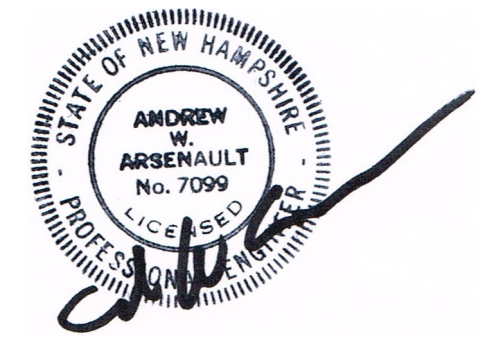


PROJECT DESIGN CONDITIONS:

SEASON	VALUE	UNITS	DESCRIPTION	SOURCE
ASHRAE WEATHER STATION: MANCHESTER, NH				
WINTER	-17.3	F	OA TEMP	ASHRAE EXTREME ANNUAL DESIGN CONDITIONS (50 YR)
	72.0	F	INDOOR TEMP	2009 IECC SECTION 302.1
SUMMER	91.1	F	OA DRY-BULB TEMP	2013 ASHRAE FUNDAMENTALS, CHAPTER 14, COOLING 0.4%
	71.9	F	OA WET-BULB TEMP	2013 ASHRAE FUNDAMENTALS, CHAPTER 14, COOLING 0.4%
	75.0	F	INDOOR TEMP	2009 IECC SECTION 302.1



1
M-1 HVAC DUCT DEMOLITION PLAN 1/2"=1'-0"



DESIGN DAY MECHANICALS INC

THE PROJECT MANAGER FOR THIS PROJECT IS NOTED BELOW. PLEASE REFER ALL QUESTIONS, SUBMITTALS AND CORRESPONDENCE TO THE PROJECT MANAGER.
 HVAC PROJECT MANAGER:
 DAVID C. MACDONALD
 EMAIL: DAVE@DDMRAFTING.COM
 PHONE: (603) 463-1088
 ADDRESS: 65 OLD CENTER RD, DEERFIELD, NH 03037

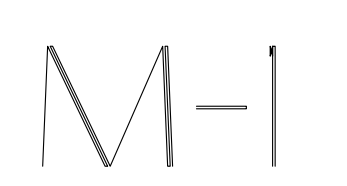
PROJECT:
 DERRY FIRE DEPT.
 ISLAND POND STATION
 WARNER HILL RD
 DERRY, NH
 FOR:
 TOWN OF
 DERRY, NH

HVAC DUCT DEMOLITION PLAN

REVISIONS:

DESIGNED BY: DCM
 DRAWN BY: MRM
 CHECKED BY: AW
 DDM JOB #: 1754
 SCALE: AS NOTED

DATE: 11/02/2017





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PROJECT:
DERRY FIRE DEPT.
ISLAND POND
STATION
WARNER HILL RD
DERRY, NH
FOR:
TOWN OF
DERRY, NH

