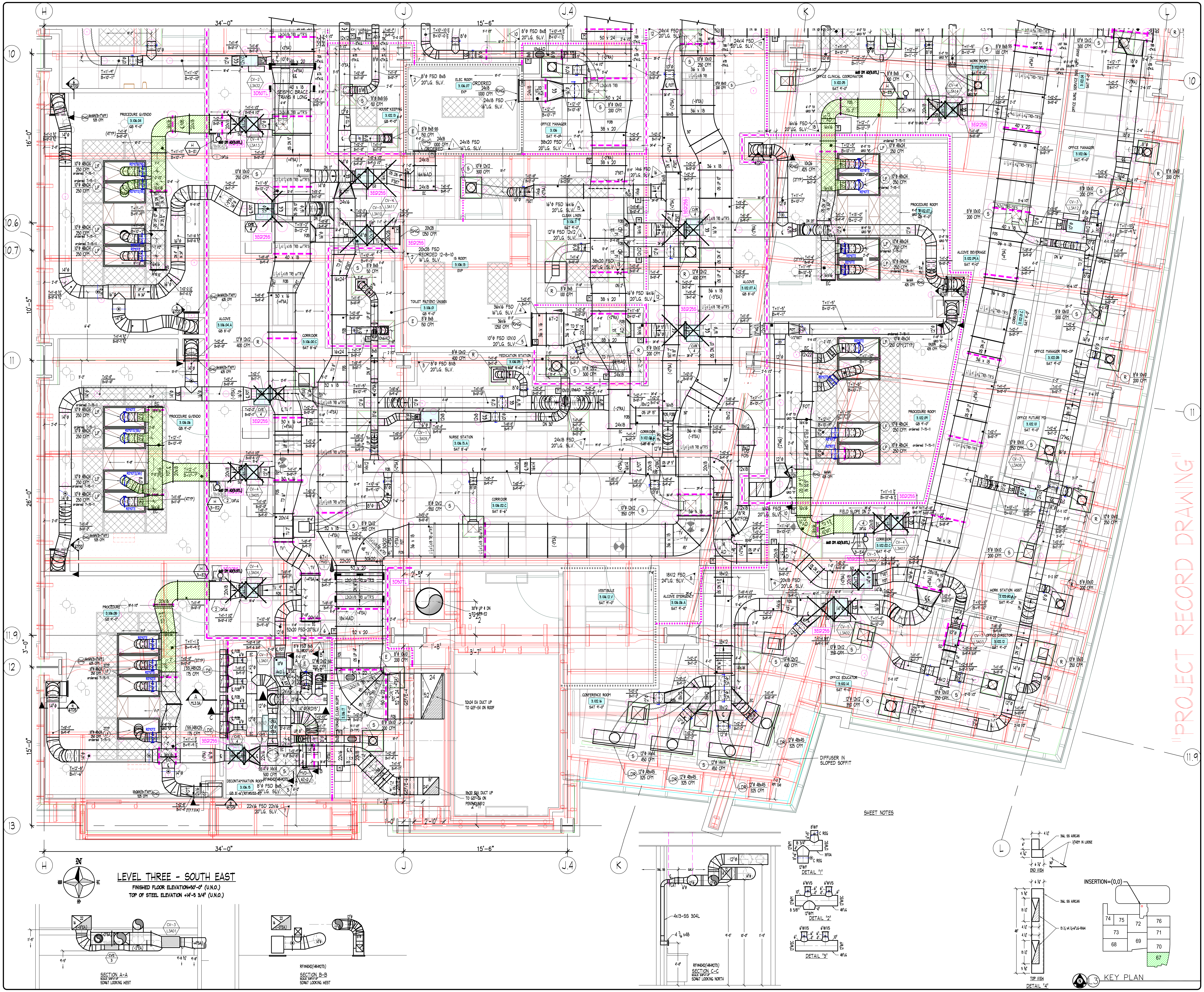

"PROJECT RECORD DRAWING"
34'-0"
15'-6"
16'-0"
10'-5"
26'-0"
3'-0"
15'-0"
H
J
J.4
K
L
10
10.6
10.7
11
11.9
12
13
PROCEDURE GI/ENDO
PROCEDURE
DECONTAMINATION ROOM
ELEC ROOM
HOUSE KEEPING
OFFICE MANAGER
TOILET PATIENT UNISEX
IS ROOM
CLEAN LINEN
MEDICATION STATION
NURSE STATION
CORRIDOR
ALCOVE
VESTIBULE
ALCOVE EMERGENCY
CONFERENCE ROOM
OFFICE CLINICAL COORDINATOR
WORK ROOM
PROCEDURE ROOM
ALCOVE BEVERAGE
OFFICE MANAGER PRE-OP
OFFICE FUTURE PD
OFFICE EDUCATOR
OFFICE DIRECTOR
WORK STATION ASST.
FIELD SLOPE DN 2"
DIFFUSER IN SLOPED SOFFIT
22x16 FSD 22x16 20"LG. SLV.
52x24 EA DUCT UP TO GEF-E4 ON ROOF
30"Ø UP & DN
SHEET NOTES
N
W
E
S

LEVEL THREE - SOUTH EAST

FINISHED FLOOR ELEVATION=50'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)

22
16
(-3"EA)
(+2"SA)
(-2"EA)
(+4"SA)
CV-3
L3A01
CVE
3
11'-5"
9'-5"
9'-8 3/4"
9'-8"
12"Ø
8"Ø
14"Ø

SECTION A-A
SCALE: 3/8"=1'-0"
SD#67 LOOKING WEST

RFI#4042(H&H#273)
SECTION B-B
SCALE: 3/8"=1'-0"
SD#67 LOOKING WEST

316L SS
GALV
FLAT
6"Ø
12"Ø
14"Ø
4x13-SS 304L
4 7/16 x48
4'-0"
9'-5"
10'-0"
11'-5"

RFI#4042(H&H#273)
SECTION C-C
SCALE: 3/8"=1'-0"
SD#67 LOOKING NORTH

8"Ø/F
C REG
18 3/4"
12"Ø/M
12"Ø/EC
33"OA
12"Ø/F
6"Ø/VS
8 5/8"
48"LG

DETAIL "1"

DETAIL "2"

DETAIL "3"

4 1/4"
316L SS AIRCAN
1/2"HEM IN LOOSE
6"
4 7/16"
6 7/8"
30°
5 3/8"
13 1/4"
48"
13 1/4 x4 1/4-6"LG-RAW

END VIEW

TOP VIEW

DETAIL "4"

INSERTION=(0,0)
74
75
72
76
73
71
69
68
70
67
L3

KEY PLAN

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

AD, AP	ACCESS DOOR. ACCESS PLATE	S & D	S & DRIVE CONNECTOR
B, BOTT	BOTTOM	SI	SPIN-IN FITTING
℄	CENTERLINE	SLV	SLEEVE
D, DN	DOWN	SP	STATIC PRESSURE
DM	DUCTMATE CONNECTOR	T	TOP
F, FEM	FEMALE	TDC	TRANSVERSE DUCT CONNECTOR
FD	FIRE DAMPER	TH	THROAT
FI	FLANGE IN	TRANS	TRANSITION FITTING
FO	FLANGE OUT	TV	TURNING VANES
FOB	FLAT ON BOTTOM	U	UP
FOS	FLAT ON SIDE	V	VERTICAL
FOT	FLAT ON TOP	VD	VOLUME DAMPER
H	HORIZONTAL	W	WITH
M	MALE	WG	WATER GAUGE
OS	OFFSET	┌●	MALE INDICATOR
R	RADIUS	┌○	FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
▲	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
⊕	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR
⊘	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
M	MOTORIZED DAMPER
⊠	DUCTWORK ACCESS DOOR OR ACCESS PLATE
○	DUCTWORK PIECE NO. INDICATOR
T+ / B+	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION
11-29-10	67A	+4"WG. SUPPLY AIR DUCTWORK UP FROM BOXES PCS: 1-61
11-29-10	67B	-3"&-2"WG. EXHAUST & RETURN AIR DUCTWORK PCS: 1-131
11-29-10	67C	+2"WG. SUPPLY AIR DUCTWORK DN FROM BOXES PCS: 1-81
3-7-11	67D	+2"WG. SUPPLY AIR DUCTWORK DN FROM BOXES
11-29-10	67P	PURCHASED SPIRAL Ø DUCTWORK PCS: 1P-42P
3-7-11	67P'	PURCHASED SPIRAL Ø DUCTWORK(LIST: 67D) PCS: 43P'-64P'
5-17-11	67AC	AIRCANS PCS: 1-9,10-26

REVISIONS

DATE	NO.	DESCRIPTION
5-4-12	12	AS-BUILT RECORD DRAWING

SHEET METAL CONTRACTORS & FABRICATORS
HARRIS & HART

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404

PHONE: (801) 731-0577
FAX NO: (801) 731-0580

WEBSITE: WWW.HARRIS-HART.COM

E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507 PAY ITEM: 67

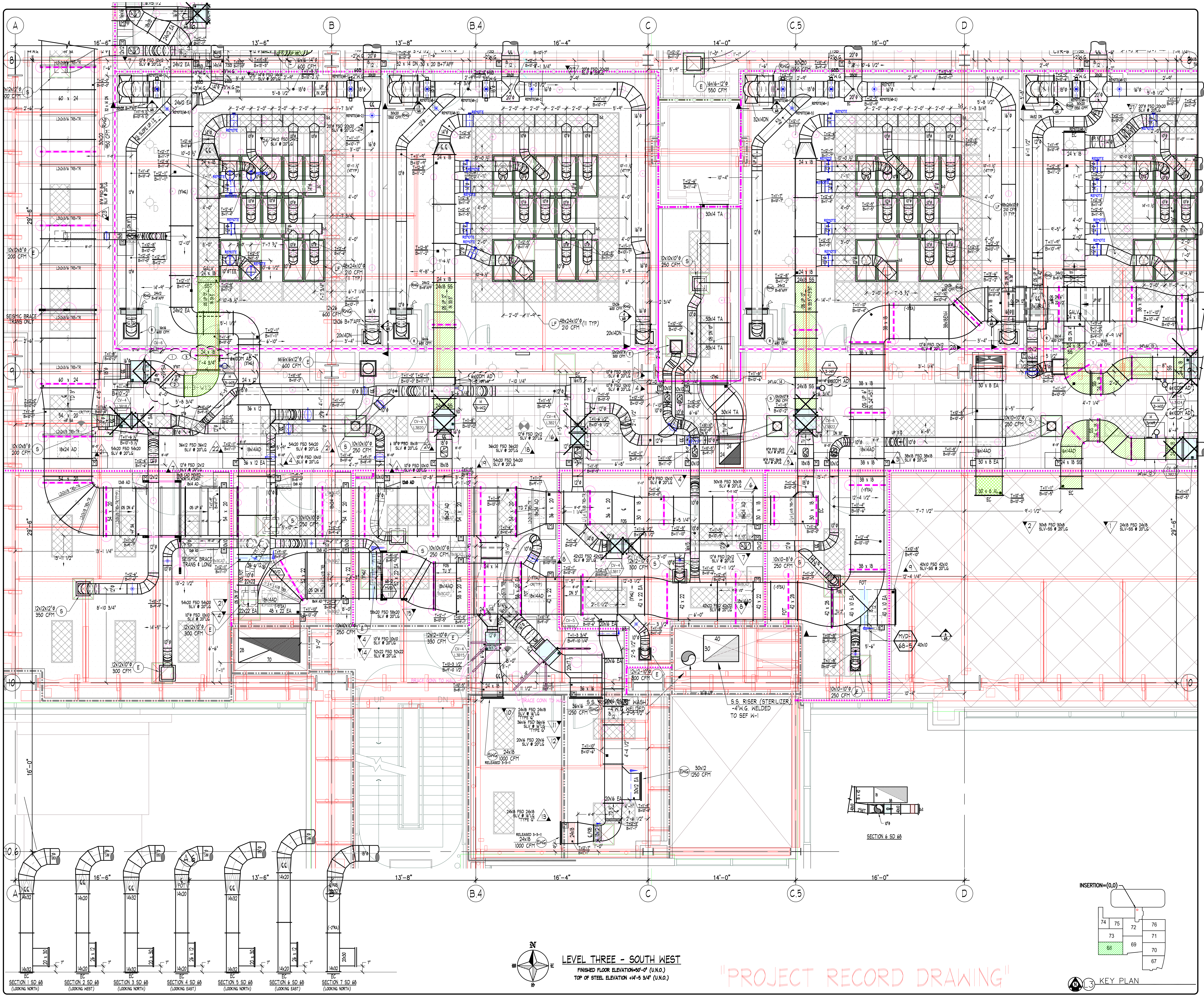
PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
LEVEL THREE AREA A
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.3A STRUCT: S2.4A MECH: M3.3A

