State Police)
    - JCAH (DOH)
    - Other
  - Agency requirements / standards: DOCCS, DOT, DMNA, etc.
  - Meet, exceed or deviate from, See Chapter 9.7 Agency Specific Standards and Requirements.
  - Codes: NYS family of Codes, Energy Code, Health, NEC, NFPA, OSHA, ASHRAE, SMACNA, IES, AEIC, etc. See Chapter 9.9 Codes Guide.
  - Government regulations such as Executive Order 88, Wicks Law, etc.
    - Executive Order 88:
      - Refer to Chapter 9.5 Energy Efficiency (EO88) Sustainable Design
      - Design approach to comply with LEED certification (only as directed by the OGS TL)
      - Include design strategies to comply with or exceed EO88 and LEED (as required).
      - Determine NYSERDA (New York State Energy Research and Development Authority) funding opportunities
        - Energy Code:
        - Approach to design compliance for Construction, Mechanical and Electrical. REScheck, MECcheck, COMcheck software analysis as required.
          - LEED:
            - Identify if LEED certification will be pursued (only as required by OGS TL)
Identify potential green/sustainable measures that will be considered for example, low VOC materials, construction waste management; refrigeration mgmt., recycled content, Premium efficiency motors, Energy Star equipment or water efficiency.

Construction Waste Management

- NYC Projects:
  - Sidewalk permit
  - Sidewalk protection
  - Coordination with FDNY
  - Crane and scaffolding safety precautions

SITE DESCRIPTION:

- Site Security
- Parking
- Storm Water System
- Sewer System
- Water Supply System
- Hydrant flow tests
- Firefighting access
- Site Grading
- Retaining walls
- Site Lighting and security
- Paving
- Fencing
- Deliveries
- Trash Storage and Removal
- Above and below ground fuel tanks
- Planting
  - ADA accessibility
- See Chapter 9.11 Civil and Site Guide (reserved)

Building Description:

- Building context – character and massing of surrounding buildings
- Programmatic needs: building function, number of occupants, square feet per person, number of spaces, aesthetics, space relationships, space standards, design concepts
- Review ADA accessibility master plan for updating the structure
- ADA accessibility challenges
- Egress routes
- Code Review
- Architectural Elements – massing, form, exterior walls, roof, fireproofing, partitions, doors, windows, hardware, ceilings, finishes, miscellaneous steel, accessories, millwork/casework, specialties, raised flooring, furnishings, appliances, food service, elevator, lifts, etc.
Structural Systems – foundation system, retaining walls, waterproofing, superstructure framing, floor decks, roof decks, slab-on-grade
Design Loads: floor loads, roof loads (snow, wind), lateral loads (wind, seismic), and deflection limits
Construction Material – steel, concrete, masonry
Radon mitigation design – See Chapter 9.8 Hazardous Materials Guide
See Chapter 9.17 Architectural Guide (reserved)

HVAC Systems Descriptions:

- Project requirements (size, age, condition and adequacy of existing systems)
- Codes
- Standards
- Chase requirements
- Equipment size and coordination
- Heavy equipment loads – verify with structural engineer
- Locations of louvers and flue piping
- Air filtering requirements
- Specialized air flow / pressure relationships required (isolation rooms, clean agent fire suppression systems, smoke control, etc)
- Special temperature / humidity requirements
- Refrigerant monitoring / alarm system
- Boilers
- Chillers
- Air Handlers
- VAV Boxes
- Ductwork
- Humidification
- Baseboard heat
- Exhaust Systems
- Fuel Oil Tank
- DDC system – connecting to existing system or new system
- Emissions
- Seismic requirements
- See Chapter 9.18 HVAC Guide

Plumbing Systems Descriptions:

- Project requirements (size, age, condition and adequacy of existing systems)
- Codes
- Standards
- Chase requirements
- Fixture demand loads
- Domestic Water
- Sanitary Sewer/Vent
- Roof drainage capacity
- Natural gas piping
- Gas Systems
- Compressed air systems
- Hydraulic systems
- Seismic requirements
- Size, number and location of building drains
- Unusable combined sewer
- Electronic controls for fixtures
- See Chapter 9.19 Plumbing and Fire Protection Guide

Fire Protection Systems Descriptions:

- Project requirements (size, age, condition and adequacy of existing systems)
- Codes
- Standards
- Fire pump / tank
- Standpipe
- Sprinkler system – wet / dry
- Clean Agent Fire Suppression
- Fire Hose Cabinets
- Fire Extinguishers
- Seismic requirements
- Cold water capacity for new fire protection system
- Sprinkler system shutdown - Firewatch
- Input from local Fire Department
- See Chapter 9.19 Plumbing and Fire Protection Guide

- Electrical Systems Descriptions:

- Project requirements (size, age, condition and adequacy of existing systems)
- Codes
- Standards
- Site electric
- Site lighting
- Temporary electric
- Electrical Distribution – available floor space available for new equipment and capacity of existing equipment
- Cable Television
- Emergency Power (generator / tank)
- UPS
- Interior lighting
- Fire Alarm System – new or existing
- Fire alarm System shutdown - Firewatch
- Lightning Protection
- Grounding
- Emergency Lighting
- Paging System
- Wireless System
- Access Control / Security Systems
- CCTV
- Antennae
- Cable tray
- Explosion proof fixtures / devices
- Perimeter and Landscape Lighting
- ADA Intercom
- Cabling
- Phone system – possible involvement with Office for Technologies
- Seismic requirements
- Chase requirements
- See Chapter 9.20 Electric Guide (reserved)

  - Project Schedule:

- Design schedule and milestones
- Determine urgency of project for the client
- State the anticipated design duration, construction start season and construction duration
- Construction schedule
- Long lead times – See BDC 35.1 Duration Worksheet and Long Lead Items identified in the 100% Submission Phase
- Material availability
- Schedule critical – will a Critical Path Method (CPM) be required?

  - Cost Estimate / Budget:

- Adequacy of the budget
- Cost options for work
- Alternates
- Information in Chapter 6 Cost Control
- Consideration for special needs having a significant impact on costs
- Allowances for proprietary systems
- Security allowances
- Construction Acceleration Incentives/Liquidated Damages
- State field office / Construction Manager staffing
- Design contingencies
- Commissioning
- Additional Design Fees for furnishings and equipment, field visits, etc.
- Client furnished items or items that are procured through purchase order.

  - Quality in Construction:

- Commissioning (see DPM Chapter 9.4 Commissioning Guide)
- Mechanical: controls; equipment such as boilers, chillers, cooling towers, ductwork.
- Plumbing/Fire Protection: sprinkler, plumbing controls
- Electrical: low voltage, high voltage, emergency, lighting, communications, security, life safety
- Architectural: exterior envelope, doors/hardware/keying
- Identify project Benchmarks or Mock-ups
- Pre-installation meetings for specific specifications
- CADD Coordination Drawings
- Building Information Modeling (BIM)
- Special Inspections (code mandated)
CHAPTER 4 – SUBMISSION PHASE GUIDELINES

4.3.1 SCHEMATIC DESIGN PHASE

A GENERAL INFORMATION

- The primary objective of Schematic Design Phase (SD’s) is to arrive at a clearly defined, feasible concept and to present it in a form that achieves Client understanding and acceptance. Although the design is not entirely represented, the schematic drawings can demonstrate basic spaces, scale and relationship of components.
- The secondary objective is to clarify the project Program, explore the most promising alternative design solutions, and provide a reliable basis for analyzing the cost of the project.
- Due to elemental aspects of graphic illustration, the Designer also needs to explain in writing what scope is not apparent to the Client. The drawings and scope provide the estimator with the basic scope for formulating the cost estimate.

B TASKS

1. PROJECT ADMINISTRATION AND MANAGEMENT

a) Project administration:
Tasks include the following: consultation, research, conferences, communications, meeting minutes, travel, progress reports, and direction of the work of project team.

b) Disciplines coordination / document checking:
Tasks include coordination between the architectural work and the engineering work and other involved disciples for the project. Review and checking of documents prepared for the project.

c) Agency consulting / review / approval:
Tasks include agency consultations, research of applicable regulations, appearance on Client’s behalf at agency and community meetings.

d) Applicable building code analysis.

e) Project risks assessment and mitigation planning.

f) Client-supplied data coordination:
Tasks include review and coordination of data furnished by OGS and the Client, assistance in establishing criteria, assistance in obtaining data.

g) Schedule monitoring.
h) Presentations to Client, OGS, building committee, staff committee, user groups, board of directors, OGS's and/or Client’s consultants.

i) Coordination with the preparation of Basis of Design (BOD) Document which includes details of Client requirements from every involved trade.

j) Coordinate request for Hazardous Material Testing with all trades as required.

Resolve comments from previous phase.

2. ARCHITECTURAL DESIGN / DOCUMENTATION

a) Services during this phase responding to program requirements and consisting of preparation of:

   • conceptual site and building plans
   • preliminary sections and elevations
   • preliminary selection of building systems, materials and equipment
   • development of approximate dimensions, areas and volumes
   • study model(s)
   • Request Hazardous Materials Testing if required. (This should be included for all the trades)

3. STRUCTURAL DESIGN / DOCUMENTATION

a) Services during this phase consisting of recommendations for basic structural materials and systems, analyses, development of conceptual design solutions for:

   • predetermined structural system
   • alternate structural systems

4. MECHANICAL DESIGN / DOCUMENTATION

a) Services during this phase consisting of alternate materials, systems and equipment, and development of conceptual design solutions for:

   • energy source(s)
   • energy conservation
   • heating and ventilation
   • air conditioning
   • plumbing
   • fire protection
   • special mechanical systems
   • process systems
• general space requirements

5. ELECTRICAL DESIGN / DOCUMENTATION
   a) Services during this phase consisting of consideration of alternate systems, recommendations regarding basic electrical materials, systems, and equipment, analyses, and development of conceptual design solutions for:
      • power service and distribution
      • lighting
      • telephones
      • fire detection and alarms
      • security systems
      • electronic communications
      • special electrical systems
      • general space requirements

6. CIVIL AND LANDSCAPE DESIGN / DOCUMENTATION
   a) Services during this phase consisting of soils testing, consideration of alternate materials and systems and development of conceptual design solutions for:
      • on-site utility systems
      • off-site utilities work
      • fire protection systems
      • drainage systems
      • paving
      • land forms
      • lawns and planting
      • storm water management

7. INTERIOR DESIGN / DOCUMENTATION
   a) Services during this phase consisting of space allocation and utilization plans based on functional relationships, consideration of alternate materials, systems and equipment and development of conceptual design solutions for architectural, mechanical, electrical and equipment requirements in order to establish:
      • Partition locations
      • Furniture and equipment
8. MATERIALS RESEARCH/SPECIFICATIONS
   
a) Services during this phase consisting of:
   
   • Identification of potential architectural materials, systems and equipment and their criteria and quality standards consistent with the conceptual design
   • Investigate the availability and suitability of alternative architectural materials, systems and equipment
   • Coordination of similar activities of other disciplines.
   • Possible Hazardous Materials identification and testing.

9. PROJECT SCHEDULING
   
a) Review and update previously established project schedules or initial development of project schedules (if not previously established) for decision making, design, documentation, contracting and construction.
   
   • Project Estimate
   • Review and update project costs.

C DELIVERABLES

Basis of Design (BOD) Document

Illustrate the general form, scale, and relationship of the major project components, type of construction proposed and the building systems and equipment recommended.

This is a general description of the work indicating the major systems and materials choices for the project, but usually providing little detailed product information.

Details of Client project requirements. Include materials and equipment requested to be utilized by Client.

1. DRAWINGS

   a) Typically presented at the smallest scale that can clearly illustrate the concept (perhaps 1/16” = 1’-0” for larger buildings and 1/8” = 1’-0” for smaller buildings). The Designer and the OGS Team Leader need to concur on drawing scale for the submission.

2. CODE COMPLIANCE
a) Copy of the completed BDC 402. Provide code compliance diagrams on the drawings. Code issues and solutions should be identified and resolved at this stage of the project development.

3. SUSTAINABILITY:

a) Executive Order 88 Compliance: Determine if the project needs to comply with Executive Order 88 for energy efficiency. (If the project needs to comply, determine who will be the commissioning agent and how the energy efficiency analysis will be performed.

b) LEED: If the project is pursuing LEED certification, determine who will be the LEED AP. The LEED AP and the design team should start a LEED Work Plan as recommended and defined by the USGBC. Such a plan includes kicking off initial research and analysis, establishing minimum program requirements (MPRs), and establishing project goals.

4. PROJECT ESTIMATE

a) The estimate is usually broken down into major trades or systems (for example, foundations, structure, exterior closure, interior partitions, finishes, plumbing, mechanical, electrical, site, and equipment).

b) The estimate may include a preliminary analysis of the Client’s budget, with recommendations for changes based on site, marketplace, or other unusual conditions encountered in the schematic design.

c) Include contingencies for further design development, market contingencies, and changes during construction.

5. PROJECT SCHEDULES

6. DISTRIBUTION

a) The Designer and the OGS Team Leader should determine formats, number of copies and distribution of submission documents required for this phase.

D. OPTIONAL SERVICES

- Life-Cycle Cost Analysis
- Special Renderings
- 3D Modeling
- Energy Analysis and Design
- Value Analysis / Value Engineering
E. FINAL STEPS

The final step in the Schematic Design Phase is for the Designer to obtain formal OGS Team Leader and Client approval before proceeding to the Design Development Phase or the next designated phase. Present the BOD to the Client for input and acceptance.

All phase comments shall be reviewed and responded to within 15 business days from approval.
CHAPTER 4 – SUBMISSION PHASE GUIDELINES

4.3.2 DESIGN DEVELOPMENT PHASE

A. GENERAL INFORMATION

The objectives of the Design Development Phase are different from those of Schematic Design Phase. The primary purpose is to define and describe all important aspects of the project so that all that remains is the formal documentation step of construction contract documents.

The Design Development Phase focuses more on the technical aspects of materials and building systems. Although this phase allows the Designer to finalize space and function to a great degree, the primary achievement is to enable the Client to understand how the project will function as well as give more detail about the breadth of the work and the work areas.

The Design Development Phase is the period when all the issues left unresolved at the end of schematic design can be worked out, and at a scale that minimizes the possibility of major modifications during the construction documents phase. It is also the period in which the design itself achieves the refinement and coordination necessary for a complete product.

Most design issues should be resolved by the end of Design Development Phase; some will continue to be refined, resolved, or modified during the construction documents phase of the project.

B. TASKS

1. PROJECT ADMINISTRATION AND MANAGEMENT

   a) Project administration: Tasks include consultation, research, conferences, communications, meeting minutes, travel, progress reports, and direction of the work of project team.
   b) Disciplines coordination / document checking: Tasks include coordination between the architectural work and the engineering work and other involved disciples for the project. Review and checking of documents prepared for the project.
   c) Agency consulting / review / approval: Tasks include agency consultations, research of applicable regulations, appearance on Client’s behalf at agency and community meetings.
   d) Refine building code analysis.
   e) Review and refine risk assessment and mitigation efforts.
   f) Client-supplied data coordination: Tasks include the following: review and coordination of data furnished by OGS and the Client, assistance in establishing criteria, assistance in obtaining data.
   g) Schedule monitoring.
h) Presentations to Client, OGS, building committee, staff committee, user groups, board of directors, OGS’s and/or Client’s consultants.
i) Phasing description.
j) Resolve comments from previous phase.

2. ARCHITECTURAL DESIGN / DOCUMENTATION

Services during this phase consist of continued development and expansion of the architectural Schematic Design documents to establish the final scope, relationships, forms, sizes and appearance of the project through:

- Plans, sections and elevations
- Typical construction details
- 3D sketches
- Study model(s)
- Final materials selections
- Equipment layouts

3. STRUCTURAL DESIGN / DOCUMENTATION

Services during this phase consist of continued development and of the specific structural system(s) and Schematic Design documents in sufficient detail to establish:

- Basic structural system and dimensions
- Final structural design criteria
- Foundation design criteria
- Preliminary sizing of major structural components
- Critical coordination clearances
- Outline specifications or materials lists

4. MECHANICAL DESIGN / DOCUMENTATION

Services during this phase consist of continued development and expansion of the mechanical Schematic Design documents and development of outline specifications or materials lists to establish:

- Approximate equipment sizes and capacities
- Preliminary equipment layouts
- Required space for equipment
- Required chases and clearances
- Acoustical and vibration control
- Visual impacts
- Energy conservation measures
5. ELECTRICAL DESIGN / DOCUMENTATION

Services during this phase consist of continued development and expansion of the mechanical Schematic Design documents and development of outline specifications or materials lists to establish:

- Criteria for lighting, electrical and communications systems
- Approximate equipment sizes and capacities
- Preliminary equipment layouts
- Required space for equipment
- Required chases and clearances
- Visual impacts
- Energy conservation measures

6. CIVIL AND LANDSCAPE DESIGN / DOCUMENTATION

Services during this phase consist of continued development and expansion of civil and landscape Schematic Design documents and development of outline specifications or materials lists to establish the final scope and preliminary details for on-site and off-site civil engineering work and landscaping work.

7. INTERIOR DESIGN / DOCUMENTATION

Services during this phase consists of continued development and expansion of interior Schematic Design documents and development of outline specifications or materials lists to establish final scope and preliminary details relative to:

- Interior construction of project
- Special interior design features
- Furniture, furnishings and equipment selections
- Materials and finishes and colors

8. MATERIALS RESEARCH/SPECIFICATIONS

Services during this phase consisting of:

a) Development of architectural outline specifications or itemized lists and brief form identification of significant architectural materials, systems, and equipment and their criteria and quality standards
b) Coordination of similar activities of other disciplines
c) Production of design manual including design criteria and outline specifications or materials lists
9. **PROJECT SCHEDULING**

- Review and update previously established project schedules for the project.
- Project Estimate
- Review and refine project costs
- Availability of materials
- Project delivery procedures
- Construction sequencing and scheduling
- Changes in scope of the project
- Adjustments in quality standards
- See Chapter 6 Cost Control of the DPM

C  **DELIVERABLES**

1. **DESIGN DEVELOPMENT PHASE DELIVERABLES SHOULD INCLUDE:**

   a) Technical information about special systems and subsystems to be incorporated into the project.
   b) Outline specifications and more detailed drawings to establish the size and character of the entire project including architectural, structural, mechanical, and electrical systems.
   c) The products of this phase are similar to those of the Schematic Design Phase.

2. **DRAWINGS AND SPECIFICATIONS**

   a) Drawings and specifications that fix and describe the size and character of the project.
   b) The drawings and specifications provide much greater detail and refinement than the Schematic Phase.

3. **CODE COMPLIANCE**

   a) Copy of the completed BDC 402. Provide updated code compliance diagrams on the drawings. Code issues and solutions should be identified and resolved at this stage of the project development. Code review and compliance should be further refined at this stage of the project.
4. **SUSTAINABILITY:**

   a) **Executive Order 88 Compliance:** Determine if the project needs to comply with Executive Order 88 for energy efficiency. If the project needs to comply, determine who will be the commissioning agent and how the energy efficiency analysis will be performed.

   b) **LEED:** If the project is pursuing LEED certification, the LEED AP and the design team shall continue implementation by continuously refining the LEED Work Plan established earlier. By this phase, the LEED AP should be fully integrated with the design team and involved with iterative collaboration on design decisions.

5. **PROJECT ESTIMATE**

   a) The estimate is usually broken down into major trades or systems (for example, foundations, structure, exterior closure, interior partitions, finishes, plumbing, mechanical, electrical, site, and equipment).

   b) The estimate may include a preliminary analysis of the Client’s budget, with recommendations for changes based on site, marketplace, or other unusual conditions encountered in the schematic design.

   c) Include contingencies for further design development, market contingencies, and changes during construction.

6. **PROJECT SCHEDULES**

7. **DISTRIBUTION**

   a) The Designer and the OGS Team Leader should determine formats, number of copies and distribution of submission documents required for this phase.

D **OPTIONAL SERVICES**

1. **LIFE-CYCLE COST ANALYSIS**
2. **SPECIAL RENDERINGS**
3. **3D MODELING**
4. **ENERGY ANALYSIS AND DESIGN**
5. **VALUE ANALYSIS / VALUE ENGINEERING**
E      FINAL STEPS

1. THE FINAL STEP IN THE DESIGN DEVELOPMENT PHASE IS FOR THE DESIGNER TO OBTAIN FORMAL OGS TEAM LEADER AND CLIENT APPROVAL BEFORE PROCEEDING TO THE NEXT DESIGNATED PHASE.

2. ALL PHASE COMMENTS SHALL BE REVIEWED AND RESPONDED TO WITHIN 15 BUSINESS DAYS FROM APPROVAL.
CHAPTER 4 – SUBMISSION PHASE GUIDELINES

4.4.1 80% CONSTRUCTABILITY REVIEW

A GENERAL INFORMATION

The 80% Constructability Review is an optional on-board review/submission that can be used on any project. Best Practice: Use for projects over a $1 million in construction value.

The 80% Constructability Review is intended to improve the quality of the 100% Submission documents. The objective is to minimize potential change orders and schedule delays during construction by ensuring that the construction documents are fully coordinated, complete, biddable and buildable. This milestone provides an opportunity for our client, field staff and consultant to review a mature set of documents and discuss outstanding issues (20% gap). This review ensures that the 100% Submission is a thorough and complete submission.

The Constructability Review should take place at the project site during the design phase prior to the 100% Submission. It is recommended to occur when the project reaches the 80% contract document completion stage. At this stage there should be enough detailed information to conduct a thorough review while allocating adequate time for the project team to modify their documents. This project milestone is NOT intended to be a formal submission that needs to be approved by the client. It does not include a formal estimate. The design team should continue to progress the work for the 100% Submission.

The Constructability Review Checklist is a recommended tool to assist the project team on many of the items that should be examined to improve the quality of the review. However, no checklist can be all inclusive and covers all specific project content, characteristics and requirements. Therefore, the checklist included in this chapter shall be tailored to the project by the Consultant with PM input.

The Consultant shall conduct the Constructability Review with the OGS PM and EIC, client representatives and appropriate sub-consultants at the project site. The Consultant shall use the checklist as a guide to document the discussion items and supplement the guide with meeting minutes to be distributed the project team.
The Constructability Review should address any remaining scope gaps and all outstanding issues to proceed to the 100% Submission. This includes the all discussed items and the development and finalization of Division 01 specifications. The goal is to have a true 100% complete set of submission documents.

Project team roles and responsibilities are defined in the following sections noted below.

1. **OGS PM ROLES AND RESPONSIBILITIES**
   
   a) Instruct member of project team of their roles and responsibilities prior to the meeting.
   b) Coordinate meeting date at the project site with project team.
   c) Ensure RS / AS / EIC will have proper representation.
   d) Ensure client's representatives will be present and prepared for meeting.
   e) Evaluate level of document completion. Are they near 80% completion?
   f) Input DCNet Interim submission date as the 80% Constructability Review in project remarks.
   g) Distribute Constructability Checklist to Consultant in advance of meeting. Instruct Consultant to review, edit and customize the checklist applicable to the project.
   h) Instruct Consultant to distribute hard copies of documents in advance of the meeting to the team.
   i) Instruct Consultant to continue with project design since this meeting is considered an on-board review.
   j) Request gate clearances for team members when necessary.
   k) Be prepared to discuss items on checklist. Include additional items not indicated that are relevant to this project / meeting.
   l) Take supplemental meeting minutes and back check Consultants minutes prior to publication / distribution of the final minutes to team.
   m) Notify the Quality Manager that the meeting took place and responses to meeting comments have been provided in meeting minutes.
   n) Have OPC enter the date of this review after the meeting is held.

2. **OGS TL PM ROLES AND RESPONSIBILITIES**

   a) Evaluate level of document completion. Are they near 80% completion? Is everyone prepared for the meeting to be successful?
   b) Ensure all parties will be present at the meeting.
   c) Attend the meeting to assist the PM and team.
3. CONSULTANT ROLES AND RESPONSIBILITIES

   a) Ensure that documents are at 80% completion (including all subs work).
   b) Distribute project documents (hard copies) 2-3 weeks prior to the scheduled meeting to field staff, facility staff, planner and PM to review.
   c) Review constructability checklist and prefill items that are NA.
   d) Be prepared in advance to discuss all items on checklist.
   e) Tailor checklist to include additional items not indicated that are relevant to this project.
   f) Distribute copies of the checklist at the meeting.
   g) Bring appropriate sub-consultants to the meeting.
   h) Marked up checklist to be included as backup to the meeting minutes.
   i) Take detailed meeting minutes and distribute draft minutes to the PM for review.
   j) After PM approval of the draft minutes, distribute final meeting minutes to the project team.
   k) Continue to advance / progress project during this review period.

4. FIELD STAFF ROLES AND RESPONSIBILITIES

   a) Review documents and come prepared for discussion.
   b) Perform a field check on the project.
   c) Ensure facility staff are reviewing documents prior to the meeting.
   d) Provide gate clearances when necessary.
   e) Be prepared to discuss all checklist items including Division 01 specifications. Include additional items not indicated that are relevant to this project / meeting.

5. PLANNER ROLES AND RESPONSIBILITIES

   a) Review documents and come prepared for discussion.
   b) Attend the meeting.
   c) Facility requests for out of scope items need to be evaluated and approved or disapproved.
   d) Be prepared to discuss all items on checklist. Include additional items not indicated that are relevant to this project / meeting.
   e) No formal approval for this on-board review is required unless out of scope items are requested.

6. FACILITY RESPONSIBILITIES

   a) Review documents and come prepared to the meeting.
   b) Ensure that all key staff have reviewed documents and participate in the meeting.
Be prepared to discuss all items on checklist. Include additional items not indicated that are relevant to this project / meeting.

7. **CHECKLIST**

(Consultant shall customize list per project and prefill prior to meeting)

<table>
<thead>
<tr>
<th>ID #</th>
<th>Description</th>
<th>Yes</th>
<th>No</th>
<th>NA</th>
<th>More Info Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Geotechnical</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Has a geotechnical investigation been done?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐ More Info Needed</td>
</tr>
<tr>
<td>1.2</td>
<td>Has the geotechnical report been completed?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐ More Info Needed</td>
</tr>
<tr>
<td>1.3</td>
<td>If subsurface water is present is it properly addressed in documents (dewatering plan, well points, under drains, etc.)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐ More Info Needed</td>
</tr>
<tr>
<td>1.4</td>
<td>If poor soils are present is it properly addressed in documents?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐ More Info Needed</td>
</tr>
<tr>
<td>1.5</td>
<td>If rock is present is it properly addressed in documents? Is rock clearly defined? Are removal methods defined? Is an assumed volume included in the bid documents?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐ More Info Needed</td>
</tr>
<tr>
<td>1.6</td>
<td>Do documents incorporate geotechnical report recommendations for foundations (deep and shallow), waterproofing, damp proofing, underdrains, subgrade and/or bearing grade preparation, underpinning, sheeting and shoring?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐ More Info Needed</td>
</tr>
<tr>
<td>1.7</td>
<td>Is select fill being imported for this project? Has excess material indicated to be properly disposed either on-site or off-site?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐ More Info Needed</td>
</tr>
<tr>
<td>1.8</td>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐ More Info Needed</td>
</tr>
<tr>
<td>1.9</td>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐ More Info Needed</td>
</tr>
<tr>
<td>2.0</td>
<td>Subsurface Utility Investigation</td>
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<td></td>
</tr>
</tbody>
</table>
### 2.1 Has sufficient field investigation been done to ascertain that contract work can be performed as shown on the plans?

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

### 2.2 Has a subsurface utility investigation been conducted to avoid and resolve conflicts?

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

### 2.3 Have appropriate survey methods been used to identify conflicts?

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

### 2.4 Has the appropriate utility documentation quality level been specified for this project - Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data’ ASCE Standard CI 38-02 – Quality levels A, B, C or D?

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

### 2.5 Have utility profiles been prepared to identify conflict areas between existing and proposed utilities?

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

### 2.6 Have existing utility capacities for gas, water, sanitary, storm, power, steam, chilled water been analyzed?

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

### 2.7 Are as-builts available and if so were they used?

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

### 2.8 Do documents include requirements for contractor to locate underground utilities?

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

### 2.9

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

### 2.10

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

### 3.0 Topographic Survey

#### 3.1 Has a site survey been completed?

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

#### 3.2 Have property boundaries, ROW, easements been identified?

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

#### 3.3 Have benchmarks (horizontal and vertical controls) been established?

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed

#### 3.4

- [ ] Yes
- [ ] No
- [ ] NA
- [ ] More Info Needed
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Yes</th>
<th>No</th>
<th>NA</th>
<th>More Info Needed</th>
</tr>
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<tbody>
<tr>
<td>3.5</td>
<td></td>
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</tr>
<tr>
<td>4.0</td>
<td>Site Logistics</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4.1</td>
<td>Identify point of entrance locations and traffic routes for movement of the contractor’s equipment, materials and workers to the work locations.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.2</td>
<td>If using existing roads for access is repair work included in documents?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.3</td>
<td>Are provisions and plans for worker parking and routes to and from the work site provided?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.4</td>
<td>Do the drawings indicate where staging/laydown areas for construction equipment, trash/debris receptacles, and material storage and protection will occur?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.5</td>
<td>Locate temporary contractor facilities including trailers, dumpsters, and sanitary facilities</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.6</td>
<td>Identify locations and related work zones for worker/material handling equipment such as cranes, and lifts.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.7</td>
<td>Are there areas with restricted access?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.8</td>
<td>Have permits been secured (ex. DOT, DEC, ACOE, Railroad, etc.)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>4.9</td>
<td>Are temporary barriers such as fences required?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.10</td>
<td>Are temporary access roads, parking or sidewalks needed?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.11</td>
<td>Are contract limit lines indicated on the site plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>4.12</td>
<td>Identify means of dust/dirt/debris mitigation</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.13</td>
<td>Show routing of temporary utilities, lines, and points of tie-in</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>4.14</td>
<td>Identify means of construction noise mitigation</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Section</td>
<td>Question</td>
<td>Yes</td>
<td>No</td>
<td>NA</td>
<td>More Info Needed</td>
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<tr>
<td>4.15</td>
<td>Are truck wash down areas provided? Is roadway cleaning and storm drain cleaning needed?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.16</td>
<td>Show protection of utility poles, existing structures, vegetation, etc.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.17</td>
<td>Are maintenance protection of traffic requirements realistic for site conditions?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.18</td>
<td>Are signing and traffic controls adequate?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.19</td>
<td>Is drainage clearly indicated</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.20</td>
<td>Are grading limit lines clearly defined?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.21</td>
<td>Does the project include a field office and/or equipment / furniture?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.22</td>
<td>Is advance notice and duration provided for utility shut-down or cutover?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.23</td>
<td>Is an erosion and pollution control plan identified?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.24</td>
<td>Does the submission describe where silt fence needs to be installed to protect streams, watercourses, or other bodies of water? Are other Erosion and Sediment control features included on the drawings?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.25</td>
<td>Do the specifications and / or drawings describe specific procedures when pipes or other infrastructure need to cross facility perimeter security systems?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.26</td>
<td>Pavement areas and snow removal logistics. Plan accommodates snow removal for roads, walks, building exits and parking lots.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>4.27</td>
<td></td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>4.28</td>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5.0</td>
<td>Temporary Facilities</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Section</td>
<td>Question</td>
<td>Yes</td>
<td>No</td>
<td>NA</td>
<td>More Info Needed</td>
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<tr>
<td>5.1</td>
<td>Is temporary heat provided? Who pays for heat? Is the building envelope containment defined if owner is paying for heat?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5.2</td>
<td>Is temporary cooling provided? Who pays for cooling? Is the building envelope containment defined if owner is paying for cooling?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5.3</td>
<td>Is temporary water available for contractor use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5.4</td>
<td>Are facility toilets available for contractor use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5.5</td>
<td>Is temporary light provided?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5.6</td>
<td>Is construction heat clearly identified and defined?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5.7</td>
<td>Is temporary power available for contractor use? Who pays for power use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>5.8</td>
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<td>5.9</td>
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</tr>
<tr>
<td>6.0</td>
<td>Schedule</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6.1</td>
<td>Is the preliminary construction duration assessment adequate for the work to be performed? Is the project team prepared for the Construction Duration Meeting to be held after 100% Submission?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6.2</td>
<td>Are milestones / phasing included in the Summary of Work? Is a phasing plan provided?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6.3</td>
<td>Is phasing acceptable to the facility?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6.4</td>
<td>Will Critical Path Method (CPM) be considered for the project schedule?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6.5</td>
<td>Have long lead items been identified with maximum allowable approvable submission deadlines such that if these submissions are not made or cannot be approved liquidated damages can be assessed?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6.6</td>
<td>Have critical submittals identified with maximum allowable approvable submission deadlines such that if these submissions are not made or cannot be approved liquidated damages can be assessed?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6.7</td>
<td>Are work hours clearly defined in the documents? Is the facility in agreement with these hours? Is there any premium time needed by the contractor? Can facility accommodate other than normal work hours?</td>
<td>☐ Yes ☐ No ☐ NA ☒ More Info Needed</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6.8</td>
<td>Does the specifications account for cold and hot weather construction (concrete, masonry, roofing, sub-base, pavement, etc.)?</td>
<td>☐ Yes ☐ No ☐ NA ☒ More Info Needed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.9</td>
<td>Are restricted work periods for construction defined (roofing work, etc.)?</td>
<td>☐ Yes ☐ No ☐ NA ☒ More Info Needed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.10</td>
<td>Does an accelerated construction schedule account for proper techniques for example - concrete slab curing and flooring installation specifications?</td>
<td>☐ Yes ☐ No ☐ NA ☒ More Info Needed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.14</td>
<td>Does the construction schedule account for landscape planting and limitations for seasonal time of year?</td>
<td>☐ Yes ☐ No ☐ NA ☒ More Info Needed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.15</td>
<td></td>
<td>☐ Yes ☐ No ☐ NA ☒ More Info Needed</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6.16</td>
<td></td>
<td>☐ Yes ☐ No ☐ NA ☒ More Info Needed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| 7.0 | Architectural / Building |
| 7.1 | Has sufficient field investigation been done to ascertain that contract work can be performed as shown on the plans? | ☐ Yes ☐ No ☐ NA ☒ More Info Needed |
| 7.2 | Can the contractor use the existing elevator? | ☐ Yes ☐ No ☐ NA ☒ More Info Needed |
| 7.3 | Are code plans provided to clearly identify code requirements? | ☐ Yes ☐ No ☐ NA ☒ More Info Needed |
| 7.4 | If existing furnishings or equipment are to be relocated from work area in the facility have they agreed to complete work when required? | ☐ Yes ☐ No ☐ NA ☒ More Info Needed |
| 7.5 | Will the work area be occupied? | ☐ Yes ☐ No ☐ NA ☒ More Info Needed |
| 7.6 | Are the work area (s) defined? | ☐ Yes ☐ No ☐ NA ☒ More Info Needed |</p>
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<td>Are there any items to be removed by the contractor and turned over to the owner?</td>
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<td>If a building is being demolished, has it been declared a surplus building? See 9.13 of the DPM</td>
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<td>Some facilities have special requirements with regard to hazardous waste disposal. Does the facility have special requirements? Are those identified and included on the drawings and in the specifications?</td>
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<td>Have all relevant equipment loads and supports been structurally accommodated and detailed?</td>
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<td>Are shaft and chase penetrations through floors coordinated with other trade disciplines?</td>
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<td>Has natural gas pressure serving the project been verified for suitability for connected loads?</td>
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<td>Have connection points to existing plumbing systems been shown and have their shut-off or isolation valves been identified and tested?</td>
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<td>Has the work phasing been detailed showing when power outages will be required and their estimated durations?</td>
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<td>Will a coordination and Arc Flash study be required by the consultant?</td>
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<td>Are mock ups going to be identified as part of the project? If yes, does the specifications and drawings clearly describe what is required?</td>
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<td>Are installation benchmarks required as part of this project? If yes, are they clearly identified?</td>
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<td>Are CADD Coordination drawings (013350) required?</td>
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<td>Is exploratory demolition needed to discover subsurface conditions that could not be ascertained during design? If yes, then documents need to describe work to be done.</td>
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<td>Is client training required on any systems/components? Is video training recommended to accommodate client staff turnover?</td>
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<td>Are Special Inspections required per the BDC 406? Is a BDC 406.1 needed?</td>
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<td>Determine appropriate level of Consultant construction site visits commensurate with the quality requirements of the project. Determine key site visit milestones.</td>
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<td>Identify additional project risks not discussed and mitigation strategies.</td>
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<td>Is project eligible for WICK’s exemption (single prime contract)? See chapter 9.3 of the DPM.</td>
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<td>Are there alternates for this project? Have they been approved by the BUL?</td>
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<td>Construction Safeguards / Safety</td>
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<td>15.1</td>
<td>Any job site security concerns?</td>
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<td>15.2</td>
<td>Are there any Hot Works Permit activities? Coordinate with facility procedures. Are instructions to the contractor identified in the bid documents? (Reference: 2010 FCNYS 1404.6)</td>
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<td>15.3</td>
<td>Any requirements for fire watch? (Reference: 2010 FCNYS 1404.5)</td>
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<td>15.4</td>
<td>Is protection of pedestrians required? Are code related items such as barriers identified in the documents? (References: 2010 BCNYS 3303 and 3306 or 2010 EBCNYS 1401)</td>
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<td>15.5</td>
<td>Are means of egress maintained? (Reference: 2010 EBCNYS 1405 and FCNYS 1411)</td>
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<td>15.6</td>
<td>Is protection of adjoining property properly addressed? (Reference 2010 BCNYS 3307 and EBCNYS 1402)</td>
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<td>Is facility confined space identified on the documents?</td>
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<td>Maintenance of standpipes (References: 2010 BCNYS 3311, EBCNYS 1406 and FCNYS 1413)</td>
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<td>Trash Chutes: NFPA 241 Chapter 5</td>
<td>(Reference)</td>
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<td>15.10</td>
<td>Fire Fighting Access: Roads available and vehicles within 100 feet of fire department connections. (Reference 2010 FCNYS 1401)</td>
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<td>Owner’s Responsibility for Fire Protection: 2010 FCNYS 1408</td>
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CHAPTER 4 – SUBMISSION PHASE GUIDELINES

4.4.2 100% SUBMISSION PHASE

1. WHAT IS THE PURPOSE OF THE 100% SUBMISSION?

The 100% Submission is a complete, coordinated set of contract documents with a cost estimate to be reviewed by the Client and OGS to verify that the submission meets the intent of the project and to comment on constructability, field conditions and any design errors and omissions. The 100% Submission forms the foundation for advancing the project out to bid by receiving Client approval and authorization to bid.

2. WHAT IS THE 100% SUBMISSION STRUCTURE?

The OGS Business Unit and PM submit 100% Submission documents to the Client and to the Division of Construction’s Pre-Construction Services Unit (PSU) for a constructability review. The PSU distributes two sets of the documents to the OGS Field Staff to perform a field check review and one set to the Regional Supervisor.

Best Practice Recommendation: For larger and more complex projects the PM should coordinate an on-site review meeting with the OGS Engineer-In-Charge (EIC). This meeting should also include the Client, facility staff, and the Consultant/Designers.

Best Practice Recommendation: Incomplete submissions should not be reviewed. Submissions with a large number of review comments may require a back check with resubmitted documents. When this occurs, Consultant/Designers will be required to resubmit all required hard copy sets at their expense unless an electronic set is acceptable by the PM, review team and Client. The PM shall provide a consultant evaluation noting unsatisfactory performance.

3. WHAT ARE THE 100% SUBMISSION FEATURES?

The 100% Submission is comprised of project manuals, drawings, estimates, checklists, code compliance form, special inspection forms, hazmat information, SOS and transmittal forms.

4. CONSULTANT/DESIGNER RESPONSIBILITIES

a) Responses to Review Comments (Interim Submissions if any)
   • The Consultant/Designer shall review comments made from last phase (interim submissions as applicable), respond to all review comments, and forward all responses to the PM. Most often, comments will be generated using BDC 35.3 - Document Review Form. Incorporate comments into the construction documents. Discuss questionable comments and comments creating scope change with the PM.

b) Comments may be generated by the following sources:
   • Client
- OGS Team Leader (TL)
- OGS Project Manager (PM)
- Design Reviewers
- Division of Construction
- Construction Manager (may be on-board for larger projects)

c) Drawings
- Refer to the DPM Chapter 5 Technical Documents which includes Chapter 5.1 General Information and Chapter 5.3 Project Drawings
- Drawings must be complete and include all required information for a contractor to perform a bid take-off. Project scope must be clearly shown or indicated.
- OGS Title Sheet
- OGS Border Sheet for all other drawings. Refer to the CADD requirements in Chapter 5.3.
- NYS Building Code and Energy Code compliance information per the instructions in the DPM Chapter 9.9 Codes Guide.
- Mark all drawing title blocks with “100% Submission.” with the submission date.
- Drawings do not require a licensed Designer’s professional stamp for this submission.

d) Submit all electronic drawings in the following formats:
- Portable Document Format (pdf). The CAD documents shall be combined into a single electronic document in the same order as the submitted paper document. Organize by trade discipline and provide bookmarks for each drawing number and title.
- AutoCAD, current version when requested by the PM.
- Every drawing sheet shall have its own separate electronic drawing file. Make sure to include all reference and resource files necessary for the plotted drawing to be reproduced.
- Drawing number and title description according to the title sheet and drawing index. Do not include other information such as initials, dates, etc. in the naming convention

e) Provide full hard copy document sets (drawings and project manuals) as indicated in the Distribution List. Consultant shall distribute the hard copies directly to the indicated recipients.
f) Project Manual

- Refer to the DPM Chapter 5 Technical Documents which includes Chapter 5.1 General Information and Chapter 5.2 Project Manuals.
- The Project Manual shall be complete and include all required information as if ready for a contractor to perform a detailed bid take-off. Project scope must be clearly indicated.
- Edit Divisions 00 and 01 using track changes to be reviewed and approved by the PM. Include Division of Construction staff and/or the client's input to specification edits prior to the submission.
- Document 000101 Title Page (Cover) - marked “100% Submission Copy”. Do not use track changes for these documents.
- Document 000105 Certification Page(s) – do not require a licensed Designer’s professional stamp for this submission.
- Document 000110 Table of Contents - list ALL sections that will be included by the Consultant/Designer and by OGS in the Final Submission including Bidding Requirements, Contracting Requirements, and Appendix documents. Coordinate with the PM.
- Edit 013300 Submittals (use track changes).
- Complete set of fully edited technical sections (Divisions 01 thru 48).
- Coordinate the Project Manual Table of Contents with the OGS Master Specifications numbering and titles to ensure compatibility between project specifications and Electronic Contractor’s Payments (ECP) database. The Consultant/Designer and PM shall align specification numbering and titles with our Master Specifications. Rarely, there is justification for adding a specification section that has no resemblance to our Master Specs. This allowance needs to be evaluated within each Business Unit. For consistency, new specification titles and numbers shall match AIA Master Format. Contact the Specification Manager if you have questions.
- Edited Documents for 003132 Geotechnical Data and 003126 Existing Hazardous Materials Information (when they are applicable).
- Documents NOT required in this submission include the following:
  - Bidding Requirements - Advertisement, Instructions to Bidders, Supplementary Instructions to Bidders, Bid Form, Form of Bid Bond, Instructions for Completing DCA-3, Contractors Builders Risk Comparison.
  - Contracting Requirements – General Conditions and Supplementary Conditions.
  - Appendix Documents with the exception of the following:
  - 406.1 Statement of Special Inspections (when applicable – see Section 1700 Structural Tests and Special Inspections of the NYS Building Code for requirements). See section C6 Code Compliance.
Hazardous Materials Results / Report. It is recommended practice to include appendix HAZMAT report so that reviewers can see and verify the presence and location of hazmat materials.

g) Consultant/Designers shall submit electronic documents in the following two formats:
   - Microsoft Word, current version: All the individual section files in electronic format to the PM. Submit electronic specifications using proper electronic file descriptions and numbering for each specification section according to the Table of Contents. Do not include naming information such as initials and dates. All highlighted yellow text should be deleted from the edited specification.
   - Portable Document Format (pdf): Combine specification sections into a single electronic document in the same order as the Table of Contents and submitted paper documents. The document shall be separated into trade designations. The document shall be tabulated and contain bookmarks for each individual specification section number and title.

h) Provide full hard copy document sets (drawings and project manuals) as indicated in the Distribution List. Consultant shall distribute the hard copies directly to the indicated recipients.

i) Include LEED Project Checklist (when applicable).

j) Schedule of Submittals (SOS)
   - SOS’s are required for all projects unless waived in writing by the Executive Director of Design and Construction.
   - One of the purposes of the SOS is to ensure that all items required by the work are included in the form. Therefore, the Consultant/Designer shall thoroughly edit the document to reflect the project specifications, add items not listed, and delete items that do not pertain to the project. Consultant/Designers (each trade) shall edit the SOS per their respective specification division and sections. The SOS form and instructions are available on the OGS Web Page under Design & Construction / Consultants: Master Specifications.
   - SOS’s are required by OGS D&C to be used to populate the electronic Submittals Website. Therefore, the accuracy of this document is paramount in order to efficiently run the submittal process.
• The Consultant/Designer shall indicate critical submittals using the appropriate SOS column. Critical submittals are those submittals considered vital to the timely progression of the contract schedule and include long lead items. D&C will allow the contractor to be paid for critical submittals after they have been approved. See Long Lead Items document that can be used as a tool to assist in the identification of critical submittals. The Consultant/Designer will need to contact vendors of materials and products to validate long lead times including submittal development, fabrication and delivery.

• The Consultant/Designer shall coordinate with the PM/EIC’s approval, which team members shall receive and review specific submittals using the Field (F) and Office (O) designations on the form. The EIC may have field staff resources available to review certain submittals.

k) Estimate

• Work Within Budget: All construction work and the cost estimate prepared by the Consultant shall be within the Maximum Construction Cost unless written direction is provided by the PM/TL.

• The Client Agencies use the estimate to request Division of Budget authorization to advertise. Itemized quantities of materials and values based on the construction documents are required. Temporary services, phasing, hazardous materials abatement, alternates, field office trailers, temporary heating days, commissioning, shift work, sole source allowances, and all other known costs must be included in the estimate.

• Refer to the DPM Chapter 6 Cost Control.

• Design Development Contingencies are reduced.

• Estimate Forms:
  o OGS in-house Designers shall use BDC 50 - Request for Estimate when requesting OGS Cost Control to provide the estimate.
  o Consultant/Designers shall use BDC 178 - Consultant Estimate Forms.
  o Provide this form in both Excel and PDF format. OGS Cost Control will review the consultant’s estimate and prepare BDC 35.3 Document Review / Response Form at the PM’s request.

l) Code Compliance

• BDC 402.10 - Code Compliance Review Checklist edited document.
• BDC 406 – Summary of Special Inspections edited for all projects.
• BDC 406.1 Statement of Special Inspections edited when required by BDC 406.
m) Contract Duration / Project Schedule

- Coordinate with OGS PM in the request for a duration meeting with OGS Scheduling.
- Provide input to the construction schedule that addresses long lead items, restricted work periods, restricted site access / work crews, phasing, work milestones, contractor work hours, construction duration, etc.
- Be prepared to provide input and participate in a Project Contract Duration meeting with the Project Team which may include the following members: OGS PM, OGS Project Scheduler, OGS BUL, OGS TL, OGS Regional Supervisor, OGS Area Supervisor, OGS EIC, Construction Manager, Client Agency Facility Planner, and Facility Staff to review, discuss, and validate an agreed upon Project Contract Duration (reference the 011000 Summary Of The Work - Paragraph 1.04) with consideration given regarding the following:
  - Reasonable and attainable duration for the project scope
  - Contract duration meets the needs of the Client Agency and facility; D&C maximum contract duration and fits within the Client’s budget
  - Phasing and construction sequencing (project milestones)
  - Facility security coverage
  - Critical submittals
  - Key milestones
  - Contractor work area(s) accessibility (occupied facilities, special events / activities – restricted work period, etc.)
  - Contractor hours of work (regular, overtime, shift work, off-hours, etc.)
  - Contractor manpower (allowable number of work crews)
  - Seasonal impacts (geographical location, restricted work period, etc.)
  - Temporary services (heat, power, water, security, communications, etc.)
  - Long lead items (equipment, specialties, custom ancillaries, etc.)
  - Infrastructure outages / disrupted services (utilities, access roads, security, communication, life safety, etc.)
  - Utility company impact (NYSEG, Con Edison, National Grid, Verizon, AT&T, local municipalities, etc.)
  - Environmental protection permits obtained from DEC, DOT, fire department, etc. (examples: watershed and wetlands)
  - Commissioning
  - Bid alternates
  - Construction Acceleration Incentives (CAIs)
  - If requested by the OGS PM, provide additional input for follow up meetings (or Final Submission) if:
    - There are significant scope changes to the project after the initial meeting. The duration schedule must be updated to incorporate the changes to have an accurate projection of the time needed for the project.
o) The projected award date used at the initial meeting has been revised.

n) Quality Review Certification
   • OGS requires a Quality Review Certification letter from Consultants that confirms they and their sub-consultants have complied with their firms QA/QC standards and process. Upon submission of the 100% Submission Phase, the Consultant/Designer shall certify to OGS, in writing on the Consultant's letterhead, that all Construction Documents have been thoroughly checked for constructability, for accuracy, for the coordination of all their parts and details, for conformity to all program requirements, and for conformity to all applicable laws, codes, and regulations. Where a sub-consultant firm has provided a portion of the work, the prime consultant shall obtain a similar certification letter from the sub consultant to be forwarded to OGS together with the prime consultant's certification letter. These certification letters shall be signed by a Principal of the firm and accompany the 100% Submission.
   • Ensure that the documents are in conformity with the DPM.
   • File this form in the 100Pct file folder (projects initiated after August 2015).

Energy Efficiency (EO88) and Sustainable Design
   • See Chapter 9.5 Energy Efficiency (EO88) Sustainable Design.
   • Complete LEED Project Checklist (when applicable) or Green Design Table for Small Projects.

p) Agency Specific Standards and Requirements
   • Comply with DPM Chapter 9.7 Agency Specific Standards and Requirements. When necessary, discuss agency standards and compliance with the PM.

q) Wicks Law
   • Comply with the Wicks Law. See DPM Chapter 9.3 Multiple Prime Contracts Guide. Discuss with the PM whether this project is a good candidate for Wicks Exemption.

r) SWPPP (when applicable)
   • Prepare the SWPPP Construction and Maintenance Manual. Complete the Notice of Intent (NOI) and forward to the PM. See Chapter 9.11.2 SWPPP.
s) Specific Allowance Justification Memo (when applicable)
   • The value of specific allowances is determined prior to bid between the vendor/
     manufacturer or the sub-contractor to perform the work and with the
     Consultant/Designer. It includes specific work that is spelled out in the contract
     documents. Specific allowances are a fixed amount of money included in the bid
     amount for specific reasons. Specific allowances remove a portion of the bid amount
     and should not be used without substantial justification.
   • Complete justification memos when specific allowances are required. The PM/TL
     will approve specific allowance requests prior to sending to CADM and OSC.
   • See Chapter 5.2 Project Manual 012100 Allowances for more information and
     samples of single source specific allowance justifications. Examples of specific
     allowances include fire alarms, switchgear programming, building management
     systems, utility work, etc.

t) Quality in Construction
   • Mock-ups: Determine if mock-ups and reviews should be provided for the project.
     Discuss mock-ups with the PM. Determine if mock-ups can be contained within a
     particular specification section and/or the mock-up can be a combination of
     specification sections such as a wall section that includes masonry, stud back-up,
     window unit, foundation pad and roofing components. This would require a
     standalone mock-up specification section. Mock-ups include the preparation,
     review of, and appropriate action of a sample of the work, outside normal sequence
     of installation that may combine several different trades and are completed,
     reviewed and approved before actual work begins. The work is performed by
     persons qualified to produce workmanship of the specified quality with approved
     materials. Mock-ups enable project personnel to catch mistakes before the first
     work is put in place. Mock-ups obtain early client and A\E approval of aesthetics,
     function, workmanship, materials and means & methods. The mock-up will be used
     to establish the standard of quality and performance by which the work will be
     judged. Best Practice: Use the BDC 384 Mock-up Inspections form when conducting
     the review.
   • Benchmarks: Determine if benchmarks should be provided for the project. Discuss
     benchmarks with the PM and EIC. Benchmarks review the first of each work type, in
     the planned sequence of construction, designated by the Director’s Representative
     to be reviewed and documented against the requirements, and is the base for
     judging that a Prime Contractor has met the project requirements. Once the work is
     approved at each benchmark, it will be the standard for this work through its
     completion. Best Practice: Use the BDC 381 Benchmark Inspections form when
     conducting the review.
Pre-installation Meetings: Determine where pre-installation meetings will be required for the project. Discuss meetings with the PM and EIC.

Pre-installation meetings are held prior to the start of actual work, for work requiring special coordination effort between Prime contractors and sub-contractors to understand how the work is to be performed, the sequence of work between Primes, and a review of special requirements of the work. Discussion items include: contract requirements; scope change; execution; deliveries; submittals; mock-ups; samples; schedules; weather limitations; manufacturers recommendations; compatibility of materials; quality assurance; temporary facilities and controls; space and access limitations; testing and inspection; protection of construction; personnel; safety; etc.

5. OGS PROJECT MANAGER RESPONSIBILITIES

a) Review Comments (Interim Submissions if any)
   • Coordinate all review comments received and forward them to the appropriate Consultant/Designers. The PM and Consultant/Designer shall review comments and determine whether comments are appropriate for incorporation into the 100% Submission documents.
   • Ensure that Consultant/Designer responses to all comments are received.
   • Forward responses to Clients comments when they are provided.
   • File the Consultant/Designer responses in the 39_ReviewComments / Interim folder.

b) Drawings
   • Ensure that all electronic drawings (.pdf format) are received in the proper format and filed in the 100% Submission folder.

c) Project Manual
   • Edit Division 00 and 01 sections or review Divisions 00 and 01 edited documents provided by the Consultant/Designer. The Consultant/Designer should be using track changes. Include Division of Construction staff and/or the client’s input to specification edits prior to the submission.
   • Ensure that all electronic specifications (Word and .pdf format) are received in the proper format and filed in the 100% Submission folder.
   • Ensure Document 000110 Table of Contents - lists ALL sections that will be included in the Final Submission including Bidding Requirements, Contracting Requirements and Appendix documents.
• Ensure that BDC 406.1 Statement of Special Inspections (when required by BDC 406) are edited and included in the Project Manual Appendix.

• Ensure that the specification numbering and titles align with the ECP System. This system streamlines the process of construction contractor payments, to reduce errors and to reduce the level of effort required by EIC’s and OGS CADM. The ECP System shall be used for standard lump-sum 40,000 series, Q and M projects.

• Ensure 013300 Submittals article 1.14 Review of Submittals actions/dispositions listed are used by the Consultant and sub-consultant team.

d) Schedule of Submittals (SOS)

• Ensure that the SOS has been properly edited and completed by the Consultant/Designers. Ensure that critical submittals and long lead items have been identified and marked accordingly on the SOS.

• The PM/EIC shall review the SOS process prior to the award of contracts at the Design / Construction Pre-Construction Meeting.

• The PM/TL will confirm critical submittals identified by the Consultant/Designer which will be incorporated into the contractor’s approved detailed estimate. The PM or TL should discuss critical submittals with the EIC and contractor to ensure that the focus is on selecting submittals that will progress the work. The PM or TL should bring the critical submittals to the attention of Cost Control for inclusion in the detailed estimate. Critical submittals are those submittals considered vital to the timely progression of the contract schedule and include long lead items. D&C will allow the contractor to be paid for critical submittals after they have been approved.

• Best Practice: Email the SOS(s) links to the EIC and the Area Supervisor.

e) Estimate

• Ensure all construction work and the cost estimate prepared by the Consultant is within the established Maximum Construction Cost unless written direction is provided otherwise by the PM/TL.

• Check that the estimate includes the entire project scope and all contingency allowances.

• Prior to sending to the Business Unit administration staff for processing and distribution of the submission, ensure that the Consultant has submitted the BDC 178 - Consultant Estimate Forms in Excel format for OGS Cost Management’s review.

f) Code Compliance
• See DPM Chapter 9.9 Codes Guide for submission requirements.
• BDC 402.10 - Code Compliance Review Checklist
• Ensure that it is submitted, complete for the project scope and reviewed.
• Ensure that the BDC 406 Summary of Special Inspections and BDC 406.1 Statement of Special Inspections (when required by BDC 406) is properly edited and reviewed.

g) Contract Duration / Project Schedule
• Confirm the Design To CADM date in DCNet. The resulting Project Award date will be used for the meeting.
• Confirm that the current version of the Schedule MasterSpec is being used on the Project (013113). Consult with OGS Scheduling and the AS/RS to determine any improvements or revisions to the standard schedule specifications (timelines or project specific requirements) that will be used for the project.
  o If there is a Construction Manager (CM) that is responsible for the Project Schedule, consult with OGS Scheduling and the AS/RS to develop the specific schedule specification (013200). Specification 013200 needs to be modified from the MasterSpec template to meet the specific needs of the project.
• The OGS Project Manager shall coordinate the actual meeting time and location with the Project Team. Project Manager shall distribute the meeting request, coordinate the Conference Room and WebEx to the Project Team. OGS Scheduling will facilitate the meeting. This invaluable planning tool and exercise will assist in establishing key milestones while reducing the State’s exposure and set the stage for a successful deliverable and to defend or assert claims and damages.
  o Provide input to the construction schedule that addresses long lead items, restricted work periods, restricted site access / work crews, phasing, work milestones, contractor work hours, etc.
  o Restricted Work Period (RWP) timeframe is included in all the durations determined from the meeting.
  o Contract Durations are based on the projected Contract Award date at the time of the meeting.
  o Term Contract Work Order projects are not necessary for a meeting. Coordinate with OGS Scheduling to setup and review the project schedule requirements.
• Provide input and participate in a Contract Duration meeting with the Project Team which may include the following members: OGS PM, OGS Project Scheduler, OGS BUL, OGS TL, OGS Regional Supervisor, OGS Area Supervisor, OGS EIC, Construction Manager, Client Agency Facility Planner, and Facility Staff to review, discuss, and develop an agreed upon Contract Duration (reference the 011000 Summary Of The Work - Paragraph 1.04) with consideration given regarding include but not limited to the following:
o Reasonable and attainable duration for the project scope
o Contract duration meets the needs of the Client Agency and facility; D&C maximum contract duration and fits within the Client’s budget
o Phasing and construction sequencing (project milestones)
o Facility security coverage
o Critical submittals
o Key milestones
o Contractor work area(s) accessibility (occupied facilities, special events / activities – restricted work period, etc.)
o Contractor hours of work (regular, overtime, shift work, off-hours, etc.)
o Contractor manpower (allowable number of work crews)
o Seasonal impacts (geographical location, restricted work period, etc.)
o Temporary services (heat, power, water, security, communications, etc.)
o Long lead items (equipment, specialties, custom ancillaries, etc.)
o Infrastructure outages / disrupted services (utilities, access roads, security, communication, life safety, etc.)
o Utility company impact (NYSEG, Con Edison, National Grid, Verizon, AT&T, local municipalities, etc.)
o Environmental protection permits obtained from DEC, DOT, fire department, etc. (examples: watershed and wetlands)

• Commissioning
• Bid Alternates
• Construction Acceleration Incentives (CAIs)
• Project Restricted Work Periods:
  o Project must include the Restricted Work Periods (RWPs) for all related work of the project
  o All Restricted Work Periods (RWPs) in the Summary of Work (SOW) must be assigned to the applicable work item using the work restriction and associated calendar in the plan developed at the Contract Duration Meeting (CDM)

• Ensure that the Project Contract Duration has input and buy-in by the Project Team prior to going out to bid. The best time for the meeting is after 100% Submission review comments have responses and when the CADM date can be predicted (no re-submissions or project delays anticipated).
• The report provided by OGS Scheduling will identify the following items for the Summary of Work
  o Potential Contract Award submittals and the timeframe needed for submission
  o Restricted Work Periods to be identified
    ▪ All restricted Work Periods (RWPs) need to match the Contract Duration Meeting (CDM), the Summary of Work (SOW), and the BDC-201 (DCNet Design to CADM Restricted Work Periods)
The OGS PM shall coordinate a follow-up meeting if:
  o There are significant scope changes to the project after the initial meeting. The duration schedule must be updated to incorporate the changes to have an accurate projection of the time needed for the project.
  o The projected award date used at the meeting does not align with the current date in DCNet.

h) Quality Review Certification
   • Ensure that Consultant’s and sub-consultant’s QA/QC letters are submitted and are signed by the Principals of each firm. File letters in the 100% Submission folder.

i) Energy Efficiency (EO88) Green Design
   • Ensure compliance with Chapter 9.5 Energy Efficiency (EO88) Sustainable Design.
   • Ensure that the LEED Project Checklist (when applicable) or Green Design Table for Small Projects has been completed.
   • Ensure that LEED Checklist is included in the Project Manual.

j) Agency Specific Standards and Requirements
   • See DPM Chapter 9.7 Agency Specific Standards and Requirements
   • Discuss agency standards and compliance with the Consultant/Designer.
   • Ensure all client requirements have been met and the project is in compliance with agency standards.
   • BDC 188 – Operating Impact Statement (DOCCS projects - when applicable) Ensure that BDC 188 is included when energy or water usage is impacted.

k) Wicks Exemption
   • Determine if the project is a good candidate for Wicks exemption. See Chapter 9.3 Multiple Prime Contracts Guide for limitations.

l) Storm Water Pollution Prevention Plan - SWPPP (when applicable)
   • Obtain the client’s signature on the NOI and transmit the signed NOI to DEC. Insert a copy of the completed NOI and the DEC Acknowledgement Letter into the SWPPP Construction and Maintenance Manual. See Chapter 9.11.2 SWPPP for more information.
m) Allowance Justification Memo (when applicable)
   • PM shall receive specific allowance cost and justifications from the Consultant/Designer and seek approval from OSC via CADM.

n) Project Manager’s QA/QC Tasks
   • Ensure that the project and construction documents are complete and satisfy the Client’s scope.
   • Ensure that the documents are reviewed for code compliance and technical accuracy.
   • Ensure that project special requirements such as subsurface investigation, hazardous materials, codes and standards, EO88, environmental assessments and permits, commissioning, etc. are addressed.
   • Ensure that the documents are in conformity with the DPM.
   • Ensure that all Consultant/Designer responsibilities are satisfied.
   • Review unique or critical work with the EIC. Refer to Part 8 of the BDC 324 Pre-Award Interview for Low Bidder.

o) BDC 35 100% Document Submission Transmittal
   • Ensure that the 100% Submission package is complete. Coordinate with Business Unit Administration. Complete BDC 35 form.

p) Request for Approval Letter
   • Establish the anticipated construction phase project soft cost with the Regional Supervisor and Team Leader to be included in the form letter. Consideration should be given to the following variables:
     • Testing / Inspection: soil compaction, steel, concrete, asbestos (air samplings, project monitor), commissioning, SWPP, etc.
     • Construction Management: administration and inspection of the construction contracts by OGS staff, task assignments or Construction Managers (number of CM staff x daily rate per person x construction duration in work days).
     • Contract Administration: fees charged by OGS for CADM.
     • Permit Fees.
     • Design Support: fees for designers to perform construction phase services (submittal review, RFIs, IBs, meetings, site visits). If work Orders were previously established and funded by the client, they don’t need to be included.
     • The Division of Cost Management or the BUL is available to provide guidance.
   • Copy those listed on the Distribution List.
q) New Building Numbers
   • Ensure that new buildings have a building number and this number is included in
     the project title (OGS Site Group provides building numbers).

r) Consultant Evaluation
   • Complete the required Consultant Evaluation in DCNet for this phase.

s) Project Scope
   • Ensure that the project title and scope are correct and coordinated in DCNet.
   • The PM shall update DCNet project scope using language directed to the contractor
     community. The PM shall ensure all Clients’ defined project scope has been
     included.

t) Construction Acceleration Incentive - CAI (when applicable)
   • Complete BDC 40 Construction Acceleration Incentive Approval. Need BUL, Cost
     Management and Director of Construction input and approvals. File completed form
     in the Estimate folder (projects initiated prior to August 2015) or in the 37_Estimates
     folder (projects initiated after August 2015).
   • Include 007305 Supplementary Conditions – Construction Acceleration / Liquidated
     Damages and related backup material.
   • Include CAI information in the Advertisement for Bids.

u) MWBE Goals
   • The PM shall discuss MWBE standard participation goals with the TL and Area
     Supervisor. When goals appear to be unachievable discuss with Cost Management.

v) OGS Field Office
   • Discuss whether a field trailer and/or equipment is required by Division of
     Construction.

w) Distribution of the 100% Submission
   • The PM will coordinate distribution with the BU Administration staff.
### Business Unit Administration RESPONSIBILITIES

#### 100% SUBMISSION DISTRIBUTION LIST

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E = electronic     /   H = hard copy

* bundled (pdf)
Exceptions: footnote¹ - OGS requires 6 client copies
footnote² - DOCCS projects require 4 client copies
footnote³ - PM determines number of copies for trades distribution
and other members of the design team as deemed appropriate

6. BU 1, 2, 3 & 4 ADMINISTRATION STAFF:
   • PROCESS AND DISTRIBUTE THE ELECTRONIC 100% SUBMISSION PER THE
     DISTRIBUTION LIST.
   • BUNDLES DOCUMENTS IN PDF AND SENDS VIA EMAIL TO OPC.
   • CONFIRMS OR FILES DOCUMENTS IN THE 100% SUBMISSION FOLDER.
   • CHECKS AND BALANCES:
     o REVIEW AND COMPARE THE NUMBER OF CONSTRUCTION DAYS ON THE
       REQUEST FOR APPROVAL LETTER, SPECIFICATION 011000, BDC 35 AND
       DCNET. REVIEWS WITH THE TL IF THERE ARE DISCREPANCIES.
     o COMPARE THE TOTAL ESTIMATE AMOUNT ON THE BDC 177 WITH REQUEST
       FOR APPROVAL LETTER, SPECIFICATION 011000, BDC 35 AND DCNET.
       REVIEWS WITH THE TL IF THERE ARE DISCREPANCIES.
     o ENSURE DRAWINGS AND PROJECT MANUALS ARE MARKED 100%
       SUBMISSION.
     o ENSURE THAT THE CONSULTANT’S QA/QC LETTER IS PROPERLY FILED IN THE
       CONSULTANT CONTRACT PROJECT FOLDER.

7. OFFICE OF PROJECT CONTROL:
   • FILES ELECTRONIC DOCUMENTS (BUNDLED PDF’S) IN THE RECORDCORRESPONDENCE
     FOLDER.

What are the COMMON ERRORS?

Incomplete projects are submitted at the 100% Submission Phase.
Project Manuals and individual specification sections are not edited to match the specific work of the project.
Product terms used in the Specifications are different than the product terms used on the Drawings. Division 01 common documents are incorrectly applied across all trades (C, H, P & E).

Project Manuals and Drawings are not separated by trade (C, H, P & E) per Wicks Law requirements. See DPM Chapter 9.3 Multiple Prime Contracts Guide.

CADD backgrounds and/or border sheets are not coordinated per each prime contract (C, H, P & E).

Estimate requests are not done prior to 100% Submission and result in project schedule delays. Estimate is not in the OGS format.

The project title on the Drawings and Project Manual do not agree with the project title in the OGS DCNet database. The project scope in DCNet does not reflect the final scope of the project. Projects with new buildings require a building number to be included in the project title. The PM needs to coordinate these items.

Allowance justifications (when applicable) have not been finalized and forwarded to OSC for approval.

Consultant/Designer firm did not review the submission to their QA/QC standards.

What TOOLS & RESOURCES are available to me?