NEW HVAC DUCT PLAN

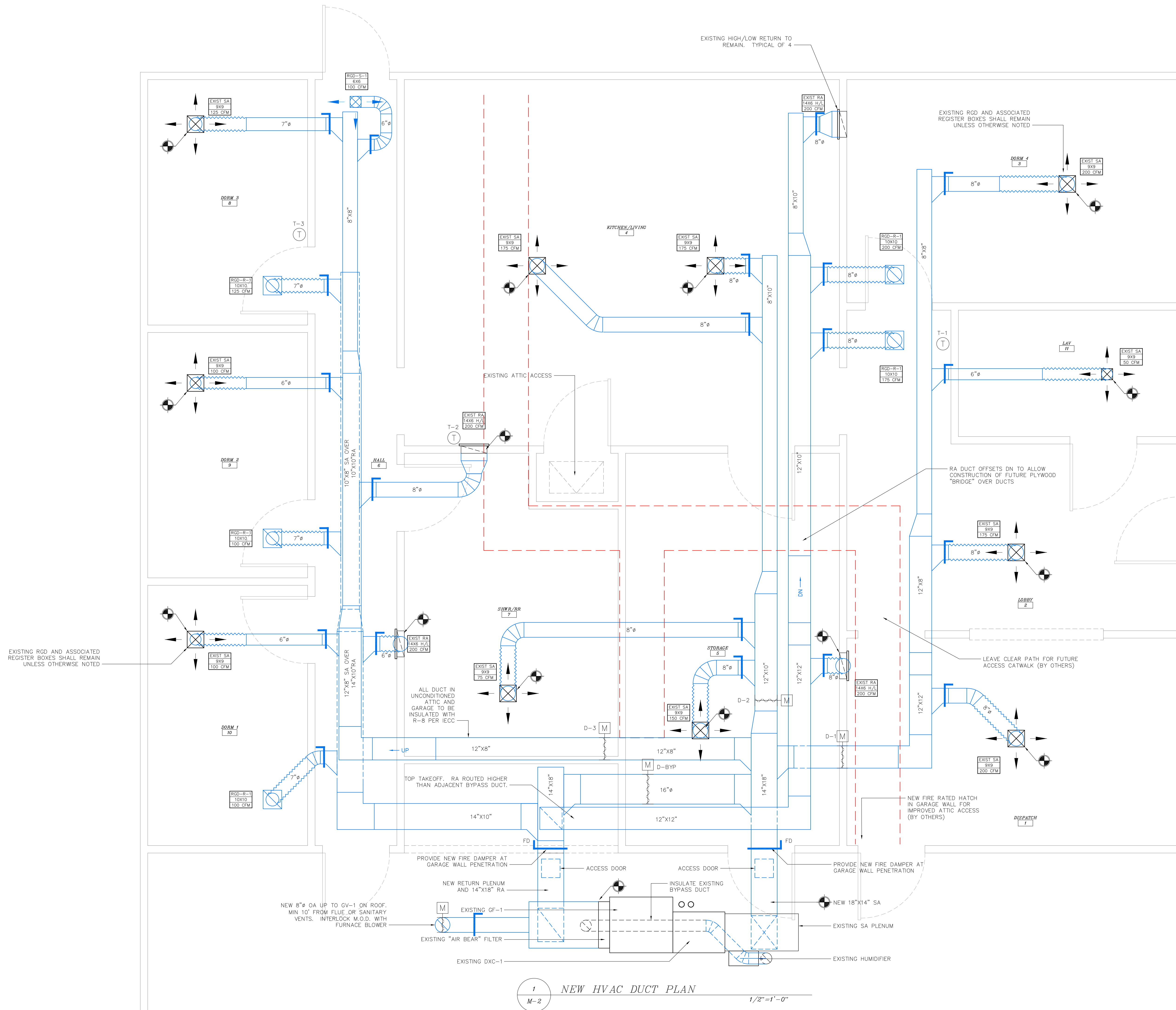
REVISIONS:

DESIGNED BY: DCM
DRAWN BY: MRM
CHECKED BY: AW
DDM JOB #: 1754
SCALE: AS NOTED

DATE: 1/02/2017

M-2

SHEET 2 OF 4



1
M-2 NEW HVAC DUCT PLAN

1/2" = 1'-0"

GAS FURNACE SCHEDULE (GF)																			
MARK	MAKE	MODEL	SUPPLY (CFM)	ESP (IN. WC)	MIN OA (CFM)	ORIENTATION	INPUT (MBH)	OUTPUT (MBH)	EFFICIENCY	FUEL	EAT	LAT	BHP	MHP	VOLT/PH	MCA	MOCP	FILTER	NOTES
GF-1	RUUD	UGTA07E4BGS	1,625	0.50	125	HORIZONTAL	75.0	69.0	92.3	LP	61.4	126.4		3/4	120/1		20	AIR BEAR	1,2

NOTES:
1. EXISTING FURNACE TO REMAIN. REPLACE FILTER, CLEAN, INSPECT AND PERFORM ROUTINE MAINTENANCE. CLEAN INSPECT AND PROVIDE NEW FILTER MEDIA FOR APRILAIRE HUMIDIFIER. INSPECT & REPLACE CONDENSATE NEUTRALIZER IF REQ'D
2. PROVIDE NEW OUTSIDE AIR DUCT AND NEW ZONE DAMPER SYSTEM

DX COOLING COIL SCHEDULE (DXC-1)														
MARK	SERVES	MAKE	MODEL	TONS	SUPPLY (CFM)	SP (IN. WC)	TOTAL (MBH)	SENSIBLE (MBH)	EDB	EWB	LDB	LWB	REFRIG	NOTES
DXC-1	GF-1	RUUD	RCQD4821AS	4.0	1,600	0.32	48.0		76.2	63.2	55.0	55.0	R-410A	1