BY: BP
DATE: 1-27-10
SCALE: 3/8"=1'-0"

DRAWING NO.
67 OF 115


A
B
B.4
C
C.5
D
8
9
10
10.6
16'-6"
13'-6"
13'-8"
16'-4"
14'-0"
16'-0"
29'-6"
SEISMIC BRACE TRANS ONLY
SEISMIC BRACE TRANS & LONG
S.S. RISER (STERILIZER) -4"W.G. WELDED TO SEF W-1
SECTION 6 SD 68
SECTION 1 SD 68 (LOOKING NORTH)
SECTION 2 SD 68 (LOOKING WEST)
SECTION 3 SD 68 (LOOKING NORTH)
SECTION 4 SD 68 (LOOKING EAST)
SECTION 5 SD 68 (LOOKING NORTH)
SECTION 6 SD 68 (LOOKING EAST)
SECTION 7 SD 68 (LOOKING NORTH)
N
W
E
S
INSERTION=(0,0)
74
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KEY PLAN

LEVEL THREE - SOUTH WEST

FINISHED FLOOR ELEVATION=50'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)

"PROJECT RECORD DRAWING"

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

AD, AP	ACCESS DOOR. ACCESS PLATE
B, BOTT	BOTTOM
℄	CENTERLINE
D, DN	DOWN
DM	DUCTMATE CONNECTOR
F, FEM	FEMALE
FD	FIRE DAMPER
FI	FLANGE IN
FO	FLANGE OUT
FOB	FLAT ON BOTTOM
FOS	FLAT ON SIDE
FOT	FLAT ON TOP
H	HORIZONTAL
M	MALE
OS	OFFSET
R	RADIUS
S & D	S & DRIVE CONNECTOR
SI	SPIN-IN FITTING
SLV	SLEEVE
SP	STATIC PRESSURE
T	TOP
TDC	TRANSVERSE DUCT CONNECTOR
TH	THROAT
TRANS	TRANSITION FITTING
TV	TURNING VANES
U	UP
V	VERTICAL
VD	VOLUME DAMPER
W	WITH
WG	WATER GAUGE
┌●	MALE INDICATOR
┌○	FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
M	MOTORIZED DAMPER
	DUCTWORK ACCESS DOOR OR ACCESS PLATE
	DUCTWORK PIECE NO. INDICATOR
T+ B+	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION
1-25-11	68A	+4"WG SUPPLY AIR DUCTWORK UP FROM BOXES PCS: 1-32
1-25-11	68B	-3" & 2"WG EXHAUST & RETURN AIR DUCTWORK PCS: 1-85
1-25-11	68C	-2"WG SUPPLY DUCTWORK DN FROM BOXES PCS: 1-61
4-8-11	68D	+2"WG(S.STL)PCS:1-5;+2"WG GALV:6-101;-2"WG: 102-143;-3"WG:144-172
1-25-11	68P	PURCHASED SPIRAL ϕ DUCTWORK
4-8-11	68P	PURCHASED SPIRAL ϕ DUCTWORK(ASSOCIATED W/LIST:68D)
5-17-11	68AC	AIRCANS PCS: 1-8, 9-17
10-28-11	68E	+2"WG GALV PCS: 1-26; -2"WG: 27
10-28-11	68P+	PURCHASED +2"WG PCS: 102-116

REVISIONS

DATE	NO.	DESCRIPTION
5-4-12	10	AS-BUILT RECORD DRAWING

SHEET METAL CONTRACTORS & FABRICATORS
HARRIS & HART

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404

PHONE: (801) 731-0577
FAX NO: (801) 731-0580

WEBSITE: WWW.HARRIS-HART.COM

E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507 PAY ITEM: 68

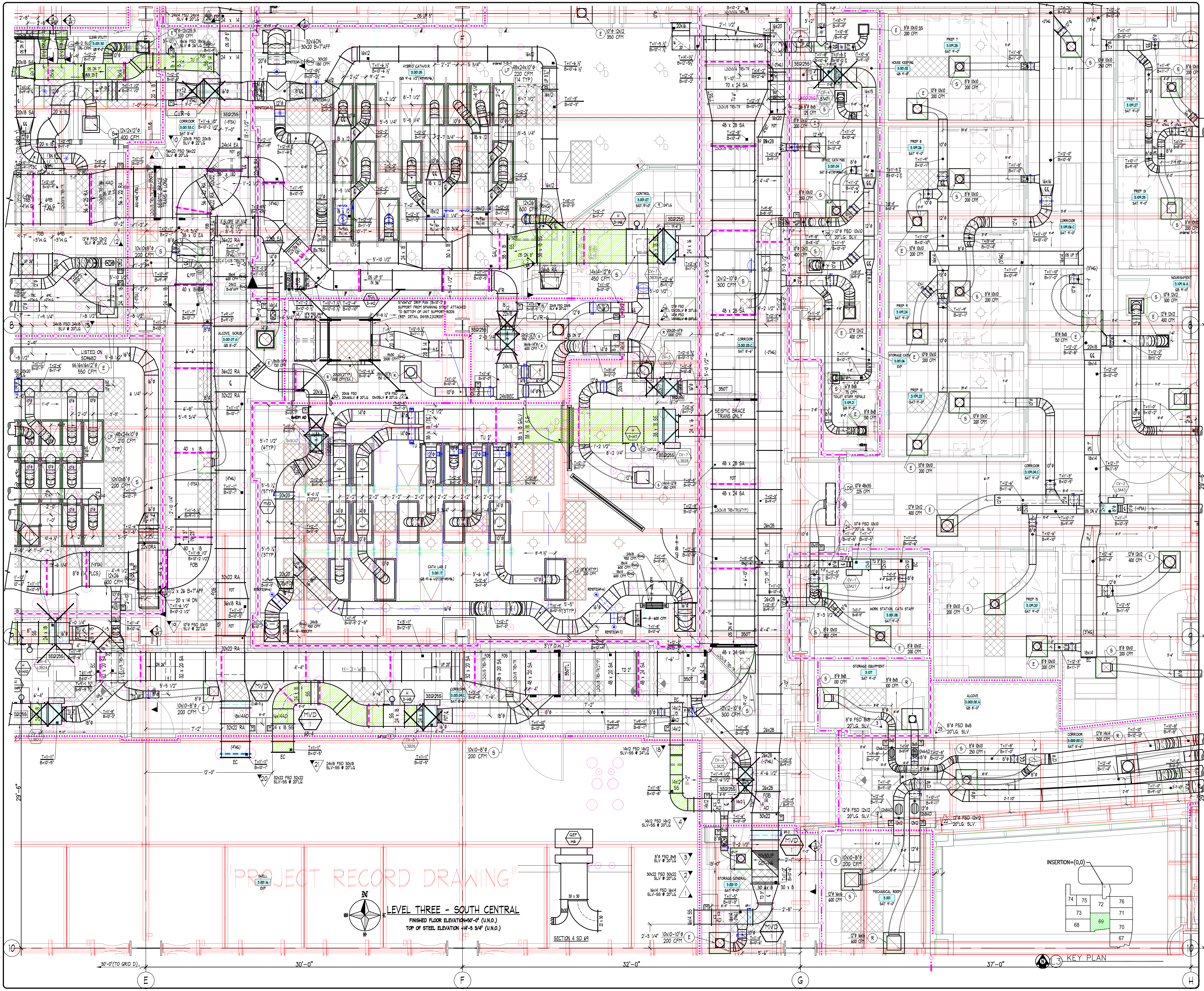
PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
LEVEL THREE AREA D
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.3D STRUCT: S2.4B MECH: M3.3D

BY:
DATE: 1-27-10
SCALE: 3/8"=1'-0"

DRAWING NO.
68 OF 115



LEVEL THREE - SOUTH CENTRAL

FINISHED FLOOR ELEVATION=50'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

AD, AP	ACCESS DOOR. ACCESS PLATE
B, BOTT	BOTTOM
℄	CENTERLINE
D, DN	DOWN
DM	DUCTMATE CONNECTOR
F, FEM	FEMALE
FD	FIRE DAMPER
FI	FLANGE IN
FO	FLANGE OUT
FOB	FLAT ON BOTTOM
FOS	FLAT ON SIDE
FOT	FLAT ON TOP
H	HORIZONTAL
M	MALE
OS	OFFSET
R	RADIUS
S & D	S & DRIVE CONNECTOR
SI	SPIN-IN FITTING
SLV	SLEEVE
SP	STATIC PRESSURE
T	TOP
TDC	TRANSVERSE DUCT CONNECTOR
TH	THROAT
TRANS	TRANSITION FITTING
TV	TURNING VANES
U	UP
V	VERTICAL
VD	VOLUME DAMPER
W	WITH
WG	WATER GAUGE
●	MALE INDICATOR
○	FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
▲	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
M	MOTORIZED DAMPER
	DUCTWORK ACCESS DOOR OR ACCESS PLATE
○	DUCTWORK PIECE NO. INDICATOR
T+ B+	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION	
2-2-11	69A	+4"WG SUPPLY DUCTWORK	PCS: 1-32
2-2-11	69B	EXHAUST AND RETURN DUCTWORK	PCS: 1-138
2-2-11	69C	+2"WG SUPPLY DUCTWORK	PCS: 1-86
2-2-11	69P	PURCHASED SPIRAL AND ϕ DUCTWORK	PCS: 1P-60P
3-3-11	69D	SUPPLY, RETURN, & EXHAUST DUCTWORK	PCS: 1-85
3-3-11	69P+1	PURCHASED SPIRAL AND ϕ DUCTWORK	PCS: 60AP-70P PCS: 71P-89P
4-8-11	69E	+4"WG GALV PCS:1; -2"WG:2-6; -3"WG:7-9	
5-17-11	69AC	AIRCANS PCS: 1-12, 13-32	
10-28-11	69F	+2"WG GALV PCS: 1-5; -2"WG: 6	
2-29-12	69G	+4"WG: GALV:1-5; -4"WG:6-12; -2"WG:13-53; +2"WG(304-2B)54,70; +2"WG GALV 55-69,71-87	

