

VITETTA

ADDENDUM No 3 RENOVATIONS & ADDITION TO AMBLER BRANCH LIBRARY

ADDENDUM No 3
To the
Drawings and Specifications for
RENOVATIONS AND ADDITION
Ambler Branch Library
209 Race Street
Ambler, PA 19002

ARCHITECT:

VITETTA ARCHITECTS
1510 Chester Pike, Suite 104
Eddystone, PA 19022

SEPTEMBER 11, 2019

Project No 6320.00

DATE ISSUED SEPTEMBER 11, 2019

ISSUED TO: PLAN HOLDERS OF RECORD THRU PENN BID

PURPOSE: To Supplement and Modify Bidding Requirements and Contract Documents

The information contained herein revises, supplements and/or supercedes the specific part of the documents referred to and shall be attached to and become part of the Contract Documents as if originally forming a part thereof. Except as herein modified, all other provisions of the Contract Documents shall remain in full force as originally set forth. Additional work called for herein, unless otherwise described in this Addendum, shall comply with the requirements originally specified for similar work. This Addendum modifies the original Bidding Documents dated 8-16-2019 (project manual), 8-16-2019 (Architectural Drawings), 6-21-2019 (Structural and MEP) and 4-10-2019 (Civil Drawings) as noted below.

ACKNOWLEDGEMENT: All Bidders are required to acknowledge receipt of this Addendum by inserting its number and date on the Bid Form and in accordance with the "Advertisement for Bids" and "Instructions to Bidders". Failure to acknowledge all Addenda shall render the proposal non-responsive and disqualify the Bid. This Addendum is now a part of the Contract Documents.

DUE DATE FOR PROJECT BIDS: SEPTEMBER 17, 2019 10 AM EDT through Penn Bid

CONTENTS: RESPONSES TO BID QUESTIONS
REVISED BID FORM (ADDRESSING ADD ALTERNATES & CONTINGENCY
ATTACHMENTS

Baldwin Tower 1510 Chester Pike, Suite 104 Eddystone, PA 19022
215 218-4747

ARCHITECTURE ENGINEERING PLANNING INTERIOR DESIGN

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RESPONSES TO BIDDER QUESTIONS

1	Insurance Requirements	See attached Exhibit A "Insurance Exhibit" for requirements	Attached
2	Updated Prevailing Wages Rates	New request has been submitted will be forwarded immediately upon receipt	
3	No written DDC Control Spec	Using the basis of design equipment "Trane" the associated stand-alone control system "Tracer Concierge" should be used. It is however BACnet/open source for future work or vendors. With other equipment vendors, their associated stand-alone controls may be used with design professional approval. Please refer to attached spec and brochure	Tracer Concierge Master Guide Spec & Brochure Attached
4	Radiant Snow Melting System	Snow-melt system shall be included in the price as an add-alternate. Refer to sheet E401. See note #4 below for reference.	Note 4: Lists specifications for snow melt add alternate
5	Hazardous Material Allowance referenced in Addendum 1	Contractors to use \$10,000.00	See New Bid Form
6	Is a Non-collusion Affidavit required	No	
7	Specifications request manual solar shades in Room 107, drawings show motorized double shades	Base Bid—Manual. Provide Add Alternate for motorized double shades	
8	There are numerous inline balancing dampers located in the soffits. This would require numerous access doors in the soffit. Is this what is desired?	A cable operated damper should be used at balancing dampers where ever its located in an inaccessible area. Then the damper can be located at the takeoff (where less noise will carry into the library space)... and still be easily adjusted from the face of the grille/register/diffuser. Please see attached cut sheet for basis of design product	Cable Operated Damper Cut Sheet is attached
9	D101A shows hollow metal on one detail and indicates aluminum on the schedule and spec. Please clarify door material	Door 101A is a new entrance door. It will be an aluminum door in an aluminum frame	See Details on A-504
10	Door 105A shown as hollow metal. Details on A504 show aluminum.	D105A is to be flush aluminum door, with aluminum faced	

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	Please clarify	insulated transom above	
11	YKK YCK 45 XT or YKK YCW 750. Need Hardware schedule	Door Schedule is found on Sheet A601, Hardware schedule is in the spec—see 08 7100.1	
12	Sheet S101 references J4 but no J4 in joist schedule	Joist reference on drawing should be J3 not J4	See Attached Sketch
13	What equipment gets vibration isolation and what type	Indoor and outdoor air handlers, and outdoor condensing unit shall all be installed on neoprene vibration isolation pads. Basis of design product: Eaton CNNK Cork, ribbed neoprene and steel vibration pad type, or equal as approved by design professional. See link for reference: https://www.eaton.com/us/en-us/catalog/support-systems/vibration-isolation-pads.models.html	See attached information
14	Drawing: M200 Spec 231123-5 There is a discrepancy between drawing M200 spec section 231123-5, 3.05 on who provides the downstream gas piping. Please clarify who is responsible for the gas meter, regulator gas piping from Race St. to the Bld.	Please refer to detail 8 / M200 Gas Meter Detail, in lieu of specification section 231125-5 3.05, for division of responsibility. PECO shall provide gas meter, shut-off valve, and regulator. Mechanical contractor (M.C.) shall supply all other piping, elbows, fittings, and valves. M.C. shall install PECO gas meter, shut-off valve, and regulator. M.C. shall also install all other piping, elbows, fittings, and valves. General contractor (G.C.) shall excavate trenches prior to gas piping installation, and backfill and repair grade after gas piping installation.	
15	Drawing M200: In order to properly size the natural gas regulator to the (3) air handling units, could you please advise on the NG pressure being provided from the gas regulator by local gas company	PECO Natural Gas Delivery Pressure = 2 PSIG	
16	Please provide R values for duct wrap insulation	<ul style="list-style-type: none"> • Minimum installed (compressed) R-value for indoor duct insulation: R-6 • Minimum installed (compressed) R-value for outdoor duct insulation: R-8 	
17	What is the base if landscaping alternate is not accepted	Seeding. All else will be done by the Owner if Alternate is not accepted	

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ATTACHMENTS:

- 1 Exhibit A for Insurance Requirements
- 2 Revised Bid Form
- 3 Tracer Concierge Master Guide Spec
- 4 Tracer Concierge Brochure
- 5 Cable operated damper cut sheet
- 6 Joist Clarification Sketch 3.01
- 7 Vibration Isolation Overview

End of Addendum 3
Renovations and Addition to Ambler Branch Library

DRAFT AIA® Document A101™ - 2017

Exhibit A

~~Insurance and Bonds~~

This Insurance ~~and Bonds~~ Exhibit is part of the Agreement, between the Owner and the Prime Contractor, dated the « » day of « » in the year « »
(In words, indicate day, month and year.)

for the following PROJECT:
(Name and location or address)

Addition & Renovations to the Ambler Branch Library - General, Plumbing, Mechanical, Electrical & Fire Detection↔↔

THE OWNER:
(Name, legal status and address)

«Wissahickon Valley Public Library»↔↔

THE PRIME CONTRACTOR:
(Name, legal status and address)

« »« »
« »

TABLE OF ARTICLES

- A.1 GENERAL
- A.2 OWNER'S INSURANCE
- A.3 CONTRACTOR'S INSURANCE ~~AND BONDS~~
- A.4 SPECIAL TERMS AND CONDITIONS

ARTICLE A.1 GENERAL

The ~~Owner and Contractor~~ Owner shall purchase and maintain insurance, ~~and provide bonds,~~ as set forth in Article 2. -this Exhibit. The Prime Contractor shall purchase the required coverages described required throughout Article A.3 in this Exhibit, and shall require all of their -Subcontractors and any Sub-Subcontractors to provide the all the same coverages Prime Contractor is required to provide as the Owner. The terms "Subcontractor" and "Sub-Subcontractor" as used in these Insurance Requirements, shall mean and include Subcontractors and Sub-Subcontractors of every tier. The term "Subcontractor & Sub-subcontractor" as used in these Insurance Requirements, shall mean and include Subcontractors and Sub-Subcontractors of every tier.

Prior to the commencement of the Work, the Prime Contractor shall secure the insurance, and provide evidence of the coverage and additional insured status for Owner as required

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Document A201™-2017, General Conditions of the Contract for Construction. Article 11 of A201™-2017 contains additional insurance provisions.

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under A.3.1.1 and, upon the Owner's request, provide a copy of the required insurance policy or policies as described throughout Article A.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

The Prime Contractor shall also require all the Subcontractors and Sub-Subcontractors to provide evidence of coverage. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

The term "Subcontractor & Sub-subcontractor" as used in these Insurance Requirements, shall mean and include Subcontractors and Sub-Subcontractors of every tier.

As used in this Exhibit, the term General Conditions refers to AIA Document A201™-2017, General Conditions of the Contract for Construction.

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

Prior to commencement of the Work, the Ownerthe Prime Contractor shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the OwnneContractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3.

The Prime Contractor shall also require all the Subcontractors and Sub-Subcontractors to provide evidence of coverage. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ A.2.2 Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability insurance.

