



1215 Houbolt Road  
Joliet, IL 60431



8550 West Bryn Mawr Avenue  
Suite #500  
Chicago, Illinois 60631  
Telephone 773-695-3500  
Facsimile 773-695-3501

October 13, 2010

To: **All Bidders**

Re: **Joliet Junior College, Illinois Community College District No. 525  
Master Facilities Plan Phase 2, Natural Sciences Addition & Renovation, Bid Release 19  
1215 Houbolt Road, Joliet, Illinois 60431**

**02I – Site Work, Excavation & Concrete Work  
05D – Structural & Miscellaneous Steel Work  
06I – General Trades Work  
07D – Roofing Work  
08C – Interior/ Exterior; Aluminum Systems, Metal Wall Panels, Glass & Glazing Work  
09H – Flooring & Tile Work  
12A – Lab Casework & Equipment Work  
15K – Fire Protection Work  
15L – Plumbing & Site Utilities Work  
15M – HVAC, Temperature Controls & Mech. & Lab Piping Work  
16J – Electrical, Fire Alarm & Security/Telecom Work**

Subject: **Supplement No. 3**

Please be advised of the following supplemental information which is to be included in the Proposal as it pertains to the above referenced Bid Packages. This Supplement is issued to modify, explain and/or clarify the original Bid Documents.

### **General Instructions to All Bidders**

- A. The Bid Proposal due date for all Bid Packages REMAINS Tuesday, October 19, 2010 at 9:00 a.m. at Joliet Junior College, 1215 Houbolt Road, Joliet, Illinois 60431. The bids are to be dropped off at Room H1018/H1019 and they will be opened in Room T1002. Please note that H1018 is an interior office space that is located inside Room H1019.**
- B. Incorporate the attached Architect's Addendum No. 3 dated October 13, 2010, into the Bid Documents.**
- C. All bidders are reminded that by submitting a bid, the bidder agrees to the content of the Bid Documents inclusive of Bid Forms, Site Logistics Plan, Safety Plan, etc. provided with the Bid Documents.**
- D. Please note the Bid Bond is to be drawn in favor of Joliet Junior College, Illinois Community College District No. 525 of Joliet, Illinois.**
- E. See attached sign in sheets from the Building Walk-Through on October 12, 2010.**
- F. Project Manual Volume 1, General Requirements, Section 11.0 Payment Procedures has been amended as follows:**

### **Off-Site Storage Material**

In order to invoice for materials stored off-site, the following documents must be submitted. Gilbane will provide a Stored Material Request package, which consists of the following for your execution:

1. Stored Materials Request – Request should be submitted 25 days prior to the established billing date.
  2. A fully executed Bill of Sale naming the Owner as purchaser and a guarantee of delivery to the project site.  
Schedule “A” to the Bill of Sale will list the material to be sold and the total dollar value.
  3. Contractor will provide an “All Risk” insurance certificate of the full invoiced value of the items. The certificate holder should be XXXXXXXXXXXXXXXXXXXXXXXX The insured party, the payee in case of loss, will be the Owner.  
There will be no deductible attached and the policy will provide a minimum of thirty (30) days notice of cancellation to the certificate holder.  
All certificates must list Gilbane and the Owner as “Additional Insureds”
  4. Provide arrangements for a designated Gilbane employee to inspect the material at it’s stored location.
  5. Retention on off-site stored materials is 25%.
- G. Incorporate into Project Manual Volume 1 the revised Total Quality Management Program dated October 13, 2010. Please discard previously issued Total Quality Management Plan.
- H. Incorporate into the bid documents the revised bid forms for **BP 02I Site Work, Excavation & Concrete Work; 05D – Structural & Miscellaneous Steel Work; 06I – General Trades Work; 07D – Roofing Work; 08C – Interior/ Exterior; Aluminum Systems, Metal Wall Panels, Glass & Glazing Work; 09H – Flooring & Tile Work; 12A – Lab Casework & Equipment Work; 15K – Fire Protection Work; 15L – Plumbing & Site Utilities Work; 15M – HVAC, Temperature Controls & Mech. & Lab Piping Work; 16J – Electrical, Fire Alarm & Security/Telecom Work dated October 13, 2010. Please discard previously issued bid forms for all these bid packages.**
- I. Incorporate into bid documents the responses to the following bidder inquiries into the scope of work:

**Bid Package 02I – Site Work, Excavation & Concrete Work**

1. **Question:** Item #14 under Specific Scopes of Work, calls for the infill of floor troughs in existing building. S101A shows the extent of floor troughs and refers you to P200A. P200A calls for infilling existing duct trenches & to provide color to match existing. None of these plans provide a detail. Please provide details for existing duct trench depths and widths, reinforcement requirements, doweling to existing floors, and color requirements.
  - i. **Response:** Refer to attached addendum #3 for dimensions of troughs. No reinforcement or doweling into existing floor is required for troughs. Infill slab detail for new openings in post-tensioned slab is also included in the attached addendum #3. Color requirements are natural concrete color.
2. **Question:** Item #19 under Specific Scopes of Work, calls for sealing of concrete floors. Is the Penthouse slab to receive this sealing. I do not see a finish plan for Penthouse.
  - ii. **Response:** Per Supplement #2, Sheets A-701-A, A-701-B, A-702-A and A-702-B have added general notes that call out the sealed concrete floor at the Penthouse. Supplement #2 also defines the locations of SC-1 and SC-2 and the related sealer product types.
3. **Question:** S101B - Foundation Note #10 calls for removing approx. four feet of unsuitable soils and replacing with Engineered Fill. Per Specs 312300 pg. 5, Engineered Fill is to be CA6. I just want to clarify that the intent is to install four feet of CA6 (and not imported soils) under entire building area to replace unsuitable soils. In addition, will this soils removal and replacement be required beyond the building footprint.
  - iii. **Response:** Note #10 refers to the geotechnical report for the replacement of the removed soil. Per the geotechnical report and the specifications, they call out the acceptable soil that can be used for the fill material. Specifically, specification 31 23 00, page 6, section 2.1.F under Material Applications, note 1 lists the material for general fill, which includes below/adjacent to foundations, slabs and pavements. Per the spec, acceptable soils can be installed as the

general fill material. Specification section 31 2300 - 2.1.B lists those acceptable soils. Engineered fill is only required as shown in detail 1/S-200 and as per section 2.1.F.3.

