BALTIMORE COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF CONSTRUCTION CONTRACTS ADMINISTRATION
111 WEST CHESAPEAKE AVENUE
TOWSON, MARYLAND 21204

Contract No. 25034 PF0 Re-Bid
Project No's. Proj-200540012
Fullerton Fire Station #8 Ladies Renovation & Addition -
4401 Fitch Avenue, Nottingham, Maryland 21236
Nottingham – District 14c5

ADDENDUM NO. 5

DATE: 6/6/2025

Contact: Anthony Crews, 410-887-3531, tcrews@baltimorecountymd.gov

To All Bidders

This addendum is hereby made a part of the Proposal and the Special Provisions, and is hereby incorporated into the Contract. Should this addendum conflict with any portion of the Special Provisions, the Proposal, or any prior addenda, this addendum shall supersede and control.

Please note the attached changes, corrections, and/or information in connection with the contract and submit bids and be otherwise governed accordingly.

For Your Information

Attached are questions and answers.

In the Specifications

Revised and attached to be inserted: Pages 45 & 47 Table of Contents adding Section 05 5213 – Pipe and Tube Railings and 8" Atlas Sound Ceiling Speaker (Series SD 72). Attached are new pages 359 A-I, referencing Section 05 5213 – Pipe and Tube Railings and new pages 1147 A-C, referencing 8" Atlas Sound Ceiling Speaker (Series SD 72).

Attachments – 22

Please sign below acknowledging receipt of this addendum and return with your bid.

_____ _____
Company Name **Signature**

DIVISION 05 - METALS

05 1200 – STRUCTURAL STEEL
05 3100 – STEEL DECK
05 5000 - METAL FABRICATIONS
05 52 13 – PIPE AND TUBE RAILINGS

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

06 1053 - MISCELLANEOUS ROUGH CARPENTRY
06 1600 – SHEATHING
06 2023 – INTERIOR FINISH CARPENTRY
06 4116 - PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS
06 6400 - PLASTIC PANELING

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

07 1326 – SELF ADHERING SHEET WATERPROOFING
07 1900 - WATER REPELLENTS
07 2100 - THERMAL INSULATION
07 2163 – FLUID APPLIED INSULATIVE COATING
07 2726 - FLUID-APPLIED MEMBRANE AIR BARRIERS
07 5216 – STYRENE BUTADIENE STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING
07 6200 – SHEET METAL FLASHING AND TRIM
07 7100 – ROOF SPECIALTIES
07 7200 – ROOF ACCESSORIES
07 8413 - PENETRATION FIRESTOPPING
07 9100 – PREFORMED JOINT SEALS
07 9200 - JOINT SEALANTS

DIVISION 08 - OPENINGS

08 1113 - HOLLOW METAL DOORS AND FRAMES
08 3113 - ACCESS DOORS AND FRAMES
08 4113 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS
08 7100 - DOOR HARDWARE
08 8000 - GLAZING

DIVISION 09 - FINISHES

09 2216 - NON-STRUCTURAL METAL FRAMING
09 2400 – CEMENT PLASTERING
09 2900 - GYPSUM BOARD
09 5113 - ACOUSTICAL PANEL CEILINGS
09 6513 - RESILIENT BASE AND ACCESSORIES
096723 – RESINOUS FLOORING
09 9123 - INTERIOR PAINTING

22 4716 – PRESSURE WATER COOLERS

DIVISION 23 - HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

23 0500 – GENERAL HVAC REQUIREMENTS
23 0513 – COMMON MOTOR REQUIREMENTS FOR HVAC EQUIPMENT
23 0529 – HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT
23 0548.13 – VIBRATION CONTROLS FOR HVAC
23 0553 – IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT
23 0593 - TESTING, ADJUSTING AND BALANCING FOR HVAC
23 0713 - DUCT INSULATION
23 0719 – HVAC PIPING INSULATION
23 0993.11 – SEQUENCE OF OPERATIONS FOR HVAC DDC
23 2300 - REFRIGERANT PIPING
23 3113 – METAL DUCTS
23 3300 – AIR DUCT ACCESSORIES
23 3423 – HVAC POWER VENTILATORS
23 3439 – HIGH-VOLUME, LOW SPEED FANS
23 3713.13 – AIR DIFFUSERS
23 3713.23 – AIR REGISTERS AND GRILLES
23 3723 – HVAC GRAVITY VENTILATORS
23 8129 – VARIABLE-REFRIGERANT-FLOW HVAC SYSYEMS
23 8216.14 – ELECTRIC RESISTANCE AIR COILS

DIVISION 26 - ELECTRICAL

26 0500 - BASIC ELECTRICAL REQUIREMENTS
26 0519 – LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
26 0526 – GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
26 0529 – HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
26 0533 – RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS
26 0544 – SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING
26 0553 – IDENTIFICATION FOR ELECTRICAL SYSTEMS
26 0923 – LIGHTING CONTROL DEVICES
26 2416 - PANELBOARDS
26 2726 - WIRING DEVICES
26 2813 - FUSES
26 2816 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS
26 2913.03 – MANUAL AND MAGNETIC MOTOR CONTROLLERS
26 5151 – INTERIOR LIGHTING
26 5219 – EMERGENCY AND EXIT LIGHTING
26 5619 – LED EXTERIOR LIGHTING
000000 – ATLAS SOUND CEILING SPEAKER (SERIES SD72)