§ A.2.3 Required Property Insurance

§ A.2.3.1 Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, (The Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all risksspecial form" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3.5, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ A.2.3.2 Causes of Loss. The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub limits, if any, are as follows:

(Indicate below the cause of loss and any applicable sub limit.)

Causes of Loss

Sub Limit

§ A.2.3.1.2 Specific Required Coverages. The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal

~~requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows: (Indicate below type of coverage and any applicable sub-limit for specific required coverages.)~~

Coverage	Sub-Limit
----------	-----------

~~§ A.2.3.31-23 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.~~

~~§ A.2.3.41-34 Deductibles and Self-Insured Retentions. If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.~~

~~§ A.2.3.52 Occupancy or Use Prior to Substantial Completion. The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.~~

~~§ A.2.3.63 Insurance for Existing Structures~~

~~If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all risks special form" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.~~

~~§ A.2.4 Optional Extended Property Insurance.~~

~~The Owner shall purchase and maintain the insurance selected and described below: (Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)~~

~~§ A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.~~

~~§ A.2.4.2 Ordinance or Law Insurance, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.~~

~~§ A.2.4.3 Expediting Cost Insurance, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.~~

~~§ A.2.4.4 Extra Expense Insurance, to provide reimbursement of the reasonable and necessary excess~~

~~costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.~~



~~§ A.2.4.5 Civil Authority Insurance, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.~~



~~§ A.2.4.6 Ingress/Egress Insurance, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.~~



~~§ A.2.4.7 Soft Costs Insurance, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.~~



~~§ A.2.5 Other Optional Insurance.~~

~~The Owner shall purchase and maintain the insurance selected below.~~

~~(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)~~

~~§ A.2.5.1 Cyber Security Insurance for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information. (Indicate applicable limits of coverage or other conditions in the fill point below.)~~



~~§ A.2.5.2 Other Insurance~~

~~(List below any other insurance coverage to be provided by the Owner and any applicable limits.)~~

~~Coverage~~

~~Limits~~

~~ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS~~

~~§ A.3.1 General~~

~~§ A.3.1.1 Certificates of Insurance. The Prime Contractor and every Subcontractor of the Prime Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) until completion, (3) until the final payment is made for the work, (4) upon renewal or replacement of each required policy of insurance; and (5) upon~~

the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final ~~a~~Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Prime Contractor's Commercial General Liability and excess or umbrella liability policy or policies. ~~The Prime Contractor shall require all sub-contractors and sub-contractors to provide certificates of insurance acceptable to the Owner evidencing requirements in Article A.3 prior to the commencement of work, and upon the Owner's written request.~~

§ A.3.1.2 Deductibles and Self-Insured Retentions. The Prime Contractor and every Subcontractor and Sub Sub-Contractor of the Prime Contractor ~~The Contractor~~ shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

§ A.3.1.3 Prime Contractor and Sub Contractor ~~Additional Insured Subcontractor~~ Obligations. ~~To the fullest extent permitted by law, The Prime Contractor and every Subcontractor and sub-sub-contractor of the Prime Contractor shall require their commercial general liability policy Prime Contractor the Contractor coverage to include -shall require~~ ~~cause the commercial general liability coverage to include~~ (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04. Copies of the additional insured endorsements must be furnished as an attachment to the certificates of insurance.

§ A.3.2 Prime Contractors and Subcontractor's Required Insurance Coverage ~~§ A.3.2 Contractor's's and Subcontractor's Required Insurance Coverage~~

§ A.3.2.1 The Prime Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Prime Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below, below:

§ A.3.2.2 The Prime Contractor shall require all of their subcontractors and any sub-sub-contractors to provide all the same coverages Prime Contractor is required to provide to the owner.

~~§ A.3.2.2 The Prime Contractor shall require all of their subcontractors to provide all the same coverages to owner.~~

§ A.3.2.33 (If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.) ~~Subcontractors and each and every Sub-subcontractor of the Subcontractor shall, at its sole expense, maintain the following insurance on its own behalf, with an insurance company or companies having an A.M. Best Rating of "A-; Class VII" or better.~~

~~§ A.3.2.44A (If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)~~

Subcontractors and Sub-Subcontractors shall furnish to the Prime Contractor and Owner, Certificates of Insurance evidencing required coverages and reflecting the effective date of such coverage as listed below, prior to the commencement of work and/or payment with Prime Contractor which shall be subject to the Prime Contractor's approval of adequacy of Protection and the satisfactory character of the insurer. The Certificate of Insurance should be mailed 10 days ~~within five days~~ before Prime Contractor's receipt of this letter regardless of when your work will start. If covered under a Blanket Agreement, please submit **only one** "Blanket" Certificate of Insurance which states: For "All Jobs, All Locations".

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§ A.3.3.2.2 Commercial General Liability

§ A.3.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form (including Premises – Operations, Independent Contractors, Products/Completed Operations, Broad Form Property Damage, Contractual Liability and Explosion, Collapse and Underground Coverage's), form

Policy Limits:

General Aggregate:	\$2,000,000 (on a per project basis)
Products/Completed Operations Aggregate:	\$1,000,000
Each Occurrence:	\$1,000,000
Personal and Advertising Injury	\$1,000,000
Fire Damage (any one fire)	\$50,000
Medical Expense (any one person)	\$5,000

Products and Completed Operations coverage must be maintained for a period of at least two (2) years after final payment.

The pwith policy limits of not less than « » (\$ « ») each occurrence, « » (\$ « ») general aggregate, and « » (\$ « ») aggregate for products-completed operations hazard listed above would, -providing coverage for claims including:

- .1-1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2-2 personal injury and advertising injury;
- .3-3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4-4 bodily injury or property damage arising out of completed operations; ~~and~~
- .5-5 ~~the Contractor's indemnity obligations under Section 3.18 of the General Conditions~~ Contractual liability coverage.
- .6 It is agreed that this insurance will not be cancelled, materially changed, or non-renewed without at least thirty (30) days advance written notice to Certificate Holder.
- .7 The amount of insurance provided in the aforementioned insurance coverage's, shall not be construed to be a limitation of the liability on the part of the Subcontractor or any of the Sub-subcontractors.
- .8 The carrying of insurance described shall in no way be interpreted as relieving the Subcontractor or sub sub-contractor of any responsibility or liability under this contract.

§ A.3.3.2.2.2 The Prime Contractor and every Subcontractor and Sub sub-contractor's of the Prime Contractor's ~~The Contractor's~~ Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- ~~.7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.~~
- ~~.8 Claims related to roofing, if the Work involves roofing.~~
- ~~.9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.~~
- .710 Claims related to earth subsidence or movement, where the Work involves such hazards.

~~.814~~ Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

~~§ A.3.2.33.3~~ Automobile Liability covering vehicles ~~owned-owned, hired vehicles and-and~~ non-owned vehicles used, by ~~the Prime Contractor and every Subcontractor of the Prime Contractor, is required to have the Contractor, with~~ policy limits of not less than ~~«\$1,000,000.00» (\$ « »)~~ per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

~~§ A.3.3.42.4~~ ~~Excess/Umbrella Liability~~The coverage with limits of \$1,000,000 per occurrence and \$2,000,000 in the aggregate. ~~Prime Contractor and every Subcontractor of the Prime Contractor Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, with policy limits of not less than «\$1,000,000.00» per Occurrence, and an Aggregate Limit of «\$2,000,000.00», where applicable, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The umbrella/excess policy shall be applied -on a Following Form basis overof the Commercial General Liability, Commercial Automobile Liability and Employer's Liability Coverage. -not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.~~

~~§ A.3.3.52.5~~ Workers' Compensation ~~coverage at statutory limits.~~

~~§ A.3.32.6~~ Employers' Liability ~~with-with~~ policy limits not less than ~~«\$1,000,000 » (\$ « »)~~ each accident, ~~«\$1,000,000 » «» (\$ « »)~~ each employee, and ~~«\$1,000,000 » and «» (\$ « »)~~ policy limit.

~~§ A.3.2.7~~ Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

~~§ A.3.3.72.8~~ ~~If the-If any Contractor Contractor~~ is required to furnish professional services as part of the Work, ~~the Prime Contractor and every Subcontractor of the Prime Contractor Contractor~~ shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than ~~«\$1,000,000» (\$ « »)~~ per claim and ~~«\$2,000,000» (\$ « »)~~ in the aggregate.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

~~Special terms and conditions that modify this Insurance Exhibit, if any, are as follows: § A.3.2.9~~ If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than ~~« » (\$ « »)~~ per claim and ~~« » (\$ « »)~~ in the aggregate.

~~§ A.3.2.10~~ Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than ~~« » (\$ « »)~~ per claim and ~~« » (\$ « »)~~ in the aggregate.

~~§ A.3.2.11~~ Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than ~~« » (\$ « »)~~ per claim and ~~« » (\$ « »)~~ in the aggregate.

~~§ A.3.2.12~~ Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than ~~« » (\$ « »)~~ per claim and ~~« » (\$ « »)~~ in the aggregate.