REVISIONS

DATE	NO.	DESCRIPTION
5-4-12	12	AS-BUILT RECORD DRAWING

SHEET METAL
HARRIS & HART
CONTRACTORS & FABRICATORS

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404

PHONE: (801) 731-0577
FAX NO: (801) 731-0580

WEBSITE: WWW.HARRIS-HART.COM

E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507 PAY ITEM: 69

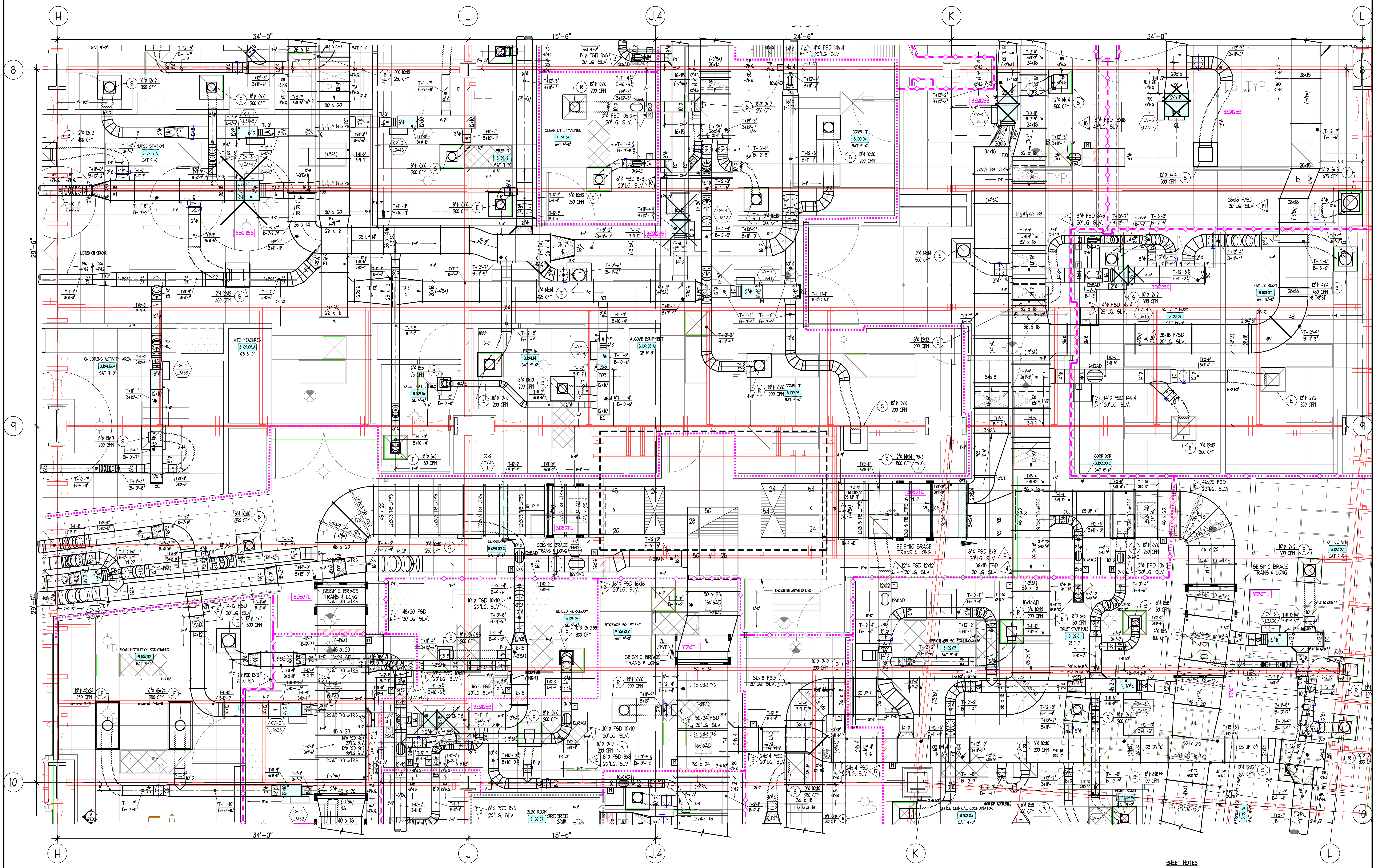
PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
LEVEL THREE AREA E
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.3E STRUCT: S2.3A&B MECH: M3.3E

BY:
DATE: 1-27-10
SCALE: 3/8"=1'-0"

DRAWING NO.
69 OF 115


H
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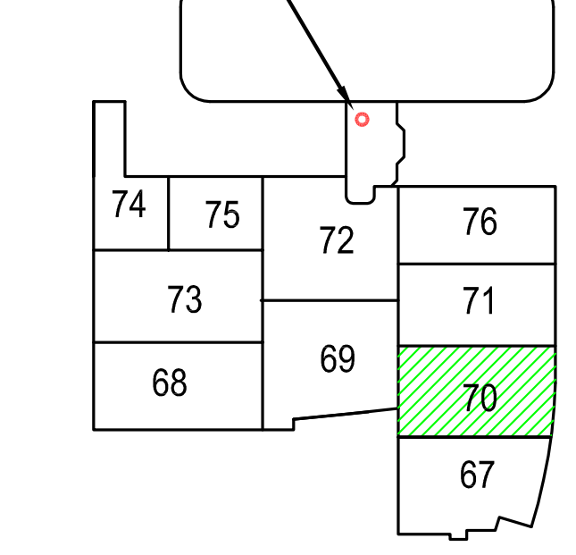
34'-0"
15'-6"
24'-6"
34'-0"
29'-6"
29'-6"
NURSE STATION
3.109.17.A
CLEAN UTILITY/LINEN
3.109.29
PREP 17
3.109.12
CONSULT
3.100.04
CHILDRENS ACTIVITY AREA
3.109.18.A
WTS MEASURES
3.109.09.A
PREP 16
3.109.14
TOILET MAT URDBEX
3.109.16
ALCOVE EQUIPMENT
3.109.03.A
CONSULT
3.100.05
FAMILY ROOM
3.100.07
ACTIVITY ROOM
3.100.06
CORRIDOR
3.102.00.C
CORRIDOR
3.049.00.C
OFFICE APN
3.102.02
EXAM/MOTILITY/URODYNAMIC
3.106.02
SOILED WORKROOM
3.106.09
STORAGE EQUIPMENT
3.106.01.C
OFFICE SCHEDULING
3.102.03
TOILET STAFF MALE
3.102.01
ELEC ROOM
3.106.07
OFFICE CLINICAL COORDINATOR
3.102.05
WORK ROOM
3.102.09
SEISMIC BRACE TRANS & LONG
ENCLOSURE ABOVE CEILING
TYP.
3EQ/255
3D50TL
SHEET NOTES

"PROJECT RECORD DRAWING"

LEVEL THREE - SOUTH EAST
FINISHED FLOOR ELEVATION=50'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)

INSERTION=(0,0)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L3 KEY PLAN

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

AD, AP	ACCESS DOOR. ACCESS PLATE	S & D	S & DRIVE CONNECTOR
B, BOTT	BOTTOM	SI	SPIN-IN FITTING
℄	CENTERLINE	SLV	SLEEVE
D, DN	DOWN	SP	STATIC PRESSURE
DM	DUCTMATE CONNECTOR	T	TOP
F, FEM	FEMALE	TDC	TRANSVERSE DUCT CONNECTOR
FD	FIRE DAMPER	TH	THROAT
FI	FLANGE IN	TRANS	TRANSITION FITTING
FO	FLANGE OUT	TV	TURNING VANES
FOB	FLAT ON BOTTOM	U	UP
FOS	FLAT ON SIDE	V	VERTICAL
FOT	FLAT ON TOP	VD	VOLUME DAMPER
H	HORIZONTAL	W	WITH
M	MALE	WG	WATER GAUGE
OS	OFFSET	┗●	MALE INDICATOR
R	RADIUS	┗○	FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
▲	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
M	MOTORIZED DAMPER
	DUCTWORK ACCESS DOOR OR ACCESS PLATE
○	DUCTWORK PIECE NO. INDICATOR
T+ / B+	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION	
12-10-10	70A	+4"W.G. SUPPLY DUCTWORK UPSTREAM OF BOXES	PCS:1-69
12-15-10	70B	-2" & -3"W.G. EA & RA DUCTWORK	PCS:1-111
12-15-10	70C	+2"W.G. SUPPLY DUCTWORK DNSTREAM OF BOXES	PCS:1-103
12-10-10	70P	PURCHASED ROUND DUCTWORK	PCS:1P-87P
5-3-11	70D	-3" W.G. EXHAUST DUCTWORK	PCS:1-10
5-17-11	70AC	AIRCANS PCS: 1-12, 13-26	

REVISIONS

DATE	NO.	DESCRIPTION
5-4-12	9	AS-BUILT RECORD DRAWING

SHEET METAL CONTRACTORS & FABRICATORS
HARRIS & HART

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404

PHONE: (801) 731-0577
FAX NO: (801) 731-0580

WEBSITE: WWW.HARRIS-HART.COM

E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

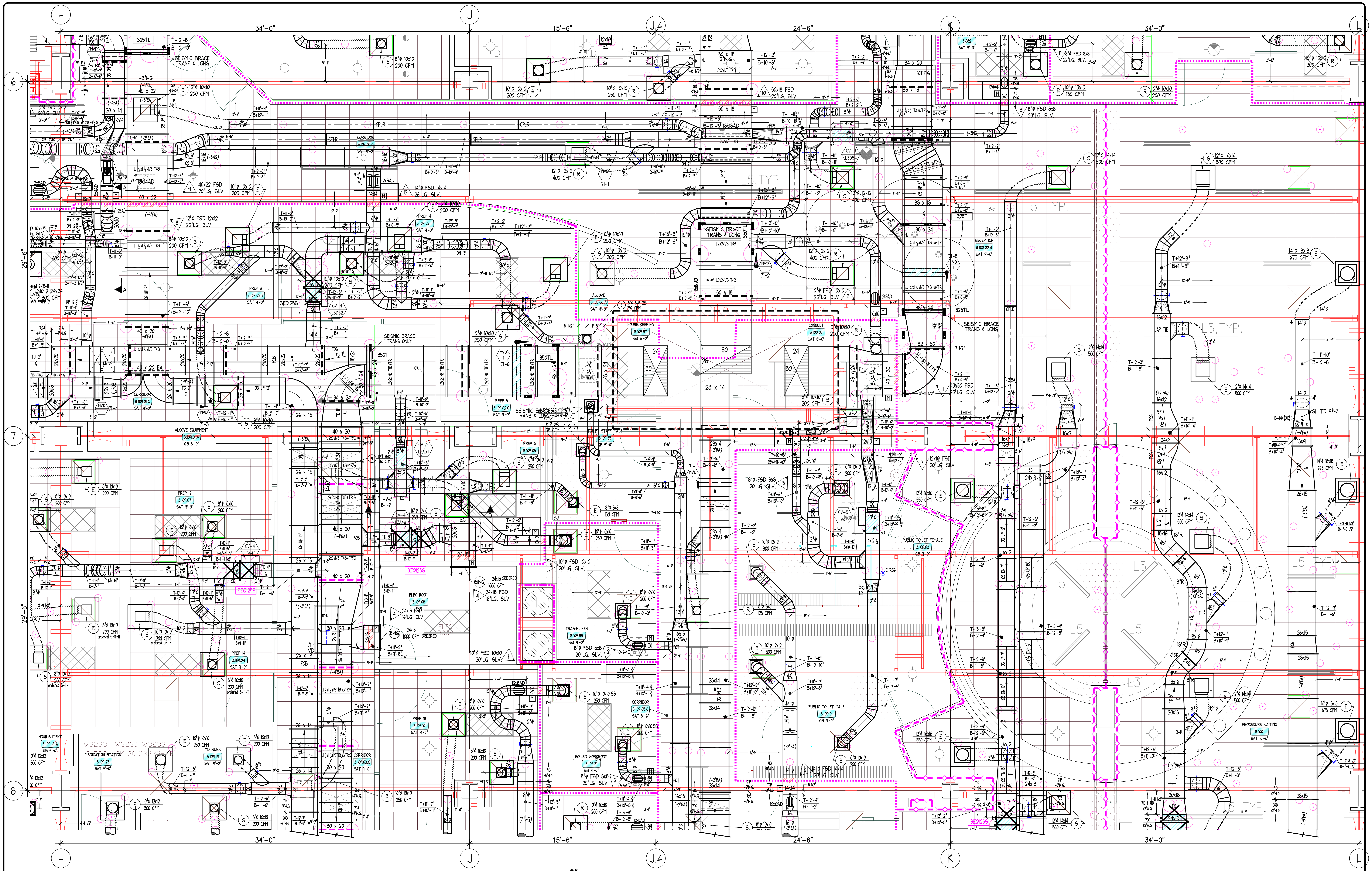
JOB NO: 9507 PAY ITEM: 70

PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
LEVEL THREE AREA F
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.3F STRUCT: S2.4A MECH: M3.3F

