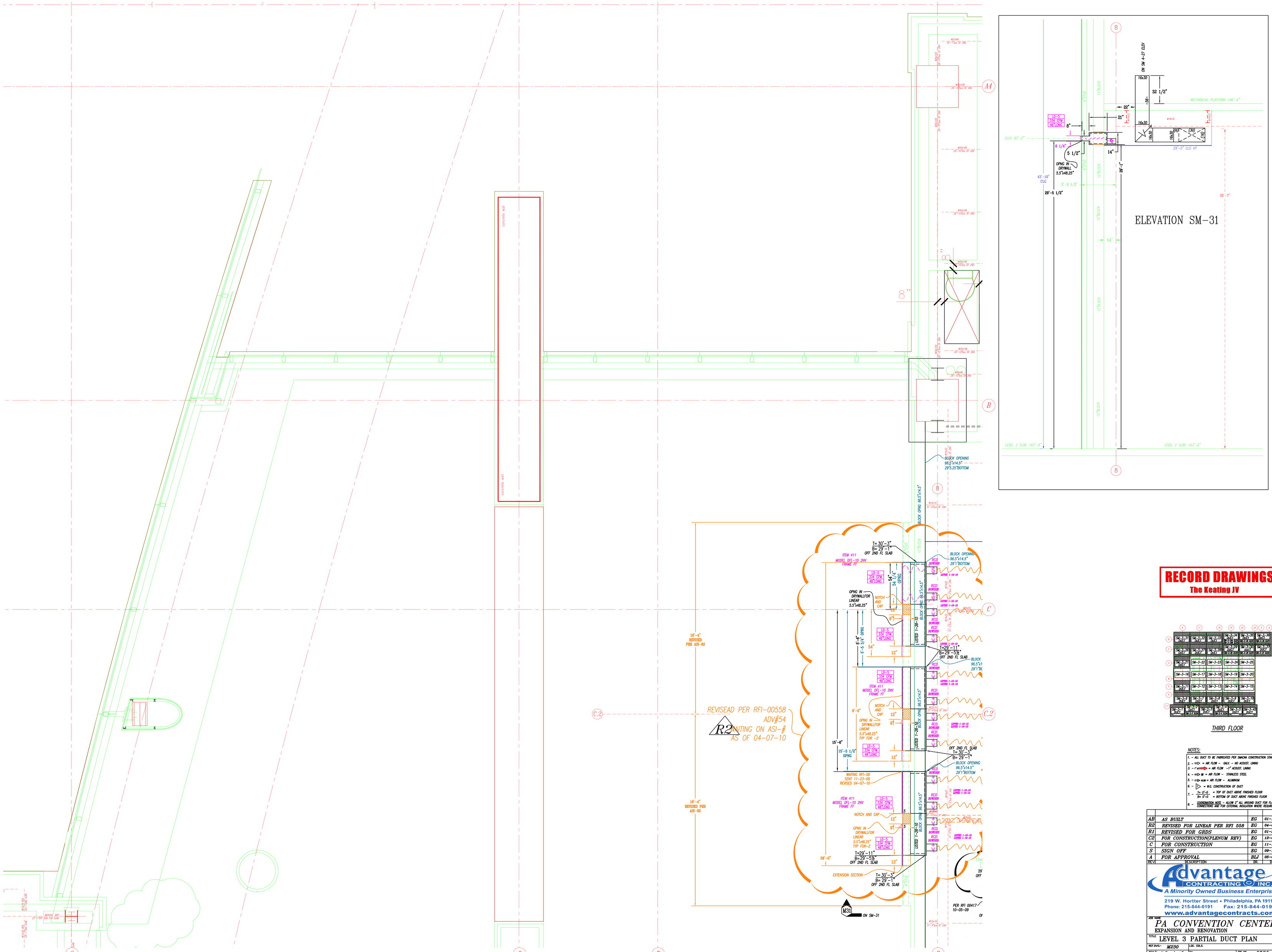
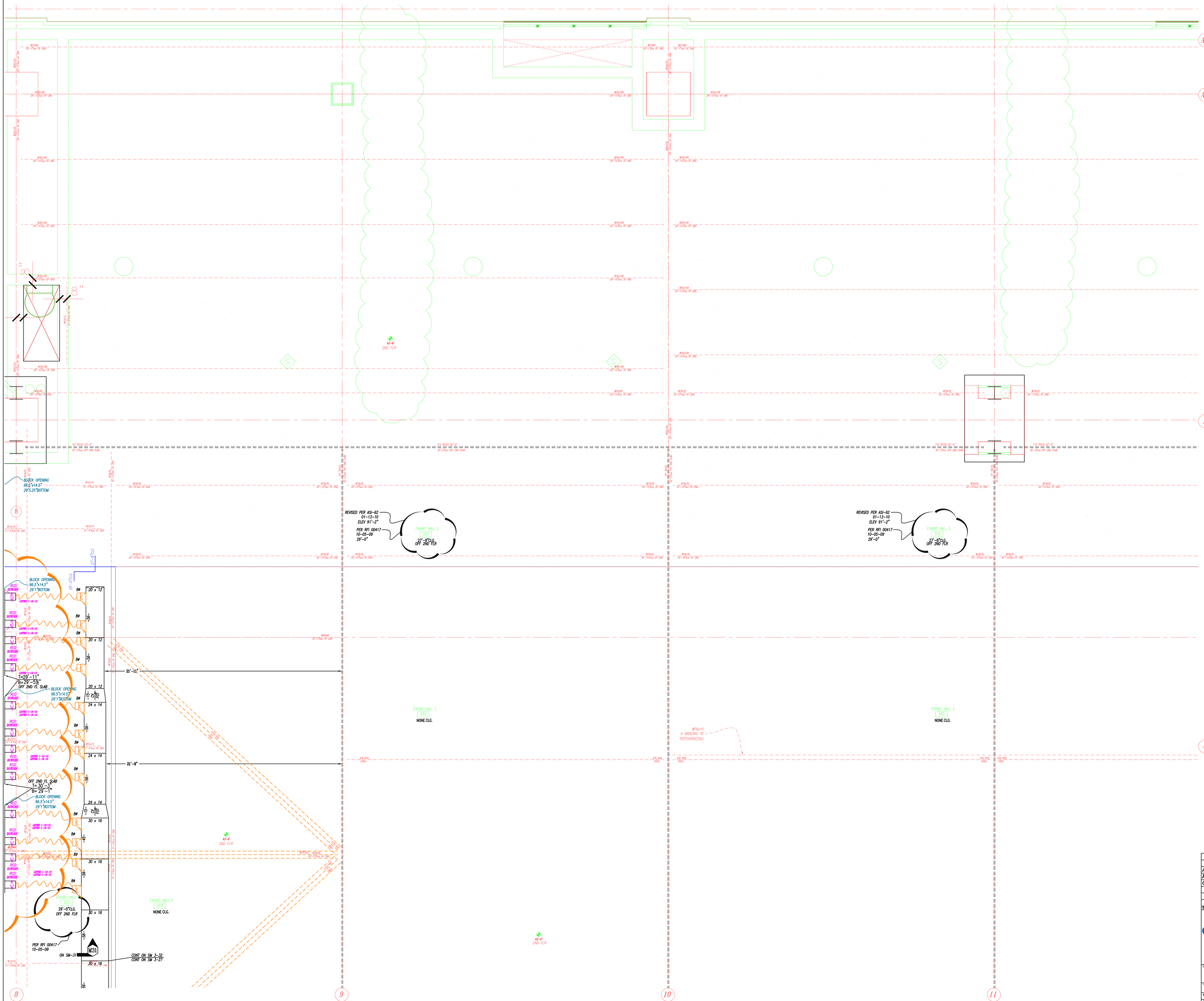
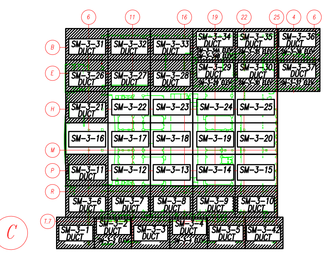

ELEVATION SM-31
ON SM 4-27 ELEV
16x30
32 1/2"
MECHANICAL PLATFORM +96'-6"
22"
21"
8"
LD-5 334 CFM 48"LONG
6 1/4"
5 1/2"
14"
29'-0" CLG HT
OPNG IN DRYWALL 5.5"x48.25"
43'-10" CLG
29'-5 1/2"
1'-3 1/2"
29'-1"
30'-7"
12"BLOCK
6"SLAB
LEVEL 2 SLAB +63'-6"
LEVEL 2 SLAB +63'-6"
concrete wall
concrete wall
BLOCK OPENING 96.5"x14.5" 29'5.25"BOTTOM
BLOCK OPNG 96.5"x14.5"
REVISEAD PER RFI-00558 ADV#54
R2 WAITING ON ASI-# AS OF 04-07-10
18'-4" REVISED PER ASI-82
18'-4" REVISED PER ASI-82
T= 30'-3" B= 29'-1" OFF 2ND FL SLAB
ITEM 411 MODEL DFL-10 2NV FRAME TT
OPNG IN DRYWALLFOR LINEAR 5.5"x48.25"
NOTCH AND CAP
54 1/4" OPNG
5'-5 3/4" OPNG
54"
12"
9"
T=29'-11" B=29'-5 3/4" OFF 2ND FL SLAB
9'-0"
15'-6"
15'-5 1/2" OPNG
WAITING RFI-58 SENT 11-23-09 REVISED 04-07-10
OFF 2ND FL SLAB T= 30'-3" B= 29'-1"
EXTENSION SECTION
T= 30'-3" B= 29'-1" OFF 2ND FL SLAB
29'-0"
M31 ON SM-31
PER RFI 00417 10-05-09
LISTED 1-28-10
RCD1 BOWDEN
LISTED 1-18-10
LISTED 1-18-10
LISTED 1-18-10



RECORD DRAWINGS
The Keating JV



THIRD FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <=> = AIR FLOW – 1" ACOUST. LINING
4. – <=> SS = AIR FLOW – STAINLESS STEEL
5. – <=> ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – 1x 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; 8x 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV'D	DESCRIPTION	BR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-28-10
C2	FOR CONSTRUCTION(PLENUM REV)	EG	12-02-09
C	FOR CONSTRUCTION	EG	11-16-09
S	SIGN OFF	EG	09-16-09
A	FOR APPROVAL	BLJ	05-15-09

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JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 3 PARTIAL DUCT PLAN

REF.DWG.- M230	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-13-09	BR. BLJ	DWG. NO.	SM 3-32

REVISED FOR STEEL

DELETED TRANS IN ASI-29

REVISED PER ASI-62
01-13-10
ELEV 91'-2"
PER RFI 00417
10-05-09
29'-0"

EXHIBIT HALL E
[203]
27'-8"CLG.
OFF 2ND FLR

EXHIBIT HALE E
[203]
NONE CLG.

ADDED DOOR
AS-74

CENTRAL PLAZA
[301]
NONE CLG.

STAIR
STR-E
NO CLG.

DN
UP
UP
DN
UP
DN
UP

38'-0"Lx12'-0"Wx5'-0"H PLENUM
VIBRO-ACOUSTIC MODEL
4" DOUBLE WALL PERF CONSTRUCTION

T=35'-10"
B=31'-10"
OFF 2ND FL SLAB

T=45'-5"
B=38'-3"
OFF LEVEL 2 SLAB
A I-940 DETAIL 1/V

DUCT ON SM 3-33

CONT ON SM 4-33

DAMPER REMOVED BY-36

T=16'-9"
B=11'-9"

AHU
14

THIRD FLOOR

NOTES:

1. — ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. — <=D= = AIR FLOW — GALV. — NO ACOUST. LINING
3. — <=D= = AIR FLOW —1" ACOUST. LINING
4. — <=D= = AIR FLOW — STAINLESS STEEL
5. — <=D= ALUM = AIR FLOW — ALUMINUM
6. — [▷ = W.G. CONSTRUCTION OF DUCT
7. — T= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. — COORDINATION NOTE — ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R2	REVISED FOR GRDS	EG	01-28-10
C	FOR CONSTRUCTION	EG	09-22-09
R1	REVISED UNITS	EG	09-16-09
S1	SIGN OFF REV-1	EG	09-16-09
S	SIGN OFF	BLJ	07-09-09
A	FOR APPROVAL	BLJ	05-15-09

RECORD DRAWINGS
The Keating JV

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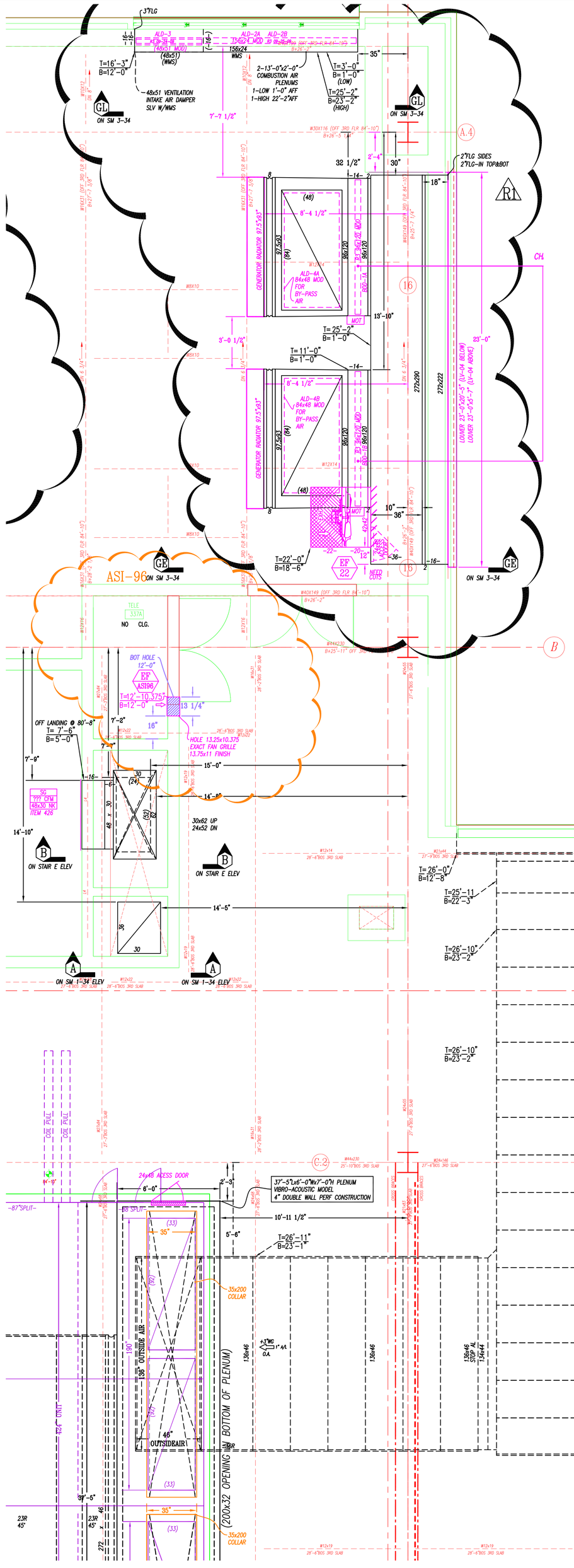
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 3 PARTIAL DUCT PLAN

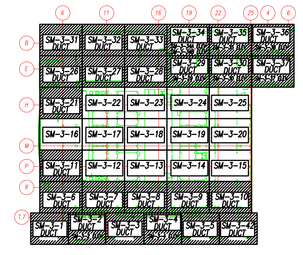
REF.DWG.- M230 M233 | LOC. COLS.

SCALE 3/8"=1'-0" | CH. | JOB NO. 8520

DATE 05-13-09 | DR. BLJ | DWG. NO. SM 3-33



RECORD DRAWINGS
The Keating JV



THIRD FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <=> = AIR FLOW –1" ACOUST. LINING
4. – <=> SS = AIR FLOW – STAINLESS STEEL
5. – <=> ALM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT.
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R2	REVISED FOR GRDS	EG	01-28-10
C	FOR CONSTRUCTION	EG	09-22-09
R1	REVISED PER RFI-329 ADV#40	BLJ	07-09-09
S	SIGN OFF	BLJ	07-09-09
A	FOR APPROVAL	BLJ	05-15-09

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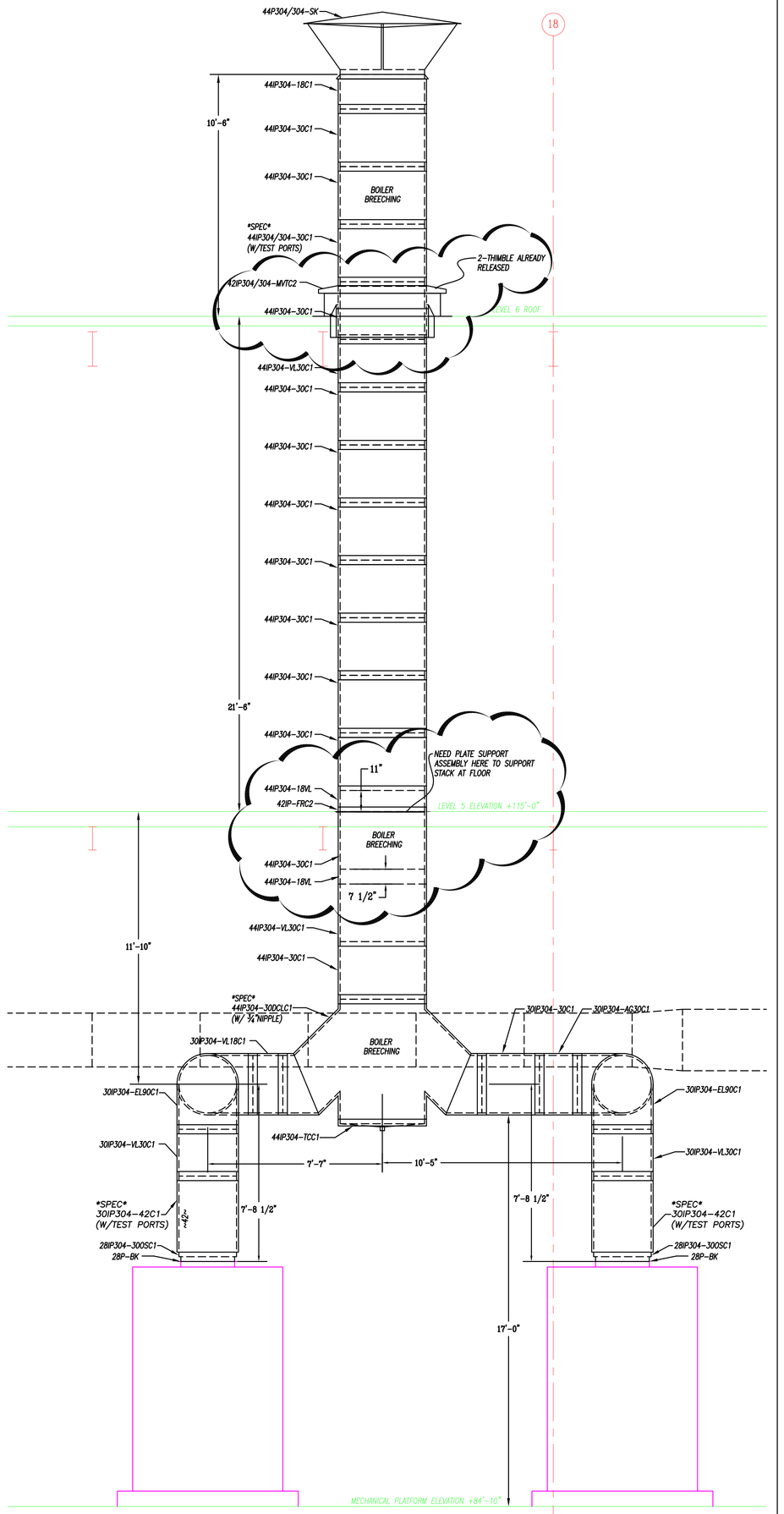
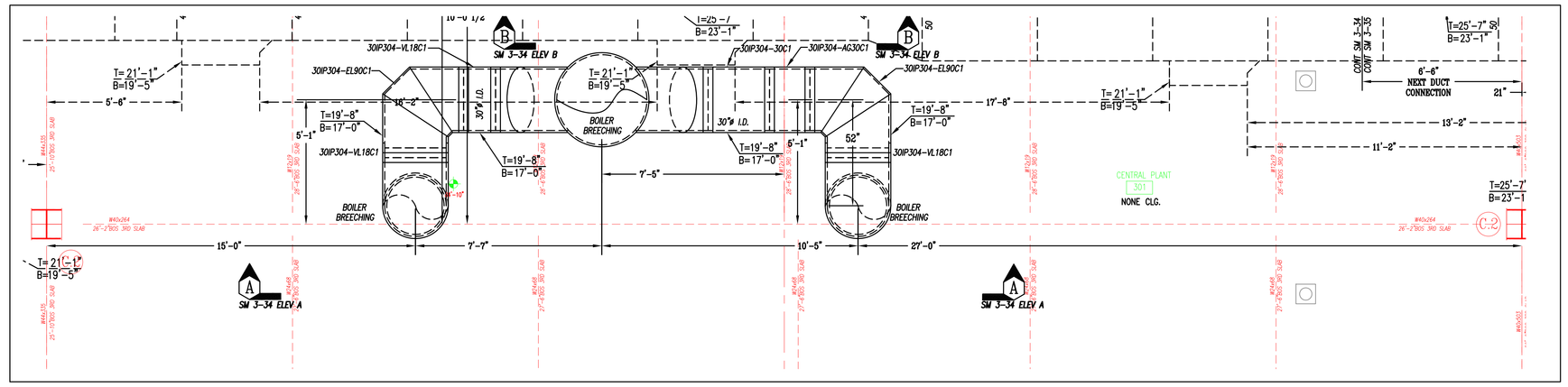
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 3 PARTIAL DUCT PLAN

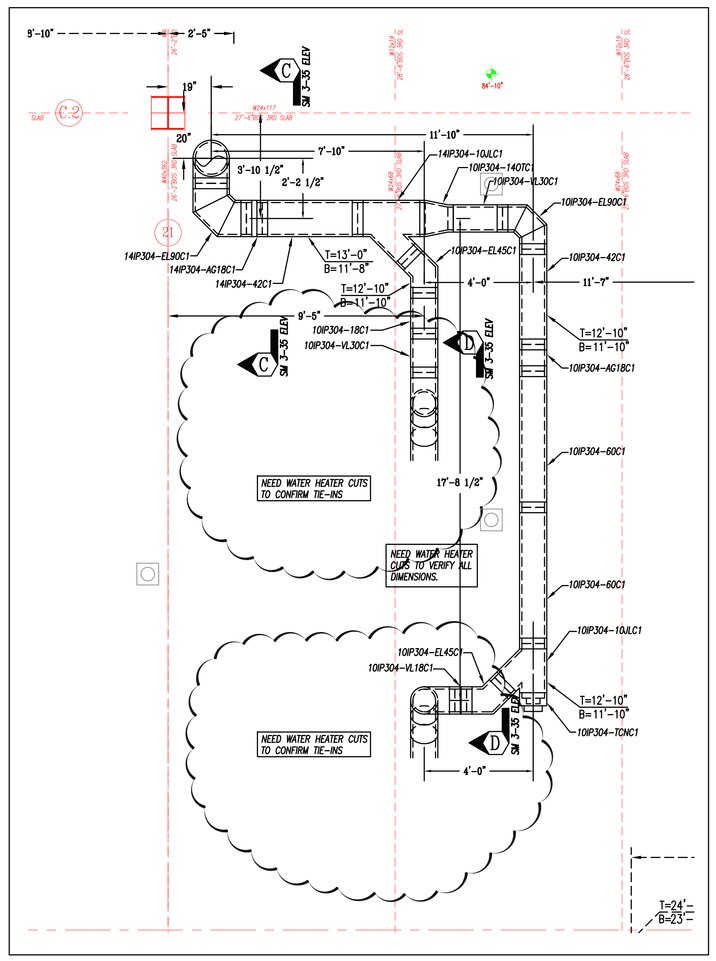
REF DWGS: M-233	LOC. COILS:		
SCALE: 3/8"=1'-0"	DR:	JOB NO.	8520
DATE: 05-13-09	DR. BLJ	DWG NO.	SM 3-34



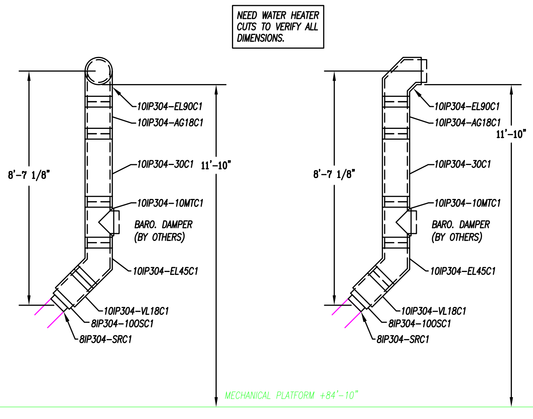
SECTION "A–A"



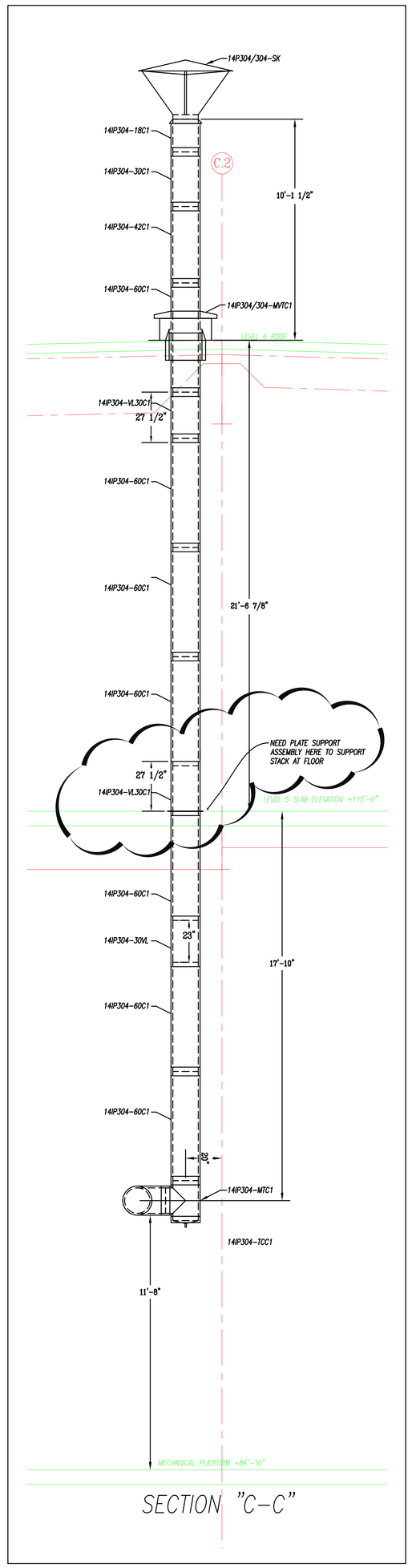
BOILER PLAN



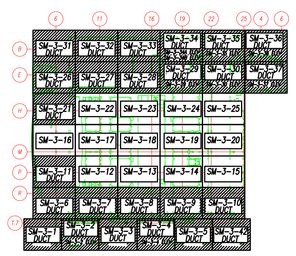
HOT WATER PLAN



SECTION "D–D"



SECTION "C–C"



THIRD FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⇨ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – ⇨ = AIR FLOW – 1" ACOUST. LINING
4. – ⇨ W = AIR FLOW – STAINLESS STEEL
5. – ⇨ ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – Tx 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; Bx 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV#	DESCRIPTION	DR.	DATE
AB	AS BUILT	BLJ	01-11-11
A	RELEASE	BLJ	09-22-09

RECORD DRAWINGS
The Keating JV

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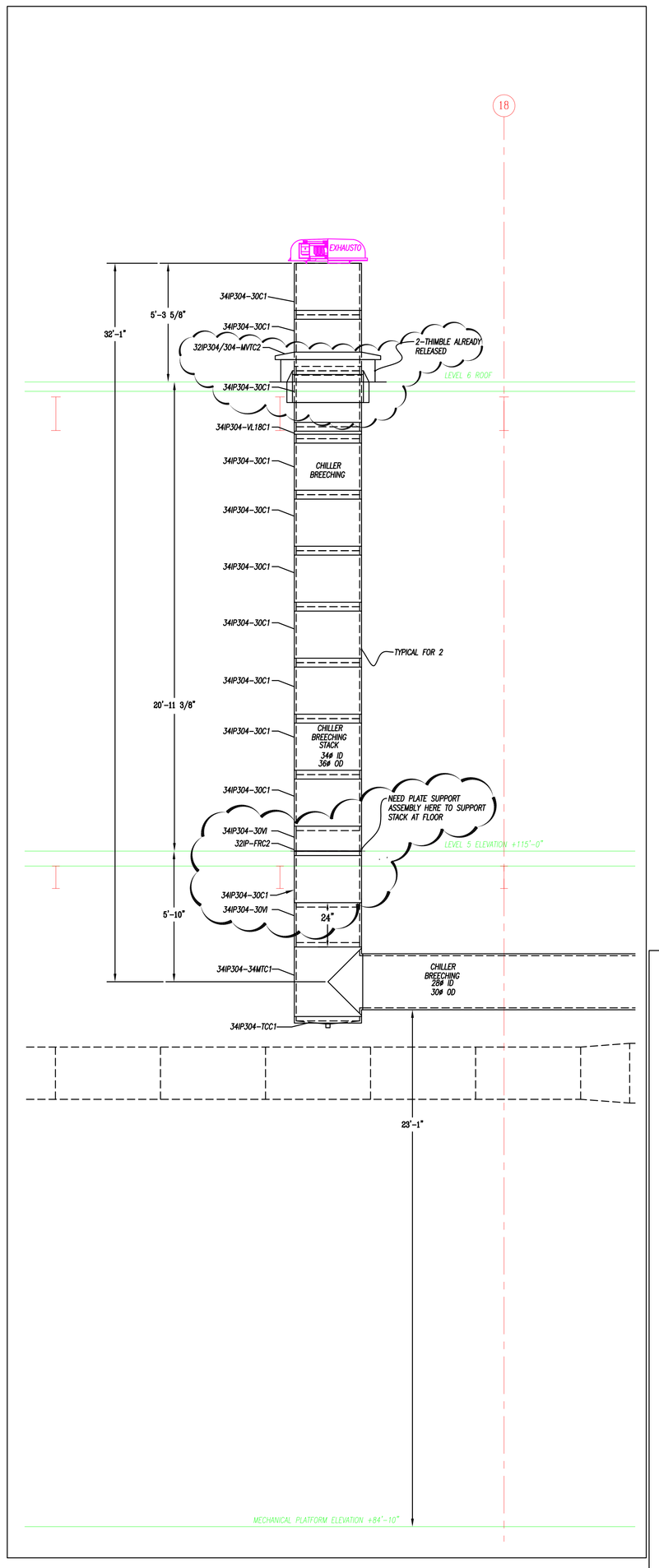
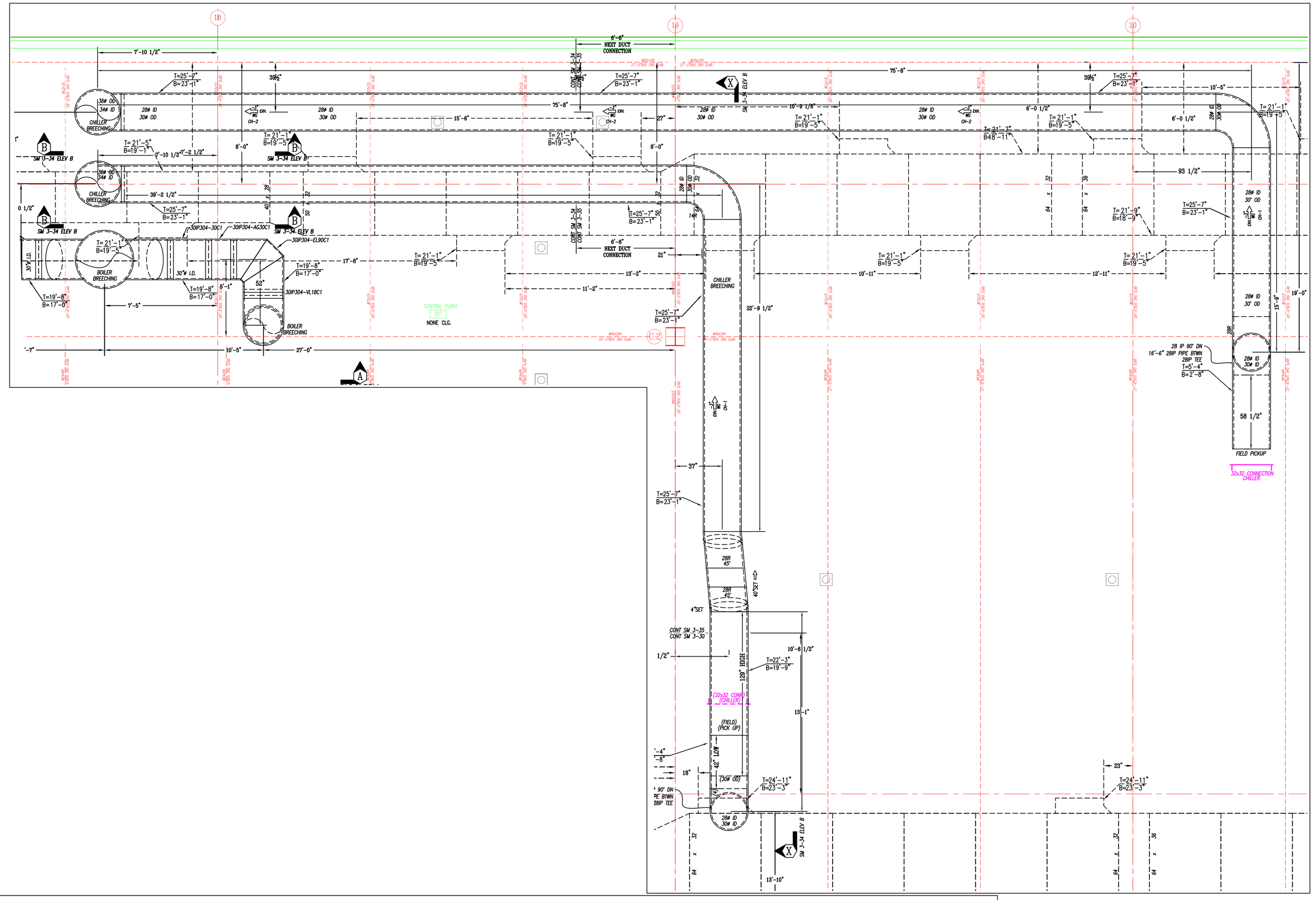
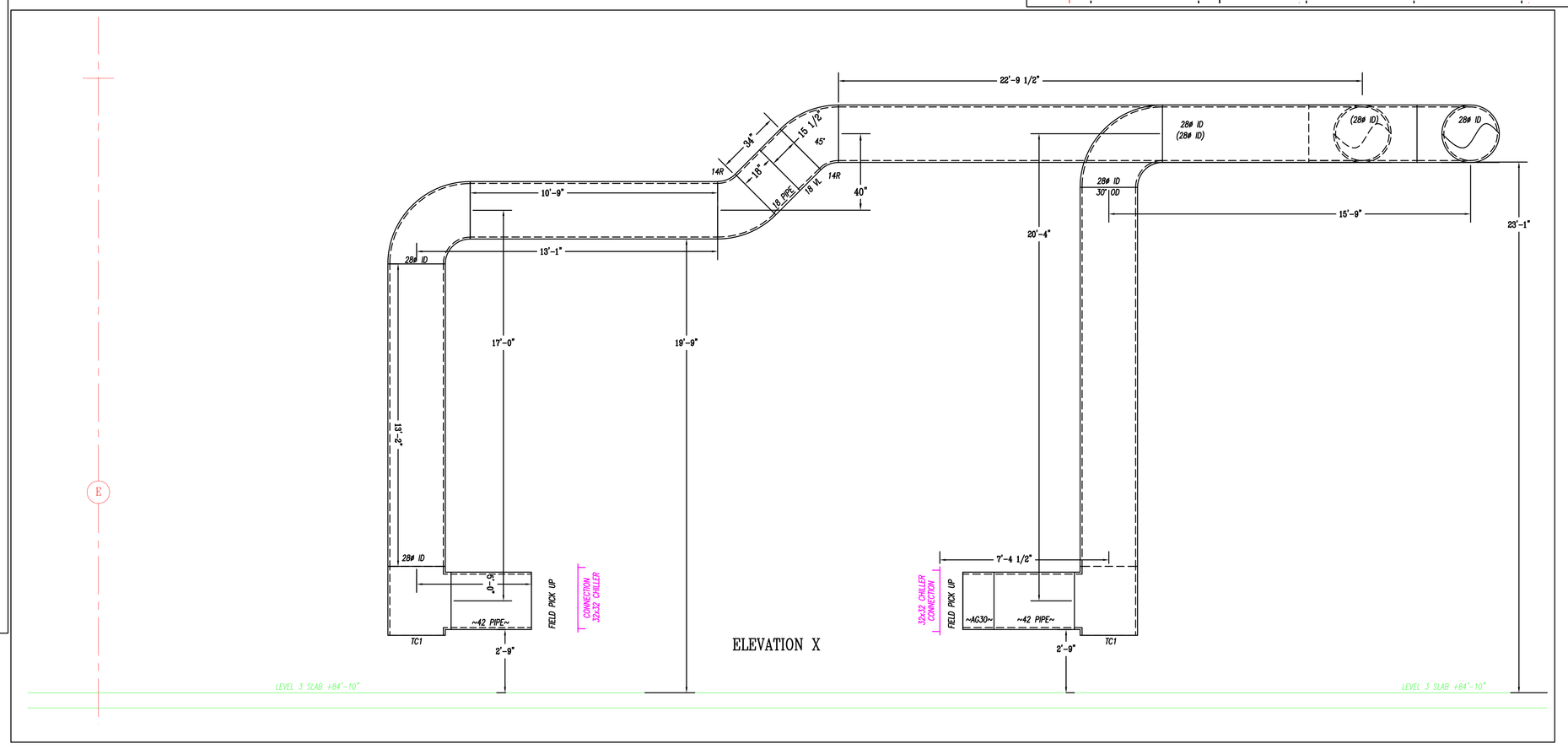
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

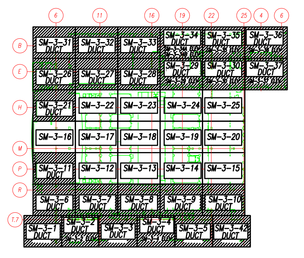
TITLE: BOILER PLAN AND ELEVATION
HOT WATER HEATERS PLAN AN ELEVATIONS

REF. DWG. M-239	LOC. COLS		
SCALE 3/8"=1'-0"	CH.	JOB NO. 8520	
DATE 05-13-09	DR. BLJ	DWG. NO. SM 3-34 ELEV A	









THIRD FLOOR

RECORD DRAWINGS
The Keating JV

NOTES:
1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <=> = AIR FLOW –1" ACOUST. LINING
4. – <=> SS = AIR FLOW – STAINLESS STEEL
5. – <=> ALUM = AIR FLOW – ALUMINUM
6. – [▷] = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
C	FOR CONSTRUCTION	EG	09-22-09
A	RELEASE	EG	09-22-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

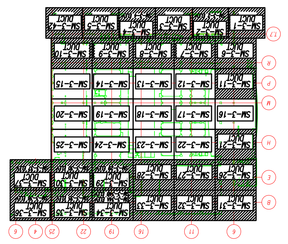
TITLE: BOILER BREECHING PLAN AND ELEVATION

REF. DWG. M-233	LDG. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-13-09	DR. BLJ	DWG. NO.	SM 3-34 ELEV B

SHEET	DESCRIPTION	DR	DATE
A	FOR APPROVAL	BLJ	06-12-09
S	SIGN OFF	BLJ	07-09-09
C	FOR CONSTRUCTION	EG	09-26-09
R1	REVISED PER ORDS	EG	01-28-10
AB	AS BUILT	EG	01-11-11

NOTES:
1 - ALL DUCT TO BE NUMBERED PER SHOWN CONSTRUCTION STANDARDS.
2 - ⇨ = AIR FLOW - OUT - NO ACOUST LINING
3 - ⇦ = AIR FLOW - IN - ACOUST LINING
4 - ⇔ = AIR FLOW - SHEETMETAL
5 - ⇔ = AIR FLOW - ALUMINUM
6 - ▷ = DIRECTION OF DUCT
7 - ⊢ = TOP OF DUCT ABOVE FINISH FLOOR
8 - ⊣ = BOTTOM OF DUCT ABOVE FINISH FLOOR
9 - CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS AND FIELD DIMENSIONS PRIOR TO CONSTRUCTION. ALSO, ALL AROUND DUCT FOR CONFLICTS AND FOR STRUCTURAL MEMBER REQUIRED.

