



Addendum No 01

CFSB Center Sports Practice Facility Bid Set

**Facilities Design & Construction
Project # 10-007**

January 26th, 2012

Murray State University
Procurement Services
Murray, KY 42071

BIDQUOTE ADDENDUM FORM

Invitation No: CC-244S-12	Opening Date: 02/02/12	Addendum No: 1
Commodity: CFSB Center Basketball Practice Facility Addition Project		Addendum Date: 01/26/12

BIDDERS SHALL CONFORM TO THE FOLLOWING CHANGES AS SAME SHALL BECOME BINDING UPON CONTRACT TO BE ISSUED IN RESPONSE TO THIS INVITATION:

The following information represents Addendum No. 1 for CC-244S-12 CFSB Center Basketball Practice Facility Addition Project.

Any questions regarding this Addendum need to addressed to Steven Stapleton at (270-809-4099) sstapleton@murraystate.edu or David Brickeen (270-809-4387) dbrickeen@murraystate.edu

BIDDERS MUST ACKNOWLEDGE RECEIPT OF THIS AND ANY ADDENDA EITHER WITH THE FORM OF PROPOSAL OR BY SEPARATE LETTER. ACKNOWLEDGEMENT MUST BE RECEIVED IN THE OFFICE OF PROCUREMENT SERVICES, MURRAY STATE UNIVERSITY, 200 GENERAL SERVICES BUILDING, MURRAY, KY 42071-3355, NO LATER THAN:

2:00 PM Central Prevailing Time

February 2, 2011
Date

RECEIPT ACKNOWLEDGED:

Vendor

Date



AUTHORIZED AGENT
PROCUREMENT SERVICES

ADDENDUM NO 01

January 26th, 2012

To the drawings and specifications for the material and labor to be used and employed in the erection and completion of the:

PROJECT: **CFSB CENTER SPORTS PRACTICE FACILITY, FDC PROJ NO – 10-007**
HC PROJ NO – 2983.00
BFW PROJ NO – 11194
MARCUM PROJ NO – 11557

OWNER: **MURRAY STATE UNIVERSITY**
102 Curris Center
Murray, Kentucky 42071
270.809.4387

ARCHITECT: **HASTINGS+CHIVETTA ARCHITECTS, INC.**
622 Emerson, Suite 200
St. Louis, Missouri 63141
Telephone: 314.863.5717

CIVIL ENGINEER: **BACON FARMER WORKMAN ENGINEERING & TESTING, INC.**
1215 Duiguid Drive
Murray, Kentucky 42071
Telephone: 270.753.7307

STRUCTURAL ENGINEER: **BACON FARMER WORKMAN ENGINEERING & TESTING, INC.**
403 N. Court Street
Marion, Illinois 62959
Telephone: 618.997.9190

MPE ENGINEER: **MARCUM ENGINEERING, LLC**
500 South 17th Street
Paducah, Kentucky 42002
Telephone: 270.444.9274

This addendum supersedes all contrary or conflicting portions of the drawings and specifications. Contractors shall include addendum items or changes for all trades as may be necessary to fully complete each change, substitution or omission. Omission, addition or adjustments shall conform to recognized and accepted building codes and architectural or engineering practices.

INFORMATIONAL REQUESTS

Informational request not listed below are incorporated into other portions of the addendum.

- A. Describe the locations and limits of construction parking, construction trailer placement and construction lay down area?
- Response – See Attached AD-C01
 - Construction Parking: Designated parking areas can be utilized for construction worker parking for work being performed on this project. Exception is for those times during an event at the CFSB center. During events, parking times may be restricted or parking suspended. MSU officials will coordinate with the Contractor during/prior to those events. Any worker using the designated parking spaces will be required to obtain a free MSU Construction Parking Pass from the Public Safety Parking Office.
 - Construction Trailer: the construction trailer may be located in the grassy area directly west of the parking lot. No part of the trailer may extend past the face of curb and is recommended to place it a minimum of 5' beyond face of curb to protect it from vehicles backing out of parking stalls.
 - Construction Lay Down Area: the grass area as indicated on AD-C01 may be utilized for material storage and etc. Due to proximity to University Housing it is requested that the area be fenced and secured from the public. Contractor will be responsible for installing a temporary cross drain pipe in existing ditch to access the area from the existing drive and install a temporary gravel or hard surface entrance into the area.
- B. Clarify Intent of inspections & special inspections?
- Response – Murray State University will be responsible for *Special Inspections* as required by the KBC/IBC Chapter 1700, to include but not limited to – structural steel, concrete, masonry, applied fireproofing, seismic design elements. All other testing and quality control such as soil compaction, concrete slump, concrete slab, etc. will be the responsibility of the contractor as required by the KBC/IBC Section 110 & Building Inspector. The contractor shall coordinate with Owner's testing Agency to provide scheduling for on/off site inspections as required to meet special testing criteria.
- C. Section 09 96 46. Clarify the specification for Intumescent Fireproofing regarding the products listed and their respective UL approval for coating structural steel per the ratings shown in the contract documents?
- Response – See Project Manual Item regarding Section 07 81 23 INTUMESCENT FIREPROOFING, replace entirety of section.
- D. Section 07 54 23, Part 2.1 A4. Can we install one color of TPO for the entire project? If gray is the visible color, can we use it on the entire roof so that we are sure to meet the minimum material order requirements?
- Response – Gray TPO may be used for the entirety of the membrane roof
- E. Section 07 54 23, Part 3.1 Eb. Where is the acoustical deck insulation to be installed?
- Response – The acoustical insulation is to be installed within the flutes of the acoustical deck prior to installation of rigid insulation

- F. Section 07 54 23, Part 3.1 B. The joints of the polyiso roof insulation is not required to be taped by the roofing manufacture. Can we omit taping of the joints in the roof insulation?
- Response – Install Polyiso roof insulation per roofing manufactures requirements to meet roofing warranty and FM requirements
- G. Section 07 54 23, Part 3.1 F. Is the cover board to be mechanically attached, or is to be adhered to the iso board?
- Response – Cover board is to be adhered in so far as it meets FM requirements
- H. Section 07 54 23, Part 3.4 A. Can we heat weld the walkpads per manufactures details? The manufacture does not allow the walkpads to be glued down.
- Response – Heat welding walking pads is acceptable per manufactures requirements
- I. Section 07 54 23, Can we get a layout of where the walkpads are supposed to go?
- Response – See Addendum Drawings for a plan .
- J. Section 07 54 23, 2.4 A calls for R-22.4 insulation and 3.1 B calls for R-28, which do we use?
- Response – Insulation is R-22.4, omit reference to R-28. Correct numbering of 2.4 to follow alphabetical sequence.
- K. Section 07 54 23 2.5 C calls for full-Spread applied insulation adhesive; two-component adhesive is typically installed in ribbons, is this acceptable?
- Response – Two-component adhesive may be installed in ribbons if it complies with FM requirements.
- L. Section 07 54 23 2.5 E.1.b. refers to not penetrating the ceiling plane of the deck; is penetrating the top plane to the deck with the appropriate length fastener acceptable?
- Response – The ceiling/interior plane of the deck is the bottom of the fluting, it is acceptable to penetrate the upper/exterior plane so long as the anchors do not continue past the interior plane.
- M. Section 07 62 00, who is the manufacture and what is the color of the existing gutters and downspouts?
- Response – Manufacture and exact coloring could not be determined from information at hand. The intent is match the 'green/teal' color as close as possible and match the profile shown within the contract documents per the specifications and contractors means and methods.
- N. Section 07 71 00, Can we use the TPO manufactures standard coping system?
- Response – Provide the specified copings and fascias.
- O. Section 07 72 00, Are the roof hatches to be fabricated from steel or aluminum? Both are listed.
- Response – Roof Hatches are Aluminum.
- P. Can the curved gutter shown on sheet A4.01 north elevation, can this gutter be shop fabricated to conform to curvature or is it to be pre-manufactured in longer lengths?
- Response – Gutter is to be pre-manufactured.
- Q. Does Ceramic Wall Tile have to be installed over scratch coat or can it be over concrete board or sheetrock?

- Response – Delete reference to scratch coat as obsolete. Tile will only occur at CMU and GB walls.
- R. Clarify if we are to use the PNT-AE Tnemec Product on the entire foundation and the block or from the split face down to finish grade on the foundation?
- Response – Paint specification based on type per location as shown in the contract documents. All exterior CMU is integrally colored and will not be painted. PNT-AE is only at the existing foundation that will be exposed near the loading dock.