~~§ A.3.3~~ Contractor's Other Insurance Coverage

~~§ A.3.3.1~~ Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

~~(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)~~

←→

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1:

(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

§ A.3.3.2.1 Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below: (Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)

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§ A.3.3.2.2 Railroad Protective Liability Insurance, with policy limits of not less than (\$) per claim and (\$) in the aggregate, for Work within fifty (50) feet of railroad property.

§ A.3.3.2.3 Asbestos Abatement Liability Insurance, with policy limits of not less than (\$) per claim and (\$) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.

§ A.3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.

§ A.3.3.2.5 Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

§ A.3.3.2.6 Other Insurance
(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:

(Specify type and penal sum of bonds.)

Type

Penal Sum (\$0.00)

Payment Bond

Performance Bond

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

ARTICLE A.4 — SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:



§ A.4.1 Waiver of Subrogation

§ A.4.1.1 The Subcontractor and Sub-Subcontractors waive all rights of subrogation against the Prime Contractor, General Contractor, Prime Contractor and Owner and all additional insured's named in paragraph 5 of this Insurance Requirements Letter for loss or damage covered by any of the insurance maintained by the Subcontractor or Sub-Subcontractor pursuant to this subcontract.

§ A.4.1.2 If any of the policies of insurance required under this subcontract require an endorsement to provide for waivers of subrogation, then the named insured's of such policies will cause them to be so endorsed.

§ A.4.1.3 The amount of insurance provided in the aforementioned insurance coverages shall not be construed to be a limitation of the liability on the part of the Subcontractor or any of the Sub-Subcontractors.

§ A.4.1.4. Any type of insurance or any increase in limits of liability not described above which the Subcontractor requires for its own protection or on account of statute, shall be its own responsibility and at its own expense.

§ A.4.1.5 The carrying of insurance described shall in no way be interpreted as relieving the Subcontractor of any responsibility or liability under this contract.

Prime Contractor's Insurance Agent's Statement:

I have reviewed the above requirements with the bidder named below, and have advised the bidder of those coverage's provided and those not provided through this agency.

AGENCY NAME: _____ AUTHORIZED SIGNATURE: _____

Bidder's Statement:

If awarded the contract, I will comply with contract insurance requirements.

BIDDER'S NAME: _____ AUTHORIZED SIGNATURE _____

REVISED BID FORM

RENOVATIONS TO AMBLER BRANCH, WISSAHICKON VALLEY PUBLIC LIBRARY

PROPOSAL SUBMITTED ON BEHALF OF: _____
FOR: ADDITION AND RENOVATIONS TO THE AMBLER BRANCH LIBRARY
GENERAL CONSTRUCTION, MECHANICAL, FIRE DETECTION, PLUMBING and
ELECTRICAL WORK AS A SINGLE PRIME CONTRACT

1. BIDS ARE TO BE SUBMITTED ON THIS FORM AND ANY EXCEPTIONS TO CONTRACT DOCUMENTS, GENERAL CONDITIONS, INSTRUCTIONS TO BIDDERS, DETAILED SPECIFICATIONS AND SPECIAL CONDITIONS MUST BE WRITTEN ON THE VARIANCE FORM PROVIDED FOR THIS PURPOSE.
2. In submitting this proposal, bidder acknowledges that it has carefully examined the Bid and Contract Document together with the Addenda, if any (as indicated below) as prepared by the Department of Finance, Purchasing Division, and is familiar with the various conditions affecting the work hereinafter described, the manner and the time stated for performance.

<u>Addendum No.</u>	<u>Issuing Date</u>
_____	_____
_____	_____
_____	_____

3. **Bid Summary**

Total Lump Sum Bid for Base Contract	\$	_____
Total Bid for Contingency	+	\$ _____
Total Bid for the Contract		\$ _____

Add Alternate No. 1: Electric Panel Movable Partition \$ _____

Add Alternate No 2: Snow Melt System in Ramp \$ _____

Add Alternate No 3: Motorized Double Shade system in Room 107 \$ _____

Add Alternate No 4: Landscape per Drawing L-101 \$ _____

4. Persons to Contact on matters concerning this Bid and Contract:

<u>NAME</u>	<u>OFFICIAL CAPACITY & TITLE</u>	<u>TELEPHONE. NUMBER</u>
_____	_____	()
_____	_____	()
_____	_____	()

5. Variance Form

Any variations that would materially or substantively change or alter the GENERAL CONDITIONS, INSTRUCTIONS TO BIDDERS, DETAILED SPECIFICATIONS or SPECIAL CONDITIONS must be submitted at the Pre-Bid Conference or if there is no scheduled Pre-Bid meeting, written notice by either fax or e-mail must be submitted to the ARCHITECT no later than seven (7) days prior to the Bid Opening date. An Addendum will be issued prior to Bid Opening for any changes or alterations found acceptable to the Library. This Variance form is to be used only for variances which are not materially or substantively less than the specifications required. Any variation not covered by Addendum is at the risk of the Bidder and may be cause for rejection of the Bid.

GENERAL CONDITIONS NO. (s) DETAILED DESCRIPTION

INSTRUCTIONS TO BIDDERS NO (s) DETAILED DESCRIPTION

DETAILED SPECIFICATIONS NO. (s) DETAILED DESCRIPTION

SPECIAL CONDITIONS NO. (s) DETAILED DESCRIPTION

(Attach to this Sheet if Necessary)

6. BID SHEET

CONTRACT SCOPE OF WORK

ADDITION AND ALTERATIONS, AMBLER BRANCH LIBRARY,
AS SPECIFIED HEREIN:

TOTAL LUMP SUM BID FOR BASE CONTRACT \$ _____

_____ DOLLARS

CONTINGENCY

Contingency No. C-1: Additional Asbestos Abatement of Floor Tile and Mastic

\$10,000.00 Lump Sum = \$10,000.00

TOTAL BID FOR CONTINGENCY (ITEMS C-1 TO C-3) \$ _____

TOTAL BID FOR THE CONTRACT

(Total Lump Sum Bid for Base Contract PLUS Total Bid for Contingency) \$ _____

ADD ALTERNATES:

Alternate No. 1: Electric Operation of Moveable Panels Lump Sum \$ _____

Add Alternate No 2: Snow Melt System in Ramp Lump Sum \$ _____

Add Alternate No 3: Motorized Double Shade system in Room 107 Lump Sum \$ _____

Add Alternate No 4: Landscape per Drawing L-101 Lump Sum \$ _____

Note: The Contract will be awarded to the lowest responsible bidder. The low bid will be determined based on the "Total Bid for the Contract" plus Alternate(s), if selected by the Library. All work is included and must be bid.

UNIT PRICES:

Unit Price 1: Additional Excavation beyond scope shown on documents and described in Section 31 2000 Earth Moving \$ _____/C.F.

7. If the bidder is: **A SOLE OWNER OR PARTNERSHIP** (Please Indicate Which)

execute this part of the Proposal: **SS#:** _____

OR

TIN#: _____

DATE: _____

(Signature of Owner or Partner)

(Business Name of Bidder)

(Print Name and Title)

(Address) (City) (State) (Zip) (Tele. Number)

8. If the Bidder is a: **CO., INC. LLC OR L.T.D.** **EIN#:** _____

execute this part of the Proposal. If not executed by the Corporation (i.e. required signatures as seen below and Corporate Seal affixed), a certified Corporate Resolution authorizing the form of execution used must be attached to and made part of this Bid.

DATE: _____

(Corporate or Business Name of Bidder)

(Address) (City) (State) (Zip) (Tele. Number)

(Signature of Pres. Or Vice Pres.)

(Signature of Secretary, Asst. Sec.
Treasurer or Asst. Treasurer)

(Print Name and Title)

(Print Name and Title)

CORPORATE SEAL

Tracer Concierge Direct Digital Control Systems

PART 1 - PRODUCTS

1.1 ARCHITECTURE/COMMUNICATION

- A. This project shall be comprised of a high speed Ethernet network utilizing BACnet/IP communications between System Controllers and Workstations. Communications between System Controllers and sub-networks of Custom Application Controllers and/or Application Specific Controllers shall utilize BACnet/Zigbee communications.

Each System Controller shall perform communications to a network of Custom Application and Application Specific Controllers using BACnet/Zigbee (802.15.4) as defined by the Zigbee Standard.

- a. Each communication interface shall be Zigbee Building Automation Certified product as defined by the BACnet Standard and the Zigbee Alliance.
- b. Each System Controller shall function as a BACnet Router to each unit controller providing a unique BACnet Device ID for all controllers within the system.

The Owner will provide all communication media, connectors, repeaters, network switches, and routers necessary for the high speed Ethernet network. An active Ethernet port will be provided adjacent to each System Controller and operator interface (PC) for connection to this high speed Ethernet network.

All values within the system (i.e. schedules, datalogs, points, software variables, custom program variables) shall be readable and controllable (where appropriate) by any System Controller or BACnet Workstation on the communications network via BACnet.

