DIVISION 01 – GENERAL REQUIREMENTS

01 31 13 – Project Coordination (Clash-Detection)

1. Purpose
    a. The CM shall include MEP Coordination via a third-party (Coordination Contractor) on projects that include new buildings, additions, major renovations, or as directed by the Project Manager.
    b. The result of the coordination process shall be a set of Coordination Drawings that details the completed coordination of mechanical, electrical, plumbing, and fire protection systems used by each trade during the construction phase. The Coordination Drawings shall be signed off by all trades involved for accuracy and adherence during construction.
    c. RIT, the CM, and all trades will be represented and shall participate in the Coordination process and meetings. Each trade will be responsible for accurately drafting associated services, such as routing and offsets, equipment modeling and placement, and maintaining proper clearances and access.
2. Coordination Contractor Responsibilities, at minimum,
    a. Establish a file/folder organization and naming protocol and determine the appropriate means and frequency of file transfer.
    b. Establish the level of detail for drafted elements. At minimum, include all piping, duct, cable tray, insulation, lights, conduits, equipment with proper clearances and maintenance access areas.
    c. Provide and maintain schedule for the coordination process based off the project milestone schedule.
    d. Lead coordination meetings at intervals determined by Project Manager and Coordination Contractor.
    e. Create page layouts for each level, used for printing the Coordination Drawings, and establish the page numbering for all MEP trades.
    f. Maintain background files, including
        i. 2D architectural files indicating walls, doors, fixtures, column grids, ceiling layouts
        ii. 3D RCP files containing simple extrusions representing ceiling planes
        iii. 2D structural files indicating beam centerlines, designations, elevations, and column lines
        iv. 3D structural files for new construction

01 31 19 – Meetings

1. During the project design phase, conduct a minimum of four review meetings per project: stakeholders meeting (programming), SD design review, DD design review, and CD design review.
2. A/E firm is responsible for documenting meeting minutes and distributing within 4 days of the meeting.

01 33 00 – Submittal Procedures

1. Submittals shall be transmitted via method determined by the RIT Project Manager.
2. Required submittal types
    a. Product Data, Shop Drawings
    b. MDS
    c. Certifications
3. All products used in construction shall be submitted by the contractor and reviewed by the design team and RIT FMS, followed by the A/E for formal response.
4. Reference RIT *General Conditions of the Contract for Construction*, found at https://www.rit.edu/fa/procurement/construction/constructiondocs.html

01 35 00 – NYSERDA and LEED Construction Process

1. New Construction
    a. RIT's internal NYSERDA manager will be solely responsible for submitting applications for incentives to the New Construction Program, selecting FlexTech contractors, and working with assigned NYSERDA Outreach Project Consultants.
2. Existing Facilities (Performance-Based)
    a. RIT's internal NYSERDA manager will be solely responsible for submitting applications for incentives to NYSERDA after reviewing and approving the Exhibit A-1 Scope of Work provided by the consultant.
3. Existing Facilities (Pre-Qualified)
    a. RIT's internal NYSERDA manager will be solely responsible for submitting applications to NYSERDA, except in situations where NYSERDA requires payment be made directly to the contractor, such as with solar installations. In all other cases, contractors and vendors will be required to submit copies of supporting documentation such as product literature, equipment specification sheets, engineering data, quotes, and submittals.

4. FlexTech
    a. RIT's internal NYSERDA manager will be solely responsible for submitting applications for incentives to NYSERDA after reviewing and approving the Exhibit A-1 Scope of Work provided by the vendor. Approval from NYSERDA does not constitute authorization for the vendor to begin work. That authorization will come in the form of a purchase order from RIT once internal funding for RIT's portion of the project has been secured.
5. Direct all facilities-related NYSERDA inquiries to:
    Thomas Garland
    120 Lomb Memorial Drive, Rochester, NY 14623
    585-475-5260 tpgfms@rit.edu