THIRD FLOOR



RECORD DRAWINGS
The Keating JV

SCALE: 1/8"=1'-0"	JOB NO. 8520
DATE 05-13-09	DR. BLJ
KEY DWG: M233 M236	CHK. BY
TITLE LEVEL 3 PARTIAL DUCT PLAN	
JOB NAME PA CONVENTION CENTER EXPANSION AND RENOVATION	

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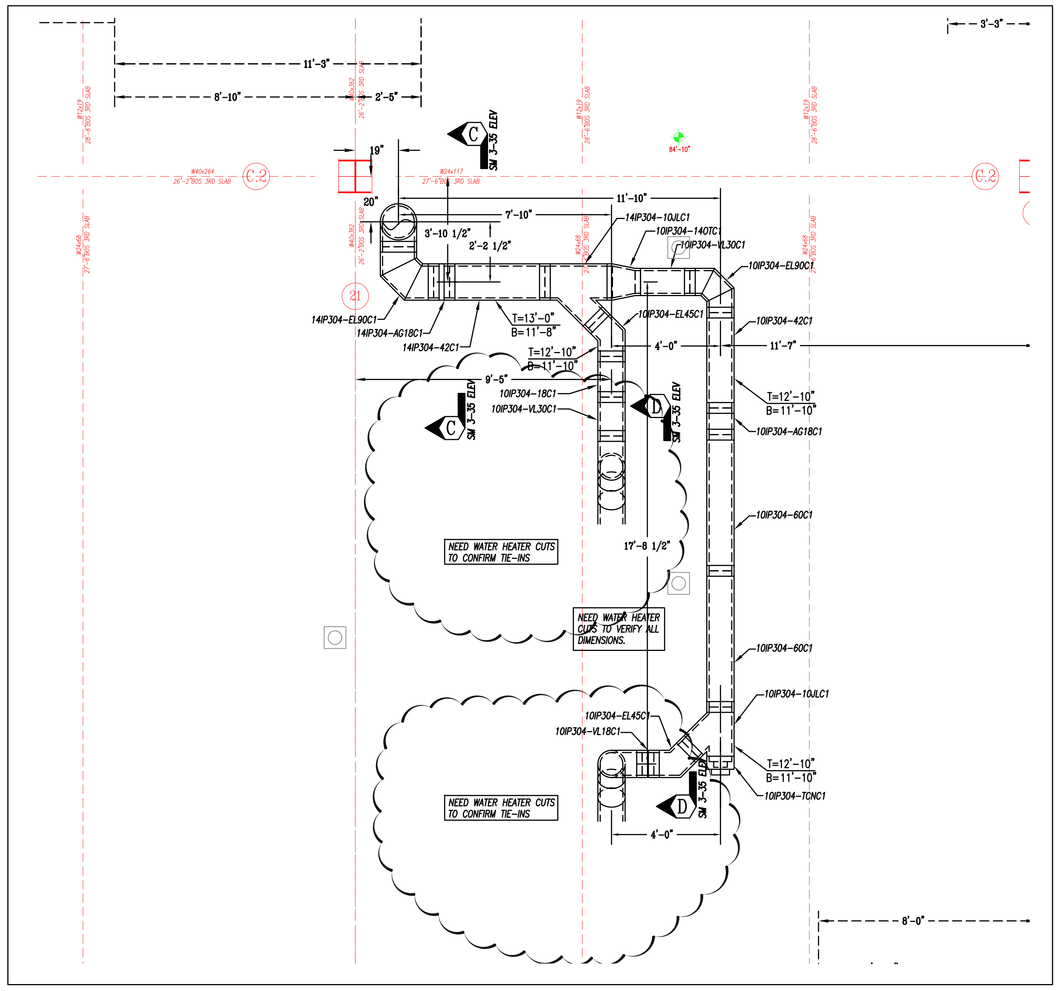
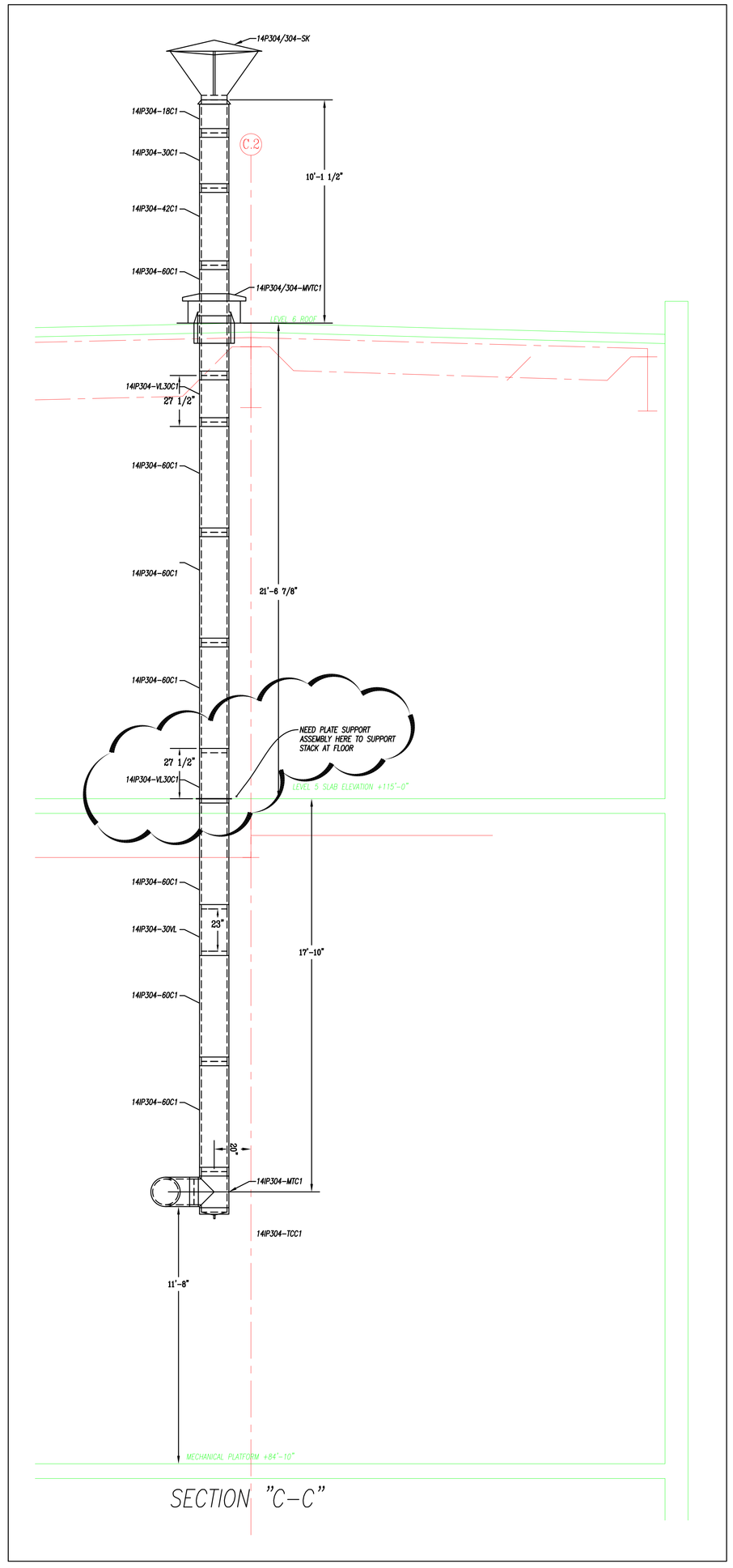
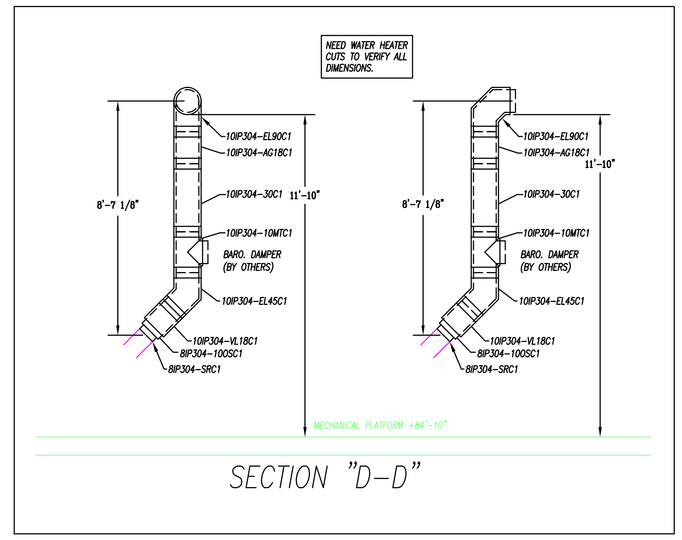
SHT. NO. M233 SM 3-35



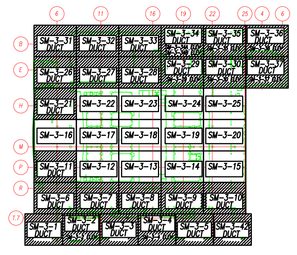


SECTION "C-C"



SECTION "D-D"

RECORD DRAWINGS
The Keating JV



THIRD FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <=> = AIR FLOW –1" ACOUST. LINING
4. – <=> IS = AIR FLOW – STAINLESS STEEL
5. – <=> ALUM = AIR FLOW – ALUMINUM
6. – [>] = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	BLJ	01-11-11
A	FOR APPROVAL	BLJ	05-13-09

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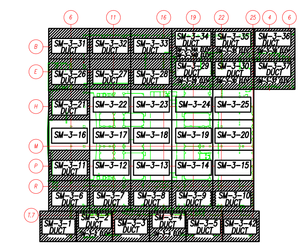
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
WATER HEATER EXHAUST PLAN AND ELEVATION

REF. DWG. M-233	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-13-09	DR. BLJ	DWG. NO.	SM 3-35 ELEV

RECORD DRAWINGS
The Keating JV



THIRD FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⇨ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – 1" A/L ⇨ = AIR FLOW – 1" ACOUST. LINING
4. – ⇨ SS = AIR FLOW – STAINLESS STEEL
5. – ⇨ ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R2	REVISED FOR GRDS	EG	01-28-10
C	FOR CONSTRUCTION	EG	09-24-09
R1	REVISED FOR AHUS	EG	09-10-09
S	SIGN OFF	BLJ	07-09-09
A	FOR APPROVAL	BLJ	05-15-09

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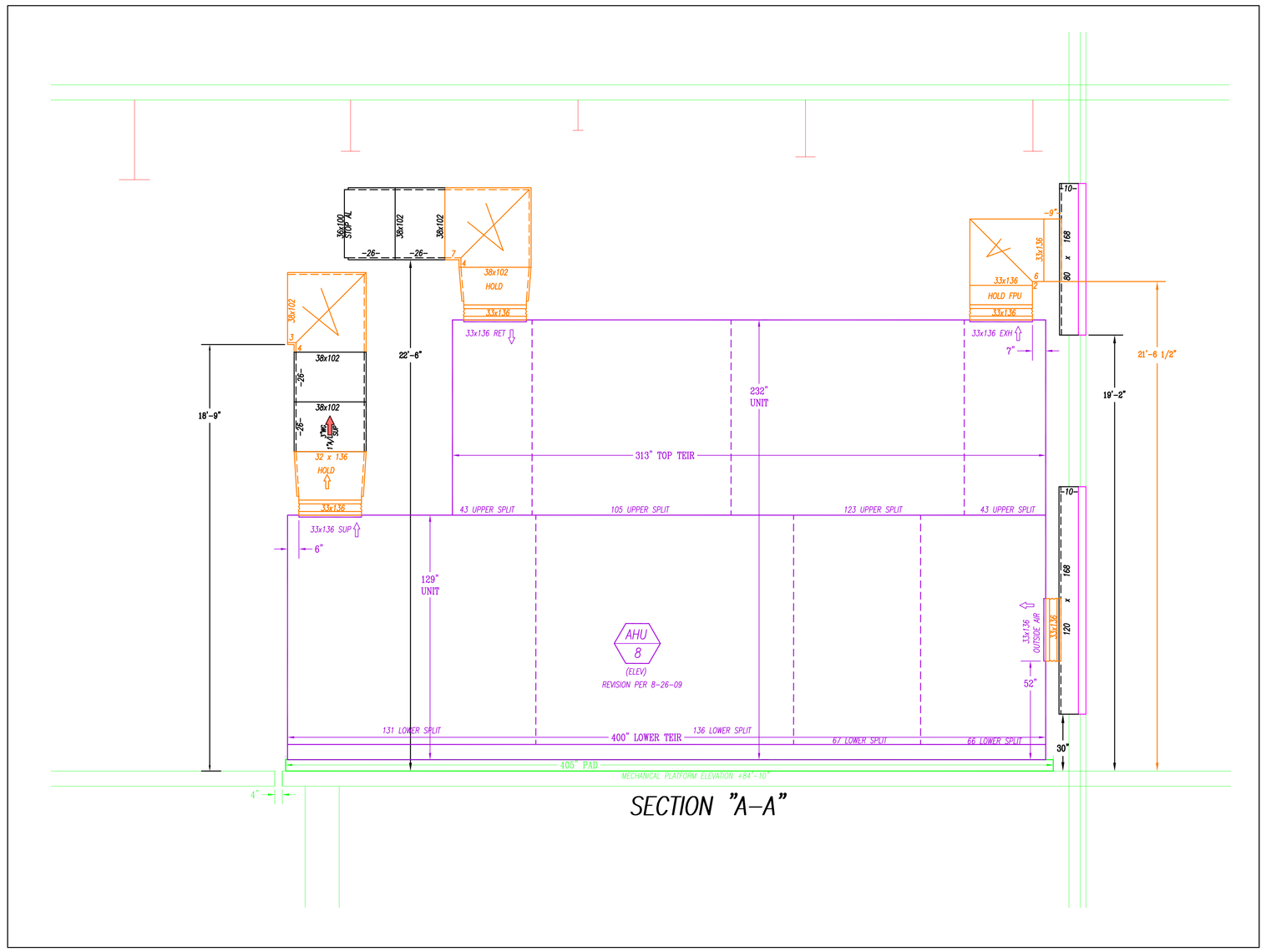
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

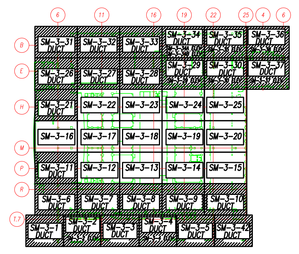
TITLE
LEVEL 3 PARTIAL DUCT PLAN

REF.DWG.- M236	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-15-09	DR. BLJ	DWG. NO.	SM 3-36



SECTION "A-A"

RECORD DRAWINGS
The Keating JV



THIRD FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⟨=⟩ = AIR FLOW – ONLY – NO ACOUST. LINING
3. – ⟨=⟩ 1" = AIR FLOW – 1" ACOUST. LINING
4. – ⟨=⟩ SS = AIR FLOW – STAINLESS STEEL
5. – ⟨=⟩ ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – 5x 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   5x 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV'D	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
C2	FOR CONSTRUCTION UNIT REVS	EG	09-24-09
R1	REVISED FOR AHUS	EG	09-10-09
C	FOR CONSTRUCTION	BLJ	07-28-09
A	FOR APPROVAL	BLJ	05-15-09

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JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 3 DUCT ELEVATIONS

REF.DWG.- SM 3-36	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-13-09	DR.	DWG. NO.	SM 3-36 ELEV

OPEN

STEEL FRAMING

T=11'-10"
B=9'-0"

15'-0"x10'-0"
O.A. LOUVER

ACCESS DOOR

T= 25'-7"
B=22'-7"

T=24'-11"
B=23'-3"

25'-8"

18'-0"

21'-3"

16'-4 1/8"

7'-5"

21'-3"x2'-9"Wx4'-2"H PLENUM
VIBRO-ACOUSTIC MODEL
4" DOUBLE WALL PERF CONSTRUCTION

T=17'-7"
B=15'-3"

424" UNIT

270 UNIT

COIL PAD

T=17'-6"
B=15'-10"

CENTRAL PLANT
ROOF
NONE CLG.

AHU 10 (PLAN) REVISION PER 8-17-09

28'-5"

T=14'-11.5"
B=11'-1.5"

240" COIL PAD

441" PAD

240x27 CANVAS

28'-5"x7'-0"Wx3'-10"H PLENUM
VIBRO-ACOUSTIC MODEL
4" DOUBLE WALL PERF CONSTRUCTION

T=17'-6"
B=15'-10"

COIL PAD

247"

T=14'-7.5"
B=11'-11.5"

T=14'-8.5"
B=12'-10.5"

T=14'-2"
B=12'-4"

T=14'-5.5"
B=11'-11.5"

T=12'-6"
B=9'-10"

T=12'-5"
B=9'-11"

T=11'-5"
B=9'-8"

T=39'-2"
B=36'-2"

30'-0" x 3'-0"

6x6 TUBE STEEL

REWORK 6x8 TUBE STEEL

TRUSS T3

TRUSS T3 BOTTOM CHORD

WT6x11 BRACE

WT6x11 BRACE

HOR. LIP CHANNEL

VERT. LIP CHANNEL

DIAG. BRACE

CONT ON SM 4-37

DAMPER REMOVED RTI-38

DAMPER REMOVED RTI-39

DAMPER REMOVED RTI-40

LOUV. REMOVED RTI-41

PICKED OFF SM-36-39

PICKED OFF SM-36-40

PICKED OFF SM-36-41

PICKED OFF SM-36-42

REWORK 6x8 TUBE STEEL

REWORK 6x8 TUBE STEEL

LV-28

LV-28

LV 28

37B

ON SM 3-37 ELEV

ON SM 1-37 ELEV

ON SM 1-37 ELEV

ON SM 3-37 ELEV

TD 6.5"

TD 8.5"

SD

C2

THIRD FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - =▭= = AIR FLOW - GALV. - NO ACOUST. LINING
3. - =▭= = AIR FLOW -1" ACOUST. LINING
4. - =▭= = AIR FLOW - STAINLESS STEEL
5. - =▭= = AIR FLOW - ALUMINUM
6. - |▷ = W.G. CONSTRUCTION OF DUCT
7. - T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 1" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R2	REVISED FOR GRDS	EG	01-28-10
C2	REVISED FOR PLENUM AHU-10	EG	11-10-09
C	FOR CONSTRUCTION	EG	09-22-09
R1	REVISED FOR AHUS	EG	09-10-09
S	SIGN OFF	BLJ	07-09-09
A	FOR APPROVAL	BLJ	05-15-09

RECORD DRAWINGS
The Keating JV

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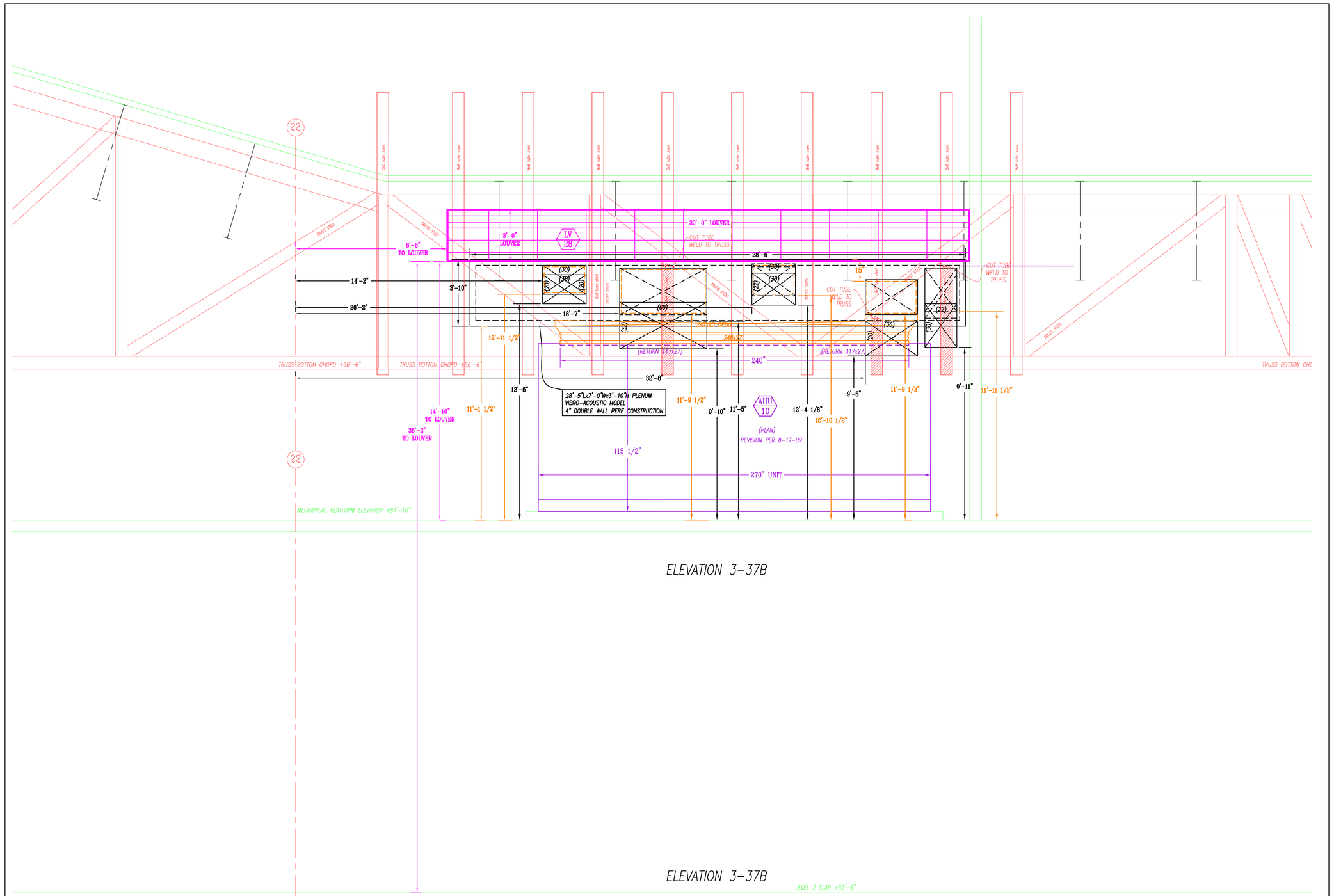
www.advantagecontracts.com

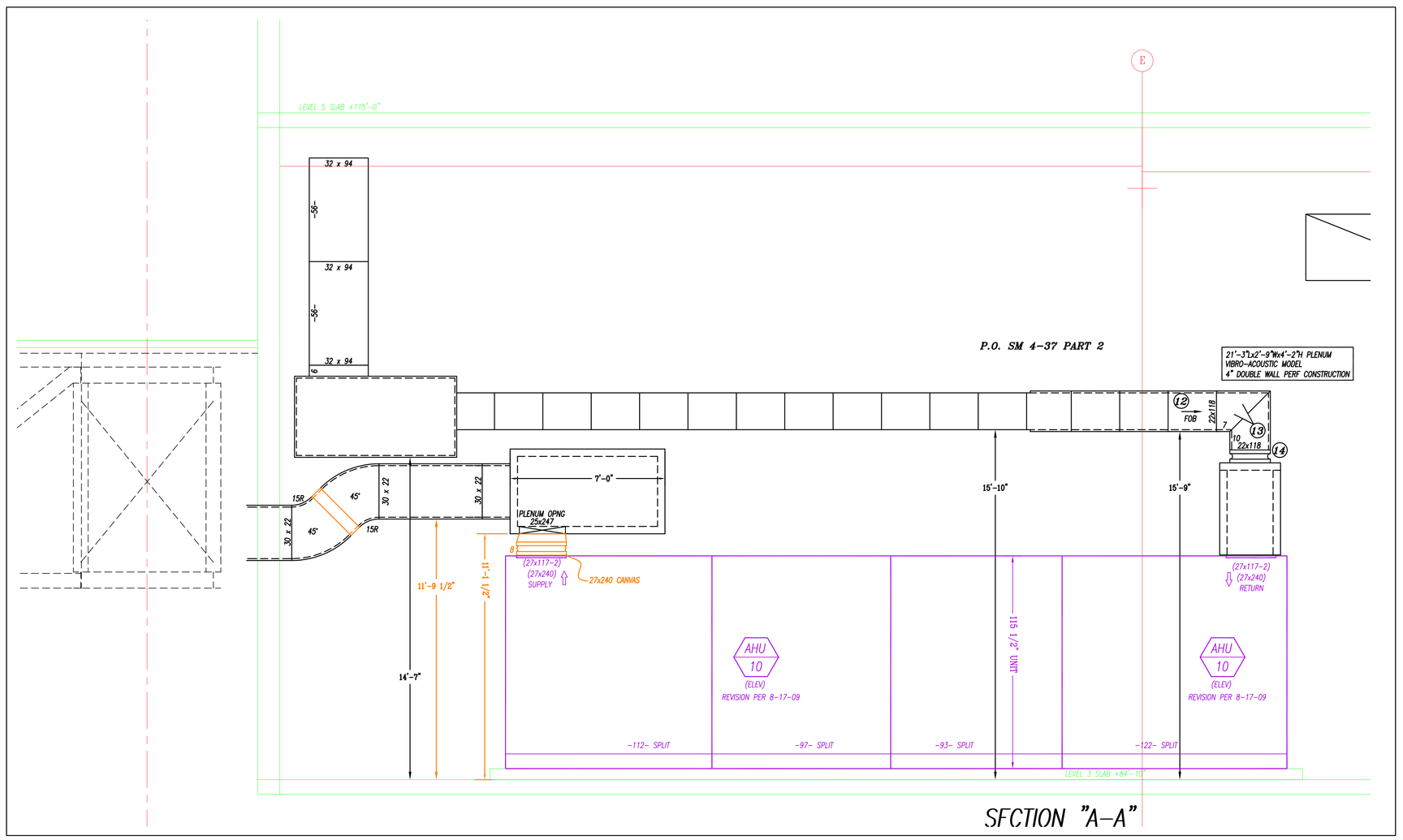
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 3 PARTIAL DUCT PLAN

REF.DWG.- M236	LOC. COILS:		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-13-09	DR.	DWG. NO.	SM 3-37

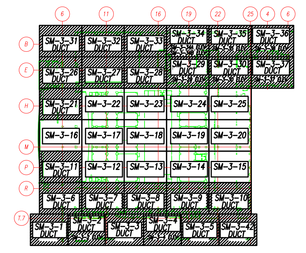


ELEVATION 3–37B



SFCTION "A–A"

RECORD DRAWINGS
The Keating JV



THIRD FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <▭> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <▭▭> = AIR FLOW –1" ACOUST. LINING
4. – <▭≡▭> = AIR FLOW – STAINLESS STEEL
5. – <▭> ALUM = AIR FLOW – ALUMINUM
6. – [▷] = W.G. CONSTRUCTION OF DUCT
7. – 5'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; 5'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	BY.	DATE
AB	AS BUILT	EG	01-11-11
C2	FOR CONSTRUCTION	EG	09-24-09
R2	REVISED FOR AHUS	EG	09-10-09
R1	REVISED FOR TUBE STEEL	EG	07-30-09
C	FOR CONSTRUCTION	EG	07-28-09
A	FOR APPROVAL	EG	05-04-09

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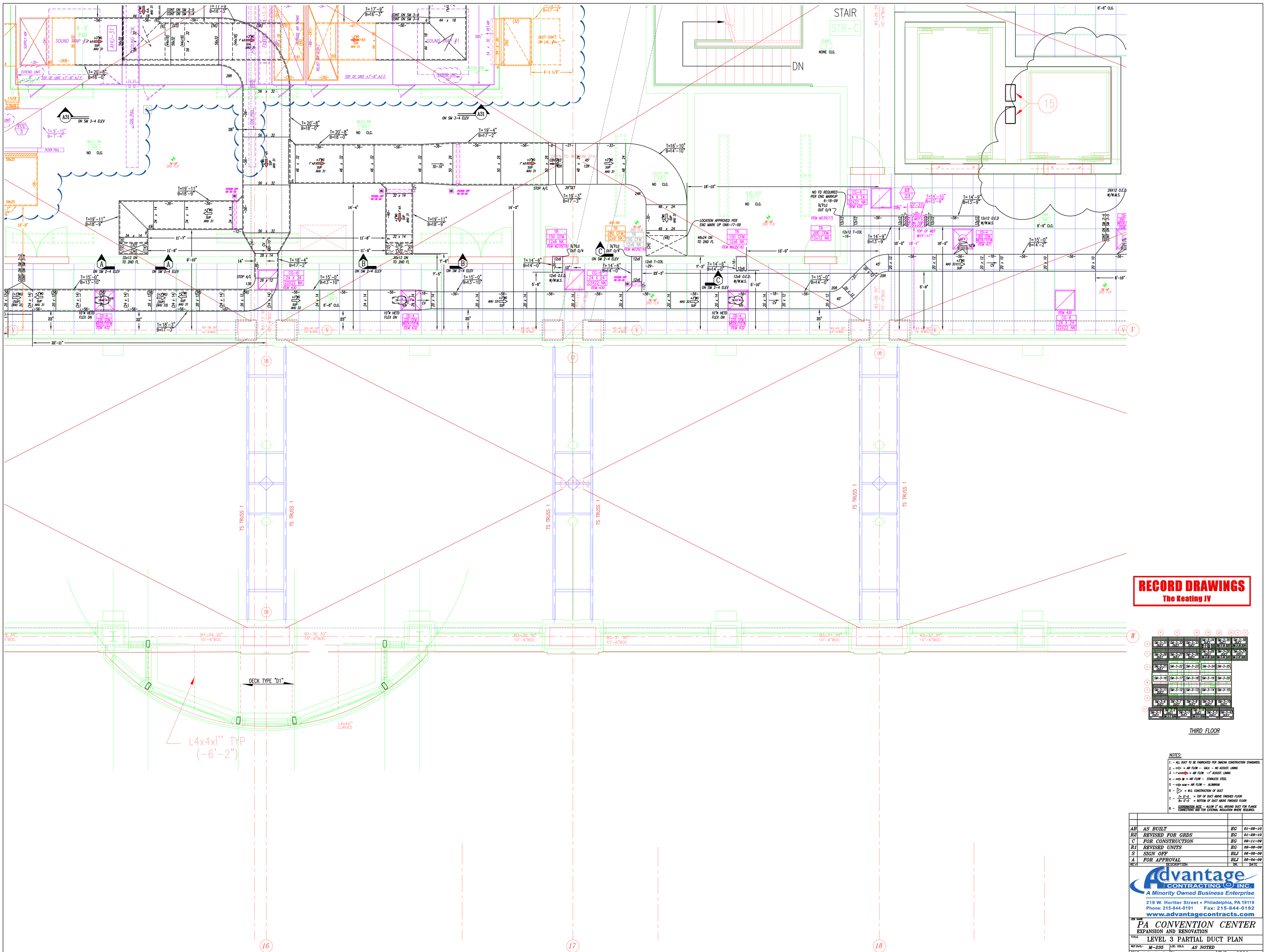
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 3 DUCT ELEVATIONS

REF. DWG.- SM 3-37	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-04-09	BY. EG	DWG. NO.	SM 3-37 ELEV



RECORD DRAWINGS
The Keating JV

THIRD FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⇨ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – ⇨ = AIR FLOW – 1" ACOUST. LINING
4. – ⇨ = AIR FLOW – STAINLESS STEEL
5. – ⇨ = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-28-10
R2	REVISED FOR GRDS	EG	01-28-10
C	FOR CONSTRUCTION	EG	09-11-09
R1	REVISED UNITS	EG	09-08-09
S	SIGN OFF	BLJ	06-08-09
A	FOR APPROVAL	BLJ	05-04-09

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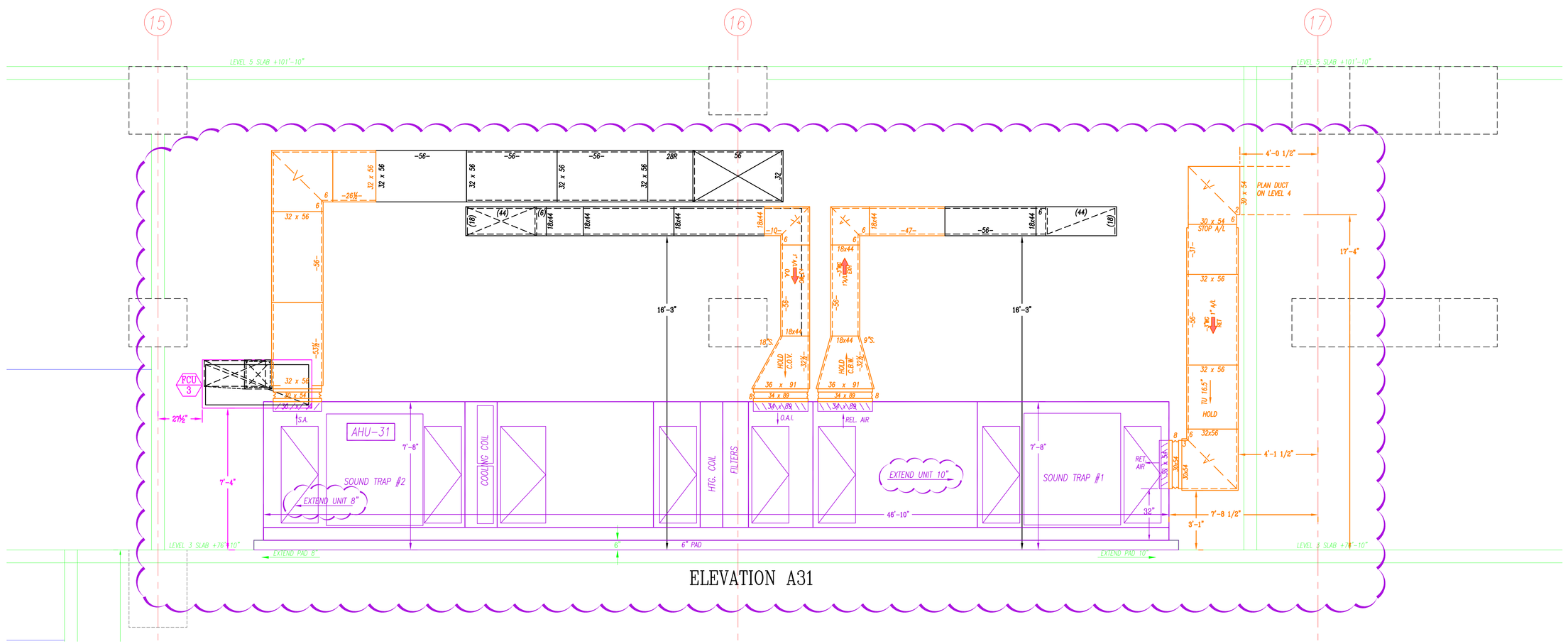
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

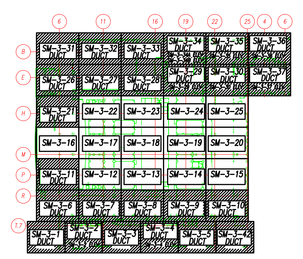
TITLE: LEVEL 3 PARTIAL DUCT PLAN

REF.DWG.-	M-235	LDD. COLS.	AS NOTED
SCALE	3/8"=1'-0"	CH.	JOB NO. 8520
DATE	05-04-09	DR. BLJ	DWG. NO. SM 3-4



ELEVATION A31

RECORD DRAWINGS
The Keating JV



THIRD FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <=> = AIR FLOW –1" ACOUST. LINING
4. – <=> SS = AIR FLOW – STAINLESS STEEL
5. – <=> ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT.
7. – 1= 10'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 8'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
C	FOR CONSTRUCTION	EG	09-21-09
R1	REVISED UNITS	EG	09-08-09
A	FOR APPROVAL	BLJ	05-04-09

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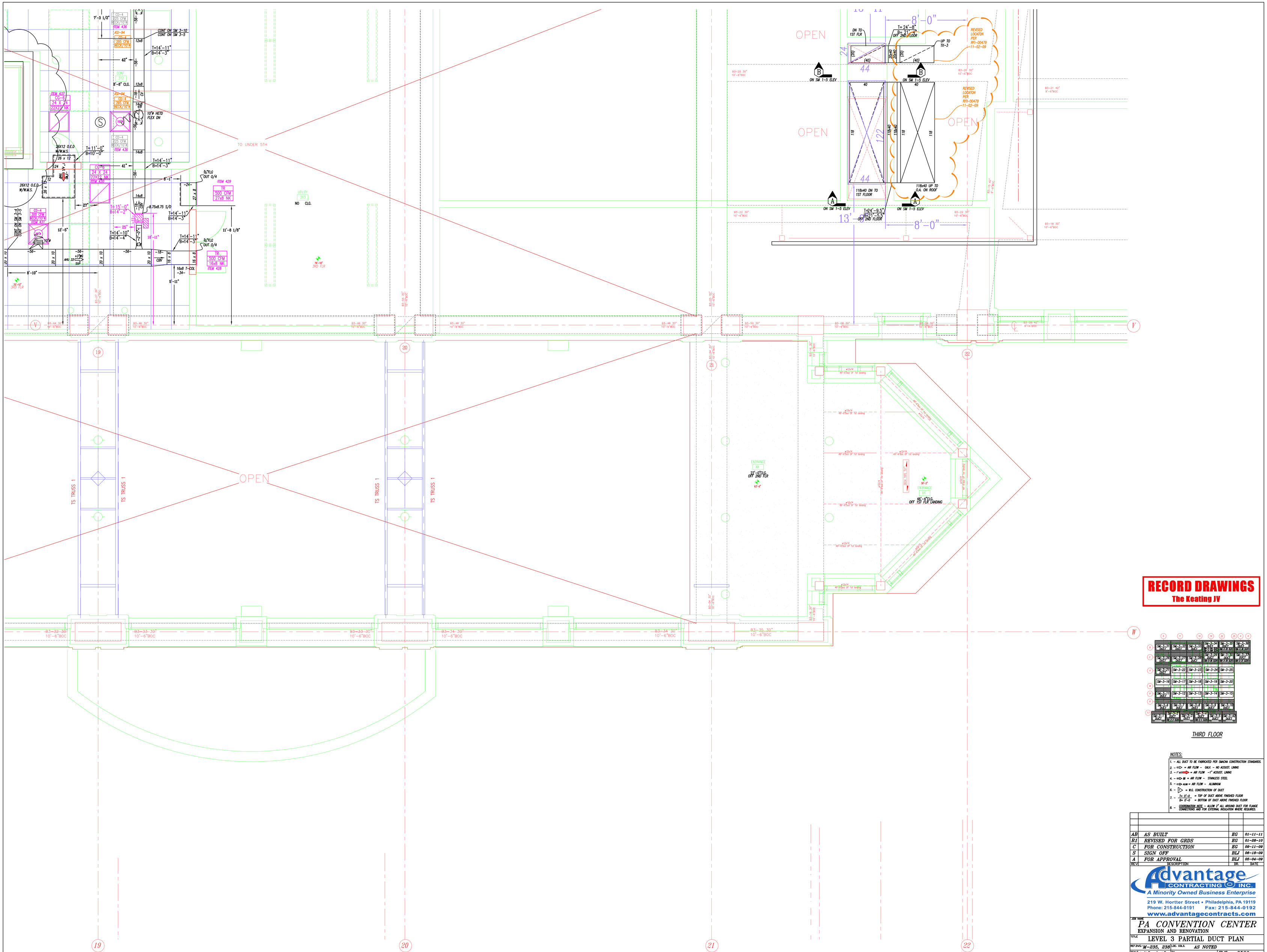
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 3 DUCT ELEVATIONS

KEY DWG.	SM 3-4	LOC. COLS.	AS NOTED
SCALE	3/8"=1'-0"	CK.	JOB NO. 8520
DATE	05-04-09	DR. BLJ	DWG. NO. SM 3-4 ELEV



THIRD FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⊂⊃ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – ⊂⊃ = AIR FLOW – 1" ACOUST. LINING
4. – ⊂⊃ SS = AIR FLOW – STAINLESS STEEL
5. – ⊂⊃ ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – In 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   In 9'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

RECORD DRAWINGS
The Keating JV

REV'D	DESCRIPTION	BY:	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-28-10
C	FOR CONSTRUCTION	EG	09-11-09
S	SIGN OFF	BLJ	06-18-09
A	FOR APPROVAL	BLJ	05-04-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 3 PARTIAL DUCT PLAN

REF.DWG: M-235, 238	LOC. COLS. AS NOTED		
SCALE: 3/8"=1'-0"	CH.	JOB NO.	8520
DATE: 05-04-09	DR. BLJ	DWG. NO.	SM 3-5

REVISED 12-7-09
PER RFI- 00559
ADVANTAGE 55
PER SK 15 11:30:09

REVISED 12-7-09
PER RFI- 00559
ADVANTAGE 55

ELEVATION L06

RECORD DRAWINGS
The Keating JV

THIRD FLOOR

NOTES:
1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <=D> = AIR FLOW - GALV. = NO ACOUST. LINING
3. - <=D=> = AIR FLOW - 1" ACOUST. LINING
4. - <=D=> SS = AIR FLOW - STAINLESS STEEL
5. - <=D=> ALUM = AIR FLOW - ALUMINUM
6. - [▷] = W.G. CONSTRUCTION OF DUCT
7. - T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-28-10
C2	FOR CONSTRUCTION(REV RFI-55-00559)	EG	12-16-09
C	FOR CONSTRUCTION	EG	11-11-09
S	SIGN OFF	BLJ	07-02-09
A	FOR APPROVAL	BLJ	04-15-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 3 PARTIAL DUCT PLAN

REF.DWG.- M-232	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 04-15-09	DR. BLJ	DWG. NO.	SM 3-6

TRUSS T5 BOTTOM CHORD

W8x31

WT6x15 X-BRACING TO TOPCHORD(25k)

TRUSS T1 BOTTOM CHORD

TRUSS T1 BOTTOM CHORD

SOUND TRAP #1

DN

UP

8'-6" TO PAD

11 1/2" TO PAD

NO CLG.

RECORD DRAWINGS
The Keating JV

THIRD FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⇨ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – ⇨ = AIR FLOW – 1" ACOUST. LINING
4. – ⇨ = AIR FLOW – STAINLESS STEEL
5. – ⇨ = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT.
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	BY:	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-28-10
C	FOR CONSTRUCTION	EG	09-11-09
S	SIGN OFF	BLJ	07-02-09
A	FOR APPROVAL	BLJ	05-04-09

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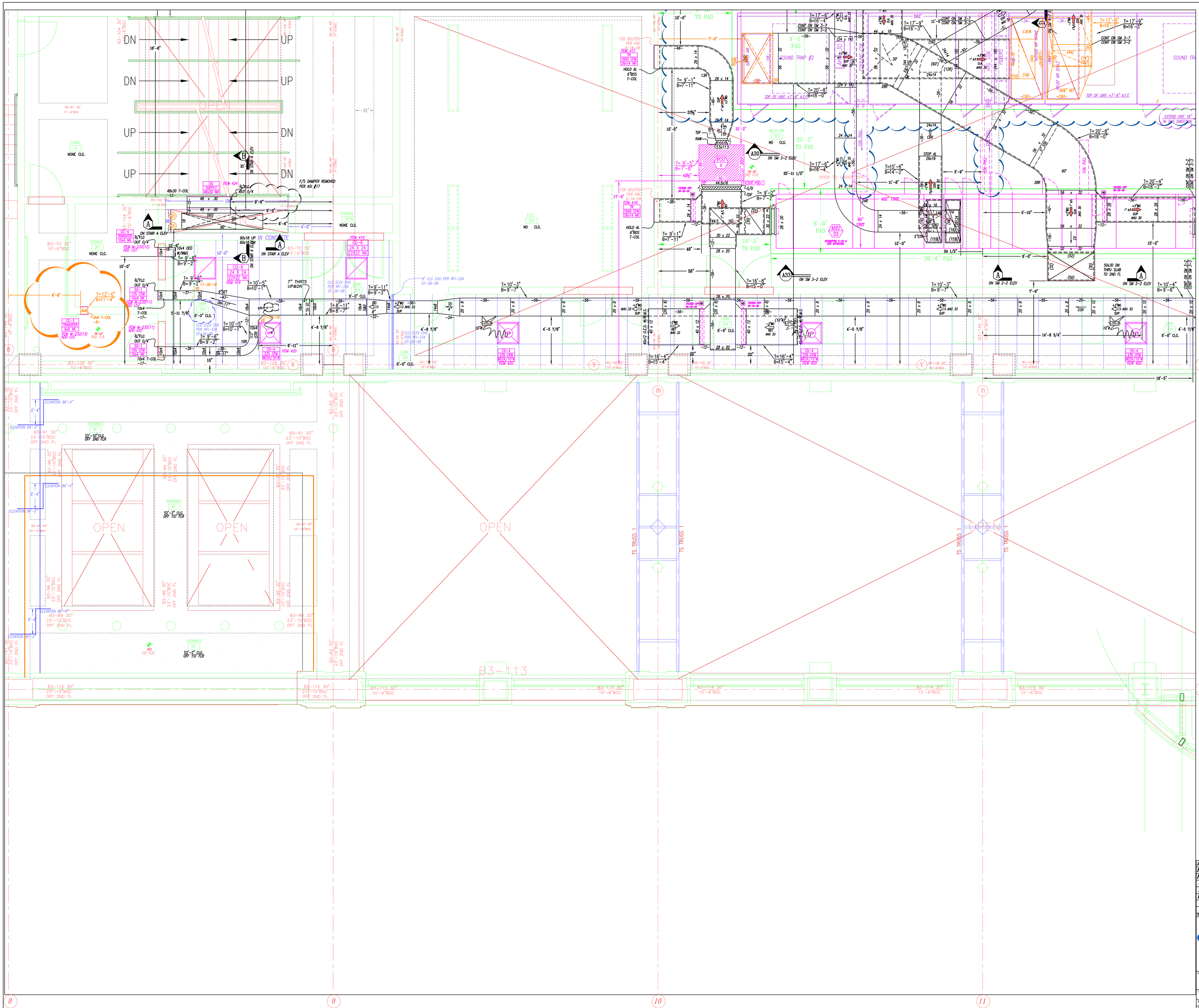
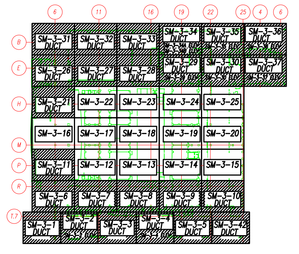
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 3 PARTIAL DUCT PLAN

REF.DWG.-	M-235	LOC. COLS.	
SCALE	3/8"=1'-0"	CH.	JOB NO. 8520
DATE	05-04-09	DR. BLJ	DWG. NO. SM 3-8


OPEN
OPEN
OPEN
B3-113
TS TRUSS 1
TS TRUSS 1
TS TRUSS 1
TS TRUSS 1
TOP OF UNIT +7'-8" A.F.F.
TOP OF UNIT +7'-8" A.F.F.
SOUND TRAP #2
9'-5" PAD
25'-9" TO PAD
10'-5" TO PAD
6'-0" PAD
39'-6" PAD
462" UNIT
60" UNIT
OPEN TO BELOW
STAIRS 1 NONE CLG.
STORAGE 301 NONE CLG.
STORAGE 301A NONE CLG.
ELEC 302 NO CLG.
MECH RM 303 NO CLG.
ENTRANCE XX 22'-10" CLG. OFF 2ND FLR
ENTRANCE XX 56'-2" CLG. OFF 1st FLR
ENTRANCE XX 56'-2" CLG. OFF 1st FLR
ELEVATION 86'-4"
ELEVATION 84'-0"
EXTEND UNIT 18" IN THIS DIRECTION
50x30 DN THRU SLAB TO 2ND FL
90x18 UP IN CONCRETE
F/S DAMPER REMOVED PER ASI #17
FSD DELETED PER ENG. E-16-09 ITEM 418
FSD DELETED PER ENG. E-16-09 ITEM 419
8" CLG CHG PER RFI-334 07-26-09
CLG ELEV CHG PER RFI-334 07-26-09
ON STAIR A ELEV
ON SM 3-2 ELEV
ON SM 2-2 ELEV
ON SM 3-2 ELEV
ON STAIR A ELEV
ON STAIR A ELEV
CONT ON SM 3-7 CONT ON SM 3-2
CONT ON SM 3-2 CONT ON SM 3-2
CONT ON SM 3-2 CONT ON SM 3-2
CONT ON SM 3-2

RECORD DRAWINGS
The Keating JV



THIRD FLOOR

NOTES:
1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – ⊢⟹⊣ = AIR FLOW – =1" ACOUST. LINING
4. – =<>= = AIR FLOW – STAINLESS STEEL
5. – =<>= ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – $\frac{T= 0'-0}{B= 0'-0}$ = TOP OF DUCT ABOVE FINISHED FLOOR = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-28-10
R1	REVISED FOR GRDS	EG	01-28-10
C	FOR CONSTRUCTION	EG	09-11-09
S	SIGN OFF	BLJ	07-02-09
A	FOR APPROVAL	BLJ	04-15-09