NOTES:
1. EXISTING COIL TO REMAIN. CLEAN COIL, CONDENSATE PAN, PUMP, ETC

DAMPER SCHEDULE (D)										
MARK	MAKE	MODEL	SIZE (IN.) W x H	CFM	VELOCITY (FPM)	APD (IN WC)	PURPOSE	MATERIAL	NOTES	
D-1	ZONEX	STCD	12X12	625	625	0.04	ZONE CONTROL	STEEL	1,3	
D-2	ZONEX	STCD	12X10	575	480	0.04	ZONE CONTROL	STEEL	1,3	
D-3	ZONEX	STCD	12X8	425	285	0.04	ZONE CONTROL	STEEL	1,3	
D-BYP	ZONEX	STBP	16 DIA	VARIES		0.04	BYPASS	STEEL	2,3	

NOTES:
1. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT
2. MODULATING DAMPER WITH INTEGRAL PRESSURE SWITCH
3. PROVIDE ZONEX GEN-II CONTROL PANEL OR EQUIVALENT

REGISTER GRILLE DIFFUSER SCHEDULE (RGD)									
MARK	MAKE	MODEL	DAMPER	PATTERN	NECK SIZE	FRAME STYLE	MATERIAL	DESCRIPTION	NOTES
RGD-S-1	PRICE	SMD	YES	SEE DWGS	SEE DWGS	AS NEEDED	STEEL	SUPPLY	1
RGD-R-1	PRICE	530	YES	45° FIXED	SEE DWGS	AS NEEDED	STEEL	RETURN	1
RGD-E-1	PRICE	530	YES	45° FIXED	SEE DWGS	AS NEEDED	STEEL	EXHAUST	1

NOTES:
1. RGD MOUNTED DAMPERS ARE TO BE USED FOR TRIM ONLY. PRIMARY VOLUME DAMPERS ARE TO BE INSTALLED IN THE DUCTS.

GRAVITY VENTILATOR SCHEDULE (GV)							
MARK	MAKE	MODEL	CFM	SP (IN. WC)	THROAT SIZE	PURPOSE	NOTES
GV-1	GREENHECK	GSRI-8	125	0.03	8	INTAKE	1

NOTES:
1. 115V MOD, 14" ROOF CURB, INSECT SCREEN

DFD-Island Pond Station-Derry, NH																
Per 2009 IMC Chapter 4 & ASHRAE 62.1-2007																
Ventilation Calculations & Airflows																
Room #	Room Name	Occupancy Classification	Rp cfm/p	Pz # Occ	Rp*Pz cfm	Ra cfm/sf	Az Ft2	Ra*Az cfm	Vbz cfm	Ez	Supply		Zp	Return cfm	Exhaust cfm	Notes:
											Voz cfm	Vpz cfm				
1	Lobby / Dispatch	Lobby	5.0	3	15	0.06	298	18	33	0.8	41	375	0.11	375		Zone 1
2	Lavatory	Restroom					57					50			75	Zone 1
3	Dorm 4	Dwelling Unit	5.0	1	5	0.06	150	9	14	0.8	18	200	0.09	200		Zone 1
4	Kitchen/Living	Multipurpose	5.0	4	20	0.06	320	19	39	0.8	49	350	0.14	400		Zone 2
5	Storage	Storage	5.0	1	5	0.06	169	10	15	0.8	19	150	0.13			Zone 2
6	Hall	Corridor				0.06	126	8	8	0.8	9	100	0.09	200		Zone 3
7	Shower Room	Restroom					160					75			150	Zone 2
8	Dorm 3	Dwelling Unit	5.0	1	5	0.06	80	5	10	0.8	12	125	0.10	125		Zone 3
9	Dorm 2	Dwelling Unit	5.0	1	5	0.06	80	5	10	0.8	12	100	0.12	100		Zone 3
10	Dorm 1	Dwelling Unit	5.0	1	5	0.06	84	5	10	0.8	13	100	0.13	100		Zone 3
Existing AHU Total			12	60			1,524	64		0.8	136	1,625	0.14	1,500	225	
Actual Total People At Any One Time			5													
IMC Requirements																
							Ev	D	Vou	Vot		Actual Min OA				
							1.0	0.42	111	111		125				