BY:
DATE: 1-27-10
SCALE: 3/8"=1'-0"
DRAWING NO.
70 OF 115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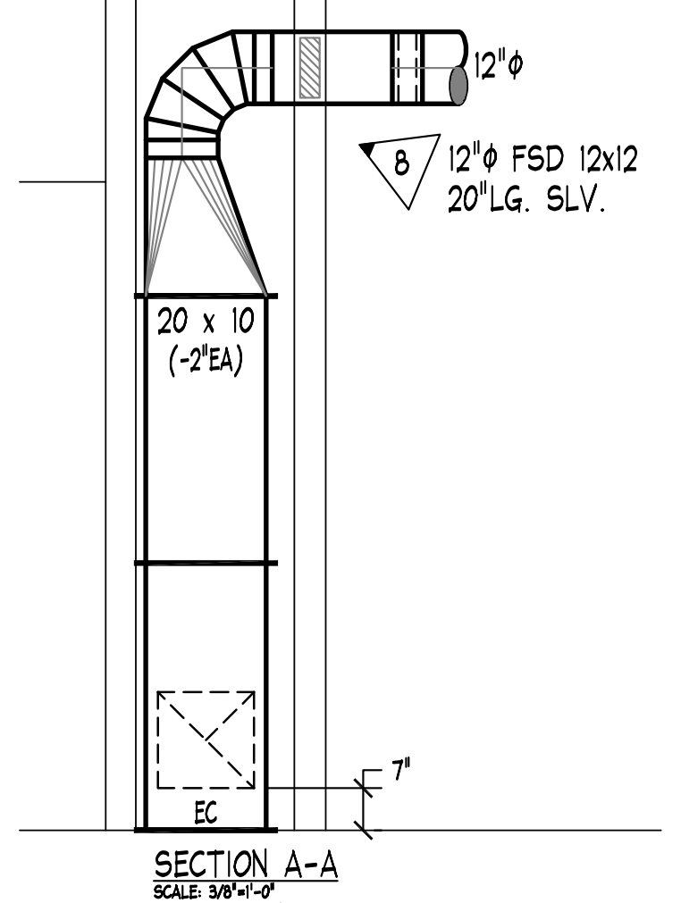
24'-6"
34'-0"
29'-6"
29'-6"
L5 TYP.
L5
SEISMIC BRACE TRANS & LONG
CORRIDOR
PUBLIC TOILET FEMALE
PUBLIC TOILET MALE
PROCEDURE WAITING
ELEC ROOM
TRASH/LINEN
SOILED WORKROOM
HOUSE KEEPING
RECEPTION
ALCOVE
MEDICATION STATION
NOURISHMENT
3EQ1255

LEVEL THREE - NORTH EAST

FINISHED FLOOR ELEVATION=50'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)

"PROJECT RECORD DRAWING"


12"ϕ
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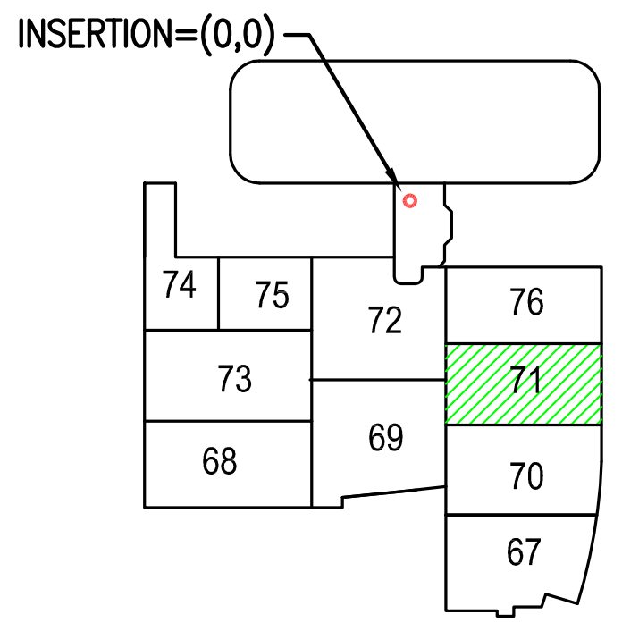
12"ϕ FSD 12x12
20"LG. SLV.
20 x 10
(-2"EA)
EC
7"

SECTION A-A
SCALE: 3/8"=1'-0"
SD#71 LOOKING WEST

71D +2" W.G. SUPPLY & -3" W.G. EXH.
NO'S 1-12
+2"SUPPLY: 1-7
-3"EXHAUST: 8-12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L3 KEY PLAN

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

AD, AP	ACCESS DOOR, ACCESS PLATE
B, BOTT	BOTTOM
℄	CENTERLINE
D, DN	DOWN
DM	DUCTMATE CONNECTOR
F, FEM	FEMALE
FD	FIRE DAMPER
FI	FLANGE IN
FO	FLANGE OUT
FOB	FLAT ON BOTTOM
FOS	FLAT ON SIDE
FOT	FLAT ON TOP
H	HORIZONTAL
M	MALE
OS	OFFSET
R	RADIUS
S & D	S & DRIVE CONNECTOR
SI	SPIN-IN FITTING
SLV	SLEEVE
SP	STATIC PRESSURE
T	TOP
TDC	TRANSVERSE DUCT CONNECTOR
TH	THROAT
TRANS	TRANSITION FITTING
TV	TURNING VANES
U	UP
V	VERTICAL
VD	VOLUME DAMPER
W	WITH
WG	WATER GAUGE
┌●	MALE INDICATOR
┌○	FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
▲	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
M	MOTORIZED DAMPER
⊠	DUCTWORK ACCESS DOOR OR ACCESS PLATE
○	DUCTWORK PIECE NO. INDICATOR
T+ / B+	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION
11-16-10	71A	+4" WG. SUPPLY AIR DUCTWORK UP FROM BOXES PCS: 1-46
11-18-10	71B	-4, 3, +2" WG. EA & RA DUCTWORK PCS: 1-107
11-19-10	71C	+2" WG. SUPPLY AIR DUCTWORK DN FROM BOXES PCS: 1-81
5-3-11	71D	+2" WG. SUPPLY & -3" W.G. EXHAUST DUCTWORK PCS: 1-12
11-19-10	71P	PURCHASED SPIRAL ϕ DUCTWORK PCS: 1P-68P
5-17-11	71AC	AIRCANS PCS: 1-9, 10-26

REVISIONS

DATE	NO.	DESCRIPTION
5-4-12	8	AS-BUILT RECORD DRAWING

SHEET METAL CONTRACTORS & FABRICATORS
HARRIS & HART

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404

PHONE: (801) 731-0577
FAX NO: (801) 731-0580

WEBSITE: WWW.HARRIS-HART.COM

E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507 PAY ITEM: 71

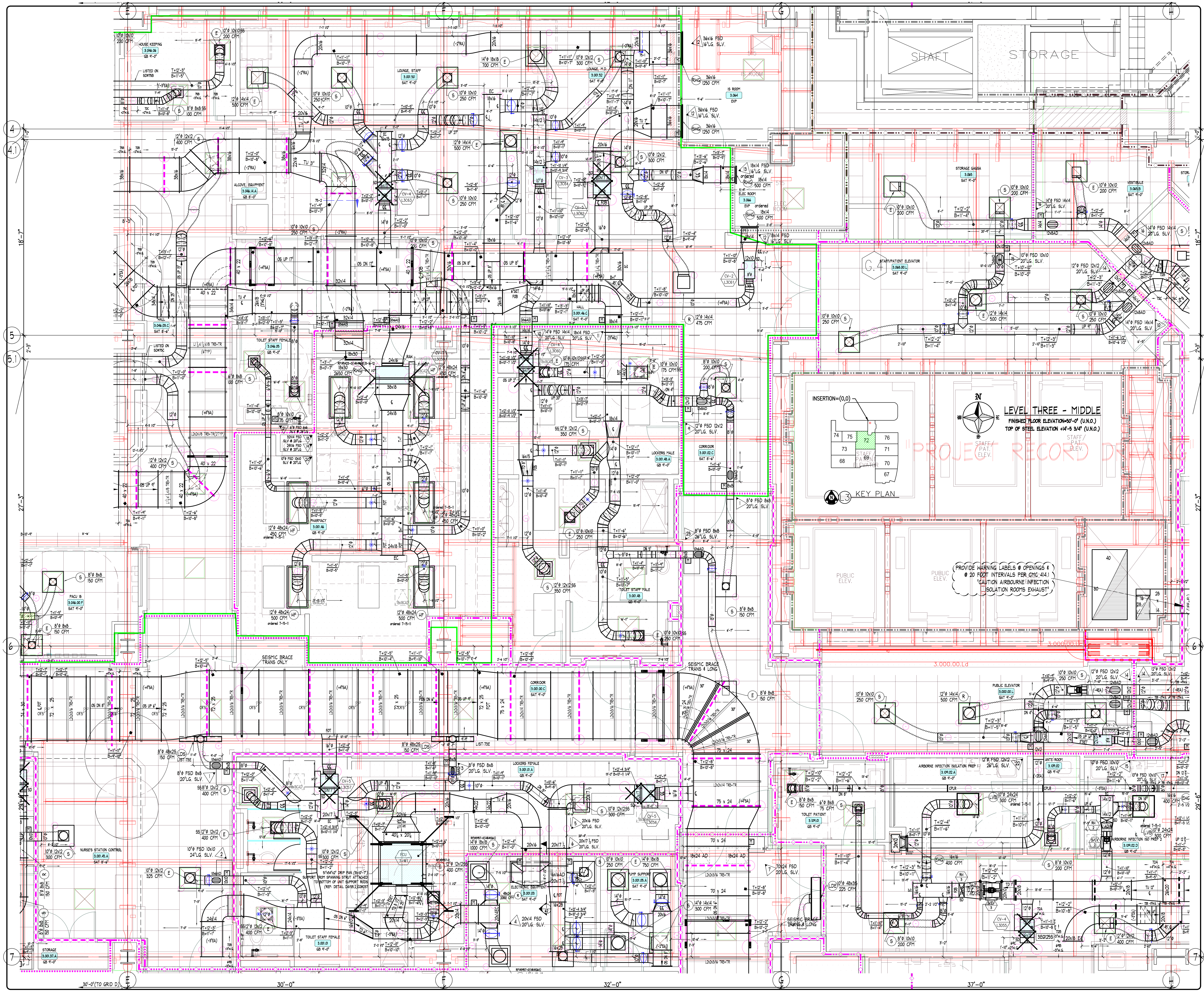
PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
LEVEL THREE AREA G
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.3G STRUCT: S2.4A&D MECH: M3.3G

BY: BP
DATE: 1-27-10
SCALE: 3/8"=1'-0"