01 44 19 – Contractor Rules

1. Project Administration
    a. Provide a work schedule prior to starting work.
    b. Submit detail documentation for any T & M work.
    c. Obtain the Project Manager's approval prior to undertaking any changes that will incur additional cost.
    d. Provide closeout documentation prior to requesting final payment.
2. Conduct
    a. Respect students, faculty, and staff. Harassment (e.g. leering or use of foul language) or disturbance (e.g. radios or loud talking) will not be tolerated.
    b. Assure workers are properly attired.
    c. Normal work hours are 7:00 AM to 3:30 PM unless prior arrangements are made with the Project Manager.
    d. Smoke in approved areas only. There is no smoking inside any buildings.
    e. No two-way radios or cell phones are allowed inside Wallace Library.
3. Housekeeping
    a. Clean worksite daily.
4. Communication
    a. Ensure that the Project Manager is advised of any deviations from schedule or scope.
    b. Do not take directions from anyone but the Project Manager.
5. Teamwork
    a. Take ownership of every facet of the project, and maintain an owner's perspective of quality balanced with budget.
6. Keys
    a. Obtain necessary keys from Project Manager prior to starting work.
    b. A $500 fine will be imposed for lost keys.
7. Accidents and Emergencies
    a. Report any accident to Campus Safety, including:
        i. Injuries beyond first aid
        ii. Spills (oil, chemical)
        iii. Fires
        iv. Fire alarm activation
        v. Sprinkler activation
    b. Call Campus Safety (475-3333) to request emergency or ambulatory assistance.
8. Fire Alarms
    a. Bag smoke detectors within and adjacent to the work area prior to starting work each day. Bags must be removed at the end of each day. A $500 fine will be imposed for each avoidable false alarm.
    b. For larger construction projects, heat detectors should be utilized for the duration of the work. Smoke detectors will need to be reinstalled before project completion. Coordinate switch with PM prior to project start as approval from EH&S and Town of Henrietta is required.
9. Fire Extinguishers
    a. For new construction: extinguishers should be ordered directly from Firematics through the project funding. Consult with EHS for type and size prior to placing order.
    b. For smaller projects, renovations, or replacements: Up to five extinguishers may be ordered through Environment Health & Fire Safety Technician. Order will be an internal chargeback to the project. Include type and size required or consult with EHS prior to order.
10. Lithium-Ion Batteries
    a. Follow manufacturer's instructions for storage, use, charging, and maintenance of lithium-ion batteries.

   b. Batteries are not to be left charging overnight and unattended.
   c. Batteries showing signs of damage shall not be used and must be disposed of appropriately by the contractor.
   d. Additional safety information: https://www.osha.gov/sites/default/files/publications/OSHA4480.pdf
11. Hazardous & Universal Waste Management
   a. Hazardous waste streams generated during the project must be managed separately from non-hazardous waste streams. Contact the Project Manager for questions.
   b. Reference 26 50 00 for proper disposal of lamp and ballast waste.
12. Safety
   a. Be aware of the Deaf and hard of hearing population on campus (delivery vehicles, forklifts, cranes, etc. must utilize flagmen).
   b. Comply with all codes and safety rules, regulations, and practices.
   c. Reference Section 00 73 19 for further safety requirements.
13. Parking and Transportation
   a. Acquire a parking permit via the web-based form on the Parking and Transportation website, https://www.rit.edu/parking/vendors-contractors.
   b. No vehicle shall be permitted to park on grass areas or pedestrian walkways unless specifically authorized by Project Manager.
   c. The contractor shall not store vehicles, equipment, or material on campus property without approval.
   d. Loading and unloading of equipment shall be performed at the location determined by Project Manager.
   e. Each site has unique requirements for student and faculty safety and convenience that will impact the location and type of construction safety fencing, barricades, signage, etc. The bid documents shall require that the contractor prepare a plan for these items for review with the Project Manager before commencing with the project.
   f. Driving or parking on sidewalks is prohibited.
   g. Fire Gates are to remain locked at all times. If you need to open a gate to drive through, you must stop and lock it immediately behind you.
   h. Citations issued to contractors must be paid within 10 days. Parking passes will not be issued to contractors with outstanding citations.