PROJECT MANUAL – VOLUME 02

ITEM 01 – SECTION 07 27 26 FLUID APPLIED AIR BARRIERS

- A. Add section in its entirety to address air barrier at exterior sheathing wraps @ columns

ITEM 02 – SECTION 07 81 23 INTUMESCENT FIREPROOFING

- A. Replace section 09 96 46 in its entirety to address correction of fireproofing requirements

ITEM 03 – SECTION 08 71 00 DOOR HARDWARE

- A. Doors # 1100A & 1214B move to set # 11 also change the exit device trim to hardwired trim # EXBV 7 EV 14D DV 626 PH2 TRACK 3. Change the power supply to ELR-152 (2 amp)
 - a. For doors# 1010A , 1010E, 1100A , 1214B
- B. Door # 1100B set # 12 delete all electric hardware with no cylinder dogging both doors using 2103 x 4903D
- C. Door # 1300C set # 12A Change the exit trim to the hardwired trim # EXBV 7 EV 14D DV 626 PH2 TRACK 3. Change the power supply to ELR-152 (2 amp)
- D. Door # 1000A & 1300A set # 15 change the ELR2103 trim to the hardwired trim # EXBV 7 EV14D DV 626 PH2 TRACK 3. Change the power supply to ELR-152 (2 amp)
- E. Door # 1000B change the power supply to ELR 151

ITEM 04 – SECTION 09 64 66 WOOD ATHLETIC FLOORING

- A. Revise 2.1, A. To read:
 - 1. *Eclipse* by Robbins Sports Surfaces
 - 2. *CRP* by Horner Sports Floors
 - 3. *Action Aero NR* by Action
 - 4. *Power Play DIN* by Aacer
 - 5. *Alliance II* by Connor Sports Flooring Corp (Verify compliance w/EN 14904 (2006))
- B. Revise 2.2 replace as applicable:
 - 1. Strip Flooring: Northern hard maple (*Acer saccharum*), kiln dried, random length, tongue and groove, and end matched.
 - i. Grade: MFMA-RL Second and Better.
 - ii. Species: Northern Hard Maple
 - iii. Cut: Plain Sawn
 - iv. Thickness: 25/32 inch or engineered thickness in compliance with system requirements
 - v. Face Width: 2-1/4 inches.
 - vi. Seasoning: Kiln dried
 - vii. Lengths: Comply with MFMA grading rules
 - viii. Expansion: 1/64" milled expansion spacer (As required per manufacture).
 - ix. Isolator Pads: Flooring manufacturer's standard, resilient, pyramidal urethane or ground EPDM rubber isolator pads ½ - 3/4" high.
 - 2. Subfloor Material: Flooring manufacturer's plywood subfloor, CD exterior grade, 1/2" thick (nominal) in panels or strips or HDPE support panels, as standard with the manufacturer.
 - 3. Finishing: Oil modified polyurethane seal and finish
 - 4. Floor to be DIN Certified per 18032, Part II. (2001) & EN 14904 (2006)

5. Resilient Wall Base: Molded, vented, rubber cove base; 4 by 3 by 48 inches; with premolded outside corners.
 - i. Color: Black.
6. Striping and Logos: Match existing CFSB Striping and layout with addition of court naming, all linework per NCAA Division I Men' & Women's layouts, court, lanes, 3-point lines, charge arc, etc, provide additional striping for side courts. Owner to provide artwork.

ITEM 05 – SECTION 10 99 99 MISCELLANEOUS SPECIALTIES

- A. Add section in its entirety to address wall mounts for TV's

ITEM 06 – 31 20 00 EARTH MOVING, paragraph 2.1

- A. Satisfactory Soils: [ASTM D 2487 Soil Classification Groups **GC, SC, CL, ML, GW, GP, GM, SW, SP, and SM**] [AASHTO M 145 Soil Classification Groups A-1, A-2-4, A-2-5, and A-3], or a combination of these groups; free of rock or gravel larger than [3 inches] in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- B. Unsatisfactory Soils: Soil Classification Groups [OL, CH, MH, OH, and PT according to ASTM D 2487] [A-2-6, A-2-7, A-4, A-5, A-6, and A-7 according to AASHTO M 145], or a combination of these groups.
 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
 2. Satisfactory soils having less than 100 pounds per cubic foot (pcf) maximum dry density.

ITEM 07 – 32 32 23 SEGMENTAL RETAINING WALL, paragraph 2.1

- A. Concrete Units: ASTM C 1372, Normal Weight, except that maximum water absorption shall not exceed 7 percent by weight and units shall not differ in height more than plus or minus 1/16 inch from specified dimension.
 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, licensees of one of the following:
 2. Basis-of-Design Product: Subject to compliance with requirements, provide Redi-Rock International or comparable product in size and type by a licensee of one of the following:
 - a. Redi-Rock International.
 - b. Stone Strong Systems
 - c. Approved Equal.
 3. Provide units that comply with requirements for freeze-thaw durability.
 4. Provide units that interlock with courses above and below by means of integral lugs or lips.
- B. Color: As selected by Architect from manufacturer's full range.
- C. Shape and Texture: Provide units of basic shape and dimensions indicated with machine-split textured exposed faces.

- D. Shape and Texture: Provide units matching basic shape, dimensions, and face texture indicated by referencing manufacturer's pattern designation. Architect to select from manufacturers full range of textures available.

PROJECT MANUAL – VOLUME 03

ITEM 01 – 23 09 00 INSTRUMENTATION AND CONTROL FOR HVAC

- A. Reference Specification Section 230900. Honeywell Controls shall be added to list of approved manufacturers for temperature controls system. The Engineer reserves final approval until shop drawing review.

ITEM 02 – 23 09 00 INSTRUMENTATION AND CONTROL FOR HVAC

- A. Reference Specification Section 283111 "Digital, Addressable Fire Alarm Mass Notification System." Add the following information to the noted specification:
- a. Notification/Status Connection
 - i. The fire alarm system shall be connected through the existing MSU communications system as required to indicate system status to the campus's central plant and public safety department.
 - ii. All duct detectors shall be furnish as part of this work. Installation of duct detectors will be by the mechanical contractor. Connections will be by the electrical/fire alarm contractor.
 - iii. Visual notification shall be by an LCD display, delete electronic graphic. Furnish and install a building map with actual rooms device location and device address, wall mounted under Plexiglas.

ITEM 03 – DIVISION 21 FIRE SUPPRESSION

- A. Reference all fire alarm drawings and specifications. The Fire Alarm system shall be a "Gamewell- FCI E3 series" in order to have one consistent manufacture throughout the building, voice Evac in the new addition and provisions to renovate and expand to cover the existing building in the future. No other manufacture or model will be acceptable.

ITEM 04 – 26 12 01 PAD-MOUNTED TRANSFORMERS

- A. Submit shop drawings indicating outline dimensions, connection and support points, weight, specified ratings and materials for 2000kVA transformer to be supplied.

DRAWINGS - ARCHITECTURAL

ITEM 01 – SHEET A2.03 CLERESTORY & ROOF PLAN

- A. Revise Roof Plan to show membrane walking pads per AD-A01

ITEM 02 – SHEET A4.01 BUILDING ELEVATIONS

- A. Revise detail B1 to show demolition and caulking of existing EJ's and CJ's prior to installing expansion joints per AD-A02

ITEM 03 – SHEET A4.01 BUILDING ELEVATIONS

- A. Revise detail B2 to show wall mounted TV's per fixed and swing arm functions per AD-A03

ITEM 04 – SHEET A6.01 PLAN DETAILS

- A. Revise detail B1 to show Vapor barrier @ Exterior Sheathing, Detail is Typical @ Columns per AD-A04

ITEM 05 – SHEET A9.01 PLAN DETAILS

- A. Revise callout of 'TV MNT' to read 'TV MNT – SWING ARM' in all locations except rooms 1000, 1102 & 1202 where it reads 'TV MNT – FIXED. See section 10 99 99 per differentiation of types.

DRAWINGS – PLUMBING

ITEM 01 - DRAWING P1.00

- A. Specialty Item CO-1, floor clean out, shall be Zurn model ZS1400 or approved equal in lieu of Zurn model ZS1440.

DRAWINGS – MECHANICAL

ITEM 01 - DRAWING M1.00

- A. Reference drawing M1.00 "HVAC NOTES No. 30. All rigid ductwork shall be insulated per specifications.

ITEM 02 - DRAWING M1.02 & M5.01

- A. Reference drawings M1.02 and M5.01. HVAC equipment supplier shall provide rooftop equipment screening as noted on drawings.

ITEM 03 - DRAWING M5.01

- A. "CONSTANT VOLUME PACKAGED ROOFTOP WITH NATURAL GAS HEAT SCHEDULE." Furnish RTU-2 with hot-gas by-pass for part load conditions.
- B. "CONSTANT VOLUME PACKAGED ROOFTOP WITH NATURAL GAS HEAT SCHEDULE." Furnish RTU-2 with power exhaust fan that is capable of fully modulating and sized to exhaust 14,000 CFM at 0.1" w.g.
- C. "OUTDOOR PACKAGED ROOFTOP VAV WITH NATURAL GAS HEAT SCHEDULE." Furnish RTU-1 with hot-gas by-pass for part load conditions.
- D. "OUTDOOR PACKAGED ROOFTOP VAV WITH NATURAL GAS HEAT SCHEDULE." Furnish RTU-1 with power exhaust fan that is capable of fully modulating and sized to exhaust 10,000 CFM at 0.1" w.g.
- E. "SINGLE DUCT AIR TERMINAL UNIT SCHEDULE and Specification Section 233600. Carrier shall be added to list of approved manufacturers for VAV terminal boxes. The Engineer reserves final approval until shop drawing review.