DRAWING NO.
71 OF 115


SHAFT
STORAGE
LEVEL THREE - MIDDLE
FINISHED FLOOR ELEVATION=50'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)
INSERTION=(0,0)
KEY PLAN
"PROJECT RECORD DRAWING"
PROVIDE WARNING LABELS @ OPENINGS & @ 20 FOOT INTERVALS PER CMC 414.1 "CAUTION AIRBOURNE INFECTION ISOLATION ROOMS EXHAUST"
PUBLIC ELEV.
STAFF/PAT. ELEV.
SEISMIC BRACE TRANS ONLY
SEISMIC BRACE TRANS & LONG
18'-7"
27'-3"
29'-6"
30'-0"(TO GRID D)
30'-0"
32'-0"
37'-0"
4
4.1
5
5.1
6
7
E
F
G

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

AD, AP	ACCESS DOOR. ACCESS PLATE	S & D	S & DRIVE CONNECTOR
B, BOTT	BOTTOM	SI	SPIN-IN FITTING
℄	CENTERLINE	SLV	SLEEVE
D, DN	DOWN	SP	STATIC PRESSURE
DM	DUCTMATE CONNECTOR	T	TOP
F, FEM	FEMALE	TDC	TRANSVERSE DUCT CONNECTOR
FD	FIRE DAMPER	TH	THROAT
FI	FLANGE IN	TRANS	TRANSITION FITTING
FO	FLANGE OUT	TV	TURNING VANES
FOB	FLAT ON BOTTOM	U	UP
FOS	FLAT ON SIDE	V	VERTICAL
FOT	FLAT ON TOP	VD	VOLUME DAMPER
H	HORIZONTAL	W	WITH
M	MALE	WG	WATER GAUGE
OS	OFFSET	┍●	MALE INDICATOR
R	RADIUS	┍○	FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
▲	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
M	MOTORIZED DAMPER
	DUCTWORK ACCESS DOOR OR ACCESS PLATE
○	DUCTWORK PIECE NO. INDICATOR
T+ B+	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION
12-28-10	72A	+4"WG. SUPPLY AIR DUCTWORK UPSTREAM OF BOXES PCS:1-48
12-28-10	72B	-3" & 2"WG. EXHAUST & RETURN AIR DUCTWORK PCS:1-112
12-28-10	72C	+2"WG. SUPPLY AIR DUCTWORK DNSTREAM OF BOXES PCS:1-101
10-31-11	72D	±2"WG GALV PCS: 1-22; -3"WG: 23-26
12-28-10	72P	PURCHASED SPIRAL ⌀ DUCTWORK PCS:1P-84P
5-17-11	72AC	AIRCANS PCS: 1-17, 18-28

REVISIONS

DATE	NO.	DESCRIPTION
5-4-12	7	AS-BUILT RECORD DRAWING

SHEET METAL CONTRACTORS & FABRICATORS

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404

PHONE: (801) 731-0577
FAX NO: (801) 731-0580

WEBSITE: WWW.HARRIS-HART.COM

E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507 PAY ITEM: 72

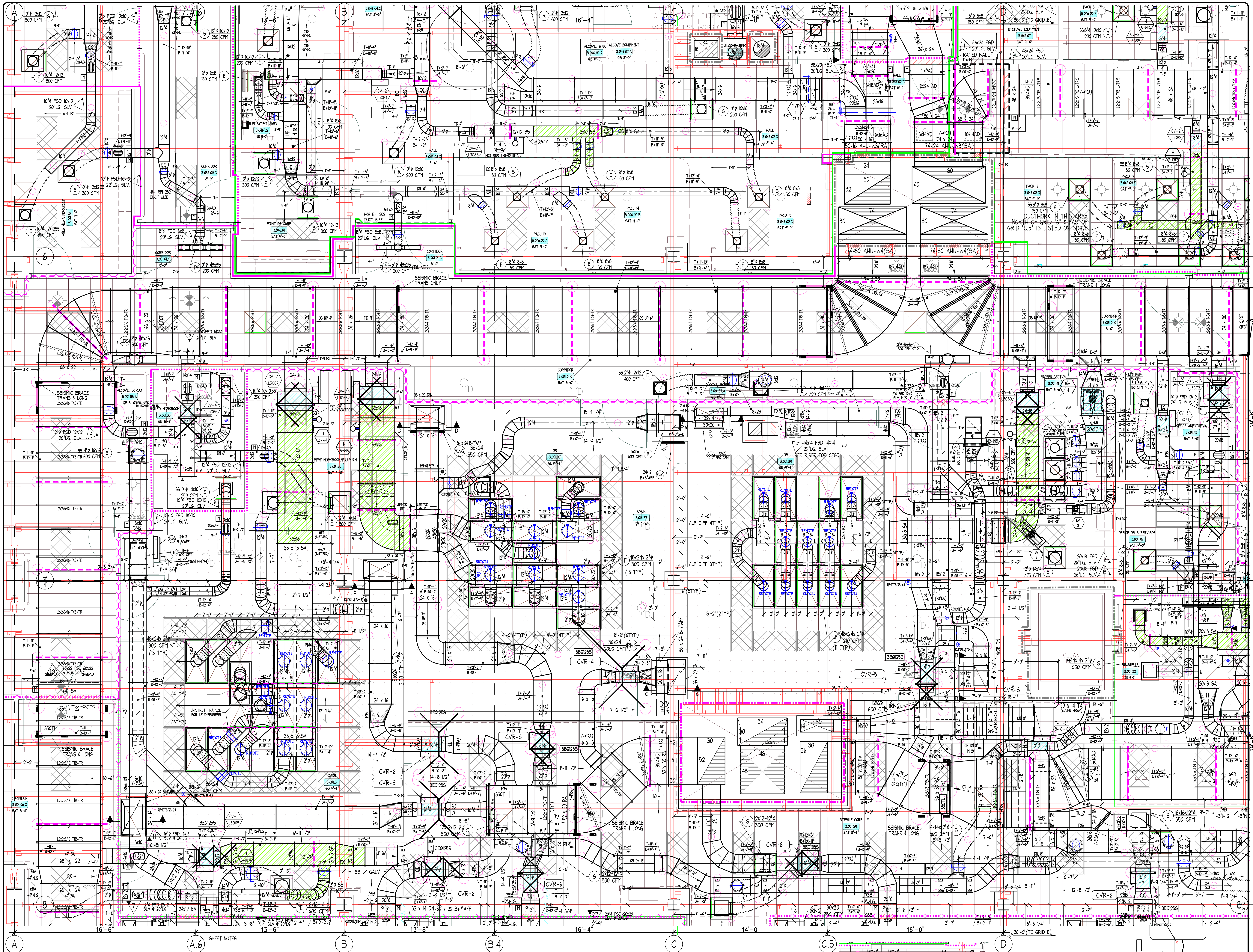
PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
LEVEL THREE AREA H
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.3H STRUCT: S2.4C&D MECH: M3.3H

BY:
DATE: 1-27-10
SCALE: 3/8"=1'-0"

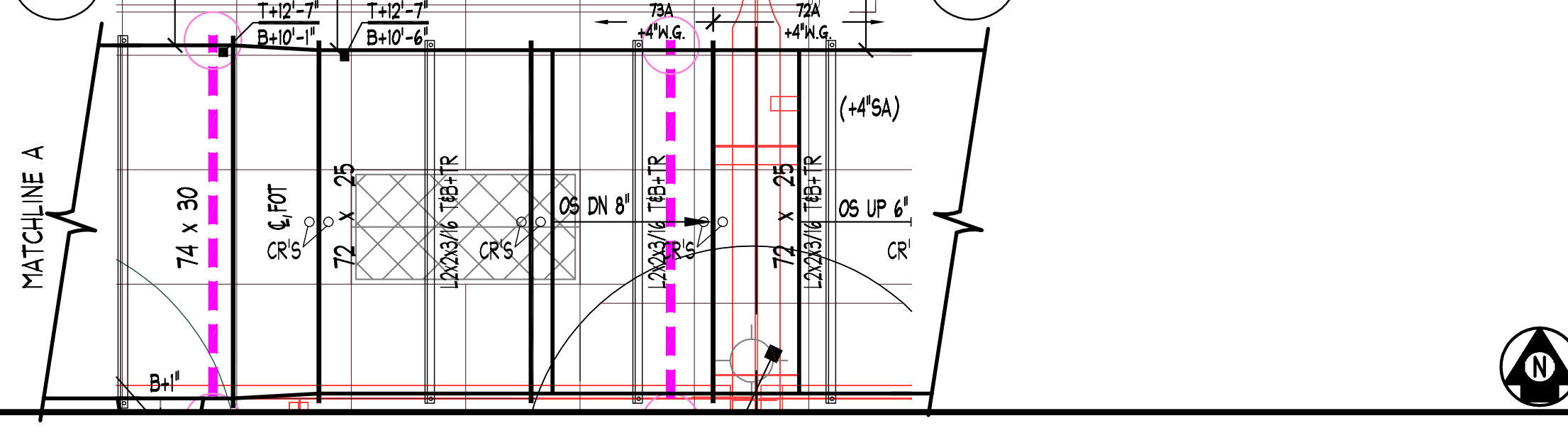
DRAWING NO.
72 OF 115

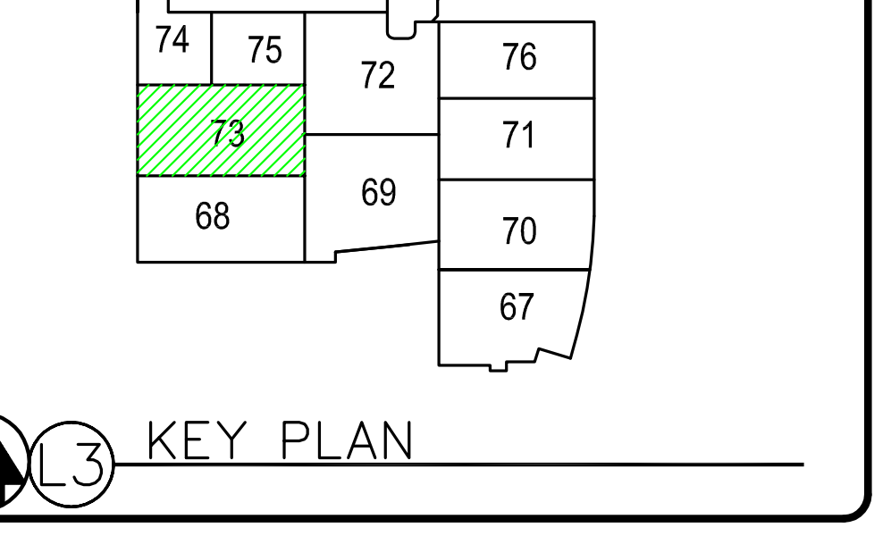


"PROJECT RECORD DRAWING"

LEVEL THREE - NORTH WEST

FINISHED FLOOR ELEVATION=50'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)