DIVISION 31 - EARTHWORK

31 1000 – SITE CLEARING
31 2300 – EXCAVATING FILLING AND GRADING

DIVISION 32 - EXTERIOR IMPROVEMENTS

MW STUDIOS
ARCHITECTURE
MASTER PLANNING

410.344.1460
8098 Sandpiper Circle, Suite H
Nottingham, Maryland 21236

ADDENDUM 05

PROJECT:	Fullerton Fire Station #8 – Renovation & Addition	MWS PROJECT NO:	20-120
ADDRESS:	4401 Fitch Avenue	CONTRACT NO.	25034 PFO Re-Bid
	Nottingham, Maryland, 21236	ISSUE DATE:	June 5, 2025

The following changes shall be incorporated into the work in accordance with all general requirements as if incorporated in the original documents.

GENERAL CHANGES:

1. Contractor to provide two, 2" conduits to run from existing basement/server rack, overhead to Trailer 3. Contractor to make final coordination of conduit routing with final placement of temporary facilities and County OIT prior to final installation. County to provide data and Computer Aided Dispatch System to temporary trailers.
2. Provide blocking in Fitness Area 121 wall where TV display is to be mounted. Blocking to occur continuously from 48" – 84" AFF and 3' left and right of the power/data outlet mounted at 72" AFF. The purpose of this note is to be supplementary in nature, to already specified components that require blocking. Blocking shall still be included for all other necessary fixtures that may not be called out for within the drawings or this directive. Fixtures include but are not limited to casework, toilet accessories, railing, plumbing fixtures, electrical fixtures, mechanical components, countertops, and all other items that are required to be self supporting. Contractor and Owner shall walk jobsite prior to close in to review all blocking locations.

CHANGES TO DRAWINGS:

CHANGES TO SPECIFICATIONS:

Add the following specification:

1. 05 5213 - PIPE AND TUBE RAILINGS

BIDDER QUESTIONS & RESPONSES:

1.) QUESTION: Please confirm that there will be no charge for the digital drawing files furnished per spec section013100.1.6.C.4

RESPONSE: Contract requests for digital drawings from the project design team are free of charge. The contractor is separately responsible for the independent development of contractor coordinated drawings.

2.) QUESTION: Please confirm that water, sewer, gas and electricity use charges will be paid by the Owner per spec section 015000.1.3 rather than by the Contractor as stated in item IX, Article 46 OR SPEC. 260500.1.10.A.

RESPONSE: Permanent utilities by the owner. Temporary utilities for the temporary housing for the County FD only will be paid by the County. Contractor must provide temporary power for use by the contractors during/for construction.

3.) QUESTION: Please confirm that any connection fees / temp meters for water, sewer, gas, & electricity utilities will be paid by owner.

RESPONSE: Contractor to provide temporary power for their construction process and paid by the contractor.

4.) QUESTION: Please confirm that Owner will pay permit fees for any permits required for the Owner Use Sleeping, Living and Wash Facilities per item 015000.2.2.A.6

RESPONSE: Contractor to pay for all permit fees associated with the temporary facilities for this project.

5.) QUESTION: Please verify if a professional commercial photographer is required to be contracted by GC to provide photo documentation noted in spec 013233 OR if GC can self perform photo documentation as long as GC complies with spec requirements.

RESPONSE: GC may self-preform photo documentation pending GC complies per specification requirements.

6.) QUESTION: Please verify if commercial videographer is required to record demonstration and training per spec. section 017900.3.3.A. Most cell phone cameras can provide the required resolution.

RESPONSE: GC may self-preform video documentation pending GC complies per specification requirements.

7.) QUESTION: Please advise if either or both of the Contractor's and Engineer's field offices will be required per article 52 of the General conditions given that the contractor is not allowed to park or stage on the existing road and parking areas and the Owner use temporary facilities will occupy most of the existing lawn area.

RESPONSE: Engineer's field offices not required.

8.) QUESTION: Specification section 024119.1.5.B requires an engineering survey of the condition of the building. Please provide details as to what an engineering survey entails.

RESPONSE: Contractor to conduct an engineered survey of the building to confirm that the work to be performed will not compromise the structural integrity of the existing portion of the building that is to remain. Contractor shall be responsible for the design and installation of any temporary bracing or shoring required to perform said work.

9.) QUESTION: Please advise if a hazardous materials survey is required per specification section 024119.1.8.D given that document 003126 is a thorough hazardous materials report dated July 3, 2024.

RESPONSE: Contractor is responsible the compliant and safe removal of all hazardous materials present within the existing facilities selective demolition scope of work.

10.) QUESTION: Document 003126 identifies asbestos containing material in several materials which are to be demolished under this contract. Spec. section 024119.1.8.D states Contractor to provide a change order proposal for the abatement of all materials found to be hazardous. Please advise if ACM identified in the July 3, 2024 report have been abated prior to the start of this contract or is it the intent that abatement of these materials be addressed as a change order to the contract?