DRAWINGS – ELECTRICAL

ITEM 01 – DRAWING E1.01

- A. Contractor shall power the center fixture type A1 in Conference Room 1102 and Conference Room 1202 from the other A1 fixtures in the space. Delete conduit and wire from center fixture type A1 to the Corridor fixture type D(E) N/L.
- B. In reference to the note that directs the contractor to furnish and install a 2" conduit with pull string for future Hall of Fame; the conduit is to originate from Electrical 1111.

ITEM 02 – DRAWING E1.02

- A. The fire alarm pull station shown near Toilet Room 1213 shall be moved to within 5' of the exterior door of Men's Suite 1200. This pull station shall be deleted if the Hall Of Fame alternate is accepted.
- B. In reference to the note that directs the contractor to furnish and install two (2) 4" conduits with pull string for future Hall of Fame; the conduits are to originate from Data/It 1211.

ITEM 03 – DRAWING E1.03

- A. The type “H” fixtures in the gym fixtures shall be furnished with three ballasts. Two of the three are standard 4-lamp electronic ballast individually switched, connected to control incremental outside lamps(2 lamps each side of center), the third ballast shall be an Advance Mark 10 dimming ballast to power the center two lamps.
The standard ballast of each fixture shall be connected to independent circuits, to allow independent control via circuit breaker(s). The third dimming ballast will also be fed from an independent circuit(s) via one of four required remote dimmer modules, one required for each of four circuits within the gym. Remote dimmer module shall be a Lithonia RDM 3000 277 or equal.
For dimming control a single 120v line voltage dimmer switch shall be located adjacent to related switches, see sheet E4.02-Lighting Control Diagram” line voltage shall be provided from a nearby (non-switched) 120V receptacle circuit and controlled 120V load side connected to each of the four remote dimmer modules. Line voltage dimmer shall be a Lithonia ISD 600 or equal.

ITEM 04 – DRAWING E3.01

- A. ELECTRICAL CONSTRUCTION NOTE No. 3. Contractor shall furnish new transformer with dual taps and locate on existing pad.

ITEM 05 – DRAWING E5.01

- A. Change light fixture type “N” to Visa Lighting #CB6506 1FS39 PTD PTD (or approved equal). Architect to select finish (similar to Silver Metallic).
- B. Change light fixture type “O” to Visa Lighting #CP5205-STM VAR with 277V and 4000k white LED lamp (or approved equal).
- C. Change light fixture type “P” to Winona Lighting #LED-POPS09-CYL-L-001/HO-ND277V-BAL-X-STD (or approved equal).
- D. Change light fixture type “Q” to McFadden Lighting #A09-A41-LED005-2-E090 with hanger #A05-B13-0338187600-AL-07 (or approved equal).
- E. Change light fixture type “R” to McFadden Lighting #A09-A42-LED005-2-E0100-EM with hanger #A05-B13-0338186400-AL-07 (or approved equal).
- F. Change light fixture type “S(E)” to McFadden Lighting #A09-A42-LED005-2-E0100-EM with hanger #A05-B13-0338185200-AL-07 (or approved equal).

PRODUCT SUBSTITUTION REQUESTS

<u>Section</u>	<u>Item</u>	<u>Manufacturer</u>	<u>Response</u>
07 11 13	Bituminous Dampproofing (Verify compliance with Rigid Insulation)	TK-Products – Tk-Hydromax 2001	Allowed
07 71 00	Roof Specialties	AP Snap-Tight – Coping & Fascia	Allowed
07 81 00	Applied Fireproofing (Concealed)	Cafco Blaze Shield II – Min Fiber	Allowed
08 11 13	Hollow Metal Doors & Frames	MPI Group	Allowed
09 64 66	Wood Athletic Flooring	Robbins – Eclipse	Allowed
09 64 66	Wood Athletic Flooring (See Project Manual above 09 64 66 for <i>Allowed</i> substitution)	Aacer – Channel	Denied
09 64 66	Wood Athletic Flooring (See Project Manual above 09 64 66 for <i>Allowed</i> substitution)	Action – Green Flex	Denied
09 64 66	Wood Athletic Flooring (Verify compliance w/EN 14904 (2006))	Connor – Alliance	Allowed
11 48 30	Scoreboards	Sportable Scoreboards	Allowed
11 66 23	BBall, VBall, Divider Curtain, Padding (Floor sleeves to be provided by VBall post manufacture)	Arizona Courtlines, Inc.	Allowed
11 66 23	BBall, VBall, Divider Curtain, Padding (Floor sleeves to be provided by VBall post manufacture)	ADP Lemco, Inc.	Allowed
23 09 00	HVAC Controls	Honeywell International	Allowed
32 32 23	Segmental Retaining Wall	Ridge Rock	Denied

All product substitutions listed as 'Allowed' shall comply with all requirements of the drawings and specifications. It is the responsibility of the 'Submitter' to ensure that substitute products installed will function properly with Base Bid and any Alternate work shown as specified in the construction documents. The 'Submitter' shall bear the cost of any modifications, material changes, and additional testing necessary to incorporate the 'Submitters' product(s) into the project if not in compliance.

ATTACHMENTS

Miscellaneous Attachments:

Pre-Bid Conference Sign in Sheet Pages 1 thru 4

Specifications:

07 27 26 FLUID APPLIED AIR BARRIERS Pages 1 thru 6
07 81 23 INTUMESCENT FIREPROOFING Pages 1 thru 6
10 99 99 MISCELLANEOUS SPECIALTIES Pages 1 thru 2

Supplemental Drawings:

AD-C01 Civil
AD-A01 thru AD-A04 Architectural

END OF ADDENDUM NO 01

PRE BID CONFERENCE
~~Sign Out Sheet~~

for

CC-244S-12 CFSB Center Basketball Practice Facility Addition Project

CAPITAL CONSTRUCTION PROJECT

JANUARY 19, 2012 @ 10:00 AM

\$250.00 Non-Refundable Fee (Handled by Paducah Blueprint)

1	COMPANY	ABEL CONSTRUCTION	PHONE FAX	859-803-2594 502-473-7361
	NAME	JEFF DOSS	EMAIL	JDOSS@ABELCONSTRUCT.COM
2	COMPANY	A&K CONSTRUCTION	PHONE FAX	270-441-7152 " " 9754
	NAME	BOBBY OWENS	EMAIL	BOWENS@AKCONSTRUCTION.COM
3	COMPANY	BFW Engineering	PHONE FAX	618-993-6700 618-993-6717
	NAME	Chris Whiting	EMAIL	cwhiting@bfwengineers.com
4	COMPANY	Hastings & Chivetta Arch	PHONE FAX	314 863 5717
	NAME	Tom Ohle	EMAIL	tohle@hearchitects.com
5	COMPANY	GH INSULATION INC PADUCAH KY	PHONE FAX	270 415-5415 270-415-5416
	NAME	GUS HALKIAS	EMAIL	
6	COMPANY	GIBSON PIPING	PHONE FAX	270-527-1315
	NAME	Jason Burgess	EMAIL	jburgess@gs@6mas.com
7	COMPANY	Cleaver Const. Co., Inc.	PHONE FAX	270-753-0701 270-753-5067
	NAME	Russ Cleaver	EMAIL	russ@cleaverco.net
8	COMPANY	CLEAVER CONST	PHONE FAX	
	NAME	MAX CLEAVER	EMAIL	MAX@CLEAVERCO.NET

9	COMPANY	Pinnacle, Inc	PHONE FAX	(270) 527-1720 (270) 527-2628
	NAME	Craig Schmetzman	EMAIL	craig@PinnacleInc.net
10	COMPANY	Johnson Plaster & Vinyl, Inc.	PHONE FAX	(270) 527-5208 (270) 527-4115
	NAME	Aaron Osbron	EMAIL	aaron@JohnsonPlaster.com
11	COMPANY	Darrell Steel	PHONE FAX	270-354-9464 270-354-9467
	NAME	Chris Darrell	EMAIL	cd@dsteelconstruction.com
12	COMPANY	Crouch Building Associates	PHONE FAX	270-247-1948 270-247-1957
	NAME	Keith Smith	EMAIL	KEITH@CROUCHBLD.COM
13	COMPANY	Crouch Building Associates, Inc.	PHONE FAX	270-247-1948 270-247-1957
	NAME	Roger Dillingham	EMAIL	ROGER@CROUCHBLD.COM
14	COMPANY	Vanguard Contractors	PHONE FAX	270-442-8670 270-442-0749
	NAME	Joe Graney	EMAIL	JGRANEY@VANGUARD21.COM
15	COMPANY	Vanguard Contractors LLC	PHONE FAX	270-442-8670 270-442-0749
	NAME	Jarrod Coulson	EMAIL	
16	COMPANY	Parker Excavating LLC	PHONE FAX	270-293-9084 731-641-1341
	NAME	Bruce Parker	EMAIL	PARKERExcavatingLLC@Live.Com
17	COMPANY	Danny Copeland's Excavating	PHONE FAX	270 898-7636 270 898-4069
	NAME	D. Copeland	EMAIL	dannycopeland@egma.l.com