1.2 OPERATOR INTERFACE

Local Operator Interface

- a. A wall mounted touch screen display shall be provided for local access to the system.
- b. The display shall provide a single point from which to control set points from multiple pieces of equipment.
- c. The interface shall optionally provide scheduling with the ability to schedule events at least 1 year in advance.
- d. The interface shall optionally include pin control and limited temperature adjustments.
- e. The local operator interface should be capable of displaying Custom Graphics as outlined below.

Building Operator Interface

- a. The operator interface shall be accessible via a web browser.
- b. Access to the operator interface shall not require any "plug-ins" (i.e. JAVA Runtime Environment (JRE), Adobe Flash) in addition to the web browsers identified below.
- c. The operator interface shall support the following Internet web browsers:
 - 1) [Optional] Internet Explorer 10.0+
 - 2) [Optional] Firefox 29.0+
 - 3) [Optional] Chrome 35.0+
- d. The operator interface shall support the following mobile web browsers:
 - 1) [Optional] iOS (iPad/iPhone) V6.0+
 - 2) [Optional] Android (Tablet) V4.3+
 - 3) [Optional] Android (Phone) V2.3+

Mobile App Operator Interface

- a. Mobile App Operator Interface shall support the following Operating systems
 - 1) Apple iOS V 7/8

- 2) Android V4.3/4.4
- b. The operator interface shall support system access on a mobile device via a mobile app to:
 - 1) Alarm log
 - 2) System Status
 - 3) Equipment status
 - 4) Space Status
 - 5) Standard Equipment graphics
- c. The operator interface shall support actions on a mobile device via a mobile app to:
 - 1) Override set points
 - 2) Override occupancy
 - 3) Acknowledge Alarms
 - 4) Comment on Alarms

System Security

- a. Each operator shall be required to login to the system with a user name and password in order to view, edit, add, or delete data.
- b. User Profiles shall restrict the user to only the objects, applications, and system functions as assigned by the system administrator.
- c. Each operator shall be allowed to change their user password
- d. The System Administrator shall be able to manage the security for all other users
- e. The system shall include pre-defined "roles" that allow a system administrator to quickly assign permissions to a user.
- f. User logon/logoff attempts shall be recorded.
- g. The system shall protect itself from unauthorized use by automatically logging off following the last keystroke. The delay time shall be user definable.
- h. All system security data shall be stored in an encrypted format.

Database

- a. Database Save. A system operator with the proper password clearance shall be able to archive the database on the designated operator interface PC.
- b. Database Restore. The system operator shall also be able to clear a panel database and manually initiate a download of a specified database to any panel in the system.

On-Line Help and Training

- a. Provide a context sensitive, on line help system to assist the operator in operation and configuration of the system.
- b. On-line help shall be available for all system functions and shall provide the relevant data for each particular screen.

System Diagnostics

- a. The system shall automatically monitor the operation of all network connections, building management panels, and controllers.
- b. The failure of any device shall be annunciated to the operators.

Equipment & Application Pages

- a. The operator interface shall include standard pages for all equipment and applications. These pages shall allow an operator to obtain information relevant to the operation of the equipment and/or application, including:
 - 1) Animated Equipment Graphics for each major piece of equipment and floor plan in the System
 - a) Animation capabilities shall include the ability to show a sequence of images reflecting the position of analog outputs, such as valve or damper positions. Graphics shall be capable of launching other web pages.
 - 2) Alarms relevant to the equipment or application without requiring a user to navigate to an alarm page and perform a filter.
 - 3) Historical Data (As defined in Automatic Trend Log section below) for the equipment or application without requiring a user to navigate to a data log page and perform a filter.

System Graphics. Operator interface shall be graphically based and shall include at least one graphic per piece of equipment or occupied zone, graphics for each chilled water and hot water system, and graphics that summarize conditions on each floor of each building included in this contract. Indicate thermal comfort on floor plan summary graphics using colors to represent zone temperature relative to zone set point.

- a. Functionality. Graphics shall allow operator to monitor system status, to view a summary of the most important data for each controlled zone or piece of equipment, to use point and-click navigation between zones or equipment, and to edit set points and other specified parameters.
- b. Graphic imagery – graphics shall use 3D images for all standard and custom graphics. The only allowable exceptions will be photo images, maps, schematic drawings, and selected floor plans.
- c. Animation. Graphics shall be able to animate by displaying different Image lies for changed object status.
- d. Alarm Indication. Indicate areas or equipment in an alarm condition using color or other visual indicator.
- e. Format. Graphics shall be saved in an industry-standard format such as BMP, JPEG, PNG, or GIF. Web-based system graphics shall be viewable on browsers compatible with World Wide Web Consortium browser standards. Web graphic format shall require no plug-in (such as HTML and JavaScript) or shall only require widely available no-cost plug-ins (such as Active-X and Macromedia Flash).

Manual Control and Override.

- a. Point Control. Provide a method for a user to view, override, and edit if applicable, the status of any object and property in the system. The point status shall be available by menu, on graphics or through custom programs.
- b. Temporary Overrides. The user shall be able to perform a temporary override wherever an override is allowed, automatically removing the override after a specified period of time.
- c. Override Owners. The system shall convey to the user the owner of each override for all priorities that an override exists.
- d. Provide a specific icon to show timed override or operator override, when a point, unit controller or application has been overridden manually.

Engineering Units

- a. Allow for selection of the desired engineering units (i.e. Inch pound or SI) in the system.
- b. Unit selection shall be able to be customized by locality to select the desired units for each measurement.
- c. Engineering units on this project shall be IP.

Scheduling. A user shall be able to perform the following tasks utilizing the operator interface:

- a. Create a new schedule, defining the default values, events and membership.
- b. Create exceptions to a schedule for any given day.
- c. Apply an exception that spans a single day or multiple days.
- d. View a schedule by day, week and month.
- e. Exception schedules and holidays shall be shown clearly on the calendar.
- f. Modify the schedule events, members and exceptions.

Alarm/Event Notification

- a. An operator shall be notified of new alarms/events as they occur while navigating through any part of the system via an alarm icon.
- b. Alarm/Event Log. The operator shall be able to view all logged system alarms/events from any operator interface.
 - 1) The Building Operator shall be able to sort and filter alarms from events. Alarms shall be sorted in a minimum of 4 categories based on severity.
 - 2) Alarm/event messages shall use full language, easily recognized descriptors.
 - 3) An operator with the proper security level may acknowledge and clear alarms/events.
 - 4) All alarms/events that have not been cleared by the Building Operator shall be stored by the building controller.

- 5) The alarm/event log shall include a comment field for each alarm/event that allows a user to add specific comments associated with any alarm.
- c. Alarm Processing.
 - 1) The Building Operator shall be able to configure any object in the system to generate an alarm when transitioning in and out of a normal state.
 - 2) The Building Operator shall be able to configure the alarm limits, warning limits, states, and reactions for each object in the system.

Reports and Logs.

- a. The Building Operator interface shall provide a reporting package that allows the operator to select reports.
- b. The Building Operator interface shall provide the ability to schedule reports to run at specified intervals of time.
- c. The Building Operator interface shall allow a user to export reports and logs from the building controller in a format that is readily accessible by other standard software applications including spreadsheets and word processing. Acceptable formats include:
 - 1) CSV, HTML, XML, PDF
- d. Reports and logs shall be readily printed to the system printer.
- e. Provide a means to list and access the last 10 reports viewed by the user.
- f. The following standard reports shall be available without requiring a user to manually configure the report:
 - 1) All Points in Alarm Report: Provide an on demand report showing all current alarms.
 - 2) All Points in Override Report: Provide an on demand report showing all overrides in effect.
 - 3) Commissioning Report: Provide a one-time report that lists all equipment with the unit configuration and present operation.
 - 4) Points report: Provide a report that lists the current value of all points

VAV Air System. An operator shall be able to view and control (where applicable) the following parameters via the Building Operator interface:

- a. System Mode
- b. System Occupancy
- c. Ventilation (Outdoor air flow) setpoint
- d. Ventilation (Outdoor air flow) status
- e. Air Handler Static pressure setpoint
- f. Air Handler Static pressure status
- g. Air Handler occupancy status
- h. Air Handler Supply air cooling and heating set points
- i. Air Handler minimum, maximum and nominal static pressure setpoints
- j. VAV box minimum and maximum flow
- k. VAV box drive open and close overrides
- l. VAV box occupancy status
- m. VAV box Airflow to space
- n. Average space temperature
- o. Minimum space temperature
- p. Maximum space temperature

1.3 APPLICATION AND CONTROL SOFTWARE

- A. Furnish the following applications software for building and energy management. All software applications shall reside and run in the system controllers. Editing of applications shall occur at the operator interface.