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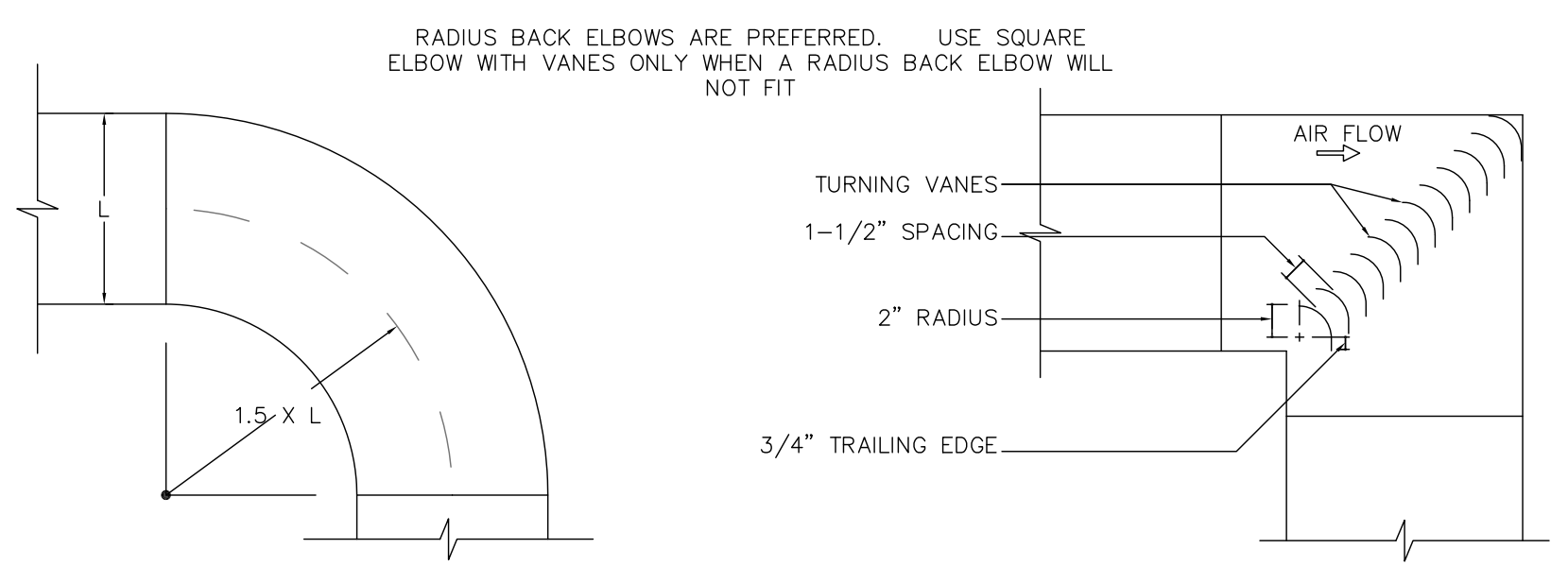
PROJECT:
DERRY FIRE DEPT. ISLAND POND STATION
WARNER HILL RD
DERRY, NH
FOR:
TOWN OF DERRY
DERRY, NH