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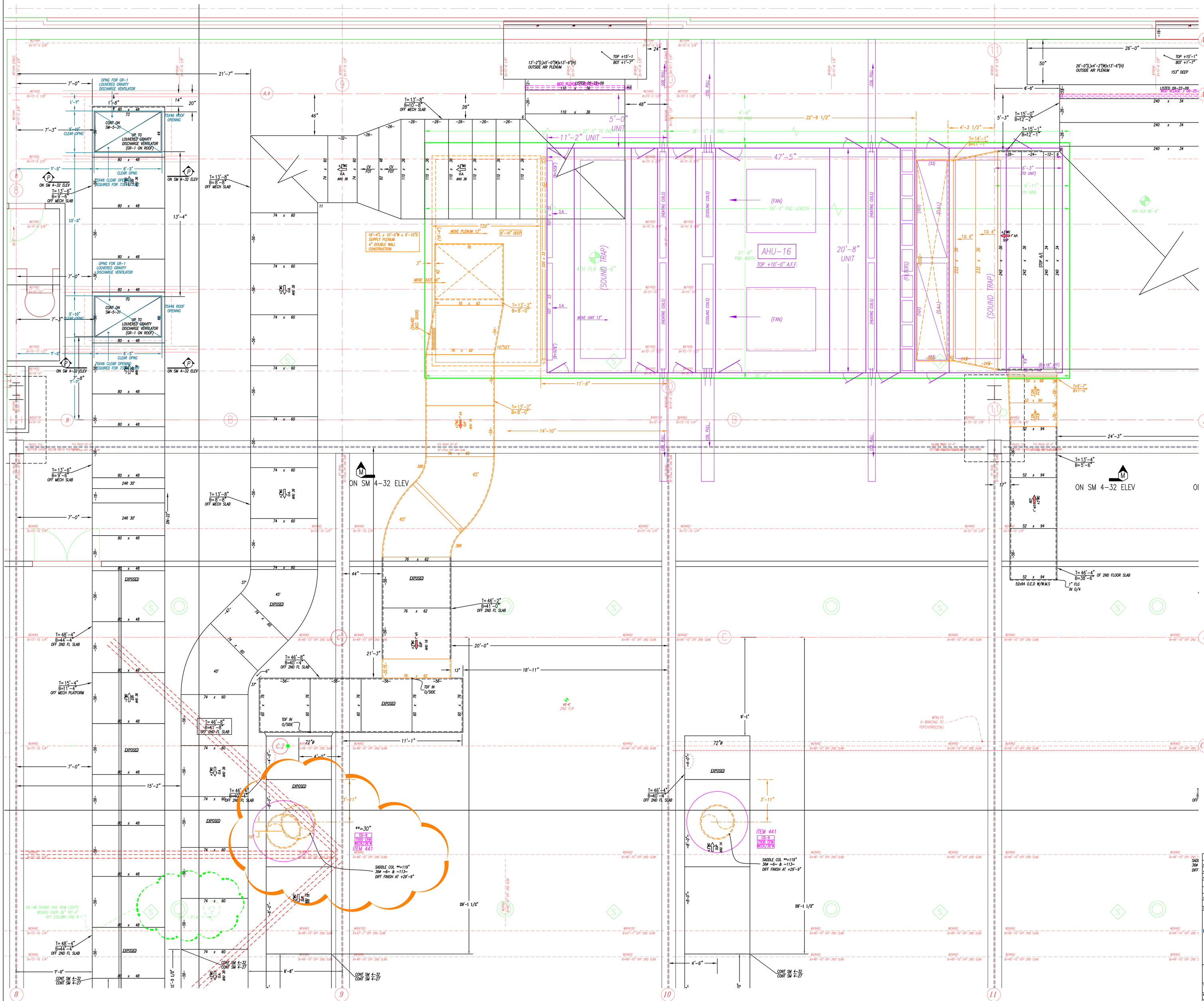
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 3 PARTIAL DUCT PLAN

REF. DWG.-	M 232	LOC. COILS	
SCALE	3/8"=1'-0"	CH.	JOB NO. 8520
DATE	04-15-09	DR. BLJ	DWG. NO. SM 3-7



RECORD DRAWINGS
The Keating JV

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – 1"=1.5=> = AIR FLOW – 1" ACOUST. LINING
4. – <=> SS = AIR FLOW – STAINLESS STEEL
5. – <=> ALUM = AIR FLOW – ALUMINUM
6. – |▷ = W.C. CONSTRUCTION OF DUCT
7. – Ts 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR; Bs 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R2	REVISED FOR GRDS	EG	01-29-10
S2	RESIGN (PIPING CONFLICTS)	EG	12-17-09
C	FOR CONSTRUCTION	EG	10-20-09
S	SIGN OFF	BLJ	09-24-09
R1	UNIT REVISION	MSO	09-08-09
A	FOR APPROVAL	BLJ	08-08-09

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JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 4 PARTIAL DUCT PLAN

REF. DWGS.	M240	LOC. COLS.	
SCALE	3/8"=1'-0"	CH.	JOB NO. 8520
DATE	08-08-09	DR. BLJ	DWG. NO. SM 4-32

THIS AREA
REVISED ON DISK
1-30-09

SLAB OPNG

10'-10 1/2"
4TH FLR
SLAB OPNG

54" TO OPNG

77" TO OPNG

SPF3 ON SM 4-1

SPF3 ON SM 4-1

ON STAIR A ELEV

ON STAIR A ELEV

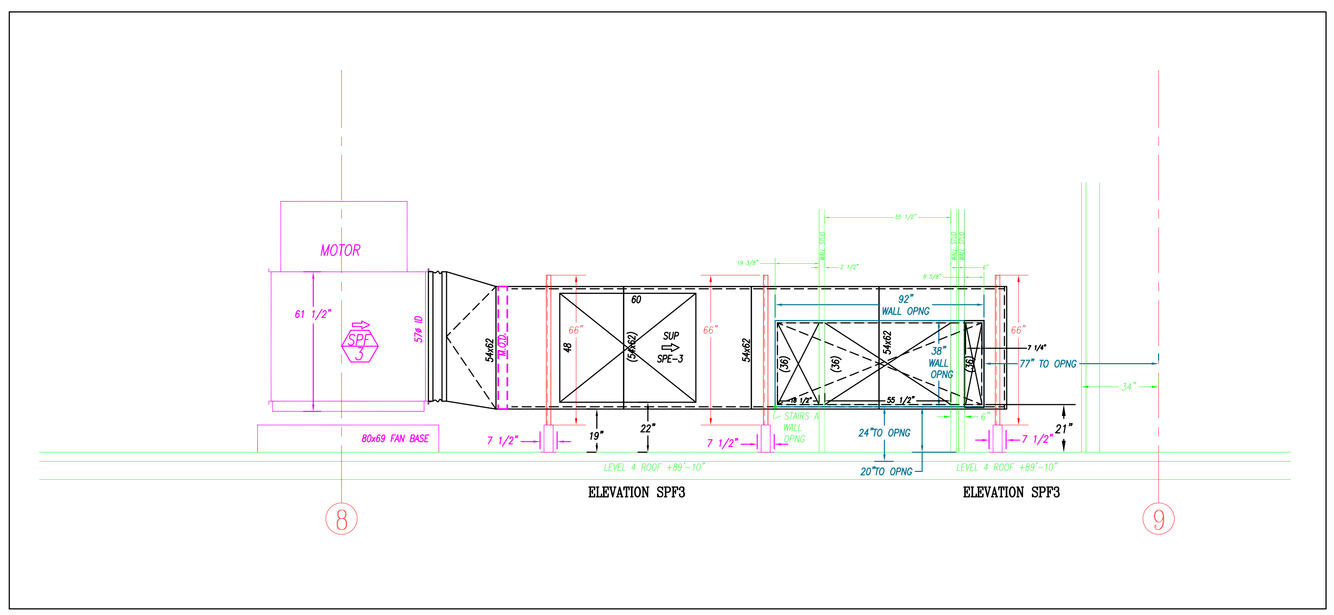
ON STAIR A ELEV

ON STAIR A ELEV

SPRINKLER COORDINATION NOTES:
SPRINKLER PIPE ELEVATED TO CENTER LINE OF PIPE
ALL LINES NOT SIZED TO BE 8" MAX.
FOR COORD PURPOSES ONLY - THANKS

RECORD DRAWINGS
The Keating JV

FOURTH FLOOR



ELEVATION SPF3 ELEVATION SPF3

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <=> = AIR FLOW - GALV. - NO ACOUST. LINING
3. - <=> = AIR FLOW - 1" ACOUST. LINING
4. - <=> SS = AIR FLOW - STAINLESS STEEL
5. - <=> ALUM = AIR FLOW - ALUMINUM
6. - ▷ = W.G. CONSTRUCTION OF DUCT
7. - 1'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV'D	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-28-10
C	FOR CONSTRUCTION	EG	11-04-09
S	SIGN-OFF	BLJ	07-16-09
A	FOR APPROVAL	BLJ	05-19-09

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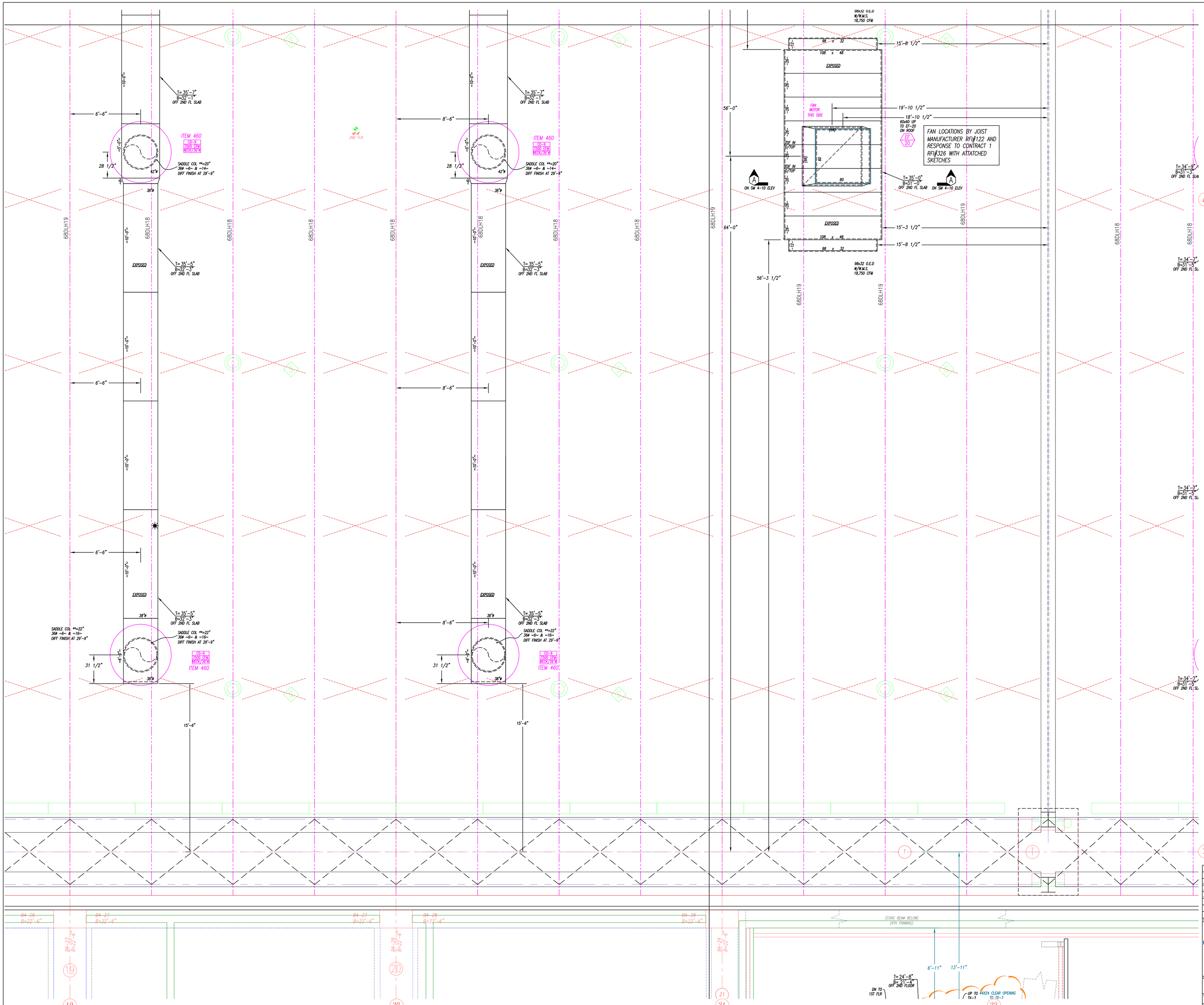
www.advantagecontracts.com

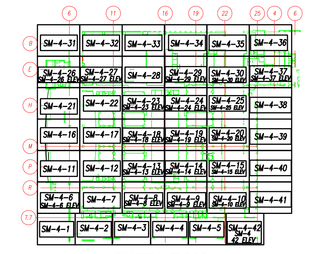
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF. DWG.- M242	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE XX-XX-XX	DR. BLJ	DWG. NO.	SM 4-1



RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - =C= = AIR FLOW - DUCT; - NO ACOUST. LINING
3. - =C= = AIR FLOW - =1" ACOUST. LINING
4. - =C= IS = AIR FLOW - STAINLESS STEEL
5. - =C= ALUM = AIR FLOW - ALUMINUM
6. - [▷ = W.G. CONSTRUCTION OF DUCT
7. - T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R2	REVISED FOR GRDS	EG	01-20-10
R1	REVISED LENGTHS	EG	09-16-09
C	FOR CONSTRUCTION	EG	09-14-09
S	SIGN OFF	EG	09-09-09
A	FOR APPROVAL	BLJ	05-19-09

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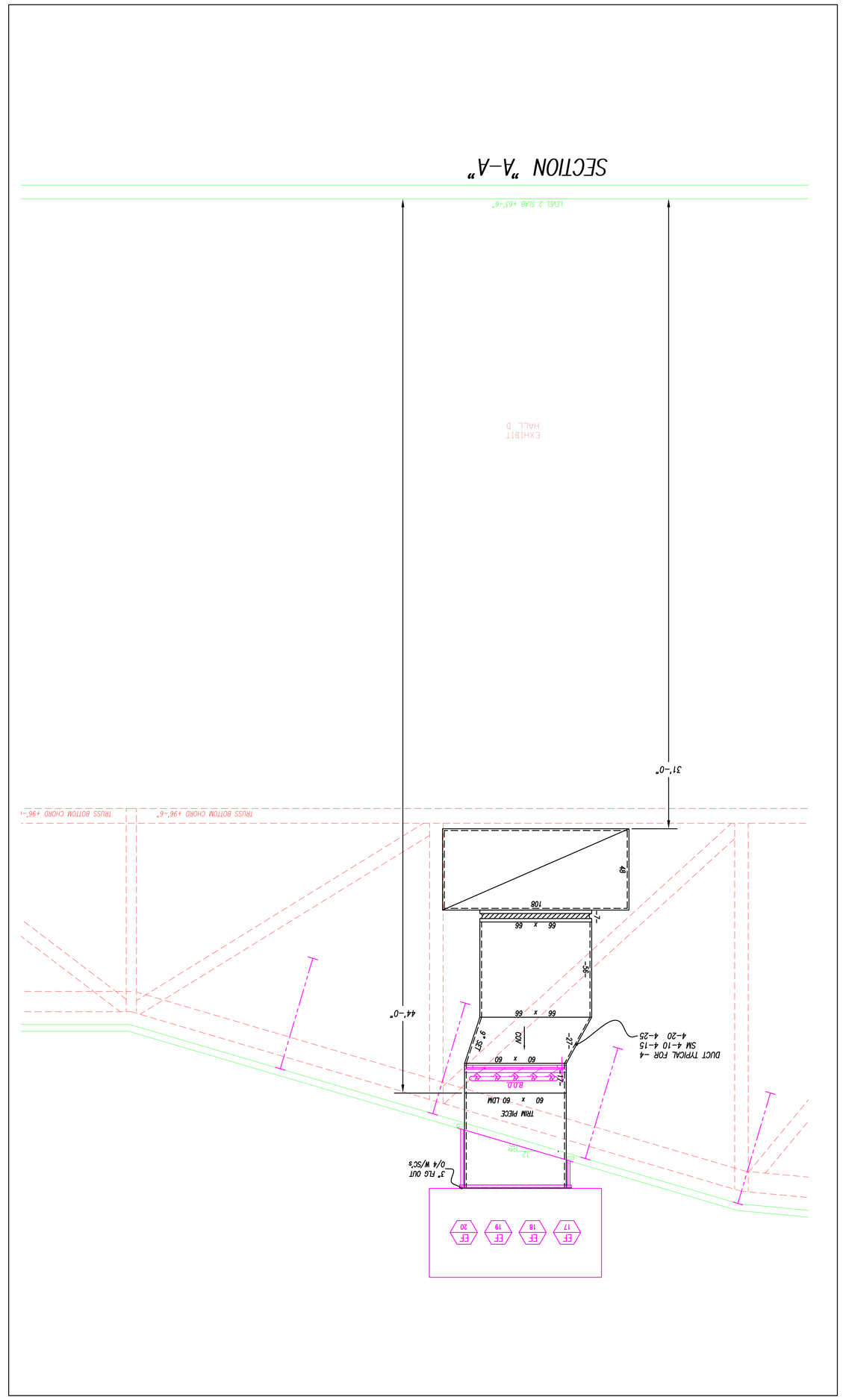
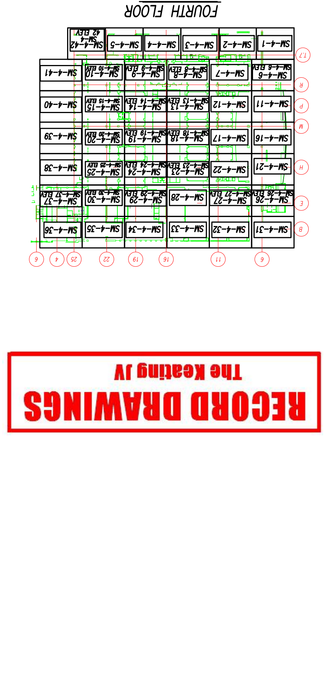
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF DWGS- M-245,248	LOC. COLS.	AS NOTED	
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE XX-XX-XX	DR. BLJ	DWG NO.	SM 4-10





NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <=> = AIR FLOW - DUCT - NO ACOUST. LINING
3. - [VAV] = AIR FLOW -1" ACOUST. LINING
4. - <=>.W = AIR FLOW - STAINLESS STEEL
5. - <=>.ALM = AIR FLOW - ALUMINUM
6. - [▷ = M.S. CONSTRUCTION OF DUCT
7. - T.O.-0 = TOP OF DUCT ABOVE FINISHED FLOOR
B.O.-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR CRITICAL INSULATION WHERE SHOWN.

REV	DESCRIPTION	BY	DATE
AB	AS BUILT	EG	01-11-11
C	FOR CONSTRUCTION	EG	09-14-09
A	FOR APPROVAL	BLJ	05-19-09

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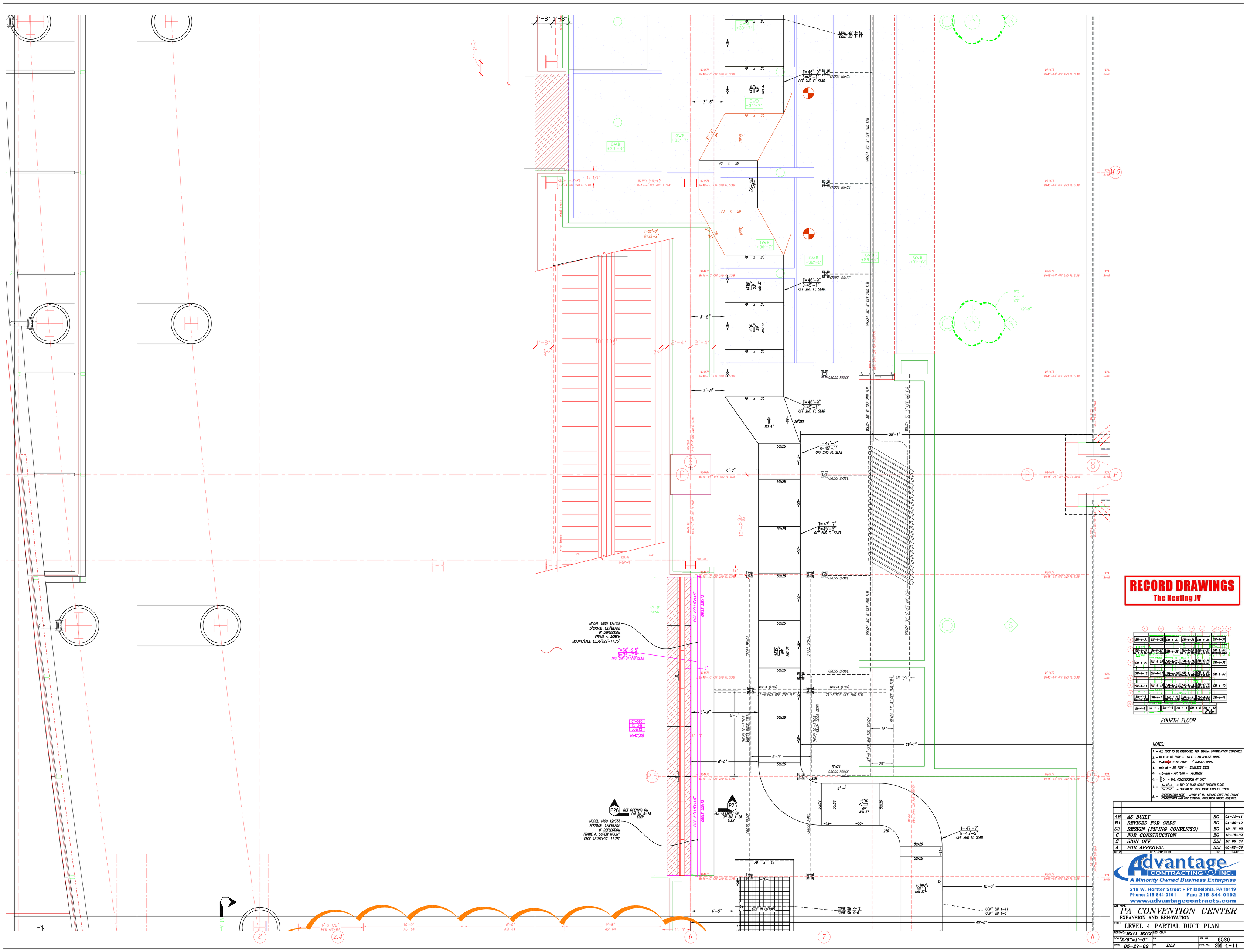
JOB TITLE
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 4 DUCT ELEVATIONS

SHT./REV.-	SM 4-10
SCALE-	3/8"=1'-0"
DATE	XX-XX-XX
LOC. CODE	
JOB NO.	8520
DR.	BLJ
DWG NO.	SM 4-10 ELEV

RECORD DRAWINGS
The Keating JV



NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <G> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <A> = AIR FLOW –1" ACOUST. LINING
4. – <SS> IN = AIR FLOW – STAINLESS STEEL
5. – <AL> ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – Tx 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; Bx 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV'I	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-29-10
S2	RESIGN (PIPING CONFLICTS)	EG	12-17-09
C	FOR CONSTRUCTION	EG	12-16-09
S	SIGN OFF	BLJ	12-03-09
A	FOR APPROVAL	BLJ	05-27-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF. DWGS:	M241 M242	LOC. COLS	
SCALE:	3/8"=1'-0"	CH.	JOB NO. 8520
DATE:	05-27-09	DR. BLJ	DWG. NO. SM 4-11

T=45'-10"
B=40'-10"
OFF 2ND FL SLAB

CONT SM 4-17
CONT SM 4-12

60"ø

2'-0"

CD-9
4500 CFM
RECK/36"ø

NEW ITEM 445

SADDLE COL **=125°
36ø ~6~ & ~119~
DIFF FINISH AT +29'-9"

~10'-0"~

42'-0"

60"ø

~14~

52"ø

T= 45'-6"
B=41'-2"
OFF 2ND FL SLAB

EXPOSED

10'-4"
2ND FLR

48x48 O.E.D.
W/W.M.S.
25000 CFM
(75000 CFM TOTAL)
TYP FOR 3

4'-0"
OFF 2ND FL SLAB

T= 37'-6"
B=33'-10"

48 x 48

96 x 80

T= 37'-6"
B=30'-10"
OFF 2ND FL SLAB

TDF IN
O/SIDE

96 x 80

48 x 48

1" PER FT

T= 37'-6"
B=33'-10"
OFF 2ND FL SLAB

96 x 80

10'-0 1/2"
TYP.

70"ø

GRV

MW 15

~6'-0"~

T= 37'-1"
B=31'-3"
OFF 2ND FL SLAB

35'-3"

MW 15

4'-0"

CONT SM 4-12
/CONT SM 4-7

ITEM 445
CD-9
4500 CFM
RECK/36"ø

SADDLE COL **=129°
36ø ~6~ & ~123~
DIFF FINISH AT +29'-9"

42"ø

6'-0"

~6'-0"~

MW 15

10'-5 1/2"

MW 15

4'-6"

CONT SM 4-12
/CONT SM 4-7

SADDLE COL **=125°
36ø ~6~ & ~119~
DIFF FINISH AT +29'-9"

42'-11 1/2"

WT6x15
X-BRACING TO
TOPCHORD(25A)

M.5

P

8

9

10

11

RECORD DRAWINGS
The Keating JV

FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <⊏> = AIR FLOW – GALV. – NO ACOUST. LINING
3. - <⊏1"AL> = AIR FLOW – 1" ACOUST. LINING
4. - <⊏> SS = AIR FLOW – STAINLESS STEEL
5. - <⊏> ALUM = AIR FLOW – ALUMINUM
6. - [▷] = W.G. CONSTRUCTION OF DUCT
7. - 7'-0"-0" = TOP OF DUCT ABOVE FINISHED FLOOR; 5'-9"-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.'D	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	11-04-09
S	SIGN OFF	BLJ	09-24-09
A	FOR APPROVAL	BLJ	09-27-09

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JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 4 PARTIAL DUCT PLAN

REF.DWGS	M241 M242	LOC. COLS.	
SCALE	3/8"=1'-0"	CH.	JOB NO. 8520
DATE	05-27-09	DR. BLJ	DWG. NO. SM 4-12

ITEM 459
EF-9
75000 CFM
140'X/36"ø

ITEM 445
EF-8
75000 CFM
140'X/36"ø

SADDLE COL **=125"
36ø ~6~ & ~119~
DIFF FINISH AT +29'-9"

SADDLE COL **=129"
36ø ~6~ & ~123~
DIFF FINISH AT +29'-9"

T=45'-10"
B=40'-10"
OFF 2ND FL SLAB

T= 45'-6"
B=41'-2"
OFF 2ND FL SLAB

T= 37'-6"
B=30'-10"
OFF 2ND FL SLAB

T= 37'-6"
B=33'-10"
OFF 2ND FL SLAB

T= 37'-1"
B=31'-3"
OFF 2ND FL SLAB

T= 36'-0"
B=32'-4"
OFF 2ND FL SLAB

T= 36'-2"
B=32'-6"
OFF 2ND FL SLAB

CONT SM 4-18
CONT SM 4-13

CONT SM 4-13
CONT SM 4-8

48x48 O.E.D.
W/W.M.S.
25000 CFM
(75000 CFM TOTAL)
TYP FOR 3

FAN LOCATIONS BY JOIST MANUFACTURER RFI#122 AND RESPONSE TO CONTRACT 1 RFI#326 WITH ATTATCHED SKETCHES

60x60 UP TO EF-9 ON ROOF

60x60 UP TO EF-10 ON ROOF

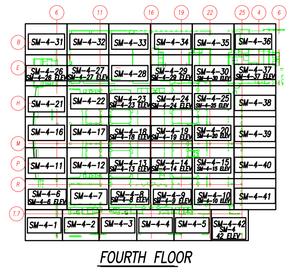
ON SM 4-8 ELEV

EXPOSED

STOP A/L

X-BRACING TO TOPCHORD(TYP)

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:
1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – =▷= = AIR FLOW – GALV. – NO ACOUST. LINING
3. – =▷= = AIR FLOW –1" ACOUST. LINING
4. – =▷= ≡ = AIR FLOW – STAINLESS STEEL
5. – =▷= ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – 1'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	11-04-09
S	SIGN OFF	BLJ	09-24-09
A	FOR APPROVAL	BLJ	05-28-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF.DWG.- M244	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE XX-XX-XX	DR. BLJ	DWG. NO.	SM 4-13

T= 36'-4"
B=31'-4"
OFF 2ND FL SLAB

ITEM 459
QD-9
17500 CFM
NECK/36"ø

SADDLE COL **=11"
DIFF FINISH AT 29'-9"

32 1/2"

60"ø

42'-4"
2ND FLR

52"ø

EXPOSED

8'-6"

~10'-0"

T= 36'-0"
B=31'-8"
OFF 2ND FL SLAB

~5'-0"

~1'-4"

M1.5

6'-6"

T= 36'-0"
B=31'-8"
OFF 2ND FL SLAB

15.5

15

16

17

18

P

T= 35'-7"
B=31'-1"
OFF 2ND FL SLAB

31 1/2"

~12"

42"ø

A
S ELEV

1'-6"

56'-0"

98x32 O.E.D
W/M.M.S.
18,750 CFM

7'-6 1/2"

11'-0"

FAN
MOTOR
SHED SIDE

108 x 48

(66)

60

TDF IN
D/TOP

98 x 32

15'-8 1/2"

60x60 UP
TO EF-15
ON ROOF

EF
15

FAN LOCATIONS BY JOIST
MANUFACTURER RFI#122 AND
RESPONSE TO CONTRACT 1
RFI#326 WITH ATTATCHED
SKETCHES

ON SM 4-9 ELEV

18'-10 1/2"

19'-10 1/2"

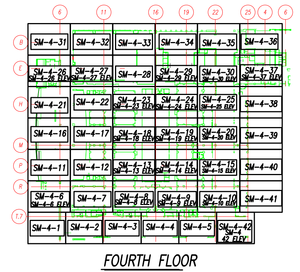
T= 35'-0"
B=31'-0"
OFF 2ND FL SLAB

15'-3 1/2"

46'-2 1/2"

42'-4"
2ND FLR

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – 1"=> = AIR FLOW – 1" ACOUST. LINING
4. – <=> SS = AIR FLOW – STAINLESS STEEL
5. – <=> ALM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R2	REVISED FOR GRDS	EG	01-29-10
R1	REVISED LENGTHS	EG	09-18-09
C	FOR CONSTRUCTION	EG	09-14-09
S	SIGN OFF	EG	09-09-09
A	FOR APPROVAL	BLJ	05-28-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL PARTIAL PLAN

KEY DWG.- M244	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE XX-XX-XX	DR. B JONES	DWG. NO.	SM 4-14

T=36'-4"
B=31'-4"
OFF 2ND FL SLAB

ITEM 459
EF-9
7500 CFM
NECK/36"ø

SADDLE COL **=11"
DIFF FINISH AT 29'-9"

61'-4"
2ND FLR

32 1/2"

60"ø

52"ø

EXPOSED

~14"

~10'-0"

6'-6"

T=36'-0"
B=31'-8"
OFF 2ND FL SLAB

8'-6"

T=35'-7"
B=32'-1"
OFF 2ND FL SLAB

T=35'-0"
B=31'-0"
OFF 2ND FL SLAB

T=34'-10"
B=31'-2"
OFF 2ND FL SLAB

T=34'-9"
B=31'-3"
OFF 2ND FL SLAB

42"ø

31 1/2"

~10'-

DECK TYPE "D1"

98x32 O.E.D
W/M.M.S.
18,750 CFM

FAN
MOTOR
1HP5 SOLE

108 x 48

(68)

(68)

60

7'-6 1/2"

11'-0"

TDF IN
0/TOP

60x60 UP
TO EF-19
ON ROOF

EF
19

FAN LOCATIONS BY JOIST MANUFACTURER RFI#122 AND RESPONSE TO CONTRACT 1 RFI#326 WITH ATTATCHED SKETCHES

A
ON SM 4-10 ELEV

15'-8 1/2"

18'-10 1/2"

19'-10 1/2"

15'-3 1/2"

108 x 48

98 x 32

46'-2 1/2"

30'-0"ø± OFF 2ND SLAB

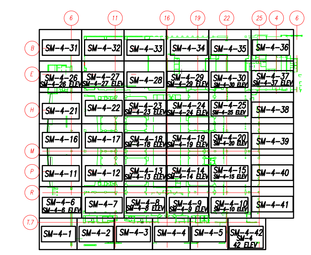
19

20

21

P

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <□> = AIR FLOW = - ONLY - = NO ACOUST. LINING
3. - <□> = AIR FLOW = -1" ACOUST. LINING
4. - <□> IS = AIR FLOW = - STAINLESS STEEL
5. - <□> ALUM = AIR FLOW = - ALUMINUM
6. - [▷] = W.G. CONSTRUCTION OF DUCT
7. - Tx'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; Bx'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV'D	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R2	REVISED FOR GRDS	EG	01-29-10
R1	REVISED LENGTHS	EG	09-18-09
C	FOR CONSTRUCTION	EG	09-14-09
S	SIGN OFF	EG	09-09-09
A	FOR APPROVAL	BLJ	05-28-09

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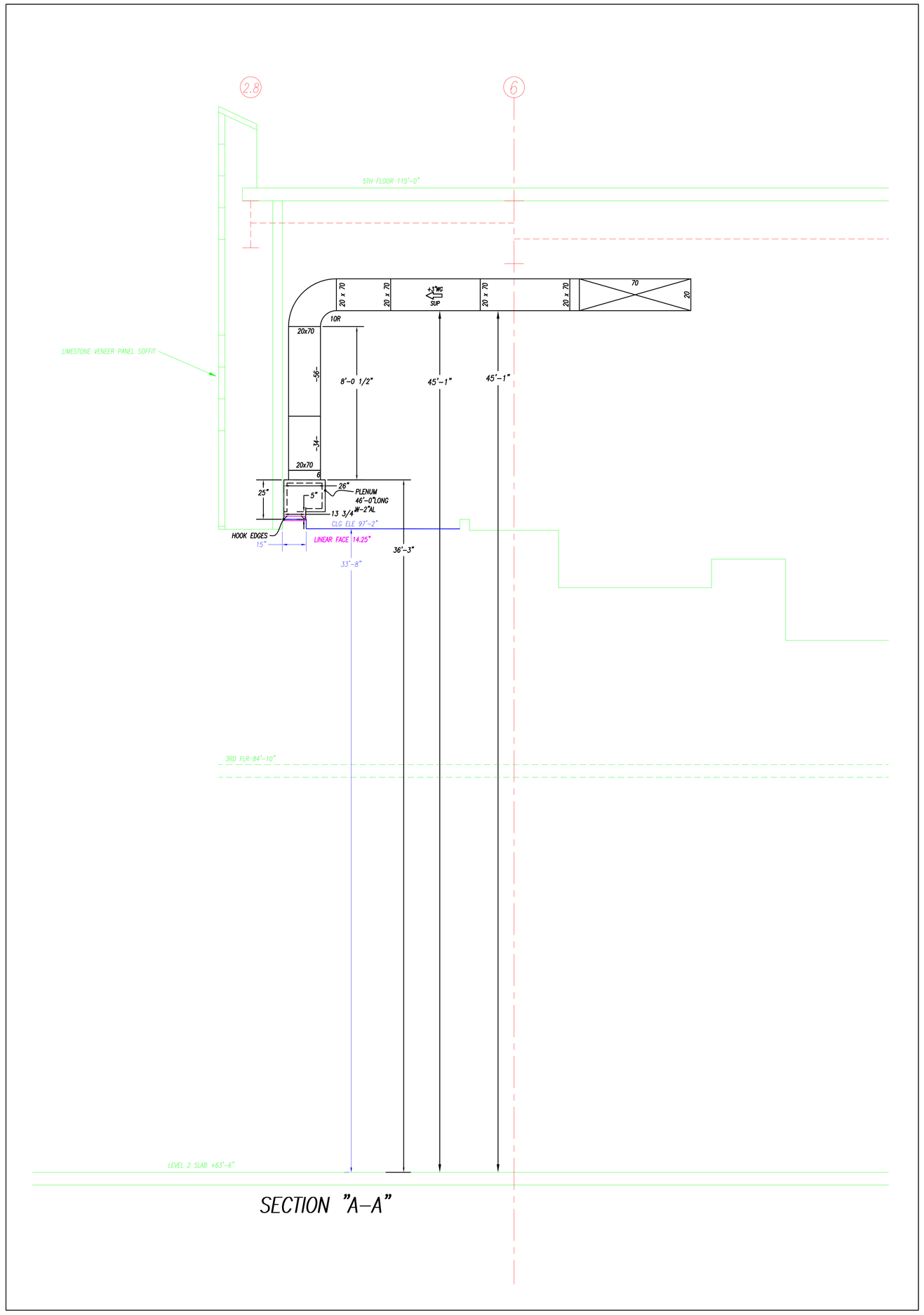
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

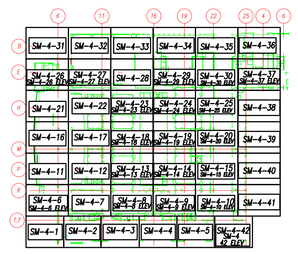
TITLE
LEVEL 4 PARTIAL DUCT PLAN

REF.DWGS.-	244-245	LOC. COLS.	
SCALE	3/8"=1'-0"	CH.	JOB NO. 8520
DATE	XX-XX-XX	DR. BLJ	DWG. NO. SM 4-15



SECTION "A–A"

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <C> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <A> = AIR FLOW – 1" ACOUST. LINING
4. – <S> SS = AIR FLOW – STAINLESS STEEL
5. – <S> ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – 7'± 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   8'± 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	BLJ	01-11-11
C	FOR CONSTRUCTION	BLJ	12-15-09
A	FOR APPROVAL	BLJ	05-28-09

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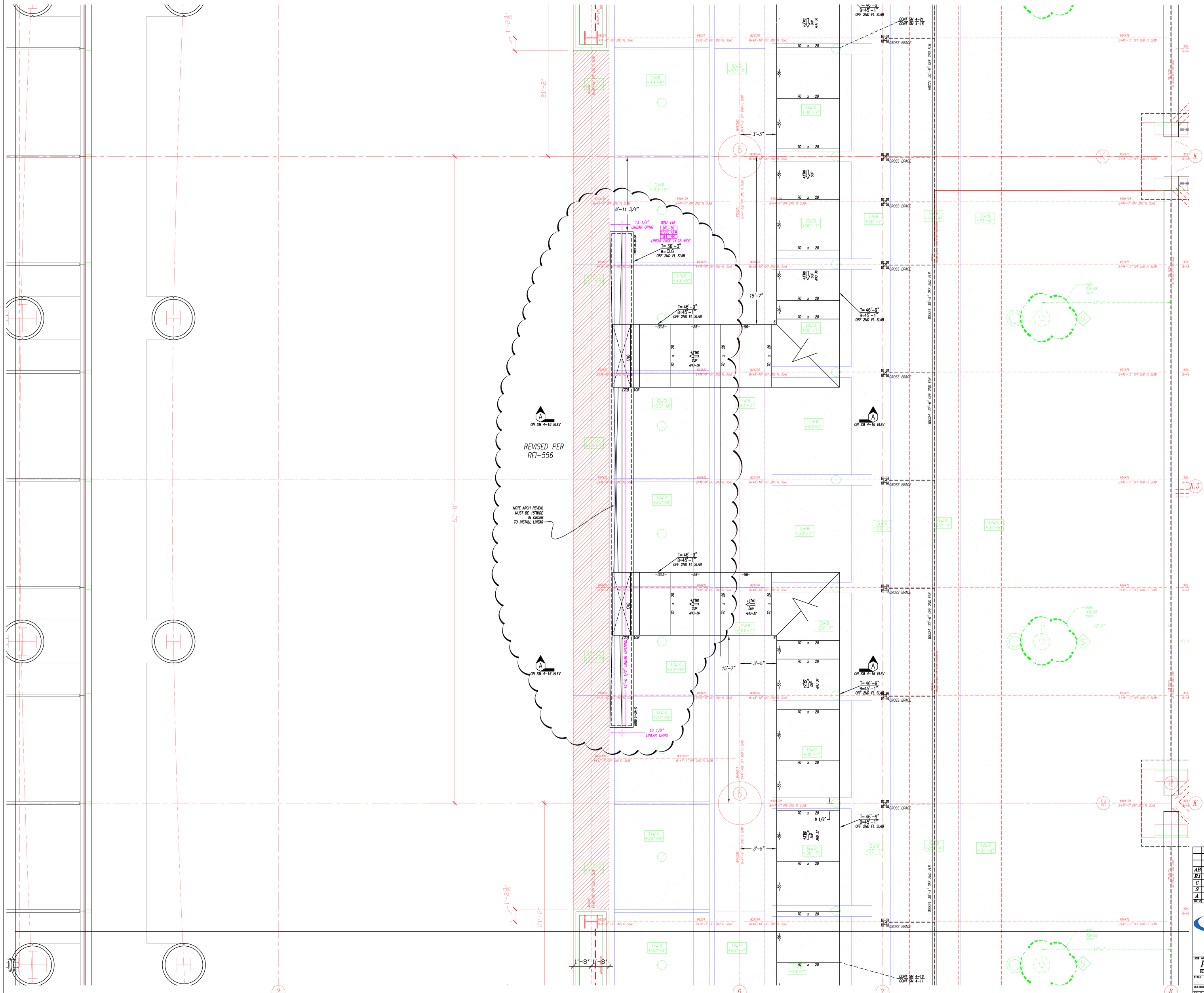
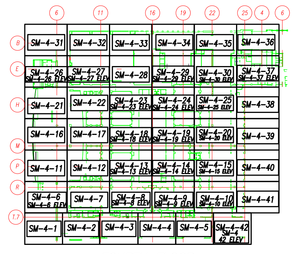
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 DUCT ELEVATIONS

REF. DWGS.- SM 4-16	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-28-09	DR. BLJ	DWG. NO.	SM 4-16 ELEV



RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <=> = AIR FLOW - GALV. - NO ACOUST. LINING
3. - <=> = AIR FLOW - 1" ACOUST. LINING
4. - <=> = AIR FLOW - STAINLESS STEEL
5. - <=> = AIR FLOW - ALUMINUM
6. - ▷ = W.G. CONSTRUCTION OF DUCT
7. - T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	12-15-09
S	SIGN OFF	BLJ	12-03-09
A	FOR APPROVAL	BLJ	05-28-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF. DWG.- M-241	LOC. COLS.		
SCALE: 3/8"=1'-0"	CH.	JOB NO.	8520
DATE: XX-XX-XX	DR. BLJ	DWG. NO.	SM 4-16

ITEM 445
GS-8
7500 CFM
NCV.75# ø

CONT SM 4-22
CONT SM 4-17

3'-6 1/2"

9'-5 1/2"

-8'-0"

EXPOSED

4'-0"

68"ø

OFF 2ND FL SLAB

18'-7"
OFF COLUMN K

9'-5"

4'-6"

T=46'-2"
B=40'-6"
OFF 2ND FL SLAB

T=45'-10"
B=40'-10"
OFF 2ND FL SLAB

SM 4-15
SM 4-16
AND 15

62'-4"
2ND FLR

ASI-88 SHOWS THIS ROW LIGHTS
MOVING OVER 36" 18'-0"
OFF COLUMN LINE 8

3'-0"

SADDLE COL **=121"
36ø =6~ & =115~
DIFF FINISH AT +29'-9"

5'-2 1/2"

18"

30"

6'-2 1/2"

3'-8 1/2"

60"ø

~7'-0"

~10'-0"

17'-0"

17'-0 1/2"

CONT SM 4-17
CONT SM 4-12

WT6x15
X-BRACING TO
TOPCHORD(25k)

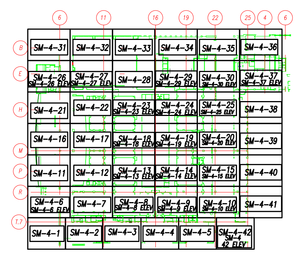
SADDLE COL **=121"
36ø =6~ & =115~
DIFF FINISH AT +29'-9"

OFF 2ND FL SLAB

OF

SADDLE COL **=121"
36ø =6~ & =115~
DIFF

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. = ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. = <C> = AIR FLOW – GALV. – NO ACOUST. LINING
3. = <AL> = AIR FLOW –1" ACOUST. LINING
4. = <SS> = AIR FLOW – STAINLESS STEEL
5. = <AL> ALUM = AIR FLOW – ALUMINUM
6. = [▷] = W.G. CONSTRUCTION OF DUCT
7. = 7= 67'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. = COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	BR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	11-02-09
S	SIGN OFF	BLJ	09-24-09
A	FOR APPROVAL	BLJ	05-28-09

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JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 4 PARTIAL DUCT PLAN

REF DWG- M244	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-28-09	DR. BLJ	DWG. NO.	SM 4-17