The described 4 foot undercut and fill does not apply to any specific civil aspect beyond the building. The contractor will be required to provide adequate subbase for all sidewalk associated with the building. Structurally, the fill is only required for the bearing of the new footings and slab on grade within the building footprint. All of the above shall also be in compliance with the Geotechnical Report.

4. **Question:** On S103B, Note #16 calls for concrete stairs/ see Arch Plans. A103 shows stairs, but Section 5/A524 through this area gives no details for these stairs. There are no details for these stairs on A410-A412. Please provide details for these stairs.
  - iv. **Response:** Refer attached addendum #3 for stair details.
5. **Question:** On S200, detail 14/S200 through East exterior stairs shows "Plaza" concrete at base of stairs. A701B shows sidewalks along east side of building from exterior stair to approx. B.2 line. The Civil plans make no indication of sidewalks in this area. Please clarify.
  - v. **Response:** Plaza as shown in the detail is not included in the scope of work for this project, and will be done under a separate contract. The detail has been revised in the attached addendum #3 to indicate that the area is not in contract.
6. **Question:** On C3.31, will new curbing be required at north edge of parking lot adjacent to southeast corner of new sidewalks. Existing curbs terminate approx. 90' west of east edge of parking lot. If curbs are required please clarify the extent and provide detail for type of curb and reinforcement.
  - vi. **Response:** This Trade Contractor will be required to install a thickened edge sidewalk which will serve as the curb for the inner ring road. Coordination with future inner ring road contractor will be required. Refer attached addendum #3 for a detail for the required thickened edge sidewalk.
7. **Question:** Will individual plastic chairs with sand plates be acceptable for supporting mesh in slab-on-grade.
  - vii. **Response:** Exception to this product is NOT acceptable.

#### **Bid Package 05D – Structural & Miscellaneous Steel Work**

8. **Question:** We are the manufacturer's representatives for Architectural Railings & Grilles and we would like to submit out Glen Lake railing system as a substitution for the HDI Circum railing called out in specification section 05 52 13. Please clarify if this is acceptable
  - viii. **Response:** Based on A/E determination, the substitution product does not equally match the aesthetic quality of the HDI basis of design product in the spec. Therefore it is not approved.

#### **Bid Package 06I – General Trades Work**

9. **Question:** The scope of work for bid package 06I – general Trades item 60 calls for providing an x-ray scan and layout of the post-tensioned cables. Is an x-ray scan required or is the more commonly used ground penetrating radar acceptable?
  - ix. **Response:** Ground Penetrating Radar Scan (GPR) is an acceptable method.
10. **Question:** How will the disposal of debris handled from the second floor of the existing building?
  - x. **Response:** This Trade Contractor (06I) will be responsible for providing and maintaining a trash chute on the second floor of the existing building (at the exterior stair). Refer to item # 72 under Specific Scopes of Work under Section L - Scopes of Work for further clarification.
11. **Question:** There are two (2) painting allowances in the bid. One allowance for 250 hours (scope item 34) and another allowance for \$15,000 (item 6 on bid form). Is this correct?
  - xi. **Response:** Yes, this is correct. Allowance under item # 34 in Section L-Scope of Work, Specific Scopes of Work is for touch-up painting work; Allowance under item # 6 in Section J – Cost Allowances is for patching and associated touch-up painting work.

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**Bid Package 07D – Roofing Work**

12. **Question:** The scope of work for the roofing package 07D indicates that our work will include wood blocking. Please verify that this is the intent.
- xii. **Response:** Yes, the roofer is responsible for blocking associated with their system as well as copings.

**Bid Package 08C – Interior/ Exterior; Aluminum Systems, Metal Wall Panels, Glass & Glazing Work**

13. **Question:** On Bid form for 08C are we strike out 07D and hand write in #08C or will new page be submitted?
- xiii. **Response:** Use attached revised proposal form.
14. **Question:** Glass type I-2 per section #08800-2 is listed as tempered wire glass which manufactures do not make primarily due to the fact if it breaks in oven the wire in glass causes problems with temp. oven. We can supply wire glass with film as made by tech. Glass products, safti-first etc. which is fire/safety rated please advise
- xiv. **Response:** Superlite I-W safety film by SAFTI has been added to the spec for the wired glazing. The tempering of the wired glass has been deleted. Refer attached addendum #3 for changes.
15. **Question:** Reviewed supplement #2 upon review there is not a specification for louvers at North Penthouse as detailed on A-515 can you please submit.
- xv. **Response:** Refer to spec section 07 42 14- Insulated Metal Wall Panels, Section 2.05 for specifications on Metal Louvers.