18	COMPANY	Danny Cope & Sons Excavating LLC	PHONE FAX	270 898-7636 270 898-4069
	NAME	Jon Cope	EMAIL	joncope78@gmail.com
19	COMPANY	Jays Electric	PHONE FAX	270-527-2201 270-527-2202
	NAME	Greg Kildow greg@jaysselectric.com	EMAIL	
20	COMPANY	David Const	PHONE FAX	502-581-7777
	NAME	Jason Jones	EMAIL	jason.jones@Davidci.ca
21	COMPANY	Swift Roofing Inc.	PHONE FAX	270-753-5976 270-753-9452
	NAME	Larry Swift	EMAIL	ldswift@swiftroofing.net
22	COMPANY	Hill Electric	PHONE FAX	270-753-9562 270-753-6850
	NAME	John Hudson	EMAIL	john@hillelectric.com
23	COMPANY	MVC Tommy Allen Crosslin	PHONE FAX	270-889-8108
	NAME	Tommy Allen Crosslin	EMAIL	
24	COMPANY	John Clark Construction Co. Inc.	PHONE FAX	752-7850 753-7859
	NAME	Chris Clark	EMAIL	clark@johnclarkconstruction.com
25	COMPANY	Mott Electric LLC	PHONE FAX	270-744-8020
	NAME	Robert Mott	EMAIL	robmott@mottelectricllc.net
26	COMPANY	B.H. Green & Son Doug Jones	PHONE FAX	442-7575 441-9008
	NAME		EMAIL	

27	COMPANY	Emwine Const	PHONE FAX	270 7538986
	NAME	Gary Emwine	EMAIL	Emwine2812@BellSouth.net
28	COMPANY	PINNALE, INC.	PHONE FAX	270-527-1720 270-527-2678
	NAME	DENNIS W. SMITH	EMAIL	DENNIS@PINNALEINC.NET
29	COMPANY	PRINCETON LUMBER COMPANY, INC.	PHONE FAX	(270) 365-2081 (270) 365-2082
	NAME	But Taylor, Barrett Boyd	EMAIL	but.taylor@princetonlumbercompany.com
30	COMPANY	M P Lawson Const.	PHONE FAX	MPLawsonConst@BellSouth.com 270 554-3022
	NAME	Central Paving, Troy Davenport	EMAIL	Legend KDM@AOL.NET 270-443-1059
31	COMPANY	R. Carr & Assoc	PHONE FAX	270 443-9294 443-5973
	NAME	Rick Carr	EMAIL	RICK.CARR@RCARR.NET
32	COMPANY	Marcum Engineering	PHONE FAX	270.444.9274
	NAME	Bacchus L. Oliver	EMAIL	bdiver@marcumengineering.net
33	COMPANY		PHONE FAX	
	NAME		EMAIL	
34	COMPANY		PHONE FAX	
	NAME		EMAIL	
35	COMPANY		PHONE FAX	
	NAME		EMAIL	

SECTION 07 27 26 - FLUID-APPLIED MEMBRANE AIR AND VAPOR BARRIERS

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. This Section includes the following non-asphaltic barriers:
 - 1. Fluid-applied membrane air barrier, vapor permeable.
 - a. For application to gypsum based sheathing.
- B. Related Sections include the following:
 - 1. Division 06 Section "Sheathing" for wall sheathings, wall sheathing joint-and-penetration treatments.
 - 2. Division 07 Section "Sheet Metal Flashing and Trim" for sheet metal flashings.
 - 3. Division 07 Section "Joint Sealants" for joint-sealant materials and installation.
 - 4. Division 09 Section "Gypsum Board" for vapor barriers applied to interior face of metal stud cavity walls

1.3 DEFINITIONS

- A. ABAA: Air Barrier Association of America.
- B. Air Barrier Assembly: The collection of air barrier materials and auxiliary materials applied to an opaque wall, including joints and junctions to abutting construction, to control air movement through the wall.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Air barrier shall be capable of performing as a continuous vapor-retarding or vapor permeable air barrier as application warrants, and as a liquid-water drainage plane flashed to discharge to the exterior incidental condensation or water penetration. Air barrier assemblies shall be capable of accommodating substrate movement and of sealing substrate expansion and control joints, construction material changes, and transitions at perimeter conditions without deterioration and air leakage exceeding specified limits.
- B. Air Barrier Assembly Air Leakage: Not to exceed 0.01 cfm x sq. ft. of surface area at 1.57 lbf/sq. ft.; ASTM E 283.

1.5 SUBMITTALS

- A. Product Data: Include manufacturer's written instructions for evaluating, preparing, and treating substrate; technical data; and tested physical and performance properties of air barrier.
- B. Shop Drawings: Show locations and extent of air barrier. Include details for substrate joints and cracks, counterflashing strip, penetrations, inside and outside corners, terminations, and tie-ins with adjoining construction.
 - 1. Include details of interfaces with other materials that form part of air barrier.
- C. Product Certificates: For air barriers, certifying compatibility of air barrier and accessory materials with Project materials that connect to or that come in contact with the barrier; signed by product manufacturer.
- D. Qualification Data: For Applicator.
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for air barriers.

1.6 QUALITY ASSURANCE

- A. Applicator Qualifications: A firm experienced in applying air barrier materials similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. The air barrier shall be joined in an airtight and flexible manner to the air barrier material of adjacent systems, allowing for the relative movement of systems due to thermal and moisture variations and creep.
- C. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review air barrier requirements including surface preparation, substrate condition and pretreatment, minimum substrate curing period, forecasted weather conditions, special details and sheet flashings, mockups, installation procedures, sequence of installation, testing and inspecting procedures, and protection and repairs.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store liquid materials in their original undamaged packages in a clean, dry, protected location and within temperature range required by air barrier manufacturer.
- B. Remove and replace liquid materials that cannot be applied within their stated shelf life.
- C. Store rolls according to manufacturer's written instructions.
- D. Protect stored materials from direct sunlight.

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Apply air barrier within the range of ambient and substrate temperatures recommended by air barrier manufacturer. Protect substrates from environmental

conditions that affect performance of air barrier. Do not apply air barrier to a damp or wet substrate or during snow, rain, fog, or mist.

PART 2 - PRODUCTS

2.1 FLUID-APPLIED MEMBRANE AIR BARRIER

- A. Fluid-Applied, Vapor-Permeable Membrane Air Barrier: synthetic polymer membrane.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Henry Company; Air-Bloc 06 WB.
 - b. Carlisle; Barriseal
 - c. WR Meadows; Wir-Shield WR
 - d. Tremco; ExoAir
 - e. Prosoco; R-Guard
 2. Physical and Performance Properties:
 - a. Membrane Air Permeance: Not to exceed 0.004 cfm/ sq. ft. of surface area at 1.57-lbf/sq. ft. pressure difference; ASTM E 2178.
 - b. Vapor permeance: Not to exceed 0.2 perms; ASTM E 96.
- B. Where air barrier membranes are to be exposed to UV degradation for a period of more than 30 days, use manufacturer's UV resistant formulations.

2.2 AUXILIARY MATERIALS

- A. General: Auxiliary materials recommended by air barrier manufacturer for intended use and compatible with air barrier membrane. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
- B. Primer: Liquid waterborne primer recommended for substrate by manufacturer of air barrier material.
- C. Counterflashing Strip: Modified bituminous, 40-mil- thick, self-adhering sheet consisting of 32 mils of rubberized asphalt laminated to an 8-mil- thick, crosslaminated polyethylene film with release liner backing.
- D. Modified Bituminous Strip: Vapor-retarding, 40-mil- thick, smooth-surfaced, self-adhering; consisting of 36 mils of rubberized asphalt laminated to a 4-mil- thick polyethylene film with release liner backing.
- E. Joint Reinforcing Strip: Air barrier manufacturer's glass-fiber-mesh tape.
- F. Substrate Patching Membrane: Manufacturer's standard trowel-grade substrate filler.
- G. Adhesive and Tape: Air barrier manufacturer's standard adhesive and pressure-sensitive adhesive tape.

- H. Joint Sealant: ASTM C 920, single-component, neutral-curing silicone; Class 100/50 (low-modulus), Grade NS, Use NT related to exposure, and, as applicable to joint substrates indicated, Use O. Comply with Division 07 Section "Joint Sealants."

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance.
 - 1. Verify that substrates are sound and free of oil, grease, dirt, excess mortar, or other contaminants.
 - 2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 SURFACE PREPARATION

- A. Clean, prepare, treat, and seal substrate according to manufacturer's written instructions. Provide clean, dust-free, and dry substrate for air barrier application.
- B. Mask off adjoining surfaces not covered by air barrier to prevent spillage and overspray affecting other construction.
- C. Remove grease, oil, bitumen, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.
- D. At changes in substrate plane, apply sealant or termination mastic beads at sharp corners and edges to form a smooth transition from one plane to another.
- E. Cover gaps in substrate plane and form a smooth transition from one substrate plane to another with stainless-steel sheet mechanically fastened to structural framing to provide continuous support for air barrier.