RESPONSE: All hazardous materials identified in the report are currently remaining within the projects existing conditions and will be required to be removed by the Contractor.

11.) QUESTION: Please advise required strength of concrete for retaining wall. Plan sheet 6 of 58 calls for 3500 PSI. Specification section 033000.2.9.A calls for SHA mix 3, 3500 PSI. Section033000.2.9.D calls for 4000 PSI.

RESPONSE: All exterior Concrete shall be SHA Mix #3, 3500 psi.

12.) QUESTION: Please advise whether fire retardant core and lumber products are required for Plastic-Laminate-Clad Architectural Cabinets.

RESPONSE: Plastic-Laminate-Clad Architectural Cabinets do not require fire retardant for any part of the cabinet box, drawer box, drawer fronts, doors, or shelves.

13.) QUESTION: Please advise whether testing of water repellent will be required per spec. section 071900.3.4.A as this section states that the Owner reserves the right to invoke testing.

RESPONSE: Owner reserves the right to invoke testing.

14.) QUESTION: Please confirm that the Contractor is not required to hire a testing agency to perform the Air Barrier inspections described in section 042726.3.5.A.

RESPONSE: Successful air barrier installation may be performed by a third party testing agency or certified as specification compliant post instillation by air barrier manufacturer.

15.) QUESTION: Hardware set 5 appears to be missing a closer.

RESPONSE: Correct. Add closer to hardware set 5.

16.) QUESTION: Specification section 123661.2.2.C.1 calls for the countertops to be made of ¾" thick solid surface material. Countertop material is identified as SS-1, Formica Everform on plan sheet A700. This material is only available in ¼" or ½" thick sheets.

RESPONSE: Provide countertop material in ½" thick sheets.

17.) QUESTION: Please confirm that final turf establishment is to be from seed rather than sod.

RESPONSE: Seed or sod is acceptable, pending it conforms to stabilization requirements.

18.) QUESTION: What will be extent of GC responsibility for watering / irrigation maintenance services of new grass seed / sod after installation? Duration, number of trips, etc?

RESPONSE: New lawn establishment and maintenance is described in specification division 32 92 00, section 1.12 through 1.14.

19.) QUESTION: Please provide the MBE goal percentage and any subgoal percentages.

RESPONSE: Please refer to the documents.

20.) QUESTION: Please verify if pollution insurance policy is required to be provided by GC.

RESPONSE: Pollution insurance is not required.

21.) QUESTION: Is GC required to hire professional certified arborist to trim (3) existing trees adjacent to existing retaining wall to be demoed / replaced? What extent of temp protection will GC have to provide OR hire arborist to provide above & beyond trimming if required due to close proximity to retaining wall & min required access area needed to complete work? What will county's course of action be if tree roots have to be removed beyond arborist's recommendation for temp protection of tree in order to properly remove / replace existing retaining wall? Will GC be responsible for tree relocation or replacement?

RESPONSE: Yes, Contractor is required to hire professional certified arborist. The trees dying after work is performed is not desirable and an effort should be made to prevent this from happening. In the event that the work performed may pose a serious health risk to existing trees, the Contractor shall notify and review with Owner the course of action prior to the continuation of preforming said work.

22.) QUESTION: Please verify if GC required to provide pest control services as specified in Div 01 specs per Spec 015000 Part 3.4.E

RESPONSE: Correct.

23.) QUESTION: Please provide further clarification on what scopes of work pertain to / are applicable to Spec 013516 Alteration Project Procedure Title X Requirements

RESPONSE: See hazardous materials report. Contractor shall be responsible for the compliant and safe identification and abatement of all hazardous materials that require removal to complete the proposed scope of work.

24.) QUESTION: Any Owner required or preferred subcontractors / vendors that GCs need to contract for any various scopes of work?

RESPONSE: No.

25.) QUESTION: Verify GC to supply / install new prefabricated wood storage shed noted on drawings. Please also provide further specs / dimensions / make & model / all other product requirements for this storage shed.

RESPONSE: Basis of Design: Home Depot, Scarsdale 12 ft. x 16 ft. Designer Outdoor Wood Shed with 2 Windows-Black Shingle (192 sq. ft.)

26.) QUESTION: Provide spec for new metal railings

RESPONSE: See attached specification 05 5213 - PIPE AND TUBE RAILINGS.

27.) QUESTION: Are watermarked AIA payment application forms required or can excel version mirroring AIA application for payment format be submitted ?

RESPONSE: Please see attached Application and Certification For Payment for use on this project.

28.) QUESTION: Is a specific web based PM software program required to be utilized / purchased by GC for managing communication & documents during construction per Spec 011000 Part 1.3F

RESPONSE: County has there own site for document exchange. The County will be inviting the successful bidder.

29.) QUESTION: Confirm contractor use of owner existing toilet facilities is allowed per Spec 015000 Part 3.2.E.1

RESPONSE: Contractor shall not be allowed the use of existing Owner toilet facilities. Contractor shall provide their own toilet facilities separate from of Owner use.