KEY PLAN

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

AD, AP	ACCESS DOOR. ACCESS PLATE
B, BOTT	BOTTOM
℄	CENTERLINE
D, DN	DOWN
DM	DUCTMATE CONNECTOR
F, FEM	FEMALE
FD	FIRE DAMPER
FI	FLANGE IN
FO	FLANGE OUT
FOB	FLAT ON BOTTOM
FOS	FLAT ON SIDE
FOT	FLAT ON TOP
H	HORIZONTAL
M	MALE
OS	OFFSET
R	RADIUS
S & D	S & DRIVE CONNECTOR
SI	SPIN-IN FITTING
SLV	SLEEVE
SP	STATIC PRESSURE
T	TOP
TDC	TRANSVERSE DUCT CONNECTOR
TH	THROAT
TRANS	TRANSITION FITTING
TV	TURNING VANES
U	UP
V	VERTICAL
VD	VOLUME DAMPER
W	WITH
WG	WATER GAUGE
●	MALE INDICATOR
○	FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
▲	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
M	MOTORIZED DAMPER
◿	DUCTWORK ACCESS DOOR OR ACCESS PLATE
○	DUCTWORK PIECE NO. INDICATOR
T+ B+	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION
1-17-11	73A	+4"WG. SUPPLY AIR DUCTWORK UPSTREAM OF BOXES PCS:1-33
1-17-11	73B	-4", 3" & 2" RETURN, CXHAUST & SUPPLY AIR DUCTWORK PCS:1-200
1-24-11	73C	+2"WG. SUPPLY AIR DUCTWORK DNSTREAM OF BOXES PCS:1-93
1-24-11	73P	PURCHASED SPIRAL ϕ DUCTWORK PCS:1P-73P
3-22-11	73D	+4"WG:1-2;+2"WG:3-83;-3"WG(S.STL):84-88; -3"WG:89-103;-2"WG:104-111
3-22-11	73P	PURCHASED SPIRAL DUCTWORK @ OR's PCS:74P-78P
5-17-11	73AC	AIRCANS PCS: 1-11, 12-17
10-31-11	73F	+2"WG GALV PCS: 1-43; -2"WG: 44(CO#245 CHANGES)
10-31-11	73P+	+2"WG GALV PCS: 79-88; -2"WG: 89 (ASSOCIATED w/LIST 73F)

REVISIONS

DATE	NO.	DESCRIPTION
5-4-12	12	AS-BUILT RECORD DRAWING

SHEET METAL CONTRACTORS & FABRICATORS
HARRIS & HART

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404

PHONE: (801) 731-0577
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WEBSITE: WWW.HARRIS-HART.COM

E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507
PAY ITEM: 73

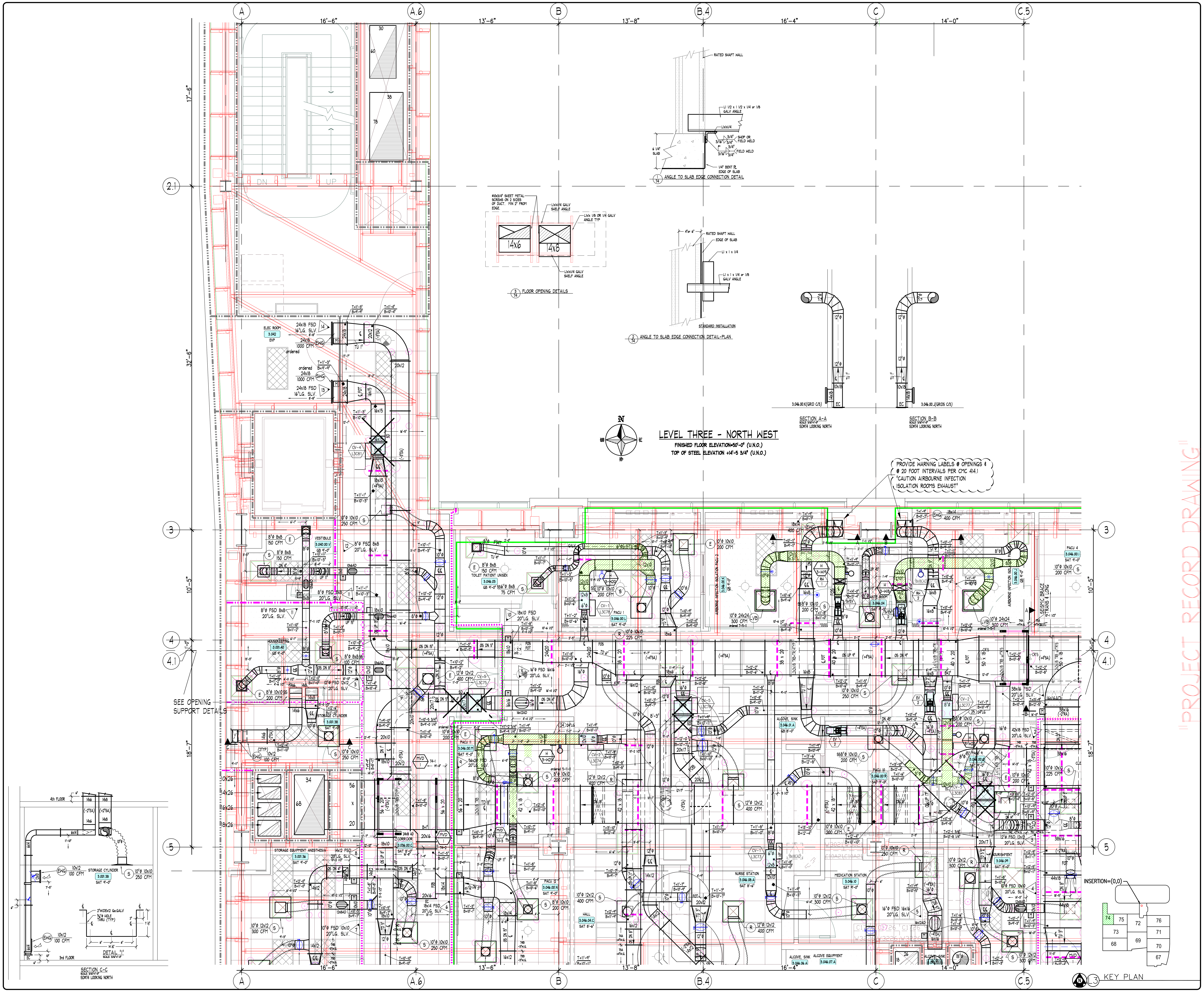
PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
LEVEL THREE AREA J
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.3J STRUCT: S2.4B&C MECH: M3.3J

BY: BP
DATE: 1-27-10
SCALE: 3/8"=1'-0"

DRAWING NO.
73 OF 115


LEVEL THREE - NORTH WEST
FINISHED FLOOR ELEVATION=50'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)
N
S
E
W
A
A.6
B
B.4
C
C.5
2.1
3
4
4.1
5
16'-6"
13'-6"
13'-8"
16'-4"
14'-0"
17'-6"
32'-6"
10'-5"
18'-7"
SECTION A-A
SCALE: 3/16"=1'-0"
SD#74 LOOKING NORTH
3.046.00.K(GRID C/3)
SECTION B-B
SCALE: 3/16"=1'-0"
SD#74 LOOKING NORTH
3.046.00.J(GRIDS C/3)
12"ø
10x18
14x18
EC
TU 1"
ANGLE TO SLAB EDGE CONNECTION DETAIL
ANGLE TO SLAB EDGE CONNECTION DETAIL-PLAN
FLOOR OPENING DETAILS
RATED SHAFT WALL
EDGE OF SLAB
STANDARD INSTALLATION
14x6
14x8
PROVIDE WARNING LABELS @ OPENINGS & @ 20 FOOT INTERVALS PER CMC 414.1 "CAUTION AIRBOURNE INFECTION ISOLATION ROOMS EXHAUST"
SEE OPENING SUPPORT DETAILS
SECTION C-C
SD#74 LOOKING NORTH
4th FLOOR
3rd FLOOR
DETAIL
INSERTION=(0,0)
KEY PLAN
74
75
72
76
73
71
69
68
70
67
"PROJECT RECORD DRAWING"

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

AD, AP	ACCESS DOOR. ACCESS PLATE	S & D	S & DRIVE CONNECTOR
B, BOTT	BOTTOM	SI	SPIN-IN FITTING
℄	CENTERLINE	SLV	SLEEVE
D, DN	DOWN	SP	STATIC PRESSURE
DM	DUCTMATE CONNECTOR	T	TOP
F, FEM	FEMALE	TDC	TRANSVERSE DUCT CONNECTOR
FD	FIRE DAMPER	TH	THROAT
FI	FLANGE IN	TRANS	TRANSITION FITTING
FO	FLANGE OUT	TV	TURNING VANES
FOB	FLAT ON BOTTOM	U	UP
FOS	FLAT ON SIDE	V	VERTICAL
FOT	FLAT ON TOP	VD	VOLUME DAMPER
H	HORIZONTAL	W	WITH
M	MALE	WG	WATER GAUGE
OS	OFFSET	┌●	MALE INDICATOR
R	RADIUS	┌○	FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
▲	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
M	MOTORIZED DAMPER
☒	DUCTWORK ACCESS DOOR OR ACCESS PLATE
○	DUCTWORK PIECE NO. INDICATOR
T+ B+	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION
12-20-10	74A	+4"WG. SUPPLY AIR DUCTWORK UPSTREAM OF BOXES PCS:1-36
12-20-10	74B	-4", 3" & 2" EXHAUST & RETURN AIR DUCTWORK PCS:1-81
12-20-10	74C	+2"WG. SUPPLY AIR DUCTWORK DNSTREAM OF BOXES PCS:1-85
12-20-10	74P	PURCHASED SPIRAL ø DUCTWORK PCS:1P-38P
5-17-11	74AC	AIRCANS PCS: 1-10, 11-17

REVISIONS

DATE	NO.	DESCRIPTION
5-4-12	7	AS-BUILT RECORD DRAWING

SHEET METAL CONTRACTORS & FABRICATORS

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404

PHONE: (801) 731-0577
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WEBSITE: WWW.HARRIS-HART.COM

E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507 PAY ITEM: 74

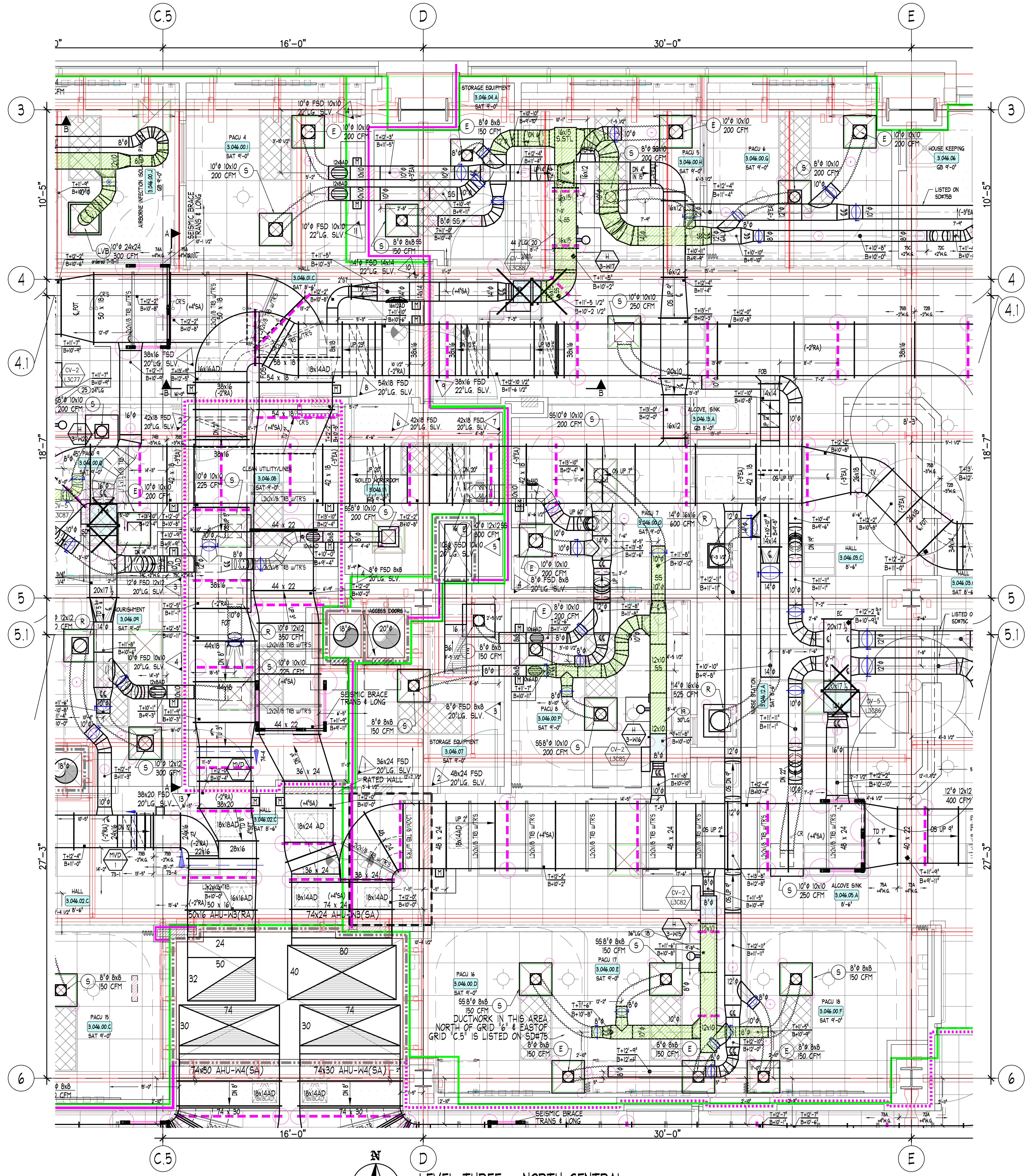
PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
LEVEL THREE AREA K
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.3K STRUCT: S2.4C MECH: M3.3K