- ARCHITECTURAL DOCUMENT CHECKLIST
- STRUCTURAL DOCUMENT CHECKLIST (RESERVED)
- SITE DOCUMENT CHECKLIST (RESERVED)
- MECHANICAL DOCUMENT CHECKLIST (RESERVED)
- ELECTRICAL DOCUMENT CHECKLIST (RESERVED)
- DOCUMENT CHECKLIST (RESERVED)
- OGS MASTER SPECIFICATIONS AND TABLE OF CONTENTS WITH PHANTOM NOTES
- AGENCY SPECIFIC STANDARDS AND REQUIREMENTS
- EQUIPMENT VENDORS / MANUFACTURERS’ REPRESENTATIVES
- DPM CHAPTER 9.8 HAZARDOUS MATERIALS GUIDE
- DPM CHAPTER 9.15 GEOTECHNICAL GUIDE
- DPM CHAPTER 9.6 STATE RECORDS AND DOCUMENTATION GUIDE. OGS POSSESSES VARIOUS FORMS OF INFORMATION ON MANY OF THE EXISTING STATE FACILITIES AND PROPERTIES.
RESCHECK AND COMCHECK (WHEN APPLICABLE)

What happens NEXT?

Submitting the 100% Submission documents to the Client is a stopping point for the Design.

Once submitted to the Client, the development of Final Documents is not pursued until the Client’s approval letter and authorization to advertise are received. OPC forwards this documentation to the TL. The Client approval letter may indicate additional requirements, changes or modifications that will need to be addressed by the Consultant/Designer.

When applicable, the SEQR, DEC, and/or APA approval process should continue.

The Consultant/Designer shall be prepared to respond to comments BDC 35.3 - Document Review Form using the response portion of the form. Comments may be generated by the following:

- Client
- OGS Team Leader
- OGS Project Manager
- Design Reviewers
- Division of Construction
- Pre-Construction Services Unit
- Field staff (field check) BDC 35.2 Field Check Review / Response Form

Occasionally, OGS D&C may require larger, more complex, or high-profile projects to include a Special Notice included in The Empire Builder on the OGS Web. The Special Notice should be issued prior to the bidding phase to assist in marketing the project. The notice provides detailed project information that needs to be coordinated and approved by CADM. The PM should verify with the TL if a Special Notice is recommended. The Special Notice Sample link provides the Consultant/Designer with an example of a notice and its contents.

OPC requests Prevailing Wage Rates from the Department of Labor.
CHAPTER 4 – SUBMISSION PHASE GUIDELINES

4.5 FINAL SUBMISSION PHASE

What is the PURPOSE of the Final Submission?

The Final Submission is the last opportunity for the Consultant/Designer to incorporate and respond to any project review comments. All inconsistent direction, uncoordinated documents, or additional clarification should be resolved or incorporated in the construction documents and cost estimates finalized during this phase of the project.

What is the Final Submission STRUCTURE?

The Final Submission Phase begins when the funding Client Agency provides formal approval along with form AC340 DOB Authorization to Advertise (DOCCS projects only require formal approval, the AC340 DOB Authorization to Advertise is not required).

The Office of Project Control (OPC) notifies the OGS Project Manager (PM) utilizing BDC-203 Notice of Client Approval and DOB Authorization to Advertise.

The Consultant/Designer has three (3) weeks from the Authorization to Advertise date to either deliver the Final Submission or request the PM to forecast the Final Submission date with OPC.

The Final Submission Phase ends when the PM delivers all required documents to OPC by the scheduled date.

What are the Final Submission FEATURES?

The Final Documents Submission includes sealed construction documents, estimates, Schedule of Submittals (SOS), incorporation of review comments into the construction documents, responses to review comments, and completion of supporting documents as described in this chapter.
Consultant/Designer RESPONSIBILITIES

C1 Responses to Review Comments

C1.1 The Consultant/Designer shall review comments made at the 100% Submission, respond to all review comments, and provide all responses to the PM and the Initiator. Incorporate comments into the construction documents and provide a detailed response / explanation to each review comment.

Discuss questionable comments and comments creating scope change with the PM. Comments may be generated by the following sources:

Client
OGS Team Leader (TL)
OGS Project Manager (PM)
Design Reviewers
Division of Construction
Pre-Construction Services Unit (PSU) - constructability review

Field staff - field check

C1.2 A 100% Resubmission or a draft electronic final may be required by the PM to assure comments have been incorporated before sealed mylars are submitted.

C1.3 Submit electronic PDF final documents (drawings and specifications) for OGS’s back check and verification of Consultant/Designer responses and compliance.

C1.4 Responses to review comments and PDF final document submission / back check acceptance should be completed prior to the final payment request for the corresponding work order for the phase of work.

C2 Drawings

C2.1 Refer to the DPM Chapter 5 Technical Documents which includes Chapter 5.1 General Information and Chapter 5.3 Project Drawings

C2.2 Drawings must be complete and include all required information for a contractor to perform a bid take-off. Project scope must be clearly shown or indicated.
A licensed New York State Registered Architect, Registered Landscape Architect or Professional Engineer’s stamp and signature are required on each mylar drawing including asbestos abatement and other hazardous materials mitigation design drawings.

Mark all drawings title blocks with the final submission date in the “Bid Document” place holder. This date may be the Client approval letter date. Delete all references to previous submission milestones and dates.

C2.3 Submit Final Drawings on mylar sheets.

C2.4 Submit all electronic drawings (AutoCAD, current version) version to the PM.

Every drawing sheet shall have its own separate electronic drawing file. Make sure to include all reference and resource files necessary for the plotted drawing to be reproduced.

Coordinate drawing number and title description according to the title sheet and drawing index. Do not include other information such as initials, dates, etc. in the naming convention.

C3 Project Manual

C3.1 Refer to the DPM Chapter 5 Technical Documents which includes Chapter 5.1 General Information and Chapter 5.2 for Project Manuals.

C3.2 Document 000101 Title Page (Cover) – delete 100% Submission marks.

C3.3 Document 000105 Certification Page(s) - a New York State Registered Architect, Registered Landscape Architect, or Professional Engineer’s stamp and signature is required. An Asbestos Designer’s name, signature, DOL license number and firm’s name is also required on the Certification page when asbestos is included in the project scope.

C3.4 Consultant/Designers shall submit all the individual section files in electronic format (Microsoft Word, current version) to the PM. All yellow highlighted text should be deleted from the edited specification.

C3.5 Submit electronic specifications using proper electronic file names for each specification section and description according to the Table of Contents. Conform to OGS File Name convention. Do not include naming information such as initials and dates.

C3.6 Use specification numbering and titles to align with the OGS Electronic Contractor Payment (ECP) system. Only use unique numbers and titles when approved by the TL/BUL.

C3.7 Include all specification sections including Bidding Requirements, Contracting Requirements and Appendix documents. See Chapter 5.2 Project Manual and 000110 Table Of Contents Edit Version For Project Specification to determine who has ownership of which specification section. Coordinate with the PM.

C3.8 Provide hard copy Final Project Manuals only when requested by the PM.

C3.9 Include LEED Project Checklist, Asbestos Report, Geotechnical Report (when applicable)
C4 Schedule of Submittals (SOS)

C4.1 One of the purposes of the SOS is to ensure that all items required by the work are included in the form. Therefore, the Consultant/Designer shall thoroughly edit the document to reflect the project specifications, add items not listed, and delete items that do not pertain to the project.

C4.2 Consultant/Designers for each trade shall edit the SOS per their respective specification division and sections.

C4.3 The SOS form and instructions are available on the OGS Web Page under Design & Construction / Consultants: Master Specifications.

C4.4 When editing the SOS carefully follow the instructions to the Consultant/Designer on the Cover sheet. After the SOS tab is populated, delete all Division tabs (Div.X).

C4.5 Indicate critical submittals and long lead items using the appropriate SOS column (column F). Critical submittals are those submittals considered vital to the timely progression of the contract schedule and include long lead items. D&C will allow the contractor to be paid for critical submittals after they have been approved. See Long Lead Items document that can be used as a tool to assist in the identification of critical submittals.

C4.6 Coordinate with the PM/EIC’s approval, which team members shall receive and review specific submittals (column E) using the OGS Field Office (F), OGS Field Office / Albany Office (F/O) and Consultant / Designer (D) designations on the form. Usually, the Field Office will approve Division 01 tab (pre-filled) and Closeout / Turnover items from specifications which needs to be confirmed by the EIC. The EIC may have field staff resources available to review other submittals as agreed upon.

C4.7 SOS’s are required by OGS D&C to be used to generate the electronic Submittals Website Log. Therefore, the accuracy of this document is paramount in order to efficiently run the submittal process during the construction phase.

C4.8 Include the completed SOS in the Project Manual(s) Appendix.

C4.9 Update the SOS as required after the Construction Duration Meeting is held and after addenda has been issued.

C5 Estimate

C5.1 Final Submission estimates are used by OGS both as a basis upon which to evaluate bids and as a tool to assist with contractor payments during construction. Any single or sole source allowances (vendor quotes for items such as fire alarm systems, building management systems, etc.) must have OSC approval as part of the Final Submission. The Final Estimates should no longer include any Design Development Contingencies. Non-material factors that impact the Construction Value of a job, including temporary services, phasing, shift work should be included in the Total Estimated Construction Value.
C5.2 The Final Estimates include complete itemized quantities for materials based on the construction documents.

C5.3 Refer to the DPM Chapter 6 Cost Control.

C5.4 Estimate Forms:
OGS in-house Designers shall use BDC 50 - Request for Estimate when requesting OGS Cost Control to provide the estimate.
Consultant/Designers shall use BDC 178 - Consultant Estimate Forms.

C6 Code Compliance

C6.1 BDC 402.1 - Code Compliance Review Checklist
Resubmit an electronic copy to PM if the form was revised from the 100% Submission.

C6.2 BDC 401 - Design Compliance Certificate
Submit a signed and sealed hard copy for the project’s primary contract to the PM.

C6.3 BDC 403 - Design Compliance Certificate (Trades)
Submit signed and sealed hard copies for each of the project’s secondary trade contracts (when trades are included) to the PM.

C6.4 BDC 406 – Summary of Special Inspections
Ensure that the form was edited and accepted by the PM.

C6.5 BDC 406.1 – Statement of Special Inspections
Ensure that the form was edited for the project, accepted by the PM and included in the Project Manual Appendix when the BDC 406 requires one.

C6.6 BDC 401.1 - Waiver of Construction Permit
Use in lieu of the BDC 401 for projects NOT requiring a construction permit. Submit a signed hard copy to the PM.

C7 Agency Specific Standards and Requirements

C7.1 Ensure all agency specific standards and requirements are met. See DPM Chapter 9.7 Agency Specific Standards and Requirements

C7.2 Complete BDC 188 – Operating Impact Statement
(Required for DOCCS projects when energy or water usage is impacted)

C8  SWPPP (when applicable)

C8.1  Ensure that the SWPPP Construction and Maintenance Manual and the Notice of Intent (NOI) are complete and forward to the PM. See Chapter 9.11.2 SWPPP. Include Contractor’s certification statement in the Project Manual Appendix.

C9  Approved Allowance Justification Memo (when applicable)

   C10.1  Ensure allowance cost and justification has been completed and accepted by the PM, CADM and OSC. File documents in the Estimate / Allowances folder.

OGS Project Manager RESPONSIBILITIES

P1  Review Comments

   P1.1  Coordinate all review comments and forward them to the appropriate Consultant/Designers. PM and Consultant/Designer shall review comments and determine whether comments are appropriate for incorporation into the bid documents.

   P1.2  Ensure that Consultant/Designer responses and explanation to all comments are received prior to Final Submission.

   P1.3  Forward responses to Clients comments when they are received.

   P1.4  The PM shall determine if a 100% Resubmission or a draft electronic final is required to ensure that comments have been incorporated before sealed mylars are submitted.

   P1.5  File the Consultant/Designer responses within the BDC 35.3 Document Review / Response Form and the BDC 35.2 Field Check Review / Response Form in the ReviewComments project file folder (projects initiated prior to August 2015 or in the 100Pct / Responses folder (projects initiated after August 2015). Send the responses to the originator and notify the Preconstruction Services Unit (PSU) that they have been completed and filed. The PSU will log the completion date into DCNet (constructability review and field check only) and forward responses to initiators and Regional Office.

   P1.6  Prior to bid processing, DCNet will be checked by OPC for completed responses and explanations. If responses / explanations have not been completed, OPC will not permit the project to move forward
unless waived by the Quality Manager or the Director of Design with a BUL remark in DCNet stating the reason for the waiver.

P2 Drawings

P2.1 Ensure that all electronic drawings (AutoCAD, current version) are received and properly filed in the trade designated CAD file folder structure. Ensure that every final drawing sheet should have its own separate electronic drawing file. Ensure that all reference and resource files necessary are included for the plotted drawing to be reproduced.

P3 Project Manual

P3.1 Organize and coordinate the electronic specifications into trade designations in the SpecDevelopment project folder.

P3.2 Ensure that the BDC 406.1 Statement of Special Inspections (when required by BDC 406) is properly edited and included in the Project Manual Appendix.

P3.3 Ensure that the 000105 Certification Page is stamped and signed. Ensure that the Asbestos Designer field indicates name, DOL license number and signature (when applicable) on the 000105 Certification Page for Consultant projects. Submit hard copies to OPC for filing in the RecordCorrespondence folder (projects initiated prior to August 2015) or filed in the 23_CodePermits folder (projects initiated after August 2015).

P3.4 Ensure that all specification sections including Bidding Requirements, Contracting Requirements and Appendix documents. See Chapter 5.2 Project Manual and 000110 Table Of Contents Edit Version For Project Specification to determine who has ownership of which specification section. Coordinate with the Consultant/Designer.

P3.5 File final specifications in the 42_FinalSpecs folder.

P4 Schedule of Submittals (SOS)

P4.1 Ensure that the SOS has been properly edited, completed by the Consultant/Designers (all trades) and included in the Project Manual(s) Appendix.

Ensure that critical submittals and long lead items (column F) have been identified and marked accordingly.

Ensure that the SOS tab is populated and that all Division tabs (Div. X) are deleted.

Ensure that the reviewer option selections (Send to – column E) is marked accordingly with either F, F/O or D designations.
Ensure that addenda effecting submittals is addressed in the SOS.

File the SOS Excel document in the SpecDevelopment / SOS folder (projects initiated prior to August 2015) or in the 36_SpecDevelopment / SOS folder (projects initiated after August 2015).

P4.2 The PM/EIC shall review the edited SOS and routing of submittals prior to the distribution of the Final Submission. Submit the final SOS Excel documents to Submittals Exchange ® prior to project award.

P4.3 The PM/TL will confirm critical submittals identified by the Consultant/Designer which will be incorporated into the contractor’s approved detailed estimate. The PM or TL should discuss critical submittals with the EIC and contractor to ensure that the focus is on selecting submittals that will progress the work. The PM or TL should bring the critical submittals to the attention of Cost Control for inclusion in the detailed estimate. Critical submittals are those submittals considered vital to the timely progression of the contract schedule and include long lead items. D&C will allow the contractor to be paid for critical submittals after they have been approved.

P5 Electronic Contractor Payments (ECP)

P5.1 Ensure that the ECP input into DCNet is done prior to award of contracts. Forward to Cost Control by using send button. Ensure that the specification numbering and titles align with the ECP System. This system streamlines the process of construction contractor payments, to reduce errors and to reduce the level of effort required by EIC’s and OGS CADM. The ECP System shall be used for standard lump-sum 40,000 series, Q and M projects. The framework for ECP is the ECP Project Manual, which is created by the PM during this phase. See Electronic Contractor Payments (ECP) for more information.

P5.2 Ensure that addenda effecting the ECP is addressed.

P6 Code Compliance

P6.1 BDC 402.1 - Code Compliance Review Checklist

Ensure that the form was submitted or revised. Ensure that the document is emailed to OPC to file in the RecordCorrespondence folder (projects initiated prior to August 2015) or filed by the PM in the 41_FinalDocProcessing folder (projects initiated after August 2015).

P6.2 BDC 401 - Design Compliance Certificate

Ensure that form is signed and sealed for the project’s primary contract. Submit original hard copy to OPC for filing in RecordCorrespondence folder (projects prior to August 2015) or filing in the 23_CodePermits folder (projects initiated after August 2015).

P6.3 BDC 403 - Design Compliance Certificate (Trades)

Ensure that form is signed, and sealed copies provided for each of the project’s secondary trade contracts (when trades are included). Submit original hard copies to OPC for filing either in RecordCorrespondence
folder (projects initiated prior to August 2015) or filing in the 23_CodePermits folder (projects initiated after August 2015).

P6.4 BDC 401.1 - Waiver of Construction Permit

Ensure usage in lieu of the BDC 401 for projects NOT requiring a construction permit. Filed in RecordCorrespondence folder (projects prior to August 2015) or filed by PM in the 41_FinalDocProcessing folder (projects after August 2015).

P6.5 Ensure that the BDC 406 and BDC 406.1 are edited and filed in the Construction / InspectionReports folder (projects initiated prior to August 2015) or in the 41_FinalDocProcessing project folder (projects initiated after August 2015).

P7 BDC 201 Bidding and Contract Documents Transmittal

P7.1 Complete BDC 201. Ensure that any restricted work periods are listed and match the Contract Duration Meeting report and Summary of Work, specific cash allowances are listed (including allowance justifications and approvals, drawing count listed, etc.) Confirm the Contract Duration Meeting award date aligns with the DCNet award date; if they are different the CDM needs to be updated and the result may require an update of the Summary of Work and the BDC 201, to be reviewed by PSU and Contract Awards. Division of Construction must sign off on construction duration and restricted work periods.

P7.2 Submit the hard copy for OPC to file in the 21_RecordCorrespondence folder.

P8 BDC 203 Notice of Approval and Authorization to Advertise

P8.1 Complete BDC 203 checklist provided by OPC.

P8.2 Email the completed document to OPC to file in RecordCorrespondence folder (projects initiated prior to August 2015) or PM to file in the 41_FinalDocProcessing project folder (projects initiated after August 2015).

P9 Final Letter

P9.1 Ensure that the PM’s draft Final Letter (DCNet/Letters/Division of Design Letters) is saved in the Correspondence / FinalContractProcessing folder (projects initiated prior to August 2015) or in the 41_FinalDocProcessing folder (projects initiated after August 2015).

P10 Project Scope
P10.1 The PM shall update DCNet project scope using language directed to the contractor community. The PM shall ensure all Clients’ defined project scope has been included.

P11 Consultant Evaluation

P11.1 Back Check: Complete the Consultant Evaluation if it was not completed at the 100% Submission Phase.

P12 Agency Specific Standards

P12.1 See DPM Chapter 9.7 Agency Specific Standards and Requirements

Discuss agency standards and compliance with the Consultant/Designer.

P12.2 Ensure all client requirements have been met and the project is in compliance with agency standards.

P12.3 BDC 188 – Operating Impact Statement (DOCCS projects - when applicable). Ensure that BDC 188 is included when energy or water usage is impacted. File document in the 34_DesCalcs folder (projects initiated after August 2015).

P13 SWPPP (when applicable)

P13.1 Obtain the client’s signature on the NOI and transmit the signed NOI to DEC. Insert a copy of the completed NOI and the DEC Acknowledgement Letter into the SWPPP Construction and Maintenance Manual.

P14 Energy Efficiency (EO88) Sustainable Design

P14.1 Ensure compliance with Chapter 9.5 Energy Efficiency (EO88) Sustainable Design.

P14.2 Ensure that the LEED Project Checklist (when applicable) or Green Design Table for Small Projects has been completed. File document in the 34_DesCalcs folder (projects initiated after August 2015).

P14.3 Ensure that LEED Checklist is included in section 018113 of the Project Manual. File the document in the 34_DesCalcs folder (projects initiated after August 2015).
P15  Construction Acceleration Incentive - CAI (when applicable)

P15.1  Complete BDC 40 Construction Acceleration Incentive Approval. Need BUL, Cost Control and Director of Construction input and approvals. File completed form in the 37_Estimates folder. Submit hard copy to OPC for filing in

P15.2  Include 007305 Supplementary Conditions – Construction Acceleration / Liquidated Damages and related backup material.

P15.3  Include CAI information in the Advertisement for Bids.

P15.4  Coordinate 011000 Summary of the Work to include durations and definitions that complement the 007305 Supplementary Conditions.

P16  Final Estimate

P16.1  BDC 178 Consultant Estimate Excel document is filed in the Estimate folder (projects initiated prior to August 2015) or filed in the 37_Estimate folder (projects initiated after August 2015) and labeled as the final estimate. Ensure that all revisions are included and that design development contingencies are removed from the final estimate.

P16.2  Submit Estimate Summary page hard copy to OPC.

P16.3  Best Practice: Review final estimate with Cost Control prior to filing into the project folder.

P17  Approved Allowance Justification Memo (when applicable)

P17.1  Ensure allowance cost and justification has been completed and accepted by CADM and OSC. Ensure documents are filed in the Estimate / Allowance folder (projects initiated prior to August 2015) or filed in the 37_Estimate Allowance folder (projects initiated after August 2015).
P18 Distribution of the Final Submission

P18.1 The PM/TL transmits the following to OPC for bid processing:

<table>
<thead>
<tr>
<th>Item</th>
<th>to OPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Documents - Drawings (stamped mylars)</td>
<td>Original</td>
</tr>
<tr>
<td>BDC 201 Transmittal Form</td>
<td>Original</td>
</tr>
<tr>
<td>OPC files scanned copy in 21_RecordCorrespondence folder</td>
<td></td>
</tr>
<tr>
<td>BDC 401 - Design Compliance Certificate</td>
<td>Original</td>
</tr>
<tr>
<td>OPC files hard copy and scanned copy in 23_CodePermits folder</td>
<td></td>
</tr>
<tr>
<td>BDC 403 - Design Compliance Certificate (Trades)</td>
<td>Original</td>
</tr>
<tr>
<td>OPC files hard copy and scanned copy in 23_CodePermits folder</td>
<td></td>
</tr>
<tr>
<td>00105 Certification Page(s)</td>
<td>Original</td>
</tr>
<tr>
<td>OPC files hard copies and scanned copies in 23_CodePermits folder</td>
<td></td>
</tr>
<tr>
<td>Final Documents - Project Manual (electronic)</td>
<td>In folder</td>
</tr>
<tr>
<td>PM files in 42_FinalSpecs folder (projects initiated after August 2015)</td>
<td></td>
</tr>
<tr>
<td>Draft Final Letter (DCNet/Letters/Division of Design Letters)</td>
<td>In folder</td>
</tr>
<tr>
<td>PM files in 41_FinalDocProcessing folder (projects initiated after August 2015)</td>
<td></td>
</tr>
<tr>
<td>Final Estimate BDC 178 (consultant) or BDC 177 (in-house) Summary Page</td>
<td>In folder</td>
</tr>
<tr>
<td>PM files Summary Page in 41_FinalDocProcessing folder (projects initiated after August 2015)</td>
<td></td>
</tr>
<tr>
<td>PM files the final workbook in 37_Estimates folders (projects initiated after August 2015)</td>
<td></td>
</tr>
<tr>
<td>BDC 203 Notice of Approval and Authorization to Advertise</td>
<td>In folder</td>
</tr>
<tr>
<td>PM emails to OPC (projects initiated prior to August 2015)</td>
<td></td>
</tr>
<tr>
<td>PM files in 41_FinalDocProcessing folder (projects initiated after August 2015)</td>
<td></td>
</tr>
</tbody>
</table>
What are the COMMON ERRORS?

Inconsistent product and terminology exist between the Drawings and Specifications.

Estimate not updated to reflect review comments and/or is not in a usable format.

Estimates not updated to remove Design Development Contingencies.

Drawings and Specifications do not consistently display the formal approval date provided by the PM.

Supporting certificates and forms are not included with the Final Submission.

Review comments are not fully incorporated from the 100% Submission. Review responses are not completed by Consultant/Designers.
Asbestos Designer’s (where applicable) signature and DOL number is missing from the governing trade’s specification Certification Page 000105.

Inconsistent drawing numbering and titles among specifications, drawings, and associated phase forms.

Electronic file names for each Project Manual specification section are different from the standard OGS electronic file name.

SOS is not edited or missing.

Microsoft Word track edited changes feature is printed on Final Submission specifications. Turn off this feature to avoid this problem.

Yellow highlighted text in the specifications is printed on Final Submission. Delete this text.

The BDC 401 Design Compliance Certification signature for the Permit Issuance Recommendation needs to be signed by a State employee of OGS D&C meeting the requirements of Licensed Professional or Certified CEO.

What TOOLS & RESOURCES are available?

- BDC 402.1 CONSTRUCTION PERMIT DOCUMENT REVIEW CHECKLIST
- AGENCY SPECIFIC STANDARDS AND REQUIREMENTS
- ARCHITECTURAL DOCUMENT CHECKLIST
- MECHANICAL DOCUMENT CHECKLIST (RESERVED)
- SITE DOCUMENT CHECKLIST (RESERVED)
- ELECTRICAL DOCUMENT CHECKLIST (RESERVED)
- DOCUMENT CHECKLIST (RESERVED)
- STANDARDS CHECKLIST (RESERVED)

What happens NEXT?

Once Final Documents are completed, OPC begins the bid processing tasks, including establishing a bid date, preparation of the final specification front-end document (as indicated as inserted by OPC in the
DPM Chapter 5.2 Project Manual), scheduling the required pre-bid visits, advertising the job, scanning documents, and printing full contract bid documents for sale and distribution to prospective bidders.

Consultant/Designer(s) shall be prepared to respond to bidder questionnaires submitted by plan purchasers via the OGS Web / Contract Awards Office and PM. Consultant/Designer(s) and the PM shall prepare addenda as required. See Chapter 7 Bid Phase for more information.

The PM shall coordinate the Design / Construction Pre-Construction Meeting to include D&C field staff and Consultant Designers. See Chapters 7.1 and 7.6 for more information.
Chapter 5
Technical Documents

5.1 General Information
5.2 Project Manual
5.3 Drawings
5.4 Technical Requirements for Drawings & Electronic Document Submission
CHAPTER 5 – TECHNICAL DOCUMENTS

5.1 GENERAL INFORMATION

A The Construction Documents consist of the Drawings, Project Manual (Specifications) and Addenda.

- OGS D&C projects shall follow the National CAD Standard for project Drawings and the CSI standard for Specifications.
- The intent of following these well-coordinated standards is to offer a consistent product and reduce risk to project cost and schedule from errors and omissions.

B The documents shall be clear, concise, correct and complete to effectively communicate their intent and instruction to the Contractor.

C Drawings and Specifications for each prime contract are complementary.

D Bidders/Contractors are responsible for reviewing the other prime Contractor drawing sets for coordination of the work; however, they are not responsible for reviewing the other prime contract Specifications.

E Depending on the size and scope of the project, Drawings may be bound within the Specification. Specifications should not be written on the Drawings.

- An exception to this requirement may be for Emergency Contracts and Job Order Contracts (JOCS).

F The “lowest responsible bid” award is the predominant delivery mechanism for awarding OGS D&C projects to Contractors. Therefore, the Construction Documents need to be complete, logically presented, properly detailed, and conveyed in a clear and concise manner.

G Terms used on the Drawings to identify materials and equipment shall precisely match terms used in the Specifications. Many times the Consultant/Designer names or
labels items that contradict the master specifications. Each Consultant/Designer shall be responsible for using consistent terminology in the Drawings and Specifications.

H Show all products included in Part 2 of the Specification section on the Drawings. When products are not shown this may generate discussion on General Conditions Article 3 Interpretation of Contract Documents. Some examples are noted below:

- Weep holes and mortar net are not shown in the Drawings but are listed in the Specifications.
- Floor finishes, painting, and coatings specifications are provided without a finish schedule or finish notes to indicate what materials and work areas require these finishes.
- The Consultant/Designer includes six lighting fixture types, which are indicated in the Specifications, yet the drawings only show three lighting fixture types.

The Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all. It is not intended to include work not properly inferable from the Contract Documents. When there is conflict between the Drawings and Specifications, the Drawing takes precedence per the language in Article 3.5 of the General Conditions. To assure clarity of scope of work and to avoid Contractor disputes, it is good practice that the Consultant/Designer includes in the Drawings all relevant materials found in the specification sections by including detailed drawings, notes, schedules, etc.

I The word “new” shall not be used. Identify work as “existing” to differentiate from that which is being provided by the contract. Article 5.1 of the General Conditions notes that all materials, equipment and articles used permanently in the Work which become the property of the State shall be new unless specifically stated otherwise.

J The General Conditions Document 007213 contains important information that affects the preparation of the Technical Documents. Reading this document provides familiarity with OGS contract language and terminology thus eliminating some of the common errors in the preparation of the Technical Documents. Some important articles are highlighted below:

General Conditions Excerpts
Definitions:

Article 2.9

Notes shall not reference the State, Architect, Owner, Engineer, Engineer-in-Charge, Client or Project Representative. The correct term is Director’s Representative and it shall be the only term used.

Article 2.12

Terms defining contractor completion and that can be referred to in schedules such as phasing. The term “physical completion” means the date upon which the Director’s Representative certifies that all deficiencies noted on the Final Inspection List have been corrected and is evidenced by issuance of the Physical Completion Report. The term “substantial completion” means that the Work is sufficiently complete so that the Work can be used for the purpose for which it is intended.

Interpretation of Contract Documents:

Article 3.1

The Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all. It is not intended to include work not properly inferable from the Contract Documents.

Article 3.5

In the event of conflicting provisions in the Contract Documents, the drawings will take precedence over the specifications.

Article 3.6

In the event of conflicting provisions within the drawings, the following order of precedence for resolution of the conflict shall apply: the more specific provision will take precedence over the less specific; if not resolved, the less stringent will take precedence over the more stringent; if not resolved, the less expensive item will take precedence over the more expensive. On all drawings, figures take precedence over scaled dimensions.
Article 3.7

In the event of conflicting provisions within the specifications, the following order of precedence for resolution of the conflict shall apply: the more specific provision will take precedence over the less specific; if not resolved, the less stringent will take precedence over the more stringent; if not resolved, the less expensive item will take precedence over the more expensive.

Materials and Labor:

Article 5.3

Except where specifically provided otherwise, whenever any product is specified by brand name, i.e., manufacturer’s or supplier’s name or trade name and catalog or model number or name, the intent is not to limit competition but to establish a standard of quality which the Director has determined is necessary. The words “or equal” shall be deemed inserted in each instance. The Contractor may use any product equal to that named in the Contract Documents which is approved by the Director and which meets the requirements of the Contract Documents providing the Contractor gives timely notice of the Contractor’s intent in accordance with the submittal and scheduling requirements of Division 1 - General Requirements.

Article 5.4

The Contractor shall have the burden of proving at the Contractor’s own cost and expense, to the satisfaction of the Director, that the proposed product is equal to the named product. The Director may establish criteria for product approval. The Director shall determine with absolute discretion whether a proposed product is to be approved.

Article 5.5:

If the Contractor fails to comply with the provisions of this Article, or if the Director determines that the proposed product is not equal to that named, the Contractor shall supply the product named.

Article 5.6:

The Contractor shall have and make no claim for the extension of time or for damages because the Director requires a reasonable period of time to consider a product proposed by the Contractor or because the Director disapproves such a product.
Article 5.7:

Where optional materials or methods are specified, or where “or equal” submissions are approved, the Contractor shall make all adjustments to contingent Work, whether the contingent Work be the Work of its contract or the Work of other Contractor’s, necessary to accommodate the option or “or equal” product it selects without extra or additional cost.

K The following definitions are the only meaning for the terms noted below and shall be used accordingly on the Drawings and Specifications:

- **Furnish**: The Contractor brings the item to the site for installation by others not in his/her contract.
- **Install**: The Contractor installs an item not in his/her contract that is brought to the site by a different contract or the owner.
- **Provide**: Means to furnish and install, i.e. the Contractor brings the item to the site and installs it. See General Conditions Article 2.16.
- **Remove**: Detach items from existing construction and dispose of them off-site unless indicated to remain the Property of the State. See 017329 Removals, Cutting, And Patching specification and 015000 Construction Facilities & Temporary Controls.

L Multiple Prime Contracts Guide (Wicks Law) Design Guide Chapter 9.3

- Section 135 of the New York State Finance Law, commonly known as the “Wicks Law”, requires OGS D&C to bid specific separate Multiple Prime Contracts
Design Procedures Manual
A Guide to Designing Projects for Design & Construction

(Construction, HVAC, Electrical and Plumbing) for certain public work projects where the cost of the public work exceeds:

- $3 million in Bronx, Kings, New York, Queens and Richmond counties
- $1.5 million in Nassau, Suffolk and Westchester counties.
- $0.5 million in all other counties

- For projects with costs below the thresholds above, a single contract shall be utilized which includes the work of multiple trades. Such contracts are referred to as Wicks Exempt.

- Refer to Chapter 9.3 for more detailed information.

M Inappropriate Terms

Avoid the use of “by others.” This term could easily be considered ambiguous. It is meant to identify work performed by another contract or by the owner. Instead of using the term “by others” clearly identify the specific trade contract such as “by P contractor”. When an item is “furnished by owner,” ensure that the responsibility for storage, installation, rough-in, commissioning, etc. is clear.

Do not use phrases with missing objects such as “as allowed” (by whom?), “as appropriate” (according to what?), “as approved” (by whom?), “as directed” (by whom?), “as indicated” (where?), or as “as required” (according to what or whom?). The phrase, “as necessary,” may be appropriate if a definition is specified that establishes the criteria for determining the necessity.

Proprietary items, design, or processes shall not be specified or required without formal approval by the OGS Team Leader. If approved, these items are considered not subject to competitive bidding and are therefore included in the contract as an allowance. See Chapter 5.2 for more information.

Generally, the competitive bidding statutes of New York State demand free and open competition among equivalent products. First and foremost, that means the standard in all public works Specifications should be what is known as the “or equal” clause. This clause essentially states that in the technical specifications the words “or equal” may be assumed after each and every list of products. In fact, the term “equal” is a misnomer. The proper term is “equivalent.” The performance of the product is important. The listed products set up a performance standard that must be met. In other words, it is not important that each bolt or internal mechanism be exactly the same as the listed product, only that it performs the same function to the same effectiveness. Article 5.3 in the General Conditions allows for equivalent products.
that are equal to the standard of quality set forth in the documents to be submitted. Its use is the option of the bidder so as to allow for the maximization of competition and thus better pricing to our Client Agency and the State of New York. Inherently, the Contractor takes a risk that his/her judgment of the product equivalence is proper since the Consultant/Designer approves / disapproves the proposed equivalent, post bid.

**The guideline “rule of three” of listing three manufacturers in the Specifications allows bidders to quickly get competitive pricing from acceptable manufacturers meeting the performance requirements required.**

- The Consultant/Designer should make an effort to name three manufacturers for all materials and products. Including manufacturer contact information assists the bidder when bid phase durations are short.

- Performance characteristics are recommended when fewer than three manufacturers are named.

- When using performance Specifications plus a manufacturer list, the Consultant/Designer should use care in listing a manufacturer and model number that does not conflict with performance requirements set forth in the Specifications.

- Listing three manufacturers in the Specification does not prevent the Contractor from submitting a proposed equivalent product for review and approval.

- Even though a Consultant/Designer may include the manufacturer’s name and model number, including performance Specifications assists the Contractor and the Consultant/Designer in submitting and evaluating “or equal” products. Performance Specifications should also provide additional descriptions of optional items that the model number may not clearly identify.

OGS D&C discourages Consultant/Designers from using manufacturer supplied performance criteria that limits the source of the material to that manufacturer through restrictive material and performance characteristics. Specifications written by outside specifications writers who are employees / distributors of a manufacturer are also discouraged, as these specifications may prescribe proprietary features or restrictive or exclusive performance criteria. This practice goes against the unrestricted competition clause in the General Conditions.

Avoid the use of abbreviations in the Drawings and Specifications. When absolutely necessary, abbreviations should be based on common engineering and construction terms and accepted abbreviation symbols. The Consultant/Designer shall
provide an abbreviations list and the term description on the Drawings or in the Specification.

P Project complexity, magnitude of the work and risk factors may require the Consultant/Designer to include and specify the level of contractor or sub-contractor qualifications (quality assurance) when editing individual specification sections.

Q The Contractor is usually not mandated to visit the project site prior to bid. Thus, catch-all notes associated with verifying site conditions “prior to bid” are not appropriate.

R For Consultant projects, the Project Manual and other technical reports shall be submitted electronically in a format compatible with Microsoft Office Professional (2013 Edition) software.

For Consultant projects, the Project Manual and Drawings should NOT include consultant and sub consultant contact information such as phone numbers or email addresses so as to discourage bidders from reaching out directly to Consultants during the contract restricted period between advertisement and award.

1. BUILDING AND SITE REHABILITATION PROJECTS

a) Provide removal drawings separate from work drawings, including plans, sections, elevations, and details.

b) Provide clear graphic delineation of removals, existing work to remain and construction work.

c) Identify existing materials as “existing”.

d) Call out all new work and new materials without the word “new”. Work not called out as “existing” is considered to be “new” work.

e) Provide means of continuous fire protection in buildings which will be occupied during construction.

f) Use the term “remove”, “removal”, or the like and avoid the use of the word “demolition”, “demolish” or the like unless scope of work is destruction of additions or buildings. See OGS Master Spec 017329 Removals Cutting And Patching.

g) Specific allowances take some time to review and approve and should be requested early in the design period. See Chapter 5.2 for additional information.

Be careful using familiar General Notes commonly employed for private work. Many times, these notes conflict with the front-end documents or the General Conditions.

Avoid use of subjective and arbitrary notes, such as those in the following examples:
Example No. 1:

“The General Contractor shall be responsible for coordinating the work of all trades and subcontractors.”

(There are no General Contractors, only Construction Contractors. All Contractors are required to coordinate work amongst themselves and the EIC as described in the General Conditions. Delete reference to shall.)

Example No. 2:

“Repair wall opening to match existing wall. Caulk and seal with a sealant of high quality and long life to prevent infiltration of outside air and water into annex equipment mechanical room.”

(High quality and long life need to be defined.)

Example No. 3:

“All construction shall conform to the latest edition of all building codes and ordinances. The NYS Uniform Fire Prevention and Building Code, the ADA code, and in case of conflict the most stringent shall govern.”

(Consultant/Designer is responsible to include all scope relating to codes. Delete references to shall.)

Example No. 4:

“Piping penetrating firewalls shall be fire stopped with a 3M or approved equal system for through penetrations approved for the specific application.”

(Consultant/Designer needs to show locations and ratings of walls. Delete reference to shall. See Firestopping Guide for additional information.)

Example No. 5:

“It shall be the responsibility of the Contractor, prior to submitting a bid, to visit the site and inspect the entire area of the work. The Contractor shall be completely familiar with all existing conditions affecting the work. If in the execution of the work, extra work is necessary due to the Contractor’s failure to be familiar with existing conditions such as...
extra work shall be furnished and installed by the Contractor at no additional cost to the owner.”

(Contractors are usually not required to visit to project site) Delete references to shall.)

Example No. 6:

“Include the cost of all small details and incidental work not shown or specified but which is required for a complete and satisfactory system.”

(All work needs to be indicated in the documents.)

Example No. 7:

“Lighting levels shall be per IES Standards (35 foot candles average and 20 foot candles minimum) Contractor shall install/remove lighting fixtures based on actual field lighting level measurements.”

(Scope of work needs to be clearly indicated and is not biddable. Delete reference to shall.)

Example No. 8:

Do not use words such as “few” and “many” because they are not quantifiable.

Example No. 9:

Do not use phrases such as “remove as required” or “install as required.” Use a phrase such as “install per manufacturer’s recommendations.”

Example No. 10:

Do not include subjective phrases such as:

Provide trap and vent “as required”
Provide condensate pumps “if necessary”
Provide fire dampers “as needed” at all rated wall penetrations
Install all work “in an approved manner”
(The EIC and Inspector struggle with the final acceptance of components shown to be installed “in an approved manner.” Referencing specific standards can often mitigate disputes that arise from subjective comments.)

Example No. 11:

Do not include the following language in the documents:

Architect or Project Architect
Owner
Project Manager
Construction Manager
Engineer
Inspector
Facility Representative

All references should be to the Director’s Representative for consistency with the General Conditions.
CHAPTER 5 – TECHNICAL DOCUMENTS

5.2 PROJECT MANUAL

A GENERAL INFORMATION

1. THE PROJECT MANUAL (SPECIFICATIONS) IS COMPRISED OF THE FOLLOWING:

a) Procurement and Contracting Requirements Group:
   • Division 00 Procurements and Contracting Requirements
   • Introductory Information
   • Bidding Requirements
   • Contracting Requirements
b) Specifications Group:

c) General Requirements Subgroup: Division 01

d) Facility Construction Subgroup: Divisions 02 thru 14

e) Facility Services Subgroup: Divisions 21 thru 23 and Divisions 25 thru 28

f) Site and Infrastructure Subgroup: Divisions 31 thru 35

g) Process Equipment Subgroup: Divisions 40 thru 45 and Division 48

h) Appendix:

NOTE: The Divisions not listed above are being “Reserved” by CSI and should not be used in project manuals.

The Introductory Information, Bidding Requirements, Contracting Requirements, Division 1 of the Specifications Sections, and Appendix Documents are described in this chapter. Divisions 1 through 48 of the OGS Master Specifications each contain explanatory notes identified as yellow highlighted text and are self-explanatory. Delete all yellow highlighted text after editing the specification.

Use the OGS Master Specifications located on the OGS public website

The OGS Master Specifications were developed over a long period of time and have been written to address our Client’s institutional construction needs.

However, sections of the OGS Master Specifications may be outdated. Use of the OGS Master Specifications does not relieve the Consultant/Designer of the responsibility of its content.
When creating a new section, match OGS Master Specification in formatting, numbering, layout, font, size, etc. Use the Guide Master Specification as an outline for more complex specifications.

Edit Sections in accordance with the directions contained in the yellow highlighted text messages. Delete all yellow highlighted text as sections are edited.

Completely edit all OGS Master Specification Sections so resultant specification is streamlined and project specific. Eliminate items from the specifications that are not to be provided for the project. Re-number and re-letter remaining articles, paragraphs, and subparagraphs.

Include the Project Number with the trade designation for the contract of which they are a part, in the right-hand side of the page footer on all specification pages. Leave the date information in the left-hand side of the page footer.

Specification sections that are in Division 01 and are common to more than one contract (“Common Documents”) must have the Project No. with all of the trade designations for all of the contracts for which the common specification section is a part, in the right hand side of the page footer.

The order of the trade designations shall be consistent throughout the specification, normally C, H, P, E for most projects. The Lead Trade Designer should be identified as the coordinator for the project “common documents”.

Not all specification sections in Division 01 are “common documents” to all prime contracts. Include only sections appropriate to each contract.

Other Master Specifications such as the AIA Master Spec (internal use only) or firms own specifications may be utilized with the exception of certain client specific specifications. Verify substitutions with the OGS Team Leader (TL).

When using a combination of OGS and AIA Master Specs or other specifications provided by the Consultant/Designer, ensure that the specifications are closely coordinated and do not contain conflicting information. All specifications must be in the same format and use the same text fonts and sizes as used in the OGS Master Specifications.

The AIA Master Spec has Supporting Documents for each section that may assist the Consultant/Designer in specifications whether using the OGS Master Specifications or other specifications:

- **Evaluations** – Describes the characteristics and criteria for specifying the products and materials; the scope of the section, a description of product characteristics; special design and detailing considerations; referenced standards; suggested reference materials and a list of manufacturers. Product comparisons are included in some sections.

- **Drawing Coordination Checklist** – Drawing requirements organized and related to the section content. Sheets indicate items that should be shown on the drawings because they are not in the section text.

- **Specification Coordination Checklist**.
At the end of each edited specification make sure that “END OF SECTION” is included and the author / editor initials, colon, and typist initials are included on the left margin.

Cash Allowances listed in Section 012100 (other than field order contingencies) must have the approval of the Client Agency, TL, PM and the Office of the State Comptroller. See allowance Specification 012100 in this Chapter.

Updating or adding new OGS master specifications:

Send specification request to the Specifications QIT Team Leader, who will coordinate with the Specification Division Point of Contact (POC) persons noted below:

<table>
<thead>
<tr>
<th>DIVISION</th>
<th>POC</th>
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<tbody>
<tr>
<td>00 – Procurement and Contracting Requirements</td>
<td>Pierre Alric</td>
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<td>02 – Existing Conditions</td>
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<td>03 - Concrete</td>
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<td>04 - Masonry</td>
<td>John Hutton</td>
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<td>05 - Metals</td>
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<td>06 – Wood, Plastics, and Composites</td>
<td>John Hutton</td>
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<td>07 – Thermal and Moisture Protection</td>
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<tr>
<td>08 - Openings</td>
<td>Cathy Hall</td>
</tr>
<tr>
<td>09 - Finishes</td>
<td>James Comegys</td>
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<td>10 - Specialties</td>
<td>Doug Scott</td>
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<td>11 - Equipment</td>
<td>Dan Kelley</td>
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<td>13 – Special Construction</td>
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<tr>
<td>14 – Conveying Equipment</td>
<td>Dan Miller</td>
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<td>21 – Fire Suppression</td>
<td>John Chamberlain</td>
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<td>22 - Plumbing</td>
<td>John Chamberlain</td>
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<td>23 – Heating Ventilating and Air Conditioning</td>
<td>John Chamberlain</td>
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<td>25 – Integrated Automation</td>
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<td>Chapter</td>
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<td>Waterway and Marine Construction</td>
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<td>Process Integration</td>
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<td>Material Processing and Handling Equipment</td>
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<td>42</td>
<td>Process Heating, Cooling, and Drying Equipment</td>
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<td>43</td>
<td>Process Gas and Liquid Handling, Purification, and Storage Equipment</td>
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<td>45</td>
<td>Industry Specific Manufacturing Equipment</td>
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<td>48</td>
<td>Electrical Power Generation</td>
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<td></td>
<td>Appendix</td>
</tr>
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2. PROJECT MANUAL BASIC STRUCTURE

   • PROCUREMENT AND CONTRACTING REQUIREMENTS GROUP

   • DIVISION 00 – PROCUREMENTS AND CONTRACTING REQUIREMENTS:
     ○ INTRODUCTORY INFORMATION
     ○ BIDDING REQUIREMENTS
     ○ CONTRACTING REQUIREMENTS

   • SPECIFICATIONS GROUP
     ○ GENERAL REQUIREMENTS SUBGROUP
     ○ DIVISION 01 GENERAL REQUIREMENTS
• FACILITY CONSTRUCTION SUBGROUP
  Division 02  Existing Conditions
  Division 03  Concrete
  Division 04  Masonry
  Division 05  Metals
  Division 06  Wood, Plastics, and Composites
  Division 07  Thermal and Moisture Protection
  Division 08  Openings
  Division 09  Finishes
  Division 10  Specialties
  Division 11  Equipment
  Division 12  Furnishings
  Division 13  Special Construction
  Division 14  Conveying Equipment

• FACILITY SERVICES SUBGROUP
  Division 21  Fire Suppression
  Division 22  Plumbing
  Division 23  Heating, Ventilating, and Air Conditioning
  Division 25  Integrated Automation
  Division 26  Electrical
  Division 27  Communications
  Division 28  Electronic Safety and Security

• SITE AND INFRASTRUCTURE SUBGROUP
  Division 31  Earthwork
  Division 32  Exterior Improvements
  Division 33  Utilities
Division 34  Transportation
Division 35  Waterway and Marine Construction

•  PROCESS EQUIPMENT SUBGROUP
Division 40  Process Integration
Division 41  Material Processing and Handling Equipment
Division 42  Process Heating, Cooling, and Drying Equipment
Division 43  Process Gas and Liquid Handling, Purification, and Storage Equipment
Division 44  Pollution Control Equipment
Division 45  Industry-Specific Manufacturing Equipment
Division 48  Electrical Power Generation

•  APPENDIX

Most projects will not contain many of the above sections. Other sections are available in several formats and are used for particular project types. See Chapter 3 Types Of Contracts for additional information.

3.  TOOLS AND RESOURCES
   a)  The OGS Master Specifications contains master specifications developed by OGS Design.
   b)  AIA Master Specification Support Documents contains supporting information that can be used by the Consultant/Designer when evaluating products or systems. These specifications may replace the OGS Master Specifications. Coordinate with the PM/TL.
   c)  AIA Master Specification Drawing Coordination Worksheets is a tool used to indicate what should be shown on the drawings because they are not in the section text.
   d)  AIA Master Specification - Specification Coordination Worksheets is a tool used to indicate what other specification sections describe related scope not included in the section text.
   e)  Table of Contents Edit Version for Project Specs. This version of the Table of Contents includes yellow highlighted text, which repeats the information in section F Project Manual. This section is meant to be used by Consultant/Designers editing the Table of Contents and not familiar with the OGS “front end” documents and explains which sections to include with each project type. The grey highlighted text indicating dates are
hidden text, which is used to validate latest version of the master. Delete hidden text before submitting the final TOC.

f) Chapter 7.3 Preparing Addenda provides information for writing addenda.

4. SUBMISSION REQUIREMENTS

See Chapter 4 Design Phase Guidelines for Project Manual specific submission requirements.

- SCHEMATIC DESIGN PHASE
- DESIGN DEVELOPMENT PHASE
- 80% SUBMISSION PHASE
- 100% SUBMISSION PHASE
- FINAL SUBMISSION PHASE

5. COMMON ERRORS

1. **Yellow highlighted text** messages (phantom notes) has not been deleted and instructions for editing specifications are not followed.

2. Documents 002213 through 002218 may not be common documents in each Project Manual of a project and should be edited individually so that the added articles will be numbered correctly.

3. Document 002213 Supplementary Instruction To Bidders - Affirmative Actions is only required if the individual contract (not the total project cost) is over $100,000.

4. OGS Project Manager to coordinate the project title on contract documents to agree with that in DCNet.

F. PROJECT MANUAL COORDINATION INSTRUCTIONS

INTRODUCTORY INFORMATION
1. **000101 Title Page (Cover): Required for all contracts.**
   a. There are 3 versions of this document:
      1) Standard Contract Projects w/ Pre-bid site visit.
      2) Standard Contract Projects w/ Pre-bid site visit Wicks Exempt.
      3) M Program Pre-bid site visit Fasttrack.
   b. Choose the appropriate cover. Type the following information in upper case letters:
      1) Project number (with the proper suffix) followed by a blank line.
      2) Contract work designation, i.e. CONSTRUCTION WORK; HVAC WORK; PLUMBING WORK; ELECTRICAL WORK.
      3) Exact project name and location as it appears on drawings (without PO Box, if any, and zip code) followed by a blank line. New York should be abbreviated NY.
      4) Date (should match date on drawings and certification page).
      5) Edit Submission Phase as required.
      6) Edit Pre-bid Site Visit as required.
      7) Edit 100% Submission text box as required for particular submission.

2. **000105 Certification Page: Required for all contracts.**
   a. There are two versions of this document:
      1) Standard (in-house projects or combination in-house consultant projects).
      2) Design Consultant
   b. The Certification Page contains the same information as the Cover and should be entered exactly as indicated above in 1.b.
   c. Additional information required on the page:
      1) Client Agency typed in upper case letters (see list below). It is not necessary to include “New York State” prior to the client agency’s name.
      2) OGS D&C Project Team Leader’s name with correct spelling and professional designation (R.A., AIA, P.E.), if applicable. The TL is the same for all contracts in a multi-contract project.
      3) D&C’s address and the phone and FAX numbers for Contract Administration are already pre-entered on the standard form.
4) Design Consultant’s version contains “Prepared by:”. The Design Consultant’s name and address should be entered in this location. DO NOT include the phone and FAX numbers as it facilitates undesired communication between the bidders and the consultant.

5) The bid set submission will include the professional seal of the person(s) responsible for design.

6) Include the Asbestos Designer’s name, signature, DOL license number and firm’s name on all asbestos projects.

3. 000110 Table of Contents: Required for all contracts.

a. The Table of Contents is a list of all of the items contained in the Project Manual including those items inserted at the time of bid processing by OGS administrative personnel. The Table of Contents includes:

1) Procurement and Contracting Requirements Group
   Division 00  Procurements and Contracting Requirements

2) Specifications Group
   General Requirements Subgroup: Division 01
   Facility Construction Subgroup: Divisions 02 thru 14
   Facility Services Subgroup: Divisions 21 thru 23 and Divisions 25 thru 28
   Site and Infrastructure Subgroup: Divisions 31 thru 35
   Process Equipment Subgroup: Divisions 40 thru 45 and Division 48

3) Appendix
   b. Include the division headings and words “Document Number and Title” or “Section Number and Title” if boldfaced heading is used.
   c. DO NOT list Division Number and Title if no sections in that division will be included in the Project Manual.
   d. Prepare Table of Contents using one of the following from the Master Specification on the OGS web site:
      1) Edit the Table of Contents Edit Version for Project Specs to prepare the Table of Contents for all projects. This version has yellow highlighted text and notes to help the Consultant/Designer determine which front end sections to include and which are written and added to the Project Manual by OGS administrative personnel.
      e. Refer to the various headings that follow to determine which front-end documents and appendices are required for the Table of Contents.

4. 000115 List of Drawings: Required for all contracts.
a. Select appropriate document:
   1) Single contract projects.
   2) Multi-contract projects.

b. If full size sets of drawings are included edit section as follows:
   1) Drawing title sheet or drawing index sheet listing the drawings is included in the drawing package. This is the default format unless otherwise directed by the D&C PM.
   2) Drawings are not listed on full size drawings and are listed in this section.

c. If 8½" x 11” or 11” x 17” drawings are bound in the Project Manual appendix:
   1) Edit document listing the drawings.

d. Lead trade should coordinate drawing names and numbers on drawing title sheet, index sheet or in this specification section.

e. Common document on multi contract project.

BIDDING REQUIREMENTS

5. Advertisement for Bids: Use for all contracts except the following:
   1) Emergency contracts.
   2) Inmate labor contracts.
   3) Sole-source contracts.

a. Select one of the following documents:
   1) 001113 Advertisement for Bids: Use for all standard projects with no special requirements.
   2) 001114 Advertisement for Bids: Use for projects with special requirements, i.e., expedited award, CROC, construction acceleration incentives, or pre-bid meetings or site visits. This is the most commonly used version.
   3) 001116 Advertisement for Bids: Use for Wicks Exempt projects. Use for projects with special requirements, i.e., expedited award, CROC, construction acceleration incentives, or pre-bid meetings or site visits.
   4) 001117 Advertisement for Bids: Use for Project Labor Agreement (PLA) projects.

b. Prepared and inserted by Office of Project Control (OPC).

c. Common document on multi contract project.
6. Instructions to Bidders:
   a. Use 002113 Instructions to Bidders.
   b. Inserted by OPC.

7. Supplementary Instructions to Bidders:
   a. Modifications to the Instructions to Bidders are made by use of the various Supplementary Instructions to Bidders. If more than one Supplementary Instructions to Bidders is used, coordinate the paragraph number of the paragraph being added so there is only one Paragraph 17 included.
   b. The following are standard versions that must be included as indicated:
      1) 002213 Supplementary Instructions to Bidders – MWBE-EEO: Use for all contracts (not total project cost) over $100,000 in conjunction with Document 007307. Inserted by OPC.
      2) 002214 Supplementary Instructions to Bidders – Total Bid: Use in conjunction with Document 004166.
      3) 002215 Supplementary Instructions to Bidders – Unit Price Projects: Use in Project Manuals containing unit pricing. Use with 004143 Bid Form with a prepared Unit Price Schedule and Section 012977.

002216 Supplementary Instructions to Bidders – Asbestos Projects.

Use in projects containing Asbestos Abatement Section 028213.

5) 002217 Supplementary Instructions to Bidders – Condition of Award: Use in all Project Manuals containing Sections 133419, 133423, or 133424. There are 2 versions of this document. If both sections are included in one Project Manual, the 2 versions need to be combined into 1 document.
   (a) Use with Pre-engineered Metal Buildings (Section 133419).
   (b) Use with Salt Storage Structures (Sections 133423 or 133424).

6) 002218 Supplementary Instructions to Bidders – Pre-Bid Site Visit: Use for projects when determined necessary by OGS D&C and for all projects statewide for the Division of Military and Naval Affairs. OGS Project Manager shall complete BDC 201 form. If the project team strongly recommends that bidders visit the project site, include language as to the specific reasons why bidder attendance is encouraged. Inserted by OPC.

7) 002219 Supplementary Instructions to Bidders – Qualifications of Bidders: Use for all projects. TL to complete BDC 201 form. Inserted by OPC.

8) 002220 Supplementary Instructions to Bidders – Wicks Exempt: Use in projects that meet the requirements for Wicks exemption as described in Chapter 9.3. Inserted by OPC.
9) 002221 Supplementary Instructions to Bidders – Project Labor Agreement: Use with PLA projects. Inserted by OPC.

10) 002222 Supplementary Instructions to Bidders – Condition of Award: Use with PLA projects. Inserted by OPC.

8. 003113 Preliminary Project Schedule:
   a. Use when the bid documents will include a summary schedule to demonstrate the proposed schedule for a project. This may be used when projects involve multiple phases, sequences, etc. Where providing some preliminary summary level schedule information would be helpful to the contractors. Specification sections 013113 or 013200 can be used on the project.
   b. The preliminary project schedule is provided to the PM by the Scheduling Dept. or CM if they are tasked with scheduling assignments.
   c. The PM shall include this document and the preliminary project schedule as soon as possible, but no later than the Final Submission Phase.
   d. This document will be Common document for all contracts in a multi-contract project, if it is decided to use a preliminary summary schedule in the Contract Documents.

9. 003126 Existing Hazardous Material Information:
   a. Use only when hazardous material (HazMat) investigation is performed (e.g., Asbestos, Lead, Mold, PCB, Mercury, Bird/Bat/Mouse Droppings, etc.).
   b. Edit the document as it applies to the project and include the Section in all trades (common document) whether the samples test positive or negative.
   c. This document references to an actual result report from the lab to be included in the Appendix of the manual(s).
   d. Include sample result(s)/report(s) in the Appendix of all trades as a common document whether the samples test positive or negative.
   e. The procedure is similar for Consultant and In-House projects.
   f. Consultant Projects - Preferred method is for the Consultant to do the testing and design. OGS term testing contracts may be utilized if deemed appropriate by the TL/PM and the Consultant/Designer.
   g. Included with 100% submission copies of the Project Manual.
   h. This is a common document. Include in all trades.
i. Include the corresponding HazMat remediation/abatement section in the trade Project Manual that shall perform the remediation/abatement (028003, 028213, 028304, 028402, 028403, 028433, 028533, or 028733).

j. Common document on multi contract project.

10. 003132 Geotechnical Data:
   a. Use if soil investigations and analysis were conducted (normally used for a new building or addition).
   b. This data is obtained and analyzed by a Soils Engineer and is included in each Project Manual on multi-contract projects (Common Document).
   c. The Consultant/Designer includes this document, including the soil data and analysis in the Project Manual.
   d. Geotechnical services should be coordinated through the OGS Geotechnical Engineering Group.
   e. Common document on multi contract project.

11. Bid Form:
   a. Used by the bidder to submit a bid quotation for the work of the contract.
   b. All allowance totals (specified in Section 012100) are included on the bid form.
   c. Use one of the following bid forms in the Table of Contents:
      1) 004113 Bid Form: Use for Standard.
         a) One base bid.
         b) When alternates are specified (Section 012300), the Bid Form is modified to include spaces for the bidder to write in the base bid and alternate bids.
      2) 004120 Bid Form: Use for Wicks Exempt projects.
         a) Include BDC 59 Contractor’s List of Subcontractors (Wicks Exempt) with Bid Form).
      3) 004121 Bid Form: Use for PLA projects.
      4) 004123 Bid Form: Use for two base bids.
      5) 004133 Bid Form: Use for cost plus fixed fee contract projects and cost plus percentage fee projects.
      6) 004143 Bid Form: Use for unit price contract projects. Consultant/Designer is responsible for preparing the unit price schedule that becomes part of the bid form
for bidding purposes. After determination of the low bidder, the completed unit price schedule becomes part of the Agreement (contract).

7) 004166 Bid Form: Use for projects with service contract and in conjunction with Documents 002214, 008081, and 008091.

8) 004173 Bid Form: Use for tank program projects.

d. The Consultant/Designer includes the Unit Price Schedule in the documents for Unit Price Bids.

e. Bid Forms are prepared and inserted by OPC.

12. 004200 BDC 59 Contractor’s List of Subcontractors:

Use for Wicks Exempt projects.

Inserted by OPC. Include with 004120 Bid Form.

13. 004313 Form of Bid Bond – Bid Security:

a. Use for all projects, except inmate labor contract projects.

b. Prepared and inserted by OPC.

14. 004314 New York State Surety Bond

a. Use for all projects.

b. Inserted by OPC.

15. 006517 DCA-3 Offerer Disclosure of Prior Non-Responsibility Determination:

a. Use for all projects.

b. Inserted by OPC.

CONTRACTING REQUIREMENTS

16. General Conditions:

a. Use in every Project Manual.

b. Use one of the following:
1) 007213 General Conditions: Use for all except emergency contract projects.

2) 007214 General Conditions – Emergency Contract: Use for emergency contract projects.

   c. Inserted by OPC.

17. Supplementary Conditions:
   a. Use to supplement or modify the General Conditions.
   b. More than one Supplementary Conditions may be used for any given project. For multiple versions, coordinate numbering of supplementary articles and paragraphs.
   c. No modifications to the standard (preprinted) Supplementary Conditions are permitted without approval from the Director of Contract Administration.


18. 007302 Supplementary Conditions – Dormitory Authority of the State of New York (DASNY):
   a. Use in all projects prepared for bidding by DASNY.
   b. Prepared and inserted by OPC.

19. 007303 Supplementary Conditions – Cost Plus Fixed Fee Contract:
   a. Use in Cost Plus Fixed Fee Contract projects.
   b. Inserted by OPC.

20. 007304 Supplementary Conditions – Cost Plus Percentage Fee Contract:
   a. Use in Cost Plus Percentage Fee Contract projects.
   b. Inserted by OPC.

21. 007305 Supplementary Conditions – Liquidated Damages:
   a. Use in all contracts.
   b. Inserted by OPC.
22. 007305 Supplementary Conditions – Construction Acceleration Incentives and Liquidated Damages:
   a. Use if a construction acceleration incentive is to be paid to the contractor for acceleration of completion of the work and/or if a change is to be made in the amount of liquidated damages.
   b. OGS PM to complete BDC 40 with identified signatures.
   c. Delete “/Liquidated Damages” in the title if no changes are being made.
   d. Use one of the following versions:
      1) Phased Projects: Use when acceleration incentive and/or liquidated damages apply to a phase of the project.
      2) Non-Phased Projects: Use when acceleration incentive and/or liquidated damages apply to the completion of the total project.
   e. Completed by the TL with assistance from the Quality Group and inserted by OPC.

23. 007306 Supplementary Conditions – Warranty Extension:
   a. Use if an extension of the standard one-year warranty is required for the work of a particular section.
   b. Insert the section number(s) in which the warranty extension appears to the blank space.
   c. The additional warranty requirements must also be included in Part 1 of the corresponding specifications section. Specify that the warranty contain the building name and number to locate where material or equipment is placed when the project is located within a campus with multiple buildings.
   [NOTE: Review General Conditions paragraph 9.8 for one-year warranty language. Caution should be exercised in writing modifications to the language. The phrase “shall remedy all defects” in this paragraph is clear, concise, and all-inclusive.]
   d. TL and Client approval is required.
   e. Inserted by Consultant/Designer.

24. 007307 Supplementary Conditions – MWBE-EEO:
   a. Use in all contracts over $100,000 in conjunction with Document 002213.
   [NOTE: Within a set of contracts for a single project, there may be some contracts with Affirmative Action goals and some without.]
   b. Prepared and inserted by OPC.
25. 007309 Supplementary Conditions – License Requirements:
   a. Use in contracts that contain Electrical Work, Plumbing Work and/or Fire Protection Work, and where the project work is located in New York City (Manhattan, Bronx, Brooklyn, Queens and Staten Island Counties).

26. 007320 Supplementary Conditions – Wicks Exempt:
   a. Use for Wicks Exempt projects.
   b. Inserted by OPC.

27. 30. 007322 Supplementary Conditions – Worker’s Compensation:
   a. Use on all contracts.
   b. Inserted by OPC.

28. 007323 Supplementary Conditions – Vendor Responsibility:
   a. Use on all contracts.
   b. Inserted by OPC.

29. 007324 Supplementary Conditions – Encouraging the Use of New York State Businesses in Contract Performance:
   a. Use on all contracts.
   b. Inserted by OPC.

30. 007325 Supplementary Conditions - Project Labor Agreement
   a. Use in all PLA contracts.
   b. Inserted by OPC.

31. 007326 Supplementary Conditions – Orders on Contracts (Change Orders):
   a. Use on all contracts.
b. Inserted by OPC.

32.  008081 Warranty Service Contract – General Conditions:
   a. Used on some projects in conjunction with Document 008091.
   b. Document obtained from Office of Mental Health or Office of General Services and inserted into Project Manual.

33.  008091 Warranty Service Agreement:
   a. Used on some projects in conjunction with Document 008081.
   b. Document obtained from Office of Mental Health or Office of General Services and inserted into Project Manual.

SPECIFICATIONS

DIVISION 01 – GENERAL REQUIREMENTS

34. Common Documents: Identical specification sections (documents) that are included in more than one Project Manual. They identify various relationship and contract requirements for the work identified in the specification section.

   [NOTE: For all Common Documents, edit document once with all contract designations indicated in specification footer. Make copies and insert in all Project Manuals.]

35. Ensure that Division 01 requirements are compatible with the requirements stated in the technical sections.

36.  011000 Summary of the Work:
   a. Use in all contracts.
   b. Use one of the following versions:
      1) Single contract projects
      2) Multi-contract projects
   c. Common Document for all contracts in a multi-contract project.
d. Work Covered by Contract Documents:

1) In cases when no drawings are included with the contract documents, this article is used to by the Consultant/Designer to describe the complete scope of Work. If there is a prescribed sequence for doing the Work it should be written in the same order that the Work is to be done.

e. Type of Contract: Most of the contracts used by OGS D&C are “fixed price” contracts. Revise this designation if a different type of contract is used such as “unit price” or “cost plus”.

f. Related Contracts: Enter all the separate projects that are to bid, awarded and constructed concurrently.

g. Concurrent Projects: Enter other projects taking place concurrently that may interfere with the Work of this Project.

h. Substantial and Physical Completion Dates: Insert the number of days in which the Work must be substantially completed.

1) The number of days refers to calendar days and is determined by the Consultant/Designer and TL/PM in consultation with OGS Division of Construction. TL/PM to coordinate with DCNet project information.

2) If a fixed date is required for completion of the Work, modify the sentence to indicate the Physical Completion Date. Fixed dates should be avoided however, due to the potential for delays in the bid and award process.

3) If a fixed date is used, consider the use of methods to bid, award, and construct the contract on a timely basis. The TL works with the OPC to expedite the printing process and return of information from the apparent low bidder, include construction acceleration incentive increase, Liquidated Damages, etc.]

4) If more than one completion date is required, it should be specified here.

5) Phasing:

a) If the Work must be performed in a predetermined sequence to accommodate continuous operation of the facility or to coordinate with other contracts, insert a new article indicating the title “Phasing” and the phasing sequence.

b) If the Work must be performed in a predetermined sequence, and each phase must be completed within a specific time period, insert a new article with the title, “Phasing and Physical Completion Dates.” In general, it is better to provide a duration for the activity rather than a date because any delays in the bid process will affect the duration of the contract activity and potentially, the bid amount.

i. Contract Award Submittals: Required for all contracts.

j. Restricted Work Period: A length of time during which certain work cannot be performed.

1) Reasons for possible use of a Restricted Work Period:
a) Temperature issues – i.e., materials such as roofing and paving cannot be installed and/or tested below certain temperatures, or work requires shutdown of a heating system that adversely impacts people and/or building systems during cold seasons.

b) Work includes disturbance of asbestos containing materials and a variance is being sought from the NYS Labor Department.

2) The days within the Restricted Work Period may or may not count against the number of construction days. Edit the specifications to either include or exclude the Restricted Work Period in the construction duration.

3) See yellow highlighted text notes in the specifications for further information.