30.) QUESTION: Will GC be responsible for snow removal of existing asphalt / concrete pavement & cutting of existing grass on entire property throughout duration of project?

RESPONSE: Contractor responsible for the project area ONLY.

31.) QUESTION: Confirm owner responsible for fees associated with relocation of existing power / phone & internet overhead utility lines that tie into corner of building where new addition is located / will require removal of existing building exterior wall.

32.) RESPONSE: County will pay for fees associated with new and temporary for the County FD housing and new facilities.

33.) QUESTION: What is the proposed electrical conduit route to feed the temporary trailers? Which electric panel shall serve the trailers?

RESPONSE: The proposed temporary electrical service for the trailers will be via a dedicated temporary electrical service brought from the street. Contractor shall be responsible for obtaining and filing for the temporary electrical service from BGE in order to power said temporary facilities.

34.) QUESTION: Who will be responsible for furnishing the temp. trailers?

RESPONSE: The contractor will be responsible for moving all furnishings to trailers including, desks, chairs & beds.

35.) QUESTION: Is a fire alarm system required for the temp trailers?

RESPONSE: Contractor shall provide a life safety system that conforms to all AHJ requirements for temporary living facilities.

36.) QUESTION: New electrical panel M1 is to be supplied from the existing MDP, but all of the spaces in the existing MDP are being used. Would the county consider replacing Panel MDP as part of the project?

RESPONSE: The methodology for executing the proposed project's scope of work shall be determined by the bidding Contractor, in accordance with their chosen means and methods.

37.) QUESTION: Are the dimensions of the trailers finite? Can their width or lengths vary to accomplish the requirements for their fit out? Can the building be modular as one structure?

RESPONSE: Trailer dimensions are flexible and may vary, provided they meet the specifications outlined in the construction documents and can be accommodated—along with the associated walkways and privacy fencing—within the designated area shown in the construction drawings.

38.) QUESTION: Is there a civil drawing available that shows the grade changes at the location for the temporary trailers?

RESPONSE: Existing grades are shown on the civil drawings.

39.) QUESTION: Is a geo tech report available that points out the bearing capacity at the location of the temporary trailers?

RESPONSE: No.

40.) QUESTION: With the proposed NTP and period of performance, the temporary building fabrication lead time will impact the proposed schedule since approved layout, specification, design, and color selection, manufacturing, installation will impact the start of the project.

RESPONSE: Contractor to deliver temporary facilities and completion of the renovation and addition proposed scope of work within the allocated construction duration.

41.) QUESTION: With soil bearing capacity being unknown, will options for crane use and changes in footers be accepted for placement of the temp. trailers?

RESPONSE: Temporary foundation system shall be delegated design by the Contractor and or temporary trailer vendor. Temporary foundation system shall conform to requirements of AHJ.

42.) QUESTION: Provide a civil drawing with the existing and proposed water and sanitary utilities for the temporary trailers.

RESPONSE: The existing sanitary and water lines are shown on the drawings. The Contractor shall be responsible for making their own connections for all utilities other than the electrical service. As for the electrical service, the Contractor shall be responsible for establishing an independent temporary electrical service, routed directly to the temporary trailers.

43.) QUESTION: Will Baltimore County provide the building permit for the temporary quarters?

RESPONSE: No, per sheet AD100.

44.) QUESTION: A privacy fence surrounding the temporary trailers will not cover the trailers from site on the west side of the structure. Will this be acceptable?

RESPONSE: Partial visual coverage acceptable.

45.) QUESTION: Confirm that the temporary building will not require fire sprinkler coverage. If it does, please provide drawings indicating where a fire system will connect.

RESPONSE: Sprinkler system is required for the temporary facilities. Sprinkler system shall be delegated design by the Contractor and or temporary trailer vendor. Sprinkler system shall conform to requirements of AHJ.

46.) QUESTION: Is this project "tax exempt"?

RESPONSE: No.

47.) QUESTION: Will the new temporary modular trailers have a fire alarm system pre-installed?

RESPONSE: Contractor shall provide a life safety system that conforms to all AHJ requirements for temporary living facilities.

48.) QUESTION: Will the Electrical Contractor be required to install or connect a fire alarm system in the new temporary modular trailers?

RESPONSE: Contractor shall provide a life safety system that conforms to all AHJ requirements for temporary living facilities.

49.) QUESTION: Who will furnish and complete the scope of work for the speaker and sound installation? Will it be the County? Will it be the Electrical Contractor?

RESPONSE: Contractor is responsible for providing and installing new speakers and wiring to be compatible with the reinstallation of the existing, reinstalled speakers. Speaker - Attached is the spec sheet for the an 8" Atlas Sound Ceiling Speaker. Model SD72W comes equipped with the speaker grill. Wire - 2 Conduct 16AWG Wire From Digikey to connect the speakers: Part number E1042S-41

50.) QUESTION: Will there be a conduit "Chase" for new electrical conduits, leaving the basement to the upper level?