01 50 00 – Temporary Facilities and Controls

1. Contractor may be permitted to use existing utility services for minor renovation projects with Owner's permission. Design team needs to confirm availability before issuing bid documents.
2. Temporary Facilities
   a. Enclose the construction area with a fence; coordinate product with owner. Reference RIT *General Conditions of the Contract for Construction*, found at https://www.rit.edu/fa/procurement/construction/constructiondocs.html
   b. Provide self-contained toilet units as required.
   c. Field Offices: Provide separate offices for contractors as required. Local permitting for office trailer use is the responsibility of the contractor.
3. Contractor shall provide and maintain signage that restricts access to site of all persons not employed by contractor or authorized university employees.

01 73 29 – Cutting and Patching

1. Reference RIT *General Conditions of the Contract for Construction*, found at https://www.rit.edu/fa/procurement/construction/constructiondocs.html

01 77 19 – Closeout Requirements

1. A punch list walkthrough shall be performed prior to project closeout.
2. Refer to Division 1 Appendix 2 for documents required throughout phases of project and as-built requirements.
3. Asset Spreadsheets:
   a. Master Keying Schedule
      i. During the construction phase, the door hardware contractor shall populate columns A-F; submit to RIT Project Manager.
      ii. The RIT lock shop shall populate columns G and H; RIT Project Manager will send document back to GC and door hardware contractor.
      iii. The door hardware contractor shall order appropriate cores.
   b. HVAC Equipment Modification Form

i. The HVAC contractor shall populate the entire spreadsheet; submit to RIT as part of the closeout process.
ii. The spreadsheet shall include all HVAC equipment installed as part of the project.

c. Electrical Equipment Modification Form
i. The electrical contractor shall populate the entire spreadsheet; submit to RIT as part of the closeout process.
ii. The spreadsheet shall include all electrical equipment installed as part of the project.

d. Spreadsheet Files


Master Keying Schedule Template.›


HVAC Project WORKBOOK 01-202


Electrical assets.xlsx

4. Retainage shall be paid in response to obtaining all close-out documents.

01 78 46 – Extra Stock Materials

1. No attic stock shall be purchased unless otherwise noted during the design phase.
2. Any unused or leftover finishes and fixtures shall be turned over to RIT unless noted otherwise.

01 81 13 – Sustainable Design Requirements (RIT Climate Action Plan)

1. Adhere to RIT's Climate Commitment, https://www.rit.edu/sustainablecampus/climate-commitment

01 84 00 – Space Definitions and Guidelines

1. Office Types
   a. Closed: visual and audible separation with full walls or panels to or through the ceiling, lockable door, natural light preferable but not required
   b. Semi-Closed: visual separation and partial audible separation with (approximate) 84" high walls or panels, door, borrowed light preferable but not required
   c. Semi-Open: shared office space with partial height panels providing visual separation when seated
   d. Open: shared office space with screen separation of work areas
   e. Note: Appendix 1 shows the recommended net assignable square feet (NASF) by position type. These guidelines are not a guarantee that an individual will receive a specific office type or amount of square feet but rather defines the maximum NASF an employee should occupy. NASF is defined as the area of a building suitable for occupancy, measured from the interior walls, including closets and secondary corridors within assignable space. This excludes main corridors, bathrooms and other non-assignable space.
2. Restroom Types
   a. Student / staff only
      i. Intended for daily use by local occupants and the overall campus community
      ii. Not typically used by public; used by public only during special events like open houses, festivals, etc.
   b. High-profile / public-facing
      i. Intended for campus visitors in public-access buildings/spaces
      ii. Locations include public-facing areas in/near event centers, cafeterias, sports arenas, theaters, auditoriums
3. Space Naming
   a. Do not use the term "Room" unless it is part of the official name, such as "Breakroom".
   b. Accepted restroom names; used with the presence of toilet fixtures only:
      i. Women
      ii. Men
      iii. All-Gender Restroom
      iv. All-Gender Multi-Stall Restroom
   c. Accepted bathroom names; pictograms include Man, Woman, and/or shower:
      i. All-Gender Bathroom; used with the presence of toilet fixtures AND bathing fixtures, such as student housing bathing rooms
      ii. Shower; used with the presence of bathing fixtures WITHOUT toilet fixtures
   d. Accepted building operations space names:
      i. Custodial; not "Janitor's Closet"

ii. Mechanical
iii. Electrical
iv. Storage
v. Elev Mach; not “Elevator Machine Room”
vi. Network; used for rooms containing ITS, data, phone, etc.