8 9 10 11

CI-9
7500 CFM
HCK/36"ø

CONT SM 4-23
CONT SM 4-18

SADDLE COL **=121"
36ø ~6~ & ~115~
DIFF FINISH AT +29'-9"

3'-6 1/2"

18'-7"
OFF COLUMN K

B=31 -3
OFF 2ND FL SLAB

(36"ø)

7'-7"

EXPOSED

68"ø

5'-0"

~8'-0"~

~10'-0"~

W30X116
B+48'-4" OFF 2ND SLAB

W24X68
B+48'-10" OFF 2ND SLAB

W12X16
B+49'-10" OFF 2ND SLAB

W16X26
B+49'-4" OFF 2ND SLAB

B=31 -9

B=31 -4

B=31 -5
OFF 2ND FL SLAB

14'-7"
OFF COLUMN K

A
ON SM 4-8 ELEV

T= 36'-2"
B=32'-2"
OFF 2ND FL SLAB

TDF IN
O/TOP

60

48

FAN
MOTOR
THIS SIDE

60x60 UP
TO EF-8
ON ROOF

EF
8

11'-0"

25'-0 1/2"

6'-5"

FAN LOCATIO
MANUFACTUR
RESPONSE i
RFI#326 WIT
SKETCHES

15

16

13.3

K

K.5

K.6

M

13.8

14

14.7

15

68DLH19

68DLH18

CI-9
7500 CFM
HCK/36"ø
ITEM 445

ITEM 459

T=46'-2"
B=40'-6"
OFF 2ND FL SLAB

T=45'-10"
B=40'-10"
OFF 2ND FL SLAB

W16x15
X-BRACING TO
TOP(HORIZ)(25k)

6'-11 1/2"

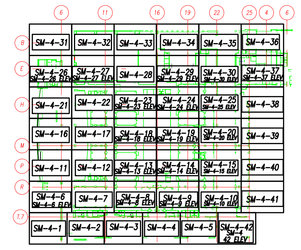
60"ø

CONT SM 4-18
CONT SM 4-13

12

13

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <G> = AIR FLOW - GALV. - NO ACOUST. LINING
3. - <A> = AIR FLOW -1" ACOUST. LINING
4. - <SS> = AIR FLOW - STAINLESS STEEL
5. - <AL> = AIR FLOW - ALUMINUM
6. - ▷ = W.G. CONSTRUCTION OF DUCT
7. - Te 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   Be 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	11-02-09
S	SIGN OFF	BLJ	09-24-09
A	FOR APPROVAL	BLJ	05-28-09

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JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 4 PARTIAL DUCT PLAN

REF.DWG.- M244 M241	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-28-09	DR. BLJ	DWG. NO.	SM 4-18

LOCATIONS BY JOIST
FACTURER RFI#122 AND
ONSE TO CONTRACT 1
26 WITH ATTATCHED
CHES

A
8 ELEV

B=80'-10"
OFF 2ND FL SLAB

SADDLE COL **=5"
DIFF FINISH AT 29'-9"

ITEM 459
CD-9
7500 CFM
HEXX/36"W

32 1/2"

72"ø

68"ø

~1'-0"

~8'-0"

~10'-0"

61'-4"
2ND FLR

B=80'-10"
OFF 2ND FL SLAB

SADDLE COL **=5"
DIFF FINISH AT 29'-9"

ON SM 4-9 ELEV

ITEM 459
CD-9
7500 CFM
HEXX/36"W

32 1/2"

72"ø

68"ø

10 EJ-14
ON ROOF

EF
14

11'-0"

7'-4 1/2"

TDF IN
D/TOP

(66)

18

60

FAN
MOTOR
108 x 48
THIS SIDE

90x32 O.E.D
W/M.M.S.
18,750 CFM

T= 35'-0"
B=31'-0"
OFF 2ND FL SLAB

A
11'-0"
ON SM 4-9 ELEV

15'-3 1/2"

15'-8 1/2"

FAN LOCATIONS BY JOIST MANUFACTURER RFI#122 AND RESPONSE TO CONTRACT 1 RFI#326 WITH ATTATCHED SKETCHES

16 17 18

K

6'-6"

8'-6"

EXPOSED

T= 36'-8"
B=31'-0"
OFF 2ND FL SLAB

T= 36'-4"
B=31'-4"
OFF 2ND FL SLAB

CD-9
7500 CFM
HEXX/36"W

ITEM 459

SADDLE COL **=7"
DIFF FINISH AT 29'-9"

33 1/2"

68"ø

60"ø

68DLH18 68DLH18 68DLH18 68DLH18 68DLH18 68DLH19 68DLH19 68DLH19 68DLH19 68PLH18 68PLH18

15.3 16 17 18

RECORD DRAWINGS
The Keating JV

FOURTH FLOOR

NOTES:
1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <=> = AIR FLOW –1" ACOUST. LINING
4. – <=> SS = AIR FLOW – STAINLESS STEEL
5. – <=> ALUM = AIR FLOW – ALUMINUM
6. – [▷] = W.G. CONSTRUCTION OF DUCT
7. – 1x 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R2	REVISED FOR GRDS	EG	01-29-10
R1	REVISED LENGTHS	EG	09-16-09
C	FOR CONSTRUCTION	EG	09-15-09
S	SIGN OFF	EG	09-09-09
A	FOR APPROVAL	BLJ	05-28-09

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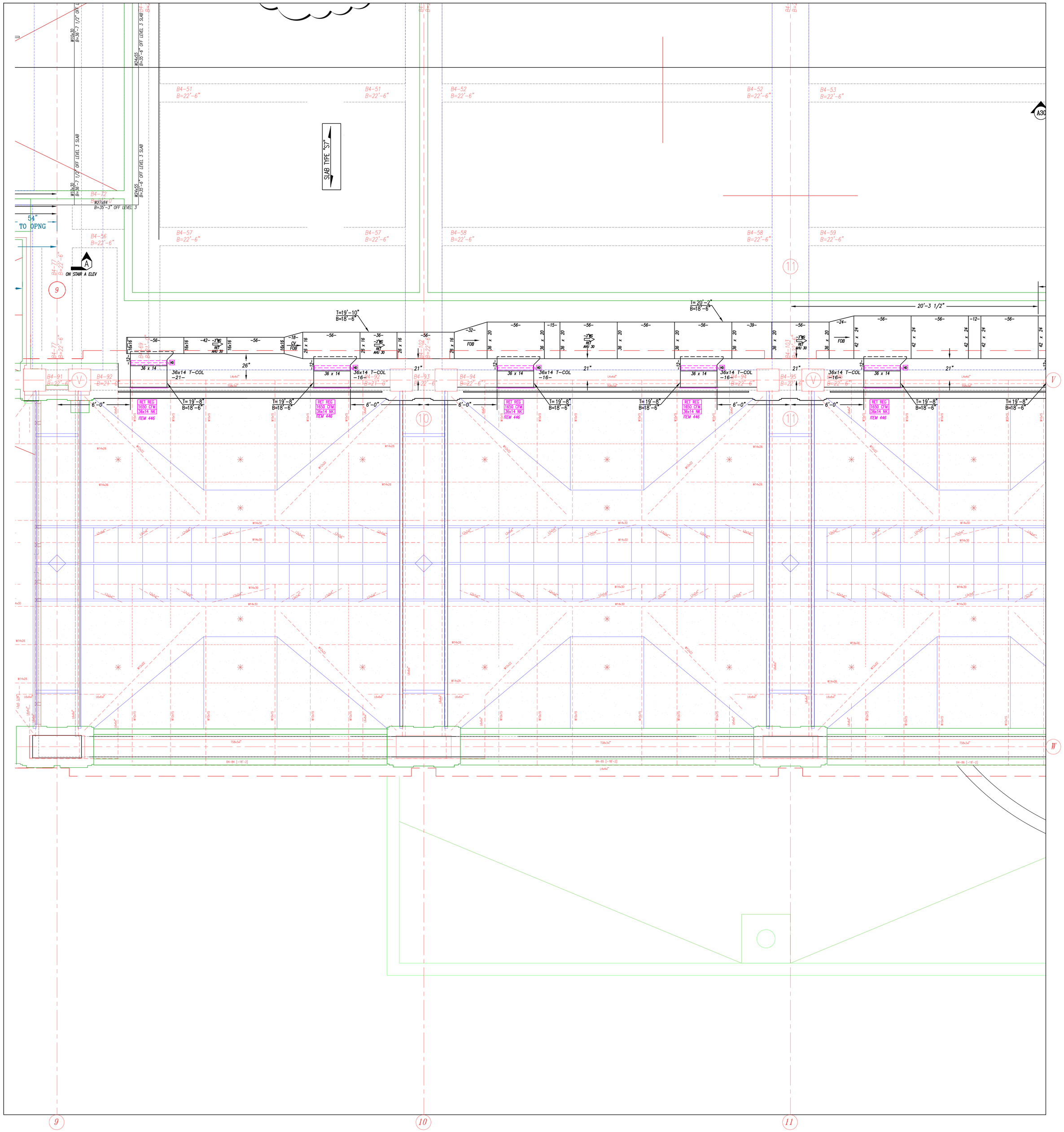
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 4 PARTIAL DUCT PLAN

REF. DWG.-	M244	LOC. COLS.	
SCALE	3/8"=1'-0"	CK.	JOB NO. 8520
DATE	XX-XX-XX	DR. BLJ	DWG. NO. SM 4-19



FOURTH FLOOR

RECORD DRAWINGS
The Keating JV

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <G> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <R1> = AIR FLOW – 1" ACOUST. LINING
4. – <SS> = AIR FLOW – STAINLESS STEEL
5. – <AL> = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – 1'-0" / 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR / BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 1" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AR	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-09-09
C	FOR CONSTRUCTION	EG	11-04-09
S	SIGN-OFF	BLJ	07-16-09
A	FOR APPROVAL	BLJ	05-19-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF. DWG.– M242	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE XX-XX-XX	DR. BLJ	DWG. NO.	SM 4-2

FAN LOCATIONS BY JOIST MANUFACTURER RFI#122 AND RESPONSE TO CONTRACT 1 RFI#326 WITH ATTATCHED SKETCHES

DECK TYPE "D1"

CONFLICT

FOURTH FLOOR

RECORD DRAWINGS
The Keating JV

NOTES:
1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <G> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <A> = AIR FLOW – 1" ACOUST. LINING
4. – <S> = AIR FLOW – STAINLESS STEEL
5. – <SA> = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 1" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R2	REVISED FOR GRDS	EG	01-29-10
R1	REVISED LENGTHS	EG	09-18-09
C	FOR CONSTRUCTION	EG	09-15-09
S	SIGN OFF	EG	09-09-09
A	FOR APPROVAL	BLJ	05-28-09

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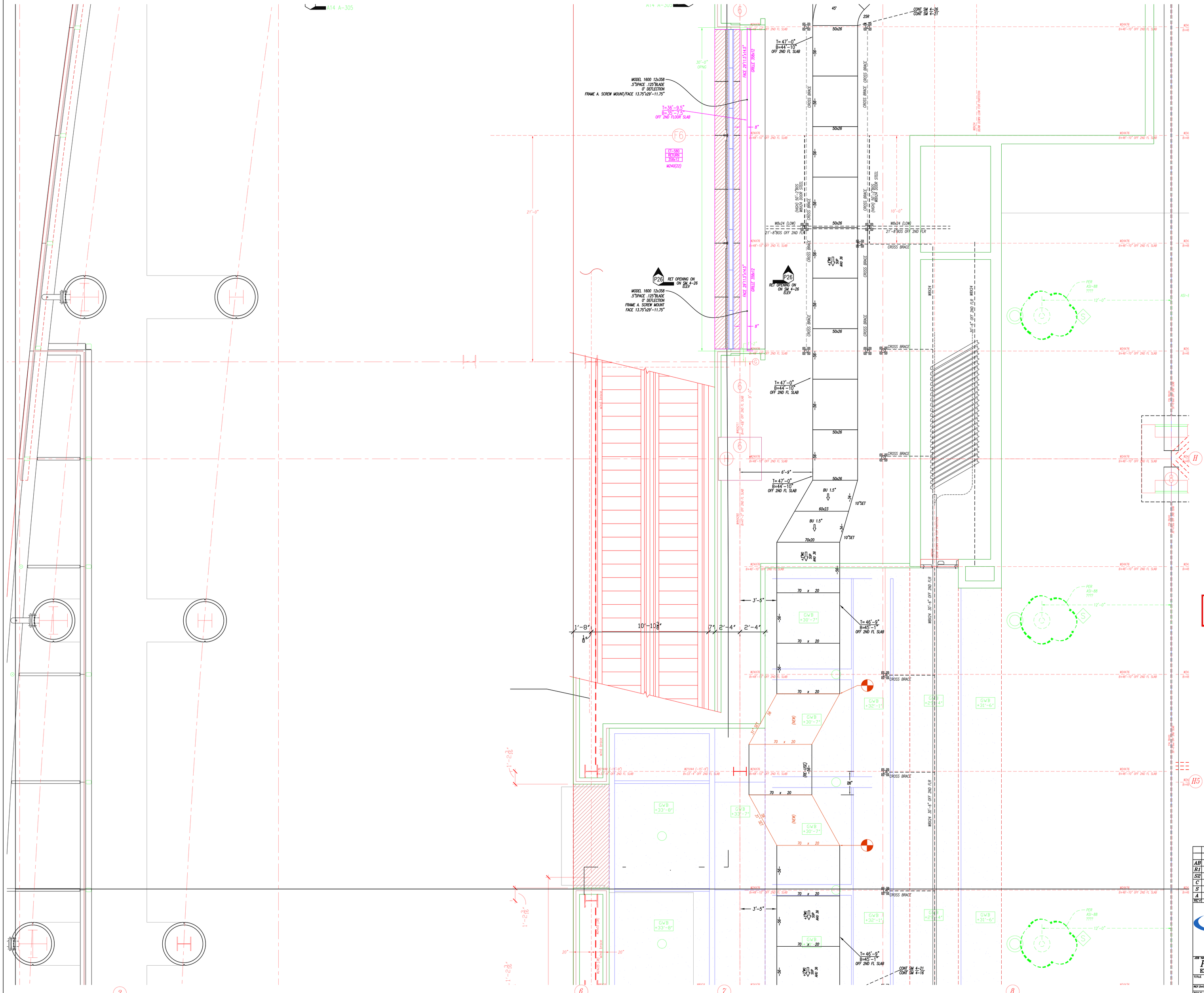
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

KEY SYS: M244–M247	LOC. COLS.		
SCALE: 3/8"=1'-0"	CH.	JOB NO.	8520
DATE: XX-XX-XX	DR. BLJ	DWG. NO.	SM 4-20


M14 A=305
MODEL 1600 12x358
.5"SPACE .125"BLADE
0° DEFLECTION
FRAME A. SCREW MOUNT/FACE 13.75"x29"-11.75"
T=36'-9.5"
B=35'-7.5"
OFF 2ND FLOOR SLAB
F6
RET-SM5
RETURN
358x12
M240(22)
FACE 291.5"x14.5"
GRILLE 358x12
32'-0" OPNG
21'-0"
P26
RET OPENING ON
ON SM 4-26
ELEV
MODEL 1600 12x358
.5"SPACE .125"BLADE
0° DEFLECTION
FRAME A. SCREW MOUNT
FACE 13.75"x29"-11.75"
T= 47'-0"
B=44'-10"
OFF 2ND FL SLAB
50x26
CROSS BRACE
W8x24 (LOW)
21'-8"BOS OFF 2ND FLR
W8x24 (LOW)
21'-8"BOS OFF 2ND FLR
10'-0"
W8X24 30"-6" OFF 2ND FLR
W8X24 30"-5" OFF 2ND FLR
W8X24 30"-4" OFF 2ND FLR
W8X24 30"-0" OFF 2ND FLR
W8X24

CONT SM 4-27
CONT SM 4-22

EXPOSED

72"ø

70"ø

68"ø

4'-0"

6'-0"

4'-6"

T= 46'-4"
B=40'-4"
OFF 2ND FL SLAB

T= 46'-2"
B=40'-6"
OFF 2ND FL SLAB

T= 37'-1"
B=31'-3"
OFF 2ND FL SLAB

SADDLE COL **=119"
36# =6= & =113=
DIFF FINISH AT +29'-9"

CO-9
7500 CFM
16"X736"ø
ITEM 445

3'-7"

3'-6 1/2"

42'-6 1/2"

35'-7"

35R

STOP 1/4

18'-7"
OFF COLUMN K

17'-9 1/2"

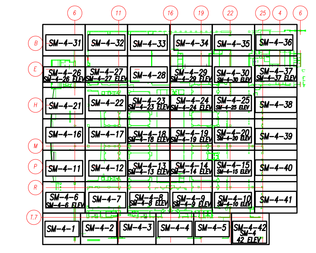
W16x15
X-BRACING TO
TOPCHORD(25k)

ASI-88 SHOWS THIS ROW LIGHTS
MOVING OVER 36" 16'-0"
OFF COLUMN LINE 8

15'-4"
2ND FLR

W24X62
8+48'-10" OFF 2ND SLAB

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. = ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. = <G> = AIR FLOW – GALV. – NO ACOUST. LINING
3. = r'xH> = AIR FLOW –1" ACOUST. LINING
4. = <SS> SS = AIR FLOW – STAINLESS STEEL
5. = <AL> ALUM = AIR FLOW – ALUMINUM
6. = [▷] = W.G. CONSTRUCTION OF DUCT
7. = T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. = COORDINATION NOTE – ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	11-02-09
S	SIGN OFF	BLJ	09-24-09
A	FOR APPROVAL	BLJ	05-28-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION
TITLE: LEVEL 4 PARTIAL DUCT PLAN

KEY DWG.: M241	LDG. CDLS.		
SCALE: 3/8"=1'-0"	DN.	JOB NO.	8520
DATE: 05-28-09	DR. BLJ	DWG. NO.	SM 4-22

CONT SM 4-28
CONT SM 4-23

W30X116 B=48'-4" OFF 2ND SLAB

W12X16 B=49'-10" OFF 2ND SLAB

W16X26 B=49'-6" OFF 2ND SLAB

W24X68 B=48'-10" OFF 2ND SLAB

72"ø

38'-6 1/2"

41'-3"

70"ø

EXPOSED

T= 37'-1"
B=31'-3"
OFF 2ND FL SLAB

17'-7"

35R

72"ø

68"ø

T= 46'-4"
B=40'-4"
OFF 2ND FL SLAB

ITEM 445
CO-9
7500 CFM
NECK/36"ø

WT6x15
X-BRACING TO
TOP CHORD(25k)

3'-7"

SADDLE COL **=119"
36ø ~6~ & ~113~
DIFF FINISH AT +29'-9"

(36"ø)

ITEM 459
CO-8
7500 CFM
NECK/36"ø

T= 46'-2"
B=40'-6"
OFF 2ND FL SLAB

5'-0"

7'-7"

12'-6 1/2"

12'-2 1/2"

(70ø)

18'-7"
OFF COLUMN K

CONT SM 4-23
CONT SM 4-18

1'-0"

~6'-0"

~2'-0"

1'X18" EF 5,6

1'X18" EF 7,8

25'-0 1/2"

20'-6 1/2"

38'-7"
OFF COLUMN F

41'-6"
OFF COLUMN F

60x60 UP
TO EF-5
ON ROOF
EF 5

60x60 UP
TO EF-6
ON ROOF
EF 6

60x60 UP
TO EF-7
ON ROOF
EF 7

60x60 UP
TO EF-8
ON ROOF
EF 8

A
ON SM 4-8 ELEV

T= 36'-0"
B=32'-4"
OFF 2ND FL SLAB

T= 36'-2"
B=32'-2"
OFF 2ND FL SLAB

TDF IN
O/TOP

TDF IN
O/SIDE

108 x 48

60

CBV

44 x 90

22'-6"

17'-6"

7'-5"

11'-5"

T= 37'-1"
B=31'-3"
OFF 2ND FL SLAB

T= 37'-2"
B=31'-9"

T= 37'-2"
B=31'-4"

T= 37'-1"
B=31'-3"
OFF 2ND FL SLAB

12 1/2"

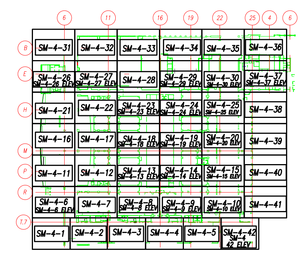
654

FAN MOTOR THIS SIDE

FAN LOCATIONS BY JOIST MANUFACTURER RFI#122 AND RESPONSE TO CONTRACT 1 RFI#326 WITH ATTATCHED SKETCHES

FAN LOCATIONS BY JOIST MANUFACTURER RFI#122 AND RESPONSE TO CONTRACT 1 RFI#326 WITH ATTATCHED SKETCHES

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

H5

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – 1"AL=> = AIR FLOW –1" ACOUST. LINING
4. – <=> SS = AIR FLOW – STAINLESS STEEL
5. – <=> ALUM = AIR FLOW – ALUMINUM
6. – [▷] = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	11-02-09
S	SIGN OFF	BLJ	09-24-09
A	FOR APPROVAL	BLJ	05-28-09

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JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 4 PARTIAL DUCT PLAN

KEY SVS- M243 M244	LOC. COLS.		
SCALE 3/8"=1'-0"	DR.	JOB NO. 8520	
DATE 05-28-09	DR. BLJ	DWG. NO. SM 4-23	

12 13 13.8 14 14.7 15 H

SM 4-29
SM 4-24

26 1/2"

CD-9
(2000 CFM)
MDX730 M

SADDLE COL **=5"
DIFF FINISH AT 29'-9"

EXPOSED

62'-4"
2ND FLR

8'-0"

72"ø

8'-6"

T=36'-10"
B=30'-10"
OFF 2ND FL SLAB

6'-6"

ITEM 459
CD-9
(2000 CFM)
MDX730 M

29 1/2"

72"ø

ATIONS BY JOIST
TURER RFI#122 AND
E TO CONTRACT 1
WITH ATTATCHED
S

A
ELEV

98x32 O.E.D
W/M.M.S.
18,750 CFM

98 x 32
108 x 48

15'-8 1/2"

FAN LOCATIONS BY JOIST
MANUFACTURER RFI#122 AND
RESPONSE TO CONTRACT 1
RFI#326 WITH ATTATCHED
SKETCHES

17'-1 1/2"

16'-4 1/2"

T= 35'-0"
B=31'-0"
OFF 2ND FL SLAB

60x60 UP
TO EF-13
ON ROOF

EF
13

TDF IN
0"/TOP

(66)

60

56'-0"

ON SM 4-9 ELEV

FAN
MOTOR
THIS SIDE

15'-3 1/2"

51'-4"

60x60 UP
TO EF-14
ON ROOF

EF
14

19'-10 1/2"

18'-10 1/2"

FAN LOCATIONS BY JOIST
MANUFACTURER RFI#122 AND
RESPONSE TO CONTRACT 1

15.3

16

17

18

H5

| | | |

DECK TYPE "D1"

SM 4-30
SM 4-25

26 1/2"

SADDLE COL **=5"
DIFF FINISH AT +29'-9"

EXPOSED

8'-0"

72"ø

8'-6"

6'-6"

T=36'-10"
B=30'-10"
OFF 2ND FL SLAB

ITEM 459
CU-9
7500 CFM
NECK/36"ø

29 1/2"

SADDLE COL **=5"
DIFF FINISH AT 29'-9"

61'-4"
2ND FLR

98x32 O.E.D
W/M.M.S.
18,750 CFM

98 x 32
108 x 48

15'-8 1/2"

FAN LOCATIONS BY JOIST MANUFACTURER RFI#122 AND RESPONSE TO CONTRACT 1 RFI#326 WITH ATTATCHED SKETCHES

17'-1 1/2"
16'-4 1/2"

T= 35'-0"
B=31'-0"
OFF 2ND FL SLAB

60x60 UP
TO EF-17
ON ROOF

EF
17

TDF IN
O/TOP

(66)

48

60

FAN
MOTOR
THIS SIDE

A
ON SM 4-10 ELEV

56'-0"

15'-3 1/2"

51'-4"

EF
18

60x60 UP
TO EF-18
ON ROOF

19'-10 1/2"
18'-10 1/2"

T= 35'-2"
B=40'-10"
OFF 2ND FL SLAB

27"

H

H5

FOURTH FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – r <=> = AIR FLOW –1" ACOUST. LINING
4. – <=> IS = AIR FLOW – STAINLESS STEEL
5. – <=> ALM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 1" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

RECORD DRAWINGS
The Keating JV

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-29-10
R2	REVISED FOR GRDS	EG	01-29-10
R1	REVISED LENGHTH	EG	09-18-09
C	FOR CONSTRUCTION	EG	09-15-09
S	SIGN OFF	EG	09-09-09
A	FOR APPROVAL	BLJ	05-28-09

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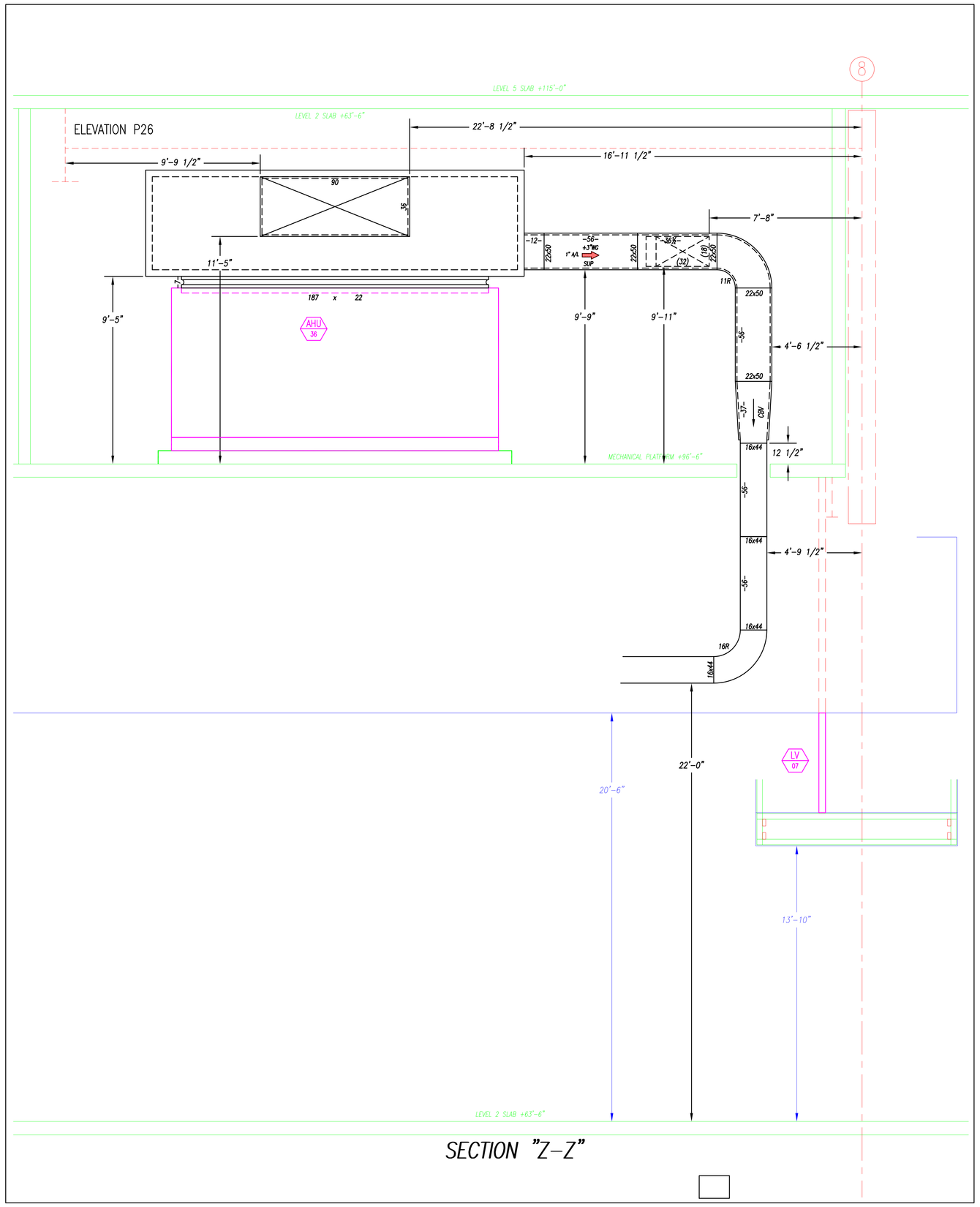
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

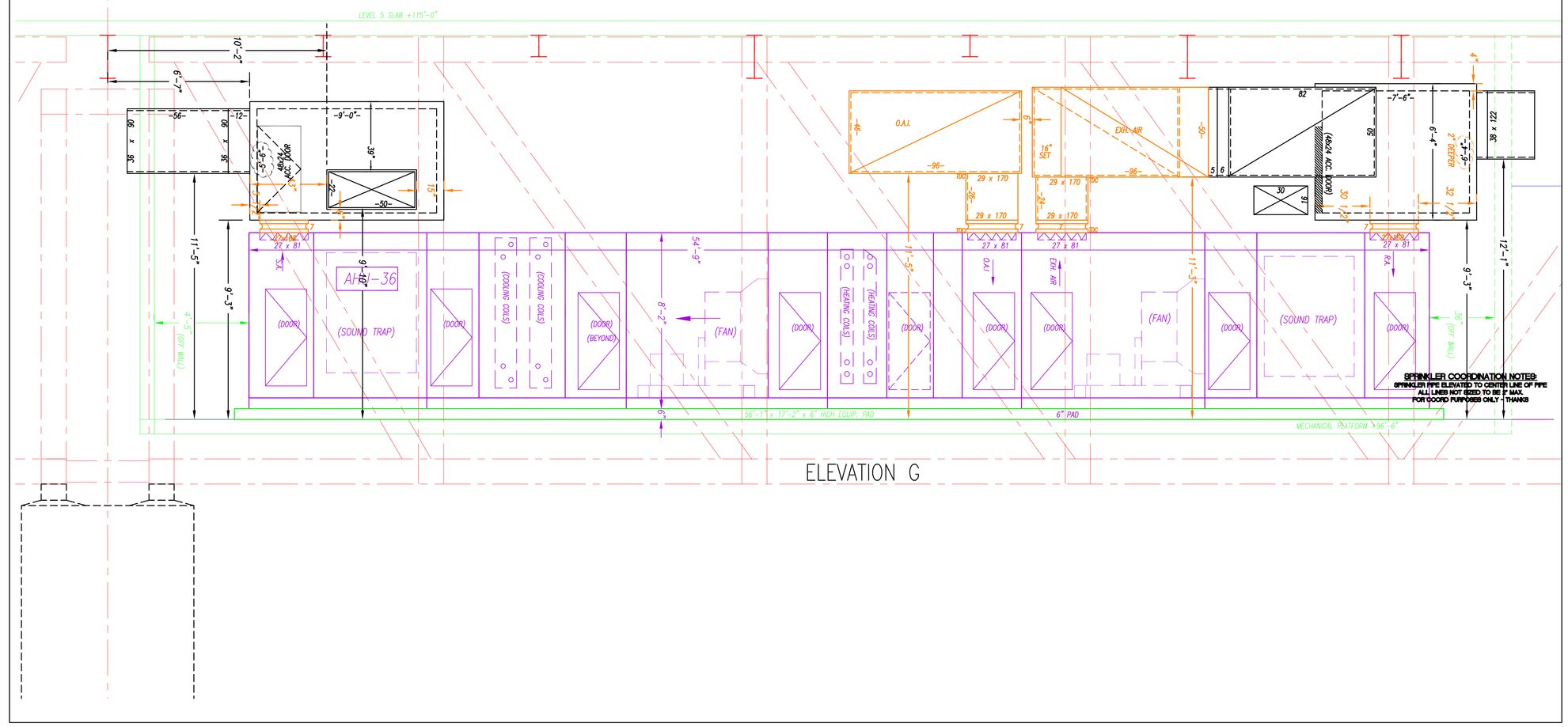
TITLE: LEVEL 4 PARTIAL DUCT PLAN

KEY DWG- M244 M249	LOC. COLS.		
SCALE: 3/8"=1'-0"	CH.	JOB NO.	8520
DATE: XX-XX-XX	DR. BLJ	DWG. NO.	SM 4-25

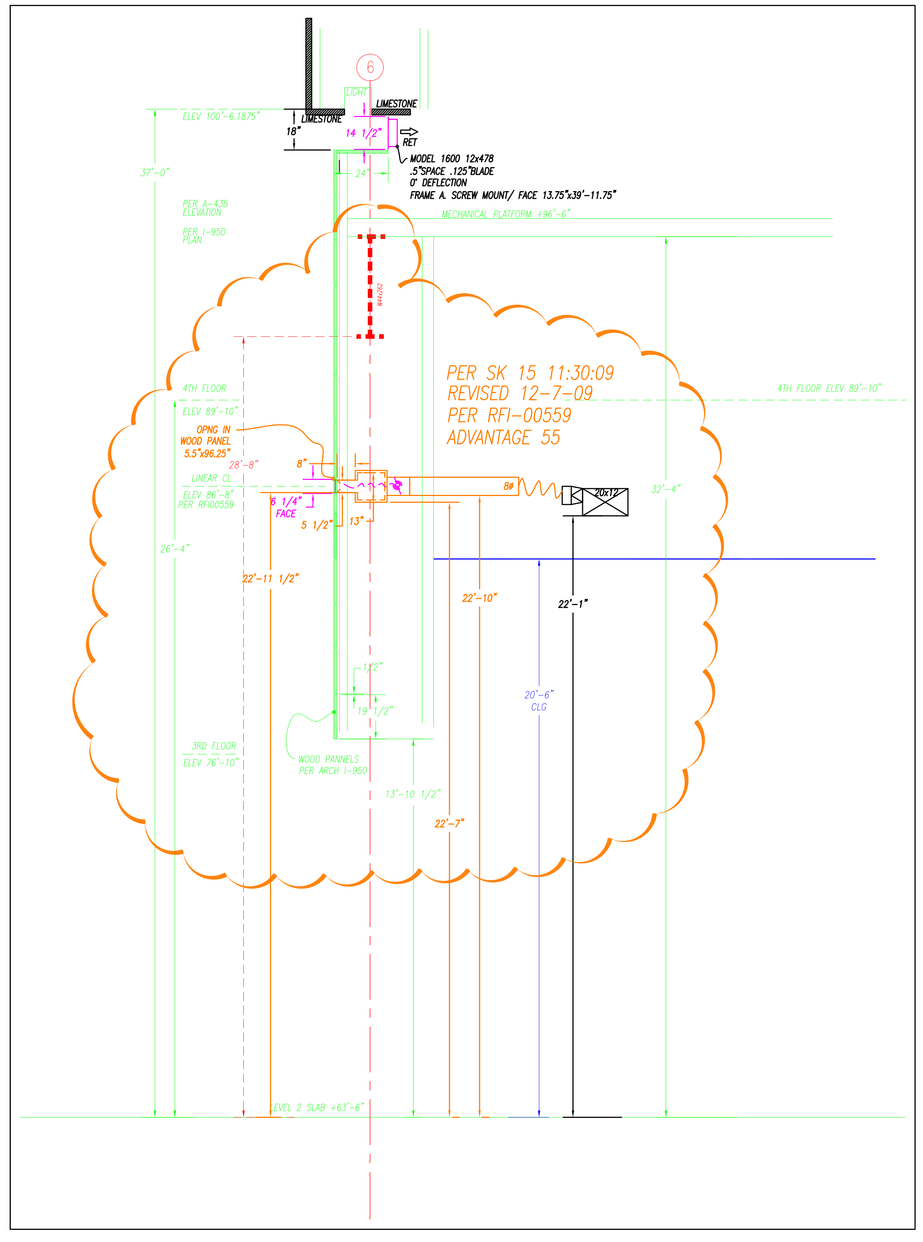
19 20 21 22



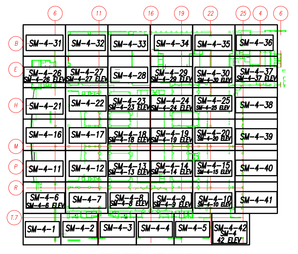
SECTION "Z-Z"



ELEVATION G



RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <=> = AIR FLOW - GALV. - NO ACOUST. LINING
3. - r'x'<=> = AIR FLOW - 1" ACOUST. LINING
4. - <=> SS = AIR FLOW - STAINLESS STEEL
5. - <=> ALUM = AIR FLOW - ALUMINUM
6. - ▷ = W.G. CONSTRUCTION OF DUCT
7. - T= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
C	FOR CONSTRUCTION	EG	12-15-09
R1	UNIT REVISION	MSO	09-15-09
A	FOR APPROVAL	BLJ	08-04-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 DUCT ELEVATIONS

REF.DWG- SM 4-26	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE XX-XX-XX	DR. BLJ	DWG. NO.	SM 4-26 ELEV

RECORD DRAWINGS
The Keating JV

REV'D	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-29-10
R2	REVISED FOR GRDS	EG	01-29-10
S1	SIGN OFF (REVISED FOR PLUMBING)	BLJ	01-14-10
C	FOR CONSTRUCTION	EG	10-15-09
S	SIGN OFF	MSO	10-17-09
R1	UNIT REVISION	MSO	09-15-09
A	FOR APPROVAL	BLJ	06-04-09

NOTES:
1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <=> = AIR FLOW – 1" ACOUST. LINING
4. – <=> IN = AIR FLOW – STAINLESS STEEL
5. – <=> ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – Tx: 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR; Bx: 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

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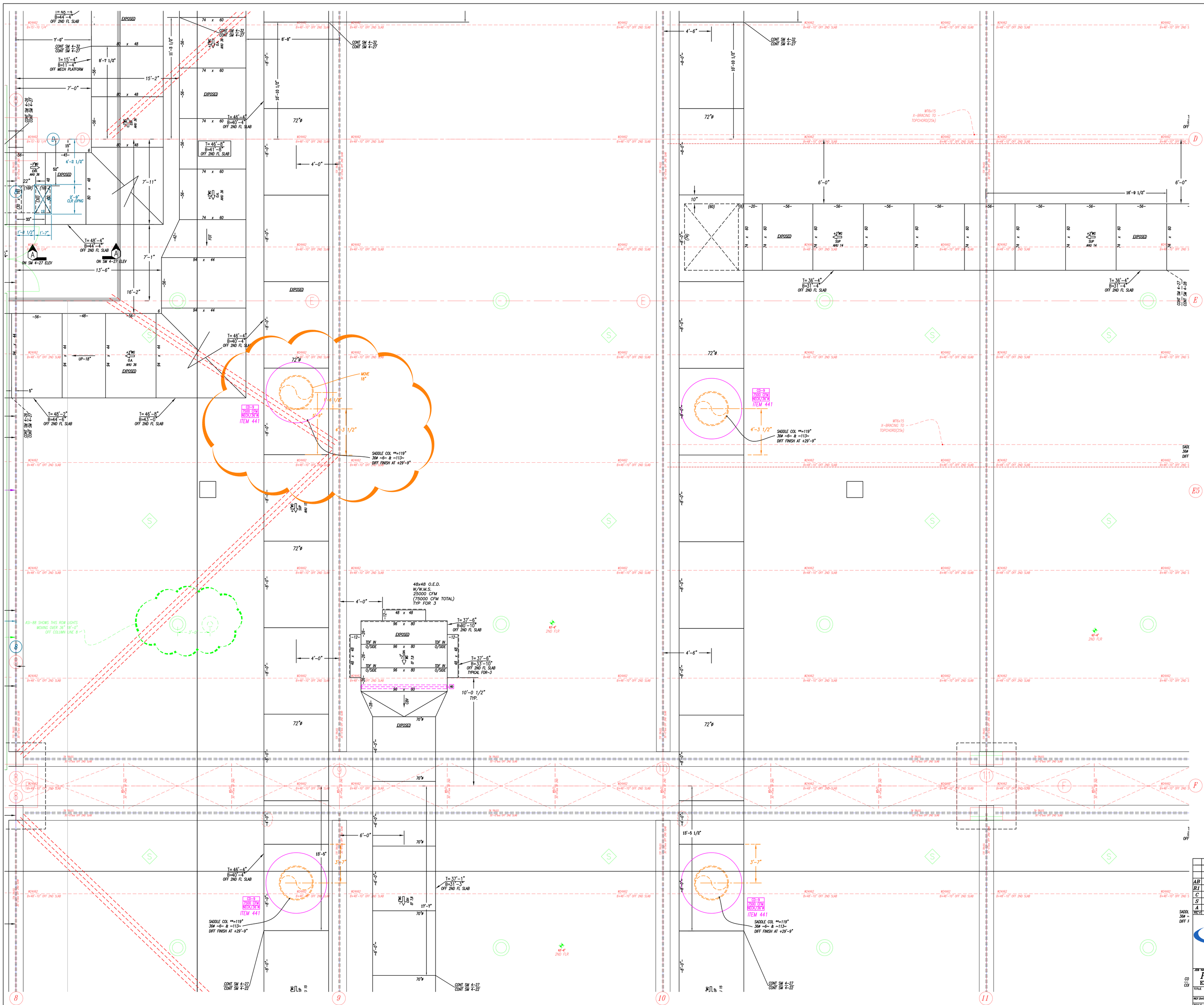
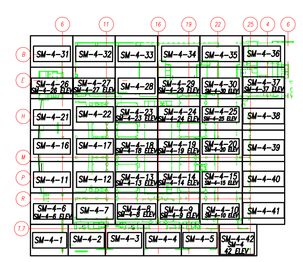
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF. DWG.: M240 | LOC. COILS:
SCALE: 3/8"=1'-0" | CH.: | JOB NO.: 8520
DATE: XX-XX-XX | DR.: BLJ | DWG. NO.: SM 4-26

FOURTH FLOOR





FOURTH FLOOR

RECORD DRAWINGS
The Keating JV

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <=> = AIR FLOW –1" ACOUST. LINING
4. – <=> #8 = AIR FLOW – STAINLESS STEEL
5. – <=> #36 = AIR FLOW – ALUMINUM
6. – [▷] = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-29-10
R1	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	10-30-09
S	SIGN OFF	BLJ	08-24-09
A	FOR APPROVAL	BLJ	08-04-09

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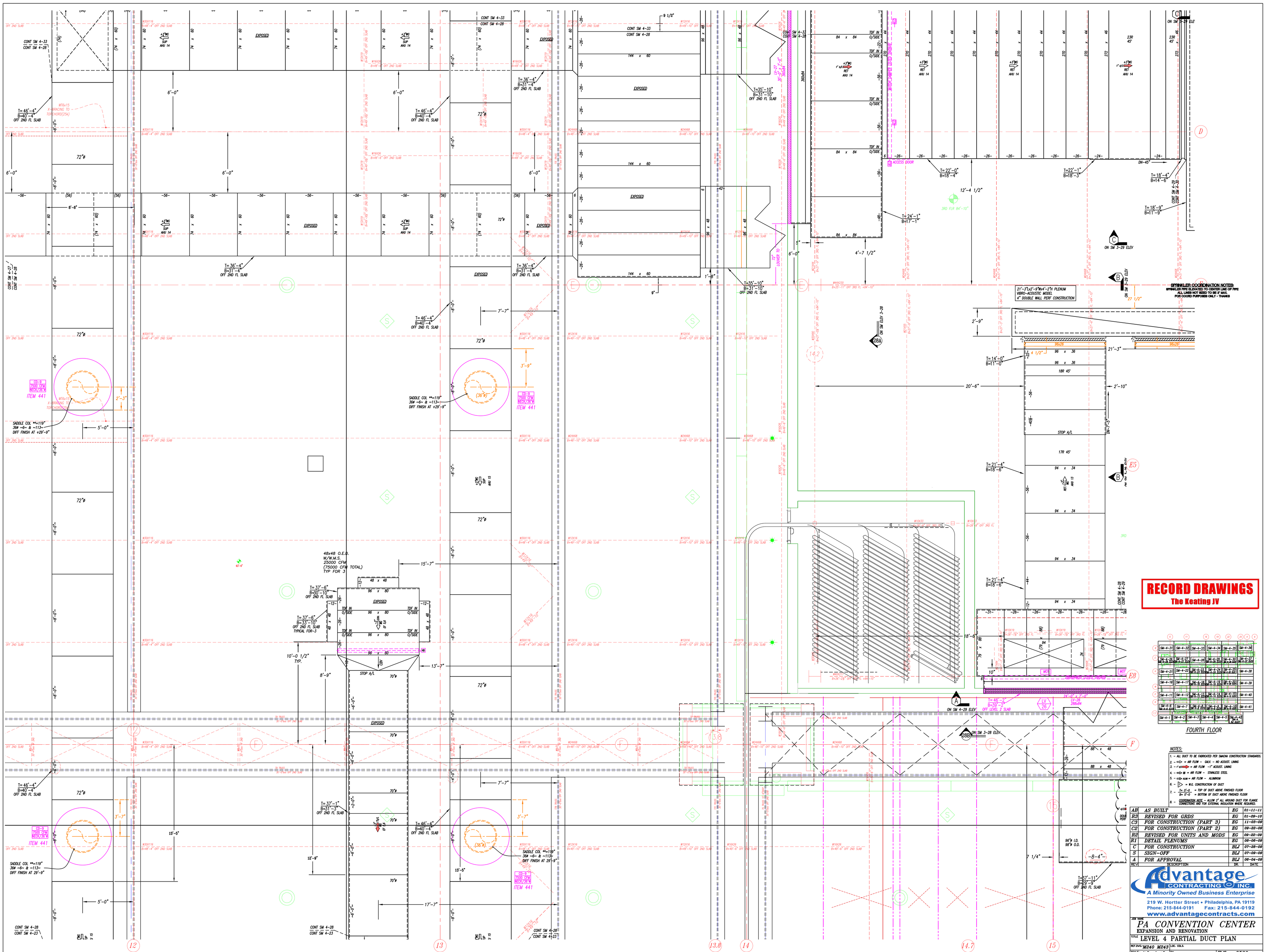
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF.DWGS: M240	LOC. COLS.		
SCALE: 3/8"=1'-0"	CH.	JOB NO. 8520	
DATE: 08-04-09	DR. BLJ	DWG. NO. SM 4-27	