RESPONSE: Contractor shall be responsible for construction and coordination of conduit pathways as required to install the proposed work in a code compliant manner.

51.) QUESTION: Who pays for the BGE installation, consumption, and usage fees for the temporary electric power needed for the new temporary modular trailers.

RESPONSE: See previous responses in above questions.

QUESTION: Please advise, in the specification section summary page #52, sub-topic "E" it states "this project shall be subject to prevailing wages as required by Baltimore County. Can you please provide the "prevailing Wage Rates"?

52.) RESPONSE: Contractors must go to: https://www.baltimorecountymd.gov/departments/prevailing-wage for all information. Also questions can be directed to: prevailingwage@baltimorecountymd.gov.

ATTACHMENTS:

Baltimore County Application and Certification For Payment

END OF ADDENDUM #5

APPLICATION AND CERTIFICATION FOR PAYMENT

OWNER: Baltimore County, Maryland
400 Washington Ave., Room 148
Towson, Maryland 21204

TO GC: CONTRACTOR NAME
CONTRACTOR ADDRESS
CONTRACTOR ADDRESS
PHONE/EMAIL

PROJECT NAME: PROJECT NAME
ESTIMATED DURATION: Working or Cal Days
TIME EXTENSION: Working or Cal Days
CONTRACT DURATION: Working or Cal Days
CURRENT TIME USED: Working or Cal Days

CONSENT DECREE: Y/N
CD DEADLINE: N/A

APPLICATION NO:
RUN DATE:
PERIOD FROM:
PERIOD TO:

CONTRACT NO.
Job Order No.
Purchase Order No.
Prevailing Wage: Yes

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
Details of Work Performed are attached.

1. ORIGINAL CONTRACT SUM	$	**0.00**
2. Net change by Change Orders	$	**0.00**
3. CONTRACT SUM TO DATE (Line 1 ± 2)	$	**0.00**
4. TOTAL COMPLETED & STORED TO DATE (Column E on Details Sheet)	$	**0.00**
5. RETAINAGE: **5** % of Completed Work (Column C on Details Sheet)	$	**0.00**
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total)	$	**0.00**
7. LESS PREVIOUS PAYMENTS	$	**0.00**
8. LESS Liquidated Damages	$	**0.00**
9. LESS Amount witheld under contract	$	**0.00**
10. LESS Prevailing Wage & Local Hire Withholdings	$	**0.00**
11. CURRENT PAYMENT DUE	$	**0.00**
12. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 4)	$	**0.00**

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous month's by County		
Total approved this Month		
TOTALS		
NET CHANGES by Change Order		

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: **CONTRACTOR NAME**

By: _____ Date: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED…….. $ _____

By: _____ Date: _____
Architect

COUNTY'S CERTIFICATE FOR PAYMENT BELOW IS FOR COUNTY USE ONLY

In accordance with the Contract Documents, based on on site observations and the data comprising this application, Baltimore County BCPM certifies to the that to the best of the County's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of

AMOUNT CERTIFIED…….. $ _____

COUNTY:

By: _____ Date: _____
Senior Project Manager

By: _____ Date: _____
Chief of Capital Construction

This certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

SD72 Series

8" Preassembled Speaker Package

SD72

Features

- 10 oz Dual Cone Speaker Provides Familiar Response & Performance
- Quality 5 Watt Dual Voltage Transformer
- Individually Packaged for Stocking & Ordering Convenience
- Safety Listed to UL1480 and UL2043

Applications

The SD72 is an aggressively priced, high quality speaker/transformer package suitable for almost any paging or background application including retail stores, restaurants, schools, and other institutional facilities.

General Description

The speaker used in the SD72 is the next generation of high performance cone loudspeakers, very similar to the preceding C-Series speakers. The similarity in the sonic qualities ensures that contractors and designers who have worked with the Atlas Sound C-Series in the past will know exactly what to expect when they use the SD72. Model SD72 is a dual cone, 25 Watts 8" (205mm) loudspeaker with a 10 oz. (260g) ceramic magnet. It includes a curvelinear, treated paper cone for lower harmonic distortion. The loudspeaker is also equipped with a full 1" diameter copper voice coil with a black anodized aluminum former for better power dissipation. Model SD72 operates within a frequency response range of 55Hz – 8kHz (±5dB) with a sensitivity of 97dB and a dispersion angle of 105°. Package includes factory installed 25V/70.7V line matching transformer with tap selections ranging from .25 to 5 Watts. It mounts a wide variety of Atlas Sound round and square baffles and enclosures to meet functional and aesthetic application requirements.