**Bid Package 12A – Lab Casework & Equipment Work**

16. **Question:** Scopes of Work - Page 10, item 9 What lab casework equipment is part of our responsibility to meet the “Commissioning Process” identified in our scope of work?
- xvi. **Response:** Refer spec section 23 99 70 – Mechanical Systems Commissioning for commissioning requirements.
17. **Question:** Page 6, item 2 ”Work Allowance” is \$40,000.00 the correct amount for all of bid package 12A?
- xvii. **Response:** Work allowance of \$40,000 covers the Miscellaneous Work Allowance. This Trade Contractor will need to provide the value and include the General Cleanup Allowance in the base bid.
18. **Question:** Scopes of Work, Page 10, item 17 what “Seismic Bracing” requirements are required in our scope of work?
- xviii. **Response:** Seismic Design is not required. In Section 11 53 13, delete subparagraph 1.03 F. In Section 11 62 20, delete subparagraph 1.03 A. Delete item #17 under Specific Scopes Work in Section L - Scope of Work
19. **Question:** Spec Section - 116210-6, 7 & 8, 2.03 and 2.04 aside from cutouts in cabinets and counter tops, what specific “electrical service fittings” are included in this bid pkg?
- xix. **Response:** Refer item # 2 under Specific Scopes of Work in Section L - Scope of Work, for clarification about responsibility.
20. **Question:** Spec Section - 116220-5, service drops SD-02. Are the service drops “plastic laminate”?
- xx. **Response:** Service Drop SD-02 is plastic laminate. Service Drop SD-03 is exposed on slotted channel framing
21. **Question:** Spec Section - 116220-8, 2.13 “ice cube trays W36H06” what is the name of the manufacturer?
- xxi. **Response:** Change designation to W30H06. Basis of Design Manufacturer is Terra Universal, Style- Metro Post-Style Wall-Mount Shelving.
22. **Question:** Will the fume hoods have a control system by the HVAC contractor that works in conjunction with the room air exchange and balancing?
- xxii. **Response:** Yes.

23. **Question:** Spec Section - 115313, are the fume hoods to be pre-wired or pre-piped?  
xxiii. **Response:** Yes, they are to be pre-wired and pre-piped.
24. **Question:** Spec Section 123553-5, 2.02 & C.4 and 123553-7, 2.06 and E, 10,11 &12 These sections do not clearly identify what the construction of the cabinet drawers is made of....steel, wood or a combination of each.  
xxiv. **Response:** Delete subparagraph 2.02 C 4 under spec section 123553.
25. **Question:** Questions regarding downdraft benches - The material between the two counter top is this wood or is it to be made out of resin. Does this support need to have a removal side for access to the electric or downdraft unit? Detail on the resin top that is resting on the cabinets. When looking at the section through center elevation 3 on AQ-502 or elevation 2 on AQ-503 there is an area from the downdraft unit to the floor what is this? Is this to be provided by casework manufacture or mechanical contractor? If casework manufactures what material should this be made of?  
Is there a sheet AQ11 as noted on AQ-601 for casework identification legend? If not, what do the 01, 02, 03, 04, 05, 06, 13, and 31 mean to identify the casework?  
xxv. **Response:** The support panels between the resin counters are wood. Hinged doors are provided for access to the downdraft. Provide cutouts in lower epoxy resin counter above microscope drawer for access to service pedestal. Refer to Sheet M-100B for connection from floor duct to downdraft unit. The duct connection to downdraft will be provided by the mechanical contractor. Delete reference to AQ-11, refer Supplement # 2 for further clarification. The numbers refer to casework code numbers and have no relation to casework size.

#### **Bid Package 15L – Plumbing & Site Utilities Work**

26. **Question:** P-100A - The 6" PVC pipe sleeve is only on the water branch piping to the sink? Is all the water piping to be insulated in the trench? Will a 6" long sweep 90 deg. fit into the trench? Please clarify?  
xxvi. **Response:** Only the water branch piping for the sink will require the PVC sleeve. Please refer to 2/P5.01 for clarification. All water piping within the trench (and within the PVC sleeve) is required to be insulated. Please refer to 2/P5.01 for clarification. Refer to attached addendum #3 for the sizes of the existing trenches.
27. **Question:** P-100B - Is the domestic water & fire service to be 11.18' & 12.68' deep as shown?  
xxvii. **Response:** The depth has been modified, refer attached addendum #3 for changes.
28. **Question:** Sheet P-100B: Why does all the acid waste branch piping have to be +6'-0" deep? Can the branch piping be shallower +2' and then drop to the main @ +6'-0" deep?  
xxviii. **Response:** We take no exception to modifying the branch piping elevations. The contractor is required to coordinate all elevations with other trades.
29. **Question:** Sheet C-3.02: Sanitary & Storm piping is called out to be PVC. What type?  
xxix. **Response:** The PVC material should be SDR-35 for the sanitary services and the storm sewer as indicated on Sheet C-3.02.
30. **Question:** Sheet P-101A: Room 1037A & B show a double bowl sink tagged SK-1? Please verify.  
xxx. **Response:** Refer attached plumbing material list item in the attached addendum #3 for clarification.
31. **Question:** Sheet P-101A: What is the existing acid waste piping material with in Mod "A"?  
xxxi. **Response:** Based on Trade Contractor field verification, tie-in to existing piping shall utilize appropriate material believed to be either polypropylene or PVDF.

#### **Bid Package 15M – HVAC, Temperature Controls & Mech. & Lab Piping Work**

32. **Question:** The specs call for black pipe only for the HW & CHW. Is copper acceptable?  
xxxii. **Response:** Copper pipe will be acceptable. Refer attached addendum #3 for clarification.
33. **Question:** Is pre-insulated black pipe required for the underground piping to the fin tube? They do not make 3/4" Ductile Iron.