3.3 JOINT TREATMENT

- A. Gypsum Sheathing: Fill joints greater than 1/4 inch with sealant according to ASTM C 1193 and with air barrier manufacturer's written instructions. Apply first layer of fluid air barrier membrane at joints. Tape joints with joint reinforcing strip after first layer is dry. Apply a second layer of fluid air barrier membrane over joint reinforcing strip.

3.4 TRANSITION STRIP INSTALLATION

- A. Install strips, transition strips, and auxiliary materials according to air barrier manufacturer's written instructions to form a seal with adjacent construction and maintain a continuous air barrier.
 - 1. Coordinate the installation of air barrier with installation of roofing membrane and base flashing to ensure continuity of air barrier with roofing membrane.

2. Install modified bituminous strip on roofing membrane or base flashing so that a minimum of 3 inches of coverage is achieved over both substrates.
- B. Apply primer to substrates at required rate and allow to dry. Limit priming to areas that will be covered by air barrier sheet in same day. Reprime areas exposed for more than 24 hours.
 1. Prime glass-fiber-surfaced gypsum sheathing with number of prime coats needed to achieve required bond, with adequate drying time between coats.
 - C. Connect and seal exterior wall air barrier membrane continuously to roofing membrane air barrier, concrete below-grade structures, floor-to floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, and other construction used in exterior wall openings, using accessory materials.
 - D. At end of each working day, seal top edge of strips and transition strips to substrate with termination mastic.
 - E. Apply joint sealants forming part of air barrier assembly within manufacturer's recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
 - F. Wall Openings: Prime concealed perimeter frame surfaces of windows, curtain walls, storefronts, and doors. Apply modified bituminous transition strip so that a minimum of 3 inches of coverage is achieved over both substrates. Maintain 3 inches of full contact over firm bearing to perimeter frames with not less than 1 inch of full contact.
 1. Modified Bituminous Transition Strip: Roll firmly to enhance adhesion.
 2. Elastomeric Flashing Sheet: Apply adhesive to wall, frame, and flashing sheet. Install flashing sheet and termination bars, fastened at 6 inches o.c. Apply lap sealant over exposed edges and on cavity side of flashing sheet.
 - G. Fill gaps in perimeter frame surfaces of windows, curtain walls, storefronts, and doors, and miscellaneous penetrations of air barrier membrane with foam sealant.
 - H. Seal strips and transition strips around masonry reinforcing or ties and penetrations with termination mastic.
 - I. Seal top of through-wall flashings to air barrier with an additional 6-inch- wide, modified bituminous strip.
 - J. Seal exposed edges of strips at seams, cuts, penetrations, and terminations not concealed by metal counterflashings or ending in reglets with termination mastic.
 - K. Repair punctures, voids, and deficient lapped seams in strips and transition strips. Slit and flatten fishmouths and blisters. Patch with transition strips extending 6 inches beyond repaired areas in strip direction.
- 3.5 AIR BARRIER MEMBRANE INSTALLATION
- A. Apply air barrier membrane to form a seal with strips and transition strips and to achieve a continuous air barrier according to air barrier manufacturer's written instructions.
 - B. Apply air barrier membrane within manufacturer's recommended application temperature ranges.

- C. Apply primer to substrates at required rate and allow to dry. Limit priming to areas that will be covered by air barrier sheet in same day. Reprime areas exposed for more than 24 hours.
 - 1. Prime glass-fiber-surfaced gypsum sheathing with number of prime coats needed to achieve required bond, with adequate drying time between coats.
- D. Apply a continuous unbroken air barrier to substrates according to the following minimum thickness. Apply membrane in full contact around protrusions such as masonry ties.
 - 1. Vapor-Retarding Membrane Air Barrier: 60-mil dry film thickness.
- E. Apply strip and transition strip a minimum of 1 inch onto cured air membrane or strip and transition strip over cured air membrane overlapping 3 inches onto each surface according to air barrier manufacturer's written instructions.
- F. Correct deficiencies in or remove air barrier that does not comply with requirements; repair substrates and reapply air barrier components.

3.6 CLEANING AND PROTECTION

- A. Protect air barrier system from damage during application and remainder of construction period, according to manufacturer's written instructions.
 - 1. Protect air barrier from exposure to UV light and harmful weather exposure as required by manufacturer. Remove and replace air barrier exposed for more than 30 days unless UV resistant formulations were used.
 - 2. Protect air barrier from contact with creosote, uncured coal-tar products, TPO, EPDM, flexible PVC membranes, and sealants not approved by air barrier manufacturer.
- B. Clean spills, stains, and soiling from construction that would be exposed in the completed work using cleaning agents and procedures recommended by manufacturer of affected construction.
- C. Remove masking materials after installation.

END OF SECTION 07 27 26

SECTION 07 81 23 - INTUMESCENT FIREPROOFING

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 mastic and intumescent fire-resistive coatings (MIFRC).
- B. Related Requirements:
 - 1. Section 07 81 00 "Applied Fireproofing" for sprayed fire-resistive materials (SFRM).

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review products, design ratings, restrained and unrestrained conditions, thicknesses, and other performance requirements.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Structural framing plans indicating the following:
 - 1. Extent of fireproofing for each construction and fire-resistance rating.
 - 2. Applicable fire-resistance design designations of a qualified testing and inspecting agency acceptable to authorities having jurisdiction.
 - 3. Minimum fireproofing thicknesses needed to achieve required fire-resistance rating of each structural component and assembly.
 - 4. Treatment of fireproofing after application.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and testing agency.
- B. Product Certificates: For each type of fireproofing.
- C. Evaluation Reports: For fireproofing, from ICC-ES.
- D. Field quality-control reports.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A firm or individual certified, licensed, or otherwise qualified by fireproofing manufacturer as experienced and with sufficient trained staff to install manufacturer's products according to specified requirements.

1.7 FIELD CONDITIONS

- A. Environmental Limitations: Do not apply fireproofing when ambient or substrate temperature is 50 deg F or lower unless temporary protection and heat are provided to maintain temperature at or above this level for 24 hours before, during, and for 24 hours after product application.
- B. Ventilation: Ventilate building spaces during and after application of fireproofing, providing complete air exchanges according to manufacturer's written instructions. Use natural means or, if they are inadequate, forced-air circulation until fireproofing dries thoroughly.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Assemblies: Provide fireproofing, including auxiliary materials, according to requirements of each fire-resistance design and manufacturer's written instructions.
- B. Source Limitations: Obtain fireproofing **for each fire-resistance design** from single source.
- C. Fire-Resistance Design: Indicated on Drawings, tested according to ASTM E 119 or UL 263 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Steel members are to be considered unrestrained unless specifically noted otherwise.
- D. VOC Content: Products shall comply with VOC content limits of authorities having jurisdiction and the following VOC limits when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - 1. Flat Paints and Coatings: 50 g/L.
 - 2. Nonflat Paints and Coatings: 150 g/L.
 - 3. Primers, Sealers, and Undercoaters: 200 g/L.
 - 4. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.
 - 5. Fireproofing Exterior Coatings: 350 g/L.
- E. Low-Emitting Materials: Fireproofing used within the weatherproofing system shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- F. Asbestos: Provide products containing no detectable asbestos.

2.2 MASTIC AND INTUMESCENT FIRE-RESISTIVE COATINGS

- A. MIFRC: Manufacturer's standard, factory-mixed formulation, and complying with indicated fire-resistance design.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Albi Manufacturing, Division of StanChem Inc.; Albi Clad TF.
 - b. Carboline Company, subsidiary of RPM International, Fireproofing Products Div.; AD Firefilm III.
 - c. Isolotek International; Cafco SprayFilm-WB 3.
 2. Application: Designated for "interior general purpose" use by a qualified testing agency acceptable to authorities having jurisdiction.
 3. Thickness: As required for fire-resistance design indicated, measured according to requirements of fire-resistance design.
 4. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - a. Flame-Spread Index: 25 or less.
 - b. Smoke-Developed Index: 50 or less.
 5. Hardness: Not less than 45, Type D durometer, according to ASTM D 2240.
 6. Finish: Spray or roller textured finish.
 - a. Color and Gloss: White.

2.3 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that are compatible with fireproofing and substrates and are approved by UL or another testing and inspecting agency acceptable to authorities having jurisdiction for use in fire-resistance designs indicated.
- B. Substrate Primers: Primers approved by fireproofing manufacturer and complying with required fire-resistance design by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
- C. Reinforcing Fabric: Glass- or carbon-fiber fabric of type, weight, and form required to comply with fire-resistance designs indicated; approved and provided by fireproofing manufacturer.
- D. Reinforcing Mesh: Metallic mesh reinforcement of type, weight, and form required to comply with fire-resistance design indicated; approved and provided by fireproofing manufacturer. Include pins and attachment.
- E. Topcoat: Suitable for application over applied fireproofing; of type recommended in writing by fireproofing manufacturer for each fire-resistance design.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for substrates and other conditions affecting performance of the Work and according to each fire-resistance design. Verify compliance with the following:
 - 1. Substrates are free of dirt, oil, grease, release agents, rolling compounds, mill scale, loose scale, incompatible primers, paints, and encapsulants, or other foreign substances capable of impairing bond of fireproofing with substrates under conditions of normal use or fire exposure.
 - 2. Objects penetrating fireproofing, including clips, hangers, support sleeves, and similar items, are securely attached to substrates.
 - 3. Substrates receiving fireproofing are not obstructed by ducts, piping, equipment, or other suspended construction that will interfere with fireproofing application.
- B. Conduct tests according to fireproofing manufacturer's written recommendations to verify that substrates are free of substances capable of interfering with bond.
- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Cover other work subject to damage from fallout or overspray of fireproofing materials during application.
- B. Clean substrates of substances that could impair bond of fireproofing.
- C. Prime substrates where included in fire-resistance design and where recommended in writing by fireproofing manufacturer unless compatible shop primer has been applied and is in satisfactory condition to receive fireproofing.
- D. For applications visible on completion of Project, repair substrates to remove surface imperfections that could affect uniformity of texture and thickness in finished surface of fireproofing. Remove minor projections and fill voids that would telegraph through fire-resistive products after application.