BY: BP
DATE: 1-27-10
SCALE: 3/8"=1'-0"

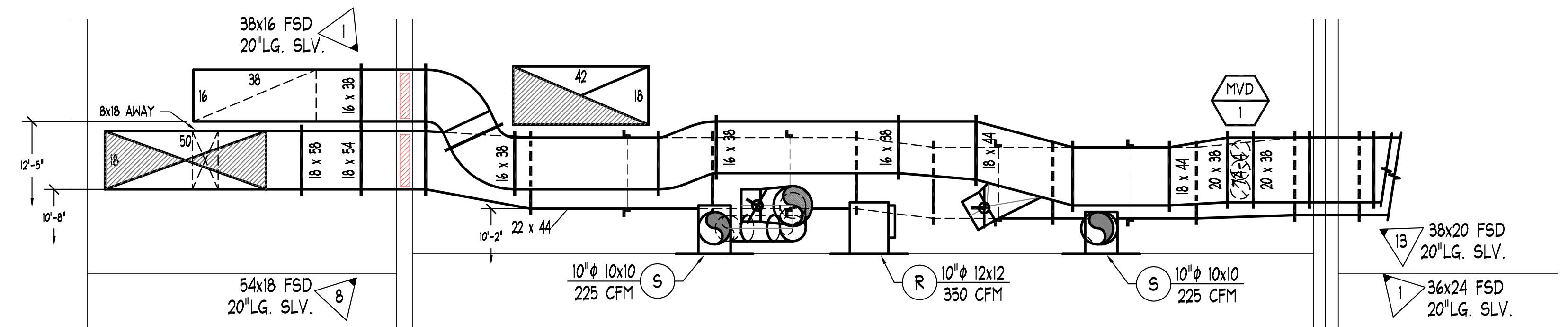
DRAWING NO.
74 OF 115



C.5
D
E
16'-0"
30'-0"
3
4
4.1
5
5.1
6
10'-5"
18'-7"
27'-3"
SEISMIC BRACE TRANS & LONG
STORAGE EQUIPMENT
74x30 AHU-X4(SA)
74x30 AHU-X4(SA)
50x16 AHU-X3(RA)
74x24 AHU-X3(SA)
DUCTWORK IN THIS AREA NORTH OF GRID '6' & EAST OF GRID 'C.5' IS LISTED ON SD#75

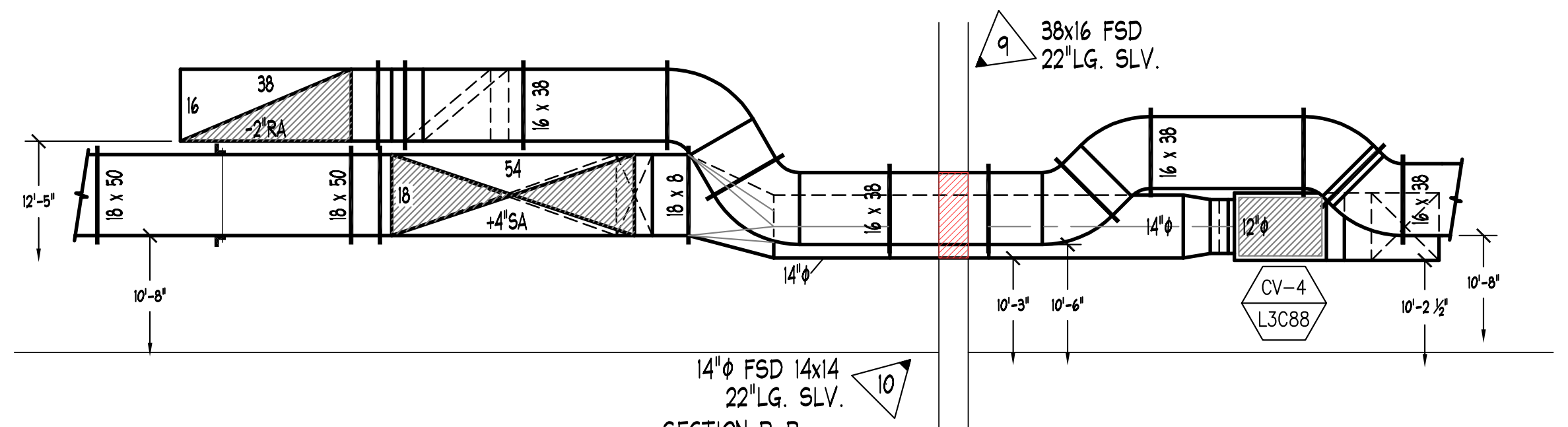
LEVEL THREE - NORTH CENTRAL

FINISHED FLOOR ELEVATION=50'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)



38x16 FSD 20"LG. SLV.
54x18 FSD 20"LG. SLV.
10"Ø 10x10 225 CFM
10"Ø 12x12 350 CFM
10"Ø 10x10 225 CFM
38x20 FSD 20"LG. SLV.
36x24 FSD 20"LG. SLV.
MVD

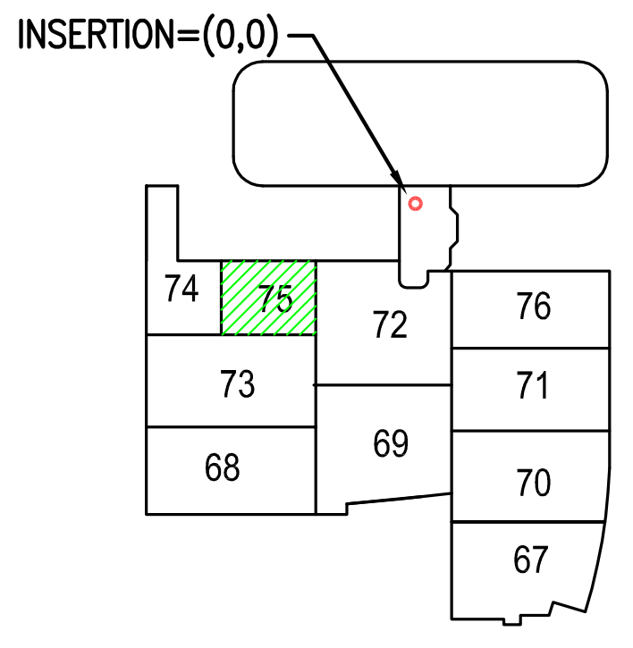
SECTION A-A
SD#75 LOOKING EAST



38x16 FSD 22"LG. SLV.
14"Ø FSD 14x14 22"LG. SLV.
CV-4 L3C88

SECTION B-B
SD#75 LOOKING NORTH

INSERTION=(0,0)



74
75
72
76
73
71
69
68
70
67

KEY PLAN

"PROJECT RECORD DRAWING"

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

AD, AP	ACCESS DOOR. ACCESS PLATE
B, BOTT	BOTTOM
℄	CENTERLINE
D, DN	DOWN
DM	DUCTMATE CONNECTOR
F, FEM	FEMALE
FD	FIRE DAMPER
FI	FLANGE IN
FO	FLANGE OUT
FOB	FLAT ON BOTTOM
FOS	FLAT ON SIDE
FOT	FLAT ON TOP
H	HORIZONTAL
M	MALE
OS	OFFSET
R	RADIUS
S & D	S & DRIVE CONNECTOR
SI	SPIN-IN FITTING
SLV	SLEEVE
SP	STATIC PRESSURE
T	TOP
TDC	TRANSVERSE DUCT CONNECTOR
TH	THROAT
TRANS	TRANSITION FITTING
TV	TURNING VANES
U	UP
V	VERTICAL
VD	VOLUME DAMPER
W	WITH
WG	WATER GAUGE
┏●	MALE INDICATOR
┏○	FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
▲	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
M	MOTORIZED DAMPER
	DUCTWORK ACCESS DOOR OR ACCESS PLATE
○	DUCTWORK PIECE NO. INDICATOR
T+ B+	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION
12-7-10	75A	+4"WG. SUPPLY AIR DUCTWORK UPSTREAM OF BOXES PCS: 1-26
12-7-10	75B	-3"&2"WG. RETURN & EXHAUST AIR DUCTWORK PCS: 1-69
12-7-10	75C	+2"WG. SUPPLY AIR DUCTWORK DNSTREAM OF BOXES PCS: 1-36
12-7-10	75P	PURCHASED SPIRAL DUCTWORK PCS: 1P-27P
5-17-11	75AC	AIRCANS PCS: 1-8 & 12, 9-11

REVISIONS

DATE	NO.	DESCRIPTION
5-4-12	6	AS-BUILT RECORD DRAWING

SHEET METAL
HARRIS & HART
CONTRACTORS & FABRICATORS

HARRIS & HART INC.
1759 WEST 1200 SOUTH
OGDEN, UTAH. 84404

PHONE: (801) 731-0577
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WEBSITE: WWW.HARRIS-HART.COM