4) In projects that requires Hazmat abatement, identify the trade that shall perform the abatement.

k. Items Not Included: Use in all contracts. Do not edit.

l. Confined Space: Use in all contracts. Do not edit. Consultant/Designers shall indicate facility designated confined spaces on the drawings that are impacted by the project. See yellow highlighted text notes in the specification.

m. Occupancy: Use one of the three paragraphs in all occupied buildings or facilities. Edit as required.

n. Connection to Electrical Equipment or Systems: Use only for projects at facilities operated by OGS, Division of Utilities Management. These projects include those in Albany at the Empire State Plaza and the Harriman SOB Campus.

o. Contractor Use of Premises: Use in all projects.

1) Edit in accordance with instructions in yellow highlighted text.

2) Renumber articles and paragraphs after editing.

p. Facility Regulations: Use only in contracts for the Office of Mental Health (OMH) and the Office of Mental Retardation and Developmental Disabilities (OMR-DD).

q. Openings and Chases in New Construction: Use when new walls, floors, and chases are included in the construction work contract and must accommodate the work of related contracts. Edit listed contracts as required.

r. Reference Specifications and Standards: Use in all contracts.

1) If DOT specifications are referenced, use “B” or “C” in accordance with instructions in yellow highlighted text.

s. Laying Out: Use in all contracts. Edit sub-paragraph B.1 in accordance with instructions in the yellow highlighted text.

t. Special Inspections: The Project Manager must obtain required sign offs from the Structural Designer and architect of record before making special inspections part of project requirements.
If this article is used, BDC-406.1 Statement of Special Inspections must be completed and included in the appendix of the Project Manual. Do not edit.

37. **011100 Safety:**
   a. Use this document for all 40000 series and Q projects.
   b. Common document for all contracts in a multi-contract project.
   c. When work is inherently dangerous, confirm potential use with PM/TL and Area Supervisor.

38. **011400 Interim Life Safety Measures:**
   a. Use for buildings that will be occupied during construction and must comply with Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requirements for special safety measures during construction.
   b. Use one of the following versions:
      1) Single contract projects
      2) Multi-contract projects
   c. Common document for all contracts in a multi-contract project.
   d. The TL/PM must obtain a written request from the client agency’s central office to include this requirement in the contract.

39. **012100 Allowances:**
   a. Use in every fixed price contract.
   b. Specific allowances remove a portion of the bid amount and should not be used without substantial justification. For certain items, such as the removal of suspected asbestos in an inaccessible location, an allowance may be the only fair way to include the cost in the contract sum.
   c. Use one of the following versions:
      1) Single contract projects.
      2) Multi-contract projects.
   d. Common Document for all contracts in a multi-contract project.
   e. Specifies allowances to pay for field order contingencies:
      1) Contingency allowance is a fixed amount of money included in the bid amount and used to pay for field condition orders on contract.
2) Set field order contingency allowance per table below:

<table>
<thead>
<tr>
<th>Estimated Labor &amp; Material Cost</th>
<th>Rehab Work %</th>
<th>New Work %</th>
</tr>
</thead>
<tbody>
<tr>
<td>under $75,000</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>$75,000 - $1,000,000</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>over $1,000,001</td>
<td>6%</td>
<td>5%</td>
</tr>
</tbody>
</table>

3) The contingency dollar value should be set at the time where the project is submitted for 100% Submission review and should not change unless significant changes occur in the scope of the project.

4) Round the allowance amount to the nearest $100.

f. The value of specific allowances is determined prior to bid between the vendor / manufacturer or sub-contractor to perform the work and the Consultant/Designer. It includes specific work that is spelled out in the contract documents. Specific allowances are a fixed amount of money included in the bid amount for specific reasons such as:

1) Furnishing and installing products and/or services from a designated source i.e., Power company charges, or work performed by a specific company to maintain a warranty or certification rating.

2) Furnishing and installing specific products.

3) Furnishing products from a designated source.

4) Disposal of hazardous material, such as PCBs, should testing performed under the base bid determine the material is present.

5) Modifications to an existing fire alarm system.

6) Connecting to an existing DDC system.

7) A common pitfall, specific allowances sometimes includes only the cost of furnishing products but not the labor to installing the products. This needs to be properly identified in the contract documents (typically identified in related specification sections).

g. Authorizations required for use of allowances:

1) Contingency allowances are already approved by the Office of the State Comptroller (OSC) in the amount identified in the percentages e.1 above. Increases in these amounts cannot be made.
2) ALL specific allowances (other than contingency allowances) must be approved by OSC. The following information is necessary for requesting approval of an allowance:

   a) A justification, based on economy and efficiency, for the use of a specific allowance. If the client is making the request for a specific product, there must be a letter from the client agency providing justification (client does not always provide a letter with justification, sometimes only an email). Examples of justification letters may be available from the TL/PM.

   b) A copy of the letter or email sent to the product manufacturer requesting an estimate for the product/work involved.

   c) A copy of the letter on company letterhead containing the price estimate provided in response to the Consultant/Designer request for quotation. A breakdown of the estimate should be obtained whenever possible.

3) TL/PM transmits items above to CADM with a cover memo containing the following:

   a) Identify the contract containing the specific allowance

   b) What the specific allowance is intended for

   c) Specific allowance amount and detailed price quote for products and services

   d) Total project estimate

   e) Brief summary of the project work and the relationship of the specific allowance work to the overall project

   f) Indication that the allowance amount was reviewed by the OGS Bureau of Cost Control and found to be fair and reasonable (Not always reviewed by Cost Control. A specific allowance cost comparison with procurement contract prices and RSMeans prices by TL is provided with memo and TL determines that it is fair and reasonable)

   g) Estimated cost of the contract of which the specific allowance is a part

   h) Percentage relationship between the specific allowance and the total project estimate

   i) Lines for signature and approved by

   j) Who is requesting specific allowance from the Client Agency

   k) For utility work Lump Sum may be appropriate

   l) Allowance Master

   m) Instructions – Allowance - Request

   n) Samples of Allowance Requests:

      (1) Extend Fire Alarm System
(2) Switchgear programming
(3) Relocation of telephone equipment
(4) Digital Video Recording

40. 012200 Cost Computations:
   a. Use in all fixed price and unit price contracts containing Section 012100-Allowances.
   b. Place project number in footer and include in Project Manual with no further editing.
   c. Common Document for all contracts in a multi-contract project.

41. 012300 Alternates:
   a. Use in fixed price contracts when there are bidding alternates.
   b. Defines alternates.
   c. Common Document for all contracts in a multi-contract project that contains alternates.
   d. The wording of the alternate description must clearly distinguish between base bid and work and/or materials in the alternate.
   e. Clearly identify alternate work on the Drawings and/or Specifications.
   f. If alternate involves different materials, both materials must be specified with the alternate material labeled as alternate.
   g. Add alternates should be used for familiarity and uniformity for the bidding community.
   h. Use of alternates on a project:

Design Director’s approval is required before including a single alternate on a project.

Multiple alternates on a project are strongly discouraged.

An alternate should be a significant percentage of the planned work. Alternate work with an estimate of only 1% or 2% of the contract estimate is not acceptable. Alternate work should be at least 5% and preferably 10% or more of the value of the contract work.

Ideally an alternate should affect only one trade. If an all-trade alternate is considered, the work must be very clearly identified and separate from base contract work. Preferably dedicated drawings should be used for the alternate work.

If multiple alternates are approved, they shall be arranged in order of priority, and the Client must be informed that selection of alternates for award will be based on this priority listing.
Overview of Alternates

Purpose of Alternates:
Client Agencies and PMs should always have a clear purpose in mind when asking for an alternate, and they should always know what their options will be once they have enough information. If the reason for asking for an alternate is not clear, the PM should question its validity. An alternate without a well-defined purpose is a waste of time.

Problems with Alternates:
Bidders dislike alternates because they complicate the bidding process and may delay the award of a contract. If the PM does not define the alternate's scope properly, the Client Agency could face unnecessary additional costs during construction.

Frivolous Use of Alternates:
Occasionally an inexperienced Client Agency will try to use alternates as a shopping list, not realizing that excessive use of alternates can be confusing and may mislead bidders. PMs should caution Client Agencies against using alternates if their actions appear to be frivolous. If alternates are necessary, they are a useful tool and provide a Client Agency with valuable information; if they are unnecessary, they create problems for everyone.

Number of Alternates:
PMs should advise the Client Agency that too many alternates are self-defeating. Bid evaluation is difficult when there are too many alternates to consider, particularly if there is no established procedure for accepting alternates. Without an established procedure for acceptance and with many alternates to consider, the possible combinations available may become excessive and lead to delay of the Contract award. Too many alternates may also lead to disputes with unsuccessful bidders who consider themselves unfairly treated.

Order of Alternate Acceptance:
If there are many alternates, establishing a priority order of acceptance as the basis of the Contract award may avoid some problems. If a Client agrees to establish an order of precedence, list the alternates on the Bid Form in the order of their probability of acceptance and inform bidders about the order of precedence in the Instructions to Bidders.
a. Use only in cost plus fixed fee contract projects and cost plus percentage fee contract projects.

b. Place project number in footer and insert in Project Manual with further editing.

43. 012977 Measurement and Payment:

a. Use in all unit price contracts.

b. Place project number in footer and insert in Project Manual with no further editing.

44. 013000 Administrative Requirements:

a. Use in all contracts.

b. The ECP Version is used for most projects.

c. The Non-ECP Version is used for work order contracts, unit price contracts or contracts requiring a project schedule (cost loaded CPM).

45. 013113 Project Schedule:

a. Use this section for all 40,000 series, Q, and M projects.

b. Use 003113 if a preliminary schedule will be provided in the bid documents.

c. This is the default scheduling specification to use. If another group or CM is tasked with scheduling assignments use 013200.

d. Review yellow highlighted text and edit document accordingly.

e. This document will be Common Document for all contracts in a multi-contract project.

46. 013119 Project Meetings:

a. Use in all contracts.

b. Review yellow highlighted text and edit document for the type of schedule selected.

c. Common Document for all contracts in a multi-contract project.
47. 013200 Construction Progress Documentation:
   a. Use this section in lieu of 013113 when a CM or other group is tasked with scheduling assignments.
   b. See input on use of this section with the TL, BUL, Scheduling Department and Division of Construction. Review yellow highlighted text and edit document accordingly.
   c. Use 003113 if a preliminary schedule will be provided in the bid documents.
   d. This document will be Common Document for all contracts in a multi-contract project.

48. 013300 Submittals:
   a. Use in all contracts.
   b. Use one of the following versions:
      1) Electronic submittals – (used for most projects)
      2) Paper submittals version (used on Unit Price contracts)

Identify submittal routing of each bid package or for specific routing requirements within a bid package whether it is an OGS D&C or Consultant/Designer. Insert the name and address if other than OGS.

Identify who shall get submittals or cover letters and whether submittals shall have joint reviews.

   c. Identify whether a preliminary project schedule (Section 013113) is provided to the Contractor (use when Section 013113).
   d. This is a Common Document for all contracts in a multi-contract project.
   e. Article 1.13 Review of Submittals: Ensure that the dispositions are appropriate and properly identified for consultant designed projects.
   f. Other requirements pertinent to this section are contained in Article 2 and Article 4 of the General Conditions. Become familiar with both Article 4 of the General Conditions and Section 013300 of the Specifications to avoid conflicts within the documents and to preclude unnecessary repetition of information in the various sections of the Project Manual.

49. 013350 Computer Aided Design Coordination Drawings:
   a. Use this section when:
      1) Coordination of mechanicals is necessary between multiple prime contractors.
      2) Larger complex projects.
      3) Projects with restricted above ceiling clearances.
4) Low floor to floor heights.
5) Under raised floor areas.
6) Congested mechanical spaces and rooms.

b. This specification is not a master specification but was developed and enhanced as Section 013350 for the DCS Oneida Cook Chill Facility (Project No. 40998) and the DOT Hudson Valley Transportation Management Center (Project No. 41564).

c. The need for coordination drawings should be decided by the PM, Consultant/Designer and Division of Construction at the 100% Submission Phase. All required coordination and preparation of coordination drawings shall be as directed by the EIC, for performance of the work.

1) Coordination will be accomplished by each Contractor superimposing his work on drawings in the following sequence:
   a) Construction Work Contractors – Base Drawings indicating structural steel with elevations for bottom of beams & finish floor. The construction contractor will include a layout of ceiling tiles (where applicable).
   b) HVAC Work Contractor – Ductwork layout drawings & piping with elevations to bottom of ductwork & piping. HVAC contractor shall indicate location of all registers, diffusers and grilles.
   c) Plumbing Work Contractor – Layout of all piping with elevations.
   d) Sprinkler Work Contractor – Layout of all piping & heads with elevations.
   e) Electrical Work Contractor – Conduit layout with junction boxes and location of all electrical fixtures.

2) Contractor coordination meetings should be held continuously until the coordination drawings are complete and approved by all parties. Consultant/Designers are requested to review completed drawings for accuracy and provide an informal approval to the Director’s Representative. Having a field representative Senior Mechanical Inspector involved during this process facilitates Contractor progress and conflict resolution. It is of utmost importance for all concerned that the coordination process be carried out completely and as expeditiously as possible. The specifications should indicate a time frame to be followed.

3) Consultant/Designer should review this section with estimator.

50. 013500 Partnering:

a. Use only when approved, in writing, by the Director.

b. Common Document for all contracts in a multi-contract project.
51. 013510 Energy Efficiency Programs:
   a. Use only when requested by the TL to take advantage of energy efficiency incentive programs.

52. 014100 Regulatory Requirements:
   a. Use in all contracts.
   b. See yellow highlighted text for editing and follow instructions where various Regulatory Requirements apply.
   c. Not a Common Document and needs to be edited for each Project Manual on a multi-trade project.

53. 014216 Definitions:
   a. Use in Project Manuals for contracts containing any sections in Divisions 21, 22, 23, 26, 27, 28, or 33.
   b. Refer to Article 2 of the General Conditions for additional definitions.
   c. Edit section to reflect work of the individual contract. Do NOT change any of the definitions.
   d. Not a Common Document and needs to be edited for each Project Manual on a multi-trade project.

54. 014217 Abbreviations:
   a. Use when abbreviations are included and are not identified on the drawings.

55. 014339 Mock-up Requirements:
   a. Provide when a combination of specification sections are mocked up. For example: cavity wall construction with metal stud back-up wall construction includes masonry, metal studs, window unit, foundation pad and roofing components.
   b. Verify with the TL whether this section should be included in the project.

56. 015000 Construction Facilities and Temporary Controls:
   a. Use in all contracts.
b. Since this is a common document, work indicated in this section is purposely assigned to a specific contract or assigned to all contracts.

c. Use one of the following versions:

1) Short Version: Use for single contract projects and multi-contract projects where it is more practical for each contractor to furnish their own construction facilities and temporary controls.

2) Multi-Contract Rehab Project Version: Use for multi-contract rehabilitation projects to assign specific responsibilities to each contract and avoid duplication. This section is a common document that will appear in all contracts in the project.

3) Multi-Contract New Project Version: Use for multi-contract new construction projects to assign specific responsibilities to each contract and avoid duplication. This section is a common document that will appear in all contracts in the project.

d. Delete State Field Office requirement if Section 015213 is used.

57. 015116 Temporary Fire Pump and Generator

a. Use this section when the building’s fire pump and power will be unavailable during construction or when replacement/repair of the permanent fire pump and power systems and a temporary supply of water for firefighting purposes is required.

58. 015123 Construction Heat and Temporary Heat:


b. Construction heat is assigned to all contracts.

c. Temporary heat is assigned to the Construction Contract.

d. Define number of temporary heating days and number of thermometers.

e. Consultant/Designer should review heating days with estimator.

59. 015213 State Field Office:

a. Use at the direction of the TL when a larger and/or more complex field office other than the one specified in Section 015000 is needed for the project.

b. This section is prepared by the Division of Construction and furnished to the TL for insertion into the Project Manual at the time of submission for bid processing.

c. The Director should ensure project estimator is aware of the inclusion of this project requirement.
d. On multi-contract projects this section is normally included in the prime contract, usually the Construction Contract.

60. 015526 Traffic Maintenance and Protection:
   a. Use only when protection of vehicular traffic is required.
   b. Verify with the TL whether this section should be included in the project.
   c. Consultant/Designer should review this section with estimator.
   d. On multi-contract projects this section is normally included in the Construction Contract.

61. 015633 Security:
   a. Use in all contracts for work at facilities operated by the Department of Corrections and Community Supervision and the Office of Children and Family Services.
   b. Use one of the following versions:
      1) Department of Corrections and Community Supervision Services:
         a) Follow directions contained in yellow highlighted text for editing.
         b) No modifications other than those in yellow highlighted text may be made without written authorization from the Department of Corrections and Community Supervision.
      2) Office of Children and Family Services:
         a) Follow directions contained in yellow highlighted text for editing.
   c. Consultant/Designer should review security restrictions with estimator.
   d. Common Document for all contracts in a multi-contract project.

62. 015634 Maintaining Perimeter Security:
   a. Use in all contracts when working near the perimeter security fence or penetrating through the fence at facilities operated by the Department of Corrections and Community Supervision and the Office of Children and Family Services.
   b. Consultant/Designer shall review this section with PM and BU2’s Electronic Security Group.

63. 015720 Temporary Maintenance of Sewer Flows and Sewer Service:
a. Use this section when temporary maintenance of sewer flows and service is appropriate.

64. 015813 Project Identification Sign:
   a. Use only on high profile projects as directed by TL with BUL approval.
   b. Layout entire sign complete with all wording and letter size then have same approved by the client agency central office and the Director.
   c. The detailed layout for the project identification sign shall be included in this section as additional pages or in the drawing package.
   d. On multi-contract projects this section is normally included in the prime contract, usually the Construction Work Contract.

65. 016500 Materials and Equipment:
   a. Use in all contracts.
   b. Place project number in footer of appropriate section and insert in Project Manual with no further editing.
   c. Common Document for all contracts in a multi-contract project.

66. 017123 Field Engineering:
   a. Use in all contracts containing major site improvement work, establishment of property lines, and critical grading requirements.
   b. When required, this section is usually included in the Construction Contract.
   c. Delete overlapping requirements in Section 011000 Laying Out Article.

67. 017329 Removals, Cutting, and Patching:
   a. Use in all contracts except exclusively site work projects.
   b. Projects involving rehabilitation work.
   c. Common Document for all contracts in a multi-contract project.
   d. Use Section 024116 Structural Demolition for major removals such as the demolition of a building or wing.
   e. List any items that are to be turned over and remain the property of the State. Otherwise, remove and dispose of all materials.
f. This section calls for the removal of all work superseded by the work of the contract. Avoid over detailing removals on drawings.

g. This section is normally included in new buildings to handle modifications to building construction in place.

68. 017419 Construction Waste Management:
   a. This section specifies administrative and procedural requirements for salvaging, recycling, and disposing of non-hazardous demolition and construction waste.
   b. Verify with the TL whether this section should be included in the project.
   c. Consultant/Designer should review this section with estimator.

69. 017423 Pre-Occupancy Cleaning:
   a. Use this section only when it is requested, in writing, by the Client Agency’s central office.
   b. This section provides for cleaning to hospital grade or clean room environment and is very costly. Consultant/Designer should review this section with the PM and estimator.
   c. This section is normally included for patient buildings that must comply with Joint Commission of Accreditation of Health Care Organizations (JCAHO) Requirements.

70. 017716 Contract Closeout:
   a. Use in all projects.
   b. This section includes the requirements for maintaining additional "as-built" sets for all subsurface wastewater disposal systems.
   c. Common Document for all contracts in a multi-contract project.
   d. Modify for multiple completion dates.

71. 017847 Equipment for Confined Space Entry:
   a. Use this section only on projects with confined space entry requirements.
   b. Use when directed by Division of Construction.

72. 017900 Video Training Programs:
a. Use when contract includes technical specification sections requiring video training programs.
b. Use one of the following versions:
   2) Can use with other complex equipment and systems as listed in this section.
c. Section requires professionally produced video training programs. Videotaping a training session is not acceptable.
d. Edit section in accordance with yellow highlighted text. Otherwise, do not change or modify any of these requirements unless specifically authorized to do so, in writing, by the TL.

73. 018113 LEED Documentation Requirements:
a. Use when project is identified as a LEED project.
b. Read yellow highlighted text notes on specification.
c. Include LEED scorecard.
d. Common Document for all contracts in a multi-contract project.

74. 081113 LEED Minimum Recycled Content:
a. The contractor is to meet minimum recycled content for materials and building products shown in Table 018113.1 of this section.
b. Common Document for all contracts in a multi-contract project.

75. 081113 LEED New Construction Project Scorecard 2009:
a. A copy of the LEED Project scorecard is attached at the end of this Section for information only.
b. Common Document for all contracts in a multi-contract project.

76. 018119 Construction Indoor Air Quality Management:
a. Use when project is identified as a LEED project.
b. Verify with the TL whether this section should be included in the project.
c. Common Document for all contracts in a multi-contract project.
77. 018120 Volatile Organic Compound Limits For Adhesives And Sealants:
   a. Use when project is identified as a LEED project.
   b. Verify with the TL whether this section should be included in the project.

78. 019113 General Commissioning Requirements
   a. Can be used with or without a LEED project. Use when project is identified as a LEED project.
   b. Verify with the TL whether this section should be included in the project. Check EO88 requirements.
   c. Common Document for all contracts in a multi-contract project.

DIVISIONS 02 THROUGH 48 – TECHNICAL SPECIFICATIONS

79. 111901 Detention Equipment:
   a. This section must be edited by the BU2 Physical Security Group.

80. Division 28 Electronic Safety and Security
   a. Many Sections in this Division require editing and/or review by in-house security project managers.

81. 310000 Earthwork:
   a. The Earthwork specification sections shall be used on all OGS D&C projects, whether designed in-house or by Consultant.
   b. Though the OGS D&C Earthwork specification makes many references to the DOT spec, especially in defining material characteristics, OGS D&C does not use the same terminology as DOT, particularly regarding materials used in backfilling and structural support courses under buildings and paving. OGS D&C references DOT specifications and tables for material makeup and sizes, but OGS D&C does not use the DOT Item Numbers to define our materials. Rather, OGS D&C provides a definition for all materials related to excavation and backfilling. This is a major difference between OGS D&C projects and those prepared by other State agencies and most consultants.
82. Use OGS Master Specification Sections for all materials and methods for which a section exists.

83. Divisions 02 thru 48 are self-explanatory and are not individually described in this Manual. Important information is included in yellow highlighted text and Sections should be edited accordingly.

84. When creating a new section, match OGS Master Specification in formatting, numbering, layout, font, size, etc. Use the Guide Master Specification as an outline for more complex specifications.
   a. Use Construction Specification Institute (CSI) Master Format for proper section numbering of any new spec section that needs to be created. The CSI Master Format is a master list of spec section numbers and spec section titles for the construction industry.
   b. Also coordinate any new spec section titles and numbers with OGS electronic contract payment (ECP) coordinators to make sure that we don’t have multiple section numbers and section titles in the ECP master table of contents for the same materials or equipment.

85. Completely edit all Master Specification Sections so resultant specification is streamlined and project specific. Delete all material that does not relate to the specific project, including all yellow highlighted text.

86. Most of the sections of the Master Specification contain requirements for the submittal of shop drawings, product data, and sample for specific items of work. These requirements must be edited for project specifications just like any other part of the section.

87. Include the Project No., with the trade designation for the contract of which they are a part, in the right hand side of the page footer on all specification pages.

88. Not all OGS Master Specifications are up to date. Review for accuracy. When a Consultant/Designer identifies an OGS Master Specification as being outdated, contact the TL who will inform the appropriate OGS D&C staff.

89. Some specifications have multiple versions of the same section. The difference between the two versions is either broadscope or short scope.
90. The Appendix Documents are bound in the Project Manual after the technical specifications sections and are listed in the Table of Contents. Appendix Documents include the following sections below:

91. Asbestos and Lead Survey Report:
   a. Use in all contracts in which hazmat testing was completed.
   b. Edit report title as required by the type of testing that was performed.
   c. Coordinate with Document 003126 Existing Hazardous Material Information.

92. Asbestos Variance: Use this document if Department of Labor has granted a site specific variance for the asbestos work of this contract.

93. BDC-59.1 Contractor’s Proposal for Subcontractor Change:
   Use in contracts containing Document 002220 and Bid Form 004120.
   Inserted by OPC.
   c. Use one of the following versions;
      1) Wicks Exempt Version: Use with standard Wicks Exempt contracts.
   d. Document filed in the DCNET forms area, not in the Master Specifications file folders.

94. BDC-59P Project Labor Agreement List of Subcontractors:
   a. Use with PLA projects.
   b. Inserted by OPC.
   c. Document filed in the DCNET forms area, not in the Master Specifications file folders.

95. BDC-328 Utilization Plan:
   a. Use in all contracts estimated to be over $100,000 in conjunction with Document 007307.
b. Inserted by OPC.

c. Document filed in the DCNET forms area, not in the Master Specifications file folders.

96. BDC-329 Contractor’s List of Subcontractor’s - Suppliers:

a. Use in all contracts.

b. Inserted by OPC.

c. Document filed in the DCNET forms area, not in the Master Specifications file folders.

97. BDC-406.1 Statement of Special Inspections:

a. Use if Special Inspections Article is included in section 011000 Summary of Work.

b. Not all projects require Special Inspections. Ensure that only code required inspections are listed on the form. There are many exceptions to the Special Inspections requirements, see the list of exceptions in Section 1704 of the Building Code of New York State.

c. Inserted by the PM and Consultant/Designer when they are required.

d. Include this document in appropriate contract’s table of contents.

e. Document filed in the DCNET forms area, not in the Master Specifications file folders.

98. Bound-in Drawings:

a. Use if there are any project specific 8 ½” x 11” or 11” x 17” drawings bound into the Project Manual.

b. Drawings referenced in a specific specification section should be included with the specification section. Example: project identification sign, room signage graphics, etc. They are not listed in Document 000115 or on the Drawing Title or Index Sheet.

c. Assign drawing numbers to match the system used for other drawings for project specific drawings that are bound in the Project Manual.

d. List project specific bound-in drawings in the List of Drawings included on the Title Sheet of the Drawings or in Document 000115, whichever is appropriate. (Do not list bound-in drawings in the Table of Contents).

e. If the drawings are on mylar, vellum, etc., a copy should be made. Turn the original over to the TL for filing in the OGS D&C Plan File records. The TL shall ensure that a copy of all project specific bound-in drawings is filed for record purposes.
99. Commissioning Process:

Use when commissioning is part of the project.

Use in conjunction with 019113 General Commissioning Requirements.

Include with specific specifications for pre-functional and functional testing. Examples include boilers, unit heaters, ductwork, direct digital building control systems, etc.

100. Contractor’s Certification Statement:

a. Include only if a SWPPP (Storm Water Pollution Prevention Plan) has been prepared.

101. NYS DOS Example Truss Identification Sign:

Use when truss type construction is part of the building design. This includes but not limited to steel bar joists, steel trusses and wood trusses.

Consultant/Designer to provide one sign in each man door. Provide notes and locations in the contract drawings and/or specifications.

See Fire Code 505.3 for more specific information.

102. Prevailing Rate Schedule:

a. Inserted by OPC.

b. Required on all contracts.

c. Common document on multi trade project.

103. Sample Firestop Schedule:

a. Use in contracts containing Section 078400.


104. Allowance Support Documentation:

a. Insert allowance support documentation from manufacturers, vendors, or utility companies when required by the complexity of equipment, products, and services included in the allowance. Documentation may include plans, details, and cost breakdowns of work included in the allowance.
105. Schedule of Submittals (SOS):

a. Insert the completed prime contract SOS edited for the project specifications.

CHAPTER 5 – TECHNICAL DOCUMENTS

5.3 DRAWINGS

A. GENERAL

1. This section provides a general overview of the technical drawing requirements for OGS D&C projects.

B. STANDARDS

1. Projects follow the National Cad Standard. See Chapter 5.4 Electronic Documentation for specific requirements.

2. Three sheet sizes are acceptable: 8 ½ x 11, 11 x 17 and 24 x 36. Q and 40,000 series projects shall use the 24 x 36 sheet size unless approved otherwise by the OGS Team Leader.

3. Mark sheets with the correct submission milestone (ex. “100% Submission”).

4. Drawing Sets for multi-trade projects:
   a. If the project has a large number of drawings per each prime contract the individual drawing sets can have their own project cover sheet with trade designation. The Lead Designer should provide the template to the trade’s designers.
   b. If the project has a small number of drawings then the Lead Designer shall provide one cover sheet that combines all the drawings from each trade designer into one drawing package.
c. For very large projects a separate drawing index sheet may be required and shall follow the general guidelines for the cover sheet outlined above.

5. Drawing templates for project startup can be found in the following locations:
   a. Consultants are to use OGS border sheets, plot sheets and resource files. They are available as Drawing Templates.zip.
   b. Border sheets and plot sheets to be used by in-house staff can be found in the Common\Support\Proto folder.

6. For Consultant projects, the Project Drawings should NOT include consultant and sub consultant contact information such as phone numbers or email addresses to discourage bidders from reaching out directly to Consultants during the restricted period between advertisement and award.

7. Addendum drawings require a professional seal (R.A. or a P.E.) of the person responsible for design.

CODE DRAWINGS

1. Code Summary Sheet that contains basic information such as occupancy classification, minimum construction requirements, exiting and materials requirements, and so on.
   a. See sample plan. (reserved)

   a. See sample plan (reserved)
   b. See Chapter 9.10 Firestopping Guide.
   c. Trade drawings (H, P & E) should reference this sheet.

3. These drawings may be combined if sheet can accommodate both.
D. DRAWINGS OF RECORD (Construction Phase)

1. Drawing revisions procedures:
   a. Issue revisions using full size drawings.
   b. Highlight revisions with bubbles and revision numbers.

If a small size detail is issued and no space is available on the existing drawings issue a new sheet with the detail. This same sheet can be used again to insert future details and issued accordingly.

Include any addenda (prior to initial job meeting).

   a) Include revision dates chronologically in the drawing border.
   b) f. Depending on the volume of revisions periodically update the drawing index as necessary and include latest revision date. Update index to include new sheets.
   g. At project closeout provide the OGS Team Leader with the updated drawings using process described above. Submit updated hard copy and electronic set of drawings in dwg or dgn and pdf formats.
   h. See Chapter 8 Construction Phase Guidelines for further information.

E. REFERENCE DRAWINGS

1. Reference Drawings are included and listed by drawing numbers in the index or list of drawings Document 000115 of the Project Manual and are generally reproduced from past projects and are furnished only to show existing or related conditions. See Project Manual Document 000115. These drawings should not show any work. If work is shown then the drawings should not be labeled as reference drawings.

F. HAZMAT DRAWINGS

1. Designer option – drawings showing hazmat existing conditions and locations can be included either as full-size drawings or they can be inserted as small size drawings into the Project Manual section 003126.

   a) If no hazmat removal work is required, then these drawings should be considered as reference drawings.
b) If hazmat removal is required, then separate drawings indicating removals should be included among the drawings.

G. ABBREVIATIONS AND SYMBOLS

1. OGS does not recommend the casual use of abbreviations. See Chapter 5.1. Symbols used on the drawings should be listed on the drawings in the form of a symbols legend.

SUBMISSION REQUIREMENTS

1. See Chapter 4.0 Submission Phase Guidelines for specific submission requirements.

- PROFESSIONAL CONSULTATIONS AND STUDIES
- PROGRAM PHASE
- SCHEMATIC DESIGN PHASE
- DESIGN DEVELOPMENT PHASE
- 80% SUBMISSION PHASE
- 100% SUBMISSION PHASE
- FINAL SUBMISSION PHASE

I. PROJECT CLOSEOUT (reserved)
CHAPTER 5 – TECHNICAL DOCUMENTS

5.4 TECHNICAL REQUIREMENTS FOR DRAWINGS AND ELECTRONIC DOCUMENT SUBMISSIONS

A. GENERAL

1. The need to exchange information during a project’s life cycle with the State, Client and Consultants necessitates answering many questions about drawing requirements electronic media, file format, etc. The goal being to allow anyone in the organization to access, interpret and disseminate information rapidly and in a uniform manner.

2. OGS requires that all drawings be created using OGS Cadd Standards to assure that OGS can plot the drawings in-house with expected results.
   a. This will result in considerable time savings by not having to send paper copies of all exchanges of information.
   b. Upon completion, the electronic files can be entered into our archival process.

B. FORMAT

1. Drawings are to be prepared in compliance with OGS CAD Standards. These standards are an interpretation of the National CAD Standard. The Standard incorporates the CAD Layer Guidelines published by the American Institute of Architects, the Uniform Drawing System published by the Construction Specifications Institute, and the Tri-Service Plotting Guidelines published by the Tri-Service CADD/GIS Technology Center and U.S. Coast Guard.

2. Deliver vector, raster and vector/raster hybrid digital files in a format that is directly compatible with OGS’s Plotting Software:
   a. Autodesk’s AutoCAD 2013 file format
   b. Bentley Microstation J or Version 8.X. file format
   c. Raster files in .tif or .jpg format.
   d. Portable Document Files (pdf) (reserved)

3. Drawings are to be prepared using OGS File Structure and Naming Standards.

4. Building Information Model (BIM) (reserved).

C. DELIVERY MEDIA

1. At project completion, in addition to required mylars, digital data sets should be furnished via compact disc-read only memory CD-ROM (ISO 9660 format). For exceptions, contact the OGS Team Leader.
2. All media must be compatible with the Microsoft Windows operating system. When submitting digital media, an external label should contain, at a minimum, the following information:
   a. Format and version of the operating system on which the media was created (e.g., Windows 10).
   b. Utility (command) used for writing the files to disk.
   c. Sequence number for multiple CD’s, etc.
   d. A short description of contents including the OGS project number and title.
   e. A digital index file containing a list of files and a brief description of each file that is included on the digital media.

3. A transmittal sheet shall accompany the media containing, at a minimum, the following information:
   a. Information included on the external label of each CD; total number of CD’s being delivered; a list of the file names and file descriptions on each CD.
   b. Certification that all delivery media is free of known computer viruses, including the name and version of the virus scanning software used, and the date the virus scan was performed.

4. Before placing files on the delivery digital media, perform the following:
   a. Remove all extraneous graphics outside the border area of each sheet, and set the active parameters to a standard setting or those in the seed/prototype file.
   b. Attach all reference (external reference) files without device or directory specifications.
   c. Remove plotting device references from each sheet.
   d. Remove all unused level/layers, reference/xref drawings, block/cell library, styles, and data definitions from each sheet.
   e. Include all graphic and non-graphic files necessary to plot each complete sheet.
   f. If necessary, files are only to be compressed using standard Windows compatible utilities. Include a copy of the utility on the CD.

D. MODEL FILES AND SHEET FILES

1. Two distinct types of CADD files are addressed in this standard: model files and sheet files.
   a. A model file contains the physical components of a building or survey (e.g., columns, walls, windows, ductwork, piping, etc.). Model files are drawn at full scale and typically represent plans, elevations, sections, etc.
   b. A sheet file is synonymous with a plotted CADD drawing file. A sheet file is a selected view or portion of the model file(s) within a border sheet. Whether the border is scaled up or the information is scaled down a sheet file is a “ready-to-plot” CADD file. There should be no information outside the border limits to allow for plotting by extents or fit elements.

2. The Figure below illustrates how different model files are referenced to a sheet file (notice that the border sheet is always a referenced model file). A sheet file is the combination of referenced model files with sheet-specific text & symbols to create a final “ready-to-plot” CADD file. A useful American Institute of Architects (AIA) rule of thumb states: “Model files are always referenced by other files, while sheet files are never referenced by other files.”
3. Model files represent full-size drawings of building elements, systems, or information (e.g., the mechanical HVAC system, the architectural floor plan, details, building sections). Sheet files represent final plotted sheets. Model files are used as components in creating plotted sheet files. The information contained within a model file for a discipline may be referenced by other disciplines to create the particular model files or sheet files for that discipline.

4. A model file can be considered a “work in progress.” For instance, a mechanical engineer may reference the architect’s floor plan model file to begin development of the HVAC ductwork layout model file. Meanwhile, the architect can continue developing the floor plan to meet new requirements. Any changes to the floor plan would be immediately accessible to the mechanical engineer. The viewing of real-time updates eliminates a great deal of frustration for other disciplines because it allows for on-the-spot rather than after-the-fact modifications.

**Figure 1 - Sheet P-101**

### E. ELECTRONIC DRAWING FILE NAMING CONVENTIONS

1. Naming conventions for electronic drawing files (both model files and sheet files) allow CADD users to determine the contents of a drawing without actually displaying the file. They also provide a convenient and clear structure for organizing drawing files within project directories.
F. MODEL FILE NAMING CONVENTION

1. The model file naming convention (Figure 2) has four fields. The first field is optional for all trades except V, B, C and L. The following three fields are mandatory. The fields must appear in the correct sequence.

   a. The optional first field is the 5 digit OGS Project Number. The use of Project Numbers in file names is highly recommended, because it prevents the same file name from existing in different directories.
   b. The next field is the Discipline Designator. Table 1 lists allowable characters. For most disciplines, this field is the discipline letter and a hyphen.
   c. The next field is the Model File Type (see Table 2).
   d. The final four-character field is user-definable.

2. Example: The model file name for an OGS project with a project number of S4444, 1st floor, Architectural Floor Plan could be S4444A-FPF1.dwg where S4444 is the Project Number, A- is the Discipline Designator, FP is the Model File Type (Floor Plan), and F1 is a user-definable set of characters for Floor 1.

3. Existing/Demolition model file naming. There are instances when a facility is being renovated and the as-built designs need to be revised to show demolition and new items.

4. A new model file type, Existing/Demolition XD (Which is not in NCS 2.0), has been added to the standard to allow users to make revisions to as-built files. This model file type is used to aid users in separating existing to remain items from items that will be demolished.
## II. TABLE 1 – MODEL FILE DISCIPLINE DESIGNATORS WITH LEVEL 2 DESIGNATORS

<table>
<thead>
<tr>
<th>A</th>
<th>B Discipline</th>
<th>G-</th>
<th>All General</th>
<th>All or any portion of the General Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) General</td>
<td>GI</td>
<td>General Information</td>
<td>General Information - Title Sheet</td>
<td></td>
</tr>
<tr>
<td>c) Hazardous Materials</td>
<td>H-</td>
<td>All Hazardous</td>
<td>All or any portion of the Hazardous Discipline</td>
<td></td>
</tr>
<tr>
<td>d) Survey Mapping</td>
<td>VA</td>
<td>Aerial Survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VF</td>
<td>Field Survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Geotechnical</td>
<td>B-</td>
<td>All Geotechnical</td>
<td>All or any portion of the Geotechnical Discipline</td>
<td></td>
</tr>
<tr>
<td>f) Civil</td>
<td>C-</td>
<td>All Civil</td>
<td>All or any portion of the Civil Discipline</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CD</td>
<td>Civil Demolition</td>
<td>Structure removal and site cleaning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CG</td>
<td>Civil Grading</td>
<td>Excavation, grading, drainage, erosion control</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Civil Paving</td>
<td></td>
<td>Roads, driveways, parking lots</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CU</td>
<td>Civil Utilities</td>
<td>Water, sanitary sewer, storm sewer, natural gas; coordination elements for power, communications, fiber optic, telephone,</td>
<td></td>
</tr>
<tr>
<td>g) Landscape</td>
<td>L-</td>
<td>All Landscape</td>
<td>All or any portion of the Landscape Discipline</td>
<td></td>
</tr>
<tr>
<td>h) Structural</td>
<td>S-</td>
<td>All Structural</td>
<td>All or any portion of the Structural Discipline</td>
<td></td>
</tr>
<tr>
<td>i) Architectural</td>
<td>A-</td>
<td>All Architectural</td>
<td>All or any portion of the Architectural Discipline</td>
<td></td>
</tr>
<tr>
<td>j) Interiors</td>
<td>I-</td>
<td>All Interiors</td>
<td>All or any portion of the Interiors Discipline</td>
<td></td>
</tr>
<tr>
<td>k) Equipment</td>
<td>Q-</td>
<td>All Equipment</td>
<td>All or any portion of the Equipment Discipline</td>
<td></td>
</tr>
<tr>
<td>l) Fire Protection</td>
<td>F-</td>
<td>All Fire Protection</td>
<td>All or any portion of the Fire Protection Discipline</td>
<td></td>
</tr>
<tr>
<td>m) Plumbing</td>
<td>P-</td>
<td>All Plumbing</td>
<td>All or any portion of the Plumbing Discipline</td>
<td></td>
</tr>
<tr>
<td>n) Process</td>
<td>D-</td>
<td>All Process</td>
<td>All or any portion of the Process Discipline</td>
<td></td>
</tr>
<tr>
<td>o) Mechanical</td>
<td>M-</td>
<td>All Mechanical</td>
<td>All or any portion of the Mechanical Discipline</td>
<td></td>
</tr>
<tr>
<td>p) Electrical</td>
<td>E-</td>
<td>All Electrical</td>
<td>All or any portion of the Electrical Discipline</td>
<td></td>
</tr>
<tr>
<td>q) Telecommunications</td>
<td>T-</td>
<td>All Telecommunications</td>
<td>All or any portion of the Telecommunications Discipline</td>
<td></td>
</tr>
<tr>
<td>r) Resource</td>
<td>R-</td>
<td>All Resource</td>
<td>All or any portion of the Resource Discipline</td>
<td></td>
</tr>
</tbody>
</table>
### III. TABLE 2 - MODEL FILE TYPES

<table>
<thead>
<tr>
<th>DISCIP LINE</th>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>b)</strong> General</td>
<td>BS</td>
<td>Border Sheet</td>
</tr>
<tr>
<td></td>
<td>KP</td>
<td>Keyplan</td>
</tr>
<tr>
<td><strong>c)</strong> General</td>
<td>SP</td>
<td>Survey and Mapping Plan</td>
</tr>
<tr>
<td></td>
<td>BL</td>
<td>Boring Location Plan</td>
</tr>
<tr>
<td><strong>d)</strong> Interiors</td>
<td>3D</td>
<td>Isometric/3D</td>
</tr>
<tr>
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</tr>
<tr>
<td><strong>e)</strong> Survey/Mapping</td>
<td>QP</td>
<td>Equipment Plan</td>
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<tr>
<td><strong>f)</strong> Geotechnical</td>
<td>RP</td>
<td>Furniture Plan</td>
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<td></td>
<td>SC</td>
<td>Section</td>
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<tr>
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<td>Signage Placement Plan</td>
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<td></td>
<td>WP</td>
<td>System/Prewired Workstation Plan</td>
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<td></td>
<td>XD</td>
<td>Existing/Demolition Plan</td>
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<td></td>
<td>DT</td>
<td>Detail</td>
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<tr>
<td></td>
<td>FA</td>
<td>Fire/Alarm/Detection Plan</td>
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<tr>
<td><strong>g)</strong> Civil</td>
<td>FP</td>
<td>Fire Suppression Plan</td>
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<td></td>
<td>LP</td>
<td>Landscape Planting Plan</td>
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<td>CP</td>
<td>Column Plan</td>
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<td><strong>h)</strong> Landscape</td>
<td>FP</td>
<td>Framing Plan</td>
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<td></td>
<td>NB</td>
<td>Non-Building Structures Plan</td>
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<td>Foundation Plan</td>
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<td><strong>i)</strong> Structural</td>
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<td>Isometric/3D</td>
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<tr>
<td></td>
<td>PP</td>
<td>Piping Plan</td>
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<td><strong>j)</strong> Plumbing</td>
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<tr>
<td></td>
<td>PP</td>
<td>Piping Plan</td>
</tr>
<tr>
<td></td>
<td>NP</td>
<td>Existing/Demolition Plan</td>
</tr>
</tbody>
</table>
### G. SHEET FILE NAMING CONVENTION

1. The sheet file naming convention (Figure 3) has one optional field (not shown), followed by three mandatory fields. Similar to the format for model file naming, the fields must be used in the correct sequence.

   a. The first field is the 5 digit OGS Project Number. It is optional for all trades except V, B, C and L.

   b. The *Sheet Discipline Designator* listed in Table 3

   c. The *Sheet Type Designator* listed in Table 4
d. A two-character *Sheet Sequence Number* (01-99)

![Diagram showing naming convention for sheet files]

**Figure 3 – Sheet File Naming Convention**
### TABLE 4 - SHEET TYPE

| Designator \n|---|
| General (symbols, legend, notes, etc.) | 0 |
| Plans (horizontal views) | 1 |
| Elevations (vertical views) | 2 |
| Sections (sectional views) | 3 |
| Large Scale Views (plans, elevations, or sections that are not details) | 4 |
| Details | 5 |
| Schedules and Diagrams | 6 |
| User Defined | 7 |
| User Defined | 8 |
| 3D Representations (Isometrics, perspectives, photographs) | 9 |

### H. COORDINATION BETWEEN SHEET FILE NAME AND SHEET IDENTIFIER

1. The sheet identifier (for use in the sheet identification block, reference bubbles, etc.) is to consist of the discipline designator, sheet file designator, and the sheet sequence number. Coordinate the sheet identifier with the name assigned to the electronic sheet file.

b) I. GRAPHIC CONCEPTS
1. **Presentation Graphics:** The first step in establishing an effective CADD standard is the development of a uniform approach to presentation graphics. Presentation graphics typically consist of drawing elements such as lines, arcs, shapes, text, and their attributes (line color, line width, and line style).

2. **Line Widths:** The use of varied line widths on AEC drawings substantially improves the readability of the documents. For all projects prepared for OGS there are nine (9) allowable line widths.

   a. **(0.13 mm)** Extra Fine lines are to be used sparingly, mostly for poche/patterning.
   
   b. **(0.18 mm)** Fine lines are to be used for detail on plans, Windows, ‘Equipment (Not In Contract)’ or to lighten backgrounds.
   
   c. **(0.25 mm)** Thin lines are to be used for depicting dimension lines, dimension leader/witness lines, note leader lines, line terminators (arrowheads, dots, slashes), phantom lines, hidden lines, center lines, long break lines, schedule grid lines, and object lines seen at a distance.
   
   d. **(0.35 mm)** Medium lines are to be used for depicting minor object lines, dimension text, text for notes/callouts, and schedule text.
   
   e. **(0.50 mm)** Wide lines are to be used for major object lines, cut lines, section cutting plane lines, and titles.
   
   f. **(0.70 mm)** Extra wide lines are to be used for minor title underlining, schedule outlines, large titles, and object lines requiring special emphasis. For very large scale details drawn at 3 in. = 1 ft-0 in. or larger, the extra wide width should be used for the object lines. Extra wide widths are also appropriate for use as an elevation grade line, building footprint, or top of grade lines on section/foundation details.
   
   g. **(1.00 mm)** This line width is to be used for major title underlining and separating portions of drawings
   
   h. **(1.40 mm)** This line width is to be used for border sheet outlines and cover sheet line work and as an option for the designer as required.
   
   i. **(2.00 mm)** This line width is an option for the designer as required.
3. **Plotting:** To assure consistent plotting of these line widths whether done by OGS or its consultants we need to define how elements are defined in the electronic documents.

   a. Plotting by weight is the recommended approach. Plotting by Weight is determined by defining each element's line weight as one of the allowable nine widths. The actual plot widths and their Microstation equivalents are shown in the following table. Drawings prepared using the plot by weight method are to use the pen table `Natlstdwt.ctb` for AutoCAD.

<table>
<thead>
<tr>
<th>Actual Plot Widths</th>
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<tbody>
<tr>
<td>0.005 in, 0.13mm</td>
</tr>
<tr>
<td>Microstation WT=1</td>
</tr>
<tr>
<td>0.007 in, 0.18mm</td>
</tr>
<tr>
<td>Microstation WT=2</td>
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<tr>
<td>0.010 in, 0.25mm</td>
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<tr>
<td>Microstation WT=3</td>
</tr>
<tr>
<td>0.014 in, 0.35mm</td>
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<tr>
<td>Microstation WT=4</td>
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<tr>
<td>0.020 in, 0.50mm</td>
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<tr>
<td>Microstation WT=5</td>
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<tr>
<td>0.028 in, 0.70mm</td>
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<tr>
<td>Microstation WT=6</td>
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<td>0.039 in, 1.00mm</td>
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<td>Microstation WT=7</td>
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<td>0.055 in, 1.4mm</td>
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<tr>
<td>Microstation WT=8</td>
</tr>
<tr>
<td>0.079 in, 2.00mm</td>
</tr>
<tr>
<td>Microstation WT=9</td>
</tr>
</tbody>
</table>

   **Figure 4 - Actual Plot Widths**

   b. Plotting by color is allowed as AutoCAD Release 14 and earlier did not allow for plotting by weight. The table below (Figure 5) defines the color to weight method. Drawings prepared using the plot by color method are to use the pen table `Natlstd.ctb` for AutoCAD.
4. **Line Types/Styles:** The line types used should match those shown on the Symbols and Abbreviation sheets. (A-001) Any use of user-defined custom line styles must be coordinated with OGS.
5. **Line Color:** The primary reason to use color in CADD drawings is to improve the clarity of the drawing on a computer monitor. When plotting by element weight color has no effect except for screening. If plotting by color you must follow the color to weight table (Figure 5).

c) Screening

d) 1. Screened images are created through a process in which the density and pattern of black and white dots are varied to simulate different shades of gray. Varying the intensity of gray scales allows users to distinguish different aspects of a drawing when it is plotted. For example, an area on a site designated for demolition can be assigned a color that has been assigned a screening percentage. When plotted, the area will be shown at a lighter shade compared with other elements in the drawing. This will allow the contractor to immediately identify the demolition area on the drawing.

e) 2. Use the following colors and percentages for screening:

   a. If you plot by color using NatlStd.ctb then you have 2 shades. Colors 50 through 59 will give you a 20% screen for the 9 line weights and colors 170 through 179 will give you a 50% screen for the 9 line weights.

   b. If you plot by weight using NatlStdWt.ctb then you have 5 shades available for your use.

      Color 10 is a 10% screen.
      Color 50 is a 20% screen
      Color 90 is a 30% screen
      Color 130 is a 40% screen
      Color 170 is a 50% screen

K. **Text Styles/Fonts**

1. Contrasting text styles (or fonts) are used within a drawing to delineate types of information. For most A/E/C drawings, the five fonts shown should be sufficient.
2. The minimum text size is 3.2 mm (1/8”) for hand drafting and 2.5 mm (3/32”) for CADD drawings.

L. BORDER SHEETS

1. A border sheet model file contains border sheet line work, the title block, and project-specific symbols and text. Project information is added to the border using the block ProjInfo. Typically, each discipline will reference the same border sheet for each project.

2. Sheet-specific information is added to the title block in the plot sheet using the appropriate attributed blocks (Table 5) prior to printing the final sheet file.
Figure 7 – Border Sheet Title Block
In the lower left corner of each border sheet is a plot size label. This is **not** to be deleted. If permission is granted to use a non-standard sheet, modify the label to reflect the actual plotted sheet size.

### M. LEVEL/LAYER ASSIGNMENTS

1. CADD levels or layers are analogous to overlays in manual drafting systems and serve to separate graphic elements (lines, shapes, and text) according to the design discipline they represent.

2. The types of information represented by individual levels/layers can be grouped into two primary types: model-specific information and sheet-specific information.
   
   a. Model-specific information represents the physical form of a site, a building, or objects composing a building. This information is often shared between drawings. Examples include walls, doors, light fixtures, and room numbers. Model-specific information may be either literal (e.g., walls) or symbolic (e.g., electrical outlets).
   
   b. Sheet-specific information may include notes, annotative symbols, and titles. This type of information is usually not shared between drawings.

3. To use and manipulate model-specific and sheet-specific information effectively, every level/layer must be defined (standardized) by its name and its use.

### (1) N. LEVEL/LAYER NAMING CONVENTION

1. The reuse, not duplication, of graphic information reduces drawing time and improves project coordination. The level/layer is the basic tool used in CADD for managing graphic information. The levels/layers defined within these standards are based on the recommendations set forth in “AIA CAD Layer Guidelines” (MA 2001).
2. Level/layer names consist of a two-character Discipline Designator (e.g., “A-” for Architectural, “M-” for Mechanical), followed by a four-character Major Group (e.g., “DOOR” for Doors, “LITE” for Lighting Fixtures), followed by four-character Minor Group (e.g., A-WALL-FULL-EXTR for exterior full height walls versus A-WALL-FULL-INTR for interior full height walls).

(a)

(b) O. DEMOLITION LEVELS/LAYERS

1. Users should note that several model files have three levels/layers reserved for demolition items. These levels/layers are as follows with ** representing a Discipline. These levels/layers should only be used when an Existing/Demolition model file is being created. For instance, the architect or engineer will sometimes have existing as-built model files, such as Site Plans and Floor Plans from a previous project. A copy of the as-built file will be made for use in the current project. This copy is renamed to be the Existing/Demolition Plan model file for that discipline. In order to distinguish items to be demolished from existing items that will remain, those items should be moved to the Demolition levels/layers. When the Existing/Demolition Plan model file is referenced into a new file to create the New construction items, the Demolition levels/layers would be turned off.

P. REFERENCE FILES (XREFS)

1. Reference files (external references or XREFs) enable designers to share drawing information electronically, eliminating the need to exchange hard copy drawings between the design disciplines. With the use of reference files, the structural engineer need not wait for the architect to complete the architectural floor plans before beginning the structural framing plan model file. Nor does the engineer have to redraw the architect’s structural walls on the structural framing plan model file.

2. Referencing electronic drawing information makes any future changes made by the architect apparent to the structural designer. This real-time access to the work of others ensures accuracy and consistency within a set of drawings and helps promote concurrent design efforts. No longer does one discipline have to wait until another discipline is nearly finished before they begin their drawings.

3. The use of reference files is a key component in the successful use of the level/layer assignments. To create either a model file or a final sheet file, multiple referenced model files may be required. The following tables should provide information on typical layer/level
names as well as the relationship of the model files to each other to create individual sheet file.

Q. MODEL/SHEET FILE LAYER/LEVEL ASSIGNMENT AND DRAWING RELATIONSHIP TABLES

**Discipline:** General

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<td>3</td>
<td>G-ANNO-LEGN</td>
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<td>5</td>
<td>G-ANNO-NOTE</td>
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<td>4</td>
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### OGS Design Procedures Manual

A Guide to Designing Projects for **Design & Construction**

#### Discipline: Architectural

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#### Referenced Model File Levels/Layers

**Genera: Border Sheet**

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**Structural: Column Plan**

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**Architectural: Demolition Plan**

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## OGS Design Procedures Manual

### Discipline: Architectural

| Level # | Drawing Type | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
|---------|--------------|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 51      | A-STAT-EXIST | R |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 53      | A-STAT-MOVE  | R |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 65      | A-STAT-NICN  | R |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 56      | A-STAT-PHST  | R |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 57      | A-STAT-RELQ  | R |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 58      | A-STAT-TEMP  | R |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

#### Architectural: Floor Plan

- A-ANNO-DIMS
- A-ANNO-KEYN
- A-ANNO-NOTE
- A-ANNO-PATT
- A-ANNO-SYMB
- A-ANNO-TEXT
- A-FLOR-FIXT
- A-FLOR-IDEN
- A-FLOR-LEVY
- A-FLOR-NUMB
- A-FLOR-OTLN
- A-FLOR-PATT
- A-FLOR-PLS
- A-FLOR-PM
- A-FLOR-RPN
- A-FLOR-SIGN
- A-FLOR-SPCL
- A-COLS-ENCL
- A-WALL-CAVI
- A-WALL-CNTR
- A-WALL-CVMG
- A-WALL-EXTX
- A-WALL-FIRE
- A-WALL-IDEN
- A-WALL-INTR
- A-WALL-MOVE
- A-WALL-PATT
- A-WALL-PRTT
- A-WALL-SPCL
- A-GLAZ-SILL
- A-WALL-HEAD
- A-WALL-JAMM
- A-DOOR-FULL
- A-DOOR-IDENT
- A-DOOR-PRTT
### OGS Design Procedures Manual

A Guide to Designing Projects for Design & Construction

#### Discipline: Architectural

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**Architectural: Reflected Ceiling Plan**

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## OGS Design Procedures Manual

A Guide to Designing Projects for **Design & Construction**

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## OGS Design Procedures Manual

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| 2       | M-ANNO-KEYN    | R         |            |                               |               |                        |              |            |         |         |
| 5       | M-ANNO-NOTE    | R         |            |                               |               |                        |              |            |         |         |
| 4       | M-ANNO-PATT    | R         |            |                               |               |                        |              |            |         |         |
| 6       | M-ANNO-SYMB    | R         |            |                               |               |                        |              |            |         |         |
| 7       | M-ANNO-TEXT    | R         |            |                               |               |                        |              |            |         |         |
| 60      | M-DEMO-HAZW    | R         |            |                               |               |                        |              |            |         |         |
| 50      | M-STAT-DEMO    | R         |            |                               |               |                        |              |            |         |         |
| 51      | M-STAT-EXIST   | R         |            |                               |               |                        |              |            |         |         |
| 53      | M-STAT-MOVE    | R         |            |                               |               |                        |              |            |         |         |
| 65      | M-STAT-NICN    | R         |            |                               |               |                        |              |            |         |         |
| 66      | M-STAT-PFS#    | R         |            |                               |               |                        |              |            |         |         |
| 57      | M-STAT-RELO    | R         |            |                               |               |                        |              |            |         |         |
| 66      | M-STAT-TEMP    | R         |            |                               |               |                        |              |            |         |         |

**Mechanical : HVAC Plan**

| 1       | M-ANNO-DIMS    | R         |            |                               |               |                        |              |            |         |         |
| 2       | M-ANNO-KEYN    | R         |            |                               |               |                        |              |            |         |         |
| 5       | M-ANNO-NOTE    | R         |            |                               |               |                        |              |            |         |         |
| 4       | M-ANNO-PATT    | R         |            |                               |               |                        |              |            |         |         |
| 6       | M-ANNO-SYMB    | R         |            |                               |               |                        |              |            |         |         |
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# OGS Design Procedures Manual

A Guide to Designing Projects for **Design & Construction**

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Active Level/Layer: R
Reference Level/Layer: R
# OGS Design Procedures Manual

A Guide to Designing Projects for **Design & Construction**

## Discipline: Fire Protection/Suppression

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## Discipline: Equipment - Security Systems

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<td>Security Plan</td>
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<td>Elevations</td>
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<td>Riser Diagrams</td>
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<td>QYSTAT-EXIST</td>
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**Telecommunications: Communication System Plan**

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<td>43</td>
<td>T-SERT-SYST</td>
</tr>
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</table>

Active Level/Layer: [ ]
Reference Level/Layer: R
CHAPTER 6 COST CONTROL

A. GENERAL INFORMATION

1. A cost estimate is required at each submission phase.

2. All cost estimates are to be submitted using the OGS forms. These forms contain formulas for the creation of certain estimating numbers.

3. The continual monitoring of costs is essential to keep the project within budget as well as to identify factors that will have a major impact on project costs. The final estimate (submitted as part of the Final Contract Documents Phase) will serve as the “official” estimate for the project. This estimate will be used in the review and approval of the contractor’s detailed estimate, which is used for progress payments during construction. It will also be used to evaluate field and/or change orders and termination costs, if necessary. The following standards apply to all estimate submissions:
   a. All submissions should be in electronic format, legible and include sufficient backup materials to facilitate review and verification by OGS D&C staff.
   b. Supporting documentation and/or detailed estimates must accompany the Consultant Estimate Form BDC 178 for each submission.
   c. The estimate should be organized in accordance with the major components of the project, and the total should be distributed among the required disciplines and trades. A separate estimate is required for each bid package (C, H, P, E)
   d. All calculations and/or descriptions of net area, gross area, or building volume should be estimated based upon American Institute of Architects (AIA) standards and procedures.
   e. All area and quantity calculations and unit prices used in developing the estimate should be clearly enumerated.
   f. All labor cost estimates should be based upon prevailing wage rates and standard unit costs for the type of work required. OGS D&C maintains a modeled Construction Index for use in estimating.

2. B. ESTIMATE COMPONENTS AND DEFINITIONS

| Material and Labor |
Material and labor costs, the backbone of the estimate, are based on the best information available on the specific project at a particular design phase. Occasionally starting with square foot costs, the estimate moves toward detailed quantity takeoffs as the plans and specifications develop. Standard published cost data and references as well as historical data and manufacturers or suppliers quotes are used for material. The labor portion of the estimate should represent productivity appropriate to the scope of work and reflect the prevailing wage rates for the county in which the project is located. OGS maintains a modeled Construction Index based on the prevailing wage rates of 11 trades in the 62 counties of New York State.

| **General Conditions and Division 1** | Accounts for project specific costs at the site above the direct material and labor costs. These costs include: bonds and insurance; supervision; field office costs; temporary facilities; general support; equipment and compliance with facility regulations. At the early stages of the project a percentage may be used which is later replaced with the itemized expenses. |
| **Home Office Overhead** | Covers a share of the contracting firm’s operating costs primarily at the home office including: rent; utilities; postage; office supplies; secretarial and administrative support; taxes, fees and executive salaries. |
| **Profit** | The suggested percentages for home office overhead and profit included in the Markup Tables are based on industry standard and accepted practice. An extremely competitive environment may indicate a lower percentage. |
| **Field Order Allowance** | An additional (lump sum) amount included in the contract to accommodate contingent activities, i.e., field conditions and error/omission changes to the Contract (Bidding) Documents. A separate Field Order Contingency Allowance, rounded to the nearest $100, must be calculated based on the total material and labor costs for each bid package. |
### Other Cash Allowances

If required, include additional amounts included in the contract documents for specific items the contractor must include in his/her bid. Some typical allowances are for special hardware, fire or security systems or utility connections. Documentation demonstrating the need, source and exact amount of the cash allowance must be submitted as backup and must be approved by the Office of the State Comptroller.
OGS Design Procedures Manual
A Guide to Designing Projects for Design & Construction

Security/Occupied Facility

Design Development
Contingency

This is a markup applied to the labor portion of the estimate
to cover lost time due to either entering and exiting security
check points for contract work within a secure facility or for
inefficiency due to working in or adjacent to an occupied
space. This can also be used to cover the effects of
phasing on contract work progression.

An amount included in the project estimate to provide for
unknown/unforeseen circumstances which traditionally arise
as the design progresses. As the design is refined in later
phases, the amount will be reduced until the Final Construction
Document Phase when no contingency should be needed.

Escalation

The provision in estimated costs for an increase in the cost of
equipment, material, labor, etc., due to continuing price level
changes over time.

Estimated Bid Amount

The estimated cost of construction plus the Field Order
Contingency Allowance for a single bid package. A separate
Estimated Bid Amount (rounded to the nearest $1,000) is
required for each bid package, and it is the amount against
which contractors’ bids will be compared.

Bid Package

Includes all the separate trade estimates that may be included
and bid in the same contract, i.e., the Construction Bid Package
could include the following trade estimates:
• Construction
• Elevators
• Food service equipment
• Site work
• Environmental engineering
Separate Field Order Contingency Allowances should be
combined into one per package and the appropriate percentage
based on the size of the bid package estimate should be used see Markup Tables

Total Estimated Bid Amount

The sum of the Estimated Bid Amounts for the separate
contracts.


Maximum Construction Cost (MCC) or Client Approved Estimate

The Maximum Construction Cost (MCC) is the authorized amount in the project budget for required construction work to which all design work must adhere. The estimate should not exceed this cost. **When project demands require exceeding the Maximum Construction Cost as stated in the Scope of Services, the Consultant should propose alternatives to reduce costs and adhere to the MCC.** The MCC is the cost of construction only – design fees are not to be included. The Field Order Contingency Allowance required for each bid package is included in the MCC.

Alternates

Additions or subtractions (rounded to the nearest $100) to an Estimated Bid Amount for substitutions asked for in the Contract (Bidding) Documents.

Estimate Accuracy Range

Expresses a confidence level of the cost estimate to the client at each submission phase.

Design, Inspection and Project Management Fees

Includes design, testing, surveying, construction inspection and project management fees. These are for planning purposes at Program or Budget Phase for the client.

3.

4.

5.  **C. COST ESTIMATING TOOLS**

1. OGS D&C Cost Control staff developed the following tools and standard forms to assist the Consultant in developing project estimates, as well as to facilitate D&C review.

2. Estimating Forms and Tables: OGS D&C staff uses in-house forms to establish a standardized estimating methodology. Design Consultants are required to use the **Consultant Estimate Form BDC 178** to ensure consistency and facilitate OGS D&C review of submissions. **The BDC 178 is an Excel file that contains the following sheets: estimate summary-history, estimate, estimate revisions, basis of estimate, mark-up tables and instructions.**

<table>
<thead>
<tr>
<th>Form ID</th>
<th>Form Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDC 178</td>
<td>Estimate Summary-History</td>
<td></td>
</tr>
<tr>
<td>Form ID</td>
<td>Form Title</td>
<td>Description</td>
</tr>
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<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commencing with the Program Report, this form is included with each phase submittal and summarizes all individual trade cost estimate information as well as previous estimates, if any, for the project.</td>
</tr>
</tbody>
</table>
| Estimate|                     | This form is used to report the detailed portion of each trade estimate. The Consultant may use his/her own format; however, the following data must be included:  
- General conditions and administration  
- CSI specification number  
- Quantities  
- Units  
- Separate material and labor costs  
(Labor costs may be reported as a unit cost or labor hours.) |
| Estimate Revisions | The Estimate Revision sheet is required at each subsequent submission to quickly highlight and document changes in the estimate and/or design from the previous submission. |
| Basis of Estimate | Documents the critical aspects of a project cost estimate and defines the scope of the project. Documents the following: purpose of the estimate (study, budget, program report, etc.), project scope, pricing basis, allowances, assumptions, and exclusions. Assures the client and our project team that the estimate provided is in sync with the purpose of the project. Required at each submission phase for projects over $2,000,000. |

a)

b)  3. The following tables are included as part of the same Excel workbook as additional tools for estimating:

c)  a. Markup Tables - The Markup Tables provide the suggested percentages for overhead and profit as well as the required percentages for Field Order Allowances and Design Development Contingencies.

d)  b. Wage Rate Table -

e)  1) For each of New York’s 62 counties: These are based on wage rates published by the NYS Department of Labor, and are compiled from base rates and supplemental benefits. Payroll taxes and
insurances are not included. Social Security, Medicare, Unemployment, Disability, and Workers Compensation will, together, generally add 30% to wages.

4. **Sequence for Applying Percentages to Estimates:** (A separate estimate is required for each trade and new building.)