3.3 APPLICATION

- A. Construct fireproofing assemblies that are identical to fire-resistance design indicated and products as specified, tested, and substantiated by test reports; for thickness, primers, topcoats, finishing, and other materials and procedures affecting fireproofing work.
- B. Comply with fireproofing manufacturer's written instructions for mixing materials, application procedures, and types of equipment used to mix, convey, and apply fireproofing; as applicable to particular conditions of installation and as required to achieve fire-resistance ratings indicated.

- C. Coordinate application of fireproofing with other construction to minimize need to cut or remove fireproofing.
 - 1. Do not begin applying fireproofing until clips, hangers, supports, sleeves, and other items penetrating fireproofing are in place.
 - 2. Defer installing ducts, piping, and other items that would interfere with applying fireproofing until application of fireproofing is completed.
- D. Install auxiliary materials as required, as detailed, and according to fire-resistance design and fireproofing manufacturer's written recommendations for conditions of exposure and intended use. For auxiliary materials, use attachment and anchorage devices of type recommended in writing by fireproofing manufacturer.
- E. Spray apply fireproofing to maximum extent possible. Following the spraying operation in each area, complete the coverage by trowel application or other placement method recommended in writing by fireproofing manufacturer.
- F. Extend fireproofing in full thickness over entire area of each substrate to be protected.
- G. Install body of fireproofing in a single course unless otherwise recommended in writing by fireproofing manufacturer.
- H. Provide a uniform finish complying with description indicated for each type of fireproofing material and matching finish approved for required mockups.
- I. Cure fireproofing according to fireproofing manufacturer's written recommendations.
- J. Do not install enclosing or concealing construction until after fireproofing has been applied, inspected, and tested and corrections have been made to deficient applications.
- K. Finishes: Where indicated, apply fireproofing to produce the following finishes:
 - 1. Manufacturer's Standard Finishes: Finish according to manufacturer's written instructions for each finish selected.
 - 2. Spray-Textured Finish: Finish left as spray applied with no further treatment.
 - 3. Rolled, Spray-Textured Finish: Even finish produced by rolling spray-applied finish with a damp paint roller to remove drippings and excessive roughness.
 - 4. Skip-Troweled Finish: Even leveled surface produced by troweling spray-applied finish to smooth out the texture and neaten edges.

3.4 FIELD QUALITY CONTROL

- A. Special Inspections: Engage a qualified special inspector to perform the following special inspections:
 - 1. Test and inspect as required by the IBC, 1704.11.
- B. Perform the tests and inspections of completed Work in successive stages. Do not proceed with application of fireproofing for the next area until test results for previously completed applications of fireproofing show compliance with requirements. Tested values must equal or exceed values as specified and as indicated and required for approved fire-resistance design.

- C. Fireproofing will be considered defective if it does not pass tests and inspections.
 - 1. Remove and replace fireproofing that does not pass tests and inspections, and retest.
 - 2. Apply additional fireproofing, per manufacturer's written instructions, where test results indicate insufficient thickness, and retest.
- D. Prepare test and inspection reports.

3.5 CLEANING, PROTECTING, AND REPAIRING

- A. Cleaning: Immediately after completing spraying operations in each containable area of Project, remove material overspray and fallout from surfaces of other construction and clean exposed surfaces to remove evidence of soiling.
- B. Protect fireproofing, according to advice of manufacturer and Installer, from damage resulting from construction operations or other causes, so fireproofing will be without damage or deterioration at time of Substantial Completion.
- C. As installation of other construction proceeds, inspect fireproofing and repair damaged areas and fireproofing removed due to work of other trades.
- D. Repair fireproofing damaged by other work before concealing it with other construction.
- E. Repair fireproofing by reapplying it using same method as original installation or using manufacturers recommended trowel-applied product.

END OF SECTION 07 81 23

SECTION 10 99 99 - MISCELLANEOUS SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

1.2 SUMMARY

- A. The location of miscellaneous specialties is indicated on the drawings.
- B. The types of miscellaneous specialties in this section include the following:
 - 1. Television Mounting Systems:
 - a. Fixed
 - b. Swing Arm

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, specifications installation and maintenance instructions for each specialty required.

PART 2 - PRODUCTS

2.2 TELEVISION MOUNTING SYSTEMS

- A. Provide manufacture's standard television mounting system with accessories for wall installation where indicated on the drawings.
- B. Acceptable Products:
 - 1. Fixed:
 - a. Model LSM by Chief Manufacturing; 800-582-6480
 - b. Accommodates: 37" to 63" flat screen TV's.
 - c. Mounting: Wall; with wall plate mounting to accommodate various substrate requirements. (Verify conditions on drawings).
 - d. Weight Capacity: 200 lbs.
 - e. Color: Black
 - 2. Swivel Arm:
 - a. Model PDR by Chief Manufacturing; 800-582-6480
 - b. Accommodates: 42" to 71" flat screen TV's.
 - c. Mounting: Wall; with wall plate mounting to accommodate various substrate requirements. (Verify conditions on drawings).

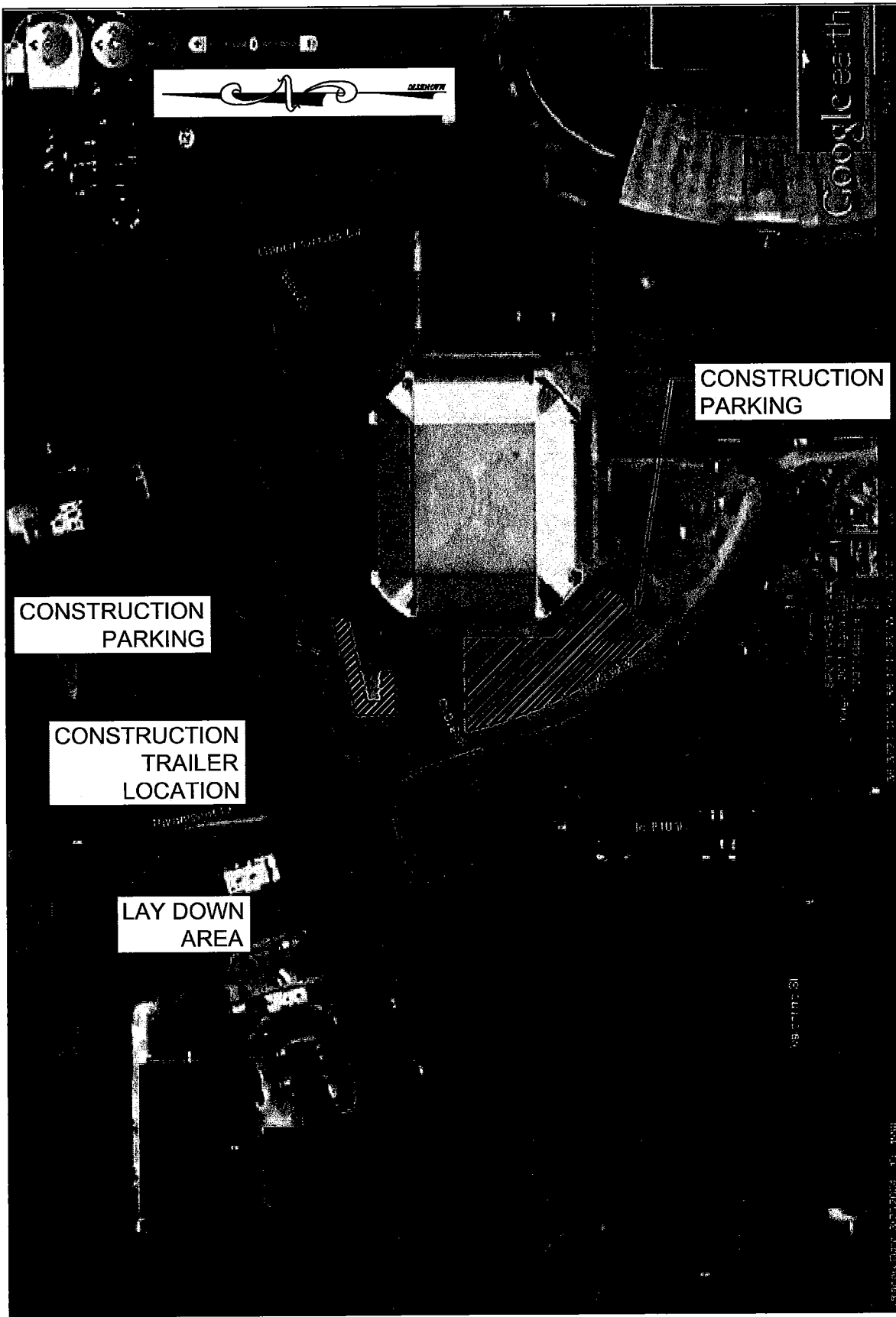
- d. Extension: 37 inches.
- e. Tilt/Roll: -15° , $+5^{\circ}$ / $\pm 2.5^{\circ}$
- f. Weight Capacity: 200 lbs.
- g. Color: Black

PART 3 - EXECUTION

3.1 GENERAL

- A. Install each specialty item in accordance with governing regulations, the industry standards applicable to the work, shop drawings, and manufacturer's written instructions.
- B. Work shall be aligned plumb, level and where required, flush with adjacent surfaces.
- C. Securely attach/anchor specialties to adjacent construction.