- xxxiii. **Response:** In addition to specified material, using pre-insulated black pipe is also acceptable.
34. **Question:** What is the spec for the underground PW piping shown on drawing M-301B?
- xxxiv. **Response:** There is no underground pipe shown on M301B. The piping is intended to be above the ceiling.
35. **Question:** Is the mechanical contractor responsible for furnishing & installing the gas meter? What is the incoming gas pressure where we tie-in to the underground gas? Is a PRV required? Who is responsible for cutting and patching the slab for access to the underground gas piping?
- xxxv. **Response:** Yes, Mechanical Trade Contractor will be responsible for furnishing & installing the gas meter. The incoming gas pressure is 14" W.C. A new gas regulator was installed under a previous bid package. This Trade Contractor (15M) will be responsible for any cutting/ patching as well as all other related work required for the tie-in.
36. **Question:** On the Lab Equipment Schedule drawing AQ-603 they call for a SFP-01 (service fixture, purified water, deck mounted). They do not spell out who is responsible for furnishing & installing this. Will the lab casework contractor be furnishing & installing this?
- xxxvi. **Response:** Bid Package 12A- Lab Casework and Equipment Work Trade Contractor will be responsible for furnishing all service fixtures. Bid Package 15M HVAC, Temperature Controls & Mech. & Lab Piping Work Trade Contractor will be responsible for installation of these items.
37. **Question:** In specification section 232100 Hydronic Piping - Is copper piping on the heating and chilled water pipe 2" and under acceptable?
- xxxvii. **Response:** This is acceptable.
38. **Question:** Will the architectural 3D model provided for BIM coordination?
- xxxviii. **Response:** Electronic CAD files of the contract documents and a 3D architectural/ structural model will be available for use by the Trade Contractors. The Trade Contractors will need to request these files and fill out a waiver form.
39. **Question:** In the general requirements of the contract under coordination drawings the requirement for the most current version of 3D CAD or BIM software is noted. The HVAC trade contractor shall manage regular 3D/Virtual Construction Coordination meetings. Will it be acceptable to lead the MEP coordination in 2D on this project?
- i. **Response:** 3D CAD or BIM MEP Coordination is mandatory for this project. 2D MEP Coordination is not acceptable.

#### **Bid Package 16J – Electrical, Fire Alarm & Security/Telecom Work**

40. **Question:** There are light fixtures on E-102A and E-102B designated as fixture types F17 and F7A that are not specified on the Luminaire Schedule on E-700. F7A also calls for a lowering/lifting system as indicated on detail 3 on E-501. Please provide the specifications for these items.
- ii. **Response:** The F17 fixtures will change to F9 fixtures on the project via addendum #3. The F7A fixture is similar to the F7 fixture, except that it is to be provided with the raise/lower system as called out for on Sheet E-102B. This will be clarified via addendum #3. Refer to material list item 61 and 62 on sheet E-600 for specification requirements of the raise/lower system.
41. **Question:** What electrical work needs to be provided for pre wired units like fume hoods?
- iii. **Response:** For pre-wired units, this Trade Contractor will be responsible to coordinate with the respective Trade Contractor and shall provide power, rough-in, terminations and trim to connect such units and render operational. For all other devices that are not specifically called out to be pre-wired, this Trade Contractor will for providing a complete installation including power, rough-in, terminating, trimming, etc as shown on the bid documents.

All other terms and conditions of the Bid Documents remain the same.

Acknowledge receipt of this Supplement No. 3 in your Proposal Form.

Sincerely,

**GILBANE BUILDING COMPANY**

*Roz Thomas*

Roz Thomas  
Purchasing Agent

SIGN IN BLDG. WALK-THROUGH 10/12/10

| NAME              | COMPANY                     | EMAIL                               | PHONE          |
|-------------------|-----------------------------|-------------------------------------|----------------|
| LEO SALVAGGIO     | JEC, INC.                   | LSALVAGGIO@JECINC.COM               | 414-393-9600   |
| Chris Adams       | Kingston Tile               | Chris@kingstontile.com              | 708-388-5990   |
| Terrence Hallahan | Plainfield Const Co         | dhpt@econste-sbs.com                | 815-436-4532   |
| Bruce Schwartz    | Schwartz Construction Group | bruce@schwartzconstructiongroup.com | (708) 246-1511 |
| JOHN WARNECKE     | RB construction inc.        | JOHNZ@RBconstructioninc.com         | 630-278-2800   |



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# TOTAL QUALITY MANAGEMENT PROGRAM

## INTENT

A PROACTIVE APPROACH MANAGED BY GILBANE BUILDING COMPANY, WHICH SHALL ENDEAVOR TO PROMOTE QUALITY IN CONSTRUCTION ON THE JOLIET JUNIOR COLLEGE (JJC), ILLINOIS COMMUNITY COLLEGE DISTRICT NO. 525 NATURAL SCIENCES ADDITION & RENOVATION PROJECT.

**QUALITY IS “CONFORMANCE TO THE REQUIREMENTS ESTABLISHED FOR THE PROJECT”**

## THE PROCESS

### QUALITY IN CONSTRUCTION

HAVE A PLAN

KNOW WHAT IS TO BE BUILT

HAVE THE RIGHT MATERIALS  
AND EQUIPMENT

HAVE ENOUGH QUALIFIED  
WORKERS

**DO IT RIGHT THE FIRST TIME**

### GILBANE CORE VALUES

Integrity

Toughmindedness

Teamwork

Dedication to Excellence

Loyalty

Discipline



# NATURAL SCIENCES ADDITION & RENOVATION PROJECT BUILDING QUALITY STATEMENT

It is every higher education project responsibility to uphold Gilbane's Total Quality Management Policy by a commitment to pro-actively administer and physically verify adherence to the project requirements assisted by a project specific Quality Program. The New Campus Center building project's Total Quality Management Program includes positive steps to promote quality in all phases of this Project.

In addition, the New Campus Center building project team members will not knowingly implement any detail, specification or requirement without consciously reviewing its ability to serve the needs of JJC.

A successful quality Gilbane higher education project is one where Quality Management in construction is not a goal but a fact!

## TQM DEFINITIONS

**ACCEPTANCE** - When all construction is "Done Done"; regulatory inspection agencies approval; as-built drawings approved; warranties accepted; testing, demonstration, start-up, training, close out, and so on accomplished successfully; and all paper and other work requirements of the contract documents have been complied with, including the Certificate of Contract Completion, JJC will accept the work.