Specifications

Model	SD72	SD72W	SD72WV
Size	8" (205mm)	8" (205mm)	8" (205mm)
Power Taps	.25, .5, 1, 2, & 5 Watts		
Sensitivity	97dB Average		
Frequency Response	55Hz-19kHz (±5dB)		
Dispersion	105° (2kHz Octave Band, -6dB Points)		
Diameter	8 1/8" (205mm)	12 3/4" (206mm)	12 3/4" (206mm)
Depth	2 7/8" (73mm)		

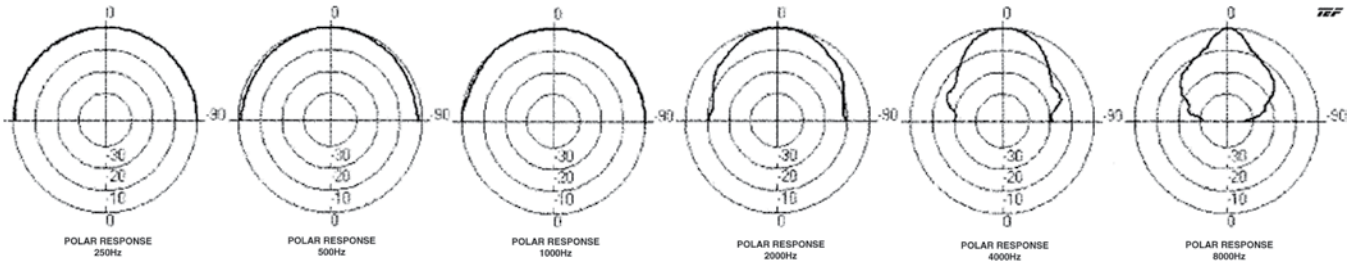
Architect and Engineer Specifications

Unit shall be Atlas Sound 8" loudspeaker Model SD72 utilizing line matching transformer. It shall have a (10oz.) ceramic magnet and a seamless cone. Frequency response range shall be 55Hz–8kHz (±5dB). Sensitivity shall be 97dB 1W/1M. Voice coil shall be black anodized aluminum to help dissipate heat, have an impedance of 8Ω and a diameter of 1" (25mm). Transformer primary voltage shall be 25V/70.7V with a frequency response range of 100Hz–10kHz (±1.5dB). Insertion loss shall not exceed 1.5dB.

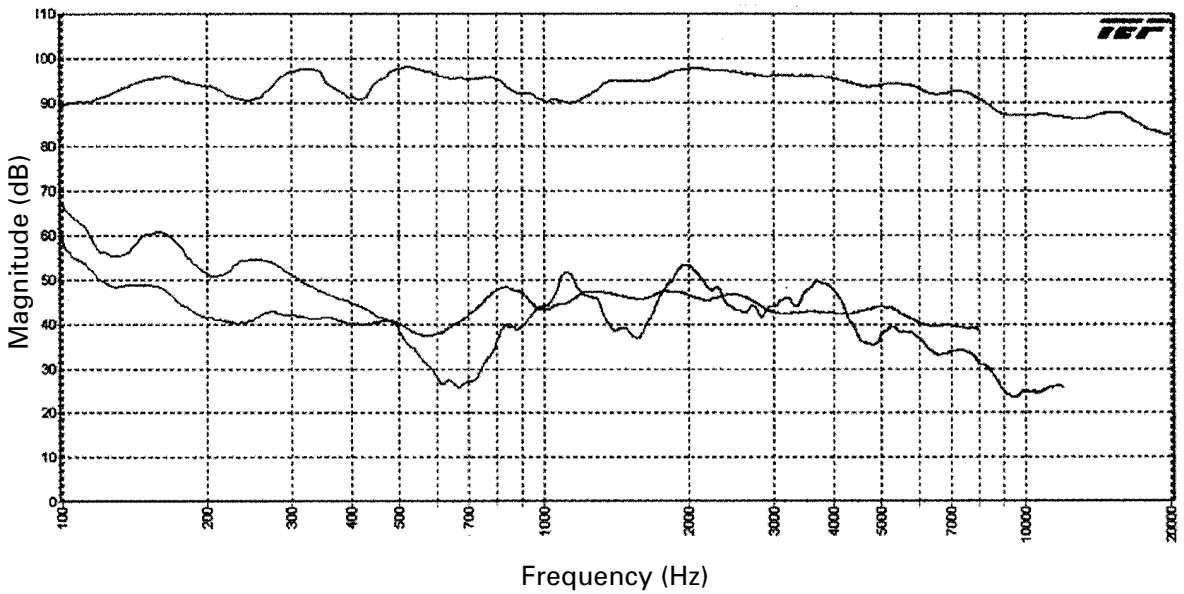
All models feature standard mounting holes to accommodate the majority of Atlas Sound 8" baffles. All mounting screws are included in the package.

Loudspeaker shall be safety listed to both UL1480 and UL2043 standards.