(a) **Material and Labor Subtotal**

+ General Conditions
  (On-site overhead if not shown as line items in Division 1 of Project Manual)
+ Home Office Overhead
+ Profit
+ Design Development Contingency
+ Escalation
+ Field Order Allowance

= Estimated Bid Amount

6. **D. COST ESTIMATE SUBMISSIONS**

7.
## Budget/Program Phase Estimate

<table>
<thead>
<tr>
<th>Description:</th>
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<tbody>
<tr>
<td>Budget or Program estimates are generally prepared to form the basis for budget authorization, appropriation, and/or funding. As such, they typically form the initial control estimate against which all actual costs and resources will be monitored. Typically, engineering is from 10% to 40% complete, and would comprise at a minimum partially completed design information for the following: defined site civil information such as site plan, existing site conditions, demolition drawings, utility plan, site electrical plans, room layouts, mechanical system layouts, plumbing layouts, and one-line electrical diagram.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of Project Definition Required:</th>
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<tbody>
<tr>
<td>10% to 40% of full project definition.</td>
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</table>

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<thead>
<tr>
<th>Estimating Methods Used:</th>
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<tbody>
<tr>
<td>Budget/Program may involve a high degree of unit cost line items, although these may be at an assembly level of detail rather than individual components. Historical square foot costs may be utilized when limited information is available. Factoring and other methods may also be used to estimate less-significant areas of the project.</td>
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<thead>
<tr>
<th>Expected Accuracy Range:</th>
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<tbody>
<tr>
<td>Typical accuracy ranges for Budget or Program estimates are -15% on the low side, and +25% on the high side, depending on the construction complexity of the project, appropriate reference information, and the inclusion of an appropriate design development contingency. Ranges could exceed those shown in unusual circumstances.</td>
</tr>
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<thead>
<tr>
<th>1. ADDITIONAL REQUIREMENTS FOR BUDGET/PROGRAM PHASE ESTIMATES:</th>
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<tbody>
<tr>
<td>A. <strong>ESCALATION</strong> - TO BE INCLUDED FROM THE COST ESTIMATE DATE UNTIL THE CURRENT BID DATE FOR THE PROJECT. IF NO BID DATE IS AVAILABLE A MINIMUM OF TWO YEARS OF ESCALATION SHOULD BE INCLUDED IN THE COST ESTIMATE.</td>
</tr>
<tr>
<td>B. <strong>DESIGN, INSPECTION AND PROJECT MANAGEMENT FEES</strong> - THESE FEES ARE CALCULATED AUTOMATICALLY ON THE ESTIMATE SUMMARY-HISTORY SHEET THAT IS PART OF THE CONSULTANT ESTIMATE FORM (BDC178). THE FEES WILL ONLY BE CALCULATED AT PROGRAM OR BUDGET PHASES AND ARE FOR CLIENT PLANNING PURPOSES ONLY.</td>
</tr>
<tr>
<td>C. <strong>ESTIMATE ACCURACY RANGE</strong> - THIS IS A RANGE OF COSTS THAT SERVE TO PROVIDE THE CLIENT WITH A CONFIDENCE LEVEL IN THE COST ESTIMATE. IT IS AN ASSESSMENT OF HOW FAR A PROJECT’S FINAL ACTUAL COST CAN BE EXPECTED TO VARY BASED ON VARIOUS FACTORS. THE RANGES ARE CALCULATED AUTOMATICALLY AT EACH SUBMISSION PHASE AND ARE FOR CLIENT PLANNING PURPOSES ONLY.</td>
</tr>
<tr>
<td>D. <strong>BASIS OF ESTIMATE (BOE)</strong> - DOCUMENTS THE CRITICAL ASPECTS OF A PROJECT COST ESTIMATE AND DEFINES THE SCOPE OF THE PROJECT. DOCUMENTS THE FOLLOWING: PURPOSE OF THE ESTIMATE (STUDY, BUDGET, PROGRAM REPORT, ETC.), PROJECT SCOPE, PRICING BASIS, ALLOWANCES, ASSUMPTIONS, AND EXCLUSIONS. ASSURES THE CLIENT AND OUR PROJECT TEAM THAT THE ESTIMATE PROVIDED IS IN SYNCH</td>
</tr>
</tbody>
</table>
WITH THE PURPOSE OF THE PROJECT. THE BASIS OF ESTIMATE IS REQUIRED AT EACH SUBMISSION PHASE FOR PROJECTS OVER $2,000,000.

**E.** FORMAT - THE PROGRAM PHASE ESTIMATE SHOULD BE BOUND INTO THE PROGRAM REPORT. THE ESTIMATE SHOULD INCLUDE AN INITIAL **CONSULTANT ESTIMATE FORM** (BDC 178), AS WELL AS DOCUMENTATION FOR ANY BACKUP DATA USED IN DEVELOPING THE ESTIMATE.

**F.** TOTAL PROJECT BUDGET SHOULD BE DISTRIBUTED AMONG THE REQUIRED DISCIPLINES AND TRADES.

**G.** ROUND THE FINAL ESTIMATE TOTAL TO TWO SIGNIFICANT DIGITS.

---

**2. SCHEMATIC PHASE ESTIMATE:**

**A. DESCRIPTION:**

1) THE SCHEMATIC DESIGN PHASE SHOULD ARRIVE AT A CLEARLY DEFINED, FEASIBLE CONCEPT AND THEN PRESENT IT IN A FORM THAT ACHIEVES CLIENT UNDERSTANDING AND ACCEPTANCE. IT IS EXPECTED TO CLARIFY THE PROJECT PROGRAM, EXPLORE THE MOST PROMISING ALTERNATIVE DESIGN SOLUTIONS AND PROVIDE A BASIS FOR ANALYZING THE COST OF THE PROJECT.

2) THE SCHEMATIC DESIGN PHASE ESTIMATE HAS THE SAME DESCRIPTION, LEVEL OF PROJECT DEFINITION, END USAGE, ESTIMATING METHODS, EXPECTED ACCURACY RANGE AND ADDITIONAL REQUIREMENTS AS LISTED UNDER THE BUDGET/PROGRAM PHASE ESTIMATE.

3) IF A PROGRAM PHASE ESTIMATE EXISTS, THE SCHEMATIC PHASE ESTIMATE SHOULD VERIFY OR AMEND THE PREVIOUSLY MADE COST DISTRIBUTIONS.

4) IN THE ABSENCE OF A PROGRAM PHASE ESTIMATE, THE SCHEMATIC PHASE ESTIMATE WILL SERVE TO ESTABLISH ASSOCIATED COSTS AND VERIFY THAT THE PROJECT CAN BE CONSTRUCTED WITHIN THE MAXIMUM CONSTRUCTION COST AS NOTED IN THE PROJECT SCOPE OF SERVICES.

5) OVERALL SYSTEM AND COMPONENT SELECTIONS SHOULD BE MADE AND THE RESULTANT COSTS ENUMERATED FOR THIS PHASE.

6) APPROXIMATE QUANTIFICATION BASED UPON EXPERIENCE AND LOGIC MAY BE USED BY THE DESIGN CONSULTANT TO DEVELOP A RELIABLE BREAKDOWN BY DISCIPLINES.

**B.** FORMAT - THE SCHEMATIC PHASE ESTIMATE SHOULD BE INCLUDED WITH THE REQUIRED SCHEMATIC PHASE SUBMISSION. THE ESTIMATE SHOULD INCLUDE (DEPENDING ON WHETHER A PROGRAM PHASE ESTIMATE HAS BEEN DEVELOPED) AN INITIAL (OR FOLLOW-UP) CONSULTANT ESTIMATE FORM (BDC 178) AS WELL AS DOCUMENTATION FOR ANY BACKUP DATA USED IN DEVELOPING THE ESTIMATE.

---

**3. Design Development Phase:**

**a.** Description:

1) The Design Development Phase defines and describes all the important aspects of the project so that all that remains is the formal documentation step of construction contract documents.
2) The Design Development Design Phase Estimate has the same description, level of project definition, end usage, estimating methods and expected accuracy range as listed under the 80% and 100% Phase Estimate.

3) If a Schematic Design Estimate exists, the Design Development Estimate should verify or amend the previously made cost distributions.

4) In the absence of a Schematic Design Estimate, the Design Development Phase Estimate will serve to establish associated costs and verify that the project can be constructed within the Maximum Construction Cost as noted in the project Scope of Services.

5) Overall system and component selections should be made and the resultant costs enumerated for this phase.

6) Approximate quantification based upon experience and logic may be used by the Design Consultant to develop a reliable breakdown by disciplines.

b. Format: The Design Development Phase Estimate should be included with the required Design Development Phase submission. The estimate should include (depending on whether a Schematic Design Phase estimate has been developed) an initial (or follow-up) Consultant Estimate Form (BDC 178) as well as documentation for any backup data used in developing the estimate.

4. Contract Documents Phase Estimates: As stated before in Chapter 4, the Contract Documents Phase actually comprises three formal submittal segments:

a. 80% Submission (coordinate with other references to this phase).

b. 100% Submission (Field Check) Phase.
### 80% and 100% Phase Estimate

<table>
<thead>
<tr>
<th>Description:</th>
<th>Estimating Methods Used:</th>
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<tbody>
<tr>
<td>This phase estimate is generally prepared to form a detailed control baseline against which all project work is monitored in terms of cost and progress control. Typically, engineering is from 40% to 80% complete, and would comprise at minimum completed design information. All drawings, plan views, elevation drawings and section drawings are complete; except detailed design schedules, architectural details and control diagrams, which may still be in draft form.</td>
<td>Estimates always involve a high degree of quantity take-off estimating methods. Estimates are prepared in great detail, and often involve numerous unit cost line items. For those areas of the project still undefined, an assumed level of detail takeoff may be developed to use as line items in the estimate instead of relying on other methods.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Level of Project Definition Required:</th>
<th>Expected Accuracy Range:</th>
</tr>
</thead>
<tbody>
<tr>
<td>40% to 80% of full project definition.</td>
<td>Typical accuracy ranges are -10% on the low side, and +15% on the high side, depending on the construction complexity of the project, appropriate reference information, and the inclusion of an appropriate design development contingency. Ranges could exceed those shown in unusual circumstances.</td>
</tr>
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</table>

**End Usage:**
Estimates are typically prepared as the detailed control baseline against which all actual costs and resources will now be monitored for variations to the budget.

c. Final Submission Phase, culminating with the completion of documents to be used during bidding and construction of the project. The estimate(s) should become more refined during this phase, resulting in a Final Contract Documents Estimate to serve as the official project estimate (for client agency budgeting purposes).
### Final Phase Estimate

**Description:**

Final estimates will typically be used by D&C for check estimates and becomes the new baseline for cost/schedule control of the project. Final estimates are prepared for the project to comprise a bid check estimate to compare against a contractor’s bid estimate, or to evaluate/dispute claims. Typically, engineering is from 90% to 100% complete, and would comprise virtually all engineering and design documentation of the project, and complete project execution and commissioning plans.

**Level of Project Definition Required:**

80% to 100% of full project definition.

**End Usage:**

Final estimates are typically prepared to form a current control estimate to be used as the final control baseline against which all actual costs and resources will now be monitored for variations to the budget. They are used to evaluate bids, to support vendor/contractor negotiations, or for claim evaluations and dispute resolution.

**Estimating Methods Used:**

Final estimates involve the highest degree of quantity take-off estimating methods, and require a great amount of effort. All items in the estimate are usually unit cost line items based on actual design quantities.

**Expected Accuracy Range:**

Typical accuracy ranges for Final estimates are -5% on the low side, +10% on the high side, depending on the construction complexity of the project, appropriate reference information, and the inclusion of an appropriate design development contingency. Ranges could exceed those shown in unusual circumstances.

d. **Description:**

1) Detail costs based upon the exact quantity takeoffs from the contract documents and current and/or projected costs.

2) A separate estimate is required for each trade as identified on the Consultant Estimate Form (BDC 178).

3) Markups for Home Office Overhead, Profit, Design Development Contingencies, and Field Order Allowances should be noted as separate line items and follow recommended percentages (refer to Markup Tables).

4) If Addenda issued during the bid period affect construction costs, those costs should be reflected in a modified final estimate.

5) Estimate must be organized by CSI specification section numbers and include separate material and labor unit costs. Each work item should be referenced by its specification section number and subtotaled by divisions.

6) The Consultant should continue to use the forms and other tools mentioned previously, as well as any pertinent source documentation concerning estimates, and all should be submitted for review and approval in accordance with the other documents for this phase.

e. **Format -** While the estimates for the Program, Schematic Design and Design Development Phases are bound into the report as required for those phases, the estimates for the Contract Documents Phase should be broken down by contract and separately bound.
Chapter 7

Bid Phase Guidelines

7.1 General Information
7.2 Bidder Questions
7.3 Preparing Addenda
7.4 Pre-Bid Site Visit
7.5 Bid Evaluations
7.6 Meetings
CHAPTER 7 – BID PHASE GUIDELINES

7.1 GENERAL INFORMATION

INTRODUCTION

The Bid Phase starts once the final project design submission package has been accepted by the OGS D&C Office of Project Control (OPC) and passed on to the OGS D&C Division of Contract Management (CADM) Contract Awards. The OGS Team Leader / Project Manager (PM) may need to assist these offices in correcting or updating the bid documents or probable construction cost estimate.

The Consultant/Designer has a limited amount of responsibility during the bidding and award.

The Procurement Lobby Law prohibits providing any information related to the project during the restricted period (advertisement to award). If contacted by contractors, subcontractors, suppliers, plan sales houses, marketing firms, building, contractor and trade associations, the Consultant/Designer should refer them the PM who will then refer inquiries to the D&C designated contact persons.

CADM CONTRACT AWARDS RESPONSIBILITIES

CADM Contract Awards administers and coordinates the bidding process, coordinates printing and distribution of the bid documents, responds to bidder questions (with Consultant/Designer assistance), distributes addenda, receives bids, awards contracts and prepares contracts for construction.

SUMMARY of CONSULTANT/DESIGNER RESPONSIBILITIES

C1 Design disciplines’ ongoing coordination
C2 Respond to bidder questions in a timely manner
C3 Prepare and coordinate addenda as applicable
C4 Attend Pre-Bid Site Visit, if requested
C5 Support for Pre-Bid Conference, if requested
C6 Assist in bid evaluation, if requested
C7 Attend Pre-Award Meeting, if requested
C8 Attend the Design/Construction Pre-Construction Meeting
C9 See DPM Chapters 7.2, 7.3, 7.4, 7.5 and 7.6 for more detailed information
SUMMARY of PM RESPONSIBILITIES

P1 Ensure responses are made to bidder questions in a timely manner and that responses are appropriate
P2 Confirm that an addenda is warranted and review / approve as applicable
P3 Seek BUL approval when an addenda needs to be issued within 7 days of bid date
P4 Determine if any bid postponement is justified
P5 Attend Pre-Bid Site Visit, when necessary
P6 Support for Pre-Bid Conference, when necessary
P7 Assist in bid evaluation, when necessary
P8 Attend Pre-Award Meeting, when necessary
P9 Attend the Design/Construction Pre-Construction Meeting
P10 See DPM Chapters 7.2, 7.3, 7.4, 7.5 and 7.6 for more detailed information

DESIGN DISCIPLINES’ COORDINATION

Coordination between the architectural work, the engineering work, and the work of other involved designers and consultants for the project is an ongoing effort and should continue through the Bid Phase. As bidder and supplier questions arise, further coordination between disciplines may be required. Coordination during this phase does not, however, supplant the required coordination during the Construction Document Phase.

BID PERIOD

The standard bid period for most projects is four (4) weeks. The goal of the bid period is to provide sufficient time for the Contractor to review the bid documents, opportunity to attend Pre-bid Site Visits and adequate time for CADM Contract Awards to receive, distribute and respond to bidder questions. The duration from advertisement to bid opening is adjustable. Large, complex projects will generally require a longer duration; while a shorter duration may be required for projects with special schedule considerations. The PM should seek approval from the BUL when these durations are modified.

The postponement of a bid date may be necessary to address bidder questions and related addenda or multiple requests from bidder’s asking for additional time to analyze the bid documents. When this occurs, the PM will need to discuss time extensions with the TL and BUL.

Pre-bid Site Visits should be scheduled one and one-half (1 ½) weeks or more prior to the bid date. An addendum that adds a significant amount of additional work, especially where prime Contractors will need to solicit proposals from additional sub-contractors, may require postponement of the bids.
CHAPTER 7 – BID PHASE GUIDELINES

7.2 BIDDER QUESTIONS

GENERAL

1. Prospective bidder submits questions during the bid period using the electronic Bidder's Question Form located on the OGS Public Web Site.
   a. Consultant/Designers receiving questions directly shall redirect bidder / supplier to submit their questions via the OGS Website.
   b. A Consultant/Designer shall not offer information to a bidder that influences the bid by providing a bidding advantage over other bidders; therefore strict adherence to this procedure is required.
   c. The Consultant/Designer must not communicate directly with a potential bidder or supplier. Changes to the contract documents must be by written addenda.
   d. Note: Conflicts between drawings and specifications:
      1) See General Conditions, Article 3 for order of precedence.
      2) See Chapter 5.1 for additional information.

2. If a Bidder Question occurs within 10 calendar days of the bid date, the OGS TL / PM / EIC with input by the Consultant/Designer must determine the project risk implications of any inconsistency or missing information revealed.
   a. If the issue can be easily and quickly resolved and has a cost implication, an addendum should be issued.
   b. If the issue has a cost implication and cannot be quickly resolved or will require time for bidders to price, the receipt of bids should be postponed and the information issued by addendum. This action may require two addenda if the technical information cannot be quickly prepared.
      1) The OGS TL / PM must coordinate postponement of bid date with CADM. CADM provides assistance in determining latest dates for addenda and postponement recommendations.
   c. If the issue has minimal or limited cost implication and/or the project schedule is of high importance the OGS TL / PM may elect not to answer the Bidder Questions.
PROCEDURES

1. Prospective bidders post Bidder Questions electronically to the OGS public website.

2. CADM Contract Awards reviews and “accepts” Bidder Question. If a Bidder Question is deemed “unacceptable” it may be responded to by CADM Contract Awards. Qualified Bidder Questions are forwarded electronically to the Project Team. Distribution of Bidder Questions is made using the project staffing list in DCNet. The PM shall ensure DCNet project staffing is updated.

3. CADM Contract Awards sends Bidder Questions email to the TL with copy to:
   a. Project Manager
   b. Business Unit Leader
   c. EIC
   d. Area Supervisor
   e. Regional Supervisor

4. Team Leader Tasks:
   a. Answers Bidder Question or obtains appropriate response from the Consultant/Designer
   b. Confirms response is appropriate
   c. Confirms if an addendum is required
   d. Inserts response using the electronic Bidder Question Form
   e. Click 'Update' button which submits to CADM Contract Awards (only the TL and PM will be able to submit an electronic response. Coordinate to prevent duplicate responses
   f. Notify CADM Contract Awards that DCNet has been updated

5. CADM Contract Awards Tasks:
   a. Reviews Consultant/Designers’ Bidder Question response
   b. May contact TL or PM to review questions related to the formal Bidder Question response
   c. Posts the Bidder Question response on the OGS website

OGS PUBLIC WEBSITE

1. Bidder Questions and responses will be posted on the OGS Website.

2. After project award, the PM shall review answered Bidder Questions (non addenda) with the EIC to determine if any IB’s will need to be issued.
Chapter 7 – Bid Phase Guidelines

7.3 PREPARING ADDENDA

**GENERAL**

1. An addendum is a document that is added to the original construction documents during the bidding period to:
   a. Correct errors or omissions in the bidding and contract documents.
   b. Clarify questions raised by bidders.
   c. Issue new requirements, including decisions to decrease or increase the scope of work.
   d. Cancel the project after it has been advertised, but before it is bid.
   e. Modify the bid opening date.

2. Addenda should not be used to complete the design phase of a project or to issue minor small-value changes.

3. Oral instructions or changes should not be proffered in any form even when it is intended that an addendum will later be prepared to document the change. It does not mislead anyone to state that replies to questions from interested parties during the restricted period when deemed necessary, will be communicated by addendum.

4. If an unforeseen but important question arises, it is usually wise to issue an addendum if time permits, even delaying the bid opening if changes are critical. Questionable matters should not remain unclarified.

5. Program changes by addendum require Client review and approval.

6. Major last-minute changes should not be attempted by issuing a few simple inadequate statements in a hastily prepared addendum. No addenda will be issued beyond the Friday before bid opening unless for a postponement of the bid opening. Addenda must be submitted to CADM Contract Awards no later than 12:00pm Friday to ensure it is processed in time.
7. Notify the PM/EIC that the Submittals Exchange® submittals website log should be adjusted when addenda items delete or add submittals to the contract.

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**PROCEDURES**

1. In order to reduce the number of addenda issued, addenda should not be sent piecemeal. Every attempt should be made to get all the required information together (except for bid opening postponements) for one large addendum rather than several small addenda. This can be accomplished by issuing addenda later in the bid period.

2. The TL or PM is responsible for coordinating all addenda. The TL or PM must inform CADM as soon as possible about the need to issue an addendum. At that time the addendum will be registered and issued an addendum number. Addenda are numbered consecutively.

3. All items (Drawings, Specification Sections, revised Bid Forms, etc.) issued with the addendum should have the same date. Usually the date the addendum is being issued is used.

4. It is the TL or PM’s responsibility to notify the project team involved on the project of the last date addenda information will be accepted for processing. Usually it is no later than one week before the bid opening date. If there are less than 7 calendar days remaining until the bid date, the TL or PM must obtain approval of the BUL.

5. The design team is responsible for the content and proper format of addenda.

6. All addenda are to be issued as all-trade addenda on multi-contract projects. As such, any single addendum may include directed modifications to either common documents, trade-specific documents or both.

7. In writing addenda, be clear, accurate, and concise. Express a change only once, then refer to it whenever necessary. Where a change in the specifications requires a change in the drawings, and vice versa, explain all changes in the addendum.
8. When making a change to documents or sections, refer first to the page number then to article number then to the paragraph or subparagraph number, as shown in the samples.

9. When making a change to the drawings, refer first to the drawing number then to the detail number/name, as shown in the samples.

10. If the addendum includes 8½ x 11 addendum drawings, the addendum drawings will be numbered with the next appropriate number after the last numbered drawing included in the project manual or the drawing package or previous addenda.

11. The addendum must have standard margins and be in the format shown in the samples.

12. The TL or PM shall deliver the addendum to the CADM Contract Awards designee.

13. PM shall ensure addenda are filed in the SpecDevelopment/Addenda folder (projects initiated prior to August 2015) or in 40_Bid AwardPhase/43_Addenda (projects initiated August 2015 or later).

14. Addendum drawings that are in addition to the initial drawing set that add work or change the design or performance of the project must bear the professional seal (R.A. or P.E.) of the person responsible for the design.

**FORMAT**

1. The sequence of information contained in an addendum should be as follows (see the samples):
   a. OGS heading (first page only)
   b. Addendum number and project number
   c. Project Title and Location (first page only)
   d. Addendum date
   e. Standard note (first page only). The standard note is not used on cancellation addenda.
f. Addendum number and date header (except first page)

g. Printing errors

h. Changes to prior addenda

i. Changes to INTRODUCTORY INFORMATION documents contained in the Project Manual in the same sequence in which they are listed in the TOC.

j. Changes to BIDDING REQUIREMENTS documents contained in the Project Manual in the same sequence in which they are listed in the TOC.

k. Changes to CONTRACTING REQUIREMENTS documents contained in the Project Manual in the same sequence in which they are listed in the TOC.

l. Changes to SPECIFICATIONS sections contained in the Project Manual in the same sequence in which they are listed in the TOC.

m. Changes to APPENDIX documents contained in the Project Manual in the same sequence in which they are listed in the TOC.

n. Changes to DRAWINGS in the following order:
   1) Changes to the originally issued drawings
   2) Revised drawings
   3) Addendum drawings
   4) The titles “CONSTRUCTION WORK DRAWINGS”, “HVAC WORK DRAWINGS”, etc. are used to distinguish the separate contracts. The revised drawings and addendum drawings for each contract are included under each separate contract heading.

o. END OF ADDENDUM (last page only).

p. Author’s and word processor’s initials (last page only).

q. The pages of each addendum must be numbered consecutively using the “page number of total pages” system. For example, if an addendum is comprised of 3 pages, the first page will be numbered “Page 1 of 3”, the second page will be numbered “Page 2 of 3”, and third page will be numbered “page 3 of 3”.

r. The project number(s) at the bottom right corner of each page.

**SAMPLES**

1. Samples of typical addenda items and language are found at: *Addenda Samples.*
ADDENDUM MASTER

1. See Addendum Edit, for the electronic master for writing addendum.
CHAPTER 7 – BID PHASE GUIDELINES

7.4 PRE-BID SITE VISITS

**GENERAL**

1. A Pre-bid Site Visit provides potential bidders with an opportunity to view the project site and become familiar with existing conditions. Most often, bidders’ access to the site will be restricted to this specified time period to minimize facility disruptions. Bidders are NOT REQUIRED to attend in order to bid a project.

2. Pre-bid Site Visits are scheduled for most projects and are conducted by the Division of Construction staff.

3. The requirement for the PM and Consultant/Designer to attend the Pre-bid Site Visit is by mutual agreement between the BUL and Regional Supervisor. A request for a Consultant/Designer to attend the Pre-bid Site Visit is considered an optional service.

4. Consultant/Designer attendance is beneficial to the project to be able to listen to bidder questions. Bidders are encouraged to fill out the Bidder’s Question Form to get a question resolved by addendum. An alternative method for Consultant/Designers to hear bidder concerns and questions would be via a teleconference call (conducted by field staff) after the bidder Pre-bid Site Visit.

5. During a Pre-bid Site Visit, factual information shall not be exchanged and no interpretations of the contract documents shall be made. Such information includes responses to bidder questions regarding reference to specific specification sections and drawing plans, details and notes clearly identified on the contract documents. **Conflicts and items that are not clearly identified in the documents shall only be answered by written addendum.** Without the benefit of a written addendum, verbal answers are not enforceable and are subject to the interpretation of those listening. Furthermore, verbal answers are not made available to all potential bidders not in attendance at the Pre-bid Site Visit.

6. Pre-bid site visits on rare occasions may be made mandatory for bidders on projects where specific expectations or requirements cannot be readily described in the drawings and specifications. If it is determined that a mandatory pre-bid site visit is necessary, pre-approval
is required by the BUL and the contracting officer. At least two pre-bid sit visit dates must be offered in the bid documents, with the requirement that the prospective bidder attend one of them. Examples of projects that have utilized mandatory pre-bid site visits include:

a. A stone cleaning project at the New York State Capitol where multiple sample cleanings were performed during design development and specific samples were identified as the standard for acceptable cleanliness.

b. A tire dump remediation project where the specified shredded tire product was required to meet a minimum cleanliness standard. Acceptable and unacceptable shred samples were made available for inspection at the pre-bid site visit. Bidders were informed that these shred samples would be used throughout the project to determine the acceptability of all shred produced.

Use of a mandatory pre-bid site visit requires approval by the BUL, Client Agency and Division of Construction because it potentially limits competition. Aggressive project marketing would be required. Justification for the use of a mandatory pre-bid site visit must be included in the project record.

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23.

24. **PRE-BID CONFERENCE**

Although rarely used, a more formal Pre-bid Conference may be recommended for large multi-trade contracts and high profile projects to familiarize all bidders with requirements of the local facility and to listen to questions and concerns raised by those present.

When a project has a Pre-bid Conference, the Project Manual cover page will include this notice. The Advertisement for Bids will also include the location, date and time for the meeting.

The Area Supervisor or the OGS Team Leader shall chair the meeting. An attendance sheet should be used to have a record of those who attended the meeting.

At this meeting, no interpretations of the Contract Documents shall be made. Responses to drawing and specification questions should only be those that can be made by reference to specific Specification sections and Drawing plans, sections, details, and notes. Conflicts and items that are not clear in the documents can only be answered by addendum. Without the benefit of an addendum, verbal answers are subject to the interpretation of those listening and are not available to anyone not in attendance at the meeting.

State attendees should include the OGS Team Leader, Project Manager and other designated Consultant/Designers, the Engineer-In-Charge, area construction and mechanical supervisors, facility representatives, and representative(s) from the Office of Contract Administration. Others that may be asked to attend, dependent upon the project, are representation from Contract Compliance, other State agencies (such as the Department of Labor), and local municipalities. Consultant/Designers may be requested to attend by the OGS Team Leader as an optional service.
The following subjects should be discussed at the Pre-bid Conference:

1. Bid security in the form of bid bonds or certified checks.
2. Sales and Use taxes.
3. Permits: Generic statements that there are no local building permits required to be obtained by the contractors, except for those required for specific items such as roadway permits and local tie-ins to public utilities.
4. Date, time, location for receipt of bids and OGS security protocols / delays.
5. Forms that must be included with the bids.
6. Specific rules of the local facility that require bidder compliance. These rules must be included in the documents. If not included, an addendum will need to be issued that includes these rules.
7. Special project specific requirements in the documents.
8. Questions raised by the potential bidders present at the meeting.
9. Tour of the project site after the meeting.
10. The following agenda is recommended:
   a) Introduction of representatives from the State
   b) Project Overview (Consultant/Designer)
   c) Bidding requirements
   d) M/WBE and EEO requirements
   e) Security regulations at the facility
   f) Specific project requirements
   g) Questions from the bidders in attendance
   h) Tour of the site
CHAPTER 7 – BID PHASE GUIDELINES

7.5 BID EVALUATION

GENERAL

1. The OGS D&C Bureau of Cost Control (Cost Control) and/or the Consultant/Designer may perform a detailed review of the low bidders estimate and provide a post bid evaluation.
   a. A Post Bid Report BDC 96.1 is required for the following conditions:
      - Low bidder is over or under 15% from the government estimate.
      - The difference between the 1st and 2nd low bidders is more than 15%.
      - Division of Construction holds a Pre-Award Meeting with the low bidder.
      - Low bidder is the sole bidder.

2. For Consultant projects, Cost Control will send the bid results and post bid forms to the Consultant/Designer to discuss and coordinate the review.

3. Post Bid Reports are to be completed and returned to Cost Control within three (3) days of the bid date.

4. The Post Bid Report summarizes the detailed review and investigation of the low bidder’s estimate vs. the government estimate. It includes the following:
   a. Comparison of estimated costs
   b. Explanation of the major differences identified
   c. Indication that the low bidder understands the scope of the work and can perform the work at the price bid.
   d. A recommendation to either re-bid the project or to award to the low bidder is also required.

5. The Cost Control Post Bid Report is forwarded to the OGS Team Leader and/or Business Unit Leader for review.

6. For more detailed information see Post Bid Report Powerpoint Presentation.
Chapter 7 – Bid Phase Guidelines

7.6 MEETINGS

**PRE-AWARD MEETINGS**

1. Pre-Award Meetings are mandatory for all 40000 series, Q and M projects and have been established to consider the responsiveness of the bid submitted by the apparent low bidder. The Regional/Area Supervisor will examine and evaluate the bid as responsive by considering the Contractor’s understanding of the overall project scope, estimated cost, proposed utilization of sub-contractors, contractor expertise, past performance on similar projects and review of the mandatory pre-award requirements.

2. Division of Cost Management/Cost Control will provide bid results to the Regional Supervisors, OGS D&C Team Leaders and other Design & Construction staff. The Regional/Area Supervisor shall conduct a pre-award meeting to review the project and assess project risks from:
   a. OGS D&C is not familiar with low bidder
   b. Low bidder has not done work with OGS D&C before
   c. A prior assessment of Liquidated Damages exists
   d. Poor workmanship occurred on a previous project
   e. Termination for cause occurred on a previous project
   f. Poor overall rating was earned on a previous project
   g. Amount bid is significantly below or above project estimate or varies widely from other bids
   h. Required mandatory pre-award submittal requirements in accordance with Document 002219 of the Project Manual.

3. The meeting should be held within 15 days of bid. The Regional Supervisor/Area Supervisor will notify the TL/PM via email. The TL/PM should participate via teleconference call. The award process will continue unless there is a specific request to CADM to hold up the award. The Regional and/or Area Supervisor should review the following information prior to the meeting:
   a. The Uniform Contracting Questionnaire (UCQ)
   b. Prior assessment of Liquidated Damages and/or any Termination for Cause
   c. The Post-Bid Report from Cost Control indicating a review of the low bidder’s estimate and recommendation to award or not to award
   d. A listing of Contractor history with OGS
   e. A review of prior evaluations
4. If the Consultant/Designer or anyone else is aware of a reason a bidder should not be awarded the contract, specific information, including project number, is to be sent to the Regional Supervisor for the project in question.

5. The Regional and/or Area Supervisor will send the bidder the "Pre-Award Meeting Agenda" which requires the bidder to provide additional information (references, supervision resumes' and a detailed work plan) for the meeting.

6. The Regional and/or Area Supervisor shall conduct the meeting along with representatives from CADM and Division of Design (when requested). The Consultant/Designer may participate via a teleconference call. The "Pre-Award Interview for Low Bidder" document contains questions and information the bidder should be made aware of (inspection, licensing, prevailing wages, limits on subcontracting, etc.) pertaining to the specific project.

7. After the Pre-Award Meeting is held the Regional and/or Area Supervisor shall determine whether the bidder meets or does not meet the contractor qualifications and makes a recommendation to award or not to award within two days of the meeting. The recommendations shall be sent to the Director, Division of Construction, who will review and forward it to CADM. If the recommendation is against award, reasons for such recommendation shall be provided. Issues of poor performance must be noted and referred to CADM for a possible responsibility hearing.

8. If the bid is determined to be "Non Responsive" by CADM the contract may be offered to the next low bidder or the project may be re-bid.

**DESIGN / CONSTRUCTION PRE-CONSTRUCTION MEETING**

1. The OGS TL/PM or the EIC shall initiate the Design/Construction Pre-Construction Meeting (via a teleconference) between the bid phase and award phase for 40,000 series projects valued at greater than $200,000. For projects valued under $200,000 this meeting is highly recommended but not mandatory. The PM shall invite the Consultant/Designer to the meeting.

2. The intent of this meeting is to define processes, roles and responsibilities of the team members. It should also include a discussion on defining the quality assurances (procedures for guarding against defects before and during the execution of the work) and quality control (reviewing completed work, testing and inspection to determine if work complies with contract requirements) measures.

3. The meeting discussion between the TL/PM, EIC and Consultant Designer should focus on the project intent, project specifics, reconfirmation of contact names, staff roles and items pertinent to the Construction Phase of the project. Discuss the
proper “chain-of-command” and copies / distribution lists. Chapter 8 Construction Phase Guidelines and BDC 37 Pre-Construction Meeting Agenda should be used as outlines for discussion items. Review optional services, number of site visits and milestones, etc. This meeting is recorded by the EIC in the BDC 36 or 36.1 Construction Management Plans. The BDC 37 Pre-Construction Meeting Agenda should be filed in the Construction / MeetingMinutes folder.

Note: Deciding that all email/paperwork has to go through the PM may cause unwarranted bottlenecks and untimely responses.

4. Consultant Projects:
   a. Have a discussion on how the Consultant/Designer can add quality and value to the project during the construction phase.
   b. Review and discuss the Work Order for this phase.
      1) Number of site visits (person days) and milestones for the project.
      2) Amount of time expected to be physically present on the job site.
      3) Lump Sum amount per day is recommended that would include a Not-to-Exceed total amount.
      4) The number of site visits can be supplemented in the future
      5) Use of BDC 151 Design Observation Report form on all site visits.
   c. Discuss level and quality of submittal reviews.
   d. Discuss optional services (if any).
Chapter 8 Construction Phase

CHAPTER 8

CONSTRUCTION PHASE GUIDELINES

INTRODUCTION

1. The continuing involvement of the Project Manager (PM) and Consultant/Designer during the Construction Phase assures OGS D&C and our Client Agencies that the completed project reflects the design intent and that the quality of materials and workmanship is to the acceptable standard as set forth in the contract documents.

2. Roles, expectations, and responsibilities need to be clearly identified and communicated amongst the Consultant/Designer, PM, and Director’s Representative (Engineer-In-Charge) during this phase. Most often, this phase is somewhat challenging due to the perceived transfer of project ownership from the PM / Consultant/Designer to the Engineer-In-Charge. The Pre-Construction Meeting ensures that the project transition to the Construction Phase is properly executed. Refer to the DPM Design / Construction Pre-Construction Meeting in Chapter 7.6 Meetings section B of the Bid Phase Guidelines.

3. The PM and Consultant/Designer have the responsibility to provide the necessary contract administration support services and resources to the Engineer-In-Charge during this phase to ensure a timely completion of the project. The number and intervals of site visits should be commensurate with the project schedule and complexity. Consideration should also include specific pre-installation meetings, benchmarks and mock-up reviews. See Construction Observation Site Visits and Reports in this chapter.

4. Effective communication amongst the Project Team is essential to the successful completion of a project. It is recommended that the Project Team use online meeting services via the internet in real time to share desktops and visually view project documents when appropriate. The use of an Electronic Web-Based Construction Collaboration System (submittals website) will be used to assist in the management of the project team (including Contractors, Consultants and Client) during this phase for the shop drawing submittal process and other forms of construction communications and documentation including but not limited to Requests for Information, Information Bulletins, meeting minutes, testing reports, schedules, contract documents, SWPPP reports, etc.
SUMMARY of the PM RESPONSIBILITIES

P1 Primary responsibility for coordination with Client on scope changes during construction.

P2 Initiation and approval responsibility for all changes to Consultant/Designer scope of services, including responsibility to issue/approve all work assignments.

P3 Ensure that the Pre-Construction Teleconference Meeting is held prior to construction start. The PM/EIC should invite Consultant/Designers to participate.

P4 Ensure that communications are occurring at an appropriate frequency to support the project and that they are maintained between the Consultant/Designers, PM, EIC and field staff. See Chapter 10.3 Communications Guide.

P5 Ensure that Consultant understands their role and responsibilities for this phase.

P6 Submittals:
   a. Ensure that the Schedule of Submittals (SOS) Excel version is emailed to Submittals Exchange® along with the project team directory.
   b. Ensure the website submittal log includes submittals that are added or deleted by addenda.
   c. Ensure that the submittals system log on the website is maintained and updated in collaboration with the consultant, EIC, and Contractor.
   d. Ensure submittals are being submitted by Contractor and are reviewed and processed by the Consultant/Designer in a timely manner.
   e. Discuss submittal re-evaluation fees with the Consultant/Designer / EIC and request approval for enforcement provision from the Director of Construction’s Office when necessary.

P7 Ensure Consultant/Designer RFIs & IBs are being processed in a timely manner.

P8 Ensure all Consultant/Designer site visits have an associated Design Observation Report BDC 151 and that the EIC is responding to deficiencies.

P9 Ensure that BDC 49 Contract Document Deviation Request Form is used when Contractor substitutions / deviations are proposed and provide assistance in the review process.

P10 Assist in the review of Field Orders and Change Orders.

P11 Assist in the interpretation of contract documents.

P12 Best Practice: Complete a Consultant evaluation for this phase.

P13 Ensure that the submittals website closeout data is provided on a searchable database (CD, DVD or downloadable file) and a copy is provided to Consultant. Ensure archive data is uploaded into the project Construction / Submittals folder by BU6 CADD Unit.

P14 Review the contents within this chapter for more detail.
P15  Best Practice: Complete a Consultant Evaluation in DCNet.

**DIRECTOR’S REPRESENTATIVE (EIC) ROLE**

**B**

C  The Director’s Representative role is typically filled by the Engineer-In-Charge (EIC). The EIC has the direct responsibility for obtaining from the Contractors all that is represented by the plans and specifications and for ensuring that all requirements of the Contract are fulfilled before the corresponding payments are made by the State. The duties required to perform this function can be generally described as Construction Management services including interface with the Consultant/Designers, inspections, scheduling the work of prime Contractors, project reporting (bi-weekly), cost accounting, Contractor coordination, payment application review, processing field and change orders, project meetings, project closeout, review of Contractor as-built drawings, operations and maintenance manuals and warranties, and claims mitigation. The EIC’s role and responsibilities are defined in detail in the Construction Procedures Manual.

**SUMMARY of CONSULTANT/DESIGNER RESPONSIBILITIES**

**C1**  Attend the Design and Construction Pre Construction Teleconference Meeting.

**C2**  Frequent communication with PM/EIC appropriate for the type of project.

**C3**  Ongoing coordination of all the design disciplines.

**C4**  Submittals:
   a.  Notify the PM and EIC when the SOS is modified by addendum.
   b.  Interface with an electronic submittals web based collaboration system (submittals website). Manage the submittals system log in collaboration with the PM, EIC, and the Contractor.
   c.  Review of submissions within 5 – 10 business days of receipt.
   d.  Thorough review submittals for compliance with the contract documents.
   e.  Monitor the quality of submittals. Notify PM/EIC when submittal quality is incomplete and not acceptable for review. Promptly return submittal as Return for Correction. Discuss enforcement of the Contractor submittal re-evaluation fee with the PM/TL/EIC when necessary.
   f.  Notify the PM/EIC on Contractor material or proposed product substitutions, deviations and detail changes. Contractor shall use BDC 49 Contract Document Deviation Request Form for these types of changes.
   g.  Notify the PM/EIC if long lead items and critical submittals are not submitted by the Contractor in a timely manner and per the submittal schedule.
h. Do not add scope to the submittals without prior discussion with the PM/EIC. If marked revisions are made to shops / product data and scope is added to the contract then the shops / product data revisions need to be supplemented with a complimentary IB.

C5 Answer Request for Information (RFI’s) within 5 business days.

C6 Issue Information Bulletins (IB’s) in a timely manner as to not impact the construction schedule.

C7 Notify the PM/EIC promptly of any scope changes.

C8 Attend important pre-installation meetings, mock-up reviews and other significant meetings.

C9 Site Visits (as approved by the PM):
   a. Meet with EIC and tour project site.
   b. Review work for contract compliance, design intent, quality of workmanship, and material acceptance.
   c. Use Design Observation Report BDC 151 for ALL site visits and reports. Note deficiencies in the report. A report is also required to be submitted when there are no deficiencies found.
   d. Notify the PM when deficiency responses are not provided by the EIC in a timely manner.
   e. Discuss / request additional site visits when deemed appropriate for project and quality concerns.

C10 Review of Field Orders and Change Orders (when requested by PM/EIC).

C11 Interpretation of Contract Documents (when requested by PM/EIC).

C12 Review the information within this chapter and ensure that sub-consultants have a clear understanding of the project phase requirements.

C13 Review the contents within this chapter for more detail.

C14 REVIEW SPECIAL INSPECTION DEFICIENCIES THAT CANNOT BE RESOLVED BY REPAIRS OR REPLACEMENT. THIS MAY REQUIRE THE REVISION OF DETAILS OR CERTIFICATION THAT THE MATERIAL OR INSTALLATION MEETS THE INTENDED PURPOSE.

COMMUNICATIONS

D

1. The PM and the EIC shall maintain open lines of communications for the duration of the project. They shall include applicable Client Representatives, Consultant/Designers, Contractors and Facility Representatives as required.

2. Project Team Communications Protocol:
   a. All important communications shall be in writing, or if given verbally should be confirmed in writing.
   b. All communications to and from sub-Contractors and suppliers shall be through the EIC and Contractor.
   c. All communications with the Consultant’s sub-consultants shall be through the Prime Consultant.
DESIGN DISCIPLINES COORDINATION

1. Project coordination is an ongoing effort between the architectural and engineering Consultant/Designers and shall continue through the Construction Phase. Consultant/Designers shall review and cross check documents with required submittals and RFI's prepared by the Contractor. Coordinate submittal information with related design disciplines.

SUBMITTAL REVIEW PROCESS

1. The submittal review process includes the preparation, receipt, review, and appropriate action on shop drawings, product data, samples, mock-ups, and other submittals required by the Contract Documents on a thorough and timely basis so as not to impact the construction schedule.

2. The submittal process and associated reviews are administered by Submittals Exchange® a web based submittals tool specified in 013300 Submittals.

3. Submittals Exchange® uses the Excel SOS (included in the Project Manual Appendix as a pdf document) to generate the project submittal log. Notify the EIC to update the web submittal log when addendum modifies the SOS.

4. Submittals are prepared by the Contractor and include shop drawings, product literature, or actual samples of specific products to be installed; reports from independent testing agencies; operating instructions; maintenance manuals for installed equipment; and warranties from product suppliers and equipment manufacturers. The Contractor shall review each submittal for its appropriateness and suitability for the product, and the submittal shall note that this review has been conducted. See Article 4.2 of the General Conditions. If submittals come in from the Contractor without apparent thorough review, they should be returned to the Contractor with a statement such as:

   “There appear to be significant discrepancies between the contract documents and this shop drawing. You are advised to recheck the submitted data for contract compliance and resubmit.”

5. The intent of Article 4.7 of the General Conditions and Specification 013300 item 1.07 Re-evaluation Fee ($250) is to ensure that the Contractor, Sub-Contractor or Manufacturer has done due diligence in the submittal preparation with respect to appropriate content and completeness. The number of resubmissions that are deemed an acceptable number is determined by the Consultant/Designer and PM. Resubmissions that do not address previous
red-lined comments is a good example of a submission that should be rejected and the re-evaluation fee invoked. The re-evaluation fee is a useful tool to be used by the Consultant/Designer to send notice to a non-performing Contractor, sub-Contractor, vendor or supplier that their proper preparation and review of submittals is important to the project. The re-evaluation fee process is implemented when the EIC/PM requests review and approval by the Assistant Director of Construction.

6. The intent of Article 4.3 of the General Conditions regarding submittal substitutions and deviations requires Contractors to submit in separate writing proposals for contract change prior to or at the time of submittal submission according to the SOS to allow the Consultant/Designer, PM, EIC and the Director sufficient time to review.

   a. Contractors are required to formally notify the Director in writing using BDC 49 Contract Document Deviation Request Form for submittal deviations, proposed substitutions, detail modifications and phasing changes from the contract documents.

   b. See Article 4.3 of the General Conditions for specific language and 013300 Submittals specification article 1.02 and 1.03.

   c. OGS D&C is seldom in support of Contractor proposed substitutions or deviations, unless there is an unworkable detail or other inherent design flaw with the documents or there is a significant benefit to the State. It is of OGS D&C’s opinion that these proposals usually benefits the Contractor more than the State and slows down the project schedule.

   d. Consultant/Designer shall not allow any Contractor deviation or substitution to be made without formal discussions with the PM/EIC.

   e. The PM and Consultant/Designer shall not approve submittals which indicate a significant deviation or substitution until the BDC 49 has been completed by the Contractor and approved by the OGS Representatives noted on the form.

   f. The EIC will discuss the form and its use at the Contractor Initial Job Meeting.

   g. BDC 49 form is available electronically to Contractors on the OGS Website.

   h. The Contractor proposed anticipated savings (if any) when approved is not the final cost. The final cost will be vetted by the Field Order or Change Order that BDC 49 generates.

   i. The PM or the EIC shall file the BDC 49 form (including accepted and denied proposals) in the Correspondence / Construction folder.

7. The Contractor uploads submittals to the submittals website as indicated in specification section 013300 Submittals.

8. Submittal Distribution:
   Distribution is as follows unless decided otherwise:

   a. Per submittals website.
   b. Record copy provided by Contractor per Specification 013300.
c. Security submittals noted in the Agency Specific Standards and Requirements for DOCCS and CFS Agencies are to be reviewed and marked by Consultant/Designers for conformance to the project. When completed, notify the PM that submittal is ready for OGS security specialists review.

9. The Consultant/Designer shall thoroughly review, approve, or take other appropriate action on the shop drawings. The EIC may provide submittal review assistance for submittal completeness, Division 1 sections as well as reviewing other Division submittals as agreed to at the Pre-Construction meeting.

10. The Consultant/Designer must make a determination (submittal action) on each submittal as to whether or not the submitted material complies with the contract requirements and is acceptable for installation on the project.

<table>
<thead>
<tr>
<th>Submittal Actions</th>
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</thead>
<tbody>
<tr>
<td><strong>Approved:</strong></td>
</tr>
<tr>
<td><em>The submitted material is acceptable as received.</em></td>
</tr>
<tr>
<td><strong>Approved as Noted:</strong></td>
</tr>
<tr>
<td><em>The submitted material is acceptable pending compliance with noted changes. Generally the changes must be minor in nature. Submittals requiring significant changes, especially changes that can be reasonably expected to increase the Contractor’s costs, should not be approved with notes.</em></td>
</tr>
<tr>
<td><strong>Disapproved:</strong></td>
</tr>
<tr>
<td><em>If the submitted material cannot reasonably be expected to be found acceptable for installation on the project, the submittal should be disapproved. If disapproved material is resubmitted by the Contractor, disposition should be discussed with the Team Leader and EIC prior to review.</em></td>
</tr>
<tr>
<td><strong>Returned for Correction:</strong></td>
</tr>
<tr>
<td><em>If the submitted material can reasonably be expected to be acceptable for installation on the project, but significant changes are required, the submittal should be returned for correction. The notes should specifically state the necessary changes and should include all required changes.</em></td>
</tr>
<tr>
<td><strong>No Action or Acknowledged:</strong></td>
</tr>
<tr>
<td><em>This action is seldom used but is available for the following situations:</em></td>
</tr>
</tbody>
</table>
The submitted material does not require approval. Examples include submission of quality control certificates and certifications, warranties, test reports, and design calculations. In these cases, the Designer must acknowledge receipt on a transmittal that is returned to the Contractor.

The submitted material was inadvertently sent to the wrong address. An example is product color samples that should have been sent directly to the EIC.

The submittal is incomplete and cannot be reviewed until additional material is received. In this case, the Designer must indicate this requirement on a submittal that is returned to the Contractor.

Multi-Action:
Where the submittal is marked “Multi-Action”, separate dispositions are made for the items submitted, see the review comments for the disposition of each item submitted.

11. Submittal Review Timeframe and Record Keeping
   a. In general, submittals should be reviewed and acted on within five (5) to ten (10) business days of receipt. Best Practice: Consultant/Designer or EIC is to review submittal for completeness when the submittal is received. If incomplete, submittal shall be promptly marked Returned for Correction.
   b. Consultant/Designers may maintain their own master file of submittals.
   c. Consultant/Designer shall attend mock-up reviews and evaluations conducted at the project site.
   d. Consultant/Designer shall issue separate instructions using the submittals website - Information Bulletins (IB’s) for red-lined shop drawings that indicate necessary revisions that change the contract documents. Notify the PM/EIC when this occurs. IB’s will be incorporated into Order on Contract (Change Order) by the EIC.
   e. Consultant/Designer shall review laboratory submittals, reports on materials and equipment, issuing instructions for special inspections, performance testing and testing of work.
   f. The project team needs to determine who the final reviewer is to release submittals in SubmittalsExchange®.

12. If a submitted product is determined not to be an “or equal” but is acceptable for use on the project, the Consultant/Designer shall notify the PM and EIC. A BDC 49 Contract Deviation Request Form will need to be filled out by the Contractor and reviewed by the project team who may or may not allow its use on a project.

General Conditions Submittal and “Or Equal” Excerpts

**Article 4.2**
The Contractor shall approve all submittals before submitting them. By such approval, the Contractor represents that it has determined and verified field measurements, field construction criteria, materials, catalog numbers, and similar data that it has checked and coordinated shop drawings, product data and samples with the requirements of the Contract Documents and that it has verified the completeness, correctness, and accuracy of the submittal.

**Article 4.3**
The Director’s approval of shop drawings, product data and samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract.
Documents unless the Contractor has informed the Director of the deviation in a separate writing at the time of submission and received written approval of the specific deviations. The Director’s approval shall not relieve the Contractor from the responsibility for errors or omissions in the shop drawings, product data or samples.

Article 5.2

Except where specifically provided otherwise, whenever any product is specified by brand name, i.e., manufacturer’s or supplier’s name or trade name and catalog or model number or name, the intent is not to limit competition but to establish a standard of quality which the Director has determined is necessary. The words “or equal” shall be deemed inserted in each instance. The Contractor may use any product equal to that named in the Contract Documents which is approved by the Director and which meets the requirements of the Contract Documents providing the Contractor gives timely notice of the Contractor’s intent in accordance with the submittal and scheduling requirements of Division 1 - General Requirements.

Article 5.3

The Contractor shall have the burden of proving at the Contractor’s own cost and expense, to the satisfaction of the Director, that the proposed product is equal to the named product. The Director may establish criteria for product approval. The Director shall determine with absolute discretion whether a proposed product is to be approved.

Article 5.4

If the Contractor fails to comply with the provisions of this Article, or if the Director determines that the proposed product is not equal to that named, the Contractor shall supply the product named.

This section allows the Designer to direct the Contractor to provide the named product if the Contractor has failed to prove that a substitute product is equal. This provision prevents repetitive shopping for Contractor implied equal products. Use of this provision and number of submittals varies from project to project and is based on Contractor’s lack of performance.

13. See Deviations vs. Or Equal link for more information on deviation and “or equal” definitions and examples.

14. Submittal / Document Closeout:
   a. The EIC will turn over his/her hard copy record set of submittals / documents to the facility representative at project completion.
   b. The EIC shall request Contractor to provide a navigable CD, DVD, USB flash drive, or downloadable link of project data contained on the submittal website.
   c. The EIC/PM to provide the archived data to the Consultant/Designer at project completion.
   d. The archived data will be uploaded into the Construction / Submittals project folder in DCNet by BU6 CADD Unit.
1. RFIs provide a systematic control of the collection, analysis, review and resolution of Contractor technical questions about the plans and specifications arising during the construction phase.

2. The EIC will encourage the Contractor to compose well-written requests, complete with appropriate references to specifications, drawings and details, to facilitate timely and accurate Consultant/Designer responses while avoiding the potential confusion of verbal communications.

3. The Consultant/Designer shall respond to Contractor RFIs on a timely basis (within 5 business days of receipt) to prevent a delay in the construction schedule.

4. RFIs shall be issued by the Contractor using the submittals website (BDC 22 RFI form) to facilitate legibility and timeliness of questions and responses. Contractor should submit RFIs with all related backup sketches and documentation.

5. The EIC may answer RFIs when input from the Consultant/Designer is not deemed necessary. The EIC shall notify the PM and Consultant/Designers of their responses. Consultant/Designers shall review the EIC response to RFIs prior to the EIC issuing the answered RFI to the Contractor.

6. Changes to the contract should not be made in a response to an RFI. An Information Bulletin should be generated by Consultant/Designer and sent to the EIC to facilitate issuing a Field Order or Change Order.

7. The Consultant/Designer should not respond to an RFI if it is initiated by the EIC or field staff to answer their project related questions using the Web Collaboration site. These types of questions and communication should take place using the telephone or email. DCNet may be used by field staff to track their project questions. However, it should be noted that Consultant/Designers do not have access to DCNet.

**INFORMATION BULLETINS (IBs)**

1. IBs describe work to be added, deleted or modified by the Consultant/Designer.

2. IBs include the preparation, reproduction and distribution of supplemental drawings, specifications, and interpretations in response to the following:
   a. Some Contractor RFIs
   b. Owner changes and modifications
   c. Consultant/Designer clarification of the Contract Documents
   d. Resolution of design problems due to errors, omissions and field conditions
   e. Bidder Questions that were not answered by an addendum (not significant cost impact and not wishing to delay bids) requiring clarification during the construction phase.
3. IBs addressing scope changes requested by the Client Representative, facility representative, or EIC shall not be developed or issued without written approval of the OGS TL/PM.
   a. The PM shall approve any additional compensation for the development of IB’s for Consultant projects. IBs generated by RFIs, design clarifications, errors, omissions, and field conditions easily ascertainable at the time of design shall not be considered for additional compensation.

4. Consultant/Designer IBs should be issued using form BDC 23 - Information Bulletin located on the submittals website. The IB form and associated drawings should be bundled into a single file when attachments are included. Complete the form in its entirety. The IB form includes a justification pick list. This list is intended to explain why an IB was issued. Justifications reasons are the following:
   a. **Program Change** - Client or agency change modifying contract documents.
   b. **Omission** - a change that modifies the contract documents in order to meet applicable laws, rules, or regulations, or to address a request or program need that was known and should have been included in the contract documents.
   c. **Design Error** - a change to correct a defect in the contract documents.
   d. **Contractor Error** - a design change to correct a defect by the Contractor or construction process.
   e. **Field Error** - a change to correct a defect created by construction staff.
   f. **Field Condition** - a change that modifies the contract documents as a result of an unforeseen physical job site condition that could not have been determined by normal site investigations or visits.
   g. **Document Clarification** - more detail and description provided to clarify the design intent or further resolution of details.
   h. **Materials / Methods substitution** - a change that substitutes a material or method for a specified material or method, when such substituted material or method is not equal to the specified material or method but is acceptable for use on the project.

5. IBs that change the Contract value or time of completion will generate a Change Order initiated by the EIC.

6. IBs shall be clearly written to describe the added scope and scope that is to be deleted. Defining added scope and deleted scope will assist the EIC in the initiation of Orders on Contract (Field Orders and Change Orders).

7. Record Drawings (optional service): The electronic set of Contract Drawings should be revised accordingly and should include a systematic method of noting IBs, revision numbers and dates. At the completion of the project construction, Consultants shall turn over the electronic record set of drawings on a CD in .pdf format.
MEETINGS

1. Pre-Installations Meetings:
   a. The purpose of these meetings is to coordinate the efforts of all concerned parties with other construction activities and preparations for particular activity under consideration through direct discussion.
   b. These meetings are generally noted by the Consultant/Designer within each specific specification section. If necessary, the EIC, PM, or the Consultant/Designer may request additional pre-installation meetings after contract award.
   c. The meeting and agenda should be scheduled and distributed by the EIC prior to the start of work and should be attended by the following:
      1) PM and/or the Consultant/Designer
      2) EIC, OGS Area Supervisor, and Inspectors
      3) Contractor’s Superintendent / Foreman
      4) Sub-Contractor’s Superintendent / Foreman
      5) Material and/or Equipment Manufacturer’s Representatives
   d. Review requirements as applicable for the following:
      1) Contract documents
      2) Options
      3) Related field or change orders
      4) Related work specified elsewhere
      5) Execution
      6) Purchases
      7) Deliveries, storage, and handling
      8) Submittals, products, and mock-ups
      9) Possible conflicts and compatibility problems
      10) Schedule
      11) Weather limitations
      12) Manufacturer’s recommendations
      13) Warranty requirements
      14) Compatibility of materials
      15) Acceptance of substrates
      16) Quality Assurance
      17) Temporary facilities and controls
      18) Space and access limitations
      19) Regulations of authorities having jurisdiction
      20) Testing and inspecting requirements (including Special Inspections)
      21) Required performance results
      22) Protection of construction
      23) Personnel
      24) Safety
   e. OGS D&C has pre-developed agendas for the below noted Specification sections. Consultant/Designers may supplement these agendas or add pre-developed agendas for other Specification sections as deemed necessary. Coordinate with the EIC.
      1) CAST IN PLACE CONCRETE
      2) FIRESTOPPING
      3) MASONRY
4) STRUCTURAL STEEL – FABRICATION
5) STRUCTURAL STEEL – ERECTION

f. The results of the meeting should clarify details and specifications, resolve difference of opinion, document any changes, and note the need for additional information that may be required to complete the activity successfully.
g. The PM / Consultant/Designer shall record minutes of the meeting to supplement the EIC minutes.

2. Teleconference Meetings:
   a. The Consultant/Designer will participate in periodic teleconference call meetings as required by the project.
   b. The Consultant/Designer will participate in regularly scheduled teleconference calls as deemed appropriate by the TL / PM, and EIC. These meetings would typically review job progress, establish priorities, define quality of work, identify and resolve problems which impede planned progress, and review outstanding submittals, RFI’s, upcoming IB’s, and Field Orders and Change Orders.
   c. The EIC may be asked to record and distribute meeting minutes.

3. Special Meetings:
   a. Attendance at special meetings called for the purpose of coordination of specific information or resolving special problems related to the project shall be organized by the PM or EIC.

4. Contractor Meetings:
   a. The Consultant/Designer should be copied on the meeting minutes when the EIC conducts regularly scheduled Contractor meetings. These meeting minutes should be uploaded and posted to the submittals website. The use of the submittals website should be discussed at the Design and Construction Pre Construction Meeting.

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CONSTRUCTION OBSERVATION SITE VISITS AND REPORTS

1. Project visits by the Consultant/Designer promote compliance and verification with contract documents and help keep the construction work running smoothly.

2. Frequency of site visits by the Consultant/Designer to satisfy the project needs are to be determined by the TL / PM, EIC and input by the Consultant/Designer according to the following variables:
   a. The size and complexity of the project
   b. The stage of construction
   c. The level of Contractor performance
   d. Critical inspections and frequency
   e. Importance of construction activity (ex. large scope / high risk, pre-installation meetings, significant pre-activity meetings)
   f. Mock-ups (BDC 384) and benchmark (BDC 381) reviews.

Best Practice: Provide a Design Site Visit Matrix identifying appropriate design discipline and key milestones for site visits. See example below.
### Design Site Visit Matrix for PN 42503 (Consultant and OGS Design)

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<tbody>
<tr>
<td>Before slab pour</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<td>95% steel frame</td>
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<tr>
<td>Pre-Install masonry meeting</td>
<td>X</td>
<td></td>
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<tr>
<td>Masonry mock-up</td>
<td>X</td>
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<tr>
<td>Pre-Install 11190 meeting</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Above Ceiling (prior to enclosure)</td>
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<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Masonry – cmu</td>
<td>X</td>
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<tr>
<td>Masonry – brick</td>
<td>X</td>
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<tr>
<td>Misc. steel (visit pens at 60% complete)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>Door benchmark inspection</td>
<td>X</td>
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<tr>
<td>Misc. steel (visit pens at 90% complete)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
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<tr>
<td>Final Punchlist</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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</tbody>
</table>

3. The OGS TL and PM shall seek input from the Consultant/Designer and EIC in determining number, duration, milestones, or frequency of site visits (usually specified by man days).
   a. The number of site visits shall be included in the Consultant Scope of Services for the Construction Phase. The number of visits in the Scope of Services can be modified as necessary.
b. Consultants shall not seek added compensation for additional site visits required to resolve problems due to errors, omissions, and field conditions that were ascertainable at the time of design.

4. When approved by the PM, the Consultant/Designer shall visit the project site as construction proceeds to observe, evaluate, and report on the progress and quality of the work completed.

The Consultant/Designer shall determine if the work is being performed in a manner, which, when completed, will be in accordance with the Contract Documents.

The Consultant/Designer shall promptly record any findings and itemize substandard work on the *Design Observation Report BDC 151*. Substandard work is anything that fails to meet some applicable criteria, such as failing to execute the work in accordance with the Contract Documents, the building codes, specified building standards, or good construction practice.

A report is required for every Consultant/Designer site visit. When work is in compliance, the Consultant/Designer shall check the NO box that answers the question to - Any Deficiencies Noted This Visit?

5. When a site visit is made by the Consultant/Designer the EIC should accompany them to discuss the project. When observed during the tour, the Consultant/Designer should discuss any deficiencies with the EIC. At the very least, the Consultant/Designer should discuss any deficiencies with the EIC at the end of the day.

The Consultant/Designer shall make recommendations to the EIC on corrective actions, acceptability of the work and contractual measures that may be exercised. The Consultant/Designer shall initiate a BDC 151 and forward to the EIC and copy the TL/PM. The EIC will follow up on deficiency items using the same BDC 151 form generated by the Consultant/Designer. The EIC will provide responses to the Consultant/Designer and the PM in the response column labeled as Field Comment and note if the issue is resolved or not.

6. The PM/EIC shall upload BDC 151 Design Observation Reports on the submittals website. Working copies can be filed in the Construction / InspectionReports project file folder.

7. The EIC will report substandard work to the Contractors. Depending on project size, the EIC may wish to create an ongoing Rolling Completion List to track items in a consolidated contract specific log.

8. The EIC shall rename file and “save as” file with file name that includes “response” in the file name saving file on the submittals website. Working copies can be filed in the InspectionReports project folder.

9. It is recommended that Consultant/Designer review the EIC’s Final Punch List for Contractors and supplement this list as required during Consultant/Designer final walk through inspection.

10. Mock-up and Benchmark inspections have associated BDC forms that should be used for review comments and acceptance. Coordinate these reviews with the EIC.

   a. BDC 381 – Benchmark Inspections
b. **BDC 384 – Mock-Up Inspections**

### SPECIAL INSPECTIONS & TESTING

1. The *BDC 406 - Summary of Special Inspections* lists the general construction categories of special inspections required by code for the construction phase. *The BDC 406.1 - Statement of Special Inspections* lists the specific inspections of each construction category, frequency and reference standards.

   Best Practice: Use the submittals website to upload Special Inspections reports for the Consultant/Designer’s review and record. Otherwise, these forms should be filed by the PM/EIC in the Construction / InspectionReports project folder. These documents should also be included in the project specifications. The EIC will need to identify who (term contract testing agency, OGS inspector or Consultant/Designer) will be doing each of the inspections. A copy of the Special Inspections reports shall be forwarded to the Consultant/Designer for the records.

2. **SPECIAL INSPECTIONS ARE A METHOD TO NOTIFY THE DESIGNER OF RECORD THAT MATERIALS, INSTALLATIONS, FABRICATIONS ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS ARE IN COMPLIANCE WITH APPROVED DOCUMENTS AND REFERENCED STANDARDS. IT IS IMPORTANT THAT THE BDC 406.1 BE FILLED OUT WITH AS MUCH DETAIL AS POSSIBLE AND BE REFLECTIVE OF THE PROJECT.**

   MOST DEFICIENCIES CAN BE RESOLVED BY REPAIRS OR REPLACEMENT OF MATERIALS OR PROCEDURES.

   **A.** THERE WILL BE DEFICIENCIES WHERE AN INSTALLATION CANNOT BE PHYSICALLY PERFORMED. IN THESE INSTANCES, THE DESIGNER WILL BE REQUIRED TO PROVIDE A REVISION IN THE DESIGN. THIS CAN BE ACCOMPLISHED WITH AN INFORMATION BULLETIN.

   **B.** IN OTHER DEFICIENCIES, THE RESOLUTION TO A DEFICIENT ITEM MAY BE A LETTER OR EMAIL CERTIFYING THAT THE MATERIAL OR CONSTRUCTION IS SUITABLE FOR ITS INTENDED PURPOSE. (EX. IN THE CASE OF CONCRETE, ACT 318 GIVES AN ALLOWABLE DEVIATION IN CONCRETE TEST BREAKS.)

   In both cases, the Designer shall provide the correspondence to the Engineer-In-Charge (EIC). The EIC will pass the information on to the Special Inspection firm and save a copy for record.

### REVIEW OF FIELD ORDERS & CHANGE ORDERS
1. The Consultant/Designer is to review all Orders on Contract and confirm that the scope is accurate, that the work is required as part of the project, and that the scope was not included in the Construction Documents before the Order on Contract is given to the Contractor. This review will also be conducted to ensure that changes to the contract do not adversely affect the original design intent.
   a. Best Practice: Change Orders should have TL/PM Design concurrence which is recorded in DCNet. The TL/PM shall review the Change Order for scope, cost, reason and cause. When there is disagreement between the EIC and PM on the change then resolution should advance to include the Area Supervisor and the TL.

2. The EIC checks that the quantities of materials, cost of materials and wage rates, the Contractor and sub-Contractor mark-ups, etc., are correct and negotiates or monitors that the work hours are reasonable.

3. ORDER ON CONTRACT PROCESS
   a. Orders on Contract can be either Field Orders or Change Orders. Money for Field Orders is pre-approved with the project, unlike Change Orders, which require special approval. Field Order contingency allowances are included in the contract as an additional lump sum used to accommodate contingent activities, such as field conditions and errors/omissions changes to the contract. Use of Field Orders for program scope changes is not appropriate.

   b. Order on Contract Procedure
      1) Whenever the EIC determines that there is a change in the project scope, he/she will issue a BDC 98 - Request for Proposal. The EIC will determine if the Order on Contract will be issued as a Field Order. A contract modification can only be accomplished as a Field Order if the following conditions are met:
         Field Order contingency allowances are included in the contract
         -and-
         The reason for change is a field condition
         -or-
         The reason for change can be determined to be an error or omission in the documents.

      2) Field Orders that result in credits are not encouraged; however, they are accepted when the EIC’s supervisor provides justification. The justification must explain why the field order meets two criteria.
         i. The work must be the result of an error, omission or field condition.
         ii. There must be a need to promptly implement the Field Order.

      3) The EIC will determine if the Order on Contract is a Change Order based on the following criteria:
i. Any Order on Contract that cannot be processed as a Field Order.

ii. The reason for change is a Client request that is a program change in scope. Program changes are to be initiated by the Client through the PM and are not field initiated. The Consultant/Designer is responsible to prepare necessary Change Order documentation through an IB.

   - The Division of Design and Division of Construction Director’s approvals are required to proceed when a change request estimate is large (say over 25% of the bid price) compared to the rest of the project, or when the change order value is over $50,000.
   - Changes must be within the scope of the project.
   - Client written justification must explain why the change cannot be bid as a separate project.
     - Provide assistance to the Client when their justifications do not seem reasonable.
     - Seek Supervisor assistance when justifications are not reasonable.
   - Client changes will not proceed until approved by OSC.

iii. Any change that exceeds the balance remaining in the Field Order contingency allowance.

iv. Change results in an alteration to contract schedule.

v. The change results in credits.

4) Error or Omission and field condition changes may be accomplished by either a Field Order or a Change Order. Whenever practical, the Field Order contingency allowance for the project should be used for these changes. When the balance in the contingency allowance is inadequate for the change, the change is to be accomplished by Change Order. For large value changes it may be appropriate to perform the change by use of a Change Order even though there are adequate monies remaining in the contingency allowance. EIC should review with the PM.

c. It is the responsibility of the EIC to monitor and follow-up on all pending Change Orders until approved.