**BENCHMARK** - The first of each work type, in the planned sequence of construction, designated by Gilbane to be reviewed and documented against the requirements, and is the basis for judging like construction.

**CONSULTANTS** - Independent agencies (ie commissioning agent, construction testing engineer, etc.) hired by Gilbane Building Company, Legat Architects, or JJC to inspect, test and/or witness work requiring third party verification.

**"DONE-DONE"** - When all work required by the contract documents is completed.

**Not** the traditional state of work at "Substantial Completion, beneficial occupancy, move in, etc."

This is when:

Gilbane, Joliet Junior College – Illinois Community College District No. 525, Legat Architects, and the Contractor(s) all agree that all Rolling Completion List (RCL) items are satisfactorily complete and, at most, minor finish/touch-up items remain.

No work required by the contract is missing.

The required training has been held.

At a minimum, one copy of the O & M manual has been submitted and reviewed.

If applicable, IDPH, Joliet Health Department, and ICECF inspection.

**INSPECTION TEAM** - A team formed of a representative from JJC, Gilbane, Legat Architects, and TBD (JJC commissioning agent) each empowered to inspect and concur conformance with the requirements. A Contractor representative is allowed to attend, but is a non-voting member.

**MOCK-UP** - A construction of non-building elements of work, subject to review and approval of adjacencies, function, aesthetics, and early benchmarks of construction methods.

**PROJECT TEAM** - All representatives of JJC building project, including agents of JJC, Legat Architects, and Gilbane assigned full or part time to the Project.

**ROLLING COMPLETION LIST (RCL)** - A list of incomplete items, omissions, errors in the work, and/or items that require action maintained and distributed by the CM.

**START-UP** - When the Trade Contractor and CM agree that equipment and/or systems are complete and ready for turnover to the Owner for its intended use, operation and maintenance consistent with the requirements of the contract documents.

# PROJECT STAFF TQM RESPONSIBILITIES

## CONSTRUCTION MANAGER

- **GILBANE PROJECT MANAGER** -- A positive advocate of the Total Quality Management process and assures TQM procedures are in place and conform to project requirements.
- **GILBANE PROJECT SUPERINTENDENT**-- Responsible for the distribution of, education in, implementing, enforcing, and execution of the Total Quality Management Program.
- **GILBANE PROJECT ENGINEER**-- Responsible for implementing, enforcing and documenting quality control procedures.
- **CM TEAM** -- The first line of action and enforcement for conformance with the requirements and primary initiator of Rolling Completion List items.

## LEGAT ARCHITECTS

- **PROJECT MANAGER** -- The interpreter and prime representative of the design documents.
- **PROJECT REPRESENTATIVE** – Person designated to attend activities requiring Legat Architects participation and other TQM activities where possible. Reviews construction with issues identified included in the RCL.

## JOLIET JUNIOR COLLEGE (JJC), ILLINOIS COMMUNITY COLLEGE DISTRICT NO. 525

- Participates in TQM activities with responsibility for interpretations and acceptance of work. Observes items included in the RCL.

## TRADE CONTRACTOR

- Provides minimum 48 hour advance notice of work activities to allow timely TQM inspections.
- Participates in TQM inspections to provide immediate responses to questions.
- Assures full implementation of the conclusions and/or approvals by Trade Contractor personnel.

## PREVENTION

### DESIGN DOCUMENTATION

- Gilbane maintains a current/superseded copy and log of the latest design drawings, specifications, sketches and Requests For Information (RFI's).
- The working set of drawings and specifications are annotated with references to applicable sketches and RFI's.
- Field conditions differing from the design documents are noted and documented by an RFI for potential design impact.
- Gilbane will identify sources for copies of standards referenced in the contract documents.
- Legat Architects provides clarification of references, edition dates and their applicability when unclear.
- As-built drawing status is reviewed by Gilbane as part of the monthly requisition process for each Contractor.
- A line item for the maintenance and submittal of as-built drawings will be included in each Contractor's Schedule of Values.
- Gilbane will verify, on a continuing basis, that documents being used for construction by workers are the approved and appropriate documentation.

### DESIGN SOLUTIONS

- Legat Architects and their consultants alone are responsible for the design and conformance to all applicable codes for the Project.
- Legat Architects shall be responsible for complete, concise, and fully coordinated set of contract documents.
- It is not the function of Gilbane to modify the design documents.
- When differing field conditions or problems arise, Gilbane will provide Legat Architects with information and a recommendation for resolution, where available, through an RFI.
- Legat Architects will interpret the design and respond with written direction within an agreed upon period of time.
- JJC makes the final interpretation of the requirements, if conflict exists.

### SHOP DRAWINGS AND SUBMITTALS

- Gilbane will verify completeness and general conformance to the requirements prior to submittal for review to Legat Architects.
- Gilbane will maintain a complete set of "In Process", "No Exception Taken" and "Exception(s) Noted" documents.
- Gilbane will selectively verify that the "No Exception Taken" or "Exception(s) Noted" documents are being used during fabrication. Verification will be by telephone, plant visits, written documentation and so on, as required. Critical notes will be referenced on

the transmittal for added clarity. All expediting trips will include a review of the shop drawing status and verification of correct documents in the plant.

- Gilbane will selectively verify that the Trades in the field are using “No Exception Taken or Exception(s) Noted” documents, and that the notes in the “Exception(s) Noted” are being implemented.
- Re-submittal and final submittal of documents will be reviewed to assure inclusion of all prior comments before transmittal to Legat Architects.
- Gilbane will maintain logs for quick access to the status of submittals.