Scheduling. Provide the capability to schedule each object or group of objects in the system. Each of these schedules shall include the capability for start, stop, optimal start, optimal stop, and night economizer actions. Each schedule may consist of up to [10] events. When a group of objects are scheduled together, provide the capability to define advances and delays for each member. Each schedule shall consist of the following:

- a. Weekly Schedule. Provide separate schedules for each day of the week.
- b. Exception Schedules. Provide the ability for the operator to designate any day of the year as an exception schedule. This exception schedule shall override the standard schedule for that day. Exception schedules may be defined up to a year in advance. Once an exception schedule is executed it will be discarded and replaced by the standard schedule for that day of the week.
- c. Holiday Schedules. Provide the capability for the operator to define up to 99 special or holiday schedules. These schedules may be placed on the scheduling calendar and will be repeated each year. The operator shall be able to define the length of each holiday period.
- d. Optimal Start. The scheduling application outlined above shall support an optimal start algorithm. This shall calculate the thermal characteristics of a zone and start the equipment prior to occupancy to achieve the desired space temperature at the specified occupancy time. The algorithm shall calculate separate sets of heating and cooling rates for zones that have been unoccupied for less than and greater than 24 hours. Provide the ability to modify the start algorithm based on outdoor air temperature. Provide an early start limit in minutes to prevent the system from starting before an operator determined time limit.

Trend Log Application

- a. Trend log data shall be sampled and stored on the System Controller panel and shall be capable of being archived to a BACnet Workstation for longer term storage.
 - 1) Trend logs shall include interval, start-time, and stop-time.
 - 2) Trend log intervals shall be configurable as frequently as 1 minute and as infrequently as 1 year.
- b. Automated Trend Logs.
 - 1) The system controller shall automatically create trend logs for defined key measurements for each controlled HVAC device and HVAC application.
 - 2) The automatic trend logs shall monitor these parameters for a minimum of 7 days at 15 minute intervals. The automatic trend logs shall be user adjustable.
 - 3) The following is a list of key measurements required for Automatic Trending:

a) Air Systems

Air Handling Unit/Rooftop (VAV)	Discharge Air Temperature
	Discharge Air Temperature Setpoint Active
	Space Temperature Active
	Cooling Capacity Status
	Discharge Air Flow

Air Handling Unit/Rooftop (CV)	Discharge Air Temperature
	Space Temperature Active
	Space Temperature Setpoint Active
	Cooling Capacity Status
	Heating Capacity Primary Status
	Outdoor Air Damper Position

VAV Box	Discharge Air Temperature
	Space Temperature Active
	Space Temperature Setpoint

	Active
	Air Flow Setpoint Active
	Discharge Air Flow

Alarm/Event Log

- a. Any object in the system shall be configurable to generate an alarm when transitioning in and out of a normal or fault state.
- b. Any object in the system shall allow the alarm limits, warning limits, states, and reactions to be configured for each object in the system.
- c. An alarm/event shall be capable of triggering any of the following actions:
 - 1) Route the alarm/event to one or more alarm log
 - a) The alarm message shall include the name of the alarm location, the device that generated the alarm, and the alarm message itself.
 - 2) Route an e-mail message to an operator(s)
 - 3) Log a data point(s) for a period of time
 - 4) Run a custom control program

VAV System Coordination. Provide applications software to properly coordinate and control the VAV system to ensure equipment safety and minimize energy use. This application shall perform the following functions:

- a. Startup and shutdown the air handler safely. Ensure the VAV boxes are open sufficiently when the air handler is running, to prevent damage to the ductwork and VAV boxes due to high air pressure.
- b. Calibrate VAV boxes.
- c. Fan Pressure Optimization (ASHRAE 90.1) - Minimize energy usage by controlling system static pressure to the lowest level while maintaining zone airflow requirements. System static pressure controlled to keep the "most open" zone damper between 65% and 75% open.
 - 1) The Fan Pressure Optimization application shall have the ability to identify and display the discharge air setpoint of the air-handler and the VAV box that serves the critical zone (e.g., the zone with the most open VAV box damper). This information shall dynamically update with changes in the location of the critical zone.
 - 2) During commissioning, and with the engineer/owner, the controls contractor shall confirm the performance of Fan Pressure Optimization by conducting a field functional test that demonstrates critical zone reset.
- d. Ventilation Optimization (ASHRAE 62) – properly ventilate all spaces while minimizing operating energy costs, using measured outdoor air flow. Dynamically calculate the system outdoor air requirement based on "real time" conditions in the spaces (i.e., number of occupants, CO2 levels, etc.) minimizing the amount of unconditioned outdoor air that must be brought into the building.
- e. Demand Controlled Ventilation – the active ventilation setpoint shall modulate between the occupied ventilation and occupied standby ventilation setpoint; Reset the setpoint based on CO2 levels in the space.

1.4 SYSTEM CONTROLLERS

- A. There shall be one or more independent, standalone microprocessor based System Controllers to manage the global strategies described in Application and Control Software section.

The System Controller shall have sufficient memory to support its operating system, database, and programming requirements.

The controller shall provide a USB communications port for connection to a PC

The operating system of the Controller shall manage the input and output communications signals to allow distributed controllers to share real and virtual point information and allow central monitoring and alarms.

All System Controllers shall have a real time clock.

Data shall be shared between networked System Controllers.

The System Controller shall continually check the status of its processor and memory circuits. If an abnormal operation is detected, the controller shall:

- a. Assume a predetermined failure mode.
- b. Generate an alarm notification.
- c. Create a retrievable file of the state of all applicable memory locations at the time of the failure.
- d. Automatically reset the System Controller to return to a normal operating mode.

Environment. Controller hardware shall be suitable for the anticipated ambient conditions. Controller used in conditioned ambient shall be mounted in an enclosure, and shall be rated for operation at -40 C to 50 C [-40 F to 122 F].

Clock Synchronization.

- a. All System Controllers shall be able to synchronize with a NTP server for automatic time synchronization.
- b. All System Controllers shall be able to accept a BACnet time synchronization command for automatic time synchronization.
- c. All System Controllers shall automatically adjust for daylight savings time if applicable.

Serviceability

- a. Provide diagnostic LEDs for power, communications, and processor.
- b. The System Controller shall have a display on the main board that indicates the current operating mode of the controller.
- c. All wiring connections shall be made to field removable, modular terminal connectors.
- d. The System controller shall utilize standard DIN mounting methods for installation and replacement.

Memory. The System Controller shall maintain all BIOS and programming information indefinitely without power to the System controller

Immunity to power and noise. Controller shall be able to operate at 90% to 110% of nominal voltage rating and shall perform an orderly shut-down below 80% nominal voltage

BACnet Test Labs (BTL) Listing. Each System Controller shall be listed as a Building Controller (B-BC) by the BACnet Test Labs with a minimum BACnet Protocol Revision of 14.



TRANE[®]



Tracer[®] Concierge[™] System

Sophisticated building control — simplified.

LET'S GO BEYOND[™]



Run your building smartly and simply with a Tracer Concierge system



The Trane® Tracer® Concierge™ system provides an easy and affordable way for building owners to gain control of lighting and HVAC systems. Concierge goes beyond managing individual rooms by running HVAC and lighting simply and smartly from one interface. The result is improved comfort and performance with reduced operating costs.

As a bundled system of proven Trane components powered by the Tracer controls platform, Concierge provides the feature-rich functionality of building automation, without added complexity. An intuitive, local user interface simplifies daily operation and saves time making changes to the system.

Energy efficiency is improved by easily managing multiple rooms and HVAC and lighting equipment from one interface. The ability to fit the system to your specific building needs results in optimized building performance — and can contribute to greater efficiency and energy savings.

Tracer Concierge also provides greater flexibility to make future expansion and the integration of new systems and equipment easier, because the system is built on a platform that supports open standards.

Get simplified, sophisticated control for your whole building with Tracer Concierge. It's better building control — Trane and Simple.

Simplify day-to-day operation

Tracer Concierge is a cost-effective solution that makes day-to-day operation of your HVAC and lighting systems easier. A bundled system of pre-engineered applications means you get advanced capabilities for building management with less risk — right out of the box.

Intuitive interface for ease of use

An intuitive local interface makes the system easy to use. One simplified control saves time in making changes to the system. A touch-screen display has standard screens that can be changed to reflect your building, allowing you to best fit the system to your specific needs. See exactly the information you want to see about your building at a glance.

Save time with area control

Tracer Concierge provides the ability to group multiple rooms, components and HVAC and lighting equipment in your building, so you can manage your building the way that you use it, controlling areas versus individual rooms. Program multiple rooms on the same schedule and update them all together as needed, from one interface — a capability that programmable thermostats don't offer — giving you the flexibility to manage your entire building instead of just the space.

Range of built-in functions saves time

Tracer Concierge offers a single point of control to complete many of the functions you use to manage your building. The single point of control eliminates the need to go from location to location in your building to program multiple thermostats, saving time and money. A range of built-in functions helps maximize building performance including overrides, temperature setpoint changes and daily monitoring.

Flexible scheduling made easy

Tracer Concierge comes pre-loaded with a scheduler that can be modified to fit your building. With a multitude of scheduling options, you can use your system how you use your building. Schedules can be set for 365 days, rather than the daily or weekly options with most programmable thermostats. This simplified setpoint control and easy schedule adjustment increases occupant comfort and minimizes energy use when no one is in your building.