END OF SECTION 10 99 99



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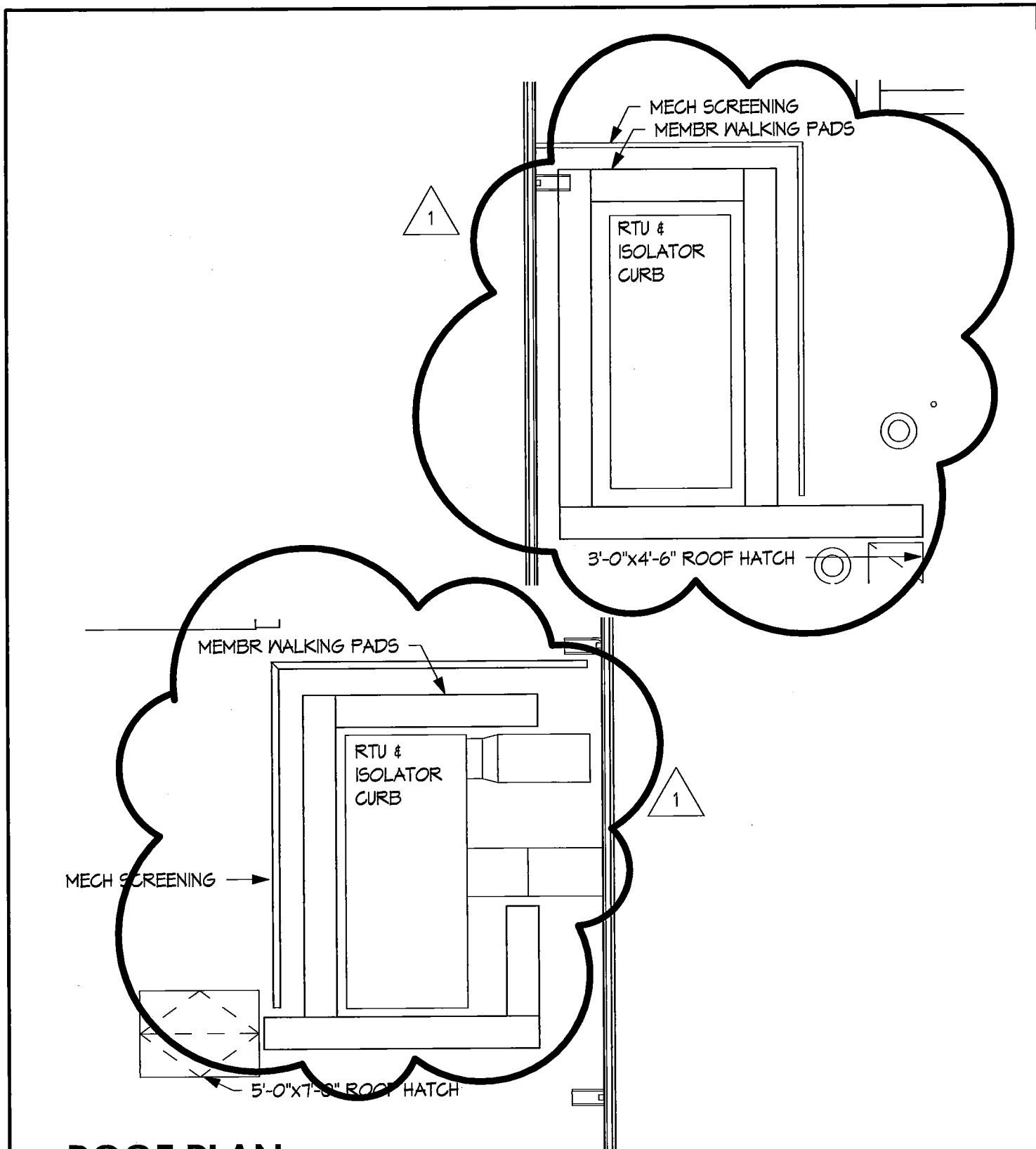
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ROOF PLAN

SCALE | 1/8" = 1'-0"

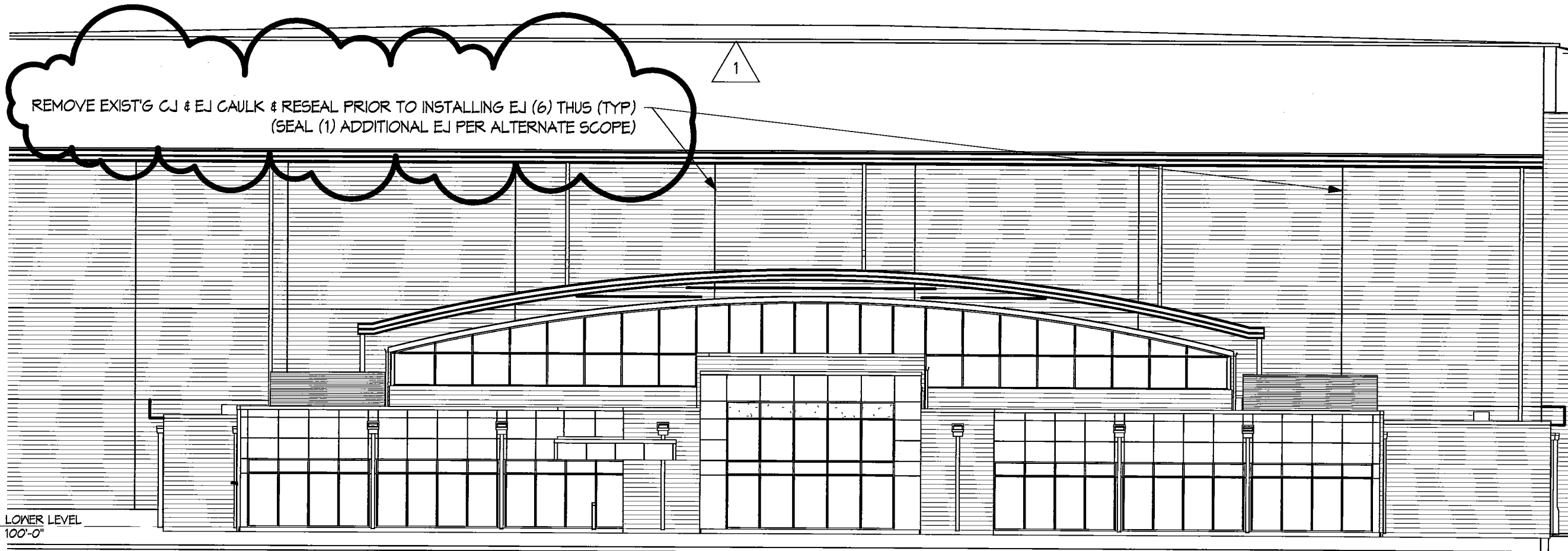
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NORTH ELEVATION