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**CONTRACTOR DISPUTES / INTERPRETATIONS**

1. When requested by the EIC/PM, the Consultant/Designer shall provide supportive factual information for interpretations and clarifications of the Contract Documents when Contractor disputes arise relating to the execution or progress of the Work as provided in the Contract Documents.

2. The Design and Construction internal document interpretation / resolution process would mimic the management levels for communication chain. See Chapter 10.3 *Communications Guide* communication chain chart.
OPTIONAL SERVICES

1. If not identified as part of the required scope of services for this phase by the OGS TL / PM, the following items are considered optional services to the standard scope described in this Chapter:
   a. Work associated with Client Agency approved changes and unforeseen field conditions.
   b. Drawings of Record
      1) Drawings of Record are highly recommended for projects that have new structures, additions or significant renovations to record design modifications to the project. Drawings of Record services should be determined early on preferably at the bid phase so that Consultant/Designer can easily incorporate drawing changes into a formalized process by issuing revised full-size drawings. Include any addendums as Revision No. 1 to the drawings and make distribution soon after award. Use triangle symbols with associated revision numbers and bubble indicator graphics to identify revisions.
      2) At substantial completion of the project, the Consultant/Designer should turn over revised electronic drawings showing revisions (addenda and information bulletins) initiated by design. See section H of this Chapter. The Consultant/Designer is NOT responsible for indicating as-built conditions reported by the Contractor, shop drawings, and changes to the specifications.
      3) Upon completion of the Drawings of Record, the Consultant/Designer shall provide AutoCad and PDF files and forward three (3) electronic compact disks (CD’s) to the PM. The PM will then forward two (2) CD’s to the EIC / Contractor to use to incorporate Contractor as-built conditions and one (1) CD to the OGS Electronic Print Room.
   c. Observation and assistance in performance tests and assist with initial operations and start-up of the project.
   d. Preparation of manuals for both operations and maintenance requirements.
   e. Participation in systems commissioning.
   f. Assessment of completed projects ability to meet design intent.
   g. Assistance in adjusting and balancing of equipment.
   h. Assistance in operator training.
   i. Regularly scheduled progress teleconference calls with the EIC.
   j. Full time on-site project representation.
   k. Construction supervision and project management.
   l. Extended Construction Period: If the construction period has been extended beyond the substantial completion date, additional compensation may be in order. Attendance to additional on-site meetings, preparation of minutes, and site visits may constitute added compensation. No work shall start without an approved work order for these additional services.
   m. Review of Contractor prepared as-built drawings.
   n. Post occupancy evaluations.

P. Construction Phase Sample Work Order
Chapter 9
Design Guides

9.1 General Information
9.2 General Conditions
9.3 Multiple Prime Contracts
9.4 Commissioning Guidelines
9.5 Energy Efficiency Guidelines
9.6 State Records/Documentation
9.7 Agency Specific Standards
9.8 Hazardous Material
9.9 Codes
9.10 Firestopping
9.12 Environmental Assessment & Permitting Guide
9.11 Civil & Site Guidelines
9.15 Geotechnical Guidelines
9.17 Roofing
9.18 Elevator
9.19 Doors & Hardware
9.21 Tank Program
CHAPTER 9 – DESIGN GUIDES

9.1 GENERAL

A. This section of the Design Manual includes design guides that are not to be considered as authoritative, but will provide guidance, tips and tools that OGS D&C believes the Designer will find helpful in structuring projects that include portions of these guides. Most of these guides are based on past OGS D&C project experiences dealing with design issues, agency standards and initiatives such as LEED, Executive Order 88 and the New York State Building Codes.
CHAPTER 9 – DESIGN GUIDES

9.2 GENERAL CONDITIONS – DOCUMENT 007213

The General Conditions Document 007213 is part of every Project Manual and contains information that affects the preparation and coordination of documents for OGS. Every Designer should review and be familiar with this document, especially Article 2 Definitions and Article 3 Interpretation of Contract Documents. The Table of Contents is included below:

1. The Contract Documents
2. Definitions
3. Interpretation of Contract Documents
4. Submittals
5. Materials and Labor
6. Contractor’s Supervision
7. Use of Premises
8. Permits and Compliance
9. Inspection and Acceptance
10. Orders on Contract (Change Orders)
11. Site Conditions
12. Suspension of Work
13. Time of Completion and Termination for Cause
14. Termination of Contractor’s Employment for the Convenience of the State of New York
15. Disputes
16. Statutory Requirements for Utilization of Minority and Women Owned Business Enterprises
17. Coordination of Separate Contracts
17A. Delays
18. Responsibility for Damage
19. Insurance - Builder’s Risk, Liability and Workers’ Compensation
20. Occupancy Prior to Completion and Acceptance
21. Payment
22. Audits and Records


Excerpt from the General Conditions:

25.4 DOMESTIC STEEL: The Contractor agrees, that if the value of this contract exceeds $100,000 all structural steel, reinforcing steel and other major steel items to be incorporated in the Work of this Contract shall be produced and made in whole or substantial part in the United States, its territories or possessions.

New York State public works projects are required by statute to utilize domestic steel for certain items. The relevant statute is copied below, as well as the corresponding general conditions language that forms a part of all construction contracts:

§ 146. Certain construction contracts involving steel.

Notwithstanding any other provisions of law, all contracts over one hundred thousand dollars in

value made and awarded by any department or agency of the state for the construction, reconstruction, alteration, repair, maintenance or improvement of any public works shall require that structural steel, reinforcing steel and/or other major steel items to be incorporated in the work of the contract shall be produced or made in whole or substantial part in the United States, its territories or possessions. The provisions of this section shall not apply if the head of the department or agency constructing the public works, in his sole discretion, determines that such provisions would not be in the public interest, would result in unreasonable costs or that such steel cannot be produced or made in the United States in sufficient and reasonably available quantities and of satisfactory quality.

It is the policy of the Design and Construction group to comply with these Domestic Steel provisions on all contracts which meet the $100,000 threshold. This includes emergency projects, job order contracting work orders, and unit price projects in addition to conventional lump sum bid projects.

To ensure compliance it is the responsibility of the project manager, designers, and construction staff to verify that only domestic steel is used for those specific products to which the Domestic Steel provision applies. Verification must be initiated when submittals or shop drawings are reviewed; pursued during inspections at fabrication facilities; and finalized when steel items are delivered to the job site.
Clearly the domestic steel provisions apply to structural steel and reinforcing steel. Enforcement of the Domestic Steel provisions shall be pursued for these specific items on all projects. In the best interest of the project and therefore the public, minor amounts of Non-Domestic structural and reinforcing steel can be accepted provided the material is not reasonably available. It is the interpretation of the Design and Construction group that the definition of ‘minor amounts’ is the amount not to exceed 5% (by weight) of the steel on the project or the amount not to exceed $5,000 in fabricated material cost. The definition of ‘structural steel’ does not include miscellaneous steel such as loose lintels, equipment dunnage, and support steel which forms an integral part of packaged equipment, etc.

The intent of the phrase “other major steel items” in the Domestic Steel statute is subject to wide interpretation. It is the opinion of the Design and Construction group that the Domestic Steel provision rarely applies to other items of work on typical projects. Therefore the Director of Design and/or the Director of Construction shall be responsible for determining whether or not the Domestic Steel provision applies to any item that does not clearly fall under the classification “structural steel” or “reinforcing steel”. Procedurally whenever a question is raised regarding the applicability of the “other major steel items” clause, the question must be raised through the chain-of-command and ultimately decided at the Director level. Only when written direction is provided by the Director shall the Domestic Steel provisions be applied to items that are not clearly structural steel or reinforcing steel. Written direction is not transferable and an independent written determination must be made for each project.

26. Statutory Requirements
CHAPTER 9 – DESIGN GUIDES

9.3 MULTIPLE PRIME CONTRACTS GUIDE

(WICKS LAW)

A. GENERAL

1. OGS D&C projects are identified as either “Single Contract” or “Multiple Prime Contracts”.

B. MULTIPLE PRIME CONTRACTS

1. Multiple Prime Contracts are awarded for interrelated major elements of the Work that must be performed simultaneously. These projects are considered as related contracts and require close coordination of the work. Related contracts are identified in Section 011000 Summary of the Work, Article 1.02 of the Project Manual.

2. Section 135 of the New York State Finance Law, commonly known as the “Wicks Law”, requires OGS D&C to bid specific separate Multiple Prime Contracts for certain public work projects where the cost of the public work exceeds:
   a. $3 million in Bronx, Kings, New York, Queens and Richmond counties
   b. $1.5 million in Nassau, Suffolk and Westchester counties
   c. $0.5 million in all other counties
   (In rare instances this requirement can be waived using a Project Labor Agreement. See Section 222 of the State Labor Law.)

   For projects with costs below the thresholds above, a single contract may be utilized which includes the work of multiple trades. Such contracts are referred to as Wicks Exempt. The use of a single contract is strongly recommended to reduce the management and coordination effort of contractors on the project site. However, the PM should use caution when the estimated construction value is very close to the threshold levels. If the project bid exceeds the threshold value then the project will need to be repackaged and rebid as a multiple-prime project.

3. Multiple Prime Contracts are sometimes referred to as “multi-contract” or “separate contracts”. These types of projects require separate project manuals for the subdivisions of the work as defined by the Wicks Law. Although not specifically defined in the law, OGS D&C’s policy requires that separate drawings must be prepared for each Multiple Prime Contract. This is to avoid confusion on the part of the Contractors as well as to preclude the possibility of contradicting the definition of contract documents contained in the General Conditions.

4. Wicks Law requires that the contract documents be subdivided into the following major Prime Contracts to permit separate and independent bidding and award:
   a. Construction
   b. Heating Ventilation and Air Conditioning (HVAC)
c. Plumbing
d. Electrical
The project cost cited in Section 2 above refers to the total project cost, not to the cost of each individual prime contract.

5. Site utilities (outside of building) and the demolition of a building are not subject to the multi-contract constraints of the Wicks Law. Non-building related projects are usually exempt from these requirements. Check with the OGS Team Leader for project specific requirements.

6. Due to the importance of the Wicks Law it is quoted below:

<table>
<thead>
<tr>
<th>135. SEPARATE SPECIFICATIONS FOR CONTRACT WORK FOR THE STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every officer, board, department, commission or commissions, charged with the duty of preparing specifications or awarding or entering into contracts for the erection, construction or alteration of buildings, for the state, when the entire cost of such work shall exceed fifty thousand dollars (modified to the dollar limits cited in section 2 above) must have prepared separate specifications for each of the following three subdivisions of the work to be performed:</td>
</tr>
<tr>
<td>1. Plumbing and gas fitting.</td>
</tr>
<tr>
<td>2. Steam heating, hot water heating, ventilating and air conditioning apparatus.</td>
</tr>
<tr>
<td>3. Electric wiring and standard illuminating fixtures.</td>
</tr>
<tr>
<td>Such specifications must be so drawn as to permit separate and independent bidding upon each of the above three subdivisions of work. All contracts hereafter awarded by the state or a department, board, commissioner or officer thereof, for the erection, construction or alteration of buildings, or any part thereof, shall award the three subdivisions of the above specified work separately to responsible and reliable persons, firms or corporations engaged in these classes of work. A contract for one or more buildings in any project shall be awarded to the lowest responsible bidder for all the buildings included in these specifications.</td>
</tr>
<tr>
<td>Nothing in this section shall be construed to prevent the authorities in charge of any state building, from performing any such branches of work by or through their regular employees, or in the case of public institutions, by the inmates thereof. As amended L.1961, c.292, eff. April 3, 1961.</td>
</tr>
</tbody>
</table>

7. The three subdivisions of work listed in the Wicks Law are expressed in very general terms, which are not clearly defined, and no mention is made of Construction Work.
This does not however permit OGS D&C to include substantial Construction Work in the other contracts. If there is Construction Work, and the estimated total cost of the project is over the dollar limit cited in Section 2 above, a separate contract is prepared for the Construction Work. To aid in the preparation of contract documents for the subdivisions of work, the following definitions for the terms used in Section 135 of the State Finance Law are provided:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plumbing</td>
<td>The potable water supply system and other waste systems within the building. NOTE: Exterior waste systems, i.e., roof drain systems, can be included in a Construction Work contract.</td>
</tr>
<tr>
<td>Gas Fitting</td>
<td>The natural gas supply system within the building.</td>
</tr>
<tr>
<td>Steam Heating Apparatus</td>
<td>The building space steam heating system.</td>
</tr>
<tr>
<td>Hot Water Heating Apparatus</td>
<td>The building space hot water heating system.</td>
</tr>
<tr>
<td>Ventilating Apparatus</td>
<td>The powered air supply and exhaust system.</td>
</tr>
<tr>
<td>Air Conditioning Apparatus</td>
<td>The built-in central air conditioning system.</td>
</tr>
</tbody>
</table>
| Electric Wiring               | The built-in electric power supply and distribution system of 110 volts or higher. NOTE: OGS D&C’s procedure for specifying control vs. power wiring is as follows:  
  1. Control wiring for a piece of equipment is included in the same contract as the equipment. 
  2. Power wiring for that same piece of equipment is included in the related Electrical Work contract.  |
| Standard Illuminating Fixtures| The interior space lighting system.                                          |

8. Judgment must be used when deciding which prime contractor should be responsible for specific scopes of work. The following examples are provided for guidance:

   a. Equipment housekeeping pads can be considered part of the equipment package, and might best be included in the contract providing the equipment. This minimizes coordination issues concerning pad size, anchor bolts, seismic bracing, etc. In other cases, where similar construction work is occurring in close proximity for equipment provided under multiple contracts, it may be prudent to include all equipment pads in the Construction contract.

   b. Supplemental framing and cutting openings in existing construction can be considered part of the equipment package and can be included in the contract providing the equipment. This same logic extends to issues such as flashing roof curbs and mechanical penetrations,
etc. However, if the complexity or extent of the supplemental framing and cutting of openings dictates, the work might best be included in the Construction contract.

c. Disconnection and reconnection of electric power supplies to accommodate the replacement of equipment can be considered part of the equipment package and included in the contract providing the replacement equipment.

d. Minor relocation of piping, conduit, raceway, etc. to accommodate the installation or modification of building elements can be included in the prime contract responsible for the modifications.

e. Hazardous material abatement can be accomplished under a single contract. For example, pipe insulation containing asbestos and vinyl asbestos floor tile can be abated under a single prime contract.

f. Removals can be accomplished under a single contract. For example, if a space is being gutted, utilities can be disconnected/secured by the appropriate trade contract, and then removals can be accomplished under the construction contract.

The Consultant/Designer should consult with the TL / PM if questions arise as to the appropriateness of including work in a particular contract.

C. SINGLE CONTRACT

1. A Single Contract can be a project that is bid and constructed as a standalone project with no related contracts and no multiple trade work. There is no dollar limit on the value of a single contract if the work of only a single trade is involved.

2. Single Contracts can be associated with a main project or contract, such as early building demolition and early site preparation, which may be completed before building construction contracts are awarded. These types of contracts would not be considered as related contracts to a main building contract for coordination because they would have been bid and constructed separate from the main project.

D. WICKS EXEMPT CONTRACT

1. Projects with costs lower than the thresholds noted below should be considered for Wicks Exemption and a single contract may be utilized which includes the work of multiple trades. The use of a single contract is highly recommended to reduce OGS’s field staff management, oversight and coordination effort of multiple contractors on the project site. However, the PM should use caution when the estimated construction value is very close to the threshold levels. If the project bid exceeds the threshold value then the project will need to be repackaged and rebid as a multi-prime project. It is highly recommended that these projects be organized by C, H, P and E trade disciplines.
a. $3 million in Bronx, Kings, New York, Queens and Richmond counties
b. $1.5 million in Nassau, Suffolk and Westchester counties
c. $0.5 million in all other counties

(In rare instances this requirement can be waived using a Project Labor Agreement. See Section 222 of the State Labor Law).

2. Wicks Exempt Contracts involving work of multiple trades (C, H, P & E) require approval from the Business Unit Leader.

3. For Wicks Exempt projects which involve the work of multiple trades in a single contract, the bidders must include in their bids a separate sealed list that names each intended trade subcontractor and their respective bid amount in accordance with Document 002220, Supplemental Instructions to Bidders – Wicks Exempt and BDC 59 Contractor’s List of Subcontractors. For this reason, contract documents shall be prepared that clearly indicate the work of the electric, plumbing, and heating trades. This requirement applies to all Wicks Exempt projects - there is no dollar threshold below which the requirement for named subcontractors is waived.

4. Any changes by the low bidder to subcontractors or agreed-upon amounts to be paid to each subcontractor shall require the approval of the OGS D&C Contracting Officer.

E. ADDITIONAL SUBDIVISION OF WORK

1. In addition to the required subdivision of Multiple Prime Contracts by Wicks Law, there may at times be reason to include additional Prime Contracts. This depends on the nature of a project and the size and complexity of an individual element of the work. It is OGS D&C’s recommendation to have the minimum number of prime contracts on a project wherever possible unless saving time; money or achieving a higher quality product can justify it otherwise.

2. Cost alone should not be the sole determining factor for qualifying a construction operation as a major subdivision of the Project. For consideration as a major contract, a construction operation should involve a specialty contractor and several trades. Most major contracts should last throughout the construction period.

3. The TL / PM, OGS Division of Construction and the Consultant/Designer must decide in advance if additional contracts will be considered and how the work will be subdivided and coordinated with the required (Wicks Law) Multiple Prime Contracts. The Consultant/Designer then prepares separate bid packages for each prime contract.
4. If there are many contracts, coordination becomes difficult to handle efficiently during design and construction. The contract documents should clearly delineate the division of work. The fragmentation of documents into smaller bid packages sometimes leads to the duplication of responsibilities that may result in problems.

5. Care must be exercised to properly identify and allocate work to avoid gaps or overlapping responsibilities among the contracts, which can be difficult depending on the complexity of the Project. Although significant segments of the Project are typically candidates for a separate contract, separate contracts may also be included for the following:
   a. Commissioning
   b. Hazardous material abatement
   c. Demolition
   d. Site preparation
   e. Site utilities
   f. Detention equipment
   g. Landscape development
   h. Food-service equipment
   i. Furnishings
   j. Elevators and escalators
   k. Testing, adjusting, and balancing

6. Below is a listing of contract designations with suffix code for the more common types of projects prepared by OGS D&C.
7. Clear assignment of responsibilities, especially at the points where different contracts meet or interface, must be included in the division of the Project. Example: Who is responsible for painting mechanical equipment?

F. PROJECT COORDINATION

1. Each Consultant/Designer is responsible for the overall design coordination of the Project between Multiple Prime Contracts. The Consultant/Designer needs to clearly specify the scope and responsibilities of each contract and cross-check the responsibilities for each contract to ensure that no overlaps or gaps exist.

2. Construction under multiple contracts often means that different contractors require access to the same space at the same time. Coordination problems can develop if the Work installed by one contractor obstructs or disturbs the Work of another. Coordination is essential for the success of multiple contract projects because they are prone to delays caused by the need to coordinate elements of the project among several contractors. Each prime contractor is responsible for coordinating the activities of their subcontractors and the work between other prime contracts in a cooperative manner per Article 17 of the General Conditions.

3. OGS D&C field representatives direct and coordinate construction operations between the prime contractors. OGS D&C may retain construction management services for selected projects.
4. The best project results occur when the documents are properly coordinated and the project properly managed during the construction phase.

5. Clearly identify the work of each major trade within the documents when projects are approved for bidding as Wicks Exempt. This clarity of separation of scope within the single contract documents facilitates subcontractor bid take-offs during the bid period and helps ensure that the bidder has sound cost proposals from their subcontractors.

E. G. MULTIPLE PRIME CONTRACTS RELATIONSHIP TO DIVISION 1 SECTIONS

1. Multiple Prime Contracts affect Division 01 specification sections more than any other division in the Project Manual. Division 01 specifications section requirements for administration, procedures, and temporary facilities apply to each contract. Some sections apply to all contracts, and some apply to only a specific contract. The suffix letter(s) at the end of the project number in the section footer distinguish separate contracts. The Sections in Division 01 of the Specifications that have more than one suffix letter are common to each related Contract. For example, requirements for Shop Drawings and Product Data apply to all contracts. In contrast, a section specifying a State Field Office (trailer) only applies to the Construction Contract. The following paragraphs summarize the effect of multiple contracts required by Wicks Law on some of the OGS Master Specification Division 01 Sections:

a. Section 011000 Summary of the Work:

1) Requirements apply equally to all contracts.

2) Article 1.02 A - states that the Project will be constructed under a multiple contracting arrangement and identifies the name of each related contract by project number and suffix designation.

3) Article 1.04 describes work restrictions on the use of the Project site and the existing building apply equally to all contracts even though work restrictions such as asbestos removal, roofing work, heating system shutdown, etc. may be identified by a specific contract.

4) Article 1.13 describes openings and chases required by related contracts and designated as work to the Construction Contract if the information is provided in a timely manner. If information is not timely, then the related contracts are responsible for cutting and patching at their own expense.

5) Article 1.14 describes sprayed on fireproofing coordination with related contracts. Hangers, clips and sleeves are to be installed by related contracts in a timely manner. If this work is not performed in a timely manner then the related contract is required to cut and repair fireproofing at own expense.

6) Article 1.16 Building location layout work is done by the Construction Contract. All other lay out work to be done by the related contracts.
b. **Section 012100 Allowances:**
   1) Requirements apply equally to all contracts.
   2) Allowance for contingencies to cover cost of additional labor and materials for contingent activities within the scope of the Contract as directed by Field Order.
   3) For specific allowances include clear descriptions of the Work for a specific contract. Example: fuel required for temporary heat by the Construction Contract.

c. **Section 012300 Alternates:**
   1) Include this section when an alternate applies to a contract.
   2) Multiple prime contracts should be listed in Article 1.02 and should include clear descriptions of the Work so the scope of each contract can be determined. Modify the footer project number and suffixes as required.

d. **Section 013300 Submittals:**
   1) Product requirements and product selection procedures apply equally to all contracts. Contractor requests for material substitution or “or equal” submissions may affect more than one contract, however, thereby creating coordination problems. Because of this, the General Conditions Article 5.7 states that the contractor shall make all adjustments to contingent work, whether the contingent work be the work of its contract or the work of other contractor’s, necessary to accommodate the option or “or equal” product it selects without extra or additional cost.

e. **Section 013350 Computer Aided Design Coordination Drawings:**
   1) Requirements apply equally to all contracts.
   2) This section should be used when coordination and layout of building systems is necessary between contracts to avoid conflicts prior to construction.

f. **Section 015000 Construction Facilities & Temporary Controls:**
   1) Generally apply equally to all contracts. However, some requirements are typically assigned to one contract. The specific assignment depends on which prime contracts are included in the project. For example, each contract must provide its own field office; however, the responsibility for providing a State Field Office, if required, must be assigned to a specific contact (generally this is to the Construction Contract).
   2) Temporary light and power service and wiring for the project is usually assigned to the Electric Contract. The exception would be for wiring of individual contractor trailers. If electrical energy is not free of charge at a state facility then provisions need to be detailed for payments of associated energy bills. This may
be assigned to a single prime contract such as the Construction Contract. Usually, energy for contractor’s individual trailers is not included.

3) Temporary water service and maintenance is typically assigned to one contract. Usually this is the Construction Contract for single-story construction. For multi-story construction this may be assigned to the Plumbing Contract.

4) Temporary toilets are typically assigned to the prime contract with the largest scope, which is usually the Construction Contract. The number of toilets required is based on a table within the specification.

5) Temporary material and personnel hoists (if required) are usually assigned to the Construction Contract and used by all contractors. The percentage of hoist usage needs to be determined to set a standard and to avoid conflicts during construction.

6) Temporary use of permanent elevator as material and personnel hoist is an option that may be available for a project. The Construction contract is usually assigned the task of operation, protection and maintenance. The percentage of elevator usage needs to be determined to set a standard and to avoid conflicts during construction.

7) Temporary closures for exterior wall openings and temporary partitions to separate the work area from State occupied areas are usually assigned to the Construction Contract.

8) Temporary fence enclosures are usually assigned to the Construction Contract.

9) Temporary fire standpipe protection system is assigned to the Plumbing Contract.

10) Temporary roads, parking and staging area construction and maintenance (including snow removal) are usually assigned to the Construction Contract.

11) Progress cleaning applies equally to each contract for its own work and own portion of the project site. All contractors are required to provide rubbish removal. Containerized rubbish removal may be assigned to the prime contract with the largest scope, which is usually the Construction Contract. Some larger projects may benefit from a laborer assigned to facilitate project site clean up for common-use areas where more than one contractor is working.

12) The Consultant/Designer should review the specification and yellow highlighted text in Section 015000 for more information. The specification does not define all construction facilities and temporary controls. The Consultant/Designer is responsible for identifying and properly addressing all project specific issues.

g. **Section 015123 Temporary Heat:**

1) Construction heat requirements apply to all contracts.
2) Temporary heat (building enclosed) is usually provided by the Construction Contract. The Construction Contractor is to assume responsibility for damage due to frost and freezing during this period.

h. Section 017123 Field Engineering:

1) Field-engineering services are usually assigned to one contract to avoid duplication that may lead to conflicts and misunderstandings. This work is usually associated with major site improvements, establishment of property lines and other critical grading requirements.

H. RESPONSIBILTY FOR DAMAGE

1. Contractor responsibility for damage during construction is described in Article 18 of the General Conditions.
CHAPTER 9 – DESIGN GUIDES

9.4 COMMISSIONING GUIDE

A. GENERAL

1. Building commissioning is a process to improve quality and functional reliability of active and passive systems. Although there are many ways to commission projects, it is best to start the process during the programming phase and continue it through the construction phase and initial occupancy. Commissioning provides building maintenance procedures, verifies systems operation for optimum performance, and sets the baseline for building re-commissioning. Commissioning is an option for clients on many projects. Commissioning is required on most mechanical and lighting systems projects. Commissioning is required if the client has requested that the building achieve LEED certification.

2. The intent of commissioning is to improve indoor air quality, functional testing, increase equipment reliability, increase energy efficiency and ensure that the client agency’s approved design intent, building staff training and operational needs have been met.

3. The commissioning process usually will involve a commissioning authority and/or agent, the Design Team, the Engineer-In-Charge and facility maintenance staff. The expectation is that all who take part will benefit from the operational expertise of the commissioning agent, especially if there are problems at initial start-up.

4. Retro-commissioning may be required for State-owned buildings over 20,000 sq. ft. under Executive Order 88.

B. REQUIRED COMMISSIONING

1. LEED Fundamental Commissioning. Defined as a LEED prerequisite, the mandates include:
   a. Engaging a commissioning team that does not include individuals directly responsible for project design or construction management.
   b. Developing and utilizing a commissioning plan.
   c. Reviewing the design intent and the Basis of Design (BoD) documentation.
   d. Incorporating commissioning requirements into the construction documents.
   e. Verifying installation, functional performance, training and operation and maintenance documentation.
   f. Completing a commissioning report.
2. LEED Enhanced Commissioning requires the following additional commissioning tasks:
   a. A commissioning authority independent of the Design Team shall conduct a review of the design prior to the construction documents phase.
   b. An independent commissioning authority shall conduct a review of the construction documents near completion of the construction document development and prior to issuing the contract documents for construction.
   c. An independent commissioning authority shall review the Contractor submittals relative to systems being commissioned.
   d. Provide the Client Agency with a single manual that contains the information required for re-commissioning building systems.
   e. Have a contract in place to review building operation with O&M staff, including a plan for resolution of outstanding commissioning-related issues within one year after construction completion date.

3. The 2020 Energy Code Section C408 describes required commissioning of building mechanical systems and electrical power and lighting systems.

C. NON-REQUIRED COMMISSIONING

Even when not required, commissioning will generally produce the biggest benefit to projects that include mechanical equipment. For smaller projects the scope of the commissioning may be reduced and a minimal commissioning plan adopted. When not otherwise required, commissioning shall remain an optional service confirmed with the client early in the programming and design process.

D. Commissioning Activities

1. The commissioning team is expected to bring operational expertise to the project, often during design, ideally. There are several ways this could benefit the project:
   a. Development and approval of the Basis of Design (BoD): The BoD is a written description outlining how systems will operate. The Client Agency or their representatives should set the direction for the BoD. It may be modified as the design is developed but it should be included in the Program Report so it is subject to the client’s approval. The BoD becomes a training and diagnostic tool, is included in the final post-construction commissioning report and may be used to evaluate the success of the project design and construction.
   b. Selection of the most appropriate building systems (mechanical, electrical, controls, security, etc.): The process should include the facility maintenance staff, facility planner, Designers, Engineer(s)–In-Charge and commissioning agent(s). This should produce a consensus of what system is best for the project and improve client satisfaction and acceptance.
   c. Improved access to equipment and design for equipment maintenance: The commissioning agent’s operational expertise and maintenance staff’s involvement should help prevent poor equipment layout.
d. Creation and refinement of the commissioning specification: The specification will serve as a roadmap for all the commissioning tasks.

e. Quality facility staff training: Improved training will make sure that the facility is capable of operating the equipment efficiently and should prevent operation that could void equipment warranties.

f. Improved testing procedures and problem diagnosis: The commissioning process should ensure that all the equipment is correctly installed and controlled. Although not all problems will be eliminated, the unsolved problems will be documented.

g. Complete maintenance manuals and as-built drawings.

2. During the project the commissioning process should be designed to promote an installation that is in compliance with the construction documents. This will be achieved in several ways:

a. Prefunctional testing or Point-to-Point (PTP) checks that installation has been done correctly.
   1) Review of Contractor’s certificate of readiness.
   2) Documents equipment brands and model numbers.
   3) Insures that all the equipment and controls in the construction documents have been provided.
   4) Check sensor calibration; confirm valve and damper functionality.

b. Testing and balancing (TAB).
   1) Checks flows on water and air distribution systems.

c. Functional Performance Testing (FPT):
   1) Spot check (minimum of 10% of the TAB).
   2) Dynamic Testing:
      a) Modulation in full range of equipment capacity.
      b) Power failure/power down.
      c) Backup upon failure.
   3) System and intersystem testing:
      a) Alarms.
   4) Control testing:
      a) Start-up, shutdown, power down, manual operation, unoccupied operation, power failure.
3. Operations and maintenance training is also to be commissioned. Observation and documentation of this process can help to insure that the training is complete and effective. This documentation is highly beneficial when training new employees, for maintenance or operations that happen infrequently or during re-commissioning. The following items should be included in the process:

   a. Verification and documentation of the scope of training provided.
   b. Training includes instructional material and demonstration of operation.
   c. The client agency must insure that the responsible staff attend and take part in the training and demonstration sessions.
   d. Training and operations manuals must be available for the training sessions.
   e. The instructional portion of the training program must cover at least the following:
      1) The design intent of each building system, including theory of operation, capabilities and limitations, and modes of control and sequences of operation in the subject building.
      2) Use of the operations and maintenance manual.
      3) Use of the systems and energy management manual.
      4) Review of control drawings and schematics.
      5) Procedures for start-up, shutdown, seasonal changeover, normal operation, unoccupied operation, and manual operation.
      6) Controls set-up and programming.
      7) Troubleshooting.
      8) Alarms.
      9) Interactions with other systems.
     10) Operational monitoring and record keeping, including what should be monitored, what useful information can come from monitored data, and why that information is important to analyzing system operation.
     11) Adjustments and optimizing methods for energy conservation.
     12) Relevant health and safety issues.
     13) Inspection, service, and maintenance requirements for each system, including any requirements for special skills and knowledge that may best be met by specialized service contractors.
     14) Sources for replacement parts/equipment.
     15) Tenant interaction issues.
     16) Why certain features are environmentally responsive (i.e., save energy, improve indoor air quality [IAQ], reduce toxic materials, reduce waste).
f. The demonstration portion of the training program must include at least the following:

1) Operation of each system, or typical examples if there are several similar systems in the building.

2) Start-up and shutdown procedures, operation under all specified modes of control and sequences of operation, and the correct procedures under emergency or abnormal conditions.

3) Procedures necessary for effective operational monitoring, as appropriate, but particularly for projects with direct digital control systems incorporating trending and graphing features.

4. Documentation is an important part of the commissioning process and should be integrated into all phases of the project. It is most important to the Commissioning Report, which includes the following items:

a. An Executive Summary:

1) The commissioning participants and their respective roles.

2) The Basis of Design including a brief building description.

3) The scope of commissioning and testing.

4) An outline of the testing and verification methods.

b. An account of each feature or system commissioned including:

1) The determination of the commissioning authority regarding:
   a) The adequacy of the equipment.

   b) Documentation and training (film of training desired).

   c) All maintenance and operation materials and instruction.

   d) All PTP deficiencies.

   e) TAB results.

   f) FPT results (film of testing desired).

2) All test procedures.

3) A list of outstanding commissioning items scheduled for later testing.

4) Commissioning communications separated by phase (PTP, FPT and post-occupancy testing):

   a) Meeting minutes.

   b) Progress reports.

   c) Deficiency lists.
d) Site visit reports.

e) Findings.

f) Unresolved issues.

5) Accounting of changes from initial design or commissioning procedure.

6) Report amendments to include deferred seasonal testing.

E. Commissioning on an OGS project

1. If commissioning is required by Code or requested by client or desired to “incorporate significant attributes of green design principles”:
   a. Determine who will act as the commissioning agent:
      1) The commissioning agent is usually a qualified third party, although according to the Green Building Tax Credit (GBTC) Part 638.8(d) “a qualified member of the architecture or engineering firm or company that performs the design may act as the commissioning authority; however, such an individual must not be responsible for any aspect of the project design, or construction management or supervision for the subject building. In addition, reporting of all conditions and findings must be immediate and direct from the commissioning authority to the Client Agency.”
      2) A separate term assignment can be made to hire a qualified consultant to act as the commissioning agent. Cross-referencing our current term consultants with the listed commissioning service providers on NYSERDA’s website is one means of identifying qualified consultants.
      3) The agent selected should have expertise and experience in the areas that will be required by the project. The commissioning agent should have familiarity with the systems being considered.
   b. When to hire the commissioning agent:
      1) The general rule is to hire a commissioning agent as early in the project as possible. This may require hiring a commissioning agent on a Not to Exceed fee (NTE) basis until the project scope is determined. This may give you the opportunity to change commissioning agents depending on the expertise required.
   c. The scope of the commissioning required:
      1) The scope of commissioning may vary considerably. Commissioning may be limited to compliance with specific client direction. It might be required by code or if the project is to be LEED certified. On projects where commissioning is required by code or the scope should be determined by examining the code and/or the LEED compliance level (fundamental or enhanced) that will be achieved. This will establish the minimum scope of services, but the commissioning team, with client approval, may elect to exceed this minimum level.
      2) On projects where commissioning is not required, but is requested, the designers, client representatives, commissioning agent and project conditions should be considered in determining the scope.
   d. The level of training the facility maintenance staff should receive must be verified by the commissioning agent. The extent of the training should be
determined and described in the specification. It will usually include a presentation by the Designers of the Design Intent and Basis of Design, as well as classroom and field training for the facility staff.

e. Sample 'Prefunctional Checklists' and 'Functional Test Procedures' must be developed for each system or piece of equipment to receive commissioning. Sample checklists are not to be used during the actual commissioning, but are included in the Project Manuals to clearly communicate the required detail and level of quality, and to act as a guide in the preparation of the actual checklists. Sample checklists are available for many master specifications. Sample checklists are also available from a number of sources, including Portland Energy Conservation, Inc. at www.peci.org. Sample checklists should be edited to include only those features included in the project.

f. Coordinate with the EIC and Cost Control to ensure that the contractor’s approved Detailed Estimate includes a line item for successful completion of project commissioning. Typically commissioning costs may often range from 3% - 5% of the total contract value, depending on the size of the contract and the extent of commissioning.

F. Commissioning Specifications

1. Commissioning specifications must be included in the contract documents. Commissioning may be applicable to only some of the contracts. Careful coordination with technical specifications in those trades and with the front-end documents for all trades will be required. Even if one of the contracts will not be involved in the commissioning process, that contractor should be made aware that commissioning will occur on the project.

2. For a contract that includes commissioning, the following specification modifications are required:

   a. Include section 019113 General Commissioning Requirements. This section specifies the contractor’s responsibilities to support the commissioning process. Only those specific requirements that impact on the contractor should be included in this section, with the goal of simplifying the process of bid preparation on the part of potential bidders.

   b. Technical specifications- each system or piece of equipment to be commissioned shall be modified as follows:
      1) Reference section 019113 General Commissioning Requirements, as related work specified elsewhere.
      2) Modify the ‘Submittals’ section to include submission of the ‘Prefunctional Checklist’ and the ‘Functional Test Procedures’.
      3) If a company field advisor is required to support the commissioning of the specific equipment or system, include the required number of hours.
      4) Provide a sample ‘Prefunctional Checklist’ and ‘Functional Test Procedure’ for each system or piece of equipment to be commissioned.

c. Include the General Commissioning Process document in the Appendix. This document describes the scope and details of the commissioning process and outlines the roles and responsibilities of each member of the commissioning team.
3. Coordination required:
   a. Section 011000 - Add a paragraph to alert all contracts that commissioning will be part of the project, identifying the commissioning parties and provide the name and address of the commissioning agent.
   b. Section 013300 - Add language to let contractor know to provide an additional submittal for the commissioning agent for all equipment subject to commissioning.
   c. Section 017716 - Add submittals of items which need to be included in the commissioning report including warranties, operating instructions and include desired format (paper or electronic or paper, .tif, .pdf etc.).
CHAPTER 9 – DESIGN GUIDES

9.5 ENERGY EFFICIENCY (EXECUTIVE ORDER 88) AND SUSTAINABLE DESIGN

This chapter provides guidelines to Designers, Project Managers and Consultants to determine the extent of compliance required by EO88 on their project, as well as instructions, tools and other resources. It also provides information regarding LEED certification and for the use of best green practices in non-LEED buildings.

Note that Executive Order 88 and LEED certification are two distinctly different topics and that EO88 does not mandate the use of LEED. However, since they each deal with sustainable design they are both included in this chapter.

9.5.1 ENERGY EFFICIENCY (EXECUTIVE ORDER 88)

Governor Cuomo signed Executive Order No. 88 “Directing State Agencies and Authorities to Improve the Energy Efficiency of State Buildings” on December 28, 2012. This new Order includes the following provisions:

1. Key Provisions:
   a. The New York Power Authority (NYPA) has created a Central Management and Implementation Team (CMIT) to administer the Order. OGS and the New York State Energy Research and Development Authority (NYSERDA) are to provide technical assistance to state agencies. Virtually all state agencies must comply with the Order.
   b. The CMIT issued Executive Order 88 Guidelines Version 1.0 in September 2013 that set forth the requirements in detail. The Guidelines are to be found at: http://www.nypa.gov

2. Existing Buildings (refer to Existing Buildings and Campuses chart):
   a. General: By April 1, 2020, a collective 20% reduction in energy use intensity (EUI) relative to Fiscal Year 2010/2011 of state-owned or operated buildings is to be achieved.
   b. Benchmarking: Annual energy use measurement and reporting is required for all standalone state buildings> 20,000 square feet and all multi-building campuses. Measurement of energy use on multi-building campuses includes all energy-consuming buildings regardless of size. NYPA has benchmarked and ranked this existing building stock into quartiles according to performance.
   c. Audits:
      • Low-performing buildings that received low benchmark scores (the lowest or 1st quartile) must undergo an ASHRAE Level II energy audit. Audits must identify opportunities for energy efficiency measures and cost-effective on-site renewable energy generation and high-efficiency combined heat and power. A retro-commissioning study is to be part of the audit. All audits <were to be> completed by December 31, 2015.
Required Capital Projects:

i. Implementation of the most cost-effective measures for the lowest quartile (were to occur) within two years (December 31, 2017 deadline). The level of implementation is dependent on the cost and funding source:
   - Retrofits or equipment replacement as part of State-Financed Capital Program must be added to capital plan.
   - Significant retrofits or equipment replacements financed through other than State (third party such as NYPA, NYSERDA) must be in the design phase.
   - Minor retrofits, and low/no-cost operations related upgrades must be completed.

ii. Cost-effectiveness may be determined utilizing life cycle cost analysis software such as the Federal Management Program’s Building Life-Cycle Cost (BLCC) software.

d. Retro-commissioning: The remaining three quartiles of the buildings (which do not require audits) (were to be) retro-commissioned according to the following schedule:
   - 2nd quartile – by June 30, 2015
   - 3rd quartile – by June 30, 2017
   - 4th quartile – by June 30, 2019

e. Sub-metering: All buildings of 100,000 square feet or larger on master-metered campuses (were to be) sub-metered for all fuels and energy sources by December 31, 2016.

f. D&C Term consultants may be used to perform the tasks required for existing buildings under this Order.

3. New Construction (refer to New Construction Chart):

a. The term “new construction” refers to new buildings, additions and substantial renovations. (Note: The guidelines do not refer to “additions” but it may be inferred that they are included.)

b. Green building standards such as LEED are “supported” as a means of increasing energy efficiency but not mandated.

c. New construction must meet the current State Energy code or better.

d. New Buildings and Additions:
   - Perform an energy efficiency analysis early in the design phase.
      i. D&C’s interpretation of “energy efficiency analysis”: The analysis may be performed with energy simulation software for analyzing baseline versus proposed building models. The baseline may be considered to be the minimum requirement for energy-efficient design as formulated in ASHRAE 90.1.
      ii. The program is to consider alternative HVAC and building energy efficiency measures to increase energy performance, analyze operating costs, and develop payback scenarios. Examples of appropriate software are HAP (Carrier) and Trace (Trane).
   - Assign a Commissioning Authority CxA to commence document review by 60% design phase.)
   - Commissioning shall occur at two points in time:
      i. Immediately after construction
      ii. Twelve months after occupancy

e. Substantial Renovations:
   - Defined as:
      i. A capital project affecting at least two primary building systems
ii. The building area is unoccupiable during construction for 30 days or more.
   • Primary systems are defined as HVAC, Electrical and/or Lighting, Exterior Walls and/or Windows, Roofing and/or Ceiling, Plumbing.
   • Requirements are the same as for a new building or addition.

f. D&C Term consultants may be used to perform the tasks required for existing buildings under this Order.

9.5.2 SUSTAINABLE DESIGN

Designers are encouraged to incorporate sustainable design principles when possible. The measures incorporated to use these principles may be based on LEED credits, even if certification is not pursued. Reduction of heat island effect, using low-emitting materials, water use reduction, using recycled content and/or regional products and recycling construction waste are all basic examples of green attributes that a designer may choose to incorporate. More expensive and involved measures such as sophisticated wastewater technologies, increased ventilation and daylighting should be formally coordinated with the client.

A. LEED RATING SYSTEM

LEED, which stands for Leadership in Energy and Environmental Design, is an internationally recognized green building certification system for designating, constructing and certifying green buildings. The voluntary rating system was designed by the U.S. Green Building Council, a non-profit trade organization of leaders from across the building industry working to promote buildings that are environmentally responsible, profitable and healthy places to live and work.

The LEED Reference Guide, which describes the rating system in greater detail, is available to OGS D&C designers through the D&C Green Quality Improvement Team.

LEED buildings are designed and built using strategies aimed at improving performance in the following five categories:

• sustainable site planning,
• safeguarding water and water efficiency,
• energy efficiency, renewable energy and CO2 emission reduction,
• conservation of materials and resources, and
• indoor environmental quality.

A whole-building approach is emphasized so that ideally no system works in a vacuum; the building design and construction process is integrated and collaborative.
LEED Version 4 is the newest version of LEED.

LEED Version 4 for New Construction is based on a 40 to 110 point scale. A project must satisfy specific prerequisites and earn a minimum number of points to be certified. Different levels of certification are granted based on the total number of earned credits. The four progressive levels of certification are: Certified: 40-49, Silver: 50-59, Gold: 60-79, Platinum: 80-110.

Credits are weighted to reflect their potential environmental and human health impacts. Credits with the greatest number of points address climate change, energy performance, and water usage.

The steps involved in getting a building certified are:

- The USGBC recommends starting the LEED process “as early as practical and preferably before schematic design.”
- register the project with USGBC (done by the client agency, Project Manager or consultant)
- prepare the project certification documentation,
- submit the application with the project certification documentation using the web-based LEED Online system,
- await application review and resubmit application if necessary, and
- achieve certification.

Other non-LEED organizations such as the Green Building Initiative, which administers the Green Globes system and are accepted by code standard societies, federal agencies and other states, could also form the basis for incorporating green building principles into design projects. These systems will have their own ratings, measurement, and verification protocols that create their own certification standards.

B. SUBMISSION REQUIREMENTS FOR LEED PROJECTS

1. Program:
   a. Discuss with client and Team leader if project will be formally registered and certified with the USGBC.
   b. For new buildings, additions or major reconstruction, conduct a charette to identify potential LEED credits with input from client and consultants.
   c. Complete the LEED Project Checklist. OGS Project Manager shall save the form to the electronic project file under the EO88-LEED folder.
   d. Identify special consultants required (i.e., commissioning, sustainable design or energy modeling consultant).
2. **Schematic Design Phase:**
   a. Update the LEED Project Checklist and save in folder.
   b. Seek recommendations from commissioning authority.
   c. Submit computer-based energy modeling preliminary report.

3. **100% Submission Phase:**
   a. Update the LEED Project Checklist and save in folder.
   b. If submitting to USGBC for certification, submit design phase LEED templates to the USGBC.
   c. If not submitting for certification, save completed LEED templates to the project file.
   d. Update modeling report.
   e. Insure that specifications for Commissioning, IAQ Construction Management Plan and IAQ Testing are included in the Project Manual.

4. **Final Submission Phase:**
   a. Finalize the LEED Project Checklist of applicable credits and save in folder.
   b. Update design phase LEED templates and resubmit to USGBC if building is to be certified.

5. **Construction Phase:**
   a. At substantial completion, update the LEED Project Checklist.
   b. If building is to be certified, submit construction phase LEED templates to USGBC.

C. **LEED CERTIFICATION FEE PROCEDURES**

1. Consult with the Client Agency and design team when defining roles and responsibilities on a LEED project:
   a. If OGS D&C is to pay the LEED registration and certification fees, the Project Manager provides D&C Finance with the project number and dollar amount.
Finance will bill the Client Agency for reimbursement and record the LEED certification fee costs as related fees in the DCNet project cost summary.

b. If the Consultant pays the certification fees, the Project Manager needs to include the associated tasks and fees as part of the consultant work order.

c. Or, the Client registers the building and pays the LEED certification fees directly.

D. SUBMISSION REQUIREMENTS FOR NON-LEED PROJECTS (optional):

The vast majority of D&C projects are not suitable for LEED certification because of their size and/or scope. A single or double trade project such as a window replacement, for example, would not be eligible for LEED certification because it would not impact all five areas of the LEED rating system. However, it ideally would include green building design attributes (or best green practices) such as proper sorting and recycling of construction waste and energy efficiency (well insulated glass with low emissivity).

In support of the pursuit of significant attributes of green design, utilize the Green Design Table for Small Projects and the LEED Project Checklist as guides during the design process.
CHAPTER 9 – DESIGN GUIDES

9.6 STATE RECORDS / DOCUMENTATION GUIDE

A. EXISTING CONDITIONS

1. OGS D&C will either provide or make available, as required, all existing documentation describing the history and/or current conditions of the building and the site that will be modified by the project. Most of this documentation is available through access to the electronic plan file or the archive legacy physical Plan File Room. It is incumbent on the Designer to verify the accuracy and relevancy of information that is made available, specifically the accuracy of construction documents from the construction of the original building or previous renovations to the building. If the OGS D&C PM and the Designer agree that an additional consulting entity, for example, a land surveyor or hazardous materials testing laboratory, is required to document existing conditions, the OGS D&C PM and the Designer should discuss methods for providing these services.

2. The types of State facilities and properties documentation available are noted below.

B. DCNET DATABASE

1. OGS DCNet is a searchable database for OGS projects. The OGS D&C PM can search by agency, facility, building number, or project description for similar projects/programs and scope at the subject facility.

C. STUDIES / PROGRAM REPORTS

1. The OGS D&C PM can locate and/or provide examples of similar Studies and Program Reports to assist with the determination of scope of services, content and associated fees.

2. Past Studies and Program Reports completed by other Designers may form the benchmark for the project design.

3. Information on relevant past Studies and Program Reports can be accessed by staff either through DCNet queries or through the Program Review Log.
D. PLAN FILE RECORDS

1. The electronic Plan File archive and the physical Plan File Room are valuable resources that contain contract documents for State projects. Older contract documents in the Physical Plan File Room (linen and mylars) are organized and filed by State Agencies, facilities and building numbers and can be scanned upon request. The electronic Plan File archive contains more recent contract documents (tiffs) organized in agency folders and facility subfolders.

E. AS-BUILT DRAWINGS

1. OGS D&C may have as-built drawings on some sitework and building projects. Check with the Plan File Room staff to inquire further.

F. TOPOGRAPHIC SURVEYS (reserved)

G. SITE PLANS (reserved)

H. GEOTECHNICAL DATA


I. STRUCTURAL STEEL FABRICATION SHOP DRAWINGS

1. OGS D&C has structural steel fabrication shop drawings for some of its states facilities. Most of the archived shop drawings were projects completed after 1986. Contact Michael Ernst, P.E. at 518-486-1725 with the OGS D&C Structural Design Group for additional information.

J. ROOFING WARRANTIES

1. Specific roof warranty recordkeeping and tracking are not core functions of OGS D&C. However, central Division of Construction staff may have ready access to certain various roof warranty records via legacy filing archives produced under past business programs.
K. FACILITY RESOURCES

1. The State Agency facility representatives such as Plant Superintendents may have various forms of information available on their buildings and infrastructure.

L. DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

1. DOCCS Standards Manual.
   a. OGS D&C maintains a DOCCS Standards Manual relating to site and building details for Medium and Maximum Security Facilities. These standards are available via OGS D&C Team Leaders from D&C Design BU1 and BU2.
   b. DOCCS Facility Key Plot Plans are available through from BU2 DOCCS Site Design Team Leader.
CHAPTER 9 – DESIGN GUIDES

9.7 AGENCY-SPECIFIC STANDARDS AND REQUIREMENTS

A. Agency-Specific Standards and Requirements include information that supplements the design standards described in other chapters of the Manual. The supplemental information is particular to that State Agency, Authority or Client. Agencies, Authorities and Clients organized by Business Unit can be found in Section D of Chapter 1.2 OGS Organization and Structure.

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<td>9.7.51</td>
<td>BATAVIA VETERANS HOME</td>
<td>reserved</td>
</tr>
</tbody>
</table>
9.7.3 DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION (DOCCS)

2. A. DOCCS GENERAL INFORMATION

1. **DOCCS MISSION STATEMENT.**
2. **NEW YORK STATE MAP LOCATING ALL CORRECTIONAL FACILITIES.**
3. **FACILITY LISTING AND DRIVING DIRECTIONS FROM ALBANY.**
4. FOR MORE INFORMATION RELATING TO DOCCS GO TO [HTTP://WWW.DOCCS.NY.GOV/](http://www.doccs.ny.gov/).

5. **DOCCS FACILITY PLANNER LISTING (INTERNAL USE ONLY) – PROVIDES INFORMATION ON DOCCS PLANNERS NAMES, PHONE NUMBERS AND FACILITIES THAT THEY ARE ASSIGNED.** 
   V:\DESIGNANDCONSTRUCT\ORGANIZATION\BUSINESSUNIT\01_DOCCS\FACILITIES\CONTACT\DIRECTORY

6. **DOCCS Facility Location Maps.**

7. **DOCCS_FACILITIES_CONTACT_DIRECTORY (INTERNAL USE ONLY) – PROVIDES INFORMATION ON FACILITY ADDRESS, STAFF NAMES / TITLES AND ASSOCIATED PHONE NUMBERS:** 
   V:\DESIGNANDCONSTRUCT\ORGANIZATION\BUSINESSUNIT\01_DOCCS\FACILITIES\CONTACT\DIRECTORY

8. **DOCCS COMMONLY USED ACRONYMS:**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASAT</td>
<td>Alcohol and Substance Abuse Treatment</td>
</tr>
<tr>
<td>AVP</td>
<td>Academic Vocational Program</td>
</tr>
<tr>
<td>BHU</td>
<td>Behavioral Health Unit</td>
</tr>
<tr>
<td>CASAT</td>
<td>Comprehensive Alcohol and Substance Abuse Treatment</td>
</tr>
<tr>
<td>CNYPC</td>
<td>Central New York Psychiatric Center</td>
</tr>
<tr>
<td>DAI</td>
<td>Disability Advocates, Inc.</td>
</tr>
<tr>
<td>GTP</td>
<td>Group Therapy Program</td>
</tr>
<tr>
<td>ICP</td>
<td>Intermediate Care Program</td>
</tr>
<tr>
<td>IICP</td>
<td>Intensive Intermediate Care Program</td>
</tr>
<tr>
<td>JCMC</td>
<td>Joint Case Management Committee</td>
</tr>
<tr>
<td>JCORC</td>
<td>Joint Central Office Review Committee</td>
</tr>
<tr>
<td>MICA</td>
<td>Mentally Ill / Chemically Addicted</td>
</tr>
</tbody>
</table>
7.
8. B. TYPES OF CONTRACTS
9.
1. INMATE LABOR PROJECTS (SEE CHAPTER 3 TYPES OF CONTRACTS)
2. Q Projects (see Chapter 3 Types of Contracts)
10. 3. M PROJECTS (SEE CHAPTER 3 TYPES OF CONTRACTS)
4. JOCS Projects
   a. The Business Unit generally determines which projects to send to the Job Order Contracting (JOCS) program. This may occur at the OGS Team Leader (TL) meeting, at the Workload Planning meeting, or by the OGS TL during design. DOCCS needs assurance that they can track JOCS projects and that an accelerated schedule considers things like cell take down, other work occurring at the facility, etc.
   b. Call the DOCCS Facility Planner with an explanation that the project is a good candidate for the JOCS program. The OGS TL should follow up conversation with e-mail confirming discussion with brief reasons why JOCS is the way to proceed with the particular project.
11.
12. C. INITIAL SITE VISIT

1. The PM shall invite the Facility Plant Superintendent, the Facility Planner and OGS field staff to verify project intent and project scope.
2. The PM shall accompany our Consultant/Designers on scoping trips.
3. The PM should provide advance notice of scoping trips to ensure full participation during the visit.
4. The PM shall copy DOCCS Director of Facilities Planning Services on scoping trip information.
5. The PM shall get security clearances for the site visit.
6. See Chapter 4.0.2 Initial Site Visit for more details.

13.

14. D. PROGRAM PHASE

1. Security Protocol:
   a. Consultant/Designers need security clearances and camera approval prior to visiting any DOCCS facility. Carry proper identification.

2. Program Phase: May be eliminated for Q projects. PM to discuss with Planner.

3. Hazardous Materials:
   a. Asbestos Abatement: Verify with OGS TL the potential to use Corcraft Industries (inmate labor) on projects.
   b. Radon Mitigation: All new buildings or additions shall be equipped with radon mitigation strategies using EPA methodology and/or recommendations.
      Exception: Discuss the potential impact of radon and indoor air quality for new buildings or addition under 4,000 SF.

4. Secure Perimeters:
   a. Penetrations through the perimeter fence (or below) need to be coordinated with the Electronics Security Team.

5. Corcraft Industries:
   a. Potential involvement relating to furnishings such as dining tables, lockers, beds, cells, furniture, systems furniture, and woven rod screens.

15.

16. STATE RECORDS AND DOCUMENTATION:
   a. DOCCS Facility Aerial Photographs:
      Are available through BU2 OGS Site Group.
   b. DOCCS Facility Surveys:
      Hardcopy and electronic versions are available through the BU2 OGS Site Group.
   c. DOCCS Facility Key Plot Plans:
      V:\DesignAndConstr\Common\FacilityInfo\Facilities-DOCCS.
      Once in this folder navigate to the facility folder. The Key Plot Plans for that facility is located at that file level and in the Blue Book. CADD plans are also available through the OGS TL.
   d. Blue Books (schematic level floor plans and photographs):
A Blue book for each facility can be found at the following location, V:\DesignAndConstr\Common\FacilityInfo\Facilities-DOCCS.

Once in this folder navigate to the facility folder. The Blue Book for that facility is located at that file level and is formatted as facility_Bluebook.PDF. CADD plans are also available via the OGS TL.

e. **Red Books:**

Historical schematic level information that was replaced with the Blue Books. The Red Books are not available for all DOCCS facilities. Even though this information is dated, these books provide building construction type and mechanical system information.

7. **Standards:**
   a. **DOCCS Design & Construction Standards.** The full text of the DOCCS Standards is not available to the general public, design consultants, or contractors due to security protocols, however, the standards are a necessary and important aspect of the DOCCS program. Please contact the OGS TL or PM to obtain information relevant to standards which may be applicable to any given project. Document path: V:\DesignAndConstr\Common\FacilityInfo\Facilities-DCS\General DCS Info\DOCCS Standards Manual 7-25-2011
   c. JCAH Accreditation - Regional Medical Units, Primary Care Clinics and Infirmaries.

8. **ESTIMATES:**
   a. MUST CONTAIN CONTINGENCIES FOR SECURE FACILITIES - CONTRACTOR DELAYS AND SEARCHES, TOOL SECURITY PROTOCOLS. CONTACT COST CONTROL FOR INFORMATION.

9. **OGS BU2 Physical Security Team:**
   a. Ensures that established physical security design standards are incorporated into all projects. Standards include: locking devices, electric and mechanical locks, detention hardware, control consoles, security glazing, detention accessories, facility keying, tear dust systems and all related security issues. The security team continuously researches innovations and improvements in security technology and implements training programs focusing on security related systems and components.

10. **OGS BU2 Electronic Security Team:**
    a. Ensures that established electronic security design standards are incorporated into all projects. Standards include: CCTV systems, perimeter intrusion detection systems, multiplex control and monitoring systems, security lighting
11. Past Code Variances:
   a. Smoke detectors located outside of inmate cells in lieu of within cell.
   b. Elimination of sprinkler heads within cells.

12. State Energy Code:
   a. See Code Compliance Manager Memo (email dated 5/19/2005) on energy code compliance requirements regarding security windows.

13. Accessibility Compliance:
   a. Special situations within DOCCS facilities require certain doors and openings to be fitted with standard security detention hardware that would otherwise require handicapped accessible hardware in accordance with NYSBC/ANSI A117.1 and ADA. These openings will be operated by DOCCS security personnel. The DOCCS Directive from Commissioner Fischer, dated May 3, 2012, defines a process whereby DOCCS will inform D&C of those openings that will be operated by DOCCS security personnel, which will in turn invoke the use of the code permitted exceptions allowing for a non-accessible opening (ICC/ANSI A117.1, Sect. 404.2, 404.2.6 and ADA Sect. 404.1).
   b. For DOCCS projects involving accessibility and compliance with NYSBC/ANSI A117.1 and ADA, follow the procedure outlined below:
      1) Provide appropriate accessibility narrative regarding the individual issues in the Program report along with a statement: “The scope of work involves accessibility issues with relation to the (for example: the doors, openings, ramps, toilet room, finish hardware, etc.). OGS will forward the proposed Accessibility Design Documents to DOCCS during the design phase for review by the DOCCS ADA and Security specialists.”
      2) Perform an accessibility compliance review during the design phase. Identify the required accessibility work items on the floor plans and describe in detail the recommendation for each item.
      3) Submit via email, a listing of the accessibility compliance items with recommended solution to each along with floor plans to Steve Crozzoli. Copy Ellisa Weber and the Facility Planner. File this in the electronic file. Perform this task prior to, and separate from, the 100% submission. Steve will have the DOCCS ADA and security specialists review the documentation for their specific requirements at that facility.
      4) Steve Crozzoli will reply in writing to D&C with specific direction regarding each item noted. Direction may include the use of code permitted
accessibility exemptions based on DOCCS unique situations. File this in the electronic file under “Client”.

5) Modify the design accordingly and incorporate in the bid documents.

6) Modify the 100% Design Submission letter to inform the client of the accessibility issues.

c. This procedure will allow Consultant/Designers to stamp design documents where code permitted accessibility exemptions are required based on DOCCS unique situations.

d. PMs should inform Consultant/Designers of this procedure. DOCCS ADA directive20120503.PDF

14. Historic Preservation:

A. WHAT IS THE PURPOSE OF HISTORIC PROJECT REVIEWS?

Office of Parks, Recreation, and Historic Preservation (OPRHP) is charged with determining the impact of design and construction projects conducted by state agencies as set forth in detail at 9 NYCRR Part 428. OPRHP determines whether the proposed project will cause a change, beneficial or adverse, in the quality of any historical, architectural or cultural property listed on the State register of historic places, or property determined to be eligible for listing on the State register as determined by the Commissioner of OPRHP.

b. DOCCS projects at historic or cultural facilities

In order to improve and streamline the process of review by OPRHP on design and construction projects undertaken by OGS on behalf of DOCCS at DOCCS Facilities, designated categories of undertakings have been determined to be exempt from OPRHP review.

19. ACCORDING TO A DETERMINATION LETTER BY OPRHP, DATED AND EFFECTIVE DECEMBER 18, 2006 (REVISED APRIL 16, 2015), DESIGNATED DESIGN AND CONSTRUCTION UNDERTAKINGS PROVIDED BY OGS TO DOCCS INCLUDING THE REPAIR, RESTORATION, REHABILITATION AND CONSTRUCTION OF EXISTING DOCCS FACILITIES LOCATED THROUGHOUT THE STATE OF NEW YORK, PURSUANT 9 NYCRR PART 428.12: STATE AGENCY ACTIVITIES AFFECTING HISTORIC OR CULTURAL PROPERTIES, ARE EXEMPT FROM REVIEW BY OPRHP.

c. Undertakings exempt from review

   o Maintenance projects that restore existing components to original working condition and do not affect the exterior appearance of the building.

   o In kind replacements of materials, finishes and fixtures which match the original condition and function.
o **Roof projects with minimal pitch**, with or without parapets, where repairs, replacements or modifications to the roofs maintain their pitch and are not apparent from the ground.

o **Heating and cooling systems**, including system variables such as ductwork, vent locations, and mechanical equipment locations that do not affect the appearance of the building.

o **Plumbing** repairs and replacements to piping, plumbing connections, fixtures, and accessories that are made as required. New plumbing as required to meet evolving building functions, building codes and ADA requirements.

o **Interior work** such as remodeling, renovation, painting, floor and ceiling finishes. Where practical, original finishes, modeling, doors and or other elements deemed to be of architectural importance by the Agency Preservation Officer shall be retained.

o **Buildings less than 50 years old.** Although these buildings may meet the criteria for inclusion for listing as a registered or eligible property, it is the opinion of DOCCS that no buildings within its jurisdiction meet the exceptional importance criteria for inclusion.

o **Buildings which involve inmate contact areas** where the primary use of the building is the regulation and control of inmate occupancy, including sleeping areas, visiting areas, program areas, recreation areas, kitchens, work facilities, education facilities, and hospital facilities where public safety is of paramount concern. Also included as inmate contact areas include administrative facilities where inmate contact could pose a safety threat to non-inmate populations, but shall not include Superintendents’ offices, reception areas or other largely public spaces within administrative facilities where there is only occasional inmate presence. Such exempt projects shall also include security fencing, doors and entrances, perimeter wall repair and replacement, window replacement, pointing of masonry, repair and replacement of towers and interior and exterior walls.

o **Earth disturbing activities inside an existing secure perimeter which include new buildings, building additions, appurtenant facilities and site work.** This exemption pertains to the potential requirement for archeological investigation to discover cultural resources within a project area. **Depending on the project, coordination with SHPO or exemption under another category may still be required.** Exempt activities include: Construction of new buildings and building additions, including excavations for foundations and associated site grading; construction of program related appurtenant facilities such as recreation areas, vehicular and pedestrian circulation, and security related features; site work for storm water management; installation of mechanical, electrical, and sanitary utilities and features.
Is the project location and/or building historically or cultural significant?

Helpful Resources:
1. BU1 & 2 Liaison (C. Dunderdale)
2. See NYS Historic Preservation Office website

**NO**
Proceed with best design practices
No review is required

**YES**
Is OPRHP review required?
See list of exempt undertakings
Review project scope and design

**NO**
Review is not required if project meets the criteria for an exempt undertaking
*Design to maintain historical significance.*

**YES**
Review is required if project does not meet the criteria for an exemption.
Compile:
1. program report
2. photos & sketches
3. project scope & design intent
Forward to C. Dunderdale (33rd Floor) to process and send to OPRHP for review.

*To maintain this agreement with OPRHP, it is imperative that we rehabilitate and renovate to the building’s original configuration & materials as closely as possible, and strive to provide sympathetic.

Note project review status in Program Report.
15. Window Assessment:

a. Security Level:
   i. What is the security level of the facility - Minimum / Medium / Maximum?
   ii. What is the security level of the building - Minimum / Medium / Maximum?
   iii. Is the building outside the secure perimeter?
   iv. Is the building part of the secure perimeter?
   v. Are the exterior building walls secure (solid grout / rebar, concrete)?
   vi. How will the replacement windows be anchored?

b. Security of the Opening:
   i. What are the security barrier elements of the opening?
      • Exterior bars or woven rod (what is the condition? Can they be reused? Do they meet the standard?)
      • Interior bars
      • Interior security screen
      • Exterior security screen
      • Detention screen
      • Detention window (bars, glazing, screen, detention screen)

c. Officer Supervision:
   i. Is the space supervised?
      • Direct Supervision
      • Indirect Supervision
      • Intermittent surveillance (cell block and hospital / corridor rounds)
      • Continuous observation

d. Inmate Accessibility:
   i. Is the window in a space where inmates have access to it or can control its operation?
   ii. What is the function of the space? cell / dormitory / dayroom / dining / other
   iii. Are the windows non-accessible by inmates (high windows out of inmate reach)?
   iv. Is the room defined as habitable space?
      • Natural light: Existing (actual) =
      • Natural light: code required =
      • Natural ventilation: Existing (actual) =
      • Natural ventilation: code required =
      • Mechanical ventilation =

e. Environmental Conditions:
   i. Is the building air-conditioned in the space?
   ii. Is mechanical ventilation provided in the space?
   iii. Are windows a part of a smoke purge system?
   iv. Are insect screens needed? If yes, what type?

f. Cell take down:
   i. Will this project require cell take down approval?
   ii. How many cells can be down at one time?

g. Field Investigation:
   i. Sample Window Removal
ii. HAZMAT abatement / removals
iii. Temporary security barrier

h. Mock-up:
   i. Will windows be different from past window designs? IF yes, should we build a mock-up to review?

16. Stormwater
   a. The DOCCS signatory on SPDES NOI’s and NOT’s is listed below.

   Eric Greppo, P.E.
   Environmental Engineer II
   Facilities Planning and Development
   Department of Corrections and Community Supervision
   550 Broadway
   Menands, NY 12204

   b. The NOI “Project Site Name” should reference the specific OGS Project Number and brief descriptor - ie: “Marcy CF HW PIPING 44303” This identifies the specific project gaining coverage under the permit.

   c. Provide one hard copy and one electronic copy of the SWPPP to DOCCS, unless otherwise directed.

   d. The DOCCS signatory listed above and the OGS Project Manager must be copied with attachment on all NOI and NOT correspondence to NYSDEC.

   e. Generally, MS4 coordination will not be necessary. DOCCS consent is required prior to sharing documents with outside parties.