PIN control to reduce overrides

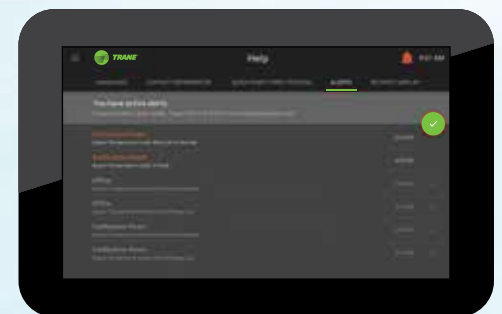
Keep your automated system automated by setting up a PIN to control who has access to system overrides, which is a primary way to lose efficiency in a building. You can also limit setpoint adjustments to a range of ± 1 to 9 degrees. These features let occupants view the system settings but ensure that system strategies are set by those who are responsible for the building, which keeps the system performing as expected and maintains efficiency.



See exactly the information you want to see about your building at a glance.

React quickly

Get critical information you need to keep your building running. An active alert feature helps save time in troubleshooting, providing notification of equipment requiring immediate service.





Improve performance and efficiency

The Tracer® Concierge™ system brings automation to your facility for improved building performance and efficiency — without sacrificing occupant comfort. Greater system efficiency can also help reduce operating costs.

- Scheduling can easily be configured to your site, which improves efficiency by matching system performance to the needs of your building. The schedule is easy to change as needed, so the system only runs when you want it to run, and you can set the system for optimized occupant comfort.
- Scheduling can be done from a single interface, rather than requiring you to program schedules and changes at numerous thermostats in your building, which saves time and money.
- An optimal start and stop feature provides better control and efficiency for building systems, so the HVAC is performing at a desired level when building occupants arrive.
- Available advanced control strategies allow you to take full advantage of the capabilities of rooftop units, to keep the system running optimally for comfort and efficiency.
- Automation provides the ability to capture and measure energy data, giving you the option to gain additional insights into building performance and usage that can drive improvement and efficiency.
- When your building is ready, Tracer Concierge is built to integrate lighting controls, so you can manage HVAC and lighting from a single interface. This saves time and results in easier, more efficient building management.
- The standard screens provided by Tracer Concierge will fit your facility, and you can further enhance the system to see and control the floor space and the unique aspects of your building that you want to monitor.

Affordable installation with added value

Tracer Concierge offers cost-effective installation, in addition to adding value to the process of running your building today and in the future. Combine that with higher energy efficiency that can reduce operating costs, and the result is an affordable building management solution that provides a return on your investment for the life of the system.



Trane Air-Fi wireless system

Tracer Concierge uses Trane® Air-Fi® wireless communication between devices, eliminating the need for wired components. With Air-Fi wireless technology, pre-installation site surveys are seldom required to determine device placement. Wireless makes installation of the system simpler and less time consuming, with less disruption to your facility and its occupants for installation in existing buildings.

Prepackaged control panel

A prepackaged control panel makes installation easier, which reduces risk and cost.

Pre-engineered applications

Tracer Concierge offers pre-engineered applications that are factory-bundled, so the built-in functions and applications are designed to work together and contribute to on-time, on-budget installation. And pre-engineered applications have been tested time and again, ensuring the system provides energy efficiency and helps your facility operate at peak performance.

Factory-mounted controls

Factory-mounted equipment controls used with Tracer Concierge support moving work from the field to the factory, for more controlled and consistent conditions. This ensures a higher level of reliability — reducing your risk at installation — and contributing to on-time, on-budget project completion.

Field-installed controls

Tracer Concierge works with field-installed controls for most types of existing equipment, so you can integrate the HVAC equipment you already have, giving you flexibility. Leveraging your existing HVAC equipment also helps save costs.

Built on open standards

Tracer Concierge is built on a platform that supports open standards and is flexible enough to work with your new or existing HVAC equipment, whether or not it's from Trane. Since the systems and components are designed to easily work together, it's easy to install and set up, saving time and money. And you can quickly and easily bring new equipment online.

Easier operation saves you time

- **A single interface provides system control.** An easy-to-use interface lets you see everything in one place, so you no longer need to travel from location to location in your building to check thermostats and control lighting.
- **Wireless provides reliability and flexibility.** With Trane® Air-Fi® wireless, you can easily move or replace wireless sensors as needed, giving you the flexibility to resolve issues related to sensing accuracy or aesthetics. And because Trane Air-Fi sensors offer redundant, self-repairing mesh technology and greater signal range, you avoid performance problems related to poor wiring or wired components, resulting in greater system reliability and reduced maintenance.
- **The system is web-enabled.** With the Tracer® Concierge™ system, your building can be connected for easy diagnostics, offering easier access for service and troubleshooting. This decreases the time and money spent on maintenance and minimizes the amount of troubleshooting that must be done on-site. Also, the system alerts you if something isn't working properly, to reduce downtime and repair costs.
- **A solution that brings automation to your building.** Tracer Concierge provides access to the rich data that automation brings, for the people who want access to it, making service and maintenance easier and faster.
- **Manage on the go.** Manage set-points, schedules and critical alerts from anywhere.





Flexibility for whatever the future brings

With Tracer Concierge, you get flexibility — no matter what your future building needs are. A wireless solution allows you to easily move or replace wireless sensors as needed, and the platform supports open standards, so adding unit controllers, zone sensors and other devices down the road will be easy and affordable.

Concierge provides advanced capabilities compared to a programmable thermostat and easy-to-use operation at an affordable price. The result is a system that offers energy savings, decreased maintenance and worry-free operation.

Building automation improves performance and efficiency and maintains occupant comfort for your facility. Concierge provides those benefits without added complexity, so you can run your building smartly. It's better building control — Trane and Simple.



Visit Trane.com/Concierge
to learn more.



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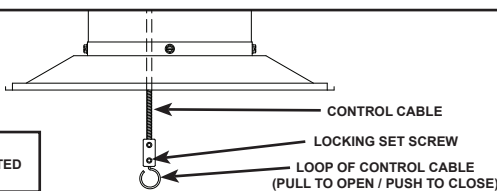
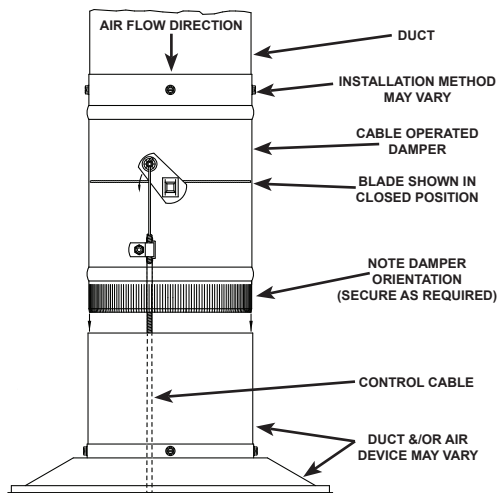
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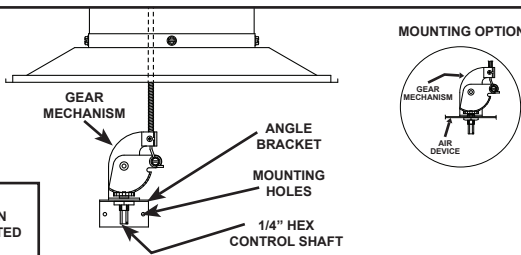
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ROUND CABLE OPERATED DAMPERS

INTERNAL CABLE - CODR & GCODR



CODR
CABLE OPERATED
DAMPER



GCODR
GEAR DRIVEN
CABLE OPERATED
DAMPER

Step 1: Install the damper in the duct as required.

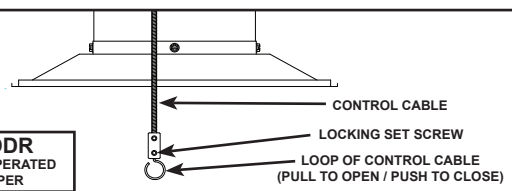
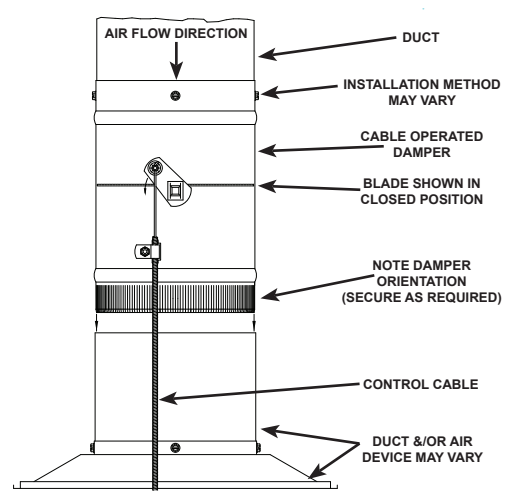
Step 2: Pass the damper control cable through the duct to the air device or the remote adjustment point. **For GOCODR**, mount gear mechanism to either the wall of the plenum using the angle bracket, or remove the angle bracket and mount it to the air device.