## COORDINATED DRAWINGS

- Gilbane, through the MEP Contractors, will schedule above ceiling (interstitial) and mechanical space areas coordination meetings prior to work proceeding in the field.
- Meetings will be held with all affected Contractors and Trades to assure full understanding of the total scope of work in all areas.
- Where formal drawings are required, Gilbane and each Trade Contractor are required to sign each drawing indicating agreement with what is shown and to use the drawings to guide the work.
- Any conflicts that are resolved in this process and have design implication or are unable to be resolved, will be specifically presented to Legat Architects for evaluation and resolution.
- Final executed documents are sent to Legat Architects for record and approval, when required by the Contract.

## SAMPLES

- Contractor submits samples in accordance with the requirements with annotation of, and reason for, any deviation from the requirements.
- Gilbane reviews samples for general conformance with the requirements, logs and transmits to Legat Architects for approval.
- Gilbane maintains a reference copy of approved samples on site.

## TESTING

- Testing Agency reports will be sent directly to Gilbane and a copy to JJC and Legat Architects.

# FIELD QUALITY ACTIVITIES

## PROJECT REQUIREMENTS MEETINGS

- PRE-CONSTRUCTION MEETING

- Prior to on-site mobilization, Gilbane will meet with the Contractor's on-site personnel and any major subcontractors.
- The TQM Program will be reviewed in detail to assure full understanding by Contractor personnel.
- General pre-construction issues, such as security, access, safety, site utilization, JJC campus rules and regulations, and administrative procedures will be presented and reviewed.
- Prior to large tractor trailer material or equipment deliveries, Gilbane will meet with the Contractors to define the approved City of Joliet road route.

## FIRST DELIVERY OF MATERIAL/EQUIPMENT INSPECTION

- Gilbane inspects and documents the first site delivery of specific type of material and equipment.
- Delivery will be verified against the requirements of the design documents and the approved shop drawings.
- Non-conforming materials and/or equipment will not be allowed to be set into place and may be required to be removed from the site.
- Remedial measures will only be considered if they are in the best interests of the Project and approved by the Project Team.

## BENCHMARK

- Before the start of construction of each type of work, Gilbane and Trade Contractor will review the contract documents, submittals, shop drawings, codes, and referenced standards to verify the requirements.
- Gilbane and Trade Contractor establish the extent of the first work of each specific type as benchmarks.
- Gilbane verifies that the identified work is in conformance with the requirements and calls a Benchmark Review.
- A benchmark is **not** a means of presenting substitutions. Contract requirements must be followed unless revised by the Project Team. An alternate benchmark of the substitution can be used to verify conformance to the revised requirements if approved by Gilbane.
- Gilbane and Legat Architects inspects and comments on the work as to conformance to the requirements.

- Comments are documented and distributed by Gilbane. Open issues are placed in the RCL for follow-up.
- Design questions are documented by the RFI process for the Legat Architects and JJC resolution.
- Other unresolved issues are transferred to the RCL for follow-up.

### MOCK-UP (if applicable)

- Gilbane will coordinate with the respective Trade Contractors to provide the contractually required mock-up's prior to proceeding with the work.
- Prior to start of mock-up construction, Gilbane and Legat Architects will review the plans, specification, submittals, shop drawings, codes, and referenced standards to assure full understanding of the requirements by Trade Contractors.
- Upon Completion of the mock-up by the trades, Gilbane will review the mock-up with the trades before review by Legat Architects and JJC personnel.
- Review and approval of the mock-up will follow the submittal process. Gilbane will issue a submittal transmittal to Legat Architects requesting approval of the mock-up. Legat Architects will then review the mock-up and return their review comments with an appropriate action to Gilbane and copy JJC.
- Specific concerns or problems are documented by Gilbane to prevent repetition in later construction.

### ROLLING COMPLETION LIST (RCL)

- List maintained by Gilbane denoting incomplete, missing, or non-compliant work items.
- RCL is one of the ways Gilbane keeps the Project Team, including the Trade Contractor, informed of items requiring corrective action.
- Primary input is from Gilbane's field staff, benchmarks, walk-downs, above ceiling and in-wall close up inspections, and other QC activities.
- Additional input comes from:
  - JJC Facilities Planning & Construction
  - Legat Architects action items
  - Commissioning agent inspections
  - Trade Contractor observations
  - Inspection and Testing Agency reports
- RCL is distributed to Contractors monthly and is a tool for, and record of, continuous notification of open issues.

### NOTIFICATION OF WALL RATINGS

During construction of the building, Gilbane and the trade contractors will use the following system as a way of notifying everyone of the wall ratings:

- The Drywall Trade Contractor is required to layout partitions and mark the layout as described in the following table. Snap lines will be painted with clear lacquer. The

stenciled wall type designation will be painted on each side of each section of wall and in no case farther apart than 20 feet apart. A painted line will show where wall types change.

- On walls with 2 layers of drywall on one side and 1 layer on the other, the side with 2 layers of drywall will be indicated with 2 paint dots, of the color for that wall type, at 12 foot maximum spacing, in addition to the stenciled type designation.

|                   |            |
|-------------------|------------|
| 4 Hour Party Wall | Purple     |
| 2 hour Fire/Smoke | Red        |
| 2 Hour            | Orange     |
| 1 Hour Fire/Smoke | Yellow     |
| 1 Hour Fire       | Green      |
| Non Rated         | White      |
| Lead Lined Wall   | Black Dots |
| Sound Wall        | Blue Dots  |

- On completed rated walls the **Drywall Trade Contractor** will stencil the wall type designation, in **red** accordance with table below, above the finished ceiling on each side of the wall. This will be done at a distance of no more than **15** ~~20~~ feet or one marking per room (whichever is stricter).
- The intent of this is to indicate wall type and fire rating for ease of reference by all trades (during construction) and JJC (after construction).