NOTES:

1. ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. =G> = AIR FLOW – GALV. – NO ACOUST. LINING
3. =I.A.L.> = AIR FLOW –1" ACOUST. LINING
4. =SS> = AIR FLOW – STAINLESS STEEL
5. =AL> = AIR FLOW – ALUMINUM
6. [▷ = W.G. CONSTRUCTION OF DUCT
7. T= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. COORDINATION NOTE – ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	BY	DATE
AB	AS BUILT	EG	01-11-11
R3	REVISED FOR GRDS	EG	01-29-10
C3	FOR CONSTRUCTION (PART 3)	EG	11-03-09
C2	FOR CONSTRUCTION (PART 2)	EG	09-22-09
R2	REVISED FOR UNITS AND MODS	EG	08-22-09
R1	DETAIL PLENUMS	EG	08-06-09
C	FOR CONSTRUCTION	BLJ	07-28-09
S	SIGN-OFF	BLJ	07-09-09
A	FOR APPROVAL	BLJ	06-04-09

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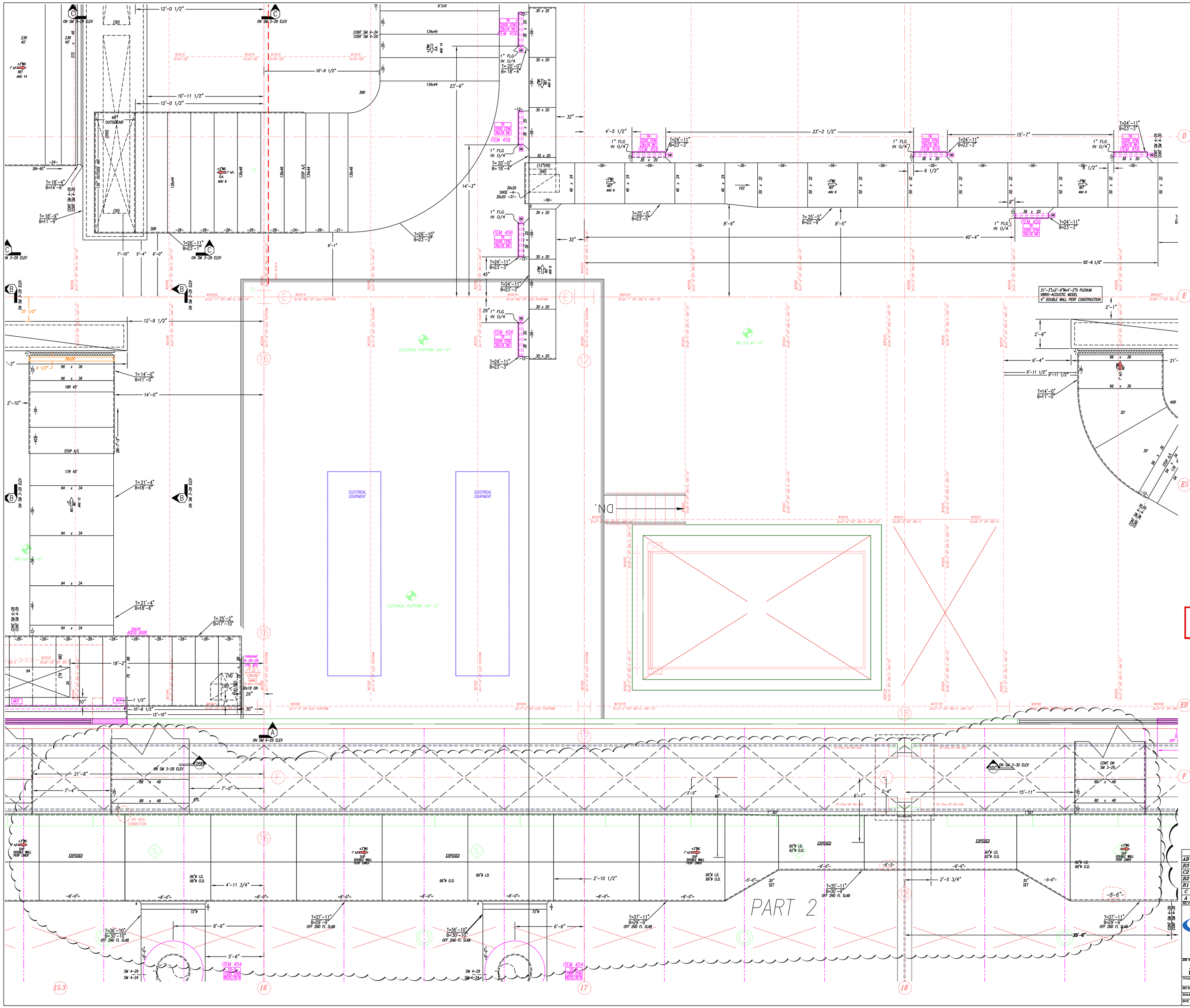
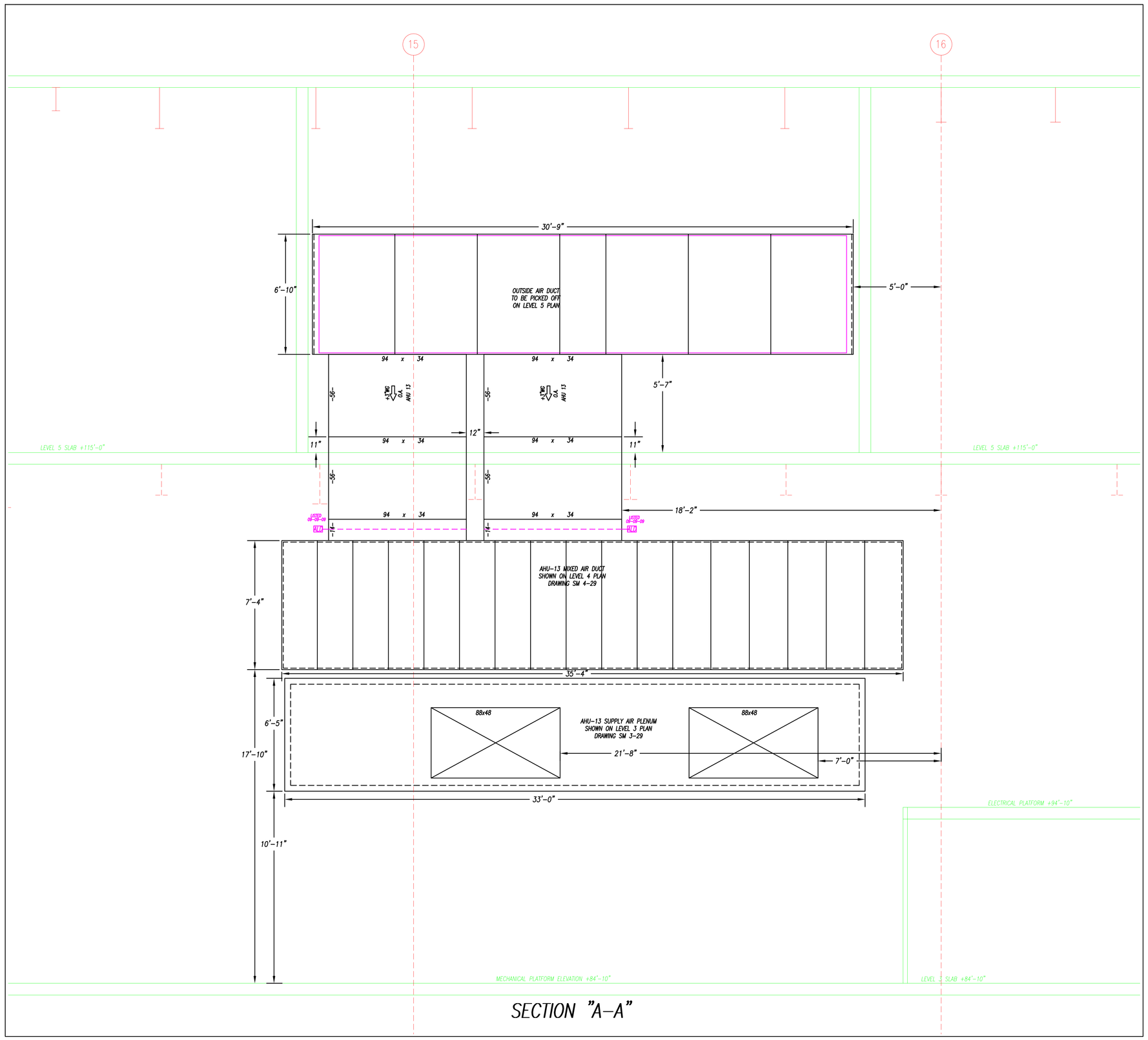
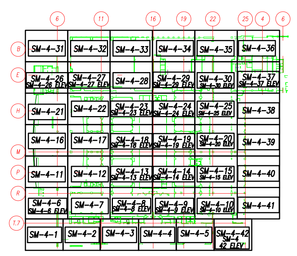
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION
TITLE: LEVEL 4 PARTIAL DUCT PLAN
KEY SVCS: M240 M243 LOC. COLS.
SCALE: 3/8"=1'-0" DR. BLJ
DATE: 06-04-09
JOB NO. 8520
DWG. NO. SM 4-28


ON SM 3-29 ELEV
12'-0 1/2"
10'-9 1/2"
10'-11 1/2"
48" OUTSIDE AIR (200)
18" OUTSIDE AIR (200)
T=18'-4" B=14'-6"
T=18'-9" B=11'-9"
T=26'-11" B=23'-1"
T=26'-10" B=23'-2"
CONT SM 4-28 CONT SM 4-29
7'-10"
5'-4"
6'-0"
6'-1"
14'-3"
23'-6"
8'-5"TYP.
134x44
136x46
STOP A/L
ITEM 456
TR 2500 CFM 36x18 NK
1" FLG IN O/4
T=20'-0" B=18'-4"
T=24'-11" B=23'-3"
T=25'-5" B=23-5
T=25'-5" B=22'-9"
ITEM 456 TR 2500 CFM 38x18 NK
4'-5 1/2"
23'-2 1/2"
15'-7"
6 1/2"
8'-9"
8'-5"
40'-4"
53'-8 1/2"
FDT
45°
29°
32"
(13"STR)
(6R)
30x20 SHOE -4- 30x20 -31-
ELECTRICAL PLATFORM +94'-10"
3RD FLR 84'-10"
ELECTRICAL EQUIPMENT
21'-3"x2'-9"Wx4'-2"H PLENUM
VIBRO-ACOUSTIC MODEL
4" DOUBLE WALL PERF CONSTRUCTION
2'-1"
2'-9"
6'-4"
6'-11 1/2"
8'-11 1/2"
T=14'-0" B=11'-0"
96 x 36
40R
30"
STOP A/L
14 x 17R 45°
12'-9 1/2"
27 1/2"
2'-10"
14'-0"
18R 45°
17R 45°
94 x 34
T=21'-4" B=18'-6"
T=25'-2" B=17'-10"
24x24 ACCESS DOOR
18'-2"
79 x 88
94
10"
1 1/2"
10'-8 1/2"
12'-10"
30x18 DN 26"
(18")
(50")
MOT
MOT
released 11-28-09 TPK, PM
T.O. 30x18 DWG M-MCH-1104R2
ON SM 4-29 ELEV
6N SM 3-28 ELEV
26B
21'-8"
7'-4"
7'-0"
88 x 48
3'-5"
6'-1"
3'-6"
15'-11"
90°
1" SET
30C
ON SM 3-30 ELEV
CONT ON SM 3-29
80 x 48
INF. W/O CONNECTION
+3"WC
1" AA
SUP DOUBLE WALL PERF LINER
EXPOSED
96"ø I.D. 98"ø O.D.
98"ø O.D.
4'-11 3/4"
2'-10 1/2"
2'-5 3/4"
60"ø I.D. 62"ø O.D.
90"ø I.D. 98"ø O.D.
T=36'-10" B=30'-10" OFF 2ND FL SLAB
T=37'-11" B=29'-9" OFF 2ND FL SLAB
T=35'-11" B=30'-9" OFF 2ND FL SLAB
72"ø
8'-6"
6'-6"
5'-6"
35" SET
ITEM 454 TR 2500 CFM 36x18 NEK/36"W
SW 4-29 SW 4-24
PART 2
FOURTH FLOOR
NOTES:
1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⇨ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – 1"AA ⇨ = AIR FLOW –1" ACOUST. LINING
4. – ⇨ SS = AIR FLOW – STAINLESS STEEL
5. – ⇨ ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.
AB AS BUILT EG 01-29-10
R3 REVISED FOR GRDS EG 01-29-10
C2 FOR CONSTRUCTION (PART 2) EG 09-22-09
R2 REVISED FOR UNITS AND MODS EG 09-22-09
R1 REVISED FOR PLENUM DETAILS EG 08-07-09
C FOR CONSTRUCTION BLJ 06-30-09
A FOR APPROVAL BLJ 06-08-09
DEVI DESCRIPTION DR. DATE
RECORD DRAWINGS
The Keating JV
Advantage CONTRACTING GROUP, INC.
A Minority Owned Business Enterprise
219 W. Hortter Street • Philadelphia, PA 19119
Phone: 215-844-0191 Fax: 215-844-0192
www.advantagecontracts.com
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION
TITLE
LEVEL 4 PARTIAL DUCT PLAN
REF.DWG- M243
LOC. COLS.
SCALE 3/8"=1'-0"
CH.
JOB NO. 8520
DATE 06-08-09
DR. BLJ
DWG. NO. SM 4-29



SECTION "A-A"

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <=> = AIR FLOW - GALV. - NO ACOUST. LINING
3. - 1"AL<=> = AIR FLOW -1" ACOUST. LINING
4. - <=> SS = AIR FLOW - STAINLESS STEEL
5. - <=> ALUM = AIR FLOW - ALUMINUM
6. - ▷ = W.G. CONSTRUCTION OF DUCT
7. - 1x 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   8x 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND TDC EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	BLJ	01-11-11
C	FOR CONSTRUCTION	BLJ	06-30-09
A	FOR APPROVAL	BLJ	06-08-09

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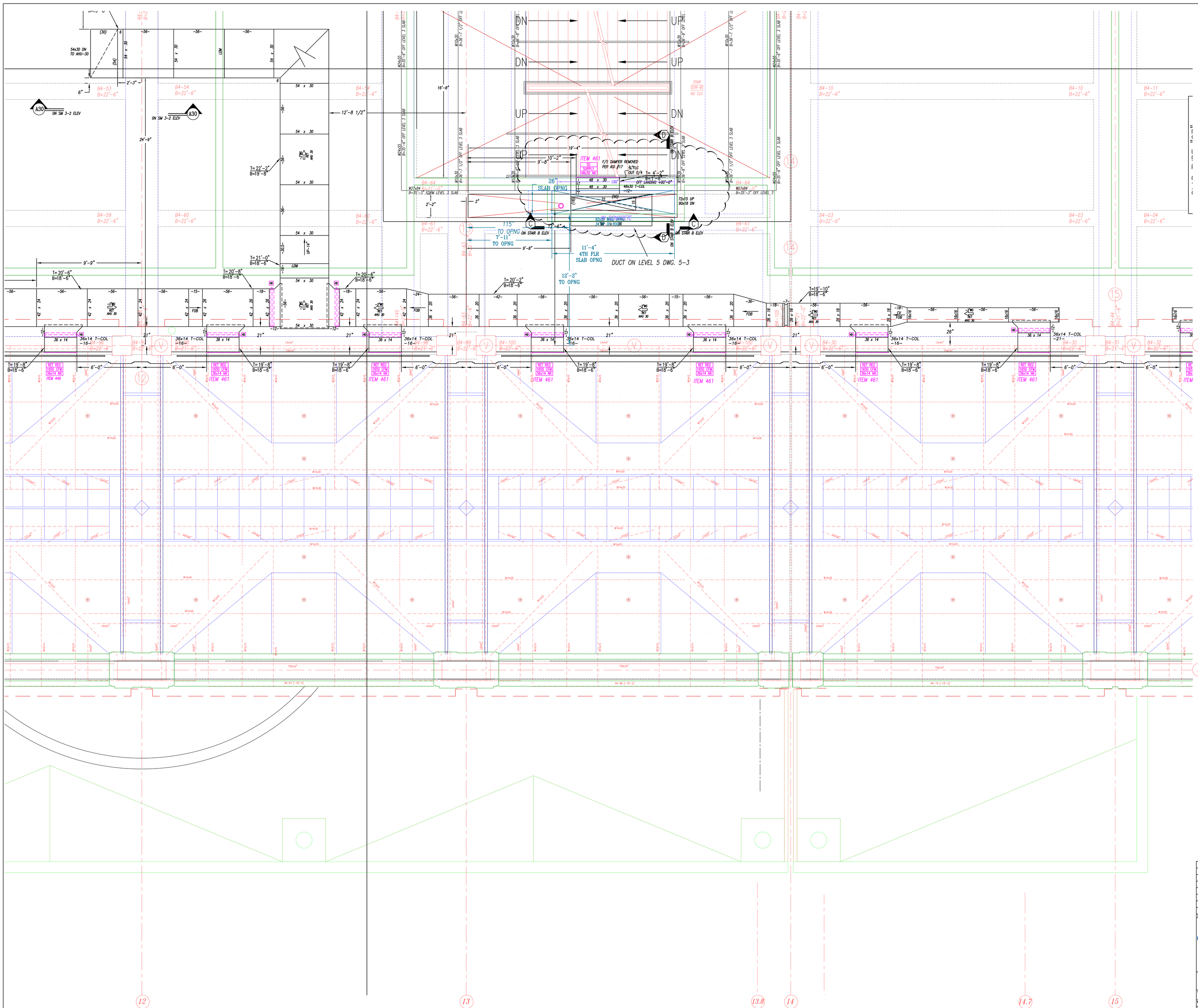
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 DUCT ELEVATIONS

REF. DWG: SM 4-29	LOC. COLS:		
SCALE: 3/8"=1'-0"	CK.	JOB NO.	8520
DATE: 06-08-09	DR. BLJ	DWG. NO.	SM 4-29 ELEV



SPRINKLER COORDINATION NOTES:
SPRINKLER PIPE ELEVATED TO CENTER LINE OF PIPE
ALL LINES NOT SIZED TO BE 2" MAX.
FOR COORD PURPOSES ONLY - THANKS

RECORD DRAWINGS
The Keating JV

FOURTH FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <C> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <AA150> = AIR FLOW –1" ACOUST. LINING
4. – <S> SS = AIR FLOW – STAINLESS STEEL
5. – <C> ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – $\frac{7\pm\ 0'-0}{8\pm\ 9'-0}$ = TOP OF DUCT ABOVE FINISHED FLOOR / BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	BY	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	11-04-09
S	SIGN-OFF	BLJ	08-19-09
A	FOR APPROVAL	BLJ	05-19-09

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www.advantagecontracts.com

JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF.DWG.- M242	LOC. COILS.		
SCALE 3/8"=1'-0"	CH.	JOB NO. 8520	
DATE XX-XX-XX	DR. BLJ	DWG. NO. SM 4-3	

RECORD DRAWINGS
The Keating JV

PART 2

FOURTH FLOOR

NOTES:
1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <=> = AIR FLOW – 1" ACOUST. LINING
4. – <=> IS = AIR FLOW – STAINLESS STEEL
5. – <=> ALM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-29-10
R3	REVISED FOR GRDS	EG	01-29-10
C2	FOR CONSTRUCTION (PART 2)	EG	09-22-09
R2	REVISED FOR UNITS AND MODS	EG	09-22-09
R1	PLENUM DETAILED	EG	08-07-09
S	SIGN OFF	BLJ	07-09-09
C	FOR CONSTRUCTION	BLJ	06-22-09
A	FOR APPROVAL	BLJ	06-08-09

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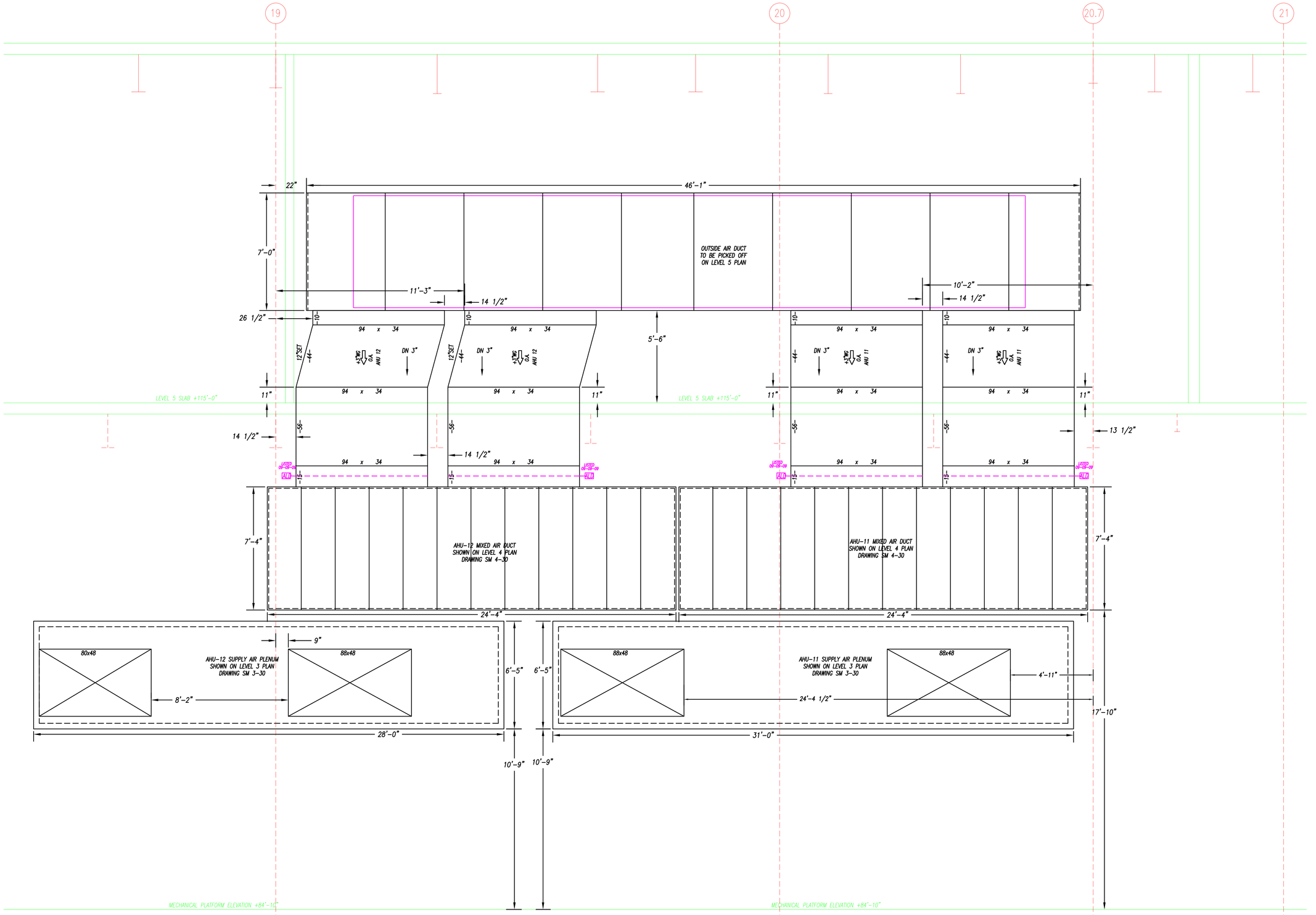
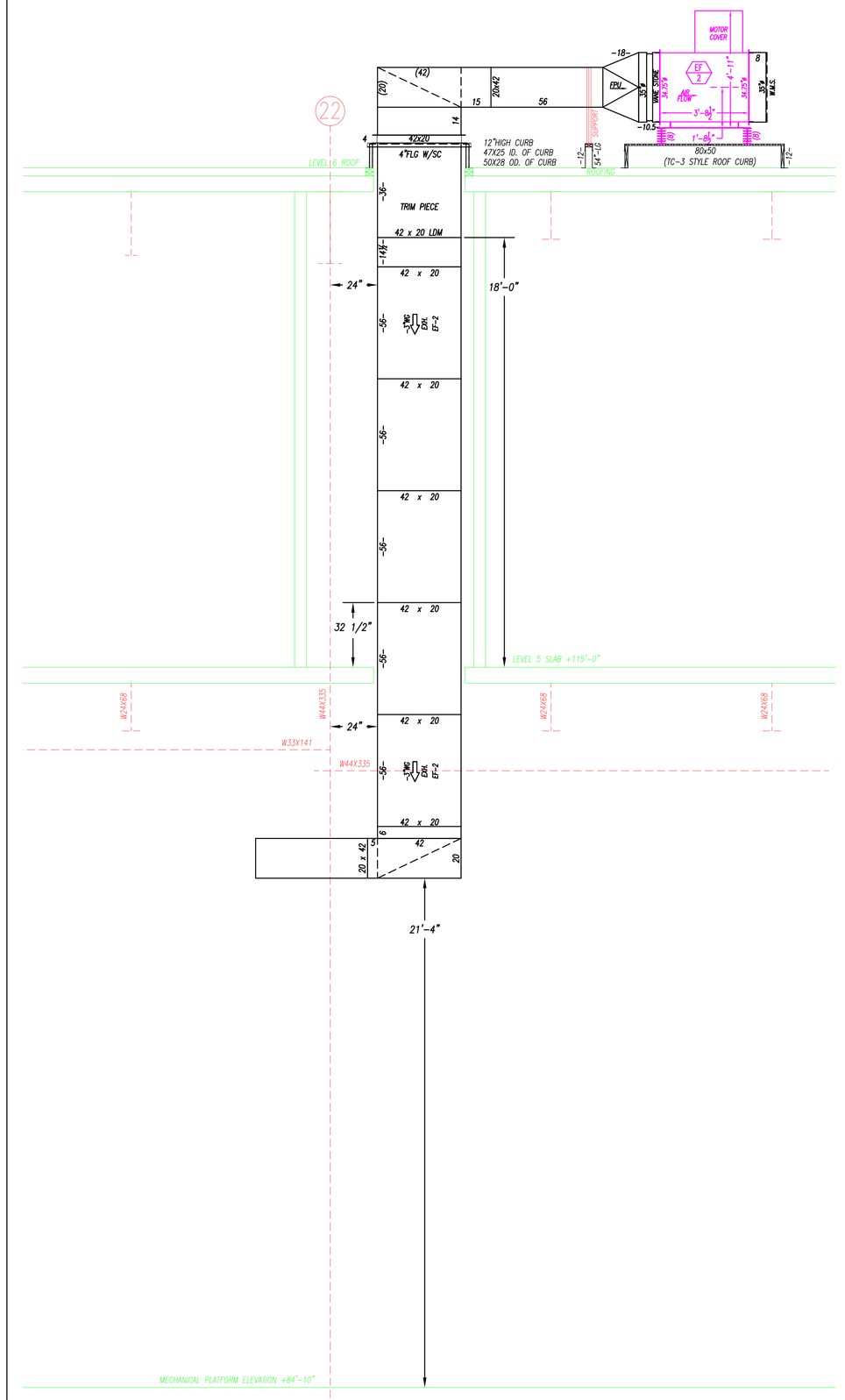
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF DWG: M243 M246	LOC. COLS.		
SCALE: 1/8"=1'-0"	CH.	JOB NO.	8520
DATE: 06-08-09	DR. BLJ	DWG. NO.	SM 4-30



SECTION "A–A"

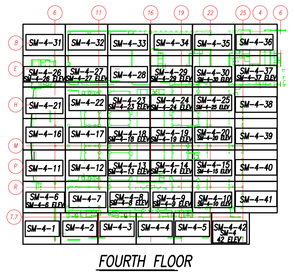


SECTION "B–B"

RECORD DRAWINGS
The Keating JV

NOTES:

1. – = ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <G> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <A> = AIR FLOW –1" ACOUST. LINING
4. – <S> = AIR FLOW – STAINLESS STEEL
5. – <AL> = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – 5x 6'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.



FOURTH FLOOR

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	BLJ	01-11-11
C2	FOR CONSTRUCTION (REV ELEV BB)	BLJ	12-09-09
C	FOR CONSTRUCTION	BLJ	08-20-09
A	FOR APPROVAL	BLJ	08-08-09

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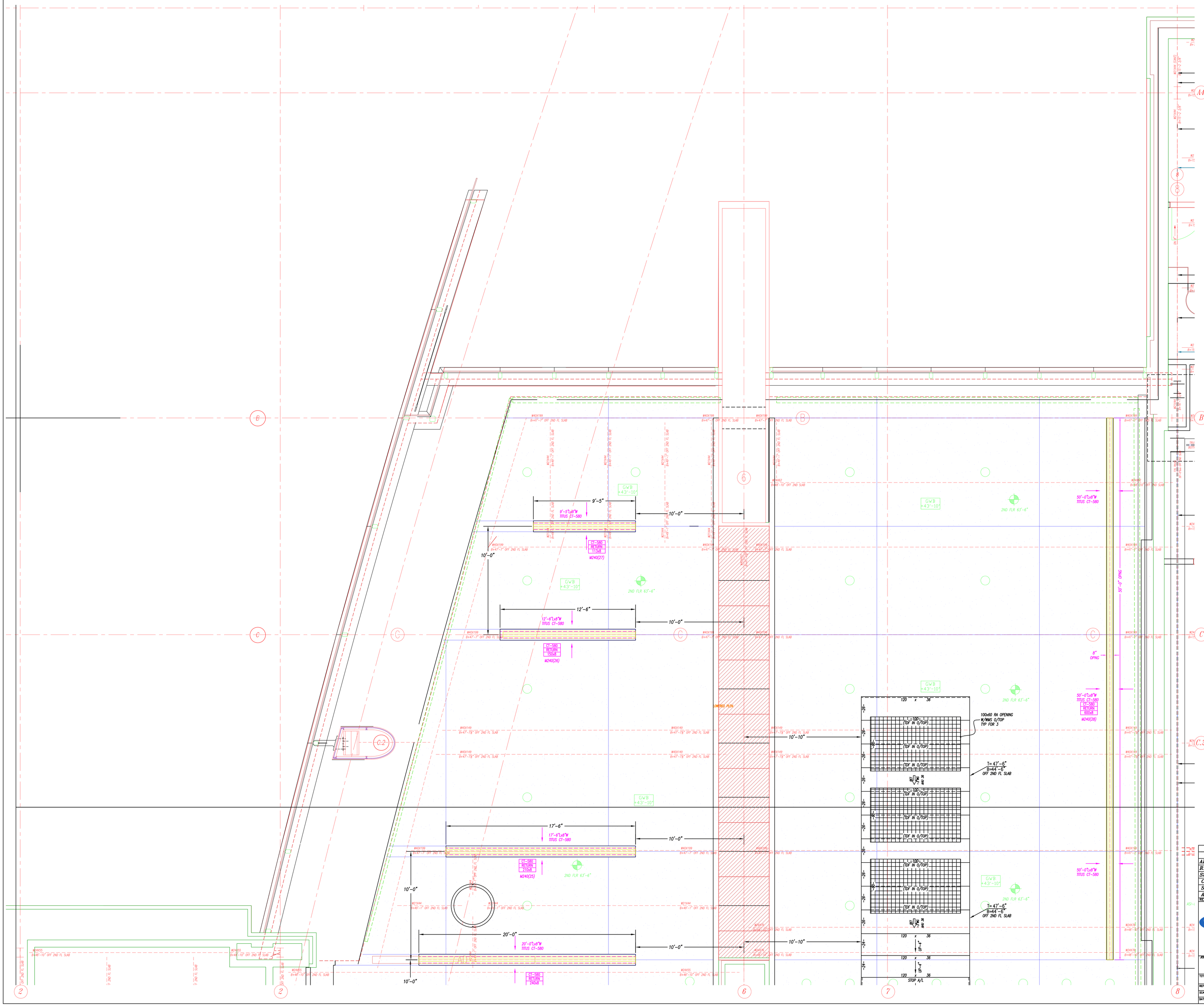
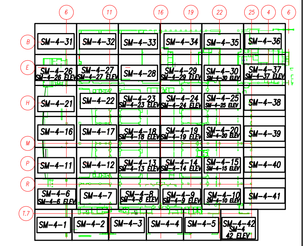
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 DUCT ELEVATIONS

REF DWG-	SM 4-30	LOC. COLS.	
SCALE	3/8"=1'-0"	CH.	JOB NO. 8520
DATE	06-08-09	DR. BLJ	DWG. NO. SM 4-30 ELEV



RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – =\|\|= = AIR FLOW – GALV. – NO ACOUST. LINING
3. – =\|\|=> = AIR FLOW –1" ACOUST. LINING
4. – =\|\|= ≡ = AIR FLOW – STAINLESS STEEL
5. – =\|\|= ALM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-29-10
R1	REVISED FOR GRDS	EG	01-29-10
S2	RESIGN (PIPING CONFLICTS)	EG	12-17-09
C	FOR CONSTRUCTION	EG	12-15-09
S	SIGN OFF	BLJ	12-17-09
A	FOR APPROVAL	BLJ	06-08-09

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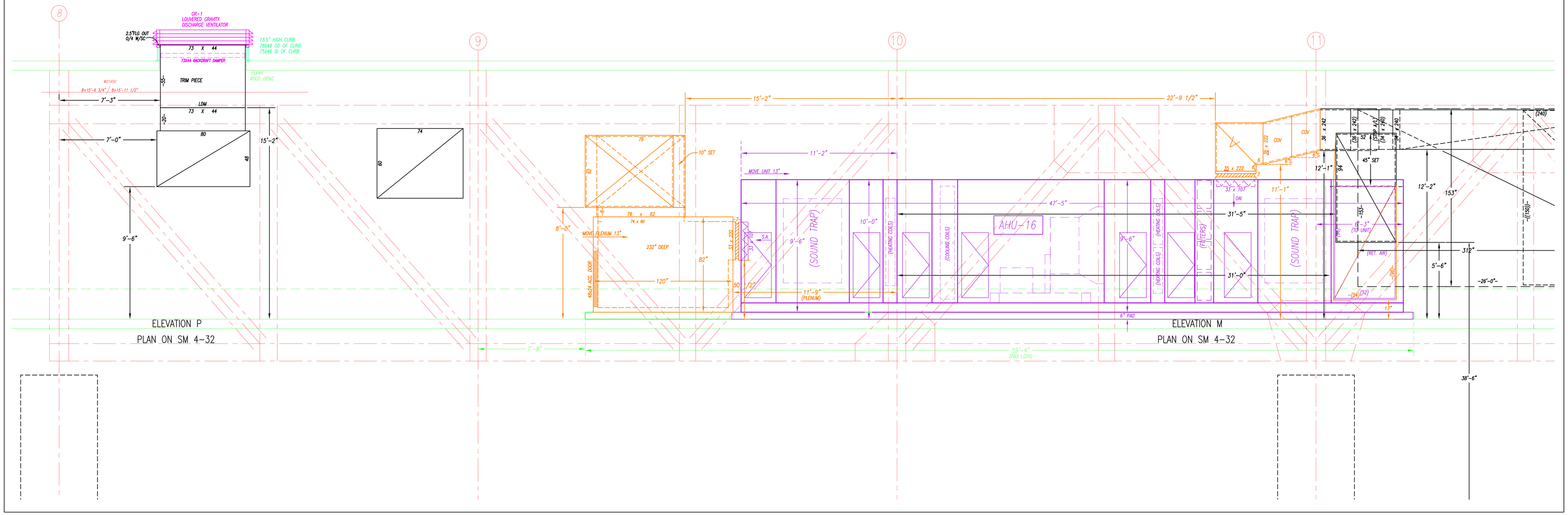
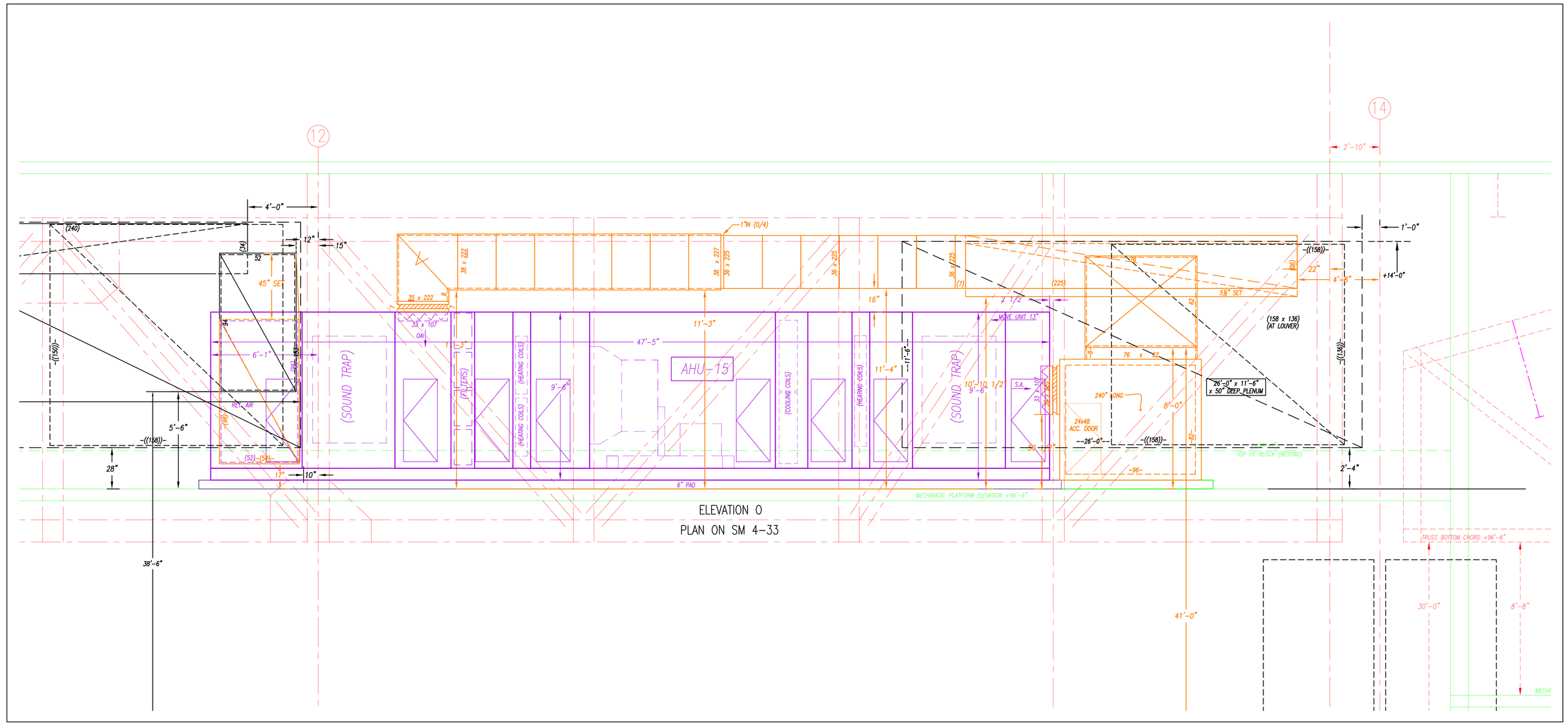
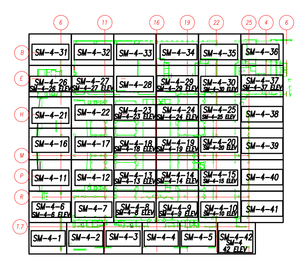
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF.DWG- M240	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 06-09-08	DR. BLJ	DWG. NO.	SM 4-31







FOURTH FLOOR

RECORD DRAWINGS
The Keating JV

NOTES: FILE COPY (XX-XX-XX)

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <G> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <AI> = AIR FLOW – 1" ACOUST. LINING
4. – <S> = AIR FLOW – STAINLESS STEEL
5. – <A> = AIR FLOW – ALUMINUM
6. – |▷ = W.G. CONSTRUCTION OF DUCT
7. – 7'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; 8'-6" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
C	FOR CONSTRUCTION	EG	10-30-09
S	SIGN OFF	BLJ	09-24-09
R1	UNIT REVISION	MSO	09-11-09
A	FOR APPROVAL	BLJ	08-08-09

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JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 4 PARTIAL DUCT PLAN

REF DWGS.- M240	LDC. COILS		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 10-14-09	DR. BLJ	DWG. NO.	SM 4-32ELEV

RECORD DRAWINGS
The Keating JV

THIS AREA FOR CONSTRUCTION ONLY PART-1 08-10-09 DONE

FOURTH FLOOR

NOTES:
1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⇨ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – 1"AL ⇨ = AIR FLOW – 1" ACOUST. LINING
4. – ⇨ SS = AIR FLOW – STAINLESS STEEL
5. – ⇨ ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – 2x 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV'D	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-29-10
R2	REVISED FOR GRDS	EG	01-29-10
C2	FOR CONSTRUCTION PART 2	EG	10-30-09
R1	REVISED FOR UNITS AND MODS	EG	09-22-09
R	UNIT REVISIONS	MSO	09-11-09
C	FOR CONSTRUCTION PART 1	BLJ	08-10-09
A	FOR APPROVAL	BLJ	06-08-09

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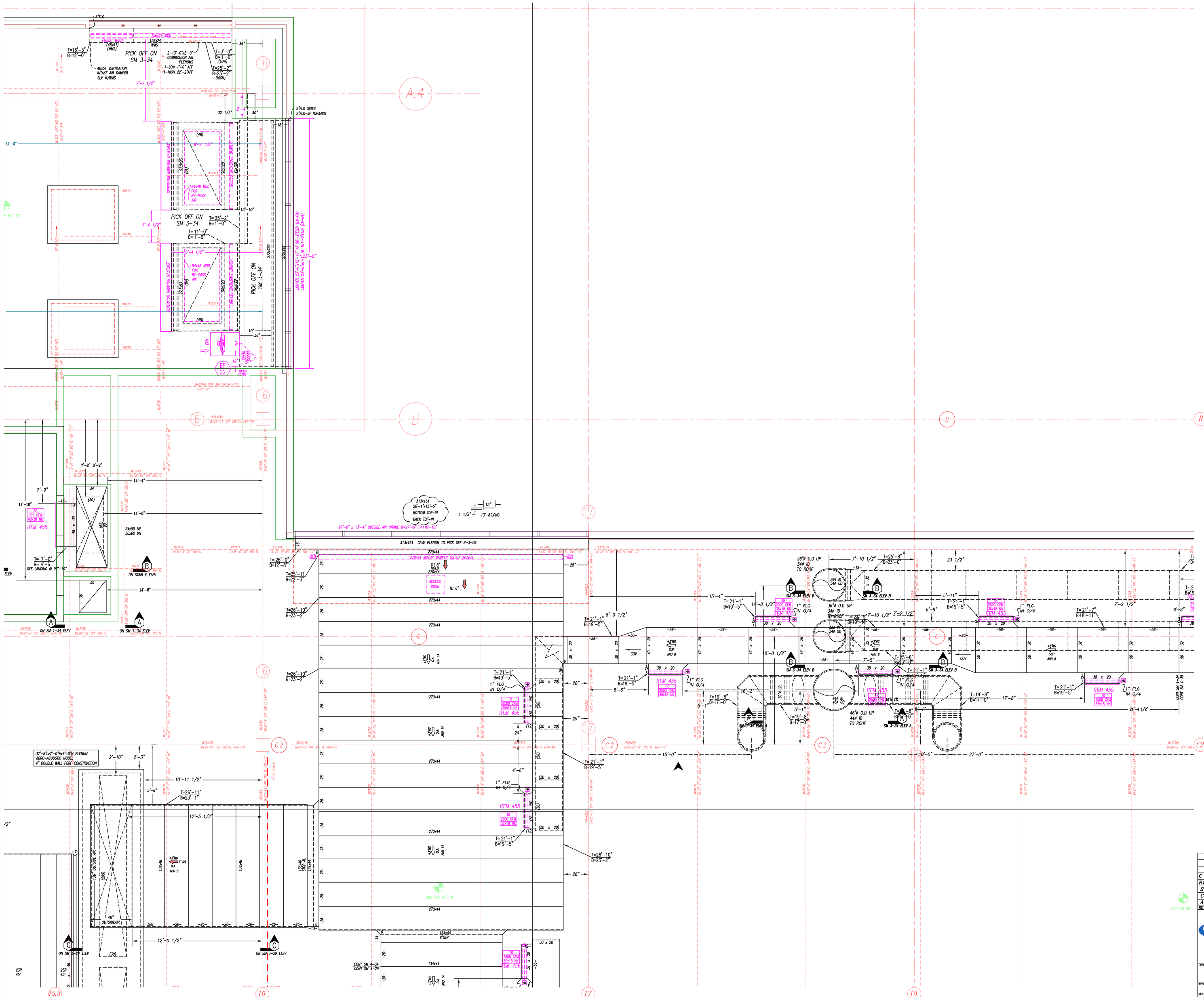
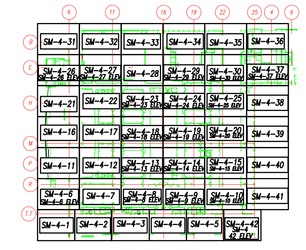
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF DWG: M240 M243 LOC. COLS.
SCALE: 3/8"=1'-0" DR. JOB NO. 8520
DATE: 06-08-09 DR. BLJ DWG. NO. SM 4-33



RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. – = ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – ⊓⊓ = AIR FLOW – 1" ACOUST. LINING
4. – <=> ▦ = AIR FLOW – STAINLESS STEEL
5. – <=> Alum = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
C	AS BUILT	EG	01-11-11
R1	REVISED PER GRDS	EG	02-01-10
S	SIGN OFF	BLJ	10-01-09
C	FOR CONSTRUCTION	BLJ	08-30-09
A	FOR APPROVAL	BLJ	08-08-09

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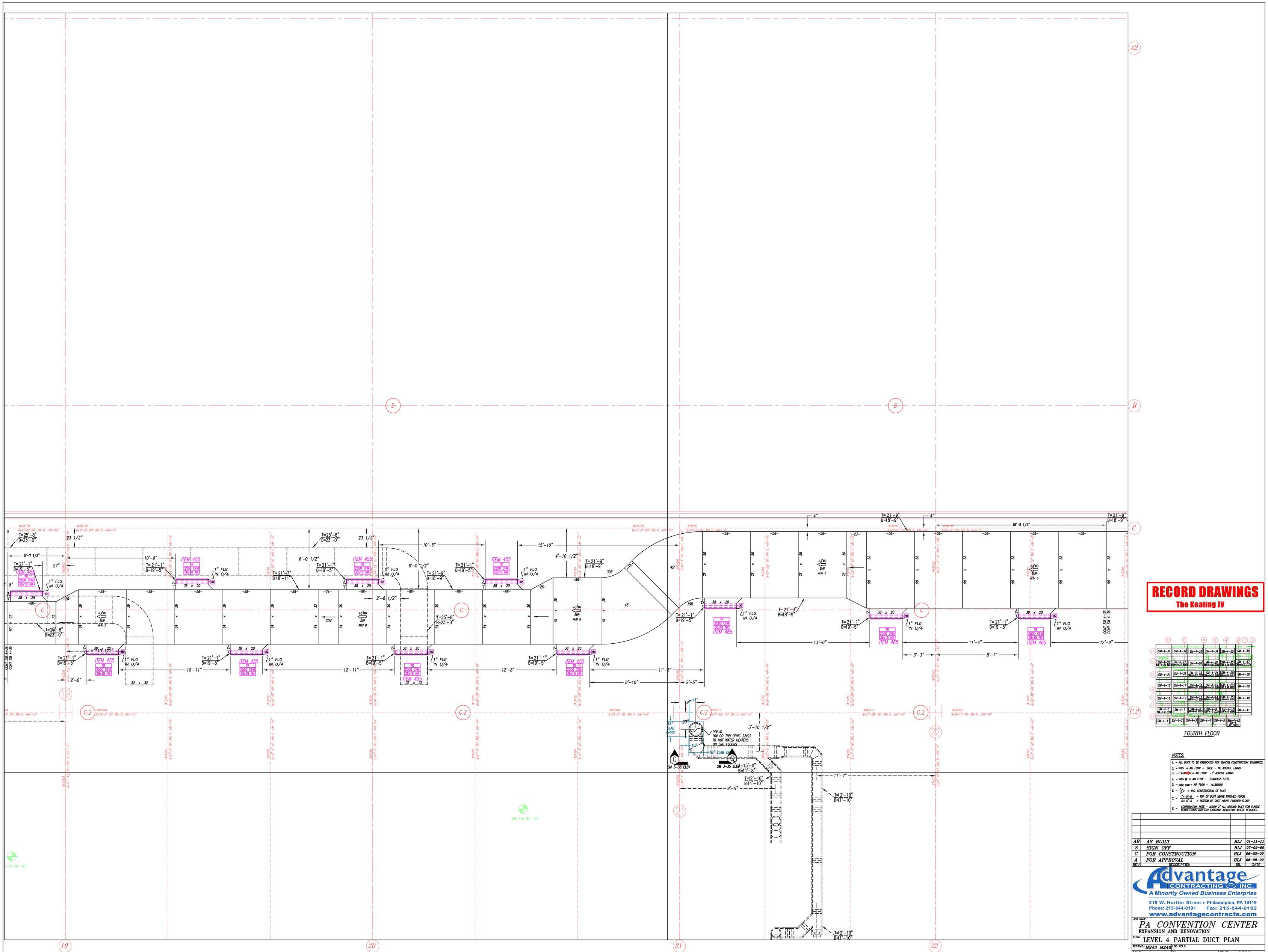
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF DWG-	M-243
SCALE	3/8"=1'-0"
DATE	06-08-09
LOC. COLS.	
CH.	
DR.	BLJ
JOB NO.	8520
DWG. NO.	SM 4-34



RECORD DRAWINGS
The Keating JV

FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <G> = AIR FLOW – GALV. – NO ACOUST. LINING
3. - <AL1"AC> = AIR FLOW – 1" ACOUST. LINING
4. - <S> = AIR FLOW – STAINLESS STEEL
5. - <AL> = AIR FLOW – ALUMINUM
6. - ▷ = W.G. CONSTRUCTION OF DUCT
7. - T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV'D	DESCRIPTION	DR.	DATE
AB	AS BUILT	BLJ	01-11-11
S	SIGN OFF	BLJ	07-09-09
C	FOR CONSTRUCTION	BLJ	06-22-09
A	FOR APPROVAL	BLJ	06-08-09

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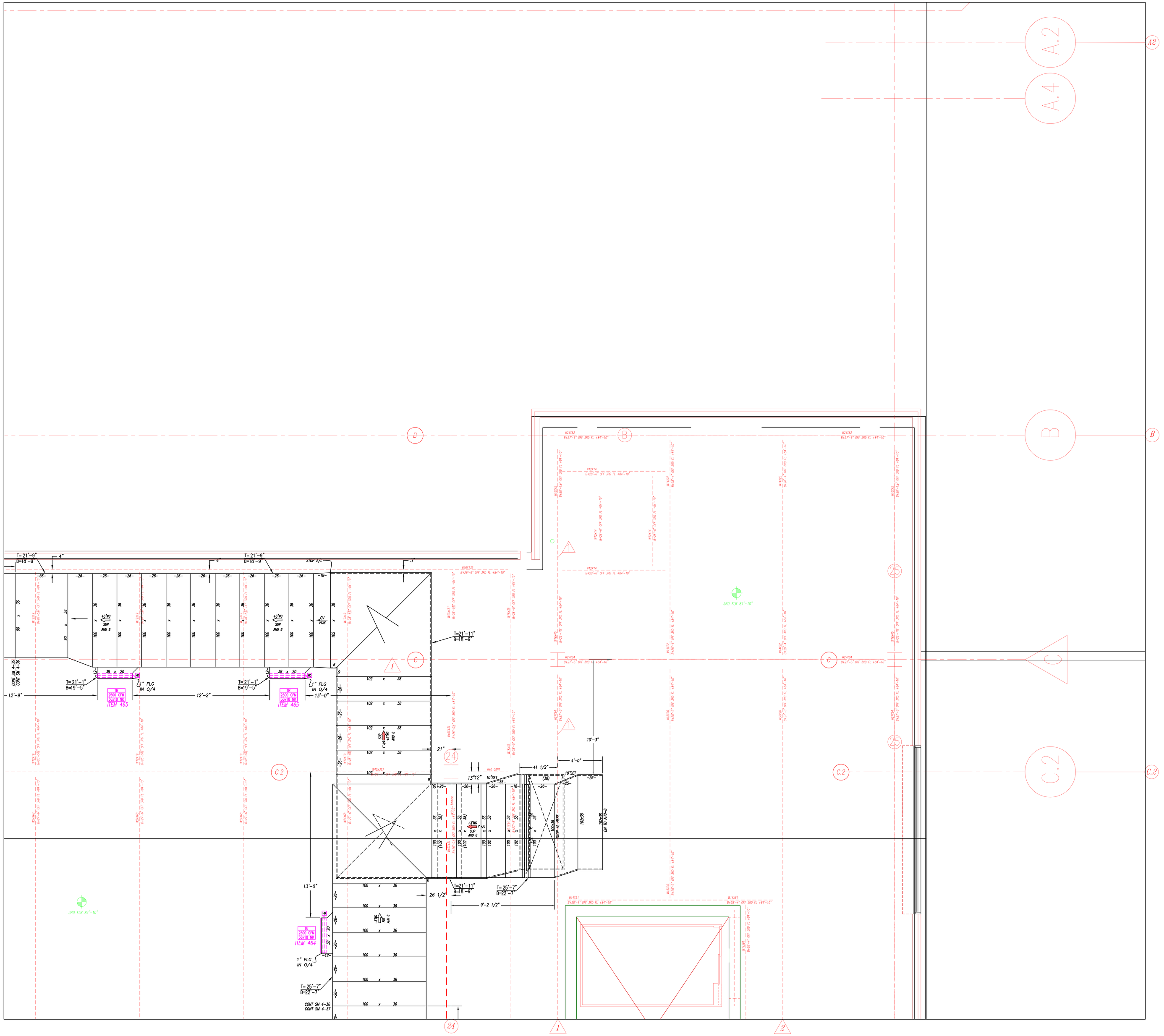
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 4 PARTIAL DUCT PLAN

REF. DWGS.- M243 M246	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 06-08-09	DR. BLJ	DWG. NO.	SM 4-35


A.2
A.4
A2
B
B
C.2
C
C.2
C.2
1
2
24
25
3RD FLR 84'-10"
FOURTH FLOOR
RECORD DRAWINGS
The Keating JV
NOTES:
1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <G> = AIR FLOW - GALV. - NO ACOUST. LINING
3. - 1" ACOUST = AIR FLOW - 1" ACOUST. LINING
4. - <SS> SS = AIR FLOW - STAINLESS STEEL
5. - <AL> ALM = AIR FLOW - ALUMINUM
6. - = W.G. CONSTRUCTION OF DUCT
7. - T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.
AB AS BUILT EG 09-22-09
R1 REVISED FOR UNITS AND MODS EG 09-22-09
S SIGN OFF BLJ 07-09-09
C FOR CONSTRUCTION BLJ 06-22-09
A FOR APPROVAL BLJ 06-08-09
REV. DESCRIPTION DR. DATE
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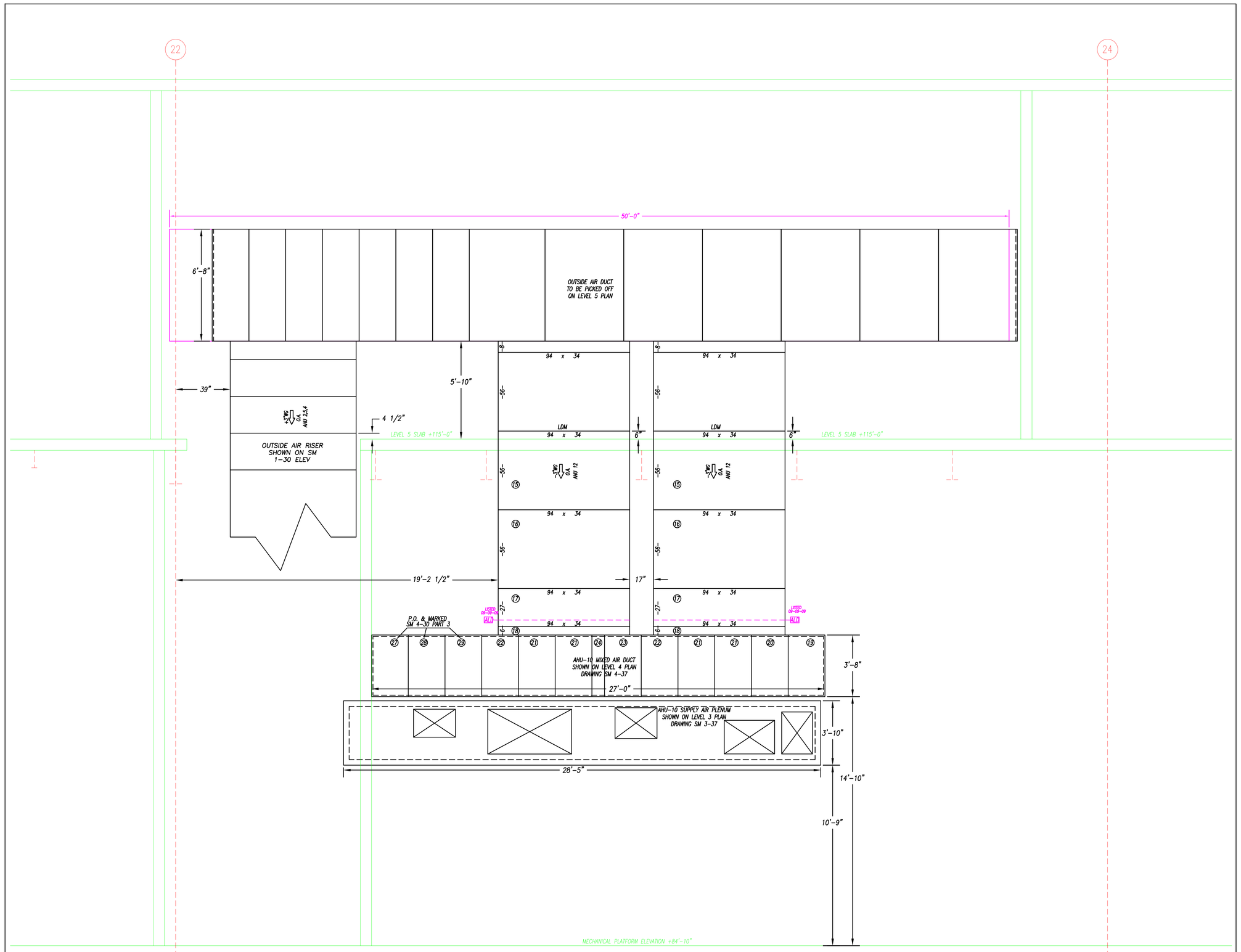
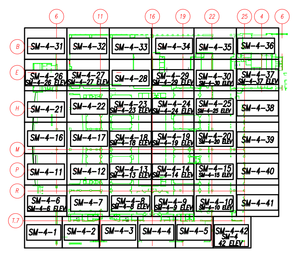
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION
TITLE
LEVEL 4 PARTIAL DUCT PLAN
REF. DWG. M246
LOC. COLS.
SCALE 3/8"=1'-0"
CH.
JOB NO. 8520
DATE 06-08-09
DR. BLJ
DWG. NO. SM 4-36



SECTION "A-A"

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <C> = AIR FLOW - GALV. - NO ACOUST. LINING
3. - <1"ACOUST> = AIR FLOW - 1" ACOUST. LINING
4. - <S> SS = AIR FLOW - STAINLESS STEEL
5. - <S> ALUM = AIR FLOW - ALUMINUM
6. - ▷ = W.G. CONSTRUCTION OF DUCT
7. - 7'± 0"-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   8'± 0"-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.'S	DESCRIPTION	DR.	DATE
AB	AS BUILT	BLJ	01-11-11
C	FOR CONSTRUCTION	BLJ	08-22-09
A	FOR APPROVAL	BLJ	08-08-09

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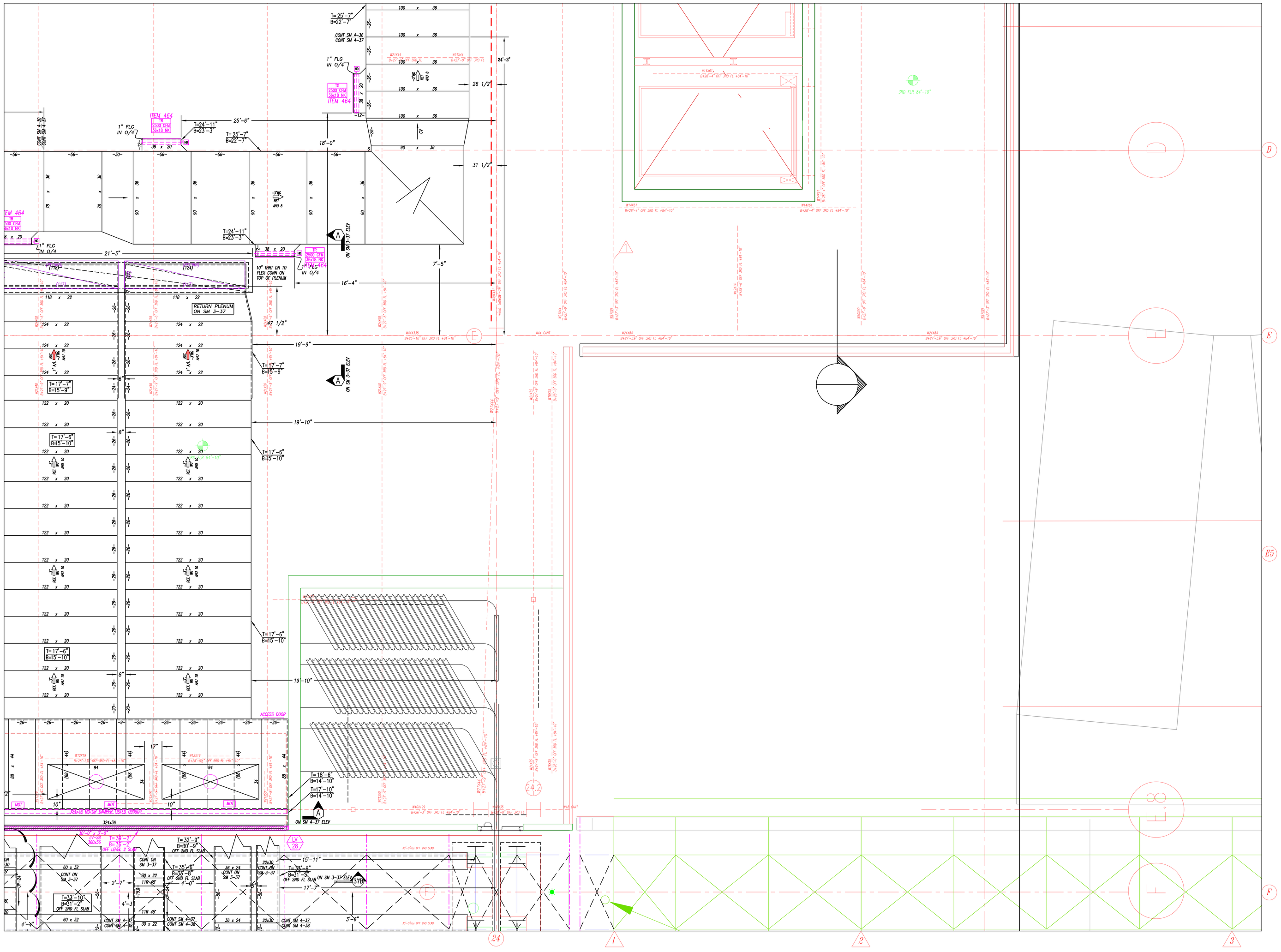
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 DUCT ELEVATIONS

REF.DWG.- SM 4-37	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 08-08-09	DR. BLJ	DWG. NO.	SM 4-37 ELEV



RECORD DRAWINGS
The Keating JV

NOTES:
1. ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. ⇨ = AIR FLOW – GALV. – NO ACOUST. LINING
3. ⇨ = AIR FLOW – 1" ACOUST. LINING
4. ⇨ = AIR FLOW – STAINLESS STEEL
5. ⇨ = AIR FLOW – ALUMINUM
6. ▷ = W.G. CONSTRUCTION OF DUCT
7. T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	09-22-09
R2	REVISED UNITS AND MODS	EG	09-22-09
R1	DETAILED PLENUM	EG	08-07-09
S	SIGN OFF	BLJ	07-09-09
C	FOR CONSTRUCTION	BLJ	06-22-09
A	FOR APPROVAL	BLJ	06-08-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF DWG: M246	LDC COLS.		
SCALE: 3/8"=1'-0"	CH.	JOB NO.	8520
DATE: 06-08-09	DR. BLJ	DWG. NO.	SM 4-37

DECK TYPE "D1"

(EX) 2-TRUSS T-3

APPROXIMATE LOCATION OF ROOF DRAINS.

(EX) TRUSS T-2

(EX) 7 64DL

64DLH116

64DLH115

64DLH114

RECORD DRAWINGS
The Keating JV

FOURTH FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – r'x# = AIR FLOW –1" ACOUST. LINING
4. – <=> SS = AIR FLOW – STAINLESS STEEL
5. – <=> ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	BLJ	09-16-09
R1	REVISED LENGTHS	BLJ	09-16-09
C	FOR CONSTRUCTION	BLJ	09-15-09
A	FOR APPROVAL	BLJ	05-19-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF.DWG: M-246,247	LOC. COLS.		
SCALE: 3/8"=1'-0"	CH.	JOB NO.	8520
DATE: 05-19-09	DR. BLJ	DWG. NO.	SM 4-38

(EX) 64DLH16

(EX) 64DLH15

(EX) 64DLH14

(EX) (7) 64DL

(EX) 2-TRUSS T-3

18'-0"

52"ø

EXPOSED

SADDLE COL **=5"
DIFF FINISH AT +29'-9"

T= 35'-2"
R=80'-10"
OFF 2ND FL SLAB

ITEM 463
(2) 8
1350 CFM
40'X/30'X

25"

RCLU

48"ø

T= 35'-0"
R= 31'-0"
OFF 2ND FL SLAB

PER RFI 00385

30'-0"ø⌀ OFF 2ND SLAB

16'-3"

6'-4 1/2"

SADDLE COL **=7"
DIFF FINISH AT +29'-9"

ITEM 466
(2) 8
1350 CFM
80'X/30'X

43 1/2"

44 1/2"

DECK TYPE "D1"

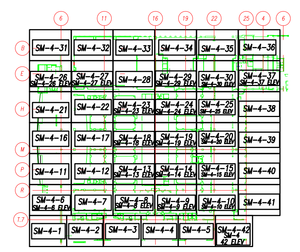
24

1

2

3

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - =▭= = AIR FLOW - GALV. - NO ACOUST. LINING
3. - =▭= = AIR FLOW - 1" ACOUST. LINING
4. - =▭= SS = AIR FLOW - STAINLESS STEEL
5. - =▭= ALUM = AIR FLOW - ALUMINUM
6. - ▷ = W.G. CONSTRUCTION OF DUCT
7. - 1'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; 2'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV'D	DESCRIPTION	BY	DATE
AB	AS BUILT	BLJ	01-11-11
R1	REVISED LENGTHS	BLJ	09-18-09
C	FOR CONSTRUCTION	BLJ	09-15-09
A	FOR APPROVAL	BLJ	05-19-09

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www.advantagecontracts.com

JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF.DWG.- M247	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-19-09	BR.	DWG NO.	SM 4-39

SLAB TYPE "S7"

RECORD DRAWINGS
The Keating JV

FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <=> = AIR FLOW = GALV. - NO ACOUST. LINING
3. - <=> = AIR FLOW = 1" ACOUST. LINING
4. - <=> IB = AIR FLOW = STAINLESS STEEL
5. - <=> ALUM = AIR FLOW = ALUMINUM
6. - [▷] = W.G. CONSTRUCTION OF DUCT
7. - Tx 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR; Bx 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	11-04-09
S	SIGN-OFF	BLJ	07-16-09
A	FOR APPROVAL	BLJ	05-19-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF. DWG.- M-245	LOC. COLS. AS NOTED		
SCALE 3/8"=1'-0"	CH.	JOB NO. 8520	
DATE XX-XX-XX	DR. BLJ	DWG. NO. SM 4-4	

DECK TYPE "D1"

T= 35'-0"
B=31'-0
OFF 2ND FL SLAB

B=31'-0"
OFF 2ND FL SLAB

43 1/2"

44 1/2"

3750 CFM
RECK/30"ø

48"ø

8 RCLU

44"ø

42"ø

PER
RFI
00385

42'-6"
2ND FLR

EXPOSED

~10'-0"~

T=34'-10"
B=31'-2"
OFF 2ND FL SLAB

16'-3"

18'-0"

68DLH18

CD-8
3750 CFM
RECK/30"ø
ITEM 468

22"

SADDLE COL **=9"
DIFF FINISH AT +29'-9"

T=34'-10"
B=31'-3"
OFF 2ND FL SLAB

T= 34'-9"
B=31'-3"
OFF 2ND FL SLAB

30'-0"on OFF 2ND SLAB

(EX) TRUSS T-2

(EX) 64DLH16

(EX) 64DLH15

(EX) 64DLH14

(EX) 1-1/2" TYPE BA GALV. METAL ROOF DECK

(EX) (7) 64DL

M

P

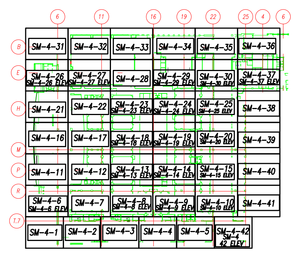
24

1

2

3

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – r'x'<=> = AIR FLOW –1" ACOUST. LINING
4. – <=> SS = AIR FLOW – STAINLESS STEEL
5. – <=> ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	09-18-09
R1	REVISED LENGTHS	EG	09-16-09
C	FOR CONSTRUCTION	EG	09-15-09
A	FOR APPROVAL	EG	05-19-09

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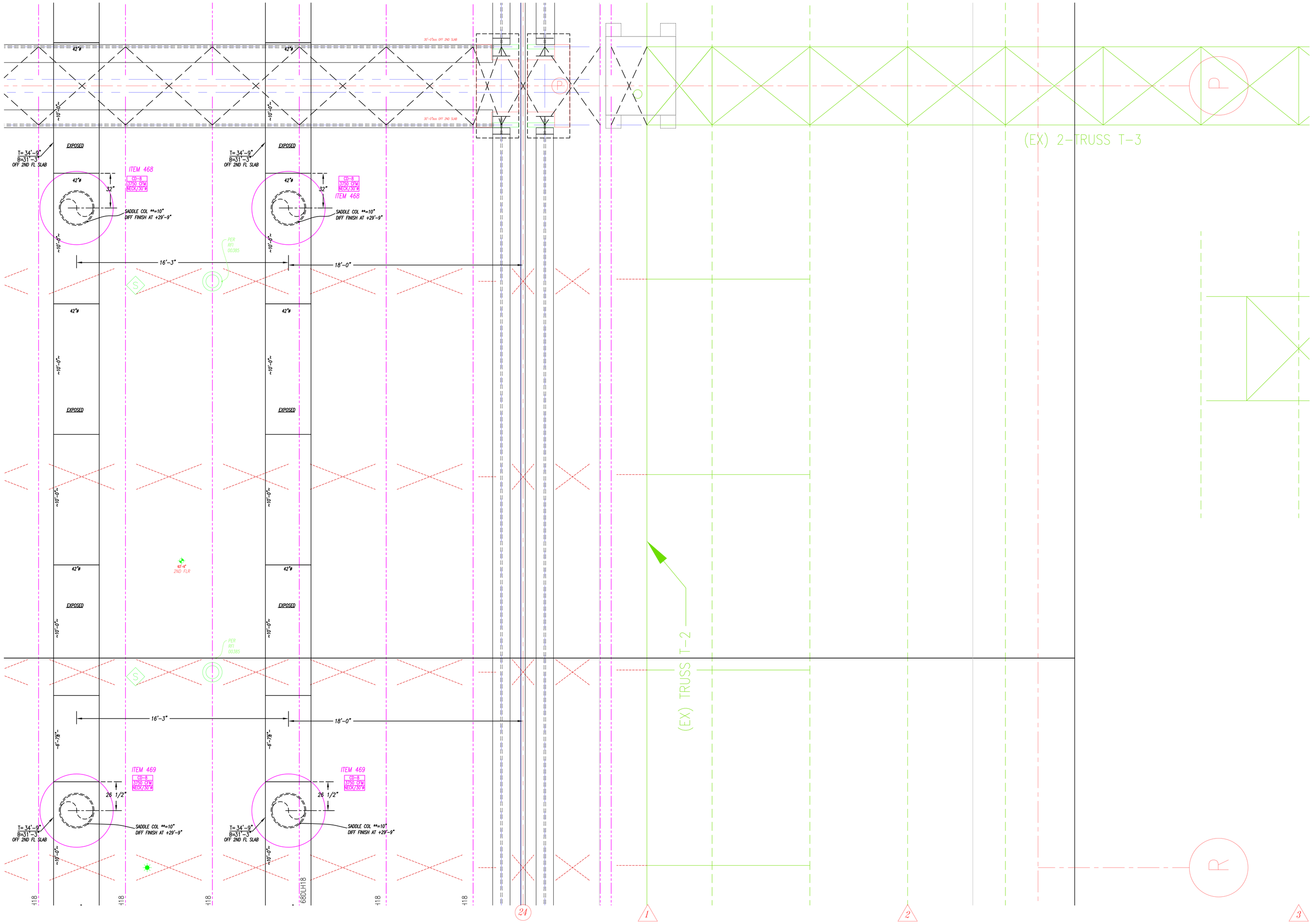
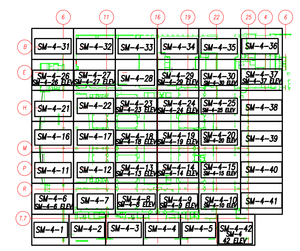
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 4 PARTIAL DUCT PLAN

REF.DWG.- M247	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-19-09	DR.	DWG. NO.	SM 4-40



RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – =◁▷= AIR FLOW – GALV. – NO ACOUST. LINING
3. – =◁▷= AIR FLOW – 1" ACOUST. LINING
4. – =◁▷ SS= AIR FLOW – STAINLESS STEEL
5. – =◁▷ ALUM= AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – $\frac{T=\ 0'-0"}{B=\ 0'-0"}$ = TOP OF DUCT ABOVE FINISHED FLOOR / = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV'D	DESCRIPTION	BY	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED LENGTHS	EG	09-18-09
C	FOR CONSTRUCTION	EG	09-15-09
A	FOR APPROVAL	EG	05-19-09

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JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 4 PARTIAL DUCT PLAN

REF.DWG.- M248	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 05-19-09	BY. EG	DWG. NO.	SM 4-41

68DLH18

42"ø

8 RCLU

38"ø

EXPOSED

T=34'-7"
B=31'-5"
OFF 2ND FL SLAB

~10'-0"~

PER RFI 00385

DECK TYPE "D1"

16'-3"

18'-0"

61'-6"
2ND FLR

SADDLE COL **=12"
DIFF FINISH AT +29'-9"

CO-8
1750 CFM
RISE/30"Ø
ITEM 469

28"

15'-9 1/2"

(EX) 64DLH16

(EX) 64DLH15

(EX) 64DLH14

(EX) (7) 6

R

(EX) 2-TRUSS T-3

8'-8"

8'-6 1/2"

(EX) 20x24

(EX) 18x24

(46)

(214)

212"

18'-1"
CLR OPNG

60X214
GOOSENECK

4'-3 1/2"

40

ON SM 1-41 ELEV

4'-2"

4'-1"
CLR OPNG

24

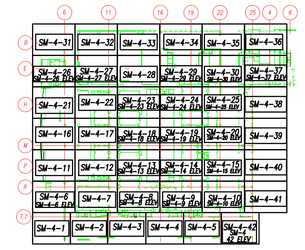
21

1

2

3

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <G> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <ALUM> = AIR FLOW – 1" ACOUST. LINING
4. – <S> SS = AIR FLOW – STAINLESS STEEL
5. – <A> ALUM = AIR FLOW – ALUMINUM
6. – [▷] = W.G. CONSTRUCTION OF DUCT
7. – Tx 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
   Bx 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	BY	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED LENGTHS	EG	09-18-09
C	FOR CONSTRUCTION	EG	09-14-09
A	FOR APPROVAL	EG	05-19-09

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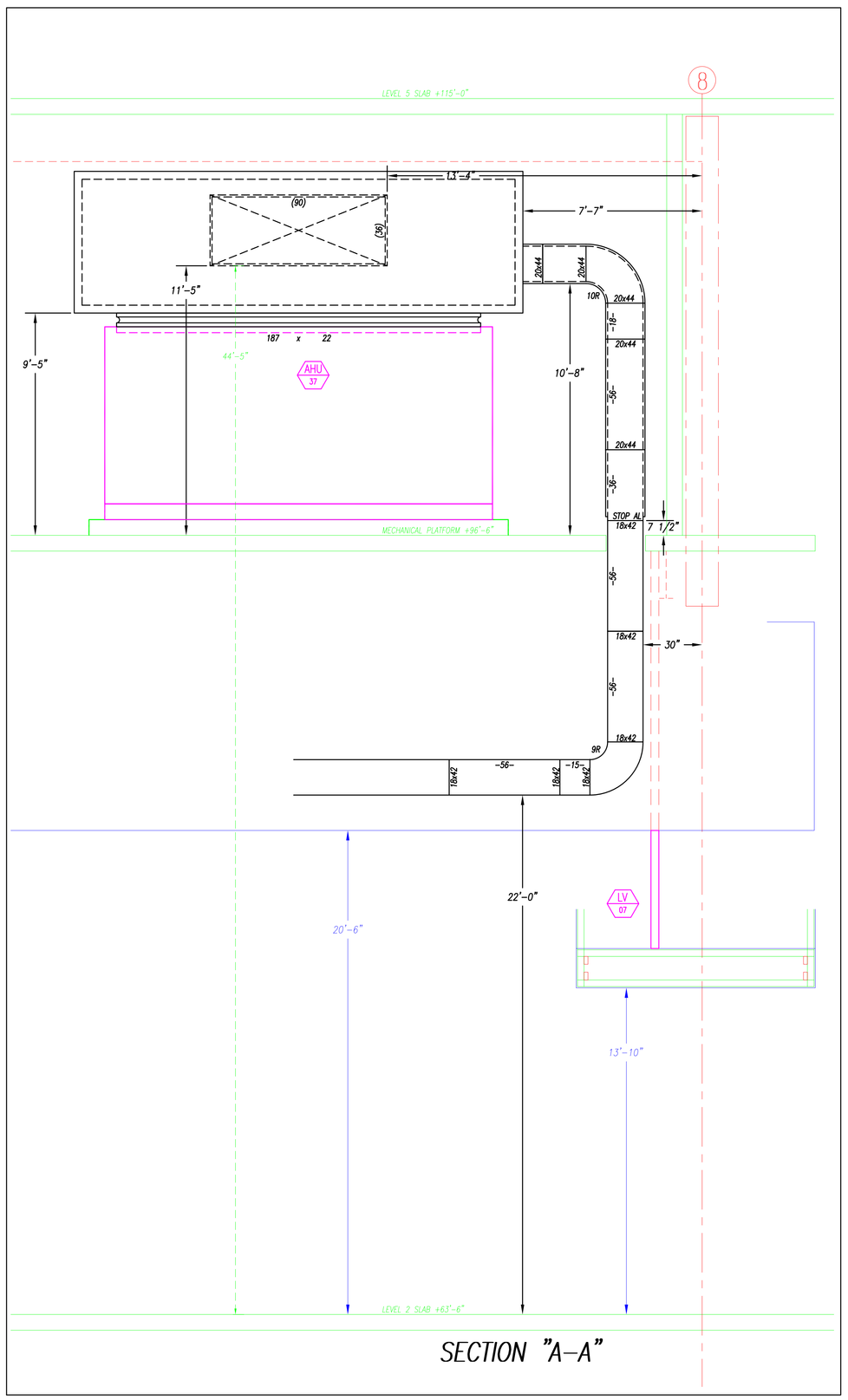
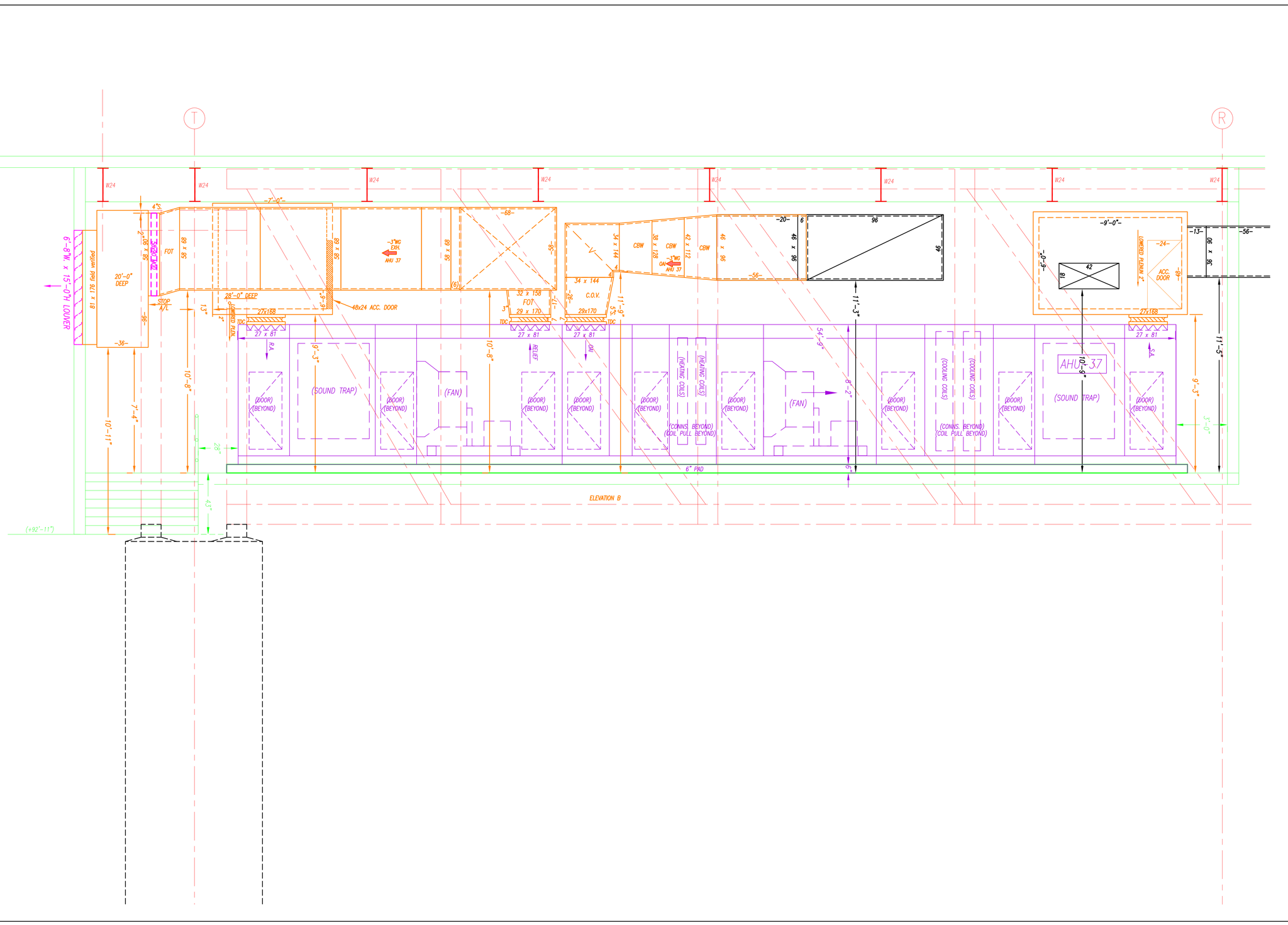
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

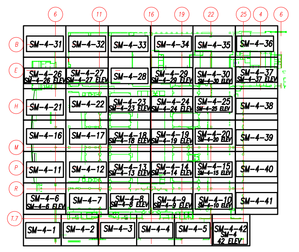
TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF. DWG: M-848
LOC. COLS.
SCALE: 3/8"=1'-0"
CH.
JOB NO. 8520
DATE: XX-XX-XX
BY: EG
DWG. NO. SM 4-42



SECTION "A-A"





FOURTH FLOOR

RECORD DRAWINGS
The Keating JV

NOTES:
1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <=> = AIR FLOW - GALV. - NO ACOUST. LINING
3. - <=> = AIR FLOW -1" ACOUST. LINING
4. - <=> SS = AIR FLOW - STAINLESS STEEL
5. - <=> ALUM = AIR FLOW - ALUMINUM
6. - ▷ = W.G. CONSTRUCTION OF DUCT
7. - 1x 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR; Bx 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND TOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
C	FOR CONSTRUCTION	EG	12-15-09
R1	UNIT REVISION	MSO	09-16-09
A	FOR APPROVAL	BLJ	05-16-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 DUCT ELEVATIONS

REF DWG-	SM 4-6	LOC. COLS.	
SCALE	3/8"=1'-0"	CK.	JOB NO. 8520
DATE	05-16-09	DR. BLJ	DWG. NO. SM 4-6 ELEV

CHANGE COLLAR LOCATIONS PER ASI-64 02-12-10

(SOUND TRAP)

AHU-37

TOP 18'-8" A.F.F.