Step 3: Adjust the damper blade position for proper air flow. **For CODR**, loosen the locking set screw closest to the looped wire end of the control cable, push or pull the looped wire end of the control cable and tighten the set screw nearest to the looped wire end of the cable to lock the damper blade in the desired position. Store the control cable appropriately. **For GCODR**, rotate the 1/4" control shaft of the gear mechanism CW or CCW using a medium flat head screw driver or a 1/4" nut driver.

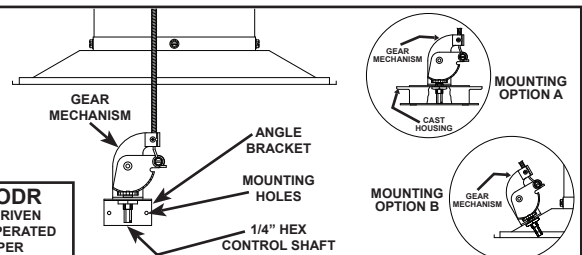
For adjustments, repeat Step 3 as needed.

NOTE: A 1/4" 'deep' socket may be required to make adjustments when the gear mechanism is mounted to the ceiling box.

EXTERNAL CABLE - XCODR & GXCODR



XCODR
CABLE OPERATED
DAMPER



XCODR
GEAR DRIVEN
CABLE OPERATED
DAMPER

Step 1: Install the damper in the duct as required.

Step 2: Route the damper control cable to the remote adjustment point, being sure to avoid severe bending or kinking of the control cable. **For XGOCODR**, mount gear mechanism to either the wall of the plenum or the remote adjustment point using the angle bracket, or remove the angle bracket and mount it to the air device or the ceiling box.

Step 3: Adjust the damper blade position for proper air flow. **For XCODR**, loosen the locking set screw closest to the looped wire end of the control cable, push or pull the looped wire end of the control cable and tighten the set screw nearest to the looped wire end of the cable to lock the damper blade in the desired position. Store the control cable appropriately. **For GXCODR**, rotate the 1/4" control shaft of the gear mechanism CW or CCW using a medium flat head screw driver or a 1/4" nut driver.

For adjustments, repeat Step 3 as needed.

NOTE: A 1/4" 'deep' socket may be required to make adjustments when the gear mechanism is mounted to the ceiling box.

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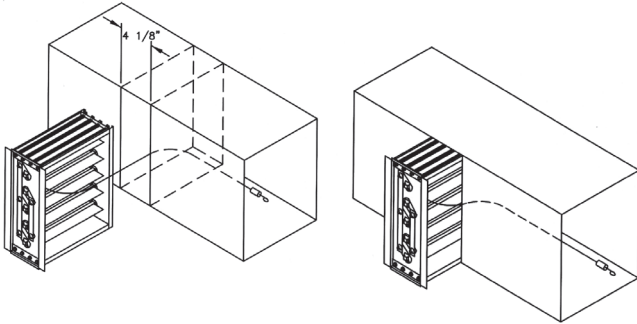
Install all devices in accordance with applicable electrical and mechanical codes.

ALL DUROZONE DAMPERS FEATURE:

• 5 year limited warranty • Controlled bypass • Maintenance free operation) • 100% factory testing • Custom dampers and special controls are available on request.

RECTANGULAR CABLE OPERATED DAMPERS

INTERNAL CABLE - CODS & GCODS



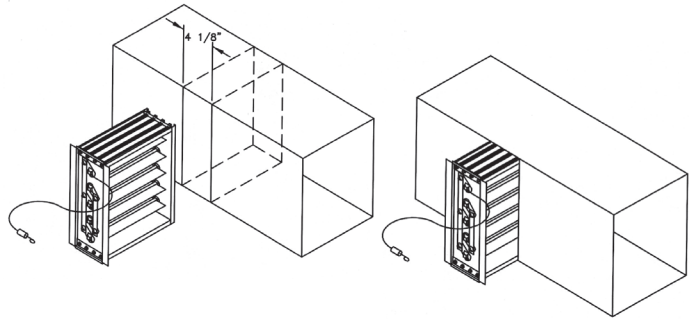
Step 1: Cut 4-1/8" wide slot into the side of the sheet metal duct.

Step 2: If desired, install gasket around the damper frame per the enclosed instructions.

Step 3: Insert the damper control cable into the slot cut into the ductwork and slide the damper into the duct work.

Step 4: Secure the damper to the ductwork with the screws provided.

EXTERNAL CABLE - XCODS & GXCODS

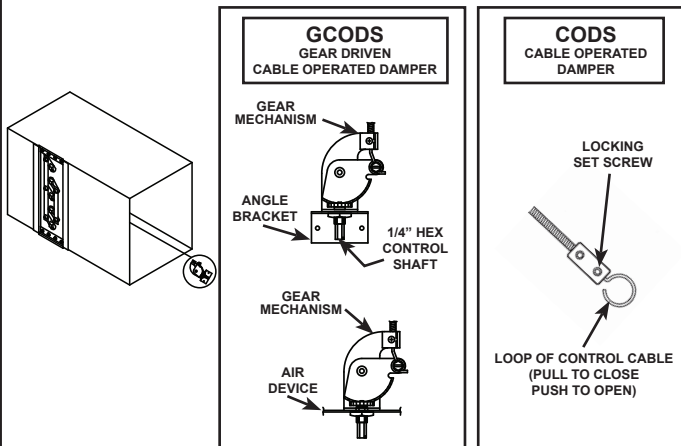


Step 1: Cut 4-1/8" wide slot into the side of the sheet metal duct.

Step 2: If desired, install gasket around the damper frame per enclosed instructions.

Step 3: Slide the damper into the duct work.

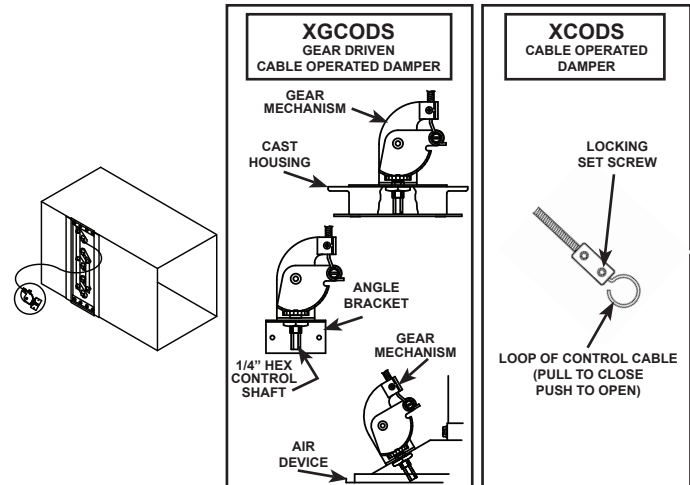
Step 4: Secure the damper to the ductwork with the screws provided.



Step 5: Pass the damper control cable through the duct to the air device or the remote adjustment point. **For GCODS**, mount gear mechanism to either the wall of the plenum using the angle bracket, or remove the angle bracket and mount it to the air device.

Step 6: Adjust the damper blade position for proper air flow. **For CODS**, loosen the locking set screw closest to the looped wire end of the control cable, push or pull the looped wire end of the control cable and tighten the set screw nearest to the looped wire end of the cable to lock the damper blade in the desired position. Store the control cable appropriately. **For GCODS**, rotate the 1/4" control shaft of the gear mechanism CW or CCW using a medium flat head screw driver or a 1/4" nut driver. **For adjustments, repeat Step 6 as needed.**

NOTE: A 1/4" 'deep' socket may be required to make adjustments when the gear mechanism is mounted to the ceiling box.



Step 5: Route the damper control cable to the remote adjustment point, being sure to avoid severe bending or kinking of the control cable. **For XGCODES**, mount gear mechanism to either the wall of the plenum using the angle bracket, or remove the angle bracket and mount it to the air device.

Step 6: Adjust the damper blade position for proper air flow. **For XCODES**, loosen the locking set screw closest to the looped wire end of the control cable, push or pull the looped wire end of the control cable and tighten the set screw nearest to the looped wire end of the cable to lock the damper blade in the desired position. Store the control cable appropriately. **For XGCODES**, rotate the 1/4" control shaft of the gear mechanism CW or CCW using a medium flat head screw driver or a 1/4" nut driver. **For adjustments, repeat Step 6 as needed.**

NOTE: A 1/4" 'deep' socket may be required to make adjustments when the gear mechanism is mounted to the ceiling box.