e. Accepted other space names:
i. Classroom; used for general instructional spaces that accommodate a variety of subjects
ii. Class Lab; specialized academic spaces with equipment/fixtures specific to the topic studied; “Class” can be substituted with word or phrase indicating type of lab, such as “Computer Lab” or “Biology Lab”
iii. Research Lab; non-instructional space dedicated to research
iv. Breakroom; used in spaces with the presence of a sink AND a seating area
v. Kitchenette; used in spaces with the presence of a sink WITHOUT a seating area
vi. Conference; used by faculty/staff for work-related meetings
vii. Meeting; used by faculty, staff, students, and public for non-class meetings
viii. Study; used by students for small group work

01 89 00 – Site and Parking Lot Design Standards

1. Include the following notes and specifications in engineering packages.
   a. Approved drawings
   b. Schedule of work
   c. Call both RIT and Dig Safely at least four days in advance for utility stakeouts.
   d. Provide survey/utility drawing based on RIT datum.
   e. Provide and maintain erosion control as noted on plan prior to start.
   f. Provide proper signage during construction to maintain traffic flow.
   g. Provide required maintenance and protection of traffic.
   h. Strip and stockpile topsoil on site per RIT direction. Discuss requirements **per project** with Grounds Foreman prior to issuing bid drawings.
   i. Excess non topsoil to be determined by RIT if left on site or removed from site.
   j. Provide required temporary and permanent signage.
2. A turning radius of 43 feet shall be required for RIT shuttle buses.

Appendix 1 – Position NASF Table

	Position/Title	Net Assignable Square Foot			
		Closed	Semi-Closed	Semi-Open	Open
Executive	President	360			
	Provost	300			
	Sr. Vice President	300			
Academic	Dean / Associate Provost	240			
	Associate / Assistant Dean	180			
	Administrative / Chair	120			
	Tenured / Tenure-Track	96			
	Non-Tenure Track	96	96		
	Adjunct (not required; varies by department)			24	24
	Post-Doc		64	64	
	Grad Student - PhD			48	48
	Grad Student – Masters, TA or RA			48	48
	Grad student – Masters, Research				24
	Grad Student – Masters, FA/Architecture			80	48
Administrative	Vice President	240			
	Associate / Assistant Vice President	180			
	Director	120			
	Associate / Assistant Director	96			
	Manager / Supervisor	96			
	Full-time Staff	96	80 / 64	64	
	Part-time Staff		80 / 64	48	
	Temporary Full-time / Co-op		80 / 64	48	
	Temporary Part-time / Student Employee			48	24
General	Department Office / Reception	96 SF per module [1 mod ≤ 10 HC < 2 mod ≤ 80 HC < 3 mod]			
	Conference	25 SF per FTE			
	Collaboration	2.5 SF per full-time student			
	Lounge/Gathering	10 SF per FTE			
	Office Support	25% of office NASF			

NASF: Net assignable square feet
HC: head count
FTE: Full-time employee
Mod: module