E. DESIGN PHASE SPECIFICATIONS

1. Specifications:

   a. Division 1:
      015633 SECURITY
      015634 MAINTAINING PERIMETER SECURITY
b. Construction:

- 081102 CUSTOM STEEL DOORS & FRAMES (Interior Security Frames Only)
- 085663 STEEL DETENTION WINDOWS
- 088853 SECURITY GLASS AND GLAZING
- 095751 STEEL PLATE CEILING SYSTEM
- 095752 SUSPENDED METAL PANEL CEILING SYSTEM
- 095753 SUSPENDED METAL PLANK CEILING SYSTEM
- 111901 DETENTION EQUIPMENT
- 111902 DETENTION ACCESSORIES
- 111903 STEEL DETENTION SCREENS
- 111904 STEEL SECURITY SCREENS


c. Electric:

- 281601 MAIN SECURITY CONSOLE
- 281602 FENCE ACCESSORY STATIONS FOR PERIMETER SECURITY SYSTEMS
- 281603 PERIMETER SECURITY MULTIPLEX SYSTEM
- 281604 MICROWAVE DETECTION SYSTEM
- 281605 ELECTRONIC FENCE ALARM SYSTEM
- 281606 PERIMETER ALARM MONITORING AND INGROUND DETECTION SYSTEM
- 281607 INFRARED DETECTION SYSTEM
- 281608 TAUT WIRE FENCE AND ALARM SYSTEM
- 281609 E-FIELD DETECTION SYSTEM
- 281611 MODIFICATIONS TO MAIN SECURITY CONSOLE
- 281613 MODIFICATIONS TO PERIMETER SECURITY MULTIPLEX SYSTEM
- 281615 MODIFICATIONS TO ELECTRONIC FENCE ALARM SYSTEM
- 281618 MODIFICATIONS TO TAUT WIRE FENCE AND ALARM SYSTEM
- 281650 SYSTEMS PROGRAMMING COMPUTER
OGS Design Procedures Manual

A Guide to Designing Projects for Design & Construction

D. HVAC / PLUMBING

224224 STAINLESS STEEL SHOWER ENCLOSURES

233300 DUCTWORK ACCESSORIES (security barriers, security diffusers and laminar flow diffusers)

F. 100% SUBMISSION

1. MAY BE ELIMINATED FOR Q PROJECTS. PM SHOULD DISCUSS WITH THE PLANNER.

G. FINAL

1. **BDC 188 - Operating Impact Statement** – required for projects that have an impact on energy or water usage (usually HVAC or Electrical Contracts). This form is sent with the Final Letter to the Planner by OPC.

H. CONSTRUCTION PHASE

1. **OGS Consultant Submittal Overview:**
   All DOCCS projects including submittals relating to security for the following specification sections listed are required to be reviewed by the Consultant/Designer and the OGS Physical and Electronic Security Groups for their final approval. Prior to releasing to the Contractor, the Consultant/Designer will coordinate additional remarks and issue submittal disposition. This also includes submissions relating to manufacturer and installer’s quality assurance (if required in the specifications).
I. ELECTRIC DESIGN

1. Temporary Generators: All temporary generator installations to be connected through automatic transferring means.

2. Provide temporary generator quick connects for larger size new buildings and substantial renovation projects. Confirm with DOCCS Planner.

3. Provide fuel polishing on all generator projects. Confirm with DOCCS Planner.


J. COMMISSION OF CORRECTION

1. SOME PROJECTS (USUALLY NEW FACILITIES OR BUILDINGS) MAY REQUIRE SUBMISSION OF DOCUMENTS TO THE STATE COMMISSION OF CORRECTION. DOCCS INFORMS THE BUL OR THE PROJECT MANAGER WHEN OGS D&C IS REQUESTED TO SEND A SET OF DOCUMENTS TO THEM.

A. SEND A HARD COPY SET OF DRAWINGS AND SPECIFICATIONS (INCLUDING CD) TO:

DOCCS

SOB Campus

1220 Washington Ave, Bldg. 2

Albany, NY 12226

Facilities Planning & Development
9.7.5 DEPARTMENT OF HEALTH (DOH)

A. State Of New York - Department Of Health - Limited Review Application.


C. New York Codes, Rules and Regulations – Title 10, Health (7 Volumes)


E. Standards:
   1. JCAH Accreditation.

9.7.7  DEPARTMENT OF TRANSPORTATION (DOT)

20. A.  DOT GENERAL INFORMATION

4. DOT MISSION STATEMENT: “IT IS THE MISSION OF THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION TO ENSURE OUR CUSTOMERS – THOSE WHO LIVE, WORK AND TRAVEL IN NEW YORK STATE – HAVE A SAFE, EFFICIENT, BALANCED AND ENVIRONMENTALLY SOUND TRANSPORTATION SYSTEM.”

5. THE AGENCY’S MAIN OFFICE IS IN ALBANY, WITH ELEVEN REGIONAL OFFICES SCATTERED AROUND THE STATE. EACH REGION HAS MULTIPLE MAINTENANCE HEADQUARTERS, OR "RESIDENCIES", TYPICALLY ONE PER COUNTY, WITH A RESIDENT ENGINEER IN CHARGE THERE. EACH RESIDENCY TYPICALLY HAS SMALLER SUBHEADQUARTERS ("SUBRESIDENCIES") FACILITIES SPREAD AROUND ITS COVERAGE AREA.

6. DOT FACILITY PLANNER CONTACT – PAULO VILLELA, FACILITIES ENGINEER, NYS DEPARTMENT OF TRANSPORTATION, 50 WOLF ROAD (POD 5-4), ALBANY, NY 12232, (518) 457-5771, PAULO.VILLELA@DOT.NY.GOV.

21. B.  TYPICAL DESIGN PROJECTS - GENERAL

22. 1. CONSTRUCTION
   a. Construction scope projects include: salt storage buildings, pre-engineered metal buildings, wood buildings, masonry buildings and repair of existing masonry, fuel tank removal and replacement, miscellaneous renovations of concrete floor slabs, overhead doors, portable column-type lifts and others.
   b. Roofing
      1) On most DOT buildings the preferred roofing material is metal, specifically a preformed galvalume steel system with a 20-year warranty. In some instances, asphalt shingles are used. Single-ply systems like EPDM generally are used on flat roofs.
      2) Where required, snow guard devices are provided for occupant safety.
      3) DOT provides input during the program and design phases for maintaining or improving safe roof access through use of hatches, fixed ladders, etc.

2. ELECTRIC
   a. Electrical scope projects include lighting replacements, new electric services and branch circuitry work, generators, transfer switches, new buildings and additions.

23. 3. HVAC/PLUMBING
A. MECHANICAL SCOPE PROJECTS INCLUDE SMALL BOILER AND FULL HEATING SYSTEM REPLACEMENTS, INFRARED AND RADIANT HEATING SYSTEMS FOR TRUCK BAYS, FLOOR DRAINS, PLUMBING FIXTURES AND OTHERS.

C. SITE/FACILITIES - REQUIREMENTS AND TYPICAL PROJECTS

1. Maintenance Headquarters:
   a. These larger (+/- 20,000 SF) buildings serve an entire county. This building will have an office area consisting of a large office for the Resident Engineer, up to two separate offices for assistants and a conference room. There is an administration area for secretarial staff, drawing files, office equipment, etc. Remote from the office portion of the building are toilet rooms with showers, lockers and janitorial space. There is usually a mechanical room and sometimes separate electrical closets. Some of the older structures (those built in the 1950’s) have a 2nd floor with more offices and a scuttle to the roof. Separate from the office wing are mechanics bay and truck storage bays with large overhead doors. Some feature wash bays, welding areas and other specialized functions. The DOT staff does minor maintenance work on their vehicles at these garages but sends them to a Fleet Administration Facility for major maintenance work.
   
   b. Typical work includes miscellaneous renovation of various elements of these larger buildings due to age, normal wear and tear, driver incidents, extreme salt environment (rusting), expanding or reducing staff levels and also shifts in gender among staff (toilet rooms and showers).
   
   c. These are larger than the Subheadquarters structures and serve an entire DOT Region. Since there are fewer of these around the State, requests for new Maintenance Headquarters are rare.

2. SUBHEADQUARTERS FACILITY:
   a. This is a smaller version of a Maintenance Headquarters building (approximately 10,000 SF). There are typically one or two Subheadquarters per Region. Staff at the Subheadquarters (usually Highway Maintenance Supervisor 1, 2 or 3) plow and salt the roads in winter and fix potholes, guide rails, signage, etc. in summer. A Subheadquarters will usually also have a small crew of general mechanics charged with maintenance of the various facilities in the Region.
   
   b. Typical work includes miscellaneous renovation of various elements of these buildings due to age, normal wear and tear, driver incidents, extreme salt environment (rusting), expanding or reducing staff levels and also shifts in gender among staff (toilet rooms and showers).

C. THE CONSTRUCTION OF A NEW MAINTENANCE SUBHEADQUARTERS IS A SOMEWHAT TYPICAL PROJECT. THE BUILDING TYPICALLY INCLUDES TRUCK BAYS, OFFICE AREA, TOILET ROOMS, BREAK ROOM AND MECHANICAL/ELECTRICAL SPACE. THE CURRENT PROTOTYPE IS A PRE-ENGINEERED STEEL STRUCTURE FOR TRUCK BAYS MATED TO A
MASONRY-CLAD STICK-BUILDING WING FOR THE OFFICES, TOILET ROOMS, ETC.

3. Fleet Administration Facility (previously called Equipment Management Shop)
   a. These are very large (30,000 SF or larger) buildings that specifically are used for maintaining DOT's vehicles. There is only one of these per DOT region. These buildings are where mechanics work and service the wide range of DOT vehicles used, including snow plows, work trucks, graders, scissor lifts, etc. These buildings feature large interior garage spaces with rows of lifts, tool racks, overhead cranes, vehicle exhaust removal systems, etc. Other notable features include large parts rooms, tire storage areas and other support spaces. The offices are typically on the 2nd floor, with the managers having windows looking down onto the garage areas. The yards of these facilities are often filled with surplussed vehicles awaiting auction.
   b. Typical work includes miscellaneous renovation of various elements of these buildings due to age, normal wear and tear, driver incidents, extreme salt environment (rusting), expanding or reducing staff levels and also shifts in gender among staff (toilet rooms and showers).

4. Salt Storage Structure
   28. A. THE PREFERRED STYLE OF PREFERRED SALT STORAGE STRUCTURE HAS CHANGED OVER THE YEARS.
      1) The favored and most expensive building type is the high-arch gambrel design that is patented by AST. This is an all-wood structure built on concrete walls and is much taller than the other salt structure types. The doorway is 30' high so the salt delivery truck can dump its load and drive out with its bed raised. LED lighting is provided and screening is used to keep birds out.
      2) THERE ARE MANY RECTANGULAR FABRIC-COVERED TYPE STRUCTURES IN USE. THESE VARY IN SIZE AND HAVE HAD TROUBLES WITH CORROSION OF THE STEEL FRAMES. DOT DIRECTLY PROCURED MOST OF THESE STRUCTURES THROUGH A COMPANY CALLED COVER-ALL THAT HAS SINCE GONE OUT OF BUSINESS. SOME WERE ALSO PROVIDED VIA D&C PROJECTS. A SURVEY WAS DONE RECENTLY TO DOCUMENT THE CONDITION OF THE FRAMES OF THESE EXISTING DOMES. ANY REPAIR PROJECTS WILL INVOLVE EITHER PROVIDING NEW FABRIC OR PROVIDING NEW WOOD FRAMED STRUCTURE AROUND THE EXISTING CONCRETE WALLS. LED LIGHTING IS PROVIDED AND SCREENING IS USED TO KEEP BIRDS OUT.
      3) THE ONCE ACCEPTABLE DOME STYLE STRUCTURES ARE NO LONGER SPECIFIED BUT REPAIR WORK IS OFTEN REQUIRED DUE TO PROBLEMS THAT STARTED IN THE 1990'S WITH COLLAPSES AND OTHER STRUCTURAL ISSUES. THE DOMES HAVE A CONCRETE RING BASE WITH AN UPPER WOOD FRAME. THE WOOD FRAME IS
COMPRISED OF A SERIES OF PANELS THAT INTERLOCK AND BEAR ON EACH OTHER. THE DOMES HAVE A LARGE DOOR OPENING AND OFTEN AN EXTRA OPENING WITH A FAN TO VENTILATE THE SPACE.

B. TYPICAL WORK INCLUDES RENOVATION OF VARIOUS PARTS OF THESE SMALLER STRUCTURES DUE TO AGE, NORMAL WEAR AND TEAR, DRIVER INCIDENTS, EXTREME SALT ENVIRONMENT (RUSTING) AND CHANGES IN FACILITY NEEDS FOR SALT USAGE. NEW SALT BUILDING PROJECTS ARE NOT UNCOMMON AS THE NEEDS IN VARIOUS REGIONS EVOLVE.

C. SOME REGIONS ALSO HAVE “RELOAD STATIONS”, WHICH ARE SALT STORAGE BUILDINGS THAT ARE NOT LOCATED AT A MAINTENANCE FACILITY. THESE ARE SITES THAT ARE UNOCCUPIED UNTIL SUCH TIME AS A SNOWPLOW DRIVER NEEDS TO ACCESS THE BUILDING TO RELOAD WITH SALT.

5. Miscellaneous Facilities
   a. Additional smaller facilities may exist, including Bridge Maintenance Shops, sleeping trailers, select non-Thruway rest stops, and cold storage buildings for equipment and supplies.
Chapter 9 – Design Guides

9.7 AGENCY SPECIFIC STANDARDS AND REQUIREMENTS

9.7.9 DIVISION OF MILITARY AND NAVAL AFFAIRS (DMNA)

A. UNIFIED FACILITIES CRITERIA (UFC) 4-010-01
DoD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS, Latest version including all changes.

B. The following are a series of Army National Guard Design Guides that contain design and functional planning guidance information to use in developing the Design and the Construction Contract Documents for Army National Guard (ARNG) projects that qualify for support, totally or in part, from Federal funds.


ARMY NATIONAL GUARD DG 415-5 GENERAL FACILITIES INFORMATION DESIGN GUIDE, Latest version. Use in conjunction with the Facility-type Design Guides (DG 415-1, DG 415-2, DG 415-3 and DG 415-4) to use in the development of military construction (MILCON) projects.

C. ARMY NATIONAL GUARD MILITARY CONSTRUCTION PROGRAM EXECUTION, NATIONAL GUARD PAMPHLET, PAM 415-5, Latest Version. This Pamphlet provides guidance on how to program, design, and execute the State’s Military Construction program.

1. DESIGN DOCUMENT SUBMITTALS, NG PAM 415-5, CHAPTER 11, PAGES 40-48. This section of the NG PAM 415-5 outlines the responsibilities and the submittal requirements for the Design Document Submittals.

D. ARMY NATIONAL GUARD FACILITIES ALLOWANCES, NATIONAL GUARD PAMPHLET, PAM 415-12, Latest Version. The NG PAM 415-12 identifies the allowable space criteria for facilities supported by Federal contributions to the State, either totally or in part. It gives information on general construction standards, materials, space allowances, building circulation, and other requirements directly related to programming military construction projects.

E. SPECIFICATIONS:
1. 015000 – Construction Facilities & Temporary Controls: Edit Paragraph 1.09 or 1.14 SECURITY.
9.7.14 OFFICE OF CHILDREN AND FAMILY SERVICES (OCFS)

A. STANDARDS BY THE AMERICAN CORRECTIONAL ASSOCIATION


B. TITLE 9, SUBTITLE AA, CHAPTER III, MINIMUM STANDARDS AND REGULATIONS FOR MANAGEMENT OF SECURE FACILITIES OPERATED BY THE OFFICE OF CHILDREN AND FAMILY SERVICES

C. OFFICE OF CHILDREN AND FAMILY SERVICES STATEWIDE SECURITY AND SAFETY DESIGN AND CONSTRUCTION GUIDELINES

a) D. SECURITY SECTION 015633

(a) E. OGS PHYSICAL SECURITY TEAM

1. Ensure that established physical security design standards are incorporated into all projects. Standards include: locking devices, electric and mechanical locks, detention hardware, control consoles, security glazing, detention accessories, facility keying, tear gas systems and all related security issues. The security team continuously researches innovations and improvements in security technology and implements training programs focusing on security related systems and components.

F. OGS ELECTRONIC SECURITY TEAM - LIMITED SECURE AND SECURE FACILITIES ONLY

1. Ensure that established electronic security design standards are incorporated into all projects. Standards include: CCTV systems, perimeter intrusion detection systems, door locking and monitoring systems, security lighting systems, audio surveillance systems, public address systems, and intercom system and related security issues.
(b) **G. FACILITY KEYING**

(c) **H. SPECIFICATIONS: 111901 AND 111902**

(d) **I. ESTIMATING – SECURITY ALLOWANCE**

**J. OGS CONSULTANT SUBMITTAL OVERVIEW**

1. All Office Of Children And Family Services consultant projects including submittals relating to security for the following specification sections listed are required to be reviewed by the consultant and the OGS BU4 Team Leader for final review. Prior to being issued to contractors, the consultant will coordinate OGS remarks and issue submittal disposition. This also includes submissions relating to manufacturer’s and installer’s quality assurance (if required in the specifications).

**K. CONSTRUCTION SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>015633</td>
<td>Security OCFS</td>
</tr>
<tr>
<td>015634</td>
<td>Maintaining Perimeter Security - DOCCS</td>
</tr>
<tr>
<td>017900</td>
<td>Video Training Programs</td>
</tr>
<tr>
<td>081102</td>
<td>Custom Steel Doors And Frames (Interior Security Frames Only)</td>
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<td>085663</td>
<td>Steel Detention Windows (Hot Rolled Framing)</td>
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<td>088853</td>
<td>Security Glazing</td>
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<tr>
<td>095323</td>
<td>Acoustical Perforated Metal Ceiling System</td>
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<td>095324</td>
<td>Suspended Metal Panel System</td>
</tr>
<tr>
<td>111901</td>
<td>Detention Equipment</td>
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<tr>
<td>111902</td>
<td>Detention Accessories</td>
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<tr>
<td>111903</td>
<td>Steel Detention Screens</td>
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<td>111904</td>
<td>Steel Security Screens</td>
</tr>
<tr>
<td>260505</td>
<td>Wiring For Gate Systems</td>
</tr>
<tr>
<td>260506</td>
<td>Wiring For Detention Equipment</td>
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</table>

**L. ELECTRIC CONSTRUCTION SPECIFICATIONS**
OGS Design Procedures Manual

A Guide to Designing Projects for Design & Construction

281601 Main Security Console
281602 Fence Accessory Stations For Perimeter Security Systems
281603 Perimeter Security Multiplex System
281604 Microwave Detection System
281605 Sensor Cable Detection System
281606 Perimeter Alarm Monitoring And Inground Detection System
281607 Infrared Detection System
281608 Taut Wire Fence And Alarm System
281609 E-Field Detection System
281611 Modifications To Main Security Console
281613 Modifications To Perimeter Security Multiplex System
281615 Modifications To Electronic Fence Alarm System
281618 Modifications To Taut Wire Fence And Alarm System
281650 Systems Programming Computer
282301 Perimeter Surveillance CCTV System
282302 CCTV System - Special Housing Unit
282303 CCTV System - Corridor And Stairs
282304 Indoor And Outdoor Surveillance CCTV System
282305 CCTV System
282315 Modifications To Perimeter Surveillance CCTV System
9.7.15 OFFICE OF GENERAL SERVICES (OGS)

A. OGS MISSION STATEMENT

1. “OGS manages and leases real property, designs and builds facilities, contracts for goods, services, and technology, and delivers a wide array of support services. We provide government and nonprofit agencies with innovative solutions, integrated service, and best value, in support of cost-effective operations and responsible public stewardship.”

B. OGS GENERAL INFORMATION

1. For more information relating to this agency go to http://www.ogs.ny.gov/.

C. TECHNICAL & DOCUMENT REQUIREMENTS

1. All transformers specified for downtown Albany facilities under the administration of OGS Utilities Management shall feature copper windings.

2. All HVAC equipment specified for downtown Albany facilities under the administration of OGS Utilities Management requires specification of full remote monitoring and control via the facility-wide Honeywell control system. The design should be coordinated with Honeywell staff located on-site in the Empire State Plaza. Honeywell field devices are typically identified in project documents to be installed by the mechanical trade contractor, with control wiring provided by the mechanical contractor. Programming, field device material cost, final wiring terminations and testing shall be furnished by Honeywell by an Allowance.

3. Designs which may include a material or finish change to the exterior or in public areas of Albany area buildings require coordination and approval of the Capitol Architect. Copy the Capitol Commission and Capitol Architect with all major deliverables on downtown Albany building projects.

4. All designs which may include a new or changed door and access hardware must be coordinated very early for consistency with the hardware and access system standardization in place in many OGS buildings, including the Empire State Plaza.

5. Project signs are only used when directed and format approved by the OGS Commissioner.
6. All designs which may require changes / additions to the fire alarm system must be coordinated very early for consistency with the fire alarm systems standardization in place in many OGS buildings, including the Empire State Plaza.

7. For electrical projects in downtown Albany facilities, Specification section 011000 – Summary of the Work shall require contractors to pre-approve all electrical connections and methods with the Division of Utilities Management.

b) D. OGS CLIENT CONTACTS

1. The OGS Real Estate Center-Real Property & Facilities Management Capital Planning Office serves as the client representative for most projects in OGS buildings. All initial project requests come only via a BDC-153 submitted to D&C by either Fred Polsinelli (Director of Capital Planning and Management) or Christian Jackstadt (Deputy Director of Real Estate Services. Projects coordination is shared among multiple client Program Managers.

E. OGS TENANT ISSUES

1. It is common that an OGS building is home in part to spaces occupied by other state agency tenants. For OGS-funded projects, only the OGS client representative can formally affect the scope of work and provide necessary approvals.

2. Designers shall be aware that some tenant facilities may be 24/7 computer/data centers with strong restrictions on building services interruptions and with as well as separate security access requirements. Other tenant agencies’ spaces may also exist with their own unique requirements or restrictions. Designs which will impact tenant spaces or systems in any way require close coordination and documentation.

3. The scope of tenant agency-funded projects in OGS buildings shall be approved by the facility’s OGS client representative, who should be copied on all major design deliverables from Program report to Final Documents.
9.7.16 OFFICE OF MENTAL HEALTH (OMH)

A. OMH GENERAL INFORMATION

1. ABOUT OMH, AGENCY OVERVIEW, FACILITY LISTINGS, BASIC FACILITY DATA, AND DRIVING DIRECTIONS: HTTPS://OMH.NY.GOV/OMHWEB/ABOUT/

B. UNIQUE CONTRACTING AND WORK METHODS

(See Chapter 3 of the Design Procedures Manual for other standard OGS D&C contract types.)

1. TIMR Contracts (Testing, Inspection, Maintenance, and Repair/Replacement): These contracting methods are initiated and used by OMH to dictate the design of certain systems or components of systems. There are currently two primary TIMR contracts in use by OMH that OGS and their consultants must coordinate with:

   a. Johnson Controls-Simplex Grinnell - This contract provides work for fire protection systems, including sprinklers, fire alarm systems and ancillary components, as well as for security systems. All system components are to be Simplex, or as approved by Simplex and any UL requirements before they can be used and maintained under this contract.

   b. Johnson Controls Security Solutions (JCSS) - This contract provides work for electronic security systems, including but not limited to cameras, monitoring of video, video recording systems, card access, door access systems, security door systems (portal doors), and ancillary components and systems including building construction, and all building systems as they relate to security needs. If installation of any system is provided by others, JCSS requires acceptance of systems by inspection before it can be added as a system that they will maintain under this contract. Types of products that JCSS supports under this contract need to be accepted by JCSS before they will add the product or system to their maintenance agreement in the contract. Equipment to be provided by OMH TIMR should be confirmed by both the OMH facility planner and project designer.

2. Contact the project Team Leader to confirm if either of these contracting methods will be used for your particular project.
3. **REVIT (Revitalization) Team:** This work method provides a vehicle for OMH staff to self-perform work at their own facilities. Work is typically related to, but not necessarily limited to, carpentry and finish work. Contact the project Team Leader to confirm if this work method will be used for your particular project.

C. **SECURITY PROTOCOL FOR SITE VISITS**

1. **SCHEDULING OF SITE VISITS SHOULD TAKE PLACE AT LEAST 48 HOURS PRIOR, SHOULD BE INITIATED BY THE OGS PROJECT MANAGER, AND SHOULD BE COORDINATED WITH THE FACILITY PLANT SUPERINTENDENT, THE OMH FACILITY PLANNER, AS WELL AS THE APPROPRIATE OGS EIC.**

2. **DESIGNERS NEED TO CARRY PROPER IDENTIFICATION WHEN VISITING ANY OMH FACILITY, AND ALL VISITORS MAY BE REQUIRED TO SIGN IN AND SIGN OUT.**

3. **IN PATIENT- OCCUPIED BUILDINGS INTERACTION WITH PATIENTS IS NOT ALLOWED, AND USE OF CAMERAS AND TOOLS MUST BE PRE-APPROVED BY THE FACILITY PLANT SUPERINTENDENT.**

D. **STATE RECORDS AND DOCUMENTATION**

1. **OMH Facility Aerial Photographs, Facility Surveys, and Facility Key Plot Plans.** Electronic versions available on the OGS 'V' drive at: V:\DesignAndConstr\Common\FacilityInfo\Facilities-OMH

2. **Building Inventory Addenda (aka hard copy Yellow Books) are located on the 34th floor of the Corning Tower. See Charles Wooster, R.A. in D&C Business Unit 4 for detailed location.**

3. **Plan File Drawings:** Hardcopies of most previous OGS-OMH projects located on the ‘P1’ level of the Comming Tower, and electronic files located on the OGS V: Drive

4. **NYS-OMH Design Standards: Program and Finish Standards (dated 08/02/2008) located at:** V:\DesignAndConstr\Organization\BusinessUnit4\OMH

5. **NYS OMH Fire Alarm and Security Standards located at:** V:\DesignAndConstr\Organization\BusinessUnit4\OMH

E. ESTIMATES

1. Carefully consider the following when providing estimates at OMH facilities:
   a. Contingencies for secure facilities (including contractor delays, searches, and tool security protocols, off-hours work, etc).

F. OMH STATEWIDE PHYSICAL SECURITY STANDARDS

1. Ensure that established physical and electronic security design standards are incorporated into all projects. These standards are published in electronic format and are available at V:\DesignAndConstr\Organization\BusinessUnit4\OMH\OMH Security Stds. See Daniel Kessler, PE, in D&C Business Unit 4 for additional information. Specific standards exist for the following types of facilities:
   a. Adult Facilities
   b. Children’s Facilities
   c. Forensic Facilities
   d. SOTP (Sexual Offender Treatment Program)
   e. Cook-Chill Facilities
   f. Research Facilities (Labs)

G. APPLICABLE CODES, RULES, AND REGULATIONS

1. New York State Building Code and Associated Family of Codes (most recent version, including NYS supplements)


3. New York Codes, Rules and Regulations – Title 10, Health (7 Volumes)

5. JCAHO Accreditation

H. SPECIFICATIONS

1. Provide standard OGS specifications, carefully edited to incorporate custom OMH-specific requirements which are noted within the yellow highlighted text of the spec. In addition, incorporate the following OGS specification sections (tailored specifically for OMH requirements) while eliminating redundant or similar OGS D&C standard specification, if applicable to the project:
   a. 007303 SUPPLEMENTARY CONDITIONS - COST PLUS FIXED FEE CONTRACT
   b. 007304 SUPPLEMENTARY CONDITIONS - COST PLUS PERCENTAGE FEE CONTRACT
   c. 075216 SBS MODIFIED BITUMENT ROOFING SYSTEM-OMH standard*
   d. 075323 ADHERED EPDM ROOFING SYSTEM
   e. 081102 STEEL DOORS AND FRAMES
   f. 085113 ALUMINUM WINDOWS
   g. 087100 FINISH HARDWARE
   h. 096516 RESILIENT SHEET FLOORING
   i. 102100 COMPARTMENTS
   j. 102624 IMPACT RESISTANT WALL PROTECTION
   k. 111901 DETENTION EQUIPMENT
   l. 323113 CHAIN LINK FENCE AND GATES

   * 075216 is unique to OMH and is the standard roof system for all OMH patient-occupied buildings. This spec is occasionally revised- see Charles Wooster, R.A. in D&C Business Unit 4 for latest version.

2. INCLUDE “FACILITY RULES AND REGULATIONS” FOR THE APPROPRIATE PROJECT FACILITY AS AN APPENDIX DOCUMENT IN PROJECT MANUAL. ALWAYS OBTAIN LATEST VERSION OF THIS DOCUMENT FROM OMH FACILITY PLANNER OR OMH PLANT SUPERINTENDENT

I. OGS CONSULTANT SUBMITTAL OVERVIEW
1. All OMH projects which include submittals relating to security specifications are required to be reviewed by the OGS Project Manager and then the BU4 OGS Team Leader for final review. Prior to being issued to contractors, the Project Manager will coordinate additional remarks and issue submittal disposition. This also includes submissions relating to manufacturer and installer’s quality assurance (if required in the specifications).
9.7.23 STATE EDUCATION DEPARTMENT (SED)

A. State Education Department Mission Statement:

1. Our mission is to strengthen the capacity of our customers by ensuring the effective, efficient, and prudent use of agency resources in advancing the Regents Strategic Plan. OMS will also develop sound practices, policies, and decisions to promote accountability and high performance throughout the Department.

B. SED General Information:

1. For more information relating to the agency go to: http://www.oms.nysed.gov/.

C. Technical and Document Requirements:

1. All contract documents/designs for projects at the following State Education Department locations shall adhere to the latest State Education Department Codes and Guidelines for Pre K-12 Grades. Refer to the Manual of Planning Standards at the following link: http://www.p12.nysed.gov/facplan/forms.html
   a. School for the Deaf in Rome, NY.
   b. Batavia School for the Blind in Batavia, NY.
   c. Onondaga Nation School, St. Regis Mohawk School, Tuscarora Indian School

2. Designs which may include a material or finish change to the exterior or interior spaces of the State Education Building and Annex, Cultural Education Center or any of the SED buildings eligible for listing on the SHPO Historical Registry shall be subject to approval of NYS Parks and Recreation SHPO Office.

3. Schools located on the three Indian Reservations shall be designed to the latest version of the NYS Building Code with the exception of Asbestos or Hazardous Material Abatement Standards; the AHERA EPA guidelines shall be followed. The school programs are run by the local school districts, but the physical buildings and grounds are owned and maintained by SED. The three state-owned schools are St. Regis Mohawk School in Hogansburg, NY; Tuscarora Indian School in Lewiston, NY; and the Onondaga Indian School in Nedrow, NY.

4. The State Education Department has departments/offices in leased space throughout the State and any modest office renovations are handled directly by the OGS Bureau of Construction/Design and Tenant Services as Tenant Alteration Request (TAR).

5. Any State Education Department projects identified to be completed in the Cultural Education Center (CEC) must include the OGS Real Estate Center Division of Real Property & Facilities Management to avoid conflicts of responsibility. This includes any work in the main mechanical spaces, basement/subbasement, and any DDC control work. OGS should be copied on any project documents being completed in the CEC.

D. State Education Facility List:
<table>
<thead>
<tr>
<th>FACILITY</th>
<th>ADDRESS</th>
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<tbody>
<tr>
<td>State Education Facility and Annex</td>
<td>89 Wash. Ave., Albany, NY</td>
</tr>
<tr>
<td>Cultural Education Center</td>
<td>Madison Ave., Albany, NY</td>
</tr>
<tr>
<td>Rome School for the Deaf</td>
<td>Turin Street, Rome, NY</td>
</tr>
<tr>
<td>Batavia School for the Blind</td>
<td>Richmond Ave., Batavia, NY</td>
</tr>
<tr>
<td>St. Regis Mohawk School</td>
<td>Church St., Hogansburg, NY</td>
</tr>
<tr>
<td>Tuscarora Indian School</td>
<td>2015 Mt. Hope Rd., Lewiston, NY</td>
</tr>
<tr>
<td>Onondaga Indian School</td>
<td>270 Rte. 11A, Nedrow, NY</td>
</tr>
<tr>
<td>Cambridge Biological Facility</td>
<td>Fish Hatchery Rd., Cambridge, NY</td>
</tr>
</tbody>
</table>
9.7.24 STATE UNIVERSITY OF NEW YORK (SUNY)

A. SUNY MISSION STATEMENT

1. “The mission of the State University system shall be to provide to the people of New York educational services of the highest quality, with the broadest possible access, fully representative of all segments of the population in a complete range of academic, professional and vocational postsecondary programs including such additional activities in pursuit of these objectives as are necessary or customary. These services and activities shall be offered through a geographically distributed comprehensive system of diverse campuses which shall have differentiated and designated missions designed to provide a comprehensive program of higher education, to meet the needs of both traditional and non-traditional students and to address local, regional and state needs and goals. In fulfilling this mission, the state university shall exercise care to develop and maintain a balance of its human and physical resources that:
   • recognizes the fundamental role of its responsibilities in undergraduate education and provides a full range of graduate and professional education that reflects the opportunity for individual choice and the needs of society;
   • establishes tuition which most effectively promotes the university’s access goals;
   • encourages and facilitates basic and applied research for the purpose of the creation and dissemination of knowledge vital for continued human, scientific, technological and economic advancement;
   • strengthens its educational and research programs in the health sciences through the provision of high quality general comprehensive and specialty health care, broadly accessible at reasonable cost, in its hospitals, clinics, and related programs and through networks and joint and cooperative relationships with other health care providers and institutions, including those on a regional basis;
   • shares the expertise of the state university with the business, agricultural, governmental, labor and nonprofit sectors of the state through a program of public service for the purpose of enhancing the well-being of the people of the state of New York and in protecting our environmental and marine resources;
   • encourage, support and participate through facility planning and projects, personnel policies and programs with local governments, school districts, businesses and civic sectors of host communities regarding the health of local economies and quality of life;
   • promotes appropriate program articulation between its state-operated institutions and its community colleges as well as encourages regional networks and cooperative relationships with other educational and cultural institutions for the purpose of better fulfilling its mission of education, research and service.”

B. SUNY GENERAL INFORMATION

1. For more information relating to this client group go to www.suny.edu.

C)C. PROJECT MANAGEMENT
1. Campus Let projects are those funded by State University Construction fund (SUCF) appropriations, but campus staff procures the necessary design services, administers the bid, and arranges for construction phase administration and inspection services. (This is in contrast to many major projects, which are managed by SUCF on behalf of the campus.) The campuses have the freedom to approach OGS for various services in order to execute their campus let projects.

2. Not all projects programmed and/or designed through OGS are actually bid, permitted, constructed and inspected by OGS D&C staff. There will be times when it is the individual campus’ choice to provide these services using campus facilities staff and resources. Because OGS and SUNY have different design document standards, terminology and policies, the “owner” of the bidding and construction administration tasks (and associated document format) needs to be clearly established early in the project. There may also be Wicks Law separation of trades implications which may affect how the design documents are prepared. If at any time it is determined during the project scope definition or design phases that the role of bidding and construction phase inspection and administration needs to change, the Division of Construction must be consulted immediately. Regional staffing plans will need to be adjusted accordingly.

3. Each SUNY campus is assigned to a State University Construction Fund Capital Program Manager in Albany whose role is to assist the campus in its workload planning and to represent the needs of the campus at the SUNY Administration level. The level of involvement of each SUCF Program Manager may vary by project and phase, but most often their role will be to assure budget compliance and to review drafts and document submissions for compliance with SUCF design and administrative directives.

4. In 2010, SUNY launched a new Strategic Plan called The Power of SUNY, which was designed to maximize SUNY’s capacity to be a catalyst for economic revitalization and to improve quality of life for New York citizens. Among the plan’s multiple themes are a renewed commitment to innovation and improvement in Energy & Sustainability. In addition, any one campus may have its own unique Facility Master Plan or similar plan intended to complement the system-wide SUNY Strategic Plan. OGS project managers should familiarize themselves with the applicable plans and seek opportunities to advance their themes on all projects.

d) D. CAMPUS VARIATION
1. Each SUNY campus is recognized as a separate client entity. Each has its own capital construction budget to be administered according to its own unique long term master plan and its short term circumstances.

2. The campuses vary significantly in size. The physical plant staff may range from a few individuals to a large group staffed with architects, engineers, and/or project managers. The expertise and experience in capital construction and associated efforts can very significantly among campuses.

3. While there will be some degree of consistency and commonality between campuses arising out of their common mission, it must be acknowledged that each campus has unique curricula, history, geography, assets, management and agendas. These elements combine in such a way as to present campus-specific challenges to project managers and designers. Further, projects quite often can require a negotiated scope of work that involves the input and approval of a number of distinct campus subgroups or departments. Project schedules should be developed with these requirements in mind.

E. TECHNICAL & DOCUMENT ISSUES

1. OGS has in its planfile storage a large number of original construction documents for many SUNY campus buildings. However, in the era that followed original construction, most new buildings, renovations and improvement projects involving the campuses did not involve OGS. Therefore, current information may not be available in-house. The individual campuses will likely be the best resource for most useful historical plans and design information.

2. Professional design and construction phase services for SUNY campus interests are defined and governed by the State University Construction Fund Program Directives. These Directives, both technical and procedural, must be incorporated into project design/construction as applicable. They are organized according to technical trades using the major divisions of the CSI format. The specific application of each Directive shall be reviewed as part of the SUCF Program Verification Phase of a project. These Directives are available at [http://www.sucf.suny.edu/design/projdirp.cfm](http://www.sucf.suny.edu/design/projdirp.cfm). The OGS Project Manager must strive to satisfy both the applicable SUCF Program Directives and the specific requirements of the campus, all while adhering to the OGS policies and procedures.

3. Be prepared to provide additional copies of draft and final submissions upon request of the campus. Often times the documents are shared with the various stakeholder campus groups which must lend their comment or approval.

F. SUNY CAMPUSES LIST
<table>
<thead>
<tr>
<th>Location</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Albany</td>
<td>University Center</td>
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<td>Alfred State</td>
<td>Technology College</td>
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<td>Alfred University, NYS College of Ceramics</td>
<td>University Center</td>
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<tr>
<td>Binghamton</td>
<td>University Center</td>
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<td>Delhi</td>
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<td>Downstate Medical Center</td>
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<tr>
<td>Upstate Medical University</td>
<td>University Center</td>
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** OGS cannot perform work for community colleges as these institutions are not solely state-operated.
CHAPTER 9 – DESIGN GUIDES

9.8 HAZARDOUS MATERIALS GUIDE

A. GENERAL

1. The State of New York and its state agencies have a large and diverse building portfolio. These buildings may contain hazardous materials. In-house or Consultant designers and Project Managers should anticipate that they may come across hazardous materials during initial site visits to these facilities. All project Designers shall make Project Managers / OGS Team Leaders aware if they suspect that hazardous materials listed in this guide either impact or are impacted by their project.

2. HAZMAT investigation requiring sampling, testing, reports and design are typical services provided by the Designers / Project Managers. Construction air monitoring is the responsibility of the Division of Construction and is coordinated by the Director’s Representative (EIC) through the use of OGS term contracts. Project Managers should inform client agencies on associated air monitoring and/or project monitoring costs as soon as they are identified.

3. For In-house Designed Projects:

   The Designer / Project Manager shall contact the designated Hazmat Design Coordinator or Business Unit Leader in their Business Unit for projects requiring sampling and testing.

   The project Designer / Project Manager shall request the services of OGS term contracts to have the investigation, sampling and testing done. The PM should fill out a BDC-83 Request For Hazardous Materials Testing with required information and preferably attach drawings, clearly depicting the sampling locations. For Asbestos sampling requirements, see (Asbestos Hazard Emergency Response Act) AHERA 40 CFR Part 763.

4. For Consultant Designed Projects:

   After the initial field visit, if the Designer determines further HAZMAT investigation, sampling and testing is necessary, the Project Manager / OGS Team Leader is encouraged to assign the HAZMAT design portion of the project to the Consultant and their sub-consultant. This assignment provides a single point of responsibility. The Consultant will be responsible for
providing the necessary design and design certifications. The Project Manual 000105 Certification Page shall identify the firm’s name, and name of the NYS Dept. of Labor (DOL) certified Asbestos Project Designer including their signature and NYS DOL license number for all asbestos projects. All HAZMAT drawings require a PE/RA stamp for construction permitting. All consultant hazmat designs should be reviewed by an in-house OGS Hazmat Designer, whom by the nature of their review responsibility is then technically defined as the project’s Hazmat Reviewer. Hazmat Reviewer designation should be assigned in DCNet’s staffing plan by the Project Manager. See Chapter 5.1 General Information of this manual for general information on technical documents.

5. Different types of hazardous materials may be encountered in rehabilitation and demolition projects. If required, testing for asbestos, lead and other hazardous materials should be performed in conjunction with one another. Testing should also be done as early as practical during the Program Phase so that costs associated with potential abatement can be considered early in the project. The exception is for fire alarm, CCTV and DDC projects to only do representative samplings that will be expanded during the design phase when work areas are defined and routing of conduits/runs have been established. See item 9 d below.

Designers should coordinate all hazardous materials testing with the Project Manager / OGS Team Leader. It is highly recommended that the Designers accompany the HAZMAT testing team to properly identify work areas and to investigate hidden conditions such as above ceilings and pipe chases. The goal is to eliminate change orders during the construction phase.

6. Brief descriptions of hazardous materials and checklists are included in this Chapter to assist the Designer in determining the likely sources of hazardous materials in a building renovation or demolition project. If you have any questions or comments about the checklists, identify any additional items not found in this list, or would like to discuss an individual project, please contact Subramaniam Nair, P.E., at 518-474-3169 of the OGS HAZMAT Group for further information.

7. This guidance document is not intended as a substitute for reading the rules and statutes and making your own independent determination of their applicability to your building renovation or demolition project. Examples in this guidance document do not represent an exhaustive listing of types of materials that may be required to be removed from a building prior to building renovation or demolition.

8. See Chapter 9.13 Demolition of Structures for information related to hazardous materials related to demolition projects.
9. Requests for Hazardous Materials Testing and Sampling:
   a. Project Control, Hazmat Requests Processing Unit on the 35th floor processes the requests and assigns them to any of the current, active term contracts (with the testing labs). Contact Hugh Stevens at 518-474-7691 for details.
   b. Project Designers shall not pre-approve the lab to arrange a trip to the facility before the written assignment is signed and approved by the Director of Design and received by the lab.
   c. Project Managers, with assistance from Hazmat Designers or Hazmat Reviewers, shall fill out form BDC83 Request For Hazardous Materials Testing with all required information. Attach drawings that clearly state where the removal or disturbance is potentially disturbing any hazardous material. For example: For Fire alarm/CCTV installation projects, the request shall include floor plans that identify conduit run and equipment location for:
      - Sampling walls for conduit penetration (drywall, plaster).
      - Sampling ceiling for conduit & system mounts (plaster, ceiling tiles drywall ceilings, and acoustic ceilings).
      - Sampling materials along path (fireproofing, floor tiles, mastics, linoleums, etc.).
      - Recommendations for calculating sample minimum quantity: Sample plaster & fireproofing by 3-5-7 AHERA rule, three (3) samples for all insulations, two (2) samples for any miscellaneous suspect ACM (drywall, ceiling tiles, floor tile and mastics).
   d. The testing labs shall coordinate their field trips with the facility and with the project EIC. The project Designer and the Hazmat Designer/Reviewer shall respond to any additional questions. A Designer should request the lab to coordinate trip with the Hazmat Designer/Reviewer and Project Manager so as to briefly discuss the project before the testing lab personnel go out to the field to take samples.

   a. The lab prepares a report per the requirement of ICR56-5 when the sampling and testing is complete and sends it out to all the names listed on BDC83 Request For Hazardous Materials Testing.
   b. Recent test results shall be scanned into the system and filed in the ConsultantContract and FacilityInfo subfolder for use by project Designers in preparing Project Manuals.

11. During construction, the EICs shall request the services of a project monitor for large projects. All required air monitoring for the contract (in-house or consultant design) will be assigned
through the current testing term contract. The EICs will employ the services of the air monitoring firm for any required air monitoring and analysis. Since air-monitoring and/or project monitoring costs are part of the Client paid expenditures (and are significant), these costs shall be made available to the Client for review during the project program report phase.

B. ASBESTOS

1. Asbestos is a naturally occurring mineral that separates into strong, very fine fibers. These fibers float in the air and are easily breathed into the lungs, causing serious health problems.

2. Asbestos is not combustible, has high tensile strength, has good thermal and electrical insulating properties, is moderately resistant to chemicals, and has good frictional properties. It is durable, flexible, strong and resistant to wear. Thus, asbestos was used in numerous building materials.

3. Asbestos was used from 1930 until it was almost entirely banned in 1989. It is most commonly found in fireproofing, insulation, roof shingles, siding, floor tiles, window glazing compound, caulking and a variety of adhesives. Asbestos is a particular concern when it becomes “friable” where brittle fibers can be released into the air and inhaled. You can’t tell whether a material contains asbestos simply by looking at it, unless it is labeled. Asbestos presence or absence must be confirmed by professional sampling and laboratory analysis. More information can be found on the U.S. EPA website, the NYS DOL website, and in the OGS Hazmat folder at V:\DesignAndConstr\Common\HazMatInfoBox.

Key asbestos regulations include:

- OSHA 29 CFR 1926.1101 (Construction Standard);
- EPA 40 CFR Part 61 (NESHAP) & 40 CFR 763;
- NYS DOL12 NYCRR 56 (Code Rule 56 Newly amended), and;
- NYS DEC 6 NYCRR 360 & 364

4. NYS DOL recently amended ICR56 and the new ICR and is in effect from March 2007. A key difference is in asbestos “Survey Planning and Design”. Previously, sufficient bulk sampling and analysis had to be conducted to ascertain the presence and location of asbestos containing material (ACM). The new requirement goes further. The asbestos survey must now also identify quantities, friability and conditions at the affected portion of the building or structure. The survey shall follow all requirements of subpart 56-5. This rule also requires that permit issuing authority (in our case, OGS) also retain a copy of all building surveys. All consultants shall send a copy of building asbestos survey report to the project manager to be stored in the ConsultantContract and FacilityInfo subfolders.
5. All projects, whether in-house or consultant designs, are required to have an Asbestos Project Designer or Asbestos Project Reviewer involved from the start of the project to the signing of the certification page (for OGS records).

It should be noted that Asbestos Project Designers and Asbestos Project Inspectors as defined by the NYS DOL must take a refresher course from a DOL certified instructor each year for recertification.

For projects involving asbestos contamination assessment, request an OGS HAZMAT Designer to review the variance before submission to NYS DOL.

6. A recent clarification from the NYS DOL stated that a minimum of two samples are required for all miscellaneous suspect ACM per homogenous area. Asbestos type materials can be found on, or in:

**Boiler rooms:**
- Boilers, furnaces, fireplaces, and their components
- Cement sheets near heating equipment
- Boiler insulation
- HVAC duct insulation
- Ductwork flexible fabric connections
- Fireproofing materials
- Fire doors

**Flooring:**
- Vinyl floor tile
- Vinyl sheet flooring
- Asphalt tile
- Linoleum paper backing
- Mastic (floor tile, carpet, etc.)
Electrical:

- Electrical panels
- Electrical wiring insulation
- Heating and electrical ducts/conduit

Elevators:

- Hoistway doors (insulation for fire rating)
- Finish floor tile and mastic
- Insulation on wiring on controller
- Elevator brake pad/lining.

Pipe and other insulation:

- Aircell (corrugated cardboard)
- Millboard
- Preform
- Joint compound
- Spray applied insulation
- Blown-in insulation
- Block

Surfacing materials:

- Acoustical plaster
- Decorative plaster
- Textured paints coatings
- Spray applied materials (fire proofing, acoustical, decorative, or insulative)

Roofing:

- Roofing shingles
- Roofing felt
- Base flashing
Cement materials (Transite):
- Cement pipes (flues & vent pipes)
- Cement wallboard
- Cement siding
- Pegboard
- Mastics

Ceiling Materials: See the following link for information related to any type of ceiling tile removal within existing buildings: https://www.labor.ny.gov/formsdocs/wp/CR56.pdf
- Ceiling tiles
- Ceiling tile adhesives (pucks)
- Lay in ceiling panels
- Acoustical tiles

Miscellaneous:
- Taping, joint, and spackling compound
- Caulking, glazing and putties
- Fire curtains and blankets
- Laboratory hoods, table tops, gloves, etc.
- Gaskets
- Vermiculite: the attic insulation material of the 60’s.

7. Project Manual Related Specification Sections and other Drawing Requirements:
   a. 000105 Asbestos Designer Name, Signature and NYS DOL license number (In-house and Consultant Design)
   b. 002216 Supplementary Instructions to Bidders – Asbestos Projects
   c. 003126 Existing Hazardous Material Information
   d. 011000 Summary of the Work
   e. 015000 Construction Facilities and Temporary Controls
   f. 017329 Removals Cutting and Patching
g. 028213 Asbestos Abatement

h. Edit 011000, 015000 and 017329 sections

i. Include Asbestos Survey Report in the Appendix of all trade specifications (common document), whether sample results test positive or negative for asbestos to alert all the contractors involved of hazards that are present or not present.

1) In-house projects - Retrieve the results from the project, consultant folder in the “V” drive and/or scan and leave it in the common document section in the electronic project specification folder.

2) Consultant projects - preferred method is for the Consultant to do the sampling, testing, report and design. Consultant Designer edits the specification and inserts their report in the Appendix of the Project Manual(s). If separate full size drawings are to be provided in the Drawing Set they need to be referenced.

j. Designers shall include the quantity of ACM to be abated under the project in the drawings.

k. In-house projects – Certain projects may require a Variance to be obtained from DOL during the design phase.

1) Complete DOL Form SH-752 “Petition for an Asbestos Variance”, available in .PDF format from the Department of Labor website at: https://www.labor.ny.gov/home/

2) There is a fee of $350 for processing the petition, and the fee must accompany the application. Contact Karyn Agneta on the 35th Floor who will obtain the necessary check from OGS Finance. Forward the completed application and check to:

   New York State Department of Labor
   Division of Safety and Health
   Engineering Services Unit
   Building 12, Room 154
   State Office Building Campus
   Albany, New York 12240

3) If the Petition is approved, a Variance will be granted by the Department of Labor. The Variance will be identified by a specific number. This number, and a copy of the Variance, must be included in the Appendix of the Project Manual.

4) In House Designers can also utilize the “Professional Consultation” option within OGS term contracts for expertise in preparing Variances. See typical “Professional Consultation” assignment.

m. OGS has term testing contracts in place that can provide testing service if deemed appropriate by the OGS Team Leader and Consultant Designer.

n. If tests are positive, Include Section 028213 in the Project Manual, only in the contract that shall perform the abatement.

o. If an Applicable Variance (AV-#) is utilized for the project, insert a hard copy in the Appendix of the Project Manual.

p. Include section 028213 in the Project Manual, only in the contract that shall perform the Abatement, if tests are positive.

8. Hazmat Designers are cautioned against providing letters to Clients stating that asbestos containing materials are not present and/or was not used during construction of a building, even if it is new construction, without requesting a complete building ACM survey. It may be highly unlikely that asbestos containing materials (ACM) were utilized in new construction, but the fact of the matter remains that contractors can still purchase and install ACM products. Even when non-ACM products are specified, contractor could still physically substitute an ACM product. It is also an OSHA requirement to identify all ACM within your building/structure prior to renovation, demolition or other construction related activity which would fall under the OSHA construction standard. According to DOL a certified asbestos inspector is the only qualified person to make a visual assessment and determination of ACM.

C. LEAD

1. Lead is primarily a concern as it relates to lead-based paint that is peeling, chipping, chalking or cracking. Paint that dates prior to 1980 is likely to be lead-based. Many buildings have multiple layers of paint and should be examined carefully. Inhaling lead dust can lead to a host of health problems. Lead paint that is good condition does not pose a health hazard. Therefore, only paint that will be disturbed during construction or paint that is in poor condition need be testing. Dust may be tested in buildings that have undergone previous work to establish baseline conditions. Lead paint is tested using an x-ray fluorescence (XRF) machine.

2. Lead can be found in the following areas:
   - [ ] Lead Based Paint: (woodwork, metal equipment, interior/exterior)
   - [ ] Lead-Acid Batteries: (lighting, exit signs security systems)
   - [ ] Lead flashing molds and roof vents:
   - [ ] Lead Pipes and solder:

4. Only if the project involves mechanical grinding, flame cutting, torching or welding to a surface containing lead based paint (LBP), abatement is required. On all other projects involving LBP, controlling the spread of lead particles and/or LBP is the key. Specification Section 028304-Handling of Lead Containing Materials, shall be used in the documents.

5. Project Manual Related Specification Sections:
   a. 003126 Existing Hazardous Material Information
   b. 011000 Summary of the Work
   c. 015000 Construction Facilities and Temporary Controls
   d. 017329 Removals Cutting and Patching
   e. 028303 Abatement of Lead-Containing Materials/or 028304 Handling of Lead Containing Materials.
   f. Edit 011000, 015000 and 017329 sections
   g. Include Lead Test Results/Survey Report in the Appendix of all trade specifications (common document) whether sample results test positive or negative for lead to alert the contractor of hazards that are present or not present. (Retrieve the results from the project, consultant folder in the “v” drive and/or scan and leave it in the common document section in the electronic project specification folder).
   h. Consultant projects - preferred method is for the Consultant do the testing and design. Consultant Designer edits the specification and inserts their report in the Appendix of the Project Manual(s). If separate full size drawings are to be provided in the Drawing Set they need to be referenced, signed and stamped by a PE/RA.
   i. OGS has term testing contracts in place that can provide testing service if deemed appropriate by the OGS Team Leader and Consultant Designer.
   j. Include Section 028303 in the Project Manual, only in the contract that shall perform any required abatement, if tests are positive. e.g.: If flame cutting, torching and welding will be performed on a surface that has lead based paint, abatement is required.
   k. Include Section 028304 in the project manual, if tests are positive and lead containing paint will be disturbed during the course of the project, but abatement is not required.

6. Wipe sampling: a pre abatement wipe sampling of the work area is recommended for determining the background lead dust level. Once the abatement is complete, a post dust wipe sampling shall be conducted and results compared for clearance criteria. If the project involves multiple locations of abatement the following method is suggested. The first three
Painted steel work/abatement locations encountered will be those utilized to develop the method for an acceptable baseline approach for the lead control area, pre abatement wipe samples, employee protection, lead paint removal method, post abatement wipe samples, cleaning criteria and disposal. Once an acceptable method is developed and approved by the independent testing lab hired by the EIC, subsequent testing shall not be required. The contractor may not change the methodology of the certified work plan.

D. **MERCURY**

1. In general, do not remove mercury from a device such as a switch. Keep the product intact and remove and store in a covered container in a manner that will prevent breakage, spillage, or release. Label and store the mercury containing devices to ensure proper handling and disposal.

2. Project Manual related specification sections:
   a. 028700 Mercury Remediation

3. The following checklist will list product categories and examples from each where mercury can be found.

   **Specialty Buildings and Concerns:**
   - Hospitals, Clinics, Laboratories, Dental Offices, and Schools. Mercury can be found in sink traps and many other pieces of equipment and devices. Special care should be given to mercury items in these buildings.

   **Batteries:**
   - Smoke detectors
   - Emergency lighting systems
   - Elevator control panels
   - Exit signs
   - Security systems and alarm

   **Lighting:**
   - Fluorescent lights
High Intensity Discharge
- Metal Halide:
  - High Pressure Sodium
- Mercury Vapor
- Neon
- Switches for lighting using mercury relays: look for any control associated with exterior or automated lighting systems
- “Silent” wall switches

Heating, Ventilating, and Air Conditioning Systems: Devices in this category control a variety of functions such as water pressure, air pressure, on/off, and flow control. Check any control associated with air handling units.
- Thermostats
- Aquastats
- Pressurestats
- Firestats
- Manometers
- Thermometers

Boilers, Furnaces, Heaters & Tanks:
- Mercury flame sensors by pilot lights
- Manometers, thermometers, gauges
- Pressure-control
- Float or level controls
- Space heater controls

Electrical Systems:
- Load meters and supply relays
- Phase splitters
- Microwave relays
- Mercury displacement relays
Other Industrial Equipment and Areas of Mercury Concern: Any control used for measurement of vacuum, pressure, fluid level, temperature, or flow rate could contain mercury. Included are thermostats, thermometers, manometers, pressurestats, etc. Other switches may have been used in old clocks, water cleaning systems, pneumatic control switches, and other areas.

It is the expectation of the OGS that all equipment control boxes and panels be examined for mercury containing devices prior to renovation or demolition.

3. The following levels of contamination are as outlined in Table 3-1 of the U.S. EPA Region 5 Mercury Response Guidebook:
   a. Level 1 – Concentration > or = to 10 $\mu g/m^3$ – requires immediate action.
   b. Level 2 – Concentration > 1.0 $\mu g/m^3$ and < 10 $\mu g/m^3$ – schedule evacuation and remediation as soon as possible.
   c. Level 3 – Concentration < or = to 1.0 $\mu g/m^3$ – no action required.

4. Project Manual Related Specification Sections:
   a. 003126: Existing Hazardous Material Information (If initial testing is done, include copy of report in the Appendix)
   b. 011000: Summary of the Work
   c. 028700: Mercury Remediation

E. POLY-CHLORINATED BIPHENYLS (PCBs)

1. PCBs are a family of chlorinated compounds that were dielectric or especially non-conductive. PCBs are oily liquids that are usually pale yellow to clear. The following is lists of areas in buildings where PCBs may be found.
   - Transformers
   - Transistors
   - Capacitors (old appliances, electronic equipment)
   - Heat transfer equipment
   - Light ballasts
   - Compressors
2. Designers have to be aware of PCBs in caulking, especially in buildings built before 1977. SUNY Construction Fund and all NYS K-12 school projects are required to test caulking for PCBs if they are disturbed or removed as part of a project. Project managers are required to request for PCB testing on all caulking and glazing along with any other required testing, especially in building built before 1977. Request a minimum of one sample per homogenous area.

3. Suspect equipment should be tested for the presence of PCB. If results are positive then the oil shall be drained and the oil and equipment shall be disposed of in accordance with EPA regulations.

4. In the event of a spill, the effected areas need to be tested for contamination. The levels of contamination will be necessary to determine the level of protection for remediation personnel (level A, B, C or D). The necessary protective equipment for each level is established by appendix B of OHSA title 29, Part 1910, Section 120 of the Code of Federal Regulations.

5. Project Manual Related Specification Sections:
   a. 003126: Existing Hazardous Material Information (If initial testing is done, include copy of report in the Appendix)
   b. 011000: Summary of the Work
   c. 028403: Disposal of PCB Liquid Filled Electrical Equipment
   d. 028433: Abatement of PCB Containing Caulk Sealant Materials

F. CHLOROFLUOROCARBONS (CFCs)

1. CFCs (chlorofluorocarbons) and HCFCs (hydro chlorofluorocarbons) are man-made refrigerants that destroy the ozone layer.
   □ Fire Extinguishers (both portable and installed halon suppression systems)
   □ Air conditioners (rooftop, room, and central)
   □ Walk in coolers (refrigeration or cold storage areas)
G. BIRD DROPPINGS

1. Pigeon nesting sites result in a substantial build-up of pigeon droppings, a condition that can be harmful to humans if the material is disturbed and made airborne. Histoplasmosis is a fungal infection resulting from exposure to birds/pigeons/bats droppings. Infectious material enters the body usually by inhalation into the lungs, but in some cases by ingestion through the mouth into the gastrointestinal tract. Birds/pigeons/bats do not carry the organism that causes histoplasmosis. Histoplasmosis is caused by a soil organism that requires the moist, nutrient rich environment that large masses of droppings offer. Areas with small amounts of dried droppings pose minimal hazard.

2. Droppings from birds/pigeons/bats are found on all surfaces near their nests. Human inhalation of infected bird droppings can cause a variety of pulmonary infections (psittacosis, histoplasmosis, and cryptococcosis) resulting in acute respiratory and influenza like symptoms. Persons with immune deficiencies may be particularly susceptible. In addition, some persons exposed to birds/pigeons/bats and their droppings can become hypersensitive to pigeon antigens and develop allergic alveolitis, a condition characterized by lung inflammation (commonly referred to as “pigeon-breeder’s lung”). The exposure levels required to cause these diseases have not been well defined.

3. Droppings from mice may carry Hantavirus. It is the microbe responsible for Hantavirus Pulmonary Syndrome (HPS), an unusual but severe and sometimes fatal lung infection. The virus is carried by mice and some other small rodents and is contracted by exposure to mouse droppings, urine or saliva. The deer mouse or white footed mouse is believed to be the most common carrier of the virus. This particular mouse species is found throughout New York State.

4. No testing is generally recommended if visible contamination is present and if testing is not warranted for medical reasons. Visual inspection is acceptable to establish cleaned condition. For large size projects EIC may request the services of an Industrial Hygienist and obtain final clearance tests, assessment and report.

5. Project Manual Related Specification Sections:
a. 003126: Existing Hazardous Material Information (If initial testing is done, include copy of report in the Appendix)
b. 011000: Summary of the Work
c. 015000: Construction Facilities and Temporary Controls
d. 028733: Bird, Bat & Mouse Droppings Remediation And Disposal

H. MOLD (A type of fungus)

1. Mold, a type of fungus, can grow on any organic substance as long as there is moisture and oxygen. Molds reproduce by making spores and they are common in all environments. Most molds have the potential to cause health effects. They could cause allergies, asthma and they could produce a variety of toxins and irritants, which if inhaled or touched could produce adverse health effects.

2. Eliminating moisture accumulation is the first and the most important step in preventing mold growth. Some of them are to fix water line leaks, prevent surface condensation, increasing ventilation, maintaining space relative humidity between 30-50% and clean and dry all wet or damp spots within 48 hours.

3. If mold is suspected in a building, try to assess the nature and quantity of the contamination. Generally the contamination is divided into three categories. Small (less than 10 square feet of contaminated surface material or any air conveyance system), Medium (greater than 10 square feet but less than 100 square feet of surface contamination), Large or extensive (greater than 100 square feet of surface contamination or greater than 10 square feet of air conveyance system contamination).

4. For small size projects, no testing is generally recommended if visible mold is identified before remediation, Visual inspection is acceptable to establish cleaned condition.

5. For medium size projects, no testing is recommended unless the source of mold is unknown, odor persists, litigation is involved and/or if there were previous mold related health issues in the building. If necessary request the services of an Industrial Hygienist (Mycologist), for performing tests and issue initial and final assessment and reports.
6. For large size projects, it is required to request the services of an Industrial Hygienist (Mycologist) and perform tests and obtain an initial assessment report. During the project EIC shall request CIH services and obtain final clearance tests, assessment and report.

7. Required Specification Sections:
   a. 003126: Existing Hazardous Material Information (If initial testing is done, include copy of report in the Appendix)
   b. 011000: Summary of the Work
   c. 015000: Construction Facilities and Temporary Controls
   d. 028533: Mold Remediation And Disposal
   e. 230595: Cleaning Air Conveyance System Components (If air systems are involved)

8. As of this date, no EPA or the Federal threshold limits have been set for mold or mold spores. Air sampling only may not be used to check a building’s compliance with federal mold standards.

9. More information can be found on the U.S. EPA website [http://www.epa.gov/mold/](http://www.epa.gov/mold/) and in the OGS Hazmat folder in: V:\DesignAndConstr\Common\HazMatInfoBox.

I. RADON

1. RADON IS A NATURALLY OCCURRING RADIOACTIVE GAS, FORMED BY THE DECAY OF URANIUM IN SOIL. IT ENTERS BUILDINGS THROUGH CRACKS AND HOLES IN THE FOUNDATIONS AND SLABS. THE RADON GAS DECAYS INTO RADIOACTIVE PARTICLES (DECAY PRODUCTS) AND WHEN INHALED BECOMES TRAPPED IN LUNGS WHEN BREATHING AND THE PARTICLES IN TURN DECAY AND RELEASE SMALL BURSTS OF RADIATION. RADON IS A KNOWN HUMAN CARCINOGEN AND PROLONGED EXPOSURE CAUSES AN INCREASED RISK OF LUNG CANCER.

ADDITIONAL INFORMATION ABOUT HISTORIC RADON MEASUREMENTS TAKEN AROUND NEW YORK STATE, SEE THE NYS DEPT. OF HEALTH'S WEBSITE AT THE FOLLOWING LINK:

HTTP://WWW.HEALTH.NY.GOV ENVIRONMENTAL/RADIOLOGICAL/RADON/MAPS_STATISTICS.HTM

3. EPA'S RADON ACTION LEVEL OF 4 PCI/L - WITHIN SCHOOL BUILDINGS & HOUSES, AND ANY RADON EXPOSURE CARRIES SOME RISK. EVEN RADON LEVELS BELOW 4 PCI/L POSE SOME RISK. RISK CAN BE REDUCED BY LOWERING RADON LEVELS. ACTION LEVEL IS BASED LARGELY ON THE ABILITY OF TECHNOLOGIES TO REDUCE ELEVATED RADON LEVELS BELOW 4 PCI/L.

4. TWO TYPES OF INTERIOR TESTING ARE GENERALLY DONE FOR RADON. A SHORT-TERM TEST, WHICH IS THE QUICKEST AND THE DEVICE REMAINS IN AN AREA FOR 2 TO 90 DAYS (USUALLY A CANISTER) AND REQUIRES A MINIMUM OF 48 CONTINUOUS HOURS AT THE SITE PROVIDES AN AVERAGE READING. A LONG-TERM TEST DEVICES REMAIN IN PLACE FOR MORE THAN 90 DAYS (ALFA TRACK DETECTORS AND ELECTRETS-ION DETECTORS). THESE TESTS MEASURE SPECIFIC RADON LEVELS WITHIN AN EXISTING BUILDING AT A SPECIFIC POINT IN TIME WITH A SPECIFIC SET OF CONDITIONS PRESENT. CURRENTLY, THERE IS NO RADON TEST WHICH MEASURES RADON OUTSIDE AT A BUILDING SITE PRIOR TO CONSTRUCTION THAT WILL PREDICT THE LIKELIHOOD OF RADON OCCURRING, OR ITS POTENTIAL LEVELS, IN A NEW BUILDING. TESTING ADJACENT EXISTING BUILDINGS IN AN ATTEMPT TO PREDICT THE LIKELIHOOD OF A RADON OCCURRENCE AT A PARTICULAR SITE IS NOT RELIABLE.

5. THE FOLLOWING ARE REGULATIONS AND/OR AVAILABLE GUIDELINES/RECOMMENDATIONS:
   A. IGCC (2012)
   b. NYS GBCA (August 2010)
   c. NYS Mechanical Code Section 512
   d. ASTM E1465
   e. EPA Guideline For Radon Measurement In Schools
   f. EPA Radon Reduction Technique in Detached Houses
   g. Radon Hazard Sub Code For NJ School Buildings (NYS DOH Recommended)
   h. NYS Dept. of Health web published radon information at:

      http://www.health.ny.gov/environmental/radiological/radon/radon.htm
6. PROJECT MANUAL RELATED SPECIFICATION SECTIONS:
   a. 130100 Active Soil Depressurization System

7. BEST PRACTICE: OGS DIVISION OF DESIGN AND CONSTRUCTION RECOMMENDS PROJECT DESIGNERS AND OGS PROJECT MANAGERS DISCUSS THE POTENTIAL IMPACT OF INDOOR AIR QUALITY, INCLUDING RADON, WITH THEIR RESPECTIVE CLIENT AGENCIES, AND THAT ALL NEW BUILDINGS OR ADDITIONS ARE EQUIPPED WITH RADON MITIGATION STRATEGIES USING EPA METHODOLOGY AND/OR RECOMMENDATIONS.

8. SEVERAL METHODS ARE USED IN COMBINATION FOR RADON MITIGATION.
   A. CONSTRUCTION TECHNIQUES:
      Sealing joints & cracks and Vapor retarder/gas retarder
   B. HVAC SYSTEM BUILDING PRESSURIZATION
   C. SUB SLAB DEPRESSURIZATION (PASSIVE AND ACTIVE). SEE EXAMPLE PROJECT DOCUMENTS LOCATED IN:
      V:DESIGNANDCONSTRUCTIONORGANIZATIONISO9001TECHNICALRESOURCESHAZMAT08RADON

J. SOIL CONTAMINATION

1. Soil may become contaminated from a number of different sources. A review of the building’s prior function will provide insight regarding the types of site testing that may be required for a reasonable and prudent investigation (i.e. pesticides in a Grounds Building, heavy metals in a waste water treatment plant, soil around a flaking, lead painted water tower, petroleum from above and underground tanks, etc.).

2. Project Manual related specification sections:
   a. 028335 Lead Contaminated Soil Removal

3. Tank Removal Program – see Chapter 9.21.

K. LITHIUM BROMIDE
1. Lithium bromide is the most common absorbent used in commercial cooling equipment, with water used as the refrigerant. The absorption cycle uses a heat-driven concentration difference to move refrigerant vapors (usually water) from the evaporator to the condenser.