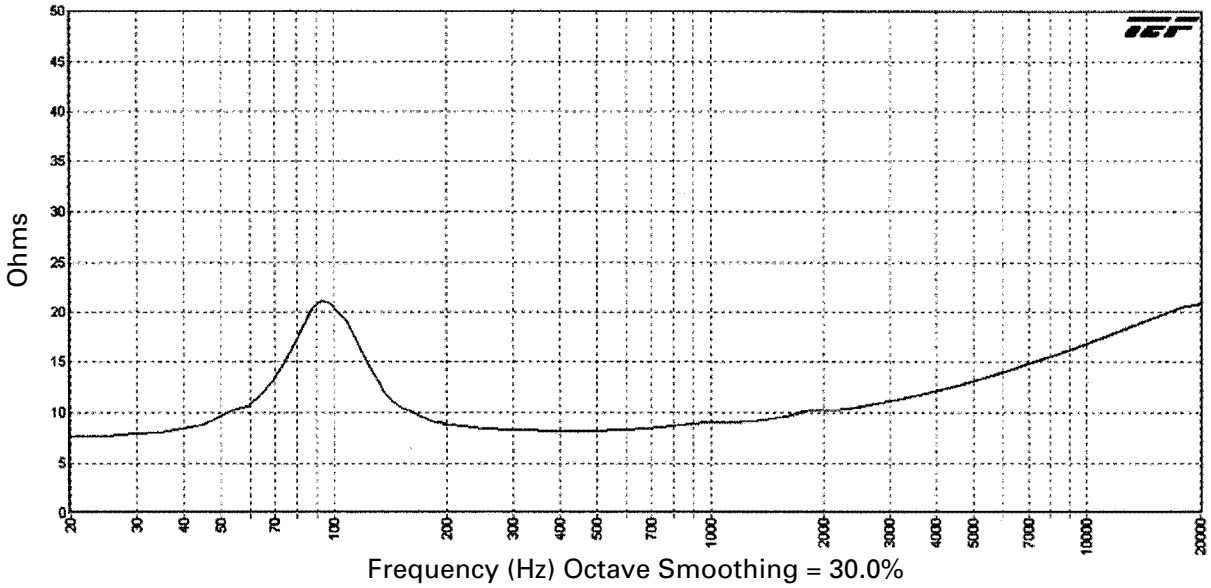
SD72 Polars (Normalized to Zero on Axis) (-6dB)



SD72 Harmonic Distortion



SD72 Impedance



SECTION 05 5213 - PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Steel railings.
2. Section 05 5119 "Metal Grating Stairs" for tube steel railings associated with metal grating stairs.

1.3 COORDINATION

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

B. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

1.4 ACTION SUBMITTALS

A. Product Data:

1. Manufacturer's product lines of mechanically connected railings.
2. Fasteners.
3. Post-installed anchors.
4. Handrail brackets.
5. Shop primer.
6. Intermediate coats and topcoats.
7. Bituminous paint.
8. Nonshrink, nonmetallic grout.
9. Metal finishes.
10. Paint products.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Samples for Initial Selection: For products involving selection of color, texture, or design, including mechanical finishes.

D. Samples for Verification: For each type of exposed finish required.

1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters, including finish.
2. Fittings and brackets.
3. Assembled Sample of railing system, made from full-size components, including top rail, post, handrail, and infill. Sample need not be full height.

a. Show method of connecting and finishing members at intersections.

E. Delegated-Design Submittal: For railings, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For delegated-design professional engineer.

B. Welding certificates.

C. Mill Certificates: Signed by manufacturers of stainless steel products, certifying that products furnished comply with requirements.

D. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.

1.6 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel in accordance with the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."
3. AWS D1.6/D1.6M, "Structural Welding Code - Stainless Steel."

1.7 DELIVERY, STORAGE, AND HANDLING

A. Protect mechanical finishes on exposed surfaces of railings from damage by applying a strippable, temporary protective covering before shipping.

1.8 FIELD CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 4000 "Quality Requirements," to design railings, including attachment to building construction.

B. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:

a. Uniform load of 50 lbf/ ft. applied in any direction.
b. Concentrated load of 200 lbf applied in any direction.
c. Uniform and concentrated loads need not be assumed to act concurrently.

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

1. Provide type of bracket with flange tapped for concealed anchorage to threaded hanger bolt and that provides 1-1/2-inch clearance from inside face of handrail to finished wall surface.

2.3 STEEL RAILINGS

A. Source Limitations: Obtain each type of railing from single source from single manufacturer.

B. Tubing: ASTM A500/A500M (cold formed) or ASTM A513/A513M, Type 5.

C. Pipe: ASTM A53/A53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.

1. Provide galvanized finish for exterior installations and where indicated.

D. Plates, Shapes, and Bars: ASTM A36/A36M.

E. Cast Iron Fittings: Either gray iron, ASTM A48/A48M, or malleable iron, ASTM A47/A47M, unless otherwise indicated.

2.4 FASTENERS

A. Fastener Materials:

1. Hot-Dip Galvanized Railing Components: Type 304 stainless steel or hot-dip zinc-coated steel fasteners complying with ASTM A153/A153M or ASTM F2329/F2329M for zinc coating.
2. Finish exposed fasteners to match appearance, including color and texture, of railings.

B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction and capable of withstanding design loads.

C. Fasteners for Interconnecting Railing Components:

1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless exposed fasteners are unavoidable or are the standard fastening method for railings indicated.

D. Post-Installed Anchors: Fastener systems with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC193 or ICC-ES AC308.

1. Material for Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, unless otherwise indicated.
2. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 stainless steel bolts, ASTM F593, and nuts, ASTM F594.

2.5 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select in accordance with AWS specifications for metal alloy welded.