Appendix 2 – Project Record Documents

1. General
    a. The Architect and Engineer shall provide RIT with the following digital files that reflect the final, constructed conditions of the project during Closeout. Each item listed shall be submitted as a separate file (separate files for trades and separate files for each CSI division section):
        i. Record Drawings
        ii. Digital Model
    b. The Contractor(s) shall provide RIT with the following digital files that reflect the final, constructed conditions of the project during Closeout. Each item shall be submitted as a separate file (separate files for trades and separate files for each CSI section):
        i. As-Built drawings for each trade/service included in the project
        ii. O&M Manuals
        iii. Approved Submittals
        iv. Warranty Letters
        v. Inspection Certificates
        vi. Logs: RFI, ASI, Submittal
        vii. Asset Spreadsheets
    c. Deliverable submissions shall be made via USB-drive, file share, or email, as determined by the Project Manager. Drawings must follow conventions and guidelines outlined in this specification in addition to those outlined in the RIT CAD Specifications.
    d. Submit a list, using Microsoft Word (.doc) or Microsoft Excel (.xls), of all drawings included in the submittal package, including drawing numbers, titles, and file names. The A/E firm is responsible for including any copyright information or restrictions pertaining to these documents.
2. Revit models are required on all construction projects with a total project funding of **$2,000,000 or greater**.
    a. The final Revit files used in the Design Services phases of a project, including all project revisions and modifications, shall be transmitted to RIT according to section 6. Schedule.
    b. Submit separate building models for each trade, not part of a worksharing central file.
    c. All models must be drawn using at least Revit 2020 version and not more recent than Revit 2024. Files shall be .rvt file extension and not password protected.
    d. Revit models shall include all geometry, physical characteristics, and product data needed to accurately represent the design and construction work of a project. Drawing sheets, schedules, simulations, and services required for assessment, review, bidding, and construction shall be extractions from this model.
    e. Any use of Revit translation software must result in 100% compatibility with the RIT computer hardware and software.
    f. Purge all unused items before submitting.
    g. Remove all unnecessary links.
    h. Providing Revit files does not preclude also providing AutoCAD files.
3. AutoCAD drawing files are required on **all** alteration, addition, and new construction projects.
    a. “Repair” or “replace in kind” projects do not require AutoCAD files. Examples: removing an existing door to install a new door would not require AutoCAD files; moving a door location would require AutoCAD files.
    b. The final AutoCAD files used in the Design Services phases of a building project, including all up-to-date revisions and modifications, shall be transmitted to RIT according to section 7. Schedule.
    c. Submit separate files for each trade.
    d. All models must be saved as an AutoCAD 2013 version. Files shall be .dwg file extension and not be password protected.
    e. AutoCAD files shall include all geometry, physical characteristics, and product data needed to accurately represent the design and construction work of a project. Drawing sheets shall be extractions from this file.
    f. Any use of AutoCAD translation software must result in 100% compatibility with the RIT computer hardware and software.
    g. Apply the following settings prior to submitting:
        i. Convert all 3D objects to 2D. All linework should be at elevation 0’-0”.
        ii. Use the “PURGE” command to remove ALL unused objects (blocks, dimstyles, layers, linetypes, shapes, materials, styles, etc.).
        iii. Turn off “SNAP” and “GRID”.
        iv. Change the background color to BLACK.
        v. Lock all viewports.

vi. Name the Layout tabs as intended for printing using drawing designators outlined in section the CAD Specifications.
vii. Remove all unused Xref files, and use the “BIND” command to attach all Xref files to the drawing files on the 0 – XREF layer.

4. PDF record drawing files are required on all construction projects, regardless of total project funding or scope.
    a. The final PDF record drawing files used in the Design Services phases of a project, including all project revisions and modifications, shall be transmitted to RIT according to the schedule below.
    b. The files shall not be password protected.
    c. Each sheet shall be its own unique file.
    d. PDF files shall be created as a plot from the Revit model or AutoCAD drawing, scaled appropriately on ARCH D or ARCH E size media. Include all geometry, physical characteristics, and product data needed to describe final constructed conditions of a project.
5. PDF as-built drawing files
    a. Markup construction drawings with red line edits as applicable. If no construction drawing was provided initially, contractor shall provide a sketch layout showing project scope and constructed conditions.
6. Schedule of Deliverables

Item	*File Format*
Program Verification and Concept Design	
As determined by Project	
Schematic Design	
As determined by Project	
Design Development	
As determined by Project	
Construction Documents and Bidding	
90-95% Drawings and Specifications Review Set	PDF
“Issued for Permit” Drawings	As requested by local authority
“Issued for Bid” Drawings	PDF, DWG floor plans
Project Manual	PDF
Construction Administration and Closeout	
“Issued for Construction” Drawings	PDF, DWG floor plans
Certificate of Occupancy	PDF
As-Built Drawings (all trades)	PDF
Record Drawings (final, constructed conditions)	PDF, DWG
Digital Model (final, constructed conditions)	RVT
O&M Manuals, Submittals, Warranty Letters, etc.	PDF
Asset Spreadsheets	XLSX

End of Division 01