FOURTH FLOOR

RECORD DRAWINGS
The Keating JV

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <=> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – r'#1=> = AIR FLOW –1" ACOUST. LINING
4. – <=> ## = AIR FLOW – STAINLESS STEEL
5. – <=> ### = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 1" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R3	REVISED PER ASI-64	EG	02-12-10
R2	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	12-16-09
R1	UNIT REVISION	MSO	09-16-09
A	FOR APPROVAL	BLJ	05-16-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 PARTIAL DUCT PLAN

REF. DWG.: M-242	LOC. COLS.		
SCALE: 3/8"=1'-0"	DR.	JOB NO.	8520
DATE: 05-16-09	DR. BLJ	DWG. NO.	SM 4-6

CONT SM 4-12
CONT SM 4-7

EXPOSED

T= 45'-1"
B=41'-7"
OFF 2ND FL SLAB

T=44'-11"
B=41'-9"
OFF 2ND FL SLAB

T= 37'-1"
B=31'-3"
OFF 2ND FL SLAB

SADDLE COL **=134"
36# =6= & =128=
DIFF FINISH AT +29'-9"

CO-9
7500 CFM
16DX72E
ITEM 447

SADDLE COL **=136"
36# =6= & =130=
DIFF FINISH AT +29'-9"

CO-9
7500 CFM
16DX72E
ITEM 447

T= 48'-0"
B=44'-4

T= 46'-6"
B=42'-0"

W16x15
X-BRACING TO
TOPCHORD(25k)

ASI-88 SHOWS THIS ROW LIGHTS
MOVING OVER 36" 18'-0"
OFF COLUMN LINE B

OPENING IN 5TH FLR ABOVE DELETED
PER ASI #36 DATED 6-25-09

STOP A/L

HD

AHU 15

AHU 37

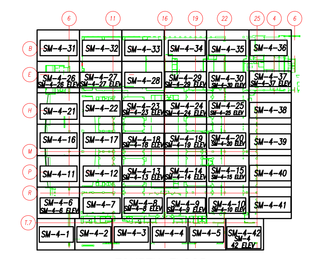
AHU-33

AHU-30

OUTSIDE AIR

FOURTH FLOOR

CONT SM 4-7
CONT SM 4-8



NOTES:

1. = ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. =CD= = AIR FLOW = DUCT, = NO ACOUST. LINING
3. = r1x1(25)= = AIR FLOW = 1" ACOUST. LINING
4. =CD= #8 = AIR FLOW = STAINLESS STEEL
5. =CD= ALUM = AIR FLOW = ALUMINUM
6. = ▷ = W.G. CONSTRUCTION OF DUCT
7. = Tx'-0" = TOP OF DUCT ABOVE FINISHED FLOOR
Bx'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. = COORDINATION NOTE = ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	01-29-10
C	FOR CONSTRUCTION	EG	11-04-09
S	SIGN OFF	EG	09-18-09
A	FOR APPROVAL	BLJ	08-19-09

RECORD DRAWINGS
The Keating JV

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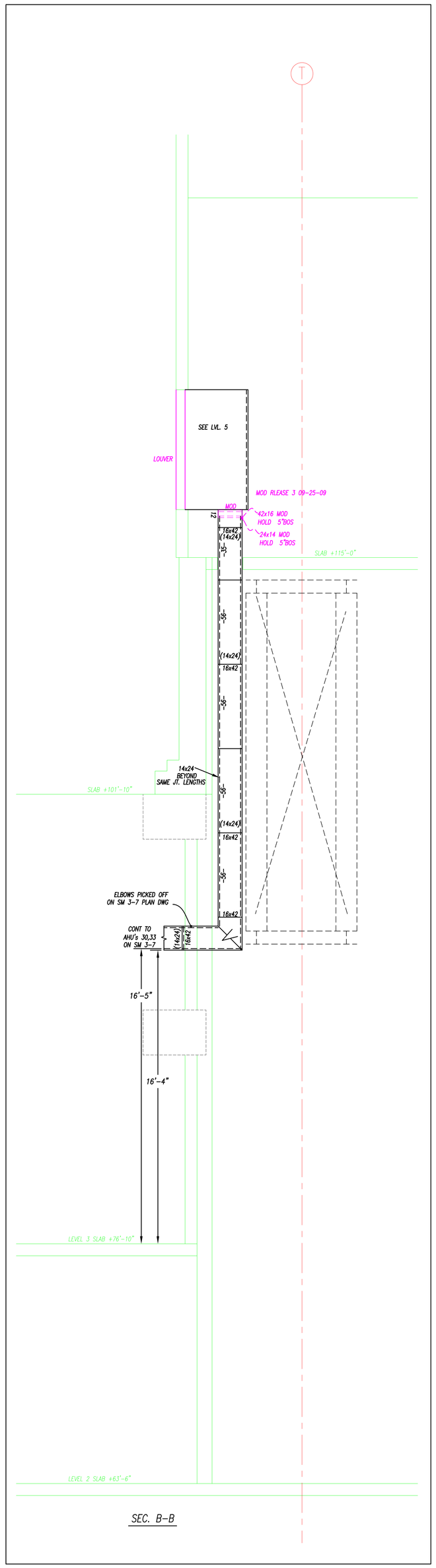
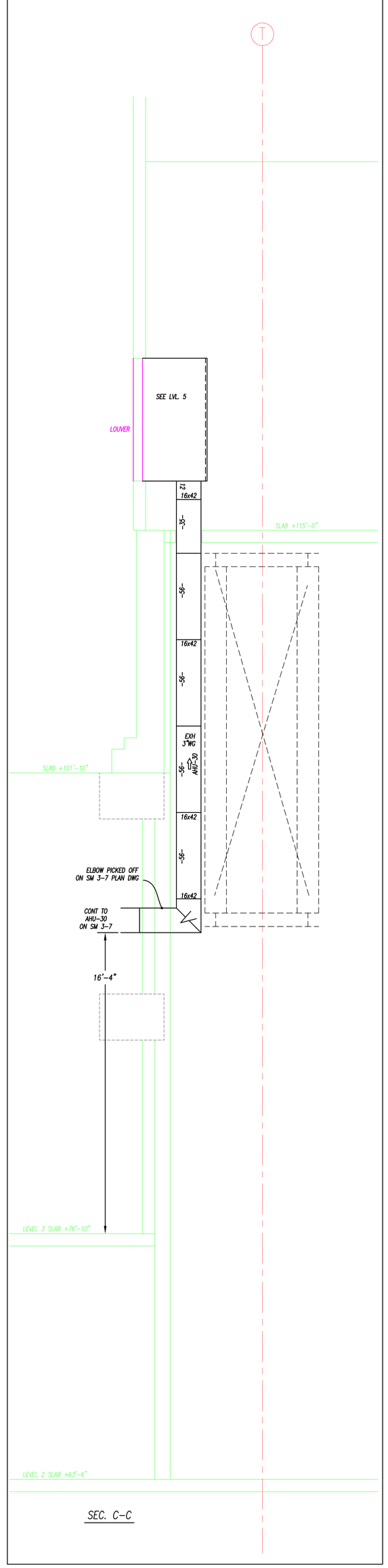
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE LEVEL 4 PARTIAL DUCT PLAN

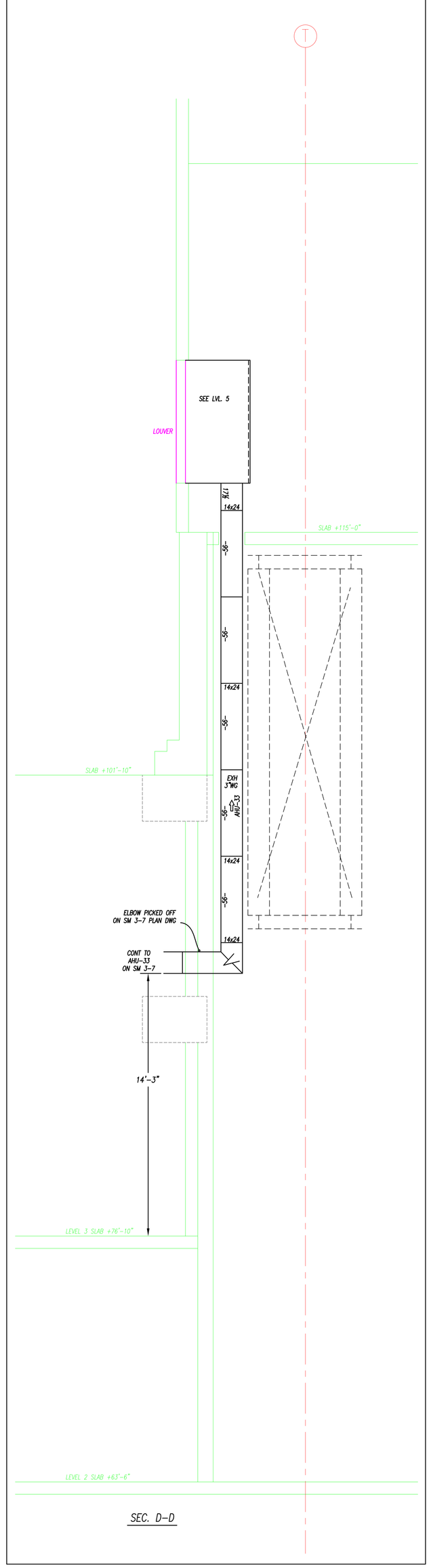
REF. DWG.	M 242	LOC. COLS.	
SCALE	3/8"=1'-0"	CH.	JOB NO. 8520
DATE	XX-XX-XX	DR. BLJ	DWG. NO. SM 4-7



SEC. B-B

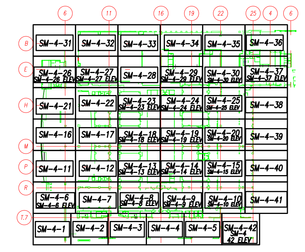


SEC. C-C



SEC. D-D

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <=> = AIR FLOW - GALV. - NO ACOUST. LINING
3. - 1"<=> = AIR FLOW -1" ACOUST. LINING
4. - <=> SS = AIR FLOW - STAINLESS STEEL
5. - <=> ALUM = AIR FLOW - ALUMINUM
6. - |▷ = W.G. CONSTRUCTION OF DUCT
7. - Te 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   Be 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 3" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
C	FOR CONSTRUCTION	EG	11-04-09
A	FOR APPROVAL	BLJ	05-19-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 DUCT ELEVATIONS

REF. DWGS:	SM 4-7	LOC. COILS:	
SCALE:	3/8"=1'-0"	CH.	JOB NO. 8520
DATE:	05-19-09	DR. BLJ	DWG. NO. SM 4-7 ELEV

CONT SM 4-13
CONT SM 4-8

EXPOSED

~10'-0"~

5'-0"

7'-7"

4'-6 1/2"

T= 45'-1"
B=41'-7"
OFF 2ND FL SLAB

CD-9
7500 CFM
HEXX/36"K
ITEM 447

CD-2
7500 CFM
HEXX/36"K
ITEM 460

SADDLE COL **=134"
36# ~6~ & ~128~
DIFF FINISH AT +29'-9"

W18x76
X-BRACING IN
TOPCHORD(CSA)

(36'0)

42"ø

38"ø

T=44'-11"
B=41'-9"
OFF 2ND FL SLAB

11'-5"

CONT SM 4-7
CONT SM 4-8

~6'-0"~

(~6'-0"~)

38"ø

(70'ø)

70'ø

W36X116
B=47'-10" OFF 2ND SLAB

EXPOSED

1¼Ø
EF 11.12

12'-2 1/2"

T= 37'-1"
B=31'-3"
OFF 2ND FL SLAB

42'-6"
2ND FLR

SA
SUP
AHU 15

T=44'-11"
B=41'-9"
OFF 2ND FL SLAB

5'-0"

7'-7"

SADDLE COL **=136"
36# ~6~ & ~130~
DIFF FINISH AT +29'-9"

W18x76
X-BRACING
ITEM 447(TOPCHORD(CSA)

(36'0)

2'-11"

38"ø

HD.

-56-

44 x 94

EXPOSED

SA
AHU 37

13'-2"

20'-10"

CONT SM 4-7
CONT SM 4-8

T= 48'-0"
B=44'-4"

94 x 44

HOLD THIS AREA FOR
HOLE VERIFICATION

6'-1"

UP-9"

96 x 84

OA
70'-8"

5TH FLR OPNG
PER ASI 38
(OA FOR AHU-37)

90 x 50

T= 46'-7"
B=42'-5"

ON SM 4-6 ELEV

6'-3"

3'-3 1/2"

3'-11"

EXH
UP-10"
TX-4

78

22"

6"

190

OUTSIDE AIR
AHU-30

12'-2 1/2"
T= 22'-2"
B=19'-8"

(30)

B4-104
B=22'-6"

B4-81
B=22'-6"

B4-82
B=22'-6"

B4-82
B=21'-0"

B4-83
B=22'-6"

B4-83
B=22'-6"

B4-01
B=22'-6"

B4-01
B=22'-6"

B4-21
B=22'-0"

B4-21
B=22'-0"

B4-145
B=21'-10"

W27x84
B=35'-3" FORM LEVEL 3 SLAB

W27x84
B=35'-3" OFF LEVEL 3

LEVEL 3 SLAB

2x30
36'-7 1/2" OFF LEVEL 3 SLAB

2x28
36'-8" OFF LEVEL 3 SLAB

32'-8"

DN

UP

25'-0 1/2"

20'-6 1/2"

FAN LOCATIONS BY JOIST MANUFACTURER: RFI#122 AND RESPONSE TO CONTRACT 1 RFI#326 WITH ATTATCHED SKETCHES

FAN MOTOR THIS SIDE

60x60 UP TO EF-11 ON ROOF

EF 11

A
ON SM 4-8 ELEV

A
ON SM 4-8

68DLH19

TDF IN
O/TOP

TDF IN
O/SIDE

108 x 48

60

68

EXPOSED

T= 36'-2"
B=32'-2"
OFF 2ND FL SLAB

T= 36'-0"
B=32'-4"
OFF 2ND FL SLAB

W8x24

CBV

15'-10"

44 x 94

FAN MOTOR THIS SIDE

60x60 UP TO EF-12 ON ROOF

EF 12

T= 37'-1"
B=31'-3"
OFF 2ND FL SLAB

T= 36'-2"
B=32'-2"
OFF 2ND FL SLAB

22'-6"

41'-6"

W30X116
B=48'-4" OFF 2ND SLAB

W24X62
B=48'-10" OFF 2ND SLAB

W24X68
B=48'-10" OFF 2ND SLAB

W16X26
B=49'-6" OFF 2ND SLAB

W12X16
B=49'-10" OFF 2ND SLAB

W30X116
B=48'-4" OFF 2ND SLAB

W36X116
B=47'-10" OFF 2ND SLAB

W36X116
B=47'-2" OFF 2ND SLAB

W24X55
B=48'-10" OFF 2ND SLAB

W21X44
B=49'-1" OFF 2ND SLAB

W33X118
B=49'-4" OFF 2ND SLAB

W33X118
B=49'-10" OFF 2ND SLAB

W30X99
B=49'-4" OFF 2ND SLAB

W24X55
B=48'-10" OFF 2ND SLAB

W24X68
B=48'-10" OFF 2ND SLAB

W24X76
B=48'-10" OFF 2ND SLAB

W24X94
B=48'-10" OFF 2ND SLAB

W24X103
B=48'-10" OFF 2ND SLAB

W24X131
B=48'-10" OFF 2ND SLAB

W24X146
B=48'-10" OFF 2ND SLAB

W24X162
B=48'-10" OFF 2ND SLAB

W24X176
B=48'-10" OFF 2ND SLAB

W24X192
B=48'-10" OFF 2ND SLAB

W24X207
B=48'-10" OFF 2ND SLAB

W24X229
B=48'-10" OFF 2ND SLAB

W24X250
B=48'-10" OFF 2ND SLAB

W24X279
B=48'-10" OFF 2ND SLAB

W24X306
B=48'-10" OFF 2ND SLAB

W24X335
B=48'-10" OFF 2ND SLAB

W24X370
B=48'-10" OFF 2ND SLAB

W24X408
B=48'-10" OFF 2ND SLAB

W24X450
B=48'-10" OFF 2ND SLAB

W24X492
B=48'-10" OFF 2ND SLAB

W24X535
B=48'-10" OFF 2ND SLAB

W24X583
B=48'-10" OFF 2ND SLAB

W24X629
B=48'-10" OFF 2ND SLAB

W24X687
B=48'-10" OFF 2ND SLAB

W24X762
B=48'-10" OFF 2ND SLAB

W24X848
B=48'-10" OFF 2ND SLAB

W24X897
B=48'-10" OFF 2ND SLAB

W24X962
B=48'-10" OFF 2ND SLAB

W24X1041
B=48'-10" OFF 2ND SLAB

W24X1099
B=48'-10" OFF 2ND SLAB

W24X1146
B=48'-10" OFF 2ND SLAB

W24X1192
B=48'-10" OFF 2ND SLAB

W24X1239
B=48'-10" OFF 2ND SLAB

W24X1285
B=48'-10" OFF 2ND SLAB

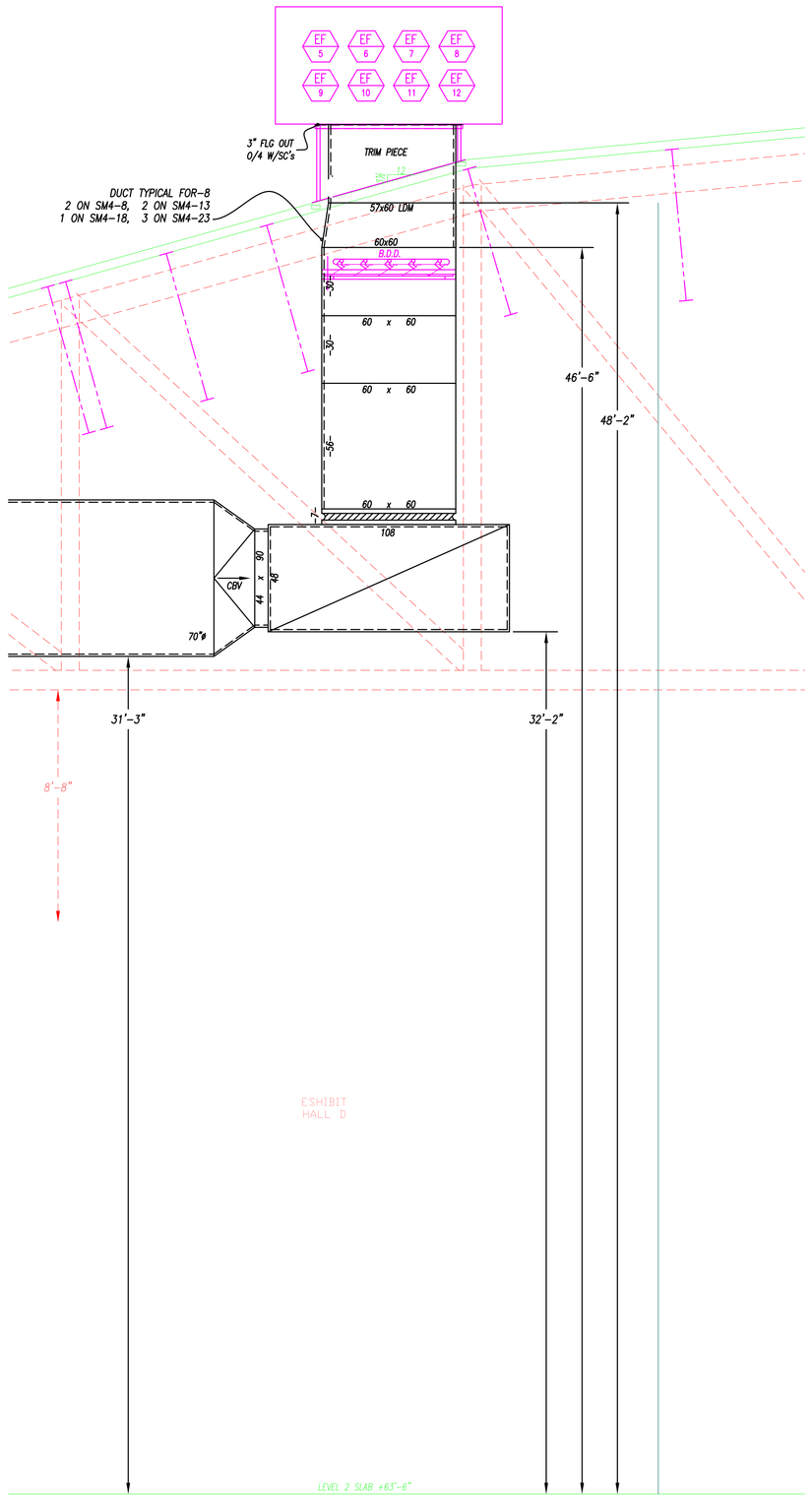
W24X1331
B=48'-10" OFF 2ND SLAB

W24X1378
B=48'-10" OFF 2ND SLAB

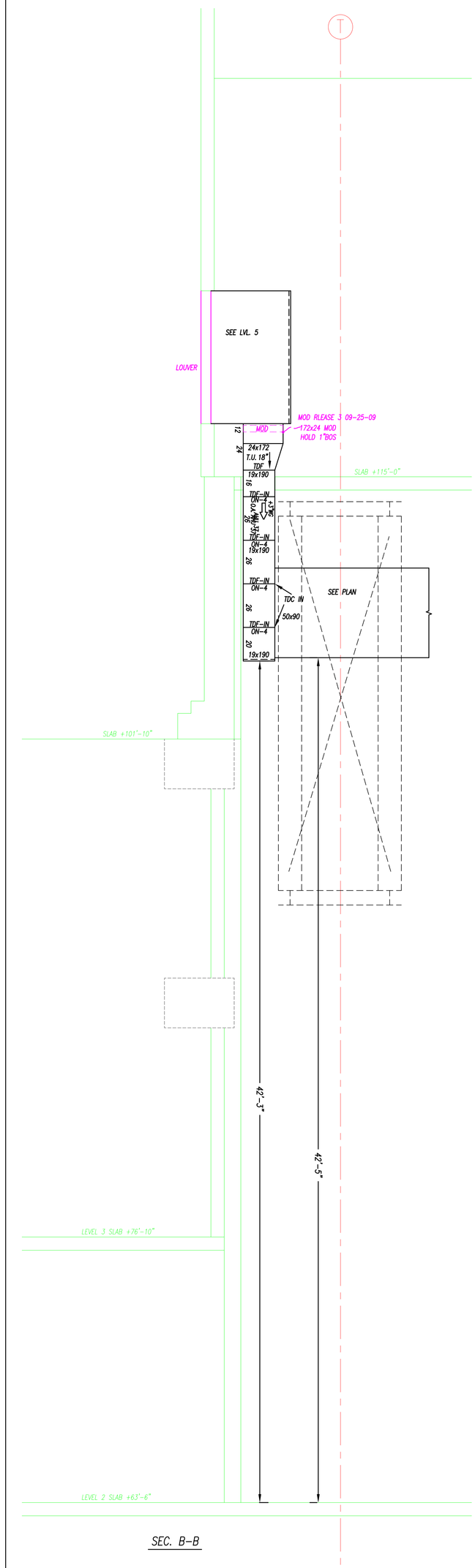
W24X1424
B=48'-10" OFF 2ND SLAB

W24X1470
B=48'-10" OFF 2ND SLAB

W24X1517
B=48'-10" OFF 2ND SLAB

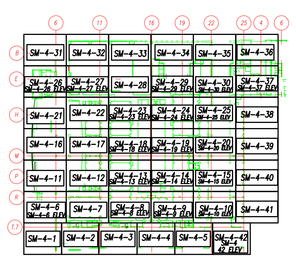


SECTION "A-A"



SEC. B-B

RECORD DRAWINGS
The Keating JV



FOURTH FLOOR

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <=> = AIR FLOW - GALV. - NO ACOUST. LINING
3. - <=> = AIR FLOW - 1" ACOUST. LINING
4. - <=> SS = AIR FLOW - STAINLESS STEEL
5. - <=> ALUM = AIR FLOW - ALUMINUM
6. - ▷ = W.G. CONSTRUCTION OF DUCT
7. - 7'-0"+ = TOP OF DUCT ABOVE FINISHED FLOOR; 9'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	BY	DATE
AB	AS BUILT	EG	01-11-11
C	FOR CONSTRUCTION	EG	11-04-09
A	FOR APPROVAL	BLJ	05-19-09

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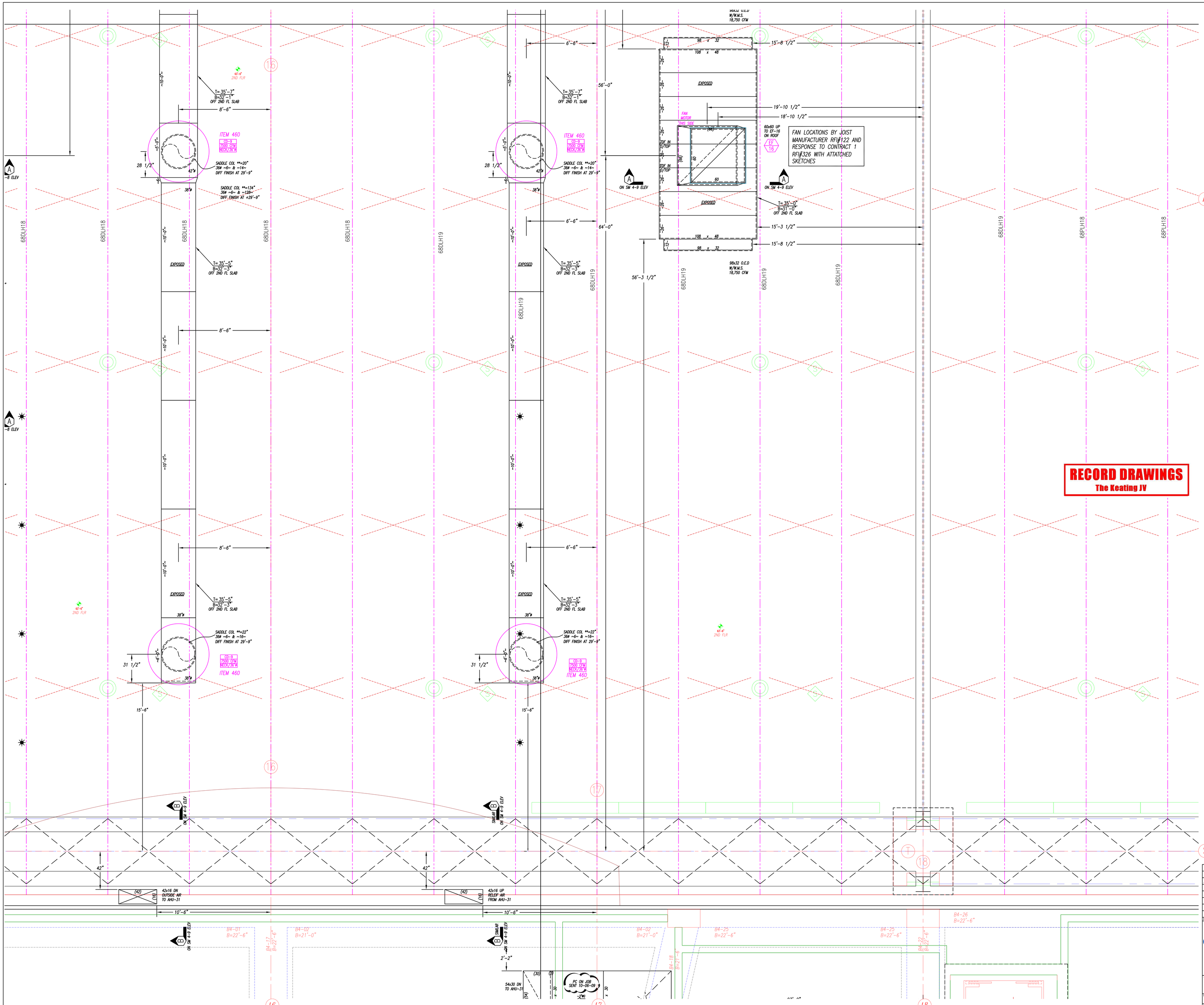
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 DUCT ELEVATIONS

REF. DWG.-	SM 4-8	LOC. COLS.	AS NOTED
SCALE	3/8"=1'-0"	CH.	JOB NO. 8520
DATE	XX-XX-XX	DR. BLJ	DWG. NO. SM 4-8 ELEV



RECORD DRAWINGS
The Keating JV

NOTES:
1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <G> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <R> = AIR FLOW – 1" ACOUST. LINING
4. – <S> = AIR FLOW – STAINLESS STEEL
5. – <A> = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R2	REVISED FOR GRDS	EG	01-29-10
R1	REVISED LENGTHS	EG	09-18-09
C	FOR CONSTRUCTION	EG	09-14-09
S	SIGN OFF	EG	09-09-09
A	FOR APPROVAL	BLJ	05-12-09

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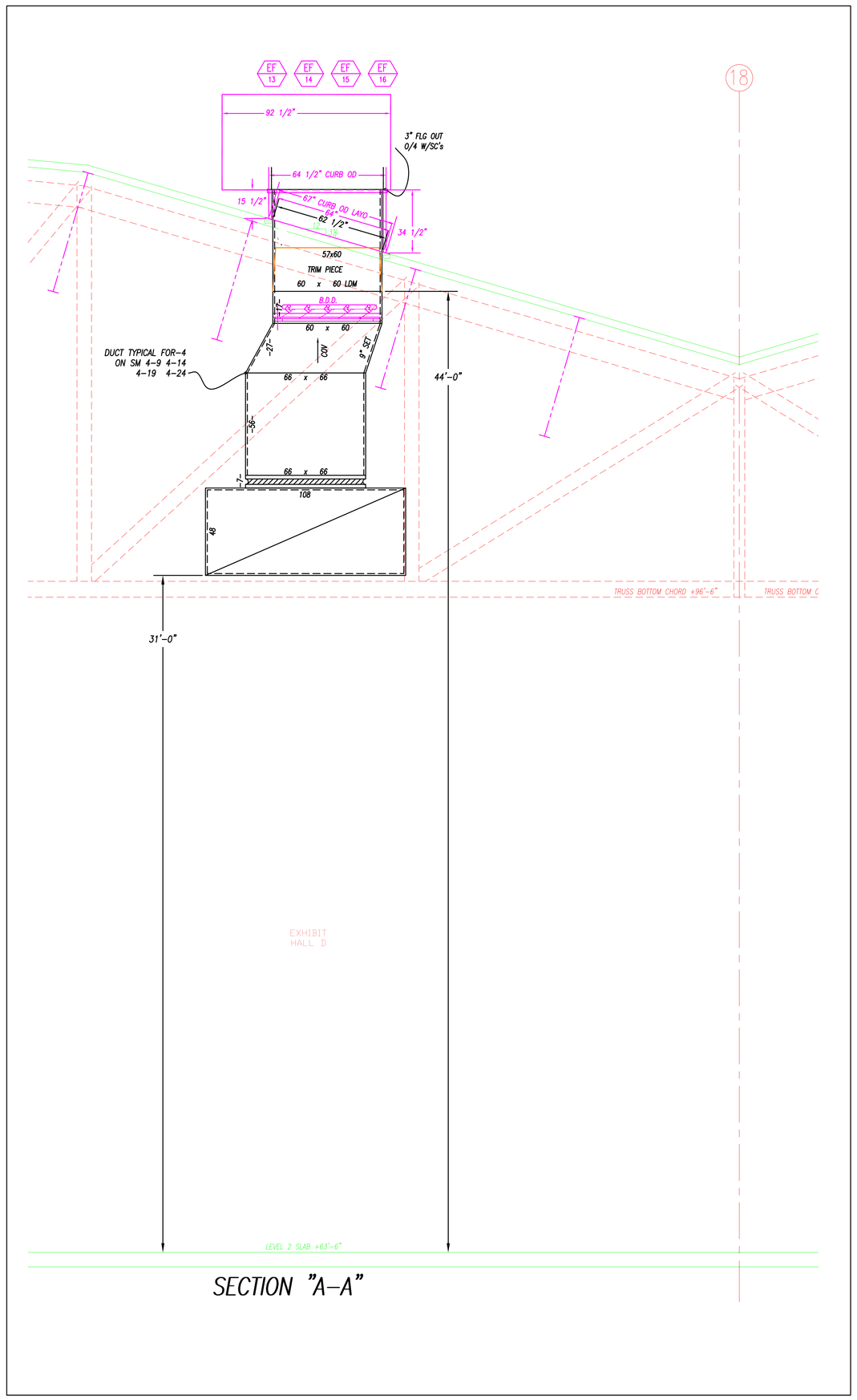
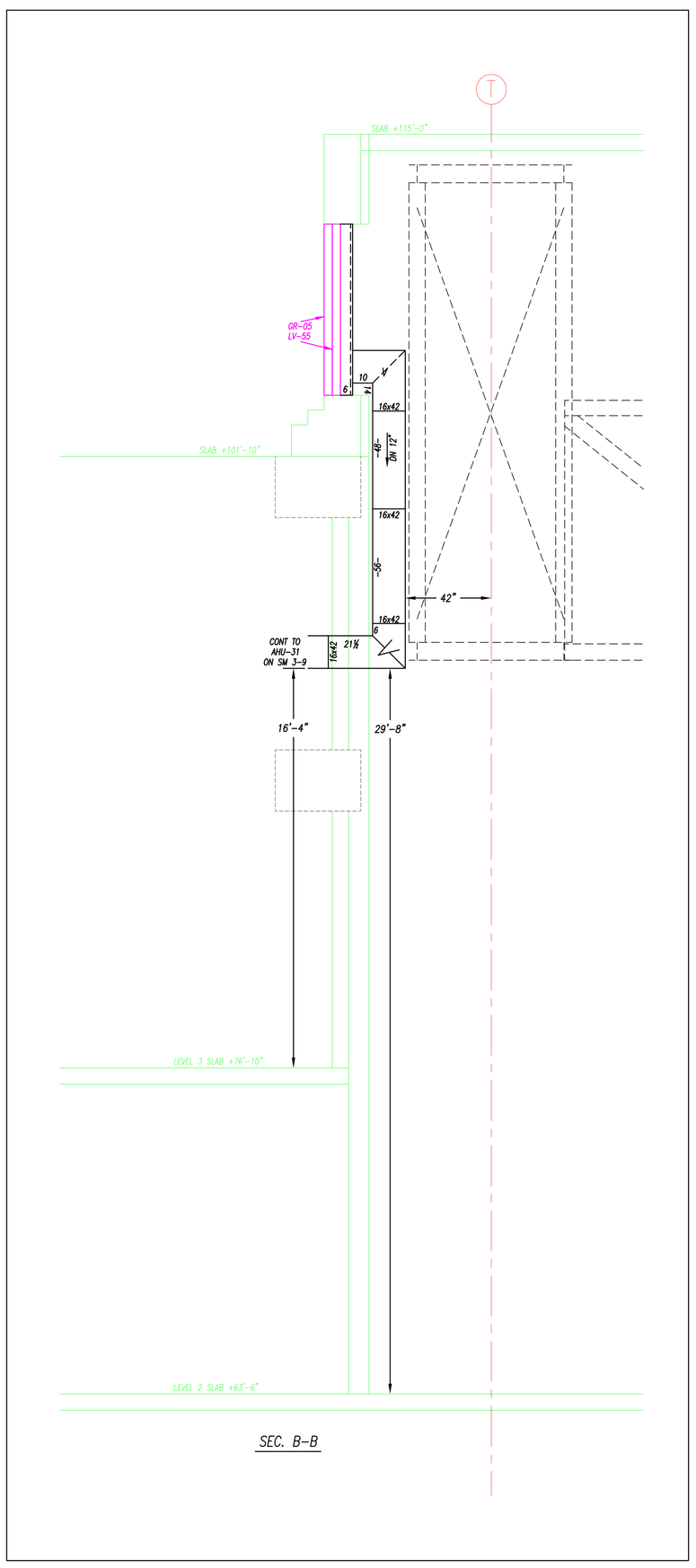
JOB NAME: PA CONVENTION CENTER EXPANSION AND RENOVATION
TITLE: LEVEL 4 PARTIAL DUCT PLAN

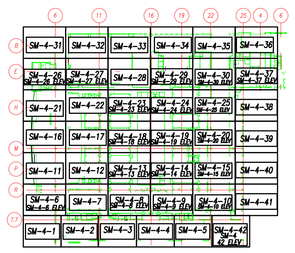
REF DWG-	M-245	LOC. COLS.	AS NOTED
SCALE	3/8"=1'-0"	DR.	JOB NO. 8520
DATE	XX-XX-XX	DR. BLJ	DWG NO. SM 4-9



SECTION "A-A"



SEC. B-B



FOURTH FLOOR

RECORD DRAWINGS
The Keating JV

NOTES:

1. - ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. - <G> = AIR FLOW - GALV. - NO ACOUST. LINING
3. - <FLEX> = AIR FLOW - 1" ACOUST. LINING
4. - <S> SS = AIR FLOW - STAINLESS STEEL
5. - <A> ALUM = AIR FLOW - ALUMINUM
6. - ▷ = W.G. CONSTRUCTION OF DUCT
7. - T= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. - COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV	DESCRIPTION	DR.	DATE
AB	AS BUILT	BLJ	01-11-11
C	FOR CONSTRUCTION	BLJ	09-14-09
A	FOR APPROVAL	BLJ	05-19-09

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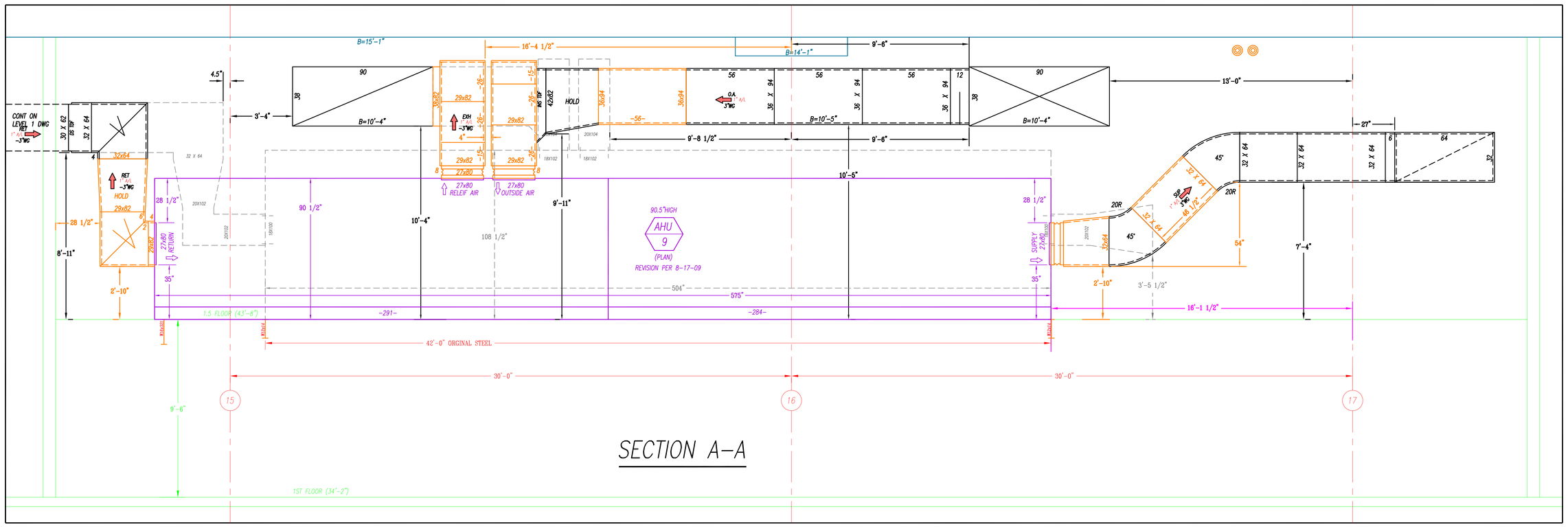
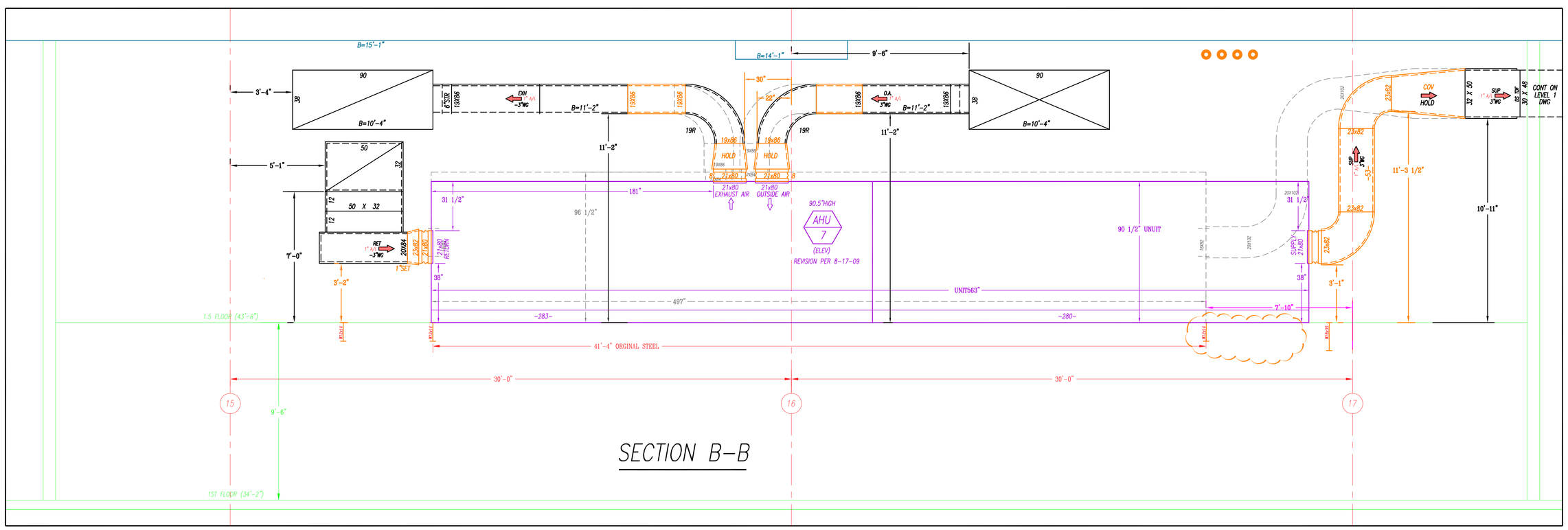
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: LEVEL 4 DUCT ELEVATIONS

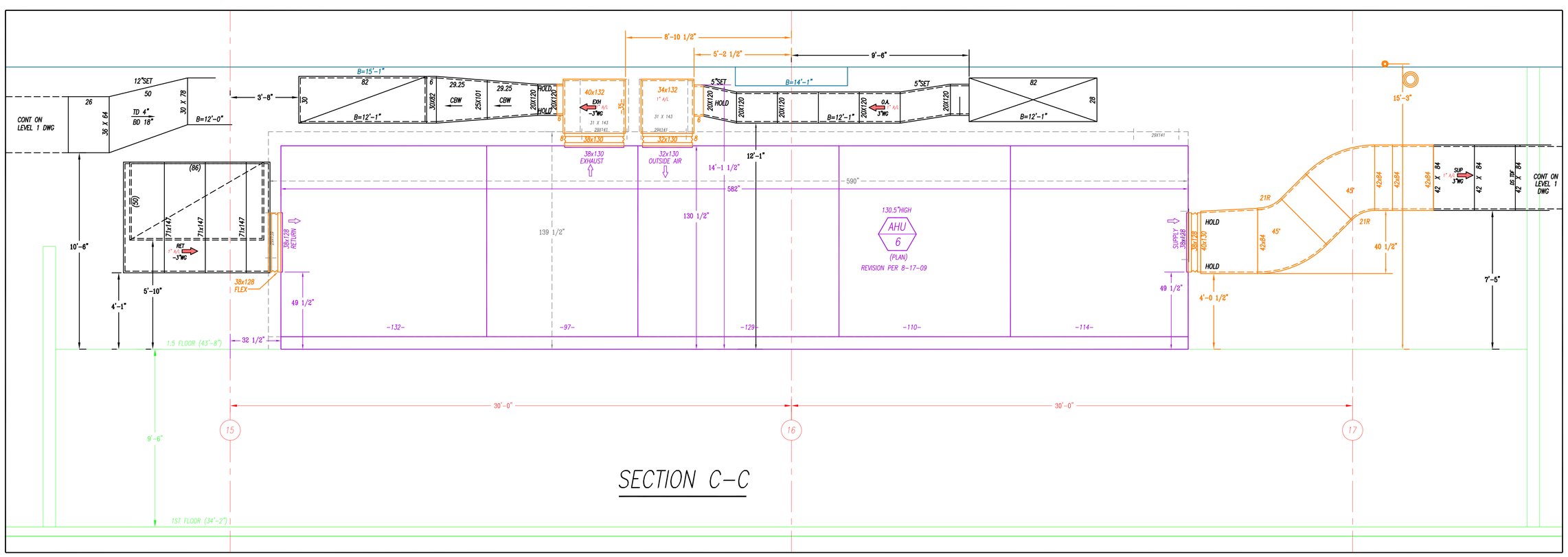
REF.DWG.- SM 4-9	LOC. COLS. AS NOTED		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE XX-XX-XX	DR. BLJ	DWG. NO.	SM 4-9 ELEV



SECTION A-A



SECTION B-B



SECTION C-C

RECORD DRAWINGS
The Keating JV

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⊏⊐ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – ⊏A⊐ = AIR FLOW –1" ACOUST. LINING
4. – ⊏SS⊐ = AIR FLOW – STAINLESS STEEL
5. – ⊏AL⊐ = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – 1x 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; 3x 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

NO.	DESCRIPTION	BY	DATE
AB	AS BUILT	EG	08-27-09
R1	REVISED FOR UNIT CHANGES	EG	08-27-09
C	FOR CONSTRUCTION	MVO	04-07-09
A	FOR APPROVAL	MVO	03-11-09