2. During absorption chiller removal projects, investigate if lithium bromide is used as an absorbent.

CHAPTER 9 – DESIGN GUIDE

9.9 CODES GUIDE

A. GENERAL

1. Code compliance review must begin early in the project so that any conflicts with applicable codes can be resolved before they become difficult or expensive to correct.

2. The code review process typically begins during the Program Phase and continues throughout the projects development. Code compliance reviews are refined as the project progresses through each design phase, see F1a below.

3. A Preliminary Code Summary shall be included in the Program Report. It generally contains basic information such as Classification of Work, occupancy classification, minimum construction requirements, exiting and materials requirements, and so on. It would identify potential code-related design issues. Discussion of code related design issues typically includes recommendations for resolving each of the issues, for example, through design modifications, interpretations or by seeking a code variance.

4. OGS is defined as a Construction Permitting Agency by Title 19 (NYCRR), Chapter XXXII, Part 1204.3(e) and is therefore responsible for administration and enforcement of the New York State Uniform Fire Prevention & Building Code (the “Uniform Code”) as it applies to OGS projects. Except for additional safeguards or stricter standards, all buildings and accessory structures (including equipment and mechanical systems) shall be constructed in compliance with the requirements in the current releases of the required codes. As the Authority Having Jurisdiction (or ‘AHJ’), D&C’s Division of Codes & Construction Permitting determines the applicability of the codes.

5. Design Professionals are required to prepare seal and certify that their construction documents meet or exceed the Uniform Code (Project Manual Standard Certification Page 000105 or the Design Consultant Certification Page 000105 and each drawing). Additionally, the Design Professional must check their documents for code compliance and seal the Design Compliance Certification Forms:
BDC 401 - Design Compliance Certification
b. BDC 403 - Design Compliance Certification (Trades)
c. BDC 406 and 406.1 - Statement of Special Inspections

Code Compliance Checklists have been developed for various disciplines by the ICC and are available from the Business Unit Leader.

A.

B. REQUIRED CODES

1. Under the Uniform Code, all building projects must meet or exceed the following codes and applicable reference standards contained therein.

   a. **2020 Uniform Code**, consisting of:
      - 2020 Residential Code of New York State (the “Residential Code”)
      - 2020 Building Code of New York State (the “Building Code”)
      - 2020 Plumbing Code of New York State (the “Plumbing Code”)
      - 2020 Mechanical Code of New York State (the “Mechanical Code”)
      - 2020 Fuel Gas Code of New York State (the “Fuel Gas Code”)
      - 2020 Fire Code of New York State (the “Fire Code”)
      - 2020 Property Maintenance Code of New York State (the “Property Maintenance Code”)
      - 2020 Existing Building Code of New York State (the “Existing Building Code”)
      - All other standards referenced in 19 NYCRR Parts 1219 through 1228

   b. **2020 Energy Conservation Construction Code**, consisting of:
      - 2020 International Energy Conservation Code
      - 2016 ASHRAE 90.1
      - All other standards referenced in 19 NYCRR Part 1240

   c. Additionally, New York State Labor Department Industrial Code Rule(s) for items relating to people who work in the building such as safety glass, provisions for window washing, cot space for female employees, asbestos abatement, boiler design, etc.

2. **Special Inspections**
   a. In addition to regular construction inspections typically performed on all OGS projects, Chapter 17 of the code requires “Special Inspections” during the construction of specific types of work. Special Inspections are required of the materials, installation, fabrication, erection or placement of components and connections requiring special expertise to ensure compliance with approved construction documents and referenced standards.

   Special Inspections require the monitoring of the materials and workmanship that are critical to the integrity of the building structure. Section 1704 identifies: construction work which requires special inspections, exceptions to these requirements, and minimum qualifications for special inspectors. A ‘Special
Inspector is a person meeting minimum qualifications and approved by the Code Compliance Manager (CCM) to perform Special Inspections.

b. Special Inspection Procedure:

1) **Designer of Record** decides if/what Special Inspections are required. **Designer of Record** completes the BDC 406 for all projects.
   a) For a project that requires no Special Inspections, only the one-page BDC 406 is required.
   b) For a project that does require Special Inspections, the BDC 406 AND the BDC 406.1 need to be completed. The BDC 406.1 must clearly communicate the level of inspection and testing for each construction category requiring special inspection. The “Comments” section of the 406.1 should not be blank. It must provide full instructions to both inspectors and testing agencies about the intended execution to meet code requirements and project parameters intended by the Designer of Record.

2) **Designer of Record** gives completed BDC 406 (and 406.1 when required) **Statement of Special Inspections** to the OGS Project Manager OGS PM), who submits copies of the BDC 406 and 406.1 along with 100% documents to the Constructability Group at the 100% Submission Phase. The OGS PM also files both forms in the Construction Inspection folder. (When project does not require a 100% Submission, OGS PM files the completed BDC 406 and 406.1 in the Construction Inspection folder at Final Submission Phase. If there are no Special Inspections, only a BDC 406 will be placed in the Construction Inspection Folder, and the BDC 406 will NOT be in the Appendix of the Project Manual).

3) After Constructability Review, the **D&C Design Project Manager** shall review all Special Inspection requirements for scope, verify all required inspections have been identified, and confirm all the listed inspections fully reveal the inspection and testing required. When the Special Inspection requirements have been correctly identified, the **D&C Design Project Manager** creates pdf versions of the BDC 406 and 406.1 and files them as per the final submission phase requirements.

4) When questions arise or modifications are required, the **D&C Design Project Manager** will discuss the project with **Designer of Record** and/or the **Code Compliance Manager**. Minor revisions can be made at the final documents phase, while major changes will require resubmitting the BDC 406 and 406.1 for 100% Submission. The **D&C Design Project Manager** will then file the resubmitted BDC 406 and 406.1 as per the final submission phase requirements.

5) **Designer of Record** resubmits the BDC 406 and 406.1 with any revisions that are required at the Final Submission Phase. The **Div. of Codes and Construction Permitting** will verify that the BDC 406 and 406.1 is properly filed at Final Submission. The BDC 406 and 406.1 will appear in the Appendix of the **Project Manual** for all projects that require special inspections.

6) Upon award the OGS Area Supervisor uses the BDC 406 and 406.1 to finalize the staffing necessary to perform inspection and testing and submits the inspection assignments to supervisor for approval, with copies sent to the **Designer of Record** and **D&C Design Project Manager**.

7) During construction phase, the EIC coordinates special inspections and related inspectors including material testing and the related testing agencies.
8) Special Inspectors document inspections using daily reports and provide reports to the EIC on a timely basis. The EIC transmits copies of the Special Inspection Reports to the Designer of Record. Special inspectors shall inform the EIC and the Designer of Record of any non-conformances that are not immediately resolved.

9) Designer of Record is responsible for reviewing all uncorrected non-complying items and for approving the remedial measures to be taken.

10) EIC maintains a file of all inspections and tests.

11) Special Inspectors sign Final Inspection Report stating all work they inspected is in accordance with the contract documents with exceptions as noted. EIC transmits a copy of the Final Inspection Report to the Designer of Record.

12) EIC issues BDC 405 including a list of special inspections completed in the comments section. An EIC may reference from the Comments section, and attach, a copy of a completed BDC 406.1.

13) See Special Inspections Flow Chart for more detailed information.

14) See Special Inspections Roles and Responsibilities for more detailed information.

3. Some projects must meet or exceed the following codes as applicable:
   a. Life Safety Code NFPA 101 for OMH and DCS Medical Program
   b. NYS Hospital Code
   c. NYS Sanitary Code
   d. NYS Department of Health
   e. NYS Department of Environmental Conservation
   f. American Corrections Association Standards for Adult Correctional Institutions (ACA)

c. C. AGENCY-SPECIFIC STANDARDS

1. See Chapter 9.7 Agency Specific Standards and Requirements for additional requirements for Client State Agencies. For example, the Department of Corrections and Community Supervision requires projects to comply with American Correctional Association Standards.

D. LOCAL CODES

1. OGS D&C is not obligated to comply with local codes if the project is located on New York State owned land. OGS D&C legal obligation in other arrangements, such as state facilities on leased land, or leased facilities are more restrictive and the Consultant/Designer should comply with any local codes. Despite our lack of legal obligation, project Consultant/Designers should attempt to comply with local codes as well as the Uniform Code. This is especially the case for any item of work which interfaces or connects with local services, utilities, and/or other connected infrastructure.

2. State projects located in New York City are not subject to New York City building codes or inspections. However, where fire alarm/fire protection systems (the NYC Fire Dept.) or pollution controls (City pollution standards), noise control, and service access may depend on coordination with local codes including sidewalk encroachment and protections. OGS D&C and our Agency Clients aspire to be good
neighbors and avoid unnecessary controversy. Contact the OGS Team Leader when in doubt as to which codes to follow for a specific project.

3. State facilities are dependent upon local fire department services and it is standard practice to have a preliminary review of the design documents with the local fire department so that any potential compliance concerns can be resolved and incorporated into the design as required. This review may include: accessibility of fire equipment, fire hydrant locations and connections, siamese connection types and locations, water flows and pressures, standpipes, etc. Coordinate this review through the D&C Team Leader.

d. E. CODE INTERPRETATION

As the Authority Having Jurisdiction (AHJ), the Div. of Codes and Construction Permitting will provide final interpretation of the codes on projects permitted by the Agency. The Code Compliance Manager will provide interpretation assistance as requested. Designers should review code issues with the project Team Leader, and Business Unit Leader prior to bringing the question of interpretation to the Code Compliance Manager for concurrence/assistance. Code interpretations are required to go through the Code Compliance Manager.

1. Designers should not contact the Department of State (DOS) for code interpretations for the following reasons:
   a. Provide consistency and continuity for all State Agencies.
   b. Separate decisions made in consultation with DOS may have unanticipated ramifications for prototypical designs or other OGS Client Agency projects / programs. The Code Compliance Manager represents OGS and their Client Agencies on a global level as opposed to the Designer who is mainly focused on an individual project when asking DOS for statewide interpretations.
   c. OGS reviews the compliance of hundreds of projects each year and prefers to consult DOS when confronted with unique situations. A project, which may be atypical for one Business Unit or Client Agency, may be common ground for another, so the Code Compliance Manager may have a ready interpretation for your “unusual project”.

2. Variance Petition Forms are available through the Code Compliance Manager. OGS office policy is that Designers should not contact DOS for an interpretation or a variance request until the issue is reviewed and approved by the Code Compliance Manager.

e.

f. F. SUBMISSION GUIDELINES

1. When relevant a preliminary code analysis including Classification of Work, Occupancy and Construction Classification, Fire Separation Distance, Fire Areas and Building Accessibility and a list of noteworthy code concerns should be addressed with possible solutions in the Program Report. The Code Compliance Manager requires the following to be completed as indicated.
   a. At the first post Program Report submission and updated in each future submission: BDC 402 – Code Compliance Review Checklist (This document
should be reviewed with OGS Team Leaders at the start of a project and at the subsequent submission milestones).

b. At the 100% and Final submissions:
Completed BDC 406 and 406.1 - Statement of Special Inspections Code
Information to be included on the construction drawings:

1) Safeguards During Construction (IBC Chapter 33):
   Pedestrian protection
   Means of egress
   Excavation and fill
   Fire extinguishers

2) Fire Service Features (IFC Chapter 5):
   Fire apparatus road
   Location of fire lanes
   Security gates across fire apparatus access roads
   Hydraulic calculations for fire hydrant systems
   Premises identification and key boxes
   Emergency responder radio coverage

3) Fire Safety During Construction and Demolition (IFC Chapter 33):
   Owners responsibility for fire protection
   Access for fire fighting
   Means of egress maintained

4) Building Information:
   Classification of Work
   Occupancy Classification / Mixed Occupancies
   Construction Classification
   Height of Building (Stories)
   Building Areas and Fire Areas
   Sprinkler Status: Required by Fire Area or Occupancy
   Key Plan with building sides accessible and setbacks

5) Egress Information:
   Room Use Designations
   Room Square Footages
   Room Occupancy Loads
   Room Exit & Corridor exit width Calculations
   Exit Travel Distances incl. Common Path
   Stair & Exit Door exit width Calculations
   Accessibility for New and Existing Building Areas
   Corridor/Exit Enclosures - Hourly Ratings
   Hardware descriptions

6) Conventional light-frame construction:
   Floor and roof live loads
   Ground snow load
   Ultimate design wind speed
   Seismic Design Category and Site Class

7) Structural Design:
   Floor live load
   Roof live load
   Roof snow load
   Wind load
   Earthquake design data
   Flood load
Special loads
System and components requiring special inspections for seismic resistance
Soil classification & design load bearing capacity

8) Energy Code Analysis
COMCheck results for Construction Insulation and Mechanical and Electrical Consumption
Software available on DOS Website www.energycodes.gov/

G. PERMITS

1. Construction permits are required by all State Agencies for the erection, construction, enlargement, alteration, improvement, relocation, removal, or demolition of all new and existing buildings, structures, systems, and equipment. Construction permits are required for all D&C project types, including: Standard, Unit Price, Work Order, Tanks, M, Q, Cost Plus, Sole Source, Inmate Labor and Job Order Contracts.

   a. However, there are two exceptions: Construction Permits are not issued for Emergency projects (in accordance with paragraph 7 below). Additionally, permits are not issued for dams and other impounding structures constructed for or in conjunction with the NYS Dept. of Environmental Conservation, if a Joint Application Form, including Supplement D-1 and other required DEC permits have been reviewed, approved, and filed with the Code Compliance Manager.

   b. Work which does not require a Construction Permit shall be processed with a BDC 401.1 – Waiver of Construction Permit. Work exempt from the requirement for a Construction Permit is still required to be designed and constructed ‘code compliant’. For assistance with identifying if a BDC 401.1 may be used for a project, instead of the BDC 401 – Design Compliance Certification, please review BDC 401.1 – Instructions and Waiver of Construction Permit. If additional assistance is required, review the project with the Team Leader and Business Unit Leader, prior to contacting the Code Compliance Manager.

2. Construction permits are required for “Demolition” work and must indicate compliance with the following:
   b. Chapter 33 of the IBC
   c. Chapter 33 of the IFC
   d. The OGS documents; BDC 401 – Design Compliance Certification, and BDC 403 – Design Compliance Certification (trades) as appropriate

3. State Agencies seeking a construction permit must submit the following information:
   a. Description of the site upon which the proposed work is to be done.
   b. Description of the use or occupancy of all parts of the land and of the proposed building or structure.
   c. Where work is proposed for an existing structure, a description of the current use or occupancy of the structure.
   d. Description of the work proposed to be undertaken.
e. The name(s) of the State agency which will have custody of the structure during construction and after the project is completed.

f. Complete set of plans and specifications for the proposed project.

4. The Code Compliance Manager may waive the requirement for plans and specifications where the work to be performed is an Emergency project, involves minor alterations, or where the Code Compliance Manager determines that plans and specifications are unnecessary.

5. Applicant agencies are required to notify the permit issuing agency if the information contained on the permit application changes. Permit will not be issued if the proposed work does not comply with the Uniform Code.

6. Construction permits may be rescinded if the work does not proceed in conformance with the applicable codes or attached conditions or if errors are discovered in the permit application.

7. State Agencies may undertake emergency repairs or reconstruction work without a Construction Permit. Emergency projects are administered through the Division of Construction. Emergency projects are initiated with the issuance of a BDC 318 – Declaration of Emergency from the Client Agency. This work must still comply with all applicable codes. A Code Compliance Certificate and supporting documentation is still required.

8. The Division of Construction requires and will complete a BDC 405 – Construction Compliance Certification for all projects permitted and emergency projects. BDC 215 – Code Compliance Certificate is required when these projects are completed.

**g. H. TOOLS AND RESOURCES**

1. **Design Compliance Certification BDC 401 and Uniform Code Compliance Review Checklist BDC 402**

   a. Under Title 19 NYCRR, a State Agency Code Compliance Manager is responsible for “providing for” the review of requests for a Construction Permit. To provide documentation that this requirement has been satisfied as part of the permit process, all projects which require a BDC 401 Design Compliance Certification, must include a sign off for Permit Issuance Recommendation. The Permit Issuance Recommendation can be found at the bottom of the BDC 401, and is to be signed by the OGS employee who can certify that a proper documented code compliance review of the construction documents was performed.

   b. The OGS Project Manager reviewing the construction documents using the BDC 402 is not required to be licensed or certified as a Code Enforcement Official (CEO) by the NYS DOS, however they must have a good working knowledge of the issues they are reviewing, must not be the Designer of Record, and must confirm that the proposed classifications and code data provided is logical based on the proposed scope of work outlined in the contract drawings and specifications. The OGS Project Manager must report any inconsistencies to the person who will be providing the Permit Issuance Recommendation. In addition to the BDC 402, Code Compliance Checklists
have been developed for various disciplines by the ICC and are available from the Business Unit Leader and may complement data provided on the BDC 402.

c. The OGS employee signing the Permit Issuance Recommendation must be a licensed RA, PE, or Certified CEO, and must not be the Designer of Record. This employee must review the totality of the work, confirm the demonstrated compliance outlined on the BDC 402, and shall certify that ample and correct code compliance documentation was provided by the Designer of Record.

2. ICC Code Opinions and Commentary
   a. The ICC publishes Code Commentary, Code Interpretations and other Code Handbooks. These publications do not include the New York State code enhancements. ICC Code Opinions and Interpretations are not the official opinions or interpretations of the NYS Department of State, or of the Authority Having Jurisdiction, and are guidance ONLY.

3. COMcheck Software available on DOS Website.

4. New York City Codes.
CHAPTER 9 – DESIGN GUIDES

9.10 FIRESTOPPING GUIDE

A. DESCRIPTION

1. To help prevent the rapid spread of fire through fire-rated construction within a building; certain walls (fire walls, fire partitions, fire barriers, smoke barriers), floors, floor / ceiling assemblies and ceiling membranes of roof/ceiling assemblies are required to meet a specific fire resistance rating – the period of time during which a building component has been tested to confine a fire or continue to perform a structural function or both. Through-penetration and joints created during the construction process require the installation of firestop systems in order to comply with the code-required five rating.

2. Firestop Classifications:
   
a. **Through penetration firestopping** is a specific construction consisting of all materials required to fill the opening around penetrating items such as cables, cable trays, conduits, ducts, pipes, steel beams, bar joists, etc. and their means of support through the building component to prevent the spread of fire.

b. **Construction joint firestopping** is an integral part of the fire resistive assembly that allows for movement in the construction joints such as floor/wall, wall/wall, wall/ceiling, floor/floor, etc.

c. **Perimeter fire containment systems** consist of fire rated floor system and curtain wall construction that requires fill material installed between the floor and the curtain wall to prevent the vertical spread of fire in a building.

d. **Membrane penetrations** are required when a penetration is made through one side of a rated assembly (floor / wall / ceiling).

B. SPECIFICATIONS

1. Each trade’s project manual needs to include a firestopping specification edited specifically for the work of the contract.
   
a. Section 078400 – Construction.

b. Section 078400 – Mechanical and Electrical.
C. DRAWINGS (C Contract, multi-trade projects)

1. The Construction Contract (Suffix “C”) contract drawings should provide Code Compliance Plans that indicate fire resistance rating designations for building components.
   a. Fire rated walls and partitions (including smoke partitions) should be indicated using graphic symbols.
   b. Fire rated floors and roof assemblies should be indicated by the use of notes.
   c. Code compliance plans allow the inspector, owner and Contractors bidding single and multi-contract projects to readily ascertain the extent of the fire rated building components that are penetrated by their building systems.

2. It is recommended that references to firestopping system details should be indicated generically as a “firestop system”.
   a. Listing the specific manufacturer’s firestop system type and number should be avoided.
   b. The Contractor’s firestopping subcontractor can provide specific manufacturer’s firestop system details and catalog numbers during the submittal phase. These details shall be tested to meet ASTM Standards by an Independent Third-Party or Accredited Scientific Lab such as the following:
      • Intertek Testing Services
      • Underwriters Laboratories
      • Factory Mutual
   c. Indicating a non-specific firestop system allows for maximum bidding flexibility and cost savings.

3. Firestop joint systems should be identified on the architectural building sections and details at junctures of wall-to-floor slab and curtain wall-to-floor slab and labeled only as firestop joint systems.

4. Provide top of wall firestopping/UL five rated soffit detailing for all fire rated or smoke partition walls running parallel with and within 2’-6” of structural shapes.

5. Provide firestopping detailing at hard-to-reach installation areas, including perimeter spandrel beams and curtain wall.
6. Complex firestopping projects may compel code compliance plans issued as G-series drawings to coordinate requirements for all contracts.

D. DRAWINGS (H, P, & E Contracts, multi-trade projects)

1. Drawings should include a general note to provide through-penetration firestopping at all penetrations through fire rated construction.
   a. The note should be keyed to the C Contract Code Compliance Plans.
   b. The OGS Project Manager should confirm that this plan is included in the Construction Contract.
   c. The firestopping general note should be adequate to cover all through penetration firestops. If the Designer indicates specific firestopping details, then they must indicate details for ALL conditions on the project, otherwise the Contractor could dispute work not shown.

2. Usually, no reference should be made to specific though penetration firestops by use of details. When a specific detail is shown for other reasons, indicate firestopping as “firestop system”. The specific manufacturer’s firestop system type does not have to be indicated. The Contractor’s firestopping subcontractor can provide specific manufacturer’s firestop system details and catalog numbers during the submittal phase. These details shall be tested to meet ASTM Standards by an Independent Third-Party or Accredited Scientific Lab such as the following:
   - Intertek Testing Services
   - Underwriters Laboratories
   - Factory Mutual

E. PROJECT TOOLS

1. The Firestop Schedule, pre-installation conference, field-constructed sample installations, fire stopping company field advisor, identification labels and wall stenciling are all part of a total package that provides the Designer, Contractor and field inspector with the tools to monitor proper firestop application as it relates to penetration type and building component fire rated construction. Sufficient site visits shall be taken to identify issues that affect the proposed recommendations for the project.
2. **Firestop Schedule**: The Firestop Schedule is included in the Contract Manual Appendix. This schedule should be completed as part of the required submittal package to be completed by all prime Contractors.

3. **Pre-Installation Conference**: This meeting should be a joint meeting attended by the Director’s Representative and all prime Contractors, respective firestopping sub-contractors and firestopping company field advisor to review project requirements. It is recommended that the Designers attend the Pre-Installation Conference. Coordinate firestopping systems with prime contractors in congested areas such as at fire rated walls above a finished corridor ceiling.

4. **Field-Constructed Sample Installations**: Field installed mock-ups should be required for each type of firestop system utilized on the project to establish standard of quality and performance.
   a. Inspectors should be present to observe the installation according to the submittal requirements for wall or floor construction type and thickness, hourly fire rating, penetrating item including size; annular space and firestop fill materials. Do not deviate from the firestop system details provided.

5. **Quality Assurance**:  
   Typical Installer Qualifications require a minimum of 3 years of firestopping installation experience. Specify a Firestopping Specialty Contractor who is certified and licensed for larger or more complex projects.

6. **Identification Labels**: Labeling of firestopping systems provides the inspector and owner specific information relating to the firestop including company name, product/catalog number, F rating, L rating and T rating (if available). These labels provide information to the building owner for rehabilitation projects.

7. **Wall Stenciling**: On larger size projects stencil walls and partitions above the ceiling to indicate the fire-ratings of the walls and partitions shown on the Code Compliance Plans prior to the installation of firestopping. Wall stenciling should be part of the C Contractor work either under the firestopping or gypsum board system specification sections. The stenciling also provides information to the building owner for rehabilitation projects.

8. **Destructive Testing**: Include destructive testing sampling (1% of each type) in the project specifications. Performing destructive testing to verify that the firestop installation meets the
mock-up standard and specific requirements for the listed assembly should ensure better quality installations.

F. SINGLE-TRADE PROJECTS (H, P, & E)

1. Single-trade projects should include drawings indicating fire rated construction. For renovation projects the Designer needs to ascertain locations and hourly ratings of existing fire rated building components.

G. CODE REQUIREMENTS

1. See the Building Code of New York State, Chapter 7.

H. INSPECTION

1. The selection of a qualified firestop system should be based on four documents.
   a. The listing directory’s drawing and explanation of the tested system.
   b. The manufacturer’s drawing of the tested firestop system.
   c. The manufacturer’s installation instructions for the firestop system.
   d. The manufacturer’s product data sheet for the firestop material(s).

2. The Inspection Checklist:
   a. Is the hourly fire rating of the firestop system equal or greater than the firestop rating of the barrier in which the firestop is installed?
   b. Is the F rating of the firestop system equal or greater than the F rating of the barrier in which the firestop is installed?
   c. Is the L rating of the firestop system equal or greater than the L rating of the barrier in which the firestop is installed?
   d. Is the T rating of the firestop system capable of meeting specification requirements?
   e. Does the barrier material type (concrete, gypsum board, cmu, etc) of the firestop system match the type of the material in the field?
   f. Is the thickness of the barrier (wall, floor, ceiling) of the firestop system less than or equal to the thickness of the barrier in the field?
   g. Is the opening size within the opening size limits stated on the tested system detail?
   h. Does the opening surface (sleeved, painted, fireproofed, etc.) in the field match the allowable surface of the firestop system?
   i. Is the opening type (drilled, sleeved, saw cut, etc.) within the limits of the system detail?
   j. Does the opening shape (square, round, rectangular) meet the shape requirements of the system design?
   k. Do field obstructions (building systems, building components) prevent the required mineral wool or other damming material (backing), and firestop product component thickness specified by the system from being installed?
1. If backing material is required, such as mineral wool or ceramic fiber, does the material meet the minimum **specified density** of the tested firestop system?

m. If required, does the mineral wool need to be installed to a specific **amount of compression**? What is the percentage of compression?

n. If required, does the mineral wool need to be installed in a **specific layer configuration**, such as two parallel layers with the opening covered by one perpendicular layer? Do the fibers need to be oriented a certain way in the firestop system?

o. If an opening is a single penetrant, is the **minimum annular space** within the limit stated on the tested system detail?

p. If an opening is a single penetrant, is the **maximum annular space** within the limit stated on the tested system detail?

q. If an opening has multiple penetrants, is the **spacing between penetrants** within the limits stated on the tested system detail?

r. Are the **penetrant sizes** (example ½” diameter cable, 6” diameter pipe or 4”x12” cable tray) within the penetrant size limits stated on the tested system detail?

s. Are the **penetrant material types** (example plastic pipe, jacketed cable, copper pipe, or aluminum cable tray) within the penetrant type limits stated on the tested system detail?

t. If a penetrant is insulated, is the **insulation type and thickness** allowed by the tested system detail?

u. Are the **joint types** (floor to floor, head of wall, wall to wall, perimeter within the joint type limits stated on the tested system detail?)

v. If required, does the selected firestop system accommodate **movement**?

w. Is the penetrant part of a closed system, such as a liquid filled supply piping, or is the penetrant part of an open system such as a drain-waste-vent piping? Is the selected firestop system qualified to firestop an **open or closed pipe system**?

x. Is the selected firestop system **exposed to water**?

y. Is the firestop system **exposed to traffic** or have a **load bearing** requirement?

z. Will it be necessary to **re-enter/retrofit** the selected firestop system?

aa. In a **perimeter fire barrier containment** condition, are there vertical as well as horizontal protection requirements that are part of the joint system.

3. **Installation Concerns:**

a. Sheetrock Contractor left too large an opening around penetration.

b. Other Contractors utilizing the same opening (ex. metal pipe, duct and cabling) creates a responsibility conflict.

c. No sleeve when the assembly requires one.

d. Utilizing existing holes on renovation projects.

e. Utilizing a hammer and not a hole saw.

f. Multiple cables in sleeves exceed quantity or percentage allowed by assembly (typically 25% to 60% maximum cable fill is allowed).

g. Shaft opening in precast plank and casting holes in planks are open to other penetrations that are firestopped on one side only.

h. Ducts with dampered assemblies need to be to follow manufacturer’s guidelines for proper installation.

i. Electric box criteria for membrane penetrations not adhered by the Contractor.

j. Voice/data Sub Contractor (most often owner furnished) runs cable through sleeves and does not properly firestop the annular space.
k. Firestopping system not continuous at hard to reach installation areas at head of partition walls running side by side to structural shapes. Access is difficult if not impossible at top of wall on adjacent side to properly firestop. Need to box out structural shape with a U.L. Fire Rated Assembly and firestop deck flutes.
l. Firestopping not continuous at hard to reach installation areas at perimeter spandrel beams and curtain wall.
m. Water resistant firestopping missing at floors that can potentially get wet such as janitor closets.
n. Joint compound used to firestop penetrations through gypsum partitions.
o. Firestopping not continuous and installed on top of pipe riser clamps.
p. Contractor mortared in insulated piping.
q. Membrane penetrations missing firestopping at rated boxes such as fire extinguisher cabinets, fire hose cabinets, fire phones, etc.

4. Common Problems
a. Deviation from approved assembly.
b. Lack of firestop submittals for each specific condition.
c. Firestop Schedule did not identify all the firestop systems.
d. Lack of mock-ups.
e. Lack of a Pre-installation Conference.
f. Poor inspection procedures.
g. Covering or enclosing areas prior to firestopping and/or inspection, especially at sheetrock walls and finished ceilings.
h. Coordination with and between trades.
i. Multiple firestop manufacturer’s products and assemblies used by the same Contractor.

5. Where no testing agency listed firestop design exists (that meet the requirements of a specific project condition), a manufacturer’s written recommendation Engineering Judgment of a design meeting the condition may be acceptable.
a. When may Engineering Judgments be acceptable?
   • When tested systems do NOT exist.
   • When modifying the application is unrealistic.
   • When existing test data supports the interpolation.

b. Sources of Engineering Judgments:
   • Manufacturer
   • Third Party
   • Fire Protection Engineer

CHAPTER 9 – DESIGN GUIDES

9.11 CIVIL AND SITE GUIDE
A. GENERAL

1. The purpose of the Civil and Site Guide is to describe OGS standards for the design and implementation of site, civil, and environmental engineering projects.

2. The Project Manager (PM) or Consultant/Designer shall obtain and become familiar with the clients’ project request and the project scope of work. Identify all required trade assists.

3. The scope of work shall be verified and clarified as needed with an initial site visit with the client and project team, as required.

4. Comply with all applicable NYS and industry codes and standards. Identify codes and standards early in the design process.

B. REFERENCES

1. Water and Wastewater Treatment and Conveyance Systems: Any improvements made to existing water treatment facilities and conveyance systems including any new facilities shall comply with the latest version of the following standards:
   a. Drinking Water Treatment and Distribution:
      i) Subpart 5-1 New York State Department of Health (NYSDOH) Public Water Systems
      ii) Ten State Standards - Recommended Standards for Water Works
      iii) National Sanitation Foundation (NSF) Standards
      iv) American Water Works Association (AWWA) Standards
      v) Local DOH and Municipality Standards
   b. Wastewater Treatment and Conveyance:
      ii) New York State Department of Environmental Conservation (NYSDEC) - Standards for Waste Treatment Works.
      iii) Ten State Standards - Standards for Wastewater Treatment Facilities.
      v) Local DOH and Municipality Standards
2. **Hazardous Waste**: Environmental cleanups are regulated by Federal, State and in some cases local jurisdictions. All environmental cleanups managed by OGS are expected to comply with all applicable environmental regulations including those related to OSHA and worker safety.

3. **Hazardous Materials**: Identify suspect hazardous materials within the project site and/or building to be demolished. See Chapter 9.8 Hazardous Material Guide for information on abatement processes for various hazardous materials. For building demolition projects also see Chapter 9.13 Demolition of Structures Guide.

4. **Accessibility and Transportation Related Items**: All site work shall provide ample and appropriate access in accordance with ADA Guidelines, NYS Existing Building Code and NYS Building Code. Coordinate with NYSDOT or local municipality for curb cut permits, NYCDOT for sidewalk permits, etc. Provide required pavement markings and road signage as recommended by the Manual of Uniform Traffic Control Devices (MUTCD). See Chapter 9.9 Code Compliance information.

5. **Fire Apparatus Access**: For new buildings, campuses or site alterations to existing roads/buildings, ensure compliance with the NYS Fire Code for fire apparatus access. The PM and Consultant/Designer shall contact local fire department having jurisdiction of the project site to notify the department of the project scope and determine the current emergency operating procedures and available apparatus. The project design shall comply with current emergency operating procedures and ensure access to all buildings as per code.

6. **Agency Specific Standards and Requirements**: State agencies have developed their own standards for infrastructure within their facilities. Project Managers and Consultant/Designers need to familiarize themselves with those standards and produce work that adhere and conform to those standards. See Chapter 9.7 Agency Specific Standards and Requirements for the following agencies: DOCCS, DOH, DOT, DMNA, OCFS, OGS, OMH, SED, and SUNY.

7. **Storm Water Pollution Prevention Plans (SWPPP)**: SWPPPs are to be prepared as required by the latest NYSDEC Storm Water General Permit for Construction Activity. See Chapter 9.11.2 for information.

8. **Topographic Surveys**: OGS will provide the latest record information on file. The PM or Consultant/Designer shall determine if additional or more current information is required. If survey is required, see Chapter 9.11.3 for standards.

9. **Wetland Delineations**: All wetland research and delineations shall be conducted in accordance with applicable NYSDEC and Federal USACE guidelines.
10. **Environmental Assessments/SEQRA:** All project require an environmental assessment and SEQRA determination. The OGS Project Manager shall contact the Environmental Permitting Unit (EPU) early in the design process to discuss the project scope. The EPU will determine the required environmental assessments and permits. The EPU and PM will determine if the work is to be completed by the consultant or in-house and update DCNet Environmental Permits information accordingly. See Chapter 9.12 Environmental Assessment and Permitting Guide for information.

11. **Building Demolition:** The PM or Consultant/Designer shall check for record information and request a building demolition survey early in the design process. The bid documents shall clearly identify the work including abatement, utility work, removals including the foundation and site restoration. See Chapter 9.13 Demolition of Structures Guide.

12. **Geotechnical Data:** The PM or Consultant/Designer shall check with OGS Geotechnical Engineer for record geotechnical information. See Chapter 9.15 Geotechnical Guide.

**C. RECORD INFORMATION**

1. **Paper and Electronic Survey Information:** OGS maintains a significant library of survey information for numerous state agencies. OGS Project Managers and consultants are strongly encouraged to search these inventories before they order new surveys. Record survey information includes: maps with property lines, easements, pertinent political, geographic, regulatory boundaries, topographic data, subsurface and overhead utilities, and pertinent natural and manmade features that either lend to or inhibit site access. The record information can be found at V:\DesignAndConstr\Common\FacilityInfo and V:\DesignAndConstr\Common\PlanFile. PMs shall save updated information to the appropriate facility info folder.

2. **As-built Drawings:**
   a. As-built drawings may exist for a specific facility, building, or system within a building. Project Managers and consultants should try to obtain any as-built drawings related to scope during the design development phase of a project.
   b. As a project is constructed – contract documents are to require contractors to prepare and turn over as-built drawings to OGS. These documents can become an invaluable resource as it can be very difficult to locate buried or hidden infrastructure after construction is completed.

3. **Investigation of Existing Conditions:**
   a. Existing conditions can be assessed and investigated using many different techniques. The most common means of infrastructure assessment involves:
i) Site Surveys  
ii) Dye Tests  
iii) Smoke Tests  
iv) Still and Video Pictures of Underground Lines/CCTV  
v) Underground Utility Location  
vi) Hydrant Flow Tests and Hydrant Line Flushing  
b. When investigations have the potential of disrupting any programs of a client agency, all work will be pre-approved by the OGS Project Manager, the Division of Construction Engineer-In-Charge, and the Client Agency Representative.

D. BUILDING CODE - APPLIED TO SITE AND ENVIRONMENTAL PROJECTS

1. While it may be obvious that the New York State Building Code regulates all construction as it applies to buildings, it is less obvious when construction permits are required for site and environmental projects. The intent of the following is to help the reader better understand which types of site and environmental projects are code regulated and therefore require a construction permit.

<table>
<thead>
<tr>
<th>Types of Project</th>
<th>Construction Permit Required</th>
<th>When Required</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paving Parking Lots</td>
<td>Possibly</td>
<td>A Construction Permit is required if the project involved lighting or other infrastructure that affected a Building system.</td>
<td></td>
</tr>
</tbody>
</table>
| New Pavement around buildings | Possibly                     | If you are replacing an entire “system” the Building Code has specific language that regulates those specific type projects. | • Paving Projects should take into account Building Accessibility.  
• Paving Projects should consider fire access to and around buildings. |
<p>| Roads                         | No                           | NA                                                | • Only code regulated if work is related to a fire access road.             |</p>
<table>
<thead>
<tr>
<th>Types of Project</th>
<th>Construction Permit Required</th>
<th>When Required</th>
<th>Discussion</th>
</tr>
</thead>
</table>
| Sanitary Sewer Work                      | In Some Cases.               | A Construction Permit would be required if the project affected a nearby or adjacent Building. | • Work will be code regulated if scope includes sewer laterals that tie directly into a Buildings Plumbing System.  
• Scope that includes Oil Water Separators and Greece Traps typically require construction permits. |
| Drinking Water Distribution System Work  | Possibly (Projects evaluated on a case by case basis). | A Construction Permit would be required if the project affected a nearby or adjacent Building. | • New Work typically requires a construction permit.  
• Repair work does not typically require a construction permit.  
• The requirement for whether or not a project requires a construction permit often depends on the proximity of the work to a building or buildings, whether the work affects the buildings fire systems.  
• NYSDOH review and approval of drawings and specifications are required. |
<p>| Water Tanks                              |                              |                                                                                |                                                                                                  |
| New Tank Construction                    | Yes                          | As the design and construction of new water tanks typically impact fire and building systems – these projects require Construction Permits. |                                                                                                  |
| Tank Rehabilitations                     | Possibly                    | As tank renovations do not typically affect building systems these projects have | Many circumstances may exist during Tank rehabilitation projects that                                                                 |
|                                          |                              |                                                                                |                                                                                                |</p>
<table>
<thead>
<tr>
<th>Types of Project</th>
<th>Construction Permit Required</th>
<th>When Required</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retaining Walls</td>
<td>Possibly</td>
<td>Construction Permits for these types of projects would only be required if the retaining wall is greater than 4’ high.</td>
<td>Retaining walls qualify as utility structures. Whether a retaining wall project should have a construction permit shall be made on a case by case basis.</td>
</tr>
<tr>
<td>Fence systems</td>
<td>Rarely</td>
<td>In some cases – Fence systems may require a Construction Permit as they may effect Building Egress and Fire Access.</td>
<td></td>
</tr>
<tr>
<td>Demolition Work</td>
<td>Yes</td>
<td>All demolition work Requires Construction Permits.</td>
<td>Work involves typically unoccupied structures. Similarly – staff, the public, or workers rarely have to enter these structures.</td>
</tr>
<tr>
<td>New Utility Structures</td>
<td>Maybe</td>
<td>Depends on type.</td>
<td></td>
</tr>
<tr>
<td>Open Structures [Gazebos, Pavilions, Carports, and Gas Station Canopies]</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 9 – DESIGN GUIDES

9.12 ENVIRONMENTAL ASSESSMENT & PERMITTING GUIDE

A. GENERAL INFORMATION

1. The primary objective of this guide is to promote an environmentally sensitive design ethic within OGS Design & Construction and ensure that OGS aids our Clients in meeting their obligations under State and Federal environmental regulations and laws. This objective is accomplished by ensuring that steps are taken during the planning, design and construction process to avoid and minimize impacts of construction projects and operations on the environment and adjacent communities.

2. The OGS Environmental Permitting Unit (EPU) serves as a resource to identify when specific environmental reviews and regulatory permits are required for a project and incorporate the permit requirements into the design documents.

B. PROCEDURES FOR NEW PROJECTS

1. All environmental reviews and regulatory permitting services shall be coordinated through the Project Manager (PM). The PM is responsible for consulting with the EPU prior to completing the Project Management Plan to determine if any Environmental Assessments and/or Regulatory Permits will be required for the project.

C. PROCESSING OF ENVIRONMENTAL ASSESSMENTS AND PERMITS

The preparation of environmental assessments and processing required permits can be accomplished as follows:

1. The EPU works directly with the State and Federal Regulatory Agencies.

2. The EPU coordinates a work assignment through one of the OGS term consultants.
3. Architecture/Engineering or Engineering/Architecture Consultants shall provide all applicable environmental reviews/assessments, requests for regulatory permits and supportive documentation as part of their contracted services. The PM will coordinate services with the EPU to determine what environmental reviews and/or regulatory permits will be necessary to ensure they are included in the project scope. EPU can assist project managers with the review of environmental studies, assessments and permit applications received from consultants.

4. Construction Permits: Contractor’s are required to obtain their own permits for elective construction means and methods pursued during the construction phase.

D. RECORD INFORMATION AND DOCUMENTATION

1. The EPU maintains permanent files of all SEQR Documents and Regulatory Permits/Applications for each client facility.

2. Regardless of the methods used to obtain Environmental Assessments and/or Regulatory Permits, a copy of all information shall be provided to the EPU for inclusion in the permanent facility files.

3. It is the Project Managers responsibility to ensure the EPU receives copies of environmental documents for each project performed by A/E or E/A Consultants.
CHAPTER 9 – DESIGN GUIDES

9.15 GEOTECHNICAL GUIDE

a) A. PROCEDURES FOR NEW PROJECTS

1. ALL geotechnical services shall be coordinated through the PM.

2. Geotechnical Engineering can be performed by the following methods:
   a. OGS Geotechnical Section performs work (selective projects, troubleshooting).
   b. OGS Geotechnical Section coordinates work assignment through use of one of the OGS Geotechnical Term Consultants (provides clear understanding of OGS’s expectations).
   c. A/E or E/A Consultant Terms or Stand-Alone Contracts may have Geotechnical Engineers as part of their team to perform services. Coordinate services required with the PM, who shall consult with the OGS D&C Geotechnical Section for available historical information in the OGS D&C Files.

3. The Designer or the PM is responsible for getting a Geotechnical Engineer involved in the project.
   a. This involvement shall occur during the project’s initial development. Under the new building code the Structural Engineer cannot provide structural recommendations prior to identification of the seismic site class by the Geotechnical Engineer. This restriction applies to all new buildings or structures, additions to existing building, enclosures for utility services, and even modifications within existing building envelopes for some situations.
   b. A Subsurface Investigation must be performed. The scope of this investigation shall be determined by the Geotechnical Engineer and, at a minimum, shall include the following:
      1) Research of Existing/Historical Data: OGS D&C Geotechnical Section has existing soil information for all agencies (correctional, state hospitals, DOT facilities, etc). Through review of this information, required costs and drilling methods can be better defined.
      2) If drilling is required:
         a) At least one (1) test boring or probe shall extend to glacial till or bedrock.
         b) If a thick deposit of clay and/or silt underlies the site, OGS D&C recommends that a seismic cone be considered.
c) If conventional methods are employed, an automatic hammer is required by OGS D&C for the advancement of the split spoon.

d) A Geotechnical Engineer or Geologist shall monitor all work, record the conditions encountered in the field and visually classify all recovered soil samples.

3) Preliminary Report: A letter report shall be prepared describing the subsurface conditions encountered. This letter report shall be prepared by the Geotechnical Engineer and, at a minimum, shall include the following:

a) Brief description of the site and its overall condition.

b) The work performed and the methods utilized for the investigation (type of rig, laboratory tests performed, etc).

c) A brief description of the subsurface conditions, including the depth to groundwater, Seismic Site Class, and the preparation of final subsurface exploration logs and Test Boring Location Plan.

d) A brief description of any red flags that should be considered regarding the site location. Example – high water table or very soft soils at deeper depths indicate a basement level should not be considered.

e) The results of any laboratory tests performed.

f) A site plan showing the locations of all test borings, test pits, cones, and any other tests performed as part of the subsurface investigation.

4) Final Geotechnical Report (if required): A Geotechnical Engineering Report shall be prepared by the Geotechnical Engineer.

a) This report cannot be finalized until the following information is provided by the Architect and Structural Engineer:

   (1) Building’s footprint and finished floor elevation

   (2) Building type and framing methods

   (3) Height and location of retaining walls, if any

   (4) Maximum column and/or wall loads

b) Various intermediate stages in this process will require the interaction of the Geotechnical Engineer and the Structural Engineer or Architect in order to determine the direction the design is to take.

c) The Geotechnical Engineering Report shall, at a minimum, include the following:

   (1) All items included in the above-mentioned letter report

   (2) Foundation recommendations – Type of foundation, all design parameters, capacities, etc. required for its design
(3) All parameters required for the design of below grade/basement walls and/or retaining walls

(4) Pavement and floor slab design

(5) Waterproofing, damp proofing, and underdrain systems if required

(6) Construction recommendations as well as the recommended sequence of construction

d) Review of the Geotechnical Engineering Report with Division of Construction’s EIC or Construction Manager prior to the start of construction.

5) Record Information: Regardless of the methods used to obtain the geotechnical information, a copy of all soil related information (reports, subsurface logs, cone profiles, etc.) shall be provided to the OGS D&C Geotechnical Section for inclusion in the permanent Geotechnical files.
CHAPTER 9 – DESIGN GUIDES

9.17.1 ROOFING GUIDE

A. GENERAL

1. The OGS Roofing Quality Improvement Team (QIT) is available for assistance on roofing projects. An in-house roofing Subject Matter Expert (SME) should be contacted for assistance and coordination.

2. References:
   a. Very good and balanced information can be found at the following independent websites:
      1) NRCA (National Roofing Contractors Association) http://www.nrca.net
      2) RSI (Roofing Specifier Institute) http://www.rci-online.org
      3) SPRI (Single Ply Roofing Industry) www.spri.org
   b. Manufacturer’s representatives and their respective web sites are a resource for technical information:
      1) Carlisle: www.carlisle-syntec.com
      2) Firestone: www.firestonebpco.com
      3) GenFlex: www.genflex.com
      4) Johns Manville: www.jm.com
      5) MBCI: www.mbci.com
      6) Sarnafil: www.sarnafil.com
      7) Siplast: www.siplast.com
      8) Tremco: www.tremcoroofing.com

3. Types of Roofing:
   a. Roofs generally fall into 2 categories; low-slope (slopes at or less than 3:12) and steep-slope (slopes greater than 3:12).
      1) Steep Slope roofing materials are generally asphalt shingles, metal roof panels, clay & concrete tile, wood shakes & shingles, slate and synthetic.
      2) Low Slope roofing materials are generally built-up roofing, modified bitumen, metal panel systems, single ply membranes (such as EPDM, PVC, TPO), spray polyurethane foam (SPF) and liquid-applied systems.

4. Roof System:
   a. The roof system is a system in the true sense of the term:
      1) Decks: The two most common decks in state-owned buildings are Concrete Decks and Steel Decks. Wood and Gypsum decks are also used, but to a lesser degree. Generally we adhere insulation and membranes to concrete decks, and we either adhere or mechanically fasten insulation to steel decks. It is important to consider U.L. Wind uplift requirements such as the fastener spacing of insulation on steel decks. Fire resistance ratings must be considered, especially on steel decks, and materials used must be tested in conjunction with the type of structural roof deck and roof slope applicable to the project and have achieved an Underwriters Laboratories Class A external fire resistance rating.
2) **Vapor Retarders**: Vapor Retarders can be classified into 2 categories: Bituminous vapor retarder membranes and non-bituminous vapor retarder membranes. Bituminous vapor retarders are the most commonly used type of vapor retarder. The most common is 2-ply sheets of type IV glass-fiber ply sheets applied in hot steep asphalt. Non-bituminous vapor retarders are plastic sheets or kraft paper or laminates, but these are rarely used.

3) **Insulation**: The predominately used insulation in roofing is Isocyanurate rigid insulation (Iso). This is because it has a relatively stable LTTR R-value of 6 per inch – about the highest for any common rigid insulation, has good compressive strength and is easy to use. Iso also has good dimensional stability, good attachment capability, and is compatible with nearly all roofing systems. Iso can be adhesively or mechanically attached depending on the system, conditions and deck type. Other insulation types used to a lesser degree are Expanded Polystyrene insulation board, with an LTTR of around 4.25 per inch and Extruded Polystyrene insulation board with a similar LTTR. Insulation should be installed in at least 2 layers (staggered) to avoid thermal loss through the joints of the boards. Tapered Insulation is utilized to accomplish slope for positive drainage when required.

4) **Coverboard**: Although some manufacturers don’t require coverboards, it is the office standard to use a coverboard over all insulations. It is also recommended by the National Roofing Contractor’s Association (NRCA) to use a coverboard over insulations. Materials most often used are ¼” or ½” glass mat-faced gypsum board panels (the office recommendation) and to a lesser degree ½” or ¾” wood fiberboard or glass fibrous boards.

5) **Membrane**: The choice of membranes is dictated after a number of criteria have been considered, including:
   a) client request
   b) type of roof deck and construction
   c) slope and drainage requirements
   d) anticipated rooftop traffic and impact resistance
   e) building height, configuration and location
   f) compatibility with existing materials
   g) odors, noise, dust which may impact building occupants or hvac systems.

**B. SUSTAINABLE ROOFING GUIDELINES (also refer to Chapter 9.17.1.1)**

1. The principles of green design should be incorporated when possible. These measures may be based on LEED credits, such as reduction of heat island effect, optimizing energy performance, using recycled content and/or regional products, and recycling construction waste. Sustainable roofs fall under two categories: “cool” (or light-colored) roofs and vegetative roofs. Both have the ability to reduce energy consumption in buildings as well as reduce the urban heat island effect.

2. **Cool Roofs**: The benefits associated with cool roofs include reduced building heat gain and annual air-conditioning energy use; extended service life of roofs by reflecting ultraviolet and infrared radiation and modulating temperature differentials;
improved thermal comfort when there is no air-conditioning; and reduced air pollution and greenhouse gas emissions.

a. **Existing Roofs:** Since reflectance and emissivity are only surface properties, almost any existing roof type can be made cool by making the surface white or light-colored. To retrofit an existing roof to a cool system, ensure that the coating or membrane is compatible with the roofing and match its mechanical properties by checking with the manufacturer.

b. **New Roofs:**
   1) Single-Ply Membrane Roofing is made of synthetic waterproof material with the color integral to the sheet. White and other colors are available to meet desirable SRI (Solar reflectance index) criteria.
   2) Metal Roofing: Uncoated metal roofing typically has high reflectance and low emittance. For a new roof select a color to meet the EPA Energy Star minimum reflectance values. Metal roofing with recycled content is readily available and preferable.
   3) White or reflective aggregate or granules on modified bitumen: Check SRI to meet LEED requirements for reflectance.

3. **Vegetative Roofs:** The two main types of vegetative roofs are extensive and intensive. The benefits associated with vegetative roofs include:
   a) Control of rainfall runoff.
   b) Moderation of heat and cold transfer into a building.
   c) Improvement of air quality and combating heat island effect.
   d) Extending life of roof by protection of membrane.
   e) Longer life span than traditional roofs.
   f) Sound absorption.

4. **Recycling Old Roofs:** It is possible to recycle insulation, ballast, metal trim and other roofing components within New York State. A common use for recycled and scrap asphalt shingles is in hot-mix asphalt pavement. Empire State Development has a recycling markets database for locating recyclers by county, zip code or state. The database can be found at this website: http://appcenter1.esd.ny.gov/IESDRecyclingMarkets/

**C. SPECIFICATIONS**

1. **Sections:** Roofing master specification sections can be found in **Division 7 – Thermal and Moisture Protection.** The following sections are the more commonly used sections and are found in DesignAndConstr/Common/MasterSpec04, or on the OGS website, Design and Construction/Consultant/Master Specifications.
   a. 073113 Asphalt Shingle Roof System
   b. 074113 Preformed Metal Roofing System
   c. 075100 Built-Up Bituminous Roofing System
   d. 075216 SBS Modified Bitumen Roofing System
   e. 075323 Adhered EPDM Roofing System
   f. 075417 Adhered PVC Roofing System
   g. 076000 Flashing and Trim

2. **Related Sections:** Other sections commonly used in conjunction with a roof project include:
   a. 028213 Asbestos Abatement
b. 061053 Wood Nailers and Blocking
c. 079200 Joint Sealers
d. 040121 Masonry Restoration (used when walls, copings and parapets may contribute to leaks and are in need of repair).

3. In many cases, the yellow highlighted text will advise as to what type of system or what manufacturers etc. can or should be used. Remember, when finished editing a section; DELETE all yellow highlighted text.

D. DRAWINGS

1. Roofing projects need to use the standard drawing layouts that are found in Chapter 5 of the OGS Design Procedures Manual.

2. Drawing titles should reflect the roofing system being used – for instance:
   a. Provide Adhered EPDM Roof System.
   b. Provide SBS Modified Bitumen Roof System.
   c. Provide Asphalt Shingle Roof.

3. Drawings generally include:
   b. Notes: Notes explaining the removal of the existing roof system (be aware of possible asbestos containing materials in existing built-up roofs, flashings and asphalt vapor barriers). Notes should also state special conditions and a description of the roofing system being used. Be specific to thickness of insulation and type, coverboards, membranes, flashings, etc.
   c. Details: AutoCad details can be found in: DesignAndContruc/Common/CaddDetails/07-Thermal. Under this section, details are broken into roofing type, such as EPDM, PVC, Built-Up, Shingle, Metal Roofing and Modified Bitumen Roofing.
      1) Edit details to accurately describe conditions found in your project.
   d. It is very important to alert the contractor to special conditions such as:
      1) Height of building (especially high rises).
      2) Number of roof levels.
      3) Areas of asbestos containing material.
      4) Access to and around the building.
      5) Penetrations.
   e. It is also a good idea to include digital photographs of existing conditions to reveal especially difficult or unique conditions.

E. DESIGN PROCEDURE

1. Information:
   a. A large number of OGS D&C projects are replacement of existing roofs. Exact preferences may vary between design business units, but below is a typical guide.
   b. After a request for a project is received, retrieve all pertinent roofing and structural drawings from OGS Plan File resources. It is important to confirm if there is slope built into the deck or if tapered insulation will be required.
2. Site Visit:
   a. Visit the site to ascertain existing conditions. Use the existing drawings to confirm or update current conditions. OGS form BDC 45, Roofing Design Checklist should be used to document existing conditions. This form is found in DCNet/Forms/Division of Design Forms and on the OGS website, Design and Construction/Consultant/Consultant Contract Forms.
   b. If a roof appears to be in “good” condition, or is not that old (roughly less than 8-10 years for single plies and 12-15 years for built-up roofs; an infrared survey could be requested to determine if water penetrated the roof system and if the insulation is wet. Findings can dictate repair or replacement as options.
   c. On metal deck buildings, check the condition of the decking – especially if the roof has been identified as previously leaking.
   d. Check the general appearance of the roof. Look for signs of ponding, poor attachment, vegetation, thinning of the single ply membrane, bare spots on aggregate surface roofs, etc.
   e. Pay attention to the water tightness of copings, flashings, windows, staining of the masonry or interior surfaces, rusting, cracks, movement signs in the masonry (parapets, etc.).
   f. When replacing a roof, the existing roof system is generally removed down to the vapor retarder on concrete decks. Test for asbestos in the vapor retarder and other suspect materials of the roof system. On steel and wood decks the existing vapor retarder is removed and replaced with an underlayment board. After the vapor barrier is repaired or replaced, insulation, coverboard, and a new membrane is added to become a system as stated previously. In rare circumstances, some roofs can be repaired or coated to provide a longer life span. Metal roofs are one type of roof that can be prepared and coated with an elastomeric coating with good results. The coatings come in many colors, or to match the existing (i.e. – patina green for old copper roofs) and are found in specification section 075601. Built-up roofs can be repaired by cutting out wet insulation, providing membrane and flood coating – this procedure is found in specification section 070160. As stated above, we generally replace not repair roofs, but consider all options.
   g. For roofing projects on occupied buildings, consider the impact of re-roofing activities and air intakes on building occupants regarding odors, fumes, noise and dust. Also consider the impact of fumes from exhaust fans on roofing contractors. Discuss this in advance with the client agency and the OGS D&C Engineer-in-Charge.
   h. Insulation requirements of current energy codes usually raise the height of the roof. It is important to determine if this will have an impact on existing flashings (usually required to be a minimum 8” above the roof) and existing weeps.
   i. A lightning protection system may exist and should be evaluated as part of any proposed large-scale roof replacement or repair.

3. Codes & Standards:
   a. NYS Uniform Fire Prevention and Building Code (the “Uniform Code”) with Uniform Code Supplement Requirements:
      1) Structural Engineers must be involved early in the design process to determine structural requirements. All new buildings and all existing buildings where the loads might be different (such as adding more insulation) must have structural evaluations.
      2) Designers must comply with the applicable sections of the current code. Roof drawings need to include the following Structural Design Data Table.
### Structural Design Data

<table>
<thead>
<tr>
<th>Load Component</th>
<th>Value</th>
<th>Uniform Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Category</td>
<td>X</td>
<td>TABLE 1604.5</td>
</tr>
<tr>
<td>Roof Dead Loads</td>
<td>XX psf; XX psf; XX psf; XX psf; XX psf</td>
<td>1606.2; 1603.1.8</td>
</tr>
<tr>
<td>Roof Live Load</td>
<td>XX psf</td>
<td>TABLE 1607.1</td>
</tr>
<tr>
<td>Wind Load</td>
<td>XX psf</td>
<td>3.18; 3.19 (Uniform Code Supplement)</td>
</tr>
<tr>
<td>Snow Load</td>
<td>XX psf</td>
<td>ASCE 7</td>
</tr>
<tr>
<td>Seismic Load</td>
<td>XX psf</td>
<td>ASCE 7</td>
</tr>
</tbody>
</table>

This data is required by code, and must be coordinated with the structural engineer. This form should be placed on the roof plan drawing. Please note that code references should be omitted from the table when placed on drawings. The above table does not include all required structural design data for full building design (i.e. ...
foundations, floors, etc.), only roof design. See current Uniform Code for structural design data requirements for full building design.

** The site class is typically determined by the geotechnical engineer and stated in the site's geotechnical report.

b. NYS Energy Conservation Construction Code requirements.  
   1) To determine the appropriate R-Value for your project: Start with the Energy Code to determine County and Zone. For commercial construction use the tables in Chapter 5 to identify the R-Value.

c. American Society of Civil Engineers – Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE 7)  
   1) Structural Engineers should reference this standard for loads, load combinations and related criteria along with known design strengths, limits, and properties of materials.

d. Structural Requirements:  
   1) **For new construction:** follow Structural requirements as outlined in the applicable chapters of the Uniform Code.  
   2) **For reroofing projects:** follow Structural requirements of the applicable Existing Building Code.

e. 1108 Secondary (Emergency) Roof Drains (New Construction):

1108.1 **Secondary drainage required.** Secondary (emergency) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason.

1108.2 **Separate systems required.** Secondary roof drain systems shall have the end point of discharge separate from the primary system. Discharge shall be above grade, in a location which would normally be observed by the building occupants or maintenance personnel.

1108.3 **Sizing of secondary drains.** Secondary (emergency) roof drain systems shall be sized in accordance with Section 1106 based on the rainfall rate for which the primary system is sized in Tables 1106.2, 1106.3 and 1106.6 by two. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.7. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.

f. Wind/Snow Loading Requirements: See structural engineer for evaluation.

g. Coordinate with OGS D&C Team Leader for OGS D&C Code Bulletins.
CHAPTER 9 – DESIGN GUIDES

9.17.2 ELEVATOR GUIDE

A. GENERAL

1. The Elevator Group is available for assistance on elevator projects, code questions and inspection requirements. The purpose of this guide is to convey a general “basis-of-design”, a standard of quality, and OGS best practices.
   a. The point-of-contact person for elevator projects is Dan Miller in BU3 (518-486-1486) and he should be designated as a reviewer on all vertical transportation projects.
   b. Consult with the Elevator Group for wheelchair lifts, dumbwaiters, and escalators.

2. The following is a list of the different types of elevators and applications:
   a. Geared Traction: Mainly used in buildings up to 8 floors and with speeds up to 350 feet per minute.
   b. Gearless Traction: Mainly used in buildings over 8 floors and with speeds greater than 400 feet per minute.
   c. Drum Machines: Only used for sidewalk elevators.
   d. Hydraulic Power Units: Primarily used for elevators under 4 floors and with speeds under 125 feet per minute.
      1. Traditional bore hole type
      2. Holeless hydraulic type (pistons are within the shaft, above the pit floor).
   e. Machine-Room-Less (MRL) Elevators
      1. Used in new construction and some retro-fit applications.
      2. MRL type machines can be installed in traditional machine rooms on retrofit projects.
      3. Some MRL’s use traction belts instead of traditional steel wire ropes. These carry more stringent requirements, including sprinklers in hoistways.
      4. Check with the Elevator Group if you are proposing an MRL installation.

3. The National Elevator Industry, Inc (NEii) publishes a set of standards and guidelines called the NEII-1 which is available for free on their website. These are valuable in becoming familiar with requirements, including modernization guidelines. Also, the following manufacturers offer design guides and detailed product information on their websites:
   • OTIS
   • KONE
   • Schindler
   • Thyssen/Krupp

The OGS Division 14 OGS Master Specification lists the names of currently approved manufacturers for all types of equipment, including fixtures, door hardware, and controllers.
Refer to 140120 Elevator Rehabilitation for a general list, then to individual specification sections for more information.

4. Elevator construction and maintenance contracts cannot typically meet NYS MWBE goals because most contractors, manufactures, and suppliers in the industry are part of large corporations. Obtain assistance from the OGS MWBE unit to request a waiver for reduced goals, prior to bid phase. Provide a project scope, value, and a detailed list of any project specific items that may be subcontracted (i.e. painting, metal refinishing, etc). Each waiver request must be approved by the Executive Chamber on a case by case basis.
   a. If a project is awarded without reduced goals, the contractor can show a good faith effort to meet the goals, and still be granted a waiver.

5. Construction durations for modernization projects are typically 16 weeks per elevator, with up to 20 weeks needed for long lead items. These items include the cabs (usually manufactured to spec by a specialty fabricator), the controllers, and the motors.
   a. On installations with multiple cars, phasing is required.
   b. In some cases, more than one car can be modernized at the same time. Discuss facility needs before approving removal of more than one car from service at a time.

6. New installations are of shorter duration with construction taking only a few weeks.

B. PROCEDURES FOR NEW PROJECTS

1. For any construction project, a determination must be made during design whether the elevators may be used by the contractor. Refer to specification 015000 Construction Facilities & Temporary Controls. If it seems likely that use will be approved by the facility, inquire about their current status and condition. Inquire whether there is currently a service contract in place, and if there are any outstanding repairs or issues that would have to be addressed. Document all conditions before hand, and if necessary, enforce a load limit below the car’s rated capacity.

2. The initial scope of work shall be verified by the request for services, visiting the project site and further communicating with the client representative.

3. The project manager shall identify the elevator systems, equipment, materials, and any specialized professional services or systems required to execute the project.

4. A detailed Program Report is required. Refer to section 4.2 of the Design Procedures Manual. Include history of the installation, findings and recommendations including electrical, HVAC and hazardous materials, as well as required code updates. Some projects may require architectural, structural and plumbing design. Current building code requires enclosed elevator lobbies, an attempt should be made at Program to provide this option, if feasible.
5. During the Program design site visit, examine the following pieces of equipment as a minimum to determine their integrity, obsolescence and code compliance:
   a. The condition of the worm/gear assembly for geared traction machines.
   b. The condition of the main shaft and thrust bearings, including oil seals/packing.
   c. The condition of the brake shoe and linings.
   d. The condition of the motor. When evaluating a DC motor, one should examine the field coils, interpoles, commutator, brushes, armature, etc.
   e. The condition of the main traction drive sheave and deflector sheaves.
   f. The type of control and floor stop selector system.
   g. The condition of the hoist, governor and compensation cables including associated terminations, sheaves, etc.
   h. The condition/age of the travel cable.
   i. The condition of machine room and hoistway raceways and wiring.
   j. The condition of the car frame, platform and cab, including fixtures. Reference ADA requirements for all controls.
   k. The condition of the pit, especially rust and signs of water infiltration.
   l. HVAC concerns relative to requirements for machine rooms (PC based controllers).
   m. Plumbing concerns relative to pit sumps, etc. Check for presence of sprinklers and any fire alarm notification devices that may be present.
   n. Architectural concerns, i.e. hoistway integrity, smoke venting, etc.
   o. Electrical concerns, i.e. elevator recall, shunt trip control associated with sprinklers, safety switches, emergency power capacity, and ATS signals.
   p. Hoistway pressurization is required if enclosed elevator lobbies at each landing are not provided per current building code. Due to cost and engineering factors, it may not be feasible to provide either hoistway pressurization or enclosed lobbies. This then becomes an existing, nonconforming condition.
   q. Integration with proprietary systems (Fire Alarm, Building Management System) that may require a specific allowance. Discuss with the facility.
   r. Any items that will need to be brought up to current code (prevention of unintended motion, car top railings, pit ladder heights, etc).
   s. If available, review maintenance and repair records, call back reports, and comments from facility staff.

6. Sampling and testing of suspected hazardous materials is required. Relative to elevators, these may be present in hoistway door insulation, arc chutes and backboards on older controllers, brake linings on hoist machines, cab flooring and underlayment, soundproofing on outside of cabs, and high temperature conductor insulation such as hoistway door interlock wiring, etc. Do not reuse hoistway door panels which contain asbestos, especially when adapting them with new hardware.
   a. Elevator contractors are generally not licensed to perform asbestos abatement, therefore a DOL variance should be sought. For example, have the elevator contractor (having only OSHA asbestos awareness training) remove the hoistway doors and hand them to the abatement contractor for wrapping, handling and disposal.
   b. Obtain variances prior to bidding, as DOL continues to revisit abatement practices with elevator equipment.
c. Elevator contractors will not bid as Prime on contracts which require abatement, as they do not want to assume the liability and extra insurance required by our contracts. Best practice is to include abatement work in a C contract.

7. Traffic studies: When a new installation involves multiple elevators in a building greater than three floors having more than 200 people, a traffic study/simulation should be conducted to determine the best application and number of elevators. In some cases, a traffic study is recommended for a modernization if the facility is experiencing severe delays and long wait times.
   a. The Industry has specific ways of measuring and estimating traffic handling capacity within a given building.
   b. A good rule of thumb for acceptable service is the 30/60/90 method: maximum of 30 seconds wait time, 60 seconds travel time, and 90 seconds total time for an elevator trip. Many new installations can do better.
   c. In typical installations, heaviest use occurs during morning up-peak as people arrive for work, second heaviest is during the lunch hour.

8. The Project Manager should be aware of the presence of non-proprietary elevator control systems, and determine if the client has a preference. Some clients have no preference, and some will specifically request one or the other. Both OEM and non-proprietary control system manufacturers are listed in part 2 of 140120 Elevator Rehabilitation.

C. TECHNICAL ISSUES

1. Consider refurbishing the existing motor(s). This involves a complete motor evaluation including megger testing of armatures, field coils, brush rigging, etc. and should be performed by a reputable motor shop such as Troy Industrial Solutions, McIntosh Industries Inc. or Performance Evaluations, Inc.
   a. Older DC gearless motors, such as those used in the Corning Tower, are of a durable design and will continue to provide service for years to come after refurbishing (with proper maintenance).
   b. It may be cost prohibitive to remove and replace the machines due to crane costs, machine room/roof access, and other limiting factors.
   c. Older OTIS Geared machines are also reliable workhorses and have been retained and refurbished on numerous projects. If in doubt, consult with the elevator group.

2. The project manager shall determine the seismic design requirements for the project (new construction only) by consulting with the structural engineer.
   a. The ground motion parameters will need to be obtained from the geotechnical study to determine these requirements.

3. When considering cab and fixture design for various projects, consult with the client about finishes. Ask about future design considerations, such as card readers or CCTV cameras as it is easy to add provisions for these ahead of time.
   a. Use of durable materials and vandal resistant hardware is preferred.
   b. Use of LED lighting is recommended.
   c. OGS best practice is to specify electro-mechanical door restrictors.
d. Coordinate keying requirements with the facility.

e. In cases of overlapping jurisdictions, OGS complies with NYC local code with regard to FDNY Emergency Responders, including Phase 1 and 2 Firemen’s service and keying. Occupant safety mirrors are also permitted. Consult with the elevator group for details.

f. Inspection certificates are not required to be displayed in the car.