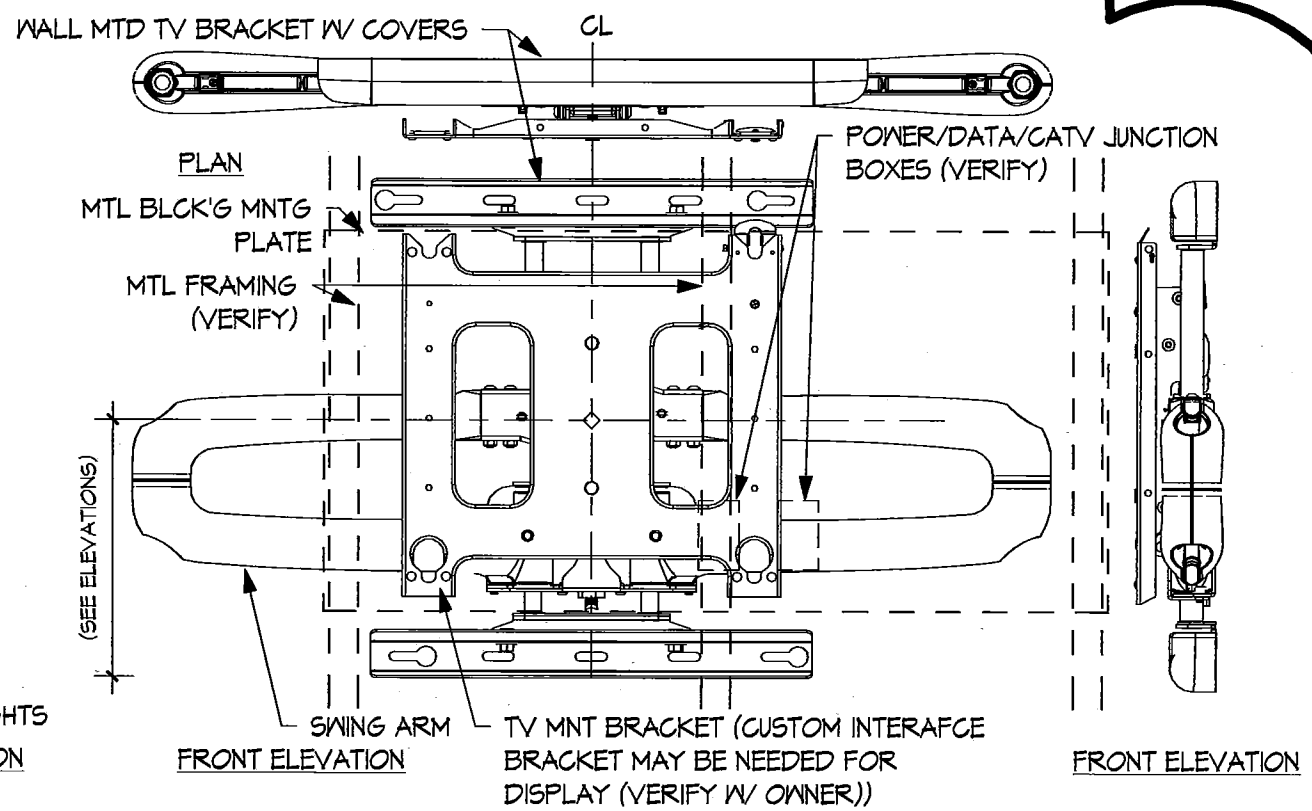
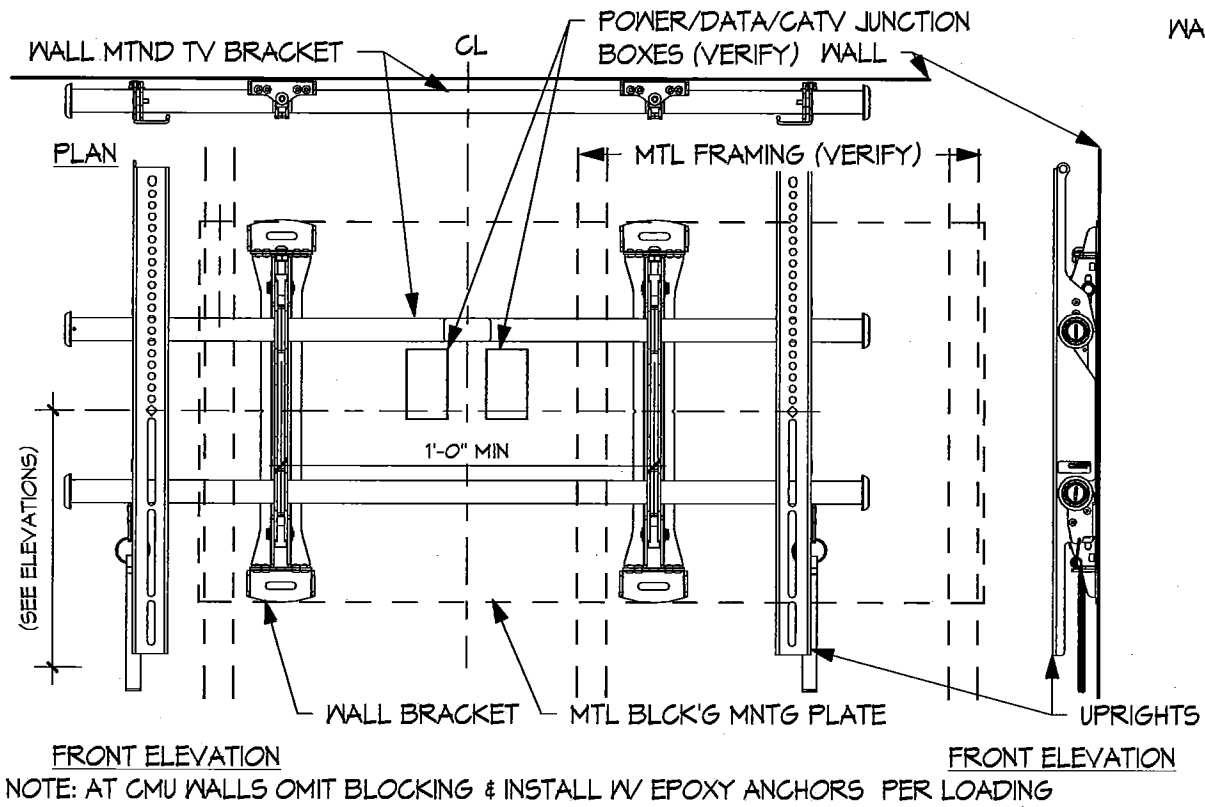
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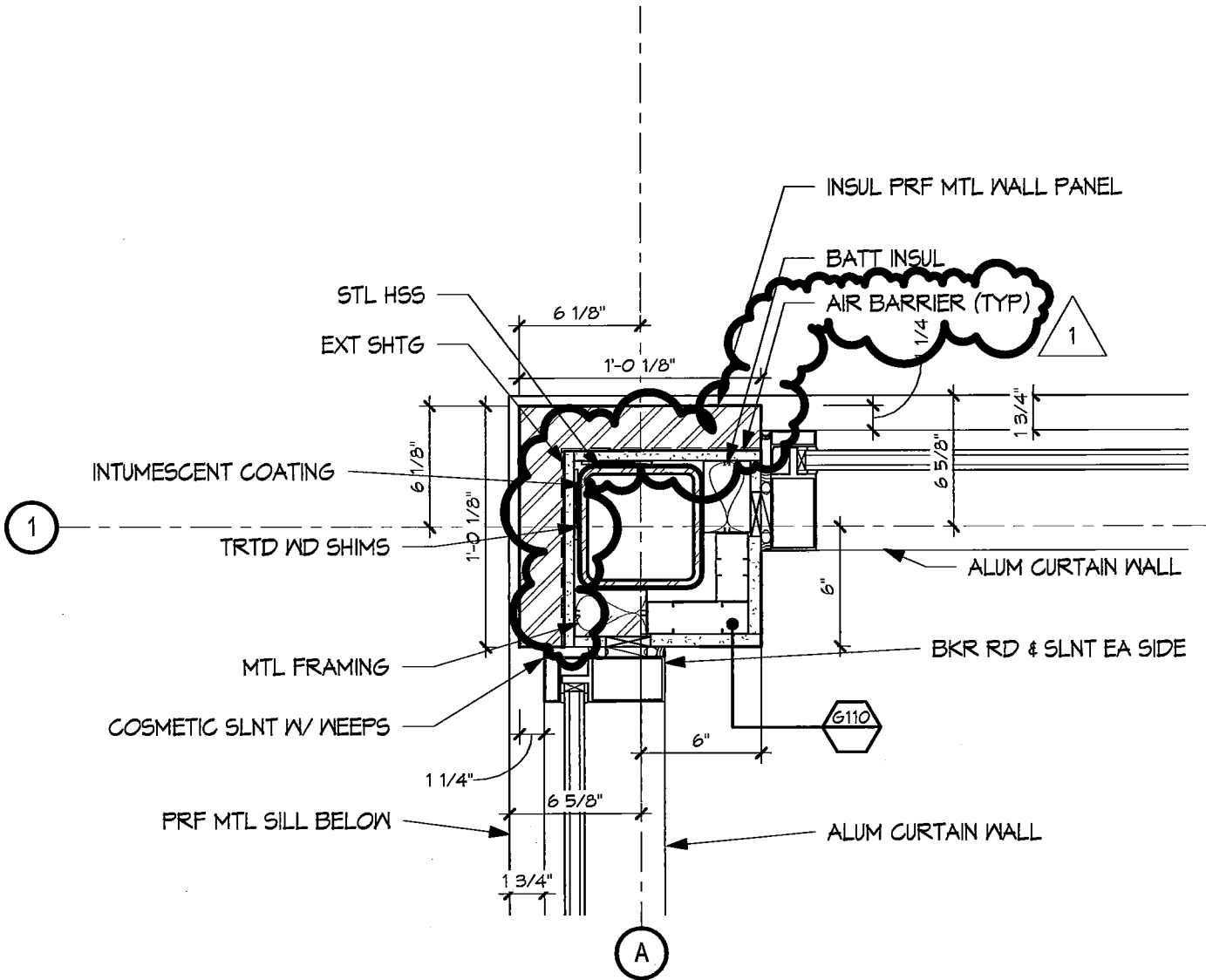
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TV BRACKET

SCALE | 1 1/2" = 1'-0"



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