B. Etching Cleaner for Galvanized Metal: Complying with MPI#25.

C. Galvanizing Repair Paint: High-zinc-dust-content paint, complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

D. Bituminous Paint: Cold-applied asphalt emulsion, complying with ASTM D1187/D1187M.

E. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout, complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.6 FABRICATION

A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.

B. Shop assemble railings to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations.

1. Clearly mark units for reassembly and coordinated installation.
2. Use connections that maintain structural value of joined pieces.

C. Cut, drill, and punch metals cleanly and accurately.

1. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated.
2. Remove sharp or rough areas on exposed surfaces.

D. Form work true to line and level with accurate angles and surfaces.

E. Fabricate connections that are exposed to weather in a manner that excludes water.

1. Provide weep holes where water may accumulate.
2. Locate weep holes in inconspicuous locations.

F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.

G. Connections: Fabricate railings with welded connections unless otherwise indicated.

H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.

4. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Finish #1 welds; ornamental quality with no evidence of a welded joint

I. Form changes in direction as follows:

1. By radius bends of radius indicated or by inserting prefabricated elbow fittings of radius indicated.

J. Bend members in jigs to produce uniform curvature for each configuration required. Maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

K. Close exposed ends of hollow railing members with prefabricated cap and end fittings of same metal and finish as railings.

L. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch or less.

M. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

1. At brackets and fittings fastened to plaster or gypsum board partitions, provide crush-resistant fillers or other means to transfer loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.

N. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work.

1. Fabricate anchorage devices capable of withstanding loads imposed by railings.
2. Coordinate anchorage devices with supporting structure.

O. For railing posts set in concrete, provide stainless steel sleeves not less than 6 inches long with inside dimensions not less than 1/2 inch greater than outside dimensions of post, with metal plate forming bottom closure.

2.7 STEEL AND IRON FINISHES

A. Galvanized Railings:

1. Hot-dip galvanize all steel railings, including hardware after fabrication.
2. Comply with ASTM A123/A123M for hot-dip galvanized railings.
3. Comply with ASTM A153/A153M for hot-dip galvanized hardware.
4. Do not quench or apply post-galvanizing treatments that might interfere with paint adhesion.
5. Fill vent and drain holes that are exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.

B. For galvanized railings, provide hot-dip galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.

C. Preparing Galvanized Railings for Shop Priming: After galvanizing, thoroughly clean railings of grease, dirt, oil, flux, and other foreign matter, and treat with etching cleaner and as follows.

1. Comply with SSPC-SP 16.

D. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with requirements indicated below:

1. Exterior Railings: SSPC-SP 6/NACE No. 3.
2. Railings Indicated To Receive Zinc-Rich Primer: SSPC-SP 6/NACE No. 3.
3. Railings Indicated To Receive Primers Specified in Section 09 9600 "High-Performance Coatings": SSPC-SP 6/NACE No. 3.
4. Other Railings: SSPC-SP 3.

E. Primer Application: Apply shop primer to prepared surfaces of railings unless otherwise indicated. Comply with requirements in SSPC-PA 1 for shop painting. Primer need not be applied to surfaces to be embedded in concrete or masonry.

1. Do not apply primer to galvanized surfaces.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Perform cutting, drilling, and fitting required for installing railings.

1. Fit exposed connections together to form tight, hairline joints.
2. Install railings level, plumb, square, true to line; without distortion, warp, or rack.
3. Set railings accurately in location, alignment, and elevation; measured from established lines and levels.
4. Do not weld, cut, or abrade surfaces of railing components that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
5. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
6. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.

B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1. Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

C. Adjust railings before anchoring to ensure matching alignment at abutting joints.

D. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.2 RAILING CONNECTIONS

A. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article, whether welding is performed in the shop or in the field.

B. Expansion Joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve, extending 2 inches beyond joint on either side; fasten internal sleeve securely to one side; and locate joint within 6 inches of post.

3.3 ANCHORING POSTS

A. Use stainless steel pipe sleeves preset and anchored into concrete for installing posts. After posts are inserted into sleeves, fill annular space between post and sleeve with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions.

B. Form or core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.

C. Leave anchorage joint exposed with anchoring material flush with adjacent surface.

D. Anchor posts to metal surfaces with flanges, angle type, or floor type, as required by conditions, connected to posts and to metal supporting members as follows:

1. For steel railings, weld flanges to post and bolt to metal supporting surfaces.

3.4 ATTACHING RAILINGS

A. Anchor railing ends to concrete and masonry with flanges connected to railing ends and anchored to wall construction with anchors and bolts.

B. Attach handrails to walls with wall brackets, except where end flanges are used. Provide brackets with 1-1/2-inch clearance from inside face of handrail and finished wall surface.

1. Use type of bracket with flange tapped for concealed anchorage to threaded hanger bolt.

2. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.

C. Secure wall brackets and railing end flanges to building construction as follows:

1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
2. For hollow masonry anchorage, use toggle bolts.

3.5 CLEANING

A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas, and repair galvanizing to comply with ASTM A780/A780M.

3.6 PROTECTION

A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

B. Restore finishes damaged during installation and construction period, so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION 05 5213