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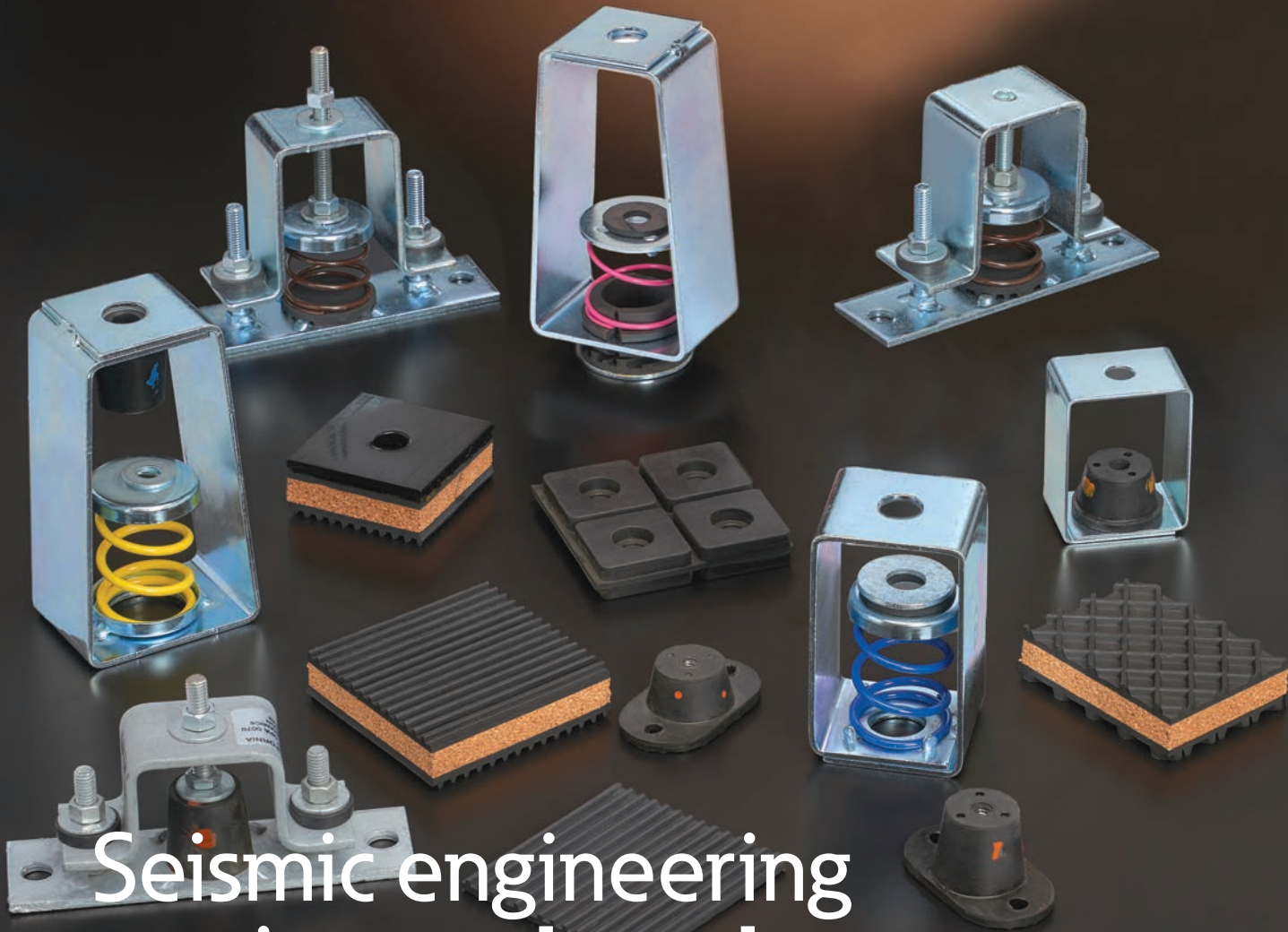
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Install all devices in accordance with applicable electrical and mechanical codes.

ALL DUROZONE DAMPERS FEATURE:

- 5 year limited warranty
- Controlled bypass
- Maintenance free operation
- 100% factory testing
- Custom dampers and special controls are available on request.



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PRODUCTS	Eaton	ISAT™	Mason™	Pentair™ (Caddy)
Seismic bracing	✓	✓	✓	✓
Seismic restraints	✓	✓	✓	✓
Vibration isolation	✓	✓	✓	✗
Anchors	✓	✓	✓	✓
Pipe hangers	✓	✓	✗	✓
Strut & fittings	✓	✓	✗	✓
Fasteners	✓	✗	✗	✓
Cable tray	✓	✗	✗	✓
Engineering services	✓	✓	✓	✗

†Marks shown are property of their respective owners.

Now including Vibration Isolation

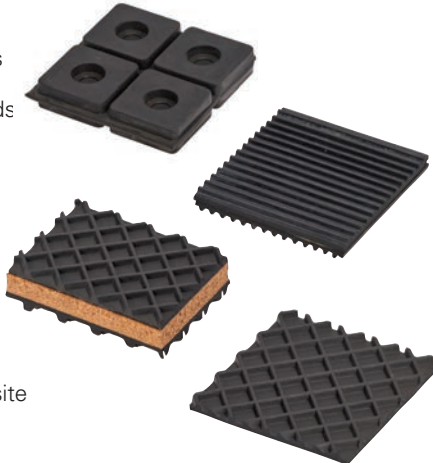
Spring hangers

- Available in a wide range of sizes and finishes, seismically rated and select products with OSHPD Pre-Approval
- Available in various spring rated deflection
- Housing engineered to carry up to five times the maximum load without failure
- Pre-compression rod furnished with all "R" option units



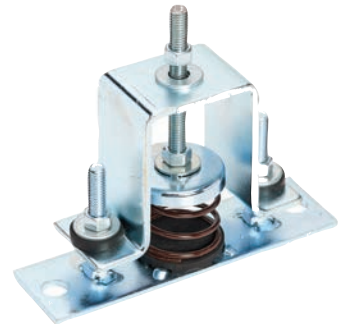
Vibration isolation pads

- Various sizes and thickness and materials, to isolate equipment and panel boards from vibration
- Non-skid: Thread surfaces resist walking
- Durable: Material is ozone resistant Neoprene rubber blend and cork
- Easy cut pad can be field adjusted to varying sizes, custom fit sizes on the job site

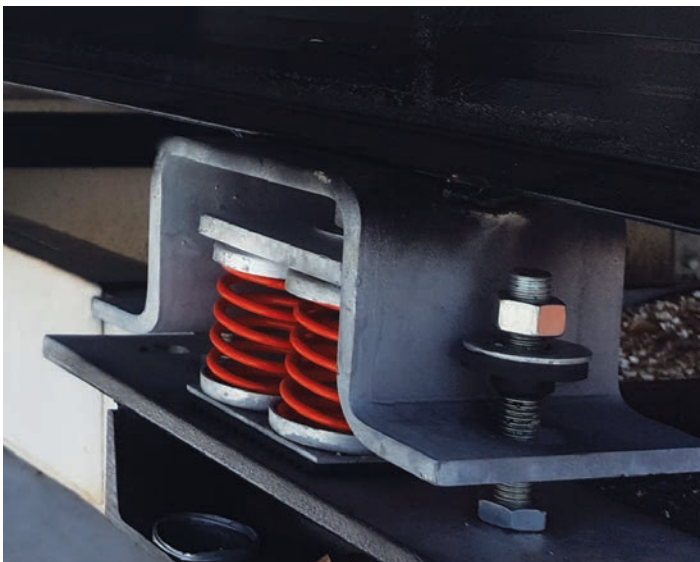


Isolator mounts

- Seismically rated and available in a wide range of sizes and configurations, custom sizes are available for any type of equipment
- Available in OSHPD pre-approved design
- All OS Type isolator/restraints feature large diameter springs with O.D. not less than 80% of rated deflection height
- Available in multi-spring low profile design
- Multiple equipment attachment options
- Light duty mounts available for more economical designs



Engineered curbs, frames and inertia bases with integrated vibration isolation available on request



Eaton's engineering services: before, during and after the sale

PRE-BID TO SYSTEM DESIGN SUPPORT

Codes and seismic requirements can differ from location to location and project to project. Our seismic experts understand the codes and can help support customers in the pre-bid process. In fact, the earlier our customers engage us in the process, the earlier we can start reviewing the project to provide a solution that complies with the building code and project specifications.

Our knowledgeable team will also work to find the lowest installed cost solution through the utilization of our labor-saving seismic bracing products.

PRODUCT & INSTALLATION SUPPORT

Our seismic experts will work to establish the lowest total installed cost, so that customers can know that they have the right products at the right time for their installation and final inspection.

Eaton's TOLCO seismic bracing products inherent labor and time-saving features are designed to help speed the process of installation. Many of the TOLCO seismic bracing products allow for universal applications, reducing the number of SKU's required on the job-site. And with built-in visual verification features of the TOLCO seismic bracing products, the installer can be assured that they have properly installed the product, and inspectors can easily be assured of correct installation torque without the use of a torque wrench.

INSPECTION AND AFTER SALE SUPPORT

Our seismic experts are available before, during and after the sale. And at the most critical point of the project, we are available to support the project with on-site visits and inspection support.

"Eaton makes it easy to get started with your project, and provides support during the project and at inspection."

For more information,
contact us.

TolcoSupport@Eaton.com

800-851-7415

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Printed in USA
Publication No. BR309001EN
October 2016 VICO-16

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