E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507 PAY ITEM: 75

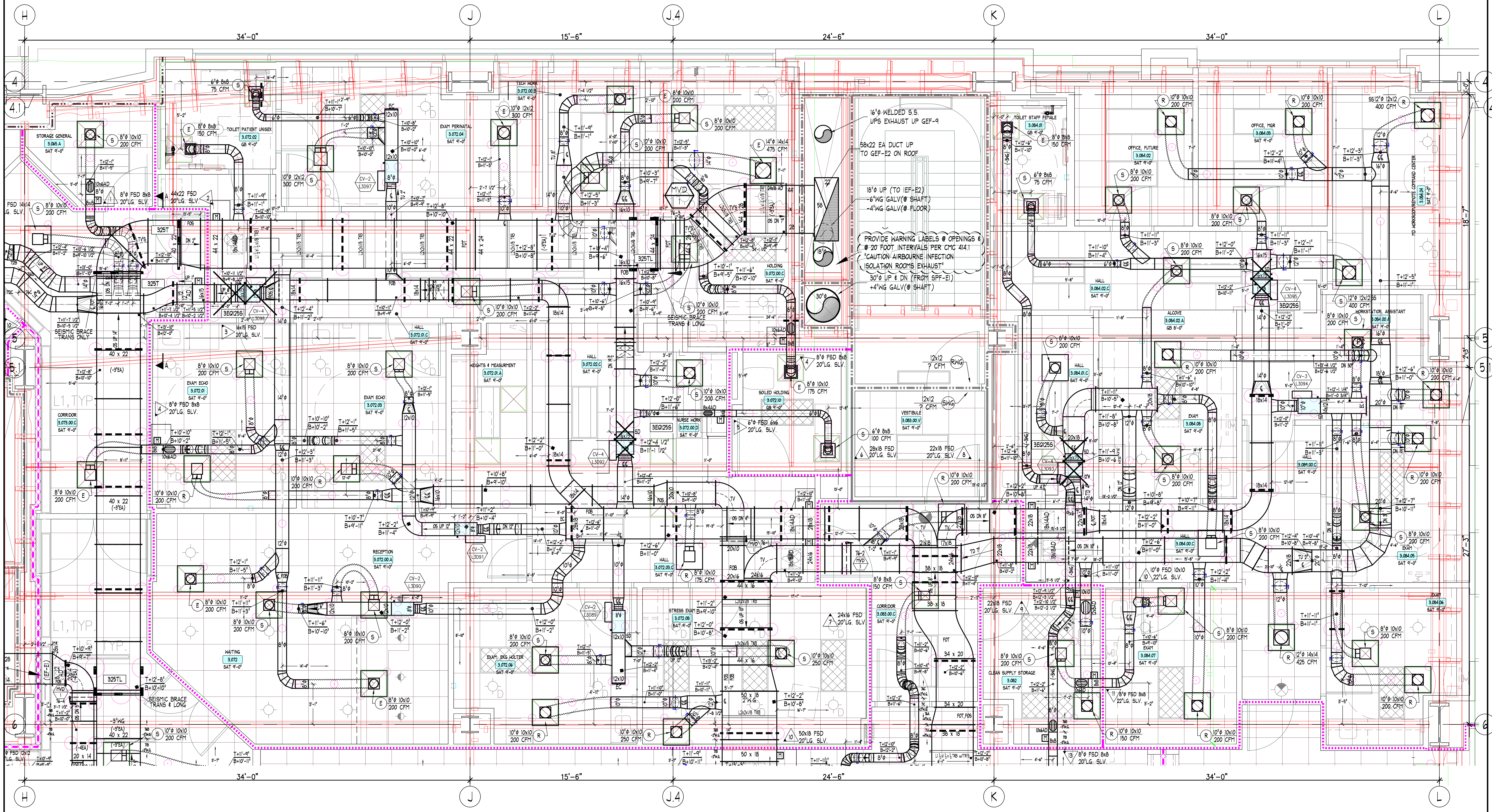
PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

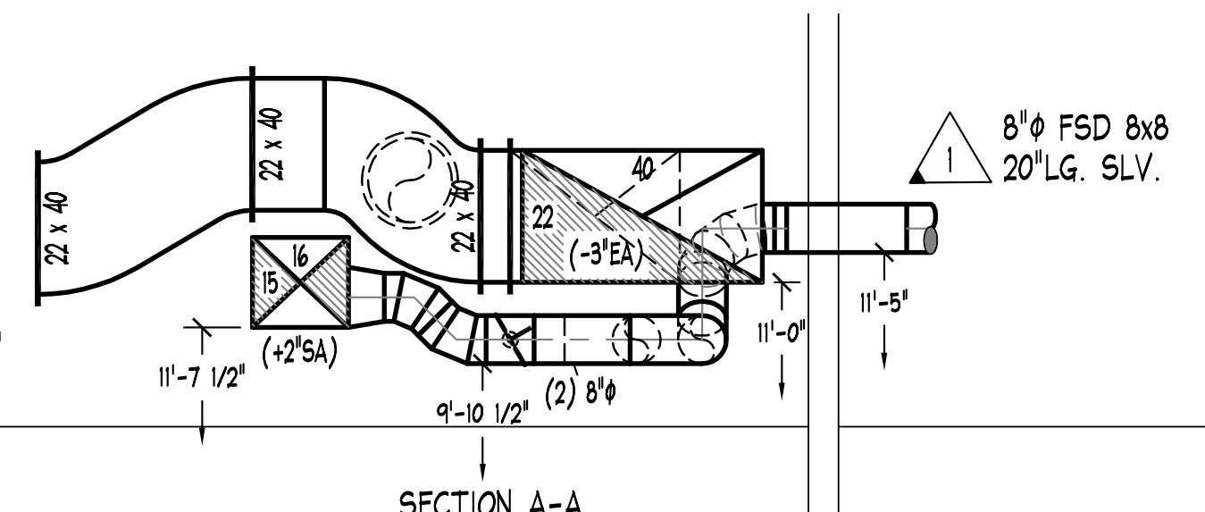
TITLE:
LEVEL THREE AREA L
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.3L STRUCT: S2.4C MECH: M3.3L

BY: BP
DATE: 1-27-10
SCALE: 3/8"=1'-0"

DRAWING NO.
75 OF 115


H
J
J.4
K
L
34'-0"
15'-6"
24'-6"
34'-0"
4
4.1
5
5.1
6
18'-7"
27'-3"
16"φ WELDED S.S.
UPS EXHAUST UP GEF-9
58x22 EA DUCT UP
TO GEF-E2 ON ROOF
18"φ UP (TO IEF-E2)
-6"WG GALV(@ SHAFT)
-4"WG GALV(@ FLOOR)
PROVIDE WARNING LABELS @ OPENINGS &
@ 20 FOOT INTERVALS PER CMC 414.1
"CAUTION AIRBOURNE INFECTION
ISOLATION ROOMS EXHAUST"
30"φ UP & DN (FROM SPF-E1)
+4"WG GALV(@ SHAFT)
SEISMIC BRACE
TRANS & LONG
L1, TYP.

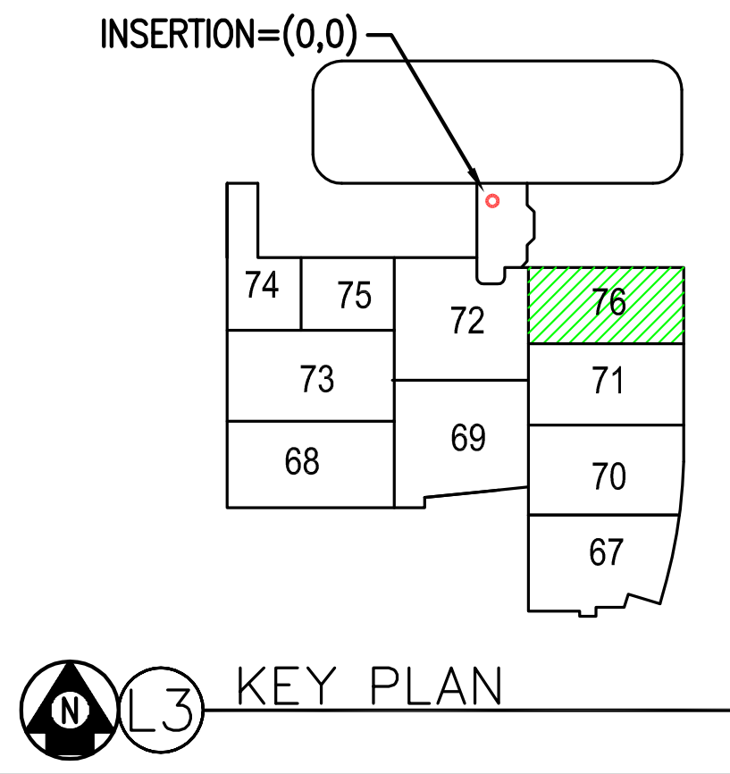

22 x 40
22 x 40
22 x 40
40
22
16
15
(-3"EA)
(+2"SA)
(2) 8"φ
10'-10"
11'-7 1/2"
9'-10 1/2"
11'-0"
11'-5"
1
8"φ FSD 8x8
20"LG. SLV.

SECTION A-A
SCALE: 3/8"=1'-0"
SD#76 LOOKING WEST

"PROJECT RECORD DRAWING"

LEVEL THREE - NORTH EAST

FINISHED FLOOR ELEVATION=50'-0" (U.N.O.)
TOP OF STEEL ELEVATION +14'-5 3/4" (U.N.O.)


INSERTION=(0,0)
74
75
72
76
73
71
69
68
70
67
N
L3

KEY PLAN

NOTES

1. ELEVATIONS INDICATED ON THIS DRAWING ARE TO THE DUCT BODY. ALLOWANCES MUST BE MADE FOR TRANSVERSE CONNECTORS, REINFORCING AND EXTERIOR INSULATION WHEN COORDINATING ELEVATIONS.

ABBREVIATIONS

AD, AP	ACCESS DOOR. ACCESS PLATE	S & D	S & DRIVE CONNECTOR
B, BOTT	BOTTOM	SI	SPIN-IN FITTING
℄	CENTERLINE	SLV	SLEEVE
D, DN	DOWN	SP	STATIC PRESSURE
DM	DUCTMATE CONNECTOR	T	TOP
F, FEM	FEMALE	TDC	TRANSVERSE DUCT CONNECTOR
FD	FIRE DAMPER	TH	THROAT
FI	FLANGE IN	TRANS	TRANSITION FITTING
FO	FLANGE OUT	TV	TURNING VANES
FOB	FLAT ON BOTTOM	U	UP
FOS	FLAT ON SIDE	V	VERTICAL
FOT	FLAT ON TOP	VD	VOLUME DAMPER
H	HORIZONTAL	W	WITH
M	MALE	WG	WATER GAUGE
OS	OFFSET	┌●	MALE INDICATOR
R	RADIUS	┌○	FEMALE INDICATOR

SYMBOL LEGEND

SYMBOL	DESCRIPTION
▲	FIRE DAMPER OR COMBINATION FIRE/SMOKE DAMPER NO.
	MANUAL VOLUME DAMPER WITH DIAL OR QUADRANT TYPE REGULATOR
	MANUAL VOLUME DAMPER WITH CEILING MOUNTED CONCEALED REGULATOR
M	MOTORIZED DAMPER
⊠	DUCTWORK ACCESS DOOR OR ACCESS PLATE
○	DUCTWORK PIECE NO. INDICATOR
T+ / B+	TOP OF DUCT/BOTTOM OF DUCT ELEVATION INDICATOR

MATERIAL LISTS

DATE	NO.	DESCRIPTION
11-30-10	76A	+4"WG. SUPPLY AIR DUCTWORK UPSTREAM OF BOXES PCS: 1-36
11-30-10	76B	-4", 3" & 2"WG. EXHAUST & RETURN AIR DUCTWORK PCS: 1-84
11-30-10	76C	+2"WG. SUPPLY AIR DUCTWORK DNSTREAM OF BOXES PCS: 1-71
11-30-10	76P	PURCHASED SPIRAL φ DUCTWORK PCS: 1P-69P
5-17-11	76AC	AIRCANS PCS: 1-11, 12-23

REVISIONS

DATE	NO.	DESCRIPTION
5-4-12	5	AS-BUILT RECORD DRAWING

SHEET METAL CONTRACTORS & FABRICATORS
HARRIS & HART

HARRIS & HART INC.
1759 WEST 1200 SOUTH
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E-MAIL TO DETAILING DEPARTMENT:
ttaylor@harris-hart.com

JOB NO: 9507 PAY ITEM: 76

PROJECT:
CHILDRENS HOSPITAL
ORANGE, CA

TITLE:
LEVEL THREE AREA M
HVAC SYSTEM LAYOUT

REFERENCE DRAWINGS
ARCH:A3.3M STRUCT: S2.4D MECH: M3.3P

BY:
DATE:
SCALE: 3/8"=1'-0"

DRAWING NO.
76 OF 115