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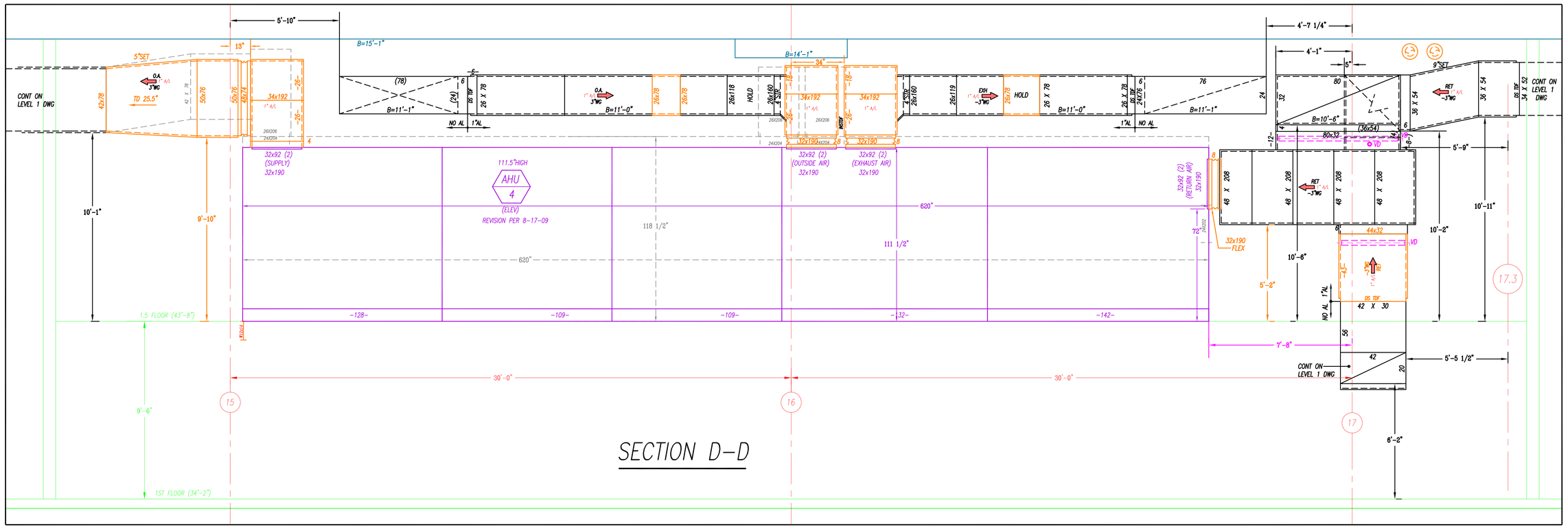
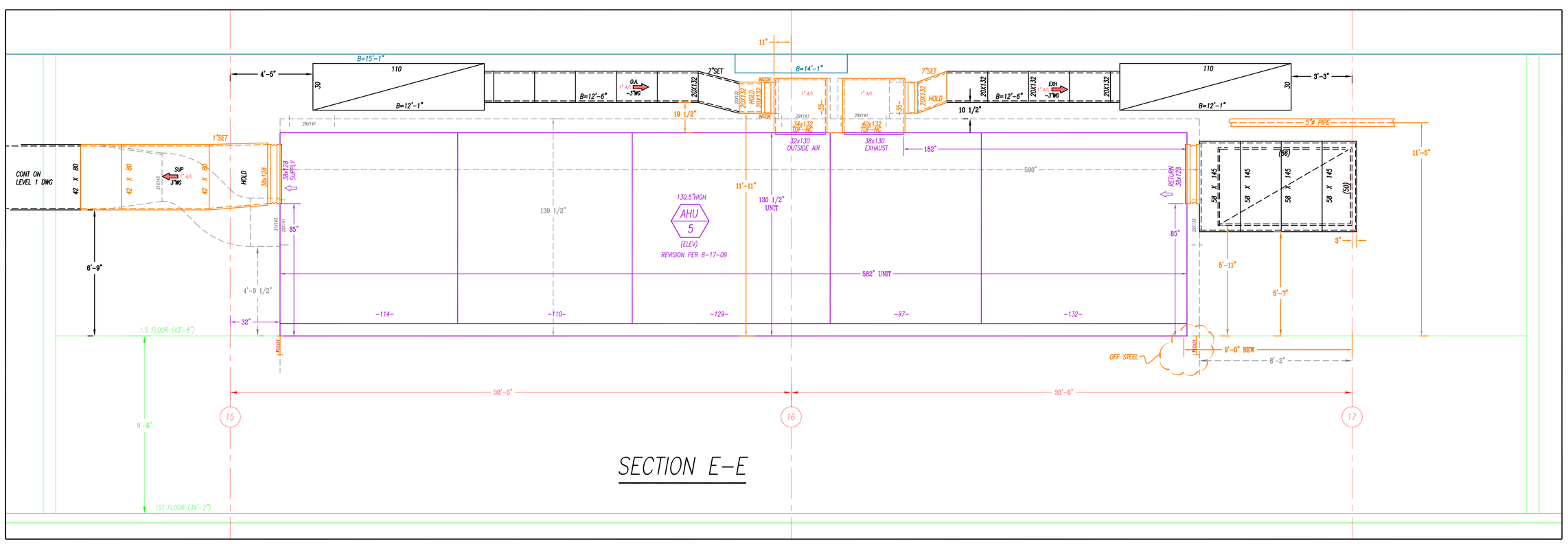
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: SECTIONS FROM AHU'S 6, 7 & 9

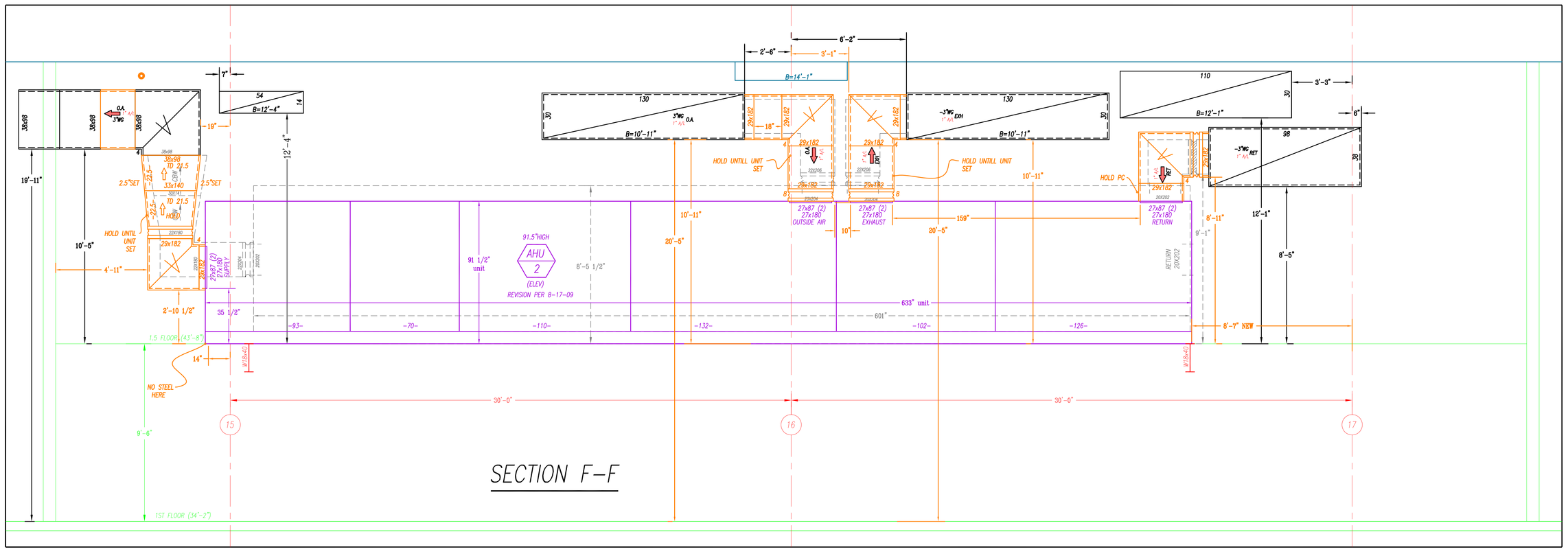
REF.DWG.-
LOC. COLS.
SCALE 3/8"=1'-0" CH.
JOB NO. 8520
DATE 02-04-09 DR. M. ONORATO
DWG. NO. SM-1.5 SECT A



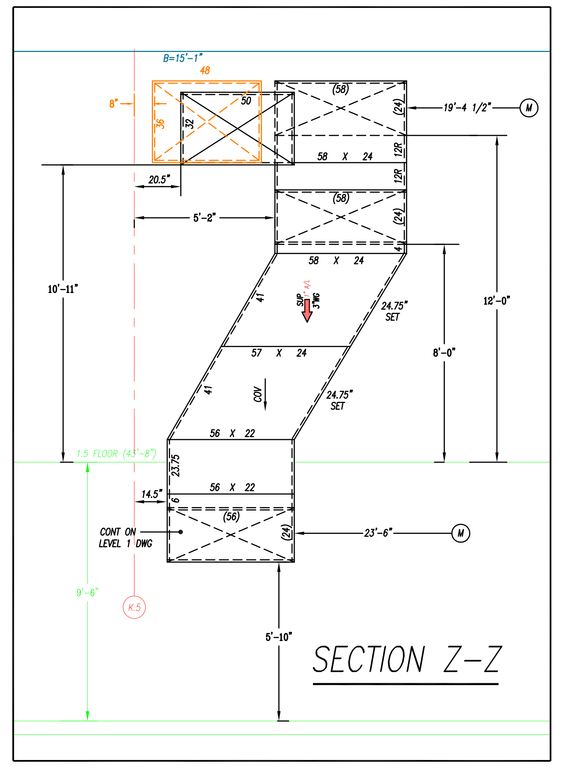
SECTION D–D



SECTION E–E



SECTION F–F



SECTION Z–Z

RECORD DRAWINGS
The Keating JV

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⇐⇒ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – ⇐⇒ = AIR FLOW –1" ACOUST. LINING
4. – ⇐⇒ = AIR FLOW – STAINLESS STEEL
5. – ⇐⇒ = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT.
7. – 1x 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR UNIT CHANGES	EG	08-07-09
C	FOR CONSTRUCTION	MVO	04-07-09
A	FOR APPROVAL	MVO	03-11-09

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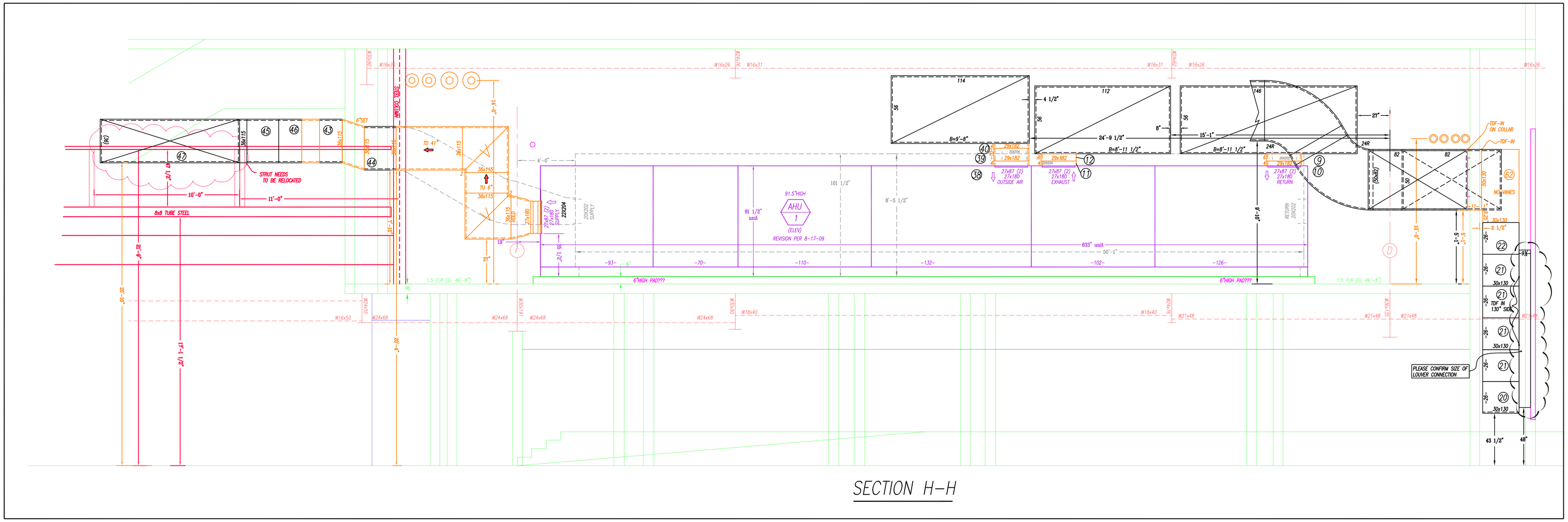
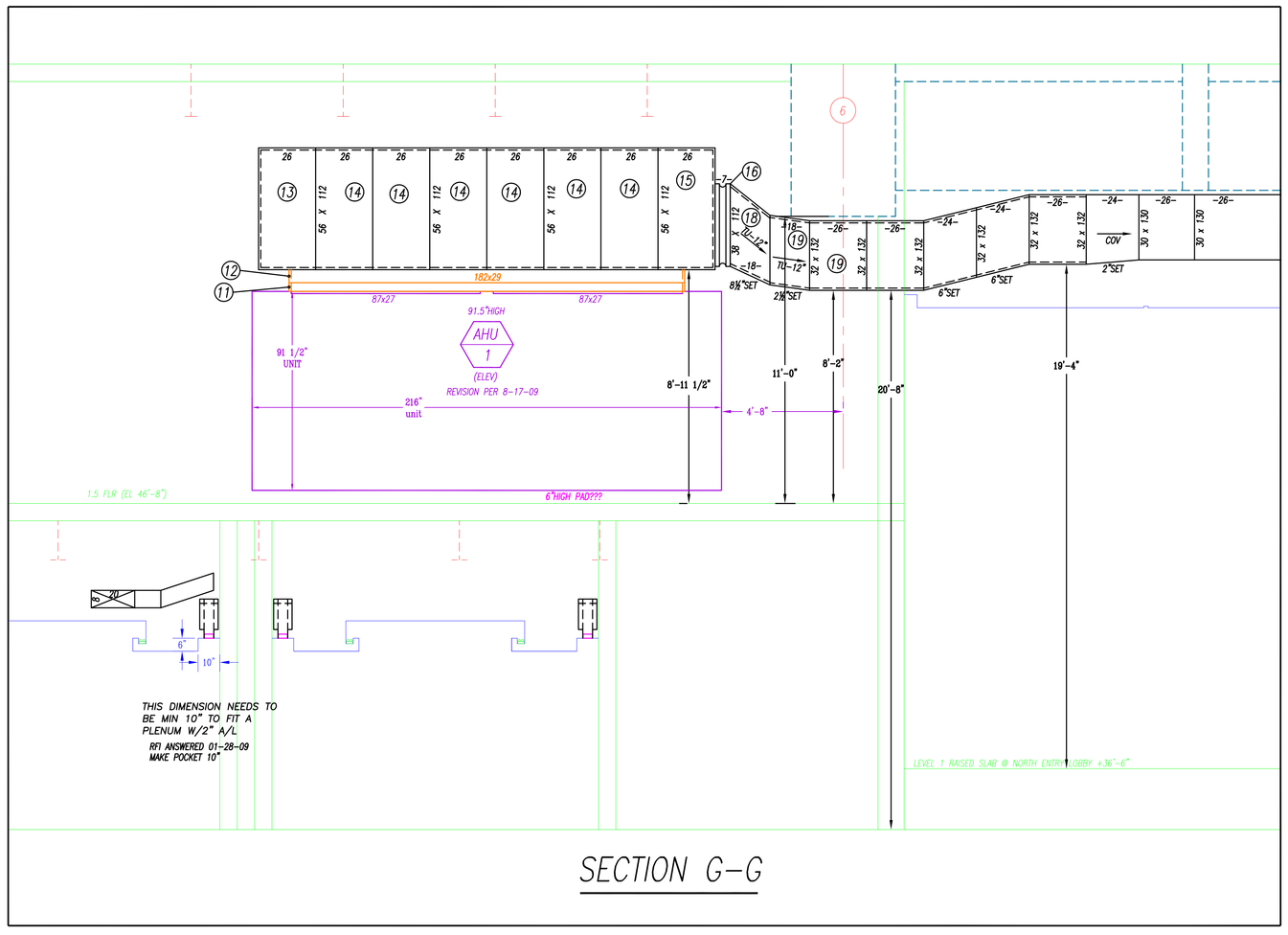
JOB NAME: PA CONVENTION CENTER EXPANSION AND RENOVATION

TITLE: SECTIONS FROM AHU'S 2, 4 & 5

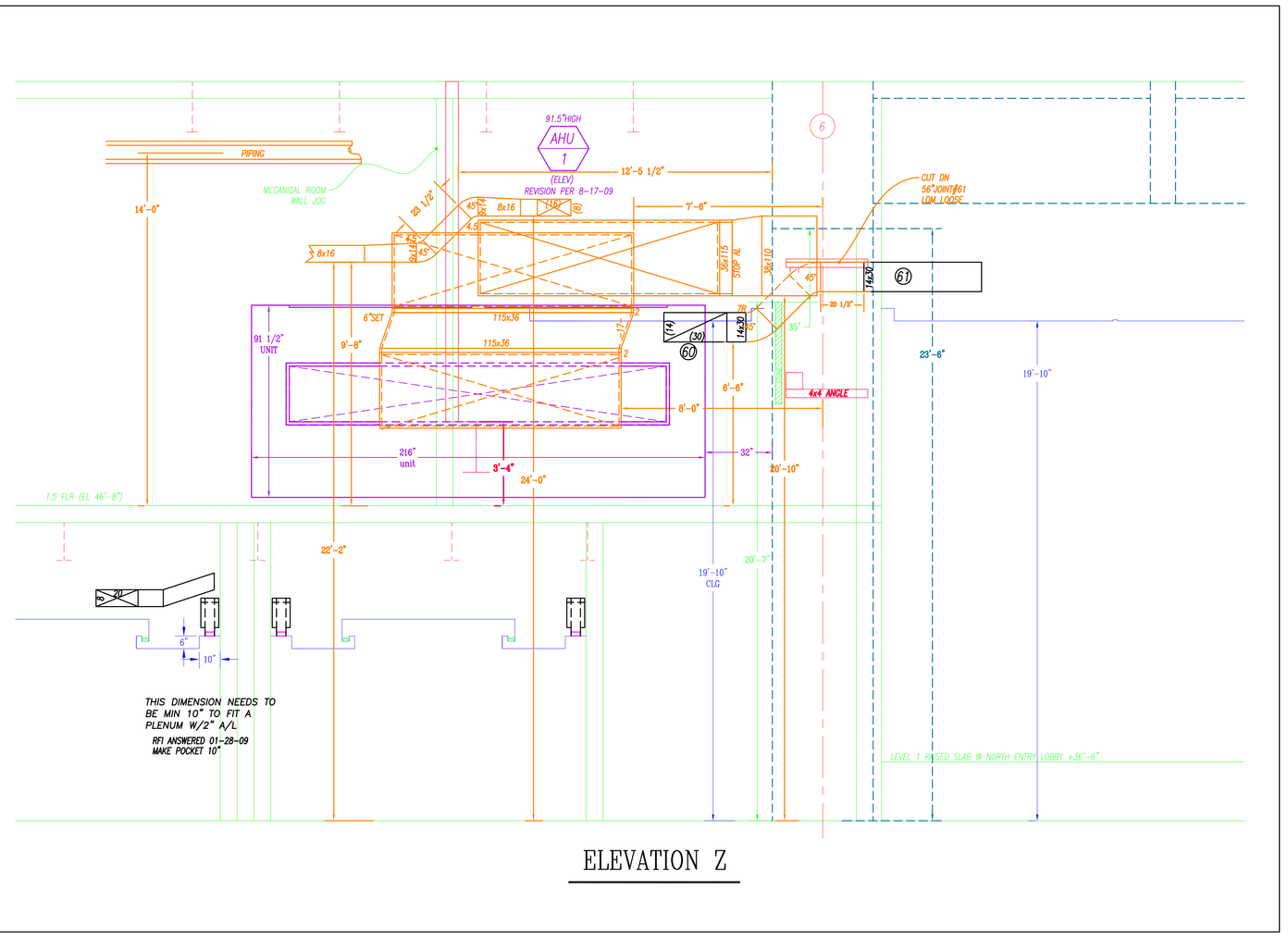
KEY DWG:	LOC. COLS.
SCALE: 3/8"=1'-0"	DA.
DATE: 02-04-09	DR. M. ONORATO
JOB NO.	8520
DWG. NO.	SM-1.5 SECT B



SECTION H–H



SECTION G–G



ELEVATION Z

RECORD DRAWINGS
The Keating JV

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⇨ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – ⇨ = AIR FLOW –1" ACOUST. LINING
4. – ⇨ = AIR FLOW – STAINLESS STEEL
5. – ⇨ = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – 7= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR; 9= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV'd	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R3	REVISED FOR WALL AND STEEL	EG	04-19-10
R2	REVISED FOR WALL OPNG	EG	01-28-10
C	FOR CONSTRUCTION	EG	10-19-09
R1	REVISED UNITS	BLJ	08-28-09
A	FOR APPROVAL	BLJ	03-11-09

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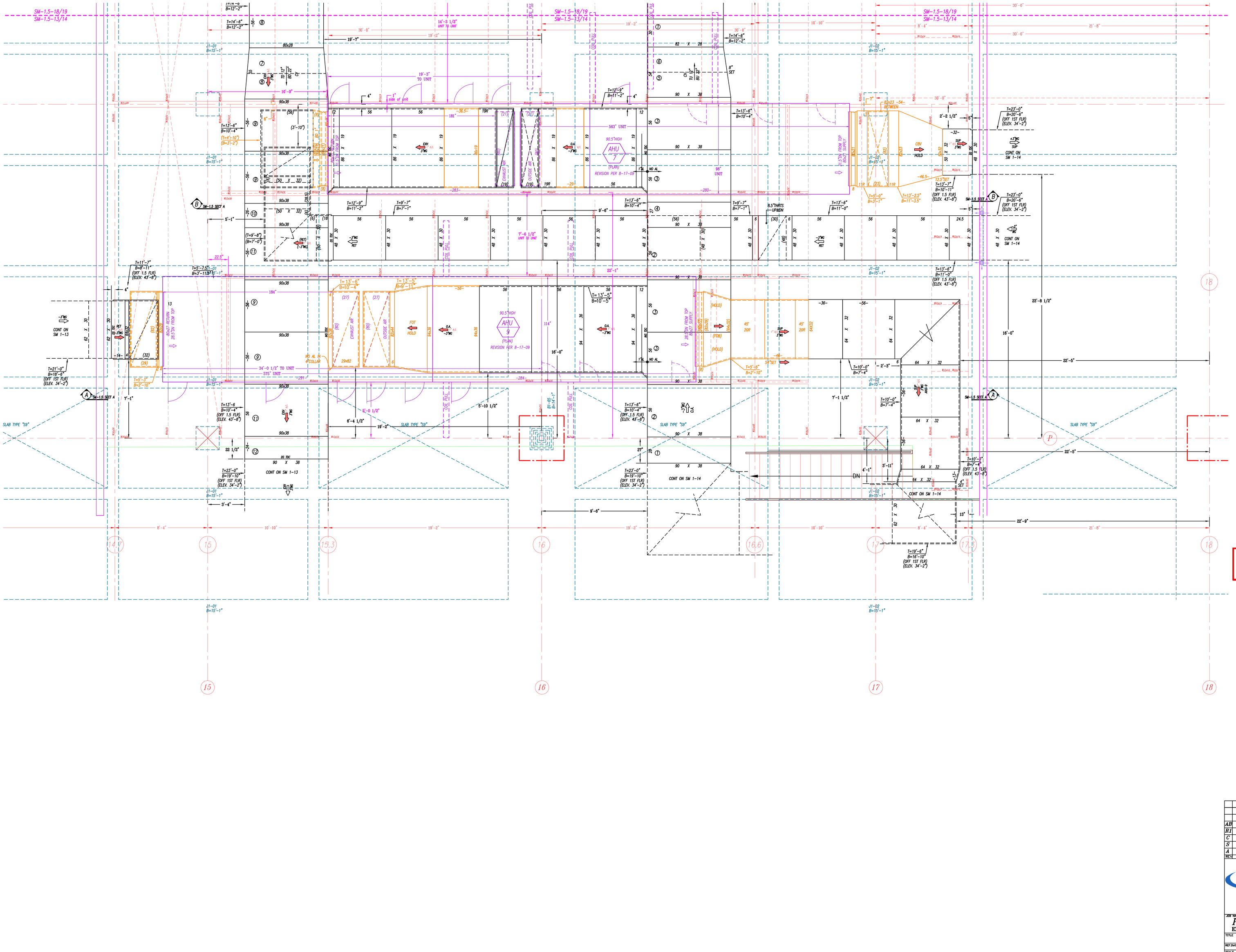
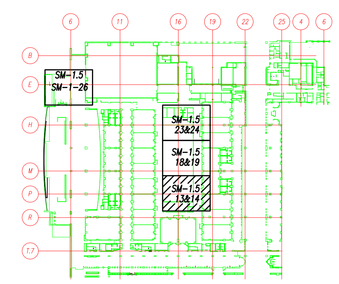
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: SECTIONS FROM AHU'S 1

REF.DWG-	SM 1.5-26	LOC. COLS.	
SCALE	3/8"=1'-0"	CH.	JOB NO. 8520
DATE	02-04-09	DR. B. JONES	DWG. NO. SM-1.5 SECT C



RECORD DRAWINGS
The Keating JV



1.5 FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⇐▭⇒ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – ⇐▭⇒ = AIR FLOW – 1" ACOUST. LINING
4. – ⇐▭⇒ RR = AIR FLOW – STAINLESS STEEL
5. – ⇐▭⇒ ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – Tx 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; Bx 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR NEW UNIT CUTS	EG	08-20-09
C	FOR CONSTRUCTION	MVO	04-07-09
S	SIGN OFF	MVO	04-02-09
A	FOR APPROVAL	MVO	03-11-09

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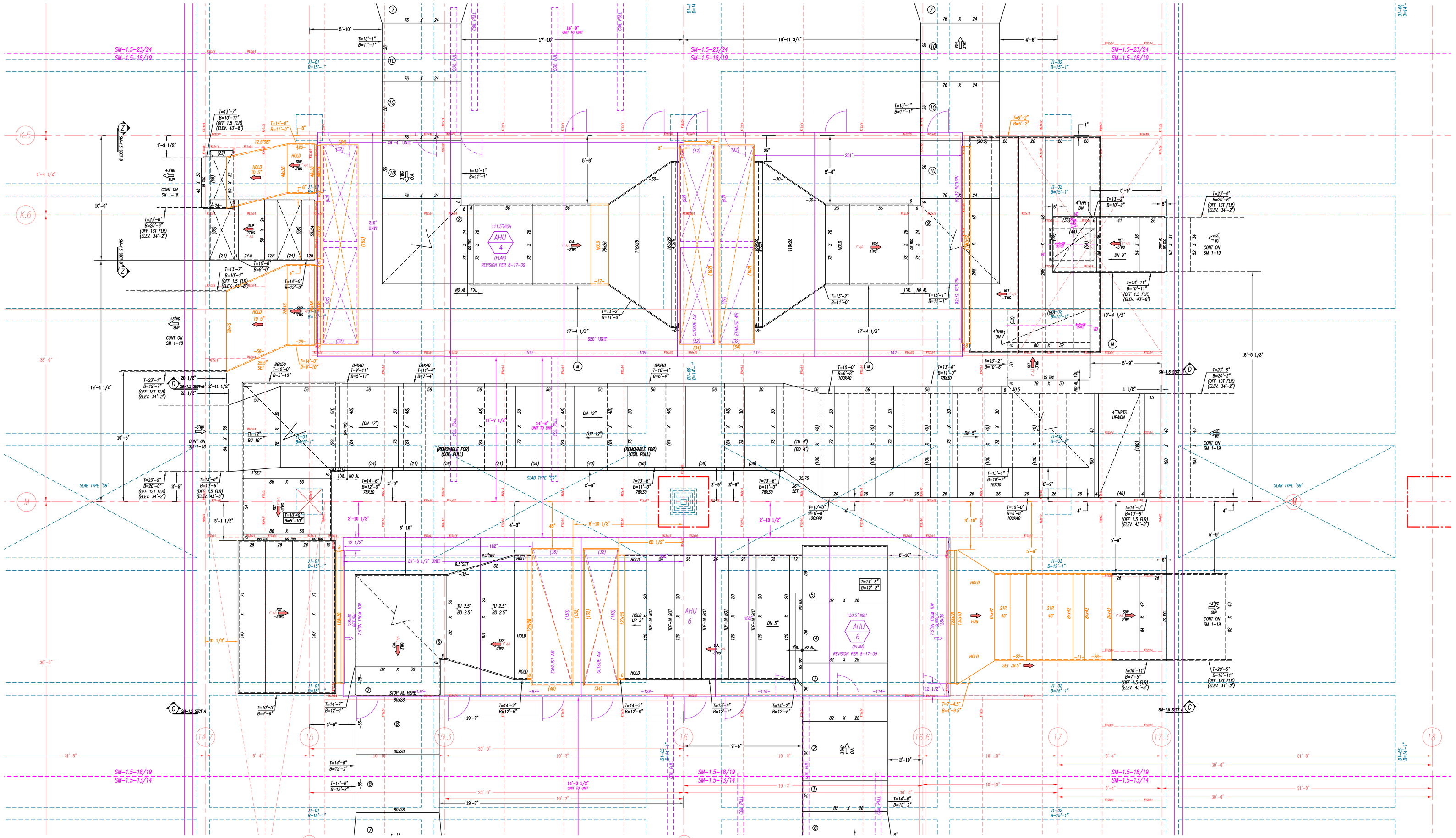
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
1.5 FLOOR PARTIAL PLAN

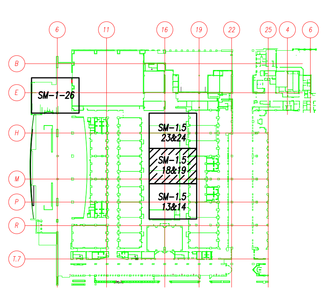
REF.DWG.- M219	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 02-04-09	DR. M. ONORATO	DWG. NO.	SM 1.5-13&14



RECORD DRAWINGS
The Keating JV

NOTES:

1. = ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. = ⇨ = AIR FLOW – GALV. – NO ACOUST. LINING
3. = ⇨ = AIR FLOW –1" ACOUST. LINING
4. = ⇨ SS = AIR FLOW – STAINLESS STEEL
5. = ⇨ ALUM = AIR FLOW – ALUMINUM
6. = ▷ = W.G. CONSTRUCTION OF DUCT
7. = T= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. = COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.



1.5 FLOOR

REV.	DESCRIPTION	BY.	DATE
AB	AS BUILT	MVO	01-11-11
R1	REVISED FOR NEW UNIT CUTS	MVO	08-28-09
C	FOR CONSTRUCTION	MVO	04-07-09
S	SIGN-OFF	MVO	04-02-09
A	FOR APPROVAL	MVO	03-11-09

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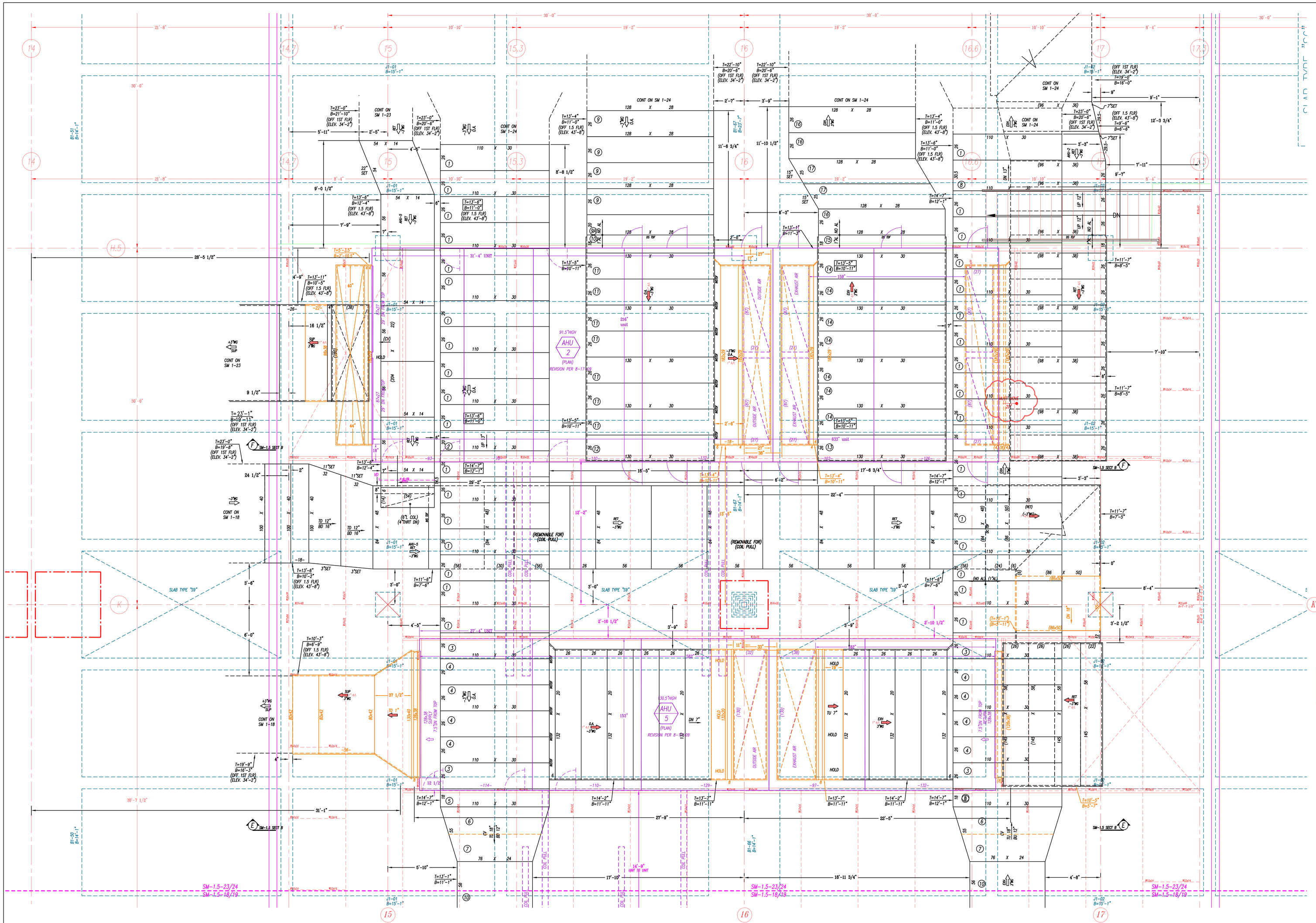
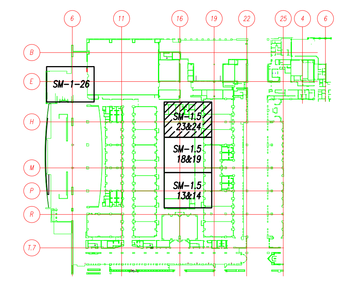
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
1.5 FLOOR PARTIAL PLAN

REF. DWG.- M219	LOC. COILS:		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 02-04-09	DR. M. ONORATO	DWG. NO.	SM 1.5-18&19



RECORD DRAWINGS
The Keating JV



1.5 FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – ⟨=C=⟩ = AIR FLOW – GALV. – NO ACOUST. LINING
3. – ⟨=C=⟩ = AIR FLOW –1" ACOUST. LINING
4. – ⟨=C=⟩ SS = AIR FLOW – STAINLESS STEEL
5. – ⟨=C=⟩ ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – T= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	08-27-09
R1	REVISED FOR UNITS	EG	08-27-09
C	FOR CONSTRUCTION	BLJ	04-07-09
S	SIGN OFF	BLJ	04-02-09
A	FOR APPROVAL	BLJ	02-18-09

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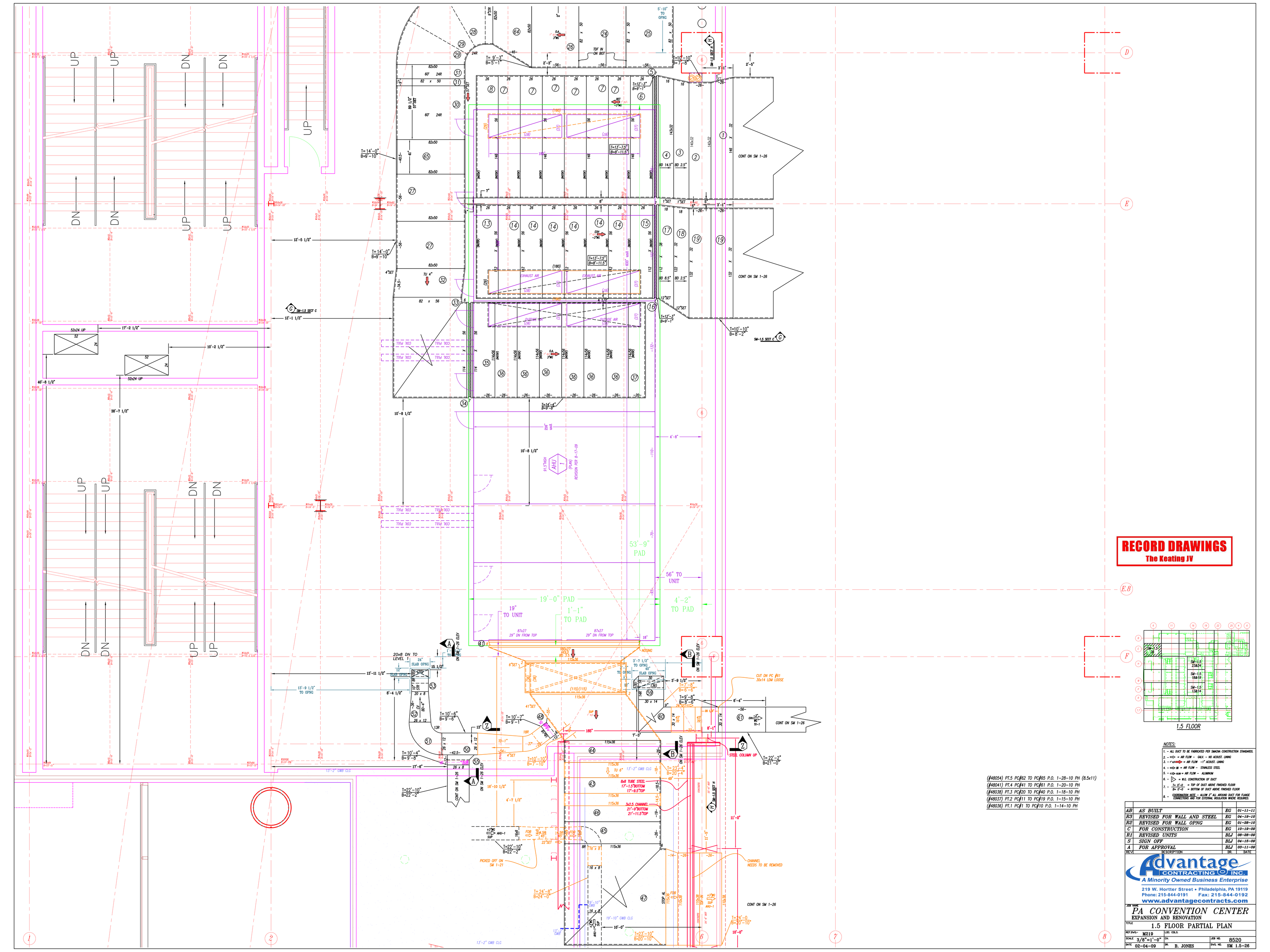
JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: 1.5 FLOOR PARTIAL PLAN

REF. DWGS.	M219	LOC. COLS.	
SCALE	3/8"=1'-0"	CH.	JOB NO. 8520
DATE	02-04-09	DR. M. ONORATO	DWG. NO. SM 1.5-23&24



RECORD DRAWINGS
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(#48054) PT.5 PG#62 TO PG#65 P.O. 1-28-10 PH (8.5x11)
(#48041) PT.4 PG#41 TO PG#61 P.O. 1-20-10 PH
(#48038) PT.3 PG#20 TO PG#40 P.O. 1-18-10 PH
(#48037) PT.2 PG#11 TO PG#19 P.O. 1-15-10 PH
(#48036) PT.1 PG#1 TO PG#10 P.O. 1-14-10 PH

1.5 FLOOR

NOTES:
1. = ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. = ⇨ = AIR FLOW - GALV. - NO ACOUST. LINING
3. = ⇨ = AIR FLOW - 1" ACOUST. LINING
4. = ⇨ = AIR FLOW - STAINLESS STEEL
5. = ⇨ = AIR FLOW - ALUMINUM
6. = ▷ = W.G. CONSTRUCTION OF DUCT
7. = T= 0'-0" = TOP OF DUCT ABOVE FINISHED FLOOR; B= 0'-0" = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. = COORDINATION NOTE - ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.#	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R3	REVISED FOR WALL AND STEEL	EG	04-19-10
R2	REVISED FOR WALL OPNG	EG	01-28-10
C	FOR CONSTRUCTION	EG	10-19-09
R1	REVISED UNITS	BLJ	08-28-09
S	SIGN OFF	BLJ	04-15-09
A	FOR APPROVAL	BLJ	03-11-09

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JOB NAME: PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE: 1.5 FLOOR PARTIAL PLAN

REF.DWG#- M219	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 02-04-09	DR. B. JONES	DWG. NO.	SM 1.5-26

NEED LOUVER CUTS

ASI-091 DOOR LAYOUT CHANGE

DN

DN

DN

DN

STAIR-A

STAIR A
FLR 115'-0"

FLR 115'-0"

B
ON STAIR A ELEV
(LVL#2 FKD)

T= 4'-8"
B= 2'-2"
OFF LANDING +115'-0"

ITEM 511
48
SUPPLY
48x30 NK

¾"TLG
OUT: 0/4

48 x 30
RE: OA

48 TBO 30

72

15"

15"

9"-3"

8'-0"

26"

8'-2"
CLR OPNG

A
ON STAIR A ELEV
(LVL#2 FKD)

13'-4"
CLEAR OPENING

4'-6"

8

9

12'-2"

12'-6"

V

B
ON STAIR A ELEV
(LVL#2 FKD)

V

W

2.4

2.6

2.8

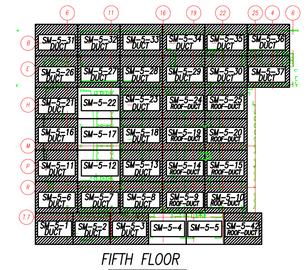
6

9

9

9

RECORD DRAWINGS
The Keating JV



FIFTH FLOOR

NOTES:

1. – ALL DUCT TO BE FABRICATED PER SMACNA CONSTRUCTION STANDARDS.
2. – <G> = AIR FLOW – GALV. – NO ACOUST. LINING
3. – <AL#1.5> = AIR FLOW –1" ACOUST. LINING
4. – <S> SS = AIR FLOW – STAINLESS STEEL
5. – <AL> ALUM = AIR FLOW – ALUMINUM
6. – ▷ = W.G. CONSTRUCTION OF DUCT
7. – 7= 0'-0 = TOP OF DUCT ABOVE FINISHED FLOOR
   B= 0'-0 = BOTTOM OF DUCT ABOVE FINISHED FLOOR
8. – COORDINATION NOTE – ALLOW 2" ALL AROUND DUCT FOR FLANGE CONNECTIONS AND FOR EXTERNAL INSULATION WHERE REQUIRED.

REV.	DESCRIPTION	DR.	DATE
AB	AS BUILT	EG	01-11-11
R1	REVISED FOR GRDS	EG	02-02-10
C	FOR CONSTRUCTION	EG	12-18-09
S	SIGN OFF	EG	11-19-09
A	FOR APPROVAL	BLJ	07-06-09

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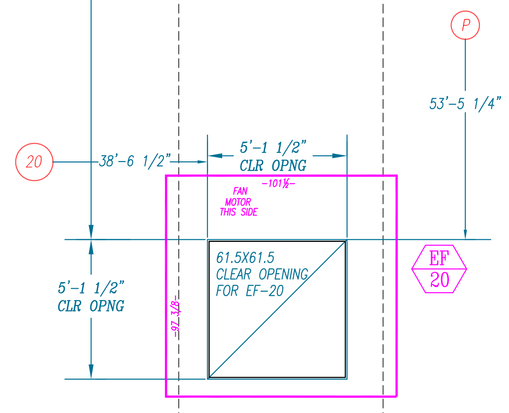
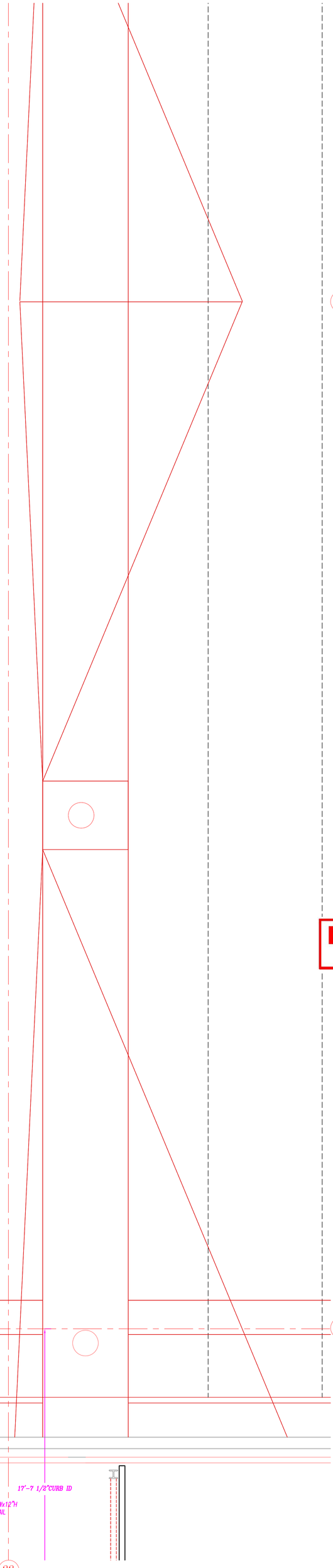
JOB NAME
PA CONVENTION CENTER
EXPANSION AND RENOVATION

TITLE
LEVEL 5 PARTIAL DUCT PLAN

REF.DWG.- M252	LOC. COLS.		
SCALE 3/8"=1'-0"	CH.	JOB NO.	8520
DATE 07-06-09	DR. BLJ	DWG. NO.	SM 5-1



FAN LOCATIONS BY JOIST MANUFACTURER RFI#122 AND RESPONSE TO CONTRACT 1 RFI#326 WITH ATTATCHED SKETCHES



RECORD DRAWINGS
The Keating JV