4. Hydraulic elevators should be evaluated to determine the possible needs for heating or cooling of the hydraulic fluid.
   a. More than 2 floors served in unheated parking garages should have reservoirs equipped with immersed oil heaters.
   b. High use demand elevators should be equipped with oil coolers.
   c. High use demand elevators should be equipped with motors rated for 120 starts per hour, rather than the standard 80 starts per hour.

5. Emergency power systems (especially when there are multiple elevators) need to be evaluated to determine the capacity of the emergency system and the signaling capability of the ATS (Automatic Transfer Switch), as well as identifying a complete path from the ATS to the elevator controller. Typically on existing systems only one elevator at time can operate from the emergency source. New controllers can automatically and sequentially operate one elevator at a time as described in the master specification.
   a. By code, a signal must be run from the ATS to the elevator controller, utilizing a pair of dry contacts. This tells the controller when it is on emergency power, and triggers additional code required notifications.
   b. In addition, a pre-transfer signal (from emergency to normal source) should be run from the automatic transfer switch to the elevator controller for cars that operate at speeds above 350 feet per minute. This pre-transfer allows the elevators to come to a controlled stop at the nearest floor prior to transfer back to the normal source. This is not a code requirement, but an OGS best practice to preserve the equipment and also passenger comfort and safety.
   c. In installations with multiple elevators, request as much information as possible on the current configuration of the emergency power system. Some will have keying or switching already in place to select cars for use during a power outage. Request from the facility: generator test records, and closely inspect the ATS. Older ATS’s cannot support current signaling requirements without modification, and sometimes have to be replaced under the project due to age.

D. CODES AND STANDARDS

1. Applicable New York State Codes and referenced standards such as the ASME A17.1 Elevator Safety Code and the A18.1 Code for Platform Lifts must be recognized early in the design stage. Other reference standards including NFPA 70 (National Electrical Code) NFPA 72 (National Fire Alarm and Signaling Code) and NFPA 13 (Standard for the Installation of Sprinkler Systems) are critical to project success.

2. Elevator equipment must be inspected and accepted by a Qualified Elevator Inspector (QEI) in accordance with the ASME A17.1 Code. This can be an OGS employee, the Design
Consultant, or a 3rd party. The selection should be clearly noted in Part 3 Execution of section 140120.

E. QA/QC FOR THE PROJECT MANAGER

1. Determine with the client if the elevator is currently covered by a maintenance contract. If present, the existing contract should be terminated following award, allowing the modernization contractor to take over the whole installation. Some agencies have expertise to include extended warranty/maintenance service contracts to be bid along with the construction work using Bid Form 014066 in conjunction with 002214 Supplementary Instructions To Bidders – Total Bid. These contracts are a benefit to the state.
   a. Maintenance/extended service contracts are part of the bid process, but are not covered by the Attachment A, are separately funded, and are administered by the client agency.
   b. The MWBE waiver process applies to the Maintenance/Extended Warranty contract. If possible, request a waiver from the MWBE office during development of the contract language. Requests for service contract waivers are not handled in the same way as requests for construction contract waivers.
   c. The contract documents must also include specification section 008091 Warranty Services Agreement.

2. Existing geared traction elevator machines in good condition can simply have the motor replaced. Unless there is evidence of poor maintenance, a cost/benefit analysis should be performed to justify full replacement.

3. Elevator code requires a Maintenance Control Plan (MCP) be provided by the contractor and turned over to the facility. This is in addition to OGS policy requiring (2) copies of OEM Manuals at project completion. Consult with the Elevator Group for MCP requirements and recommendations, or visit the NEii website for more information (National Elevator Industry, Inc).

4. Some facilities and larger campuses have remote emergency and/or standby power generation located at some distance from the elevator controllers. It is critical during design that the electrical designer investigate and confirm availability of any suggested existing path and clearly call it out on the contract documents. The consultant should be aware of any further programming requirements needed for more sophisticated systems as well as the likelihood that older ATS’s cannot be easily or readily modified. In order to avoid change orders during construction, discuss requirements with the facility and OGS field staff as early as possible in the design process.
CHAPTER 9 – DESIGN GUIDES

9.17.3 DOOR AND HARDWARE GUIDE

b) A. PROCEDURES FOR NEW PROJECTS

1. The OGS Hardware Team is a shared resource of the Business Units.

2. Architectural Hardware design can be performed by the following methods:
   a. The OGS Hardware Team writes the technical sections (087100, 081102, 088100) and coordinates with the door schedule.
   b. The OGS Hardware Team coordinates work assignments with one of the OGS approved Architectural Hardware Consultants (AHC) via an existing active term consultant contract.
   c. Assigned A/E or E/A Consultant Terms or Standalone Design Contracts may have AHCs as part of their team to perform design services. The OGS Hardware Team requests a meeting with the Consultant to ascertain the skills and knowledge of the Consultant’s hardware designer. The OGS Hardware Team would advise and steer the Consultant’s hardware designer.

3. Regardless of the Architectural Hardware design method chosen, the OGS Hardware Team requests the Designer and/or the OGS Team Leader involve the OGS Hardware Team as early as the Schematic Design Phase.
   a. The Consultant designer should coordinate the architectural hardware services through the OGS project manager.
   b. The door and hardware portions of the project will be assigned to a member of the OGS Hardware Team to provide direct coordination and assistance as needed.
   c. The Hardware Team can provide coordination and review of documents related to steel doors/frames; stainless steel doors/frames; wood doors, finish hardware (includes electric hardware, gasketing and thresholds); and security glass and glazing.

(1) B. TECHNICAL DOCUMENTS

1. Project Manual Guide
   a. Initial Documents: In order for the OGS Architectural Hardware Team to evaluate the project either for in-house (OGS) or consultant architectural hardware design, the Project Manager should be prepared to furnish the
AHC with the following documents:

1) Code Compliance Drawing and Building’s Occupancy Classification
2) Exiting Plan
3) Floor Plans
4) Partition Schedule or details
5) Door Schedule
6) Door and Frame Elevations

b. Specifications
c. C and E Contracts
d. Contractor QA/QC

2. Drawing Guide
   a. Door Schedule Example
   b. Door/Frame details (reserved)
c. Symbols for electrified hardware (reserved)

3. The Hardware Team is responsible for maintaining the following specifications:
   a. 081102 Steel Doors and Frames
   b. 081117 Stainless Steel Doors and Frames
   c. 081400 Wood Doors
d. 084223 Automatic Doors
e. 084234 Balanced Entrance Doors
f. 087100 Finish Hardware (includes electric hardware; gasketing and thresholds)
g. 088853 Security Glass and Glazing
CHAPTER 9 - DESIGN GUIDES

9.21 TANK PROGRAM GUIDE

9.21.1 NYS OFFICE OF MENTAL HEALTH

TANK SYSTEM INSTALLATION GUIDE

A. SITE PLANS: PROVIDE EXISTING CONDITION, REMOVAL PLAN, AND PROPOSED INSTALLATION SITE PLANS FOR ALL TANKS. PLANS MUST INCLUDE THE FOLLOWING:

1. DIMENSIONS OF TANK AND ANY STRUCTURAL PADS. CAPACITY OF TANK.

2. DISTANCE OF FUEL UNIT FROM ANY BUILDINGS, PROPERTY LINES, AND ROADS. THIS VARIES AS PER THE TANK TYPE (PROTECTED – UL 2085) AND SIZE AND IF FOR HEATING, DISPENSING, OR COMPRESSED NATURAL GAS (CNG).

3. LOCATION OF ALL EMERGENCY DISCONNECT EQUIPMENT (I.E. E-STOP BUTTON).

4. LOCATION OF ALL TANKS SYSTEMS, TANK MONITORING (TM) SYSTEMS, AND ANY ASSOCIATED LIGHTING.
   A. NOTE IF TM/ CONTROL WIRE (CAT 6) WILL NEED TO BE GREATER THAN 300 FEET; IF GREATER THAN 300 FEET THEN SIGNAL AMPLIFIERS OR A SWITCH TO FIBER MAY BE REQUIRED TO PREVENT SIGNAL LOSS.
   B. CONSIDER UTILIZING A LOCKABLE SHED TO HOUSE THE ELECTRICAL SUB-PANEL, DISCONNECTS, LEAK DETECTION PANEL, ETC. TO SAVE MONEY ON LENGTHY EXCAVATION AND CONDUIT RUNS.

5. LOCATION OF ALL VENTS:
A. UNDERGROUND STORAGE TANK (UST) VENTS MUST BE LOCATED A MINIMUM OF TEN (10) FEET HORIZONTALLY FROM ANY OUTDOOR AIR INTAKE OPENINGS. WHERE A VENT IS LOCATED WITHIN TEN (10) FEET HORIZONTALLY OF AN INTAKE OPENING, SUCH OPENING SHALL BE LOCATED A MINIMUM OF TWO (2) FEET BELOW THE TANK VENT.

6. LOCATION OF POWER PANELS. ANY OUTDOOR PANELS MUST BE SECURED IN A WEATHERPROOF BOX. PAY CLOSE ATTENTION TO WHERE THE DISCONNECT IS FOR THE TANK HEATER AND IF IT IS “READETLY ACCESSIBLE”; ALSO CHECK FOR GFI BREAKER REQUIREMENT.

7. LOCATION OF NEW ABOVEGROUND (AG) & UNDERGROUND (UG) PIPING, SYSTEM ALARMS AND TANK LOCATION (UNDERGROUND) IN RELATION TO OTHER STRUCTURES AND EQUIPMENT TO BE INSTALLED.

B. PIPE STANDARDS: FUEL OIL PIPE MUST COMPLY WITH THE STANDARDS LISTED IN TABLE 1302.3 OF THE 2015 INTERNATIONAL MECHANICAL CODE.
### TABLE 1302.3 FUEL OIL PIPING

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>STANDARD (see Chapter 15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper or copper-alloy pipe</td>
<td>ASTM B 42; ASTM B 43; ASTM B 302</td>
</tr>
<tr>
<td>Copper or copper-alloy tubing (Type K, L or M)</td>
<td>ASTM B 75; ASTM B 88; ASTM B 280; ASME B 16.51</td>
</tr>
<tr>
<td>Labeled pipe</td>
<td>(See Section 1302.4)</td>
</tr>
<tr>
<td>Nonmetallic pipe</td>
<td>ASTM D 2996</td>
</tr>
<tr>
<td>Steel pipe</td>
<td>ASTM A 53; ASTM A 106</td>
</tr>
<tr>
<td>Steel tubing</td>
<td>ASTM A 254; ASTM A 539</td>
</tr>
</tbody>
</table>

1. Aboveground fuel piping is typically single wall. If piping is exterior it should be heat-traced and insulated. Non-insulated pipe should be painted. New below-ground piping shall be non-metallic double-wall type.

2. Galvanized piping cannot be used; zinc from the galvanizing will contaminate the fuel causing injector problems in diesel engines. Moreover, galvanized piping is more expensive than black piping. Galvanized piping may be used for above ground vent piping.

3. Underground systems must be made of double wall steel or iron which is cathodically protected or fiberglass reinforced plastic (FRP) or other equivalent non-corrodible material.
   a. Any alternate (i.e. “other equivalent”) underground piping systems must be submitted to OMH Unit Q and the New York State Department of Environmental Conservation (NYSDEC) for review and approval prior to the completion of the Design Development Phase. Under no circumstances shall the project be permitted to be issued for bid without prior approval by NYSOMH and of both the alternate piping technology and the overall fuel oil system design.
      1) New York City (NYC) Facilities only: Any proposed alternate technology underground piping systems that serve emergency generators shall also be submitted to the Fire Department of the City of New York (FDNY) for review and approval prior to the completion of the Design Development phase. In these cases, FDNY approval of the alternate piping technology shall also be required prior to the issuance for bid.

4. All underground piping systems must be equipped with a leak detection system.
C. ABOVEGROUND STORAGE TANK (AST) REQUIREMENTS:

1. A minimum above-grade clearance of six (6) inches is required to facilitate visual inspection of tank bottom surfaces.

2. Integral generator single-wall sub-base mounted ("belly") tanks cannot be used.
   a. Exceptions can be made for use with emergency generators with written approval from NYSOMH Unit Q, but shall be limited to a storage capacity of 500 gallons or less (must be double walled).
      1) If installed, all generator belly tank vents must extend through the exterior of the generator enclosure. It cannot terminate within the enclosure (typically 12 feet above finished grade).

3. If tank size is 10,000 gallons or larger then consider using the OP style tank (20% overfill) in lieu of a diked tank. DEC will accept these tanks as an equal to the diked tank.

D. UNDERGROUND STORAGE TANK (UST) REQUIREMENTS: All new underground tanks used in New York State must bear a permanent stencil, label or plate which contains the following information:

1. Manufacturer's statement that, "This tank conforms to 6 NYCRR Part 614".

2. Standard of design by which the tank was manufactured.

3. Petroleum products and percentages of volume of petroleum additives which may be stored permanently and compatibly within the tank or reference to a list available from the manufacturer which identifies products compatible with all tank materials.

4. Year in which the tank was manufactured.

5. Dimensions, design and working capacity and model number of tank.

6. Name of manufacturer.
7. A second label which shows all of the information required above and which also shows the date of installation must be conspicuously displayed and permanently affixed to the fill port. It must be readily visible to the carrier and may be imbedded in concrete, welded to the fill port, or otherwise permanently affixed. Typically this label will either be affixed to the underside of the spill containment bucket lid or fastened to the fill port itself.

8. Note: All new tanks come with a plate that contains the above information. This is consistent with our specification and drawing documents.

E. FILL PORTS: All fill ports must contain a locking mechanism, a spill containment bucket, and be permanently marked with the color and symbol code of the American Petroleum Institute which follows:
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Color/Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>High gasoline</td>
<td>Red</td>
</tr>
<tr>
<td>(ii)</td>
<td>Middle gasoline</td>
<td>Blue</td>
</tr>
<tr>
<td>(iii)</td>
<td>Lower gasoline</td>
<td>White</td>
</tr>
<tr>
<td>(iv)</td>
<td>High unleaded gasoline</td>
<td>Red w/white cross</td>
</tr>
<tr>
<td>(v)</td>
<td>Middle unleaded gasoline</td>
<td>Blue w/white cross</td>
</tr>
<tr>
<td>(vi)</td>
<td>Lower unleaded gasoline</td>
<td>White w/black cross</td>
</tr>
<tr>
<td>(vii)</td>
<td>Vapor recovery</td>
<td>Orange</td>
</tr>
<tr>
<td>(viii)</td>
<td>Diesel</td>
<td>Yellow</td>
</tr>
<tr>
<td>(ix)</td>
<td>Ultra low sulfur diesel</td>
<td>Yellow w/black U</td>
</tr>
<tr>
<td>(ix)</td>
<td>#1 fuel oil</td>
<td>Purple w/yellow bar</td>
</tr>
<tr>
<td>(x)</td>
<td>Bio diesel</td>
<td>Bronze w/yellow border, black lettering (B##)</td>
</tr>
<tr>
<td>(xi)</td>
<td>#2 fuel oil</td>
<td>Green</td>
</tr>
<tr>
<td>(xii)</td>
<td>Kerosene</td>
<td>Brown</td>
</tr>
<tr>
<td>(xiii)</td>
<td>Waste oil</td>
<td>Purple</td>
</tr>
</tbody>
</table>

The symbols to be used are:

(i) Circle for gasoline products and vapor recovery lines.

(ii) Hexagon for other distillate.

(iii) Border must be painted around fuel products containing extenders such as alcohol. The border will be black around a white symbol and white around all other colors.
F. CATHODIC PROTECTION: UNDERGROUND STEEL AND IRON TANKS AND/OR PIPING SYSTEMS MUST HAVE CATHODIC PROTECTION, REGARDLESS OF ANY ADDITIONAL COATINGS SUCH AS HIGH DENSITY POLYETHYLENE (HDPE). ALSO, COPPER PIPING IN DIRECT CONTACT WITH CONCRETE REQUIRES CATHODIC PROTECTION.

1. ALL CATHODIC PROTECTION SYSTEMS MUST BE DESIGNED TO PROVIDE A MINIMUM OF THIRTY (30) YEARS OF PROTECTION.

G. MONITORING SYSTEMS: ALL TANK SYSTEMS MUST BE EQUIPPED WITH A LEVEL MONITORING SYSTEM.

1. MONITORING PANELS MUST CONTAIN A TEST/DIAGNOSTIC BUTTON.

2. OUTDOOR MONITORING PANELS MUST BE LOCATED IN A SECURE, WEATHERPROOF BOX.

3. IF TANK IS FOR CONSUMPTIVE USE ONSITE ONLY, A MONITORING SYSTEM, SUCH AS THE OMNTEC LU-2, IS ACCEPTABLE. OMNTEC PROTEUS IS AN EXAMPLE OF A COMBINED AUTOMATIC TANK GAUGING AND LEAK DETECTION SYSTEM. THERE ARE APPLICATIONS WHERE MECHANICAL MONITORING IS ACCEPTABLE. FOR EXAMPLE, SMALLER (275 GAL) HEATING TANKS OR LUBE CUBE STYLE TANKS OFTEN USED FOR SMALLER ELECTRIC GENERATORS.

H. VALVE REQUIREMENTS:

1. SOLENOID OR EQUIVALENT ANTI-SIPHON VALVES ARE REQUIRED FOR ALL TANK INSTALLATIONS. WE PREFER THE SOLENOID, BUT IT DOES NOT FIT ALL APPLICATIONS, SO THE MECHANICAL ANTI-SIPHON VALVE IS ACCEPTABLE.

2. A MANUAL SHUTOFF VALVE MUST BE INSTALLED IN THE SUPPLY LINE TO ISOLATE TANK FOR MAINTENANCE.
3. **NO VALVES OF ANY KIND SHOULD BE PRESENT IN THE RETURN LINE, IN ORDER TO PREVENT ANY OVER-PRESSURIZATION THAT COULD LEAD TO A SPILL. NO VALVES OR TANK PENETRATIONS ARE PERMITTED ANYWHERE BELOW THE LIQUID LEVEL INSIDE THE TANK.**

I. **TRANSFER PUMPS:** FUEL OIL TRANSFER PUMP SETS SHOULD BE MOUNTED HORIZONTALLY NOT STACKED VERTICALLY.

1. THEY SHOULD BE EASILY ACCESSIBLE.

2. PROVIDE CHECK VALVE(S) IN THE PUMP DISCHARGE.

3. PROVIDE SHUTOFF VALVE FOR MAINTENANCE.

4. PROVIDE PRESSURE RELIEF VALVE/MANIFOLD IMMEDIATELY DOWNSTREAM OF PUMP DISCHARGE.

J. **BOILER OPERATIONS:** AS A BEST MANAGEMENT PRACTICE CONSIDER INSTALLATION OF OIL/WATER SEPARATOR (OWS) SYSTEMS IN ASSOCIATION WITH ALL FUTURE BOILER SYSTEMS. HOWEVER, THE FOLLOWING SHOULD BE CONSIDERED AS PART OF THE DECISION-MAKING WITH OMH.

1. BOILER OIL SYSTEM LOOP IS CLOSED SYSTEM AND THERE IS NO NEED FOR OIL/WATER SEPARATOR; THERE IS NO OIL DISCHARGE INTO THE BUILDING DRAINAGE SYSTEM.

2. OIL SEPARATORS MAY BE REQUIRED AS REGULATED IN THE CODE.

K. **PUBLICALLY OWNED TREATMENT WORKS (POTW):** ANY SYSTEM DESIGNS THAT ARE EXPECTED TO BE CONNECTED TO THE POTW HAVE TO BE REVIEWED AND APPROVED BY THE POTW AND ANY OTHER APPLICABLE LOCAL ENTITIES BEFORE CONSTRUCTION CAN PROCEED.
L. **AS-BUILT DRAWINGS:** UPON COMPLETION OF EACH PROJECT, AS-BUILT SITE PLANS MUST BE PROVIDED TO THE OWNER FOR THEIR RECORDS.

M. AN AFFIDAVIT MUST ALSO BE PROVIDED TO THE OWNER FROM THE MANUFACTURER VERIFYING THAT THE TANK AND PIPING INSTALLATION IS APPROVED AS INSTALLED AND THAT THE WARRANTY WILL BE HONORED.

N. TANK MANUFACTURERS TYPICALLY PROVIDE TWO PLACARDS WITH EACH TANK THAT SUMMARIZE THE TANK INFORMATION (I.E., MANUFACTURE DATE, TANK DIMENSIONS, ETC.). THESE PLACARDS HAVE TO BE GIVEN TO NYSOMH PRIOR TO THE TANK INSTALLATION.
Chapter 10
Reference

10.1 OGS Network Project File Folder Structure
10.2 Naming Conventions
10.3 Communications
CHAPTER 10 – REFERENCES

10.1 OGS NETWORK PROJECT FILE FOLDER STRUCTURE

PROJECT FOLDERS

1. All digital data associated with projects is kept on the V:\ drive. The main area for design and construction documents is the V:\DESIGNANDCONSTR folder.

Construction phase digital data associated with projects is kept on the web collaboration website so that additional project team members (contractor, consultant, client and third party inspectors) have access to project documentation. Backup documentation is located on the V:\DESIGNANDCONSTR folder.

2. Inside the DesignAndConstr folder there are filter folders to subdivide the projects. Each of the filter folders will hold up to one hundred project folders. The filter folder names start with the letter “p”, followed by the first three characters of the projects they hold, and end in xx”.

2. Each project folder is named according to the five character project number (e.g. 40225, EC099, J0011, M2035, Q1013, SB019). To ensure consistency, folders for each project are created through the use of a script.

3. Emergency contracts have their own unique separate file folder structure. See section I within this chapter.

B. 40000, M’s, Q’s, S’s, J’s FILE FOLDER STRUCTURE

C. 10_ContractMgt

The Contract Management 10 series subfolders contains documents related to the overall administration of the project contracts:
1. **11_CONSTRUCTIONCONTRACTS**

2. **12CONSULTANTCONTRACTS**
   FILE DOCUMENTS HERE THAT ESTABLISH CONSULTANT CONTRACTS, ISSUING PAYMENTS.

3. **13CONSULTANTWOS**
   OPC FILES FINAL COMPLETED PROJECT DOCUMENTS HERE THAT ESTABLISH CONSULTANT WORK ORDERS THAT AUTHORIZE ASSIGNMENTS. OPC WILL CREATE SUBFOLDERS WHEN THERE ARE MULTIPLE TERM CONSULTANTS INVOLVED IN A PROJECT.
   - EMAIL REQUEST FROM THE PM OR EIC
   - BDC 41 REQUEST FOR TERM ASSIGNMENT
   - BDC 41.1 REQUEST FOR MODIFICATION TO A TERM ASSIGNMENT
   - BDC 83 REQUEST FOR HAZARDOUS MATERIALS TESTING
   - CALCULATIONS RELATED TO BDC 83
   - CP 11.3 NOTICE TO PROCEED LETTER
   - TRANSMITTAL

A. **PROJECTMANAGER**
   THE PM AND THE EIC FILE DRAFT WORK ORDERS AND RELATED WORK ORDER BACKUP MATERIAL USED IN SCOPE/FEE NEGOTIATIONS IN THIS SUBFOLDER. THE PM MAY CREATE SUBFOLDERS WHEN THERE ARE MULTIPLE TERM CONSULTANTS.
   - BDC 41 REQUEST FOR TERM ASSIGNMENT (DRAFT)
   - BDC 41.1 REQUEST FOR MODIFICATION TO A TERM ASSIGNMENT (DRAFT)
   - BDC 65-66 CONSULTANT FEE BREAKDOWN WORKBOOK (DRAFT)
   - BDC 83 REQUEST FOR HAZARDOUS MATERIALS TESTING (DRAFT)
   - RELATED CONSULTANT TRANSMITTAL AND CORRESPONDENCE
4. **14_CLAIMSANDDISPUTES**

CADM AND/OR DCM WILL FILE DIGITAL COPIES OR SCANNED IMAGES OF CORRESPONDENCE AND OTHER DOCUMENTS RELATED TO THE FOLLOWING CATEGORIES:

CLAIMS (CREATE SEPARATE “CLAIMS” SUBFOLDER FOR DOCUMENTS RELATED TO THESE):

- ARTICLE 4.7 SUBMITTAL RE-EVALUATION FEE
- ARTICLE 10 ORDERS ON CONTRACT (CHANGE ORDERS)
- ARTICLE 15 DISPUTES ON PERFORMANCE OF CONTRACT
- ARTICLE 17A DELAY CLAIMS
- ARTICLE 19 INSURANCE/ BUILDERS RISK

Disputes (create separate “Disputes” subfolder for documents related to these)

- NON-RESPONSIVE BIDS
- BID WITHDRAWALS/ FORFEITURES
- RESPONSIBILITY MEETINGS
- SHOW CAUSE PROCEEDINGS
- TERMINATIONS/ SURETY TAKEOVERS
- LITIGATION
- OTHER DISPUTES

5. **15_PAYMENTS**

Projects use the Electronic Contractor Payment Process (ECP)

- **Construction**
  
  This subfolder is where Division of Construction staff file information

- **CPAG**
  
  THIS SUBFOLDER IS WHERE CONTRACT MANAGEMENT STAFF FILE INFORMATION

6. **16_INSURANCE**

File proof of insurance coverage here.
A. NAME THE ACORD INSURANCE COVERAGE IN THE FORMAT YYYYMMDD_FT_RN WHERE:

B. YYYYMMDD IS THE DATE OF THE EXPIRATION OF THE CERTIFICATE

C. FT IS A TWO OR THREE LETTER STRING DENOTING:
   CGL – ACORD 25 certificates showing proof of commercial general liability (no pollution or professional liability)

   POL – ACORD certificates showing proof of pollution coverage only

   GPO – ACORD 25 certificates showing proof of commercial general liability and pollution coverage

d. rN is an *optional* string to be used in the event that there are additional versions of the same certificate (r1 would be the first additional version, r2 the second, etc.). Use of this should be rare and used only when it is unclear which copy among multiple versions should be retained; in such case, all copies would be retained.

7. 17_MWBE

8. 18_VENDORRESPONSIBILITY

D. 20_RecordDocuments

The Record Documents 20 series subfolders contain important project documentation deemed worthy of protection from accidental changes or deletion. Select staff have the ability to insert and overwrite documents within these folders.

All staff have the ability to view and copy documents from these folders.

1. 21_RecordCorrespondence

OPC files scanned or electronic versions of the following:

- Attachment A or B (Budget Bulletin B1184)
- BDC 153 Client Project Request and the project acceptance letter
- All submission letters (Program, Interim, 100% and Final)
- “100% Bundled” set of .pdf documents which include: request for approval letter, BDC 35 100% Document Submission Transmittal, estimate and consultant QA/QC letter (emailed to OPC by the Business Unit Administration staff)
• Client approvals: (Program, Interim, 100%)
• **DOB AUTHORIZATION TO ADVERTISE**
  • BDC 201 Bidding and Contract Documents Transmittal
  • BDC 203 Notice of Approval and Authorization to Advertise
  • BDC 391 Closeout report and signed letter
  • BDC 40 Construction Acceleration Incentive Approval

2. 22_BIDDOCUMENTS
Is the location for digital .pdf copies of the project bid drawings and specifications. The files are copied by OPC into this folder and organized by trade:

• ADDENDUM
• CONSTRUCTIONDRAWINGS
• CONSTRUCTIONPROJECTMANUAL
• ELECTRICALDRAWINGS
• ELECTRICALPROJECTMANUAL
• HVACDRAWINGS
• HVACPROJECTMANUAL
• PLUMBINGDRAWINGS
• PLUMBINGPROJECTMANUAL

3. 23_CodePermits
Is the location for project code permits, certifications and review forms. File digital copies or scanned images of the following documents:

• BDC 32 Temporary Approval for Occupancy
• BDC 101 Construction Permit
• BDC 215 Code Compliance Certificate
• BDC 401 Design Compliance Certification
• BDC 401-CS Design Compliance Continuation Sheet
• BDC 401.1 Waiver of Construction Permit
• BDC 402.10 Code Compliance Review Checklist
• BDC 403 Design Compliance Certification
• BDC 405 Construction Compliance Certification
• BDC 405.1 Construction Compliance Certification for Non-OGS Permitted Work
• BDC 406 Summary of Special Inspections
• BDC 406.1 Statement of Special Inspections
• 00105 Certification Page(s) from the Project Manual

File types may include Word documents (.doc, .docx), Acrobat files (.pdf) and scanned image files (.tif, .jpg).
4.  

24_WebCollaboration

Archive location of the project web collaboration submittal tracking log and all posted documentation that was used during the construction phase.

The initiation of the project archive will begin when there is joint agreement by the PM and the EIC that the project is complete. The PM will then archive the project and contact OPC to file the navigable files into this folder and request that the project be taken off the web service provider’s server.

E.  

30_DesignPhase

The Design Phase 30 series subfolders contain project documents used during the design phase of the project:

1.  

31_Correspondence

File the following project documents in the Correspondence folder:

- Scanned copies of hardcopy correspondence in .pdf format
- Copies of digital correspondence.

A.  

MEETINGMINUTES

This subfolder is where the following project design documents are filed:

- MEETING AGENDAS
- BDC 224 ATTENDANCE SHEETS
- MEETING MINUTES

2.  

32_EnvironPermits

File digital copies or scanned images of non-building code related environmental permits such as: site, environmental, SEQR, SPDES, DEC/ACOE, APA, DEP, DOH, EPA, storm, sewer, SWPPP, air quality, boiler, tanks, etc.
3. **33_Photos**

This folder is the location for project related photographs from the Design Phase. Construction Phase related photographs should be located in the Construction Phase / Photos folder. Subfolders can be created within this folder to further organize files by date or event.

4. **34_DesCals**

This folder is the place to file design calculations and analysis specific to the project. It is recommended that designers create subfolders named by trade to file their work. Some examples of design calculations:

- Architectural - means of egress/exit capacities, etc.
- Structural - loads. Etc.
- Electric - load and short circuit analysis
- Civil - storm water
- Plumbing - pipe sizing, plumbing fixture counts
- HVAC - heating and cooling loads

File design calculations and specific information / documentation related to compliance with the energy requirements and green design for the project:

- Energy Modeling (eQUEST, Trane / TRACE, DOE)
- COMcheck or REScheck
- ASHRAE Standard 90.1 documentation
- NYSERDA documentation
- EO88 documentation
- Commissioning documentation
- BDC 188 (DOCCS projects)
- LEED Checklist, LEED Points Templates and LEED Registration
- Green Attributes Table
- Indoor Air Quality (IAQ) documentation

5. **35_CAD**

This folder contains design trade CAD subfolders to organize work. This includes consultant final CAD drawings to be filed by trade:

- **A. CADARCH**
- **B. CADELEC**
C. **CADGEN**

Folder is intended for files that are used by all trades in the production of drawings. For example:

- The title block that is referenced to each sheet
- The area plan used as a reference on each coversheet
- The code sheet for multi-trade single contract projects (where information from more than one trade is placed on the same sheet)
- Support files submitted by consultants with their final submission - pentables, line styles, specialized fonts, etc.

D. **CADHVAC**

E. **CADPLUM**

F. **CADSITE**

G. **CADSTRU**

File the vector drawings created for the project here. Documents stored in these folders are primarily AutoCad drawings (.dwg). Non-drawing files that are reference files for the drawings are also put in this folder - raster images (.tif, .jpg, .pdf), Excel spreadsheets (.xls, .xlsx), and Word documents (.doc, .docx), etc.

6. **36_SpecDevelopment**

Is the work area for where in-house specifications that are developed for the Project Manual. This folder contains the following subfolders:

A. **COMMON**

File location for common documents and Appendix items

B. **CONSTRUCTION**
C. ELECTRIC

D. HVAC

E. PLUMBING

F. SOS
   File location of each prime trade/contract Schedule of Submittals (SOS) in Excel format.

If a project has an atypical contract, create a subfolder named according to the contract (i.e., Elevator). Files in these folders are typically Word documents and .pdf files.

7. 37_Estimates

This folder contains documents associated with the project estimate.
   - BDC 40 Construction Acceleration Incentive Approval
   - Multi-trade estimates are filed in this folder.

This folder contains the following subfolders:

a. Allowances
   This subfolder contains specific allowance information that are negotiated costs for specific items of work. File the justifications for the work to be performed and the documentation for the estimate in this folder. This could take the form of Word documents, PDF files, or Excel spreadsheets. The PM is encouraged to create additional subfolders for multiple allowances.

b. Construction
   - BDC 177 D&C Estimate Form
   - BDC 178 Consultant Estimate Form
   - BDC 96 Post Bid Workbook
c. **Electric**
   - BDC 177 D&C Estimate Form
   - BDC 178 Consultant Estimate Form
   - BDC 96 Post Bid Workbook

d. **HVAC**
   - BDC 177 D&C Estimate Form
   - BDC 178 Consultant Estimate Form
   - BDC 96 Post Bid Workbook

e. **Plumbing**
   - BDC 177 D&C Estimate Form
   - BDC 178 Consultant Estimate Form
   - BDC 96 Post Bid Workbook

The subfolders above contain the estimates for the various phases of design and should be labeled appropriately. Consultant estimate files specific to each contract - usually Excel spreadsheets (.xls, .xlsx) shall be placed in the appropriate subfolder.

Cost Control will copy BDC 96 Post Bid Workbook(s) document into the PreAward folder for use by construction staff.

8. **38_Submissions**

   This folder has four submission subfolders. The PM is responsible for saving consultant submission files (presentations, reports, project manuals, drawings) into the appropriate subfolder which includes the following:

   A. **100PCT**

   This subfolder is where the 100% Submission is filed. Documents located within this folder is comprised of complete, coordinated construction documents, including drawings, project manuals, estimates, checklists, code compliance form, special inspections form, hazmat information and transmittal forms in Word, Excel, .pdf or .tif format.
   - Drawings: “marked 100%” (each trade)
   - Project Manuals: “marked 100%” (each trade)
   - Consultant QA/QC Letter
   - Other related submission items
PM shall file the BDC 178 Consultant Estimate Form in the DesignPhase / 37_Estimates / trade folder

The “100% Bundled” set of .pdf documents which include: request for approval letter, BDC 35 100% Document Submission Transmittal, estimate and consultant QA/QC letter are emailed to OPC by the Business Unit Administration staff.

The PM shall create a new subfolder if there is a resubmission of the 100% Submission.

b. Final

This subfolder is where consultants’ final documents (.pdfs, vector drawings and project manuals) are filed. This is also the area where in-house design final draft documents can be assembled.

PM shall file the final electronic versions of these documents in the BidPhase / 41_FinalDocProcessing subfolder:

- DRAFT FINAL LETTER
- BDC 203 NOTICE OF APPROVAL AND AUTHORIZATION TO ADVERTISE
- BDC 402.10 Code Compliance Review Checklist (final version)
- BDC 406 Summary of Special Inspections (final version)
- BDC 406.1 Statement of Special Inspections (final version)
- Final Estimate Summary Page
- Approved Allowance Justification Memo
- BDC 188 Operating Impact Statement (DOCCS projects)

PM SHALL SUBMIT ORIGINAL HARD COPIES TO OPC:

- 00105 CERTIFICATION PAGE(S)
- BDC 201 BIDDING AND CONTRACT DOCUMENTS TRANSMITTAL
- BDC 401 DESIGN COMPLIANCE CERTIFICATE
- BDC 401.1 WAIVER OF CONSTRUCTION PERMIT (WHEN APPLICABLE)
- BDC 403 DESIGN COMPLIANCE CERTIFICATE (TRADES)
- BDC 40 CONSTRUCTION ACCELERATION INCENTIVE APPROVAL (WHEN APPLICABLE)

PM shall file a copy of the final Word versions of Project Manuals in the BidPhase / 42_FinalSpecs subfolder:

- PROJECT MANUALS OF EACH TRADE AND COMMON DOCUMENTS
PM shall file a copy of the final version of the consultant estimates (.doc, .docx, .xls, .xlsx) in the DesignPhase / 37_Estimates subfolder when revised from the 100% Phase Submission. This includes removal of design development contingencies:
- BDC 178 Consultant Estimate Form (final)

PM shall file a copy of the SOS final Excel version in the DesignPhase / 36_SpecDevelopment / SOS subfolder:
- SCHEDULE OF SUBMITTALS (FINAL VERSIONS OF EACH TRADE)

PM shall file the consultant final vector drawings (.dwg, .dgn) in the appropriate CADTrade folders.

C. INTERIM

This subfolder is where to file documents submitted at the close of interim milestones identified in the Design Project Management Plan (PMP). If a project is to have multiple interim submissions the PM will create multiple subfolders and label appropriately (examples: SchematicDesign, DesignDevelopment or 80Pct). See DPM Chapter 4.3 Design Phase and Chapter 4.4 Contract Documents Phase.

D. PROGRAM

This subfolder is where the following documents in Word and .pdf are filed:

- Initial Site Visit Meeting Minutes
- Preliminary Draft Program Report
- Draft Program Report
- Final Program Report - file electronic Final Program Report source documents (Word, Excel, AutoCAD, etc.) and the Final Program Report document bundled in .pdf format (as the hard copy delivered to Client).

Name the files similar to YYYYMMDD_FinalProgramReport.pdf where YYYYMMDD represents the year, month and day of the submission (i.e., 20160201_FinalProgramReport.pdf). See Chapter 4.2 Program Phase.

File Professional Consultation Reports or Studies produced as the result of an SA### project in the Program subfolder. Name the file YYYYMMDD_FinalConsultationReport.pdf or YYYYMMDD_FinalStudy.pdf. See Chapter 4.1- Professional Consultation Reports and Studies.
9. **39 ReviewComments**

This folder **CONTAINS FOUR SUBFOLDERS FOR REVIEW COMMENTS AND REVIEW COMMENT RESPONSES.** REVIEWS CAN BE PROVIDED BY OGS D&C STAFF (PROGRAM REVIEW COMMITTEE, PROJECT MANAGER, DESIGN REVIEWERS, CONSTRUCTABILITY REVIEW GROUP, FIELD CHECK STAFF), CLIENT - MAIN OFFICE AND FACILITY, CONSTRUCTION MANAGER, PEER CONSULTANTS, ETC.:

a. **100Pct**

WHEN THERE IS A RE-SUBMISSION IT IS BEST PRACTICE TO CREATE A NEW SUBFOLDER AND LABEL AS RESUBMISSION.

1) **Responses**

USE THIS SUBFOLDER TO FILE ALL COMMENT RESPONSES.

ALL INITIATOR (PERSON WITH COMMENTS) SHOULD BE PROPERLY LABELED TO READILY IDENTIFY THE PHASE AND NAME OF INITIATOR (PERSON WITH COMMENTS). SEE BELOW FOR THE FOLLOWING EXAMPLES:

- BDC 35.2 FIELD CHECK REVIEW - RESPONSE FORM *(IDENTIFY PHASE) (TRADE OR UNIT) (INITIATOR NAME).DOCM*
- BDC 35.3 DOCUMENT REVIEW - RESPONSE FORM *(IDENTIFY PHASED) (TRADE OR UNIT) (INITIATOR NAME).DOC*

ALL RESPONDER (PERSON WITH RESPONSES) SHOULD BE PROPERLY LABELED TO READILY IDENTIFY THE RESPONDER (PERSON WITH RESPONSES). SEE BELOW FOR THE FOLLOWING EXAMPLES:

- BDC 35.2 FIELD CHECK REVIEW - RESPONSE FORM *(IDENTIFY PHASE) (INITIATOR NAME) (TRADE OR UNIT) (RESPONDERS NAME).DOCM*
- BDC 35.3 DOCUMENT REVIEW - RESPONSE FORM *(IDENTIFY PHASED) (INITIATOR NAME) (TRADE OR UNIT) (RESPONDER NAME).DOC*
THE PM IS RESPONSIBLE FOR VERIFYING PROPER DOCUMENT NAMING CONVENTIONS USED.

THE PM IS RESPONSIBLE FOR SAVING THE FILLED OUT BDC35.2 FIELD CHECK REVIEW/RESPONSE FORM AND THE 35.3 DOCUMENT REVIEW/RESPONSE FORM COMMENTS AND RESPONSES IN THE SUBFOLDERS FOR THE APPROPRIATE PHASE.

THE PM IS ALSO RESPONSIBLE FOR SAVING REVIEW COMMENTS AND RESPONSES THAT DO NOT USE BDC FORMS SUCH AS CLIENT EMAILS, LETTERS, ETC. THE NAMING CONVENTIONS SHOULD BE SIMILAR TO THE EXAMPLES ABOVE.

b. Final
   Usually this folder is for a back check submission / review

c. Interim
   USE THIS FOLDER WHEN A SD OR DD PHASE MILESTONE SUBMISSIONS ARE USED

d. Program
   SCANNED PROGRAM REVIEW COMMITTEE COMMENTS, BDC 35.3, NOTES TO FILE OR CORRESPONDENCE TO CONSULTANT DEPICTING COMMENTS.

F. 40_BidAwardPhase

The Bid and Award Phase 40 series subfolders contain documents related to bid and award of project:
1. **41_FinalDocProcessing**

The PM files all digital final documentation listed below in this folder.

From the Final Phase submission:

- FINAL LETTER (DRAFT VERSION)
- BDC 203 NOTICE OF APPROVAL AND AUTHORIZATION TO ADVERTISE
- BDC 401.1 Waiver of Construction Permit
- BDC 402.10 CODE COMPLIANCE REVIEW CHECKLIST
- BDC 406 Summary of Special Inspections
- BDC 406.1 Statement of Special Inspections (determined by BDC 406)
- BDC 178 or BDC 177 Final Estimate Summary Page
- Approved Allowance Justification Memo (when applicable)
- BDC 40 Construction Acceleration Incentive (when applicable)

OPC will transfer documents noted above into the 21_RecordCorrespondence folder or the 23_CodesPermits. OPC will delete the documents after they have been transferred.

2. **42_FinalSpecs**

The PM files final specifications (Project Manual) in Word format for all trades in this folder. Appendix items such as hazardous materials testing and the SOS(s) may be in .pdf format.

The PM or OPC will create a subfolder when a project will be rebid.

3. **43_Addenda**

The PM files addenda documents in this folder.

4. **44_PREBID**

**THIS FOLDER CONTAINS THE FOLLOWING DOCUMENTS:**

- PREBID MEETING MINUTES AND ATTENDANCE SHEETS
- BDC 323 PRE BID SITE VISIT AGENDA
- BIDDER QUESTIONS (EXTERNAL RESPONSES / DRAFTS)
5. **45_PREAWARD**

This folder contains the following pre-award meeting documents:

- BDC 96 Post Bid Workbooks (email notice and copied into folder by Cost Control to be used by construction)
- BDC 187 Contractors Bid Breakdown
- PRE-AWARD MEETING MINUTES
- BDC 324 PRE AWARD INTERVIEW FOR LOW BIDDER
- CONTRACTOR REFERENCES AND EXPERIENCE
- CONTRACTOR WORK FORCE AND WORK PLAN
- RESUMES OF CONTRACTOR’S SUPERVISORS
- SCHEDULE PREPARER (WHEN REQUIRED)
- SUBMITTAL COORDINATOR (WHEN REQUIRED)

G. **50_ConstructionPhase**

The construction phase 50 series subfolders contain folders (internal) for final documents used during the construction phase of the project. All files saved shall be in pdf format.

The Web Collaboration Website shall be used to post most documentation for the entire project team to view and access. The team consists of consultants, client representatives, contractors, sub-contractors, testing firms, commissioning agents, etc. Documentation includes the following:

- BID DOCUMENTS
- PROJECT CONTACTS
- MEETING MINUTES
- SUBMITTALS
- RFIS
- IBS
- SCHEDULES
- PHOTOS
- COS / FOS
- INSPECTION REPORTS
- SPECIAL INSPECTIONS
- TESTING REPORTS
- DEVIAITION REQUESTS
- COMMISSIONING
- SITE VISIT OBSERVATION REPORTS
- SWPPP
- SDS
• CAD COORDINATION

1. **51_Correspondence**

File digital copies or scanned images of correspondence documents not necessary to be shared by the project team.

   01. **Correspondence**

       Use this folder to file all correspondence documents including any emails sent giving direction.

   02. **Meeting Minutes**

       Use this folder to file all meeting minutes for the project. Pre-Bid and Pre-Award meeting minutes are filed under 40_Design Phase – 44 and 45.

       - BDC383-PreActivity Mtg
       - Commissioning Mtg
       - Coordination Mtg
       - Facility Mtg
       - IJM
       - MM
       - Pre-Construction MM
       - Principals MM
       - Safety MM

03. **Payments**

04. **Certified Payroll**
05. Deficiencies

06. Submittals-Deviations-Transmittals
   - Deviations
   - Submittals
   - Transmittals

07. Facility Directives

08. TimeExt Delays LDs
   - Delays
   - Liquidated Damages
   - Time Extensions

09. DailyInspectionReports

10. LEED SWPPP IAQ
    - IAQ
    - LEED
    - SWPPP

11. Special Inspections
    - Asbestos
    - Concrete
Masonry
Soil
Steel

12. Other Files
   - BDC125-Labor Rates
   - Email Distribution List
   - Evaluations
   - Insurances
   - QA-QC Reports
   - Site Superintendent Letter
   - Ven Red – BDC329

13. Site Visit Reports

14. Safety Accidents
   - Accident Reports
   - ContrSafety Plan
   - OSHA 10
   - Safety Inspection Report
   - Safety MM – See 02-MM
2. 52_CMP

File digital copies or scanned images of the following documents:

- BDC 36 CONSTRUCTION MANAGEMENT PLAN
- BDC 36.1 CONSTRUCTION MANAGEMENT PLAN REVISION FORM
- BDC 37 PRECONSTRUCTION MEETING AGENDA
- BDC380-Activation Inspection
- BDC381-Benchmark Inspection
- BDC383-PreActivity-See 02-MM
- BDC384-Mock Up Inspection
- BDC385-First Delivery Inspection
- BDC386-Acceptance Inspection
- BDC387-Concealed Space Enclosure Inspection
- BDC388-Contract Completion List

3. 53_PhotosInternal

Internal folder used as a holding location for final documents that are not posted to the Web Collaboration Website. This folder is the location for all project related photographs.
from the Construction Phase. Subfolders can be created within this folder to further organize files by date or event.

4. **54_COFOS**

   Internal folder used as a holding location for final documents that are also posted to the Web Collaboration Website. Drawings, cover letters and other digital backup data for Change Orders and Field Orders should be included.

   ![Change Order](image1)
   ![Field Order](image2)

5. **55_IBs**

   Internal folder used as a holding location for final documents that are also posted to the Web Collaboration Website. Digital backup data for Information Bulletins. The PM / TL is to review the contents of the bidder questions not addressed by addendum. File the resulting final BDC 23 Information Bulletins here.

6. **56_RFIs**

   Internal folder used as a holding location for final documents that are also posted to the Web Collaboration Website including any backup documentation included with the BDC 22 Requests For Information.

7. **57_Schedules**

   Internal folder used as a holding location for final documents that are also posted to the Web Collaboration project site. This folder may also contain schedules that were developed during the Design Phase.

   - PRELIMINARY CRITICAL PATH SCHEDULE DEVELOPED AT THE PROJECT CONSTRUCTION DURATION MEETING

THE FOLLOWING DOCUMENTS ARE MIRRORED ON THE WEB COLLABORATION PROJECT SITE:
OGS Design Procedures Manual

A Guide to Designing Projects for Design & Construction

- MEETINGS MINUTES
- PDF FILES FOR SCHEDULE ITERATIONS
- .XER (P6) FILES
- THE BDC 43 PROJECT SCHEDULE ANALYSIS FORM
- THE SCHEDULE ANALYSIS CHECKLIST

The Scheduling Department posts a separate file sub-folder and structure for use with the Scheduling program and document control and management for items related to 013113 Project Schedule and 013200 Construction Progress Documentation.

8. 58 Permits

File digital copies or scanned images of non-OGS permits such as local permits, controlling agency permits, railroad permits, NYC scaffolding permit, etc.

This area is also a final location for the following permits:

- BDC 401.1 Waiver of Construction Permit
- BDC 405 Construction Compliance Certification
- BDC 405.1 Construction Compliance Certification for Non-OGS Permitted Work

EIC shall scan the final signed versions into this folder. OPC will electronically transfer these documents into the 20 RecordDocuments/Permits subfolder.

EIC shall mail the signed hard copies to OPC to file the originals.

9. 59 Closeout

File digital copies or scanned images of Closeout documents.

- Commissioning
- Record Documents - Testing
- As-Builts
- O&M Manuals
- Testing & Training
Warranties & Certificates

Turnovers

H. 60_UnitPriceWOs

The Unit Price Work Order 60 series subfolders contain documents for JOCS projects.

1. 61_Construction

   a. WO_001_Jxxx

01_RecordDocuments

02_Funding

File digital copies or scanned images of the following documents:

- REQUESTS FOR FUNDING TO CLIENT-BASE JOB ORDER
- CLIENT FUNDING PROVIDED- BASE JOB ORDER
- ENCUMBRANCE REQUESTS- BASE JOB ORDER
- FUNDING DOCUMENTATION FOR SUBSEQUENT MODS

03_Scope_RFP_NTP

File digital copies or scanned images of the following documents:

- COMPLETE, SIGNED NTP PACKAGE FOR BASE JOB ORDER.
- COMPLETE, SIGNED NTP PACKAGE FOR SUBSEQUENT MODS.
- COMPLETE RFP PACKAGE FOR BASE JOB ORDER
- COMPLETE RFP PACKAGE FOR SUBSEQUENT MODIFICATIONS
04_Correspondence

Subfolders will be created for categorizing specific correspondence.

MeetingMinutes

05_Specifications

06_PermitsDesign

07_InspectionsReports

08_PhotosInternal

09_DocumentsOther

10_Submittals

11_Hazmat

12_Closeout

2. 62_HVAC
Similar file folder structure as the Construction folder.

3. 63_Plumbing

Similar file folder structure as the Construction folder.

4. 64_Electric

Similar file folder structure as the Construction folder.

5. 65_Roofing

Similar file folder structure as the Construction folder.

I. FILE FOLDER ORGANIZATION

1. PROJECT FILE HIERARCHY
FILE FOLDER ORGANIZATION FOR 40,000 SERIES, QS, MS, AND JOCS IS ORGANIZED INTO SIX (6) MAJOR CATEGORIES AND ARRANGEMENT AS ILLUSTRATED BELOW:

2. CONTRACTMGT - 10 SERIES CATEGORY:
3. **RECORDDOCUMENTS - 20 SERIES CATEGORY:**

4. **DESIGNPHASE - 30 SERIES CATEGORY:**
5. **BIDAWARDPHASE - 40 SERIES CATEGORY:**

- 40xxx
  - 10_ContractMgt
  - 20_RecordDocuments
  - 30_DesignPhase

- 40_BidAwardPhase
  - 41_FinalDocProcessing
  - 42_FinalSpecs
  - 43_Addenda
  - 44_PreBid
  - 45_PreAward
  - 50_ConstructionPhase
  - 60_UnitPriceWOs

6. **CONSTRUCTIONPHASE - 50 SERIES CATEGORY:**
7. UNITPRICEWOS - 60 SERIES CATEGORY:
J. EMERGENCY PROJECTS FILE FOLDER STRUCTURE

K. Exxxx

The Emergency project numbers contain two letter characters followed by three numerical characters. These project types have a unique file folder structure.

1. 01_RECORDDOCUMENTS
   - NTP Letter
   - Cancellation Letters
   - BDC 46 Bid Tabulation
   - BDC 318 Declaration of Emergency
   - BDC 318 Reverse
   - BDC 319 Request to Increase funds
   - BDC 320 Three Bid Waiver requests with corresponding approval Letter.
   - BDC 391 Contract Closeout Report
   - BDC 401 or BDC 401.1 Code Compliance Certification
   - BDC 402 Code Compliance Review Checklist
   - BDC 405 Construction Compliance Certification

2. 02_BIDSOLICITATION
   - Proceed letter
   - BDC 46 Tabulation Bids – Verbal
   - BDC 316 Emergency Declaration
   - BDC 310 Cost Plus Percent Fee Emergency Contract Notice to Bidders
   - BDC 310.1 Cost Plus Percent Fee Emergency Contract Scope of Work
   - BDC 310.2 Cost Plus Percent Fee Emergency Contract Bid Quote
   - BDC 308 Emergency Contract Transmittal
   - BDC 309 Fixed Price Emergency Contract Notice to Bidders
   - BDC 309.1 Fixed Price Emergency contract Scope of Work
   - BDC 309.2 Fixed Price Emergency Contract Bid Quote
   - DCA-3 Offerer Disclosure of Prior Non-Responsibility Determinations
   - Copies of Faxes to Contractors
3. **03_CONSULTANTCONTRACT**
   This folder is the location for documents that establish consultant contracts, authorize assignments and issuing payments.
   - BDC 41 REQUEST FOR TERM ASSIGNMENT
   - BDC 83 REQUEST FOR HAZARDOUS MATERIALS TESTING
   - CP11 ACCEPTANCES

4. **04_CORRESPONDENCE**
   THIS FOLDER IS WHERE TO FILE DAY-TO-DAY PROJECT CORRESPONDENCE.

   **A. MEETINGMINUTES**
   - MEETING MINUTES
   - BDC 224 ATTENDANCE SHEETS

5. **05_SUBCONTRACTORSSUPPLIES**
   This folder is where to file sub-contractor/supplier bid solicitations, sub-contractor/supplier response(s) and bid tabulations, sub-contractor/supplier authorization to proceed letters.

6. **06_PERMITSDESIGN**
   This folder is the location for Code review forms and special inspection forms.
   - BDC 101 CONSTRUCTION PERMIT
   - BDC 215 CODE COMPLIANCE CERTIFICATE
   - BDC 403 DESIGN COMPLIANCE CERTIFICATION
   - ENVIRONMENTAL PERMITS, SEWER, STORM, ETC.

   File types include Word documents (.doc), Acrobat files (.pdf) and scanned image files (.tif, .jpg).

   Also, the location for drawings, cover letters and other electronic backup data for Field Orders or Change Orders – raster images (.tif, .jpg), Excel spreadsheets (.xls), Word documents (.doc), etc.
7. **07_INSPECTIONREPORTS**
   - BDC 268 DAILY LABOR REPORT
   - BDC 269 DAILY MATERIAL AND EQUIPMENT REPORT
   - BDC 346 FIELD INSPECTION REPORT
   - BDC 346.1 INSPECTOR’S DAILY INSPECTION REPORT
   - BDC 380 ACTIVATION INSPECTION
   - BDC 381 BENCHMARK INSPECTIONS
   - BDC 382 NOTICE OF DEFICIENCY
   - BDC 383 PRE-ACTIVITY MEETINGS
   - BDC 384 MOCK-UP INSPECTIONS
   - BDC 385 FIRST DELIVERY INSPECTIONS
   - BDC 386 ACCEPTANCE TEST
   - BDC 387 CONCEALED SPACE ENCLOSURE INSPECTION
   - BDC 388 CONTRACT COMPLETION LIST
   - BDC 406.1 STATEMENT OF SPECIAL INSPECTIONS

8. **08_PHOTOSINTERNAL**
   This folder is where electronic photographs are filed.

9. **09_COFOINTERNAL**
   This folder is the location for drawings, cover letters and other electronic backup data for Field Orders or Change Orders – raster images (.tif, .jpg), Excel spreadsheets (.xls), Word documents (.doc), etc.

10. **10_SUBMITTALS**
    This folder is where to file the schedule of submittals and backup data for DCNET entries.

11. **11_PAYMENTSESTIMATE**
    This folder is where to file place a copy of the following:
    - BDC 187 DETAILED ESTIMATE
    - BDC 271 EMERGENCY CONTRACTOR LABOR EXPENSE REPORT
    - BDC 271.1 EMERGENCY SUBCONTRACTOR LABOR EXPENSE REPORT
OGS Design Procedures Manual

A Guide to Designing Projects for Design & Construction

- BDC 272 EMERGENCY CONTRACTOR MATERIAL EXPENSE REPORT
- BDC 272.1 EMERGENCY SUBCONTRACTOR MATERIAL EXPENSE REPORT
- BDC 274 EMERGENCY CONTRACTOR EXPENSE AND FEE SUMMARY
- BDC 274.1 EMERGENCY SUBCONTRACTOR EXPENSE AND FEE SUMMARY
- BDC 275 EMERGENCY CONTRACTOR TRAVEL EXPENSE REPORT
- BDC 275.1 EMERGENCY SUBCONTRACTOR TRAVEL EXPENSE REPORT

12. 📂 12_CLOSEOUT
This folder is the location to file electronic copies of warranties
CHAPTER 10 – REFERENCES

10.2 NAMING CONVENTIONS

A. GENERAL

1. File and Folder names can be divided between those that are 'descriptive' and those that are 'non-descriptive'. A descriptive file name is made up of actual words, abbreviations or numbers that bear some relation to the content. A non-descriptive filename is likely to consist of numbers, or a combination of numbers and characters, that have no significant meaning to the person looking at the name of the file or folder.
   a. Use descriptive names as often as possible.

2. Do not use spaces in the name. Instead, each ‘word’ in the name should start with a capital letter
   a. Examples: SiteVisitLog.doc, Bdc41WorkOrder1.xls, DesignReviewComments.doc, MasterSpec04
   b. Windows operating systems do allow spaces and even seem to encourage you to use them. However, some of the programs which access the files have problems with spaces.

3. Do not use punctuation marks or other special characters in the name of the file.
   a. If necessary for clarity, only use hyphens or underscores. Hyphens are preferred because underscores are sometimes hard to see.
   b. There should only be one period in the file name separating the name from its three- or four-letter extension.

4. Rename scanned files from the machine default.
   a. Files named “Scan001.pdf”, “31scan724.tif”, etc. are not to be filed ‘as is’.

5. Each folder should contain multiple documents. Do not create a series of folders to house one document each.
   a. Example: The MeetingMinutes folder contains 20070821Minutes.doc, 20070807Minutes.doc, 20070724Minutes.doc, and 20070710IJM.doc

B. NAMING FILES AND FOLDERS
1. Keep file and folder names short (under 25 characters) but meaningful.
   a. Windows limits the path name of a file to 254 characters starting at 'V:\DesignAndConstr\...' Exceeding this limit may make the file inaccessible and prevent it from being 'backed up'.
   b. ‘Title’ folders and documents. Do not use a brief description of the file as the file name.
   c. Having the project number as part of every name is not always necessary since you are working in a folder named for the project.
   d. Be sure to include the project number in the name of files you plan on sending to non-OGS personnel.

2. When appropriate, add the date to the file name in the form YYYYMMDD.
   a. When saving emails into the Correspondence folder, precede the file name (which is usually the subject line) with the date. Windows will not allow two identical file names to exist in the same folder and will usually overwrite emails without asking.

3. Include the BDC designation as part of the name
   a. Examples: Bdc41WO50ToS0465.docx, 20071113Bdc83HudsonCF.docx, Bdc41Gilbane20061008.docx, Bdc353Response20040201.docx

4. Name Project Manual sections with the CSI section number followed by the section title without any spaces.
   a. Examples: 093013CeramicTile.docx, 055100MetalStairs.docx

5. Name Estimate files with the project number, trade letter and project phase
   a. Examples: 41111CBudget.xlsx, 41111HProgram.xlsx, 41111ERevProgram.xlsx

6. Name drawings (AutoCAD, Microstation, etc.) according to the guidelines set in Chapter 5.4 Electronic Documentation.

7. Name drawing images with the project number and drawing number (e.g., 40290A-503.pdf, 43504M-503.tif)

C. ELECTRONIC MAIL (EMAIL)

1. Include the project number in the subject line of all project related correspondence.
CHAPTER 10 – REFERENCES

10.3 COMMUNICATIONS GUIDE

(DESIGN AND CONSTRUCTION STAFF PROTOCOL)

(2) Maintain open lines of communications between Designers and Field Staff on all projects.

A. Effective communication between construction and design staff is essential to the successful completion of a project. The organizational chart on the following page was developed to better identify the various levels of project responsibility and the inter-relationship between the construction and design groups.

It is always appropriate for an Engineer-In-Charge (EIC) to contact the Project Manager (PM) for a particular project to discuss issues and/or questions. Conversely, a PM should contact an EIC for the same reasons. If however there are issues that need to be carried to a higher level for resolution, the organizational chart provides a guide to the communication chain hierarchy.

The resolution process should be for a person to only go up one level above his/her respective level. If at that level, the issue is not resolved, the person raises the issue up their chain-of-command. The process continues up the chain until such time that the issue is raised to the Executive Director of Design and Construction for OGS D&C to make the final determination. The EIC and PM should strive to resolve issues at the lowest level that is practical.

B. TOOLS TO FACILITATE COMMUNICATIONS

1. Telephone: Pick up the phone and call each other. Cell phones and voice mail allow us the opportunity to easily contact each other. Always follow professional standards.

2. DCNet: Use the project staffing directory feature in DCNet to establish names and roles for the project. The Team Leader (TL) or the PM assembles and maintains trade discipline names / roles throughout the projects life. The Regional/Area Supervisor inputs and maintains field staff names and roles.
3. **Email:** In addition to Outlook, using the email feature in DCNet Staffing facilitates communications and distribution to the project team. Enter and maintain D&C staff names and applicable roles in DCNet to maximize this utility. Consultants, facility staff and client’s information can also be added manually into the system. When composing an email message, proofread it before sending and ask yourself what your reaction would be if you received it. Always follow professional standards.

4. **Teleconferencing (multiple parties):** The EIC and the PM can facilitate multiple party communications by using teleconferencing. Good communications occur by getting the right staff together to facilitate interactive / dynamic conversations. This may include at times various combinations of team members such as the Consultant, facility, Client, EIC, Field Staff, TL, PM, BU Leader, design specialists, Contractor Area Supervisor,, sub-contractor, etc.

5. **Online Meetings (multiple parties):** The Project Team can use an online meeting service via the internet in real time to share desktops and visually view project documents.
D&C COMMUNICATION CHAIN

(a)

(b) C. PROGRAM PHASE

1. **Field Trip:** The TL/PM / Consultant/Designer shall coordinate all field trips with Field Staff. Field Staff often has information regarding institutional history, ongoing projects, facility changes, etc. which is beneficial to the early stages of design. Additional field trips may also be required during the design process.

2. **Program Reports:** The EIC can access the final Program Report at any time. This report shall be filed in the Program project folder.

D. DESIGN PHASE

1. **Design Development:** Best Practice - during the design phase prior to the 100% Submission it is recommended that the design team (including the PM, EIC, Consultant/Designer, appropriate Field Staff and client representatives) meet at the
facility premises to review the project and its impact on the existing building and/or site. The review meeting should focus on items that impact the facility operations and affect construction activity. Items that should be discussed include the following: phasing, internal and external construction barriers, temporary utilities, utility tie-ins and shutdowns, site and building access and egress, fire safety, fire watch, hot works permits, occupied facilities, hazardous materials containment, staging, materials storage and parking areas, work hours, odors / dust / noise mitigation, unusual project conditions, SWPPP, salvaging of materials, owner-provided items, long lead items and critical submittals, specific allowances, etc.

2. 100% Submission Phase

Document Review / Response Form BDC 35.3 and Field Check Review / Response Form BDC 35.2: Shall be used by the Pre-Construction Group and field staff performing the field check. Consultant/Designer shall respond to field comments using these forms. These forms shall be filed in the ReviewComments project folder by the PM. Using this form should not be a substitute for discussion between parties.

E. BID PHASE

1. Pre-bid Site Visit: The TL/PM and Area/Regional Supervisor shall discuss whether a Pre-bid Site Visit is required for the project and whether the Consultant/Designer should be required to attend. When both parties agree, the Consultant/Designer can participate via a teleconference call (after the walk through is conducted by the EIC and Contractors).

2. Pre-award Meeting: The TL/PM should discuss with the Area/Regional Supervisor the complexity of the project. Pre-award meetings are mandatory for all contracts over $1,000,000. Conference calls are an acceptable substitute for face-to-face meetings. A Pre-award Meeting may be held when there is a scope related concern with the low bidder or a new bidder. The Area/Regional Supervisor can waive the requirement for a pre-award meeting on contracts under $1,000,000 if the following conditions are met:
   a. The contractor has performed acceptably on previous OGS projects.
   b. The PM/TL agrees to waive the pre-award (the PM is not aware of any significant project-specific issues that should be addressed at a pre-award).
   c. The post-bid analysis did not identify any significant concerns or discrepancies.
   d. An acceptable work plan has been submitted.

3. Design / Construction Pre-Construction Teleconference Meeting: Between project bid and award, the TL/PM shall contact the Area Supervisor/EIC and Consultant/Designer to discuss the project intent, project specifics, establish contact list names, roles and any other items pertinent to the project. Review the proper “chain-of-command” and copies / distribution lists. The TL/PM should be made aware of all project correspondence. Review the Consultant Work Order for this phase including number of site visits required on the project (the number agreed upon can always be supplemented).

F. CONSTRUCTION PHASE

1. Electronic Web-Based Construction Collaboration System (submittals website): A third-party electronic web-based collaborative system is utilized by the project team (including contractors, consultants and client) during the construction phase for the shop drawing submittal
process. The collaboration system shall be used to manage other forms of construction communications and documentation including but not limited to Requests for Information, Information Bulletins, meeting minutes, testing reports, schedules, contract documents, SWPPP reports, etc. The use of the system and its capabilities should be a discussion item between the PM/EIC preferably at the Design / Construction Pre Construction Teleconference Meeting.

2. **Job Meeting Minutes:** Shall be issued by the EIC and emailed to the TL, PM and lead Consultant/Designer. EIC shall use electronic format file meeting minutes in the submittals website.

3. **Request For Information (RFIs):** RFIs shall be issued by the Contractor using the submittals website (BDC 22 RFI form) to facilitate legibility and timeliness of questions and responses. Require the Contractor to submit RFIs with all related backup sketches and documentation. Information requests generated by the EIC and the Field Staff shall be discussed in a telephone conversation or use of email.

4. **Information Bulletins (IBs):** IBs shall be issued by the trade specific Consultant/Designer using the submittals website (BDC 23 IB form). All IBs shall be discussed and reviewed by the TL/PM prior to issuing the information. IBs shall be issued for ALL design changes / clarifications whether they are cost, no cost or credit. The EIC shall discuss IBs with the TL/PM and Consultant/Designer and shall issue a FO or a CO as required.

5. **FOs/COs:** FOs/COs shall be issued by the EIC. ALL FOs and COs shall be emailed or discussed verbally in a timely manner with the TL, PM and Consultant/Designer using pdf electronic format. The OGS Project Team shall file FOs, COs and backup in the **FieldOrder** and **ChangeOrder** project folder located in the DCNet Construction folder. BDC 98’s are stored within DCNet. The EIC should post final FOs and COs on the submittals website. The official approved copies are located in the Division of Contract Administration for the contract record. The CO/FO process is described in detail in the CPM sections 4.6.1 and 4.6.2.

6. **Field Visits to the Construction Site:** Consultant/Designers will notify the EIC when they will be visiting the construction site or the EIC should call Consultant/Designers when they feel a design trip is warranted. Proper notice of at least 72 hours is recommended (especially for Dept. of Corrections projects for security clearances).

7. **BDC 151 – Design Observation Report:** When a site visit is made by the Consultant/Designer the EIC should accompany them to discuss the project. The Consultant/Designer should discuss any deficiencies with the EIC during the tour when observed. At the very least, the Consultant/Designer should discuss any deficiencies with the EIC at the end of the day. The Consultant/Designer will initiate a BDC 151 and forward to the EIC and copy the TL/PM. The BDC 151 working copies can be filed in the **InspectionsReports** project folder (located in the Construction folder) and the final version with responses to comments posted to the submittals website. The EIC will follow up on deficiency items using the same BDC 151 form generated by the Consultant/Designer. Depending on project size, the EIC may wish to create an ongoing Rolling Completion List to track items in a consolidated contract specific log.