## IN-WALL & ABOVE CEILING ACCEPTANCE

- Gilbane obtains signatures of all Trades indicating that their concealed work is complete prior to calling for inspection.
- Prior to wall closure or finished ceiling installation, a representative from Gilbane, Legat Architects, and the Trade Contractor inspects the work for conformance with the requirements.
- Facilities, Operations & Maintenance (FOM) personnel should be involved where possible.
- Results of these inspections will be documented and included in the RCL.
- No wall or ceiling closure shall proceed until all requirements are met and signed off.

## PRE-FINISH INSPECTION

Prior to the start of finishes (prime painting, ceiling grid, casework, flooring not yet started) the area will be checked for completeness. The Trade Contractors will perform an inspection of their work and sign off that the following is complete and with out defect:

- Drywall finishing complete. All excess materials, tools and equipment removed. All taping compound removed from windows, door frames, floors, etc. All head of wall detailing complete. All sound caulk and sealing complete. All rated walls stenciled with ratings.

- Electrical rough-in complete, wire pulled to all boxes, whips ready for lighting installation in grid, wall wash and other lighting installed and powered up for use by tapers and painters. Fire alarm and other systems roughed in and wire pulled. Box covers installed above ceiling, labeling and color coding complete. Fire stopping complete. All material, tool boxes and equipment removed. Temporary power wiring removed. Temporary lighting removed where possible. Electrical panels trimmed out to support lighting and receptacles. Receptacles installed (with temporary covers) and powered up. Lighting switches installed (with temporary covers).
- HVAC rough-in complete. All duct work installed, pressure tested and insulated. Flex drops installed and outlet ends wired up out of the way and ready to connect to the diffusers. All duct insulation complete. VAV/terminal boxes installed, wired and piped. Fire and Smoke dampers installed and inspected. Fire stopping complete. All material, tool boxes and equipment removed.
- Plumbing rough in complete. All overhead piping & plumbing lines installed, tested, hangers and saddles complete, insulated and labeling complete. Valve tags installed complete. All, fire stopping complete. All material, toolboxes and equipment removed.
- Doorframes ready for paint, plumb checked, shims removed and cleaned of taping compound.
- Floors ready for flooring materials. Grinding, chipping and any filling over ¼” deep complete. Floors swept and cleaned of taping compound.
- All sprinkler piping complete except for heads. Mains and branches initially tested. All fire stopping complete. Material, tool boxes and equipment removed.
- Controls complete above ceiling and boxes closed and labeled. Wire or air tubing pulled.
- Gilbane will spot check areas after the Trade Contractors have completed their RCL’s and sign off to verify that the area complete and ready for finishes.

## START-UP INSPECTION

- FOM and Commissioning Agent(TBD) personnel will be involved as required.
- Held when the Trade Contractor has completed the installation of equipment/system, debugged the operation and is ready to demonstrate that the equipment, as part of a system, functions as required.
- Gilbane verifies that the installation meets the requirements of the design documents and approved shop drawings.
- Gilbane, JJC, Commissioning Agent (TBD), and Legat Architects will inspect the work, with the trade contractor and manufacturer’s representative, and concur that the installation operates as required.

- JJC accepts systems when required to support areas accepted for beneficial use. Warranty provisions start for the work accepted.

## SYSTEM ACCEPTANCE

When the following conditions are met:

- All physical work is installed and RCL items complete.
- Training complete and system demonstrated.
- Operation & Maintenance manuals approved.
- Warranty information is collected.
- Owner personnel ready to operate and maintain.

## FINAL INSPECTION AND ACCEPTANCE

- Upon TOTAL completion of the work, corrections, documentation and training, (“Done-Done”) and all other requirements of the Contract are satisfied, the Gilbane Project Manager/Project Superintendent/Project Engineer, JJC, JJC Consultants, and Legat Architects construction administrator reviews with the trade contractor and accepts the work.
- Without this review and approval, a Contract cannot be closed.

## INDIVIDUAL CONTRACT CLOSE-OUT

- Upon final acceptance of a Trade Contractor’s work, completion of all of the final paperwork requirements and conformance to all requirements, Gilbane and Legat Architects will issue a “Certification of Contract Completion” and final payment, consistent with the requirements outlined in the contract documents. The goal is to have each Contract closed-out within two (2) months of JJC’s acceptance of the work.

## MEASUREMENT / DOCUMENTATION

- Written procedures and formal documentation of actions are an important part of all work. Physical construction alone does not meet all of the requirements.
- Work should not proceed prior to approval of required procedures.
- Work is not complete until all inspections and tests are documented in writing.
- Subject to JJC’s requirements, the Trade Contractor submits the original of documentation to the CM for review and transmittal to JJC thru Legat Architects.
- RCL documentation provides evidence of:
  - Unresolved problems and date noted to Trade Contractor
  - When corrective actions were taken and acceptance of the action by Gilbane
  - Legat Architects acceptance of Architect/Engineer created items

- QC activity should be identified on Gilbane's Daily Reports where separate documentation is not required.
- Consultant inspection reports are to be formatted to produce documentation and follow-up of omissions.
  - Documentation of on-going activities should be "check-list" in nature.
  - Narratives note type of work, location and explain noted omissions.
  - All outstanding items are entered in the RCL for follow-up.
  - The Consultant is responsible for independently tracking and documentation of the resolution of issues raised in their reports.

## QUALITY CONTROL

### MONITORING AND CHECKING

- Gilbane and Legat Architects have the responsibility to monitor quality control. All quality control issues are to be brought to the attention of Gilbane for implementation.
- Quality Control is done in the course of normal duties by the Project staff.
- All members of the Project Team have a responsibility to be aware of the requirements and make note of concerns in writing to Gilbane.
- Gilbane's Project Engineer assigns various functions of quality control to Gilbane staff, Consultants and, if required by Contract, to Trade Contractors.
- Gilbane Project Engineer, Project Manager and Project Superintendent are responsible for quality control follow-up.
- All items noted are entered in the RCL and are distributed to the Trade Contractor(s) on not less than a monthly basis.
- Legat Architects Field Reports
  - Items requiring action will be logged into the RCL for follow-up.
  - Legat Architects will sign-off on all Architect/Engineer created items once addressed.

### CONSTRUCTION MANAGER RESPONSIBILITIES

- List quality verification actions, procedures, tests, samples, mock-ups, and so on, from the requirements of the contract documents.
- Assure that in-field verification of use of correct design drawings, specifications, shop drawings and material verification is on-going.
- Verify conformance of Trade Contractors' work to the requirements, including correction of RCL items.
- Maintain, distribute and document the RCL. Initiate corrective actions.
- Include quality issues as part of each Job Progress Meeting.
- Monitor Trade Contractors' quality verification for proper and timely testing, inspection and reporting.

- Oversee testing and inspection agencies' work to ensure timeliness and quality of their services.
- Witness and verify field tests performed.
- Assure that required procedures are submitted and approved prior to start of referenced work.

## TRADE CONTRACTOR RESPONSIBILITIES

- Each Trade Contractor will identify an on-site person responsible for the Quality Control Program.
- Review their subcontracts, specifications, drawings, schedules, etc., to assure inclusion of quality verification requirements.
- Complete all work in accordance with the Gilbane Total Quality Management Program.
- Preview, witness and verify tests performed. Review all test reports for completeness and submit originals.
- Verify that all work meets requirements **prior** to requesting inspection or testing.
- Maintain an up-to-date file of all drawings, sketches, changes, specifications, inspections and corrective actions.
- Report all improper/unworkable conditions or details to Gilbane.

## **SAMPLE FORMS**

**TQM Notification & Record**  
**RCL – Rolling Completion List – Input Form**  
**First Delivery Inspection Form**  
**Benchmark Inspection**  
**Pre-finished Inspection**

**PROJECT:** JJC – Natural Sciences Addition & Renovation # 4764-009



## **TOTAL QUALITY MANAGEMENT NOTIFICATION & RECORD**

**INSPECTION DATE:** \_\_\_\_\_ **TIME:** \_\_\_\_\_

**TYPE:** \_\_\_\_\_

**Meet At:** \_\_\_\_\_

**WORK LOCATION:** ROOM # \_\_\_\_\_ SYSTEM \_\_\_\_\_ COL. \_\_\_\_\_  
LINES \_\_\_\_\_

**WORK REPRESENTED:** \_\_\_\_\_

**INSPECTION TEAM MEMBERS:** \_\_\_\_\_ **ORIGINATOR:** \_\_\_\_\_

**GILBANE:** \_\_\_\_\_ **JJC:** \_\_\_\_\_

**LEGAT ARCHITECTS:** \_\_\_\_\_ **COMMISSIONING AGENT:** \_\_\_\_\_

**TRADE CONTRACTOR(s):** \_\_\_\_\_

**Copy of Notification to:** Inspection Team Members Above &

**Gilbane PX:** \_\_\_\_\_ **OWNER:** \_\_\_\_\_

**A/E:** \_\_\_\_\_ **OTHER:** \_\_\_\_\_

**TRADE CONTRACTOR(s):** \_\_\_\_\_

**AGREED?** Y / N    **RE-INSPECTION REQUIRED?** Y / N    **PHOTOS?** Y / N

**NOTES:** \_\_\_\_\_

**ADDED COMMENTS ATTACHED:** Y / N





# FIRST DELIVERY INSPECTION FORM

**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_ **Project:** JJC – Natural Sciences **Job No:** 4764-  
Addition & Renovations 009

**Material / Equipment Description:** \_\_\_\_\_

**Location:** \_\_\_\_\_ **Meet at:** \_\_\_\_\_

**Bid Packages:** \_\_\_\_\_ **Trade Cont.(s):** \_\_\_\_\_

**Specification Section(s):** \_\_\_\_\_

**Drawing No(s):** \_\_\_\_\_

- **Attach copies of delivery tickets, id labels, tags, etc., when available, to this form.**
- **Obtain a copy of all operations and service manuals delivered with equipment.**

### Invited Inspection Team Representatives

**Gilbane:** \_\_\_\_\_ **Trade Cont.:** \_\_\_\_\_

**Owner, Owner Consultants or Arch/Eng. (optional):** \_\_\_\_\_

**Does the delivery conform to the Contract Documents?** Yes  No

If no, above was material / equipment removed from the site? Yes  No

**Comments:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Acceptance Signatures:

**Gilbane:** \_\_\_\_\_ **TC** \_\_\_\_\_  
\_\_\_\_\_



# BENCHMARK INSPECTION FORM

**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_ **Project:** JJC – Natural Sciences Addition & Renovation **Job No:** 4764-009

**Benchmark Description:** \_\_\_\_\_  
**Location:** \_\_\_\_\_ **Meet at:** \_\_\_\_\_

**Bid Packages:** \_\_\_\_\_ **Trade Cont.(s):** \_\_\_\_\_

**Specification Section(s):** \_\_\_\_\_ **Drawing No(s):** \_\_\_\_\_

### Invited Inspection Team Representatives

**Gilbane:** \_\_\_\_\_ **Trade Cont.:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Cx Agent** \_\_\_\_\_ **Legat Architects:** \_\_\_\_\_  
**JJC:** \_\_\_\_\_

**Does the benchmark conform to the Contract Documents?** Yes  No

If not, is re-inspection by Gilbane acceptable for approval? Yes  No

**Comments:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Acceptance Signatures:

**Gilbane** \_\_\_\_\_ **TC** \_\_\_\_\_  
\_\_\_\_\_  
**Cx Agent** \_\_\_\_\_ **Legat Architects** \_\_\_\_\_  
**JJC** \_\_\_\_\_