SCHEDULES DETAILS AND VENTILATION CALCS

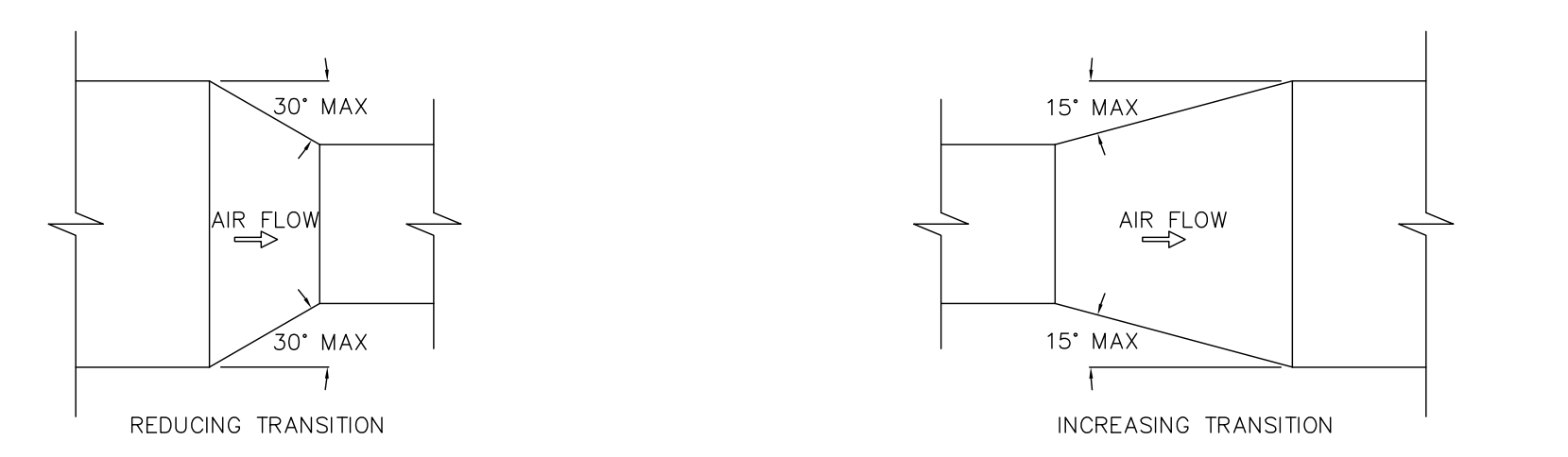
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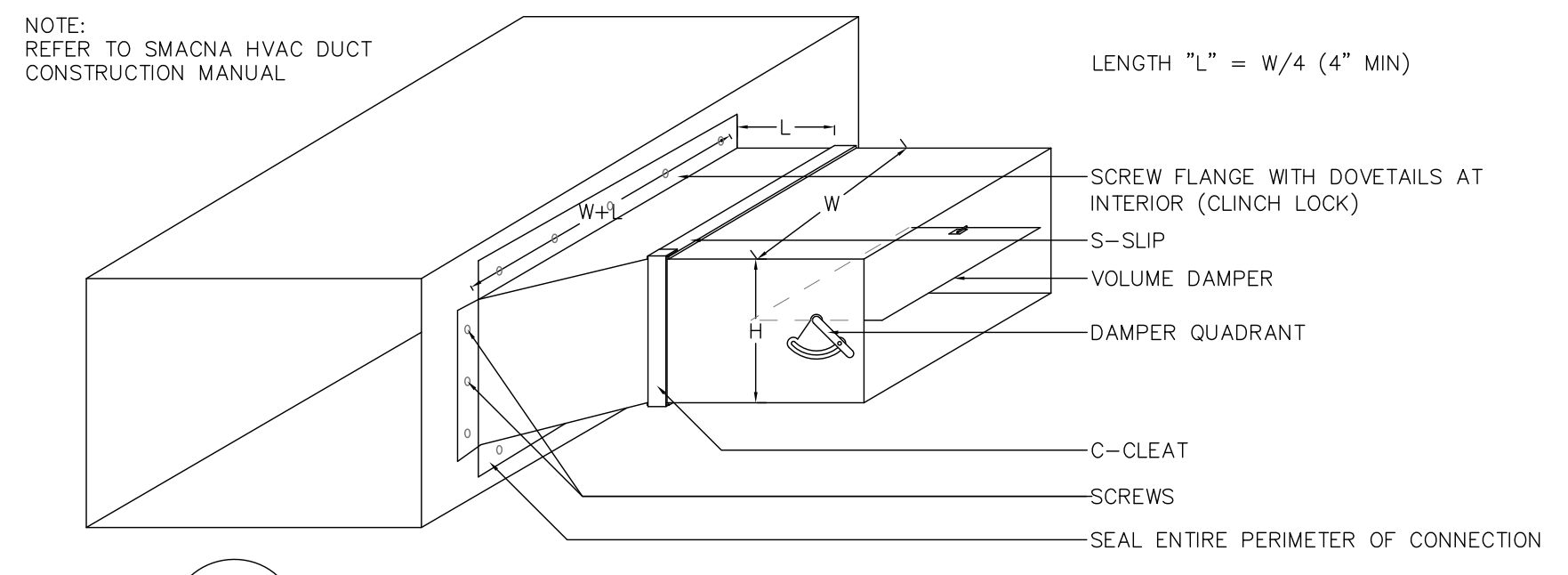
DATE: 11/02/2017



1 TYPICAL RECTANGULAR ELBOW NOT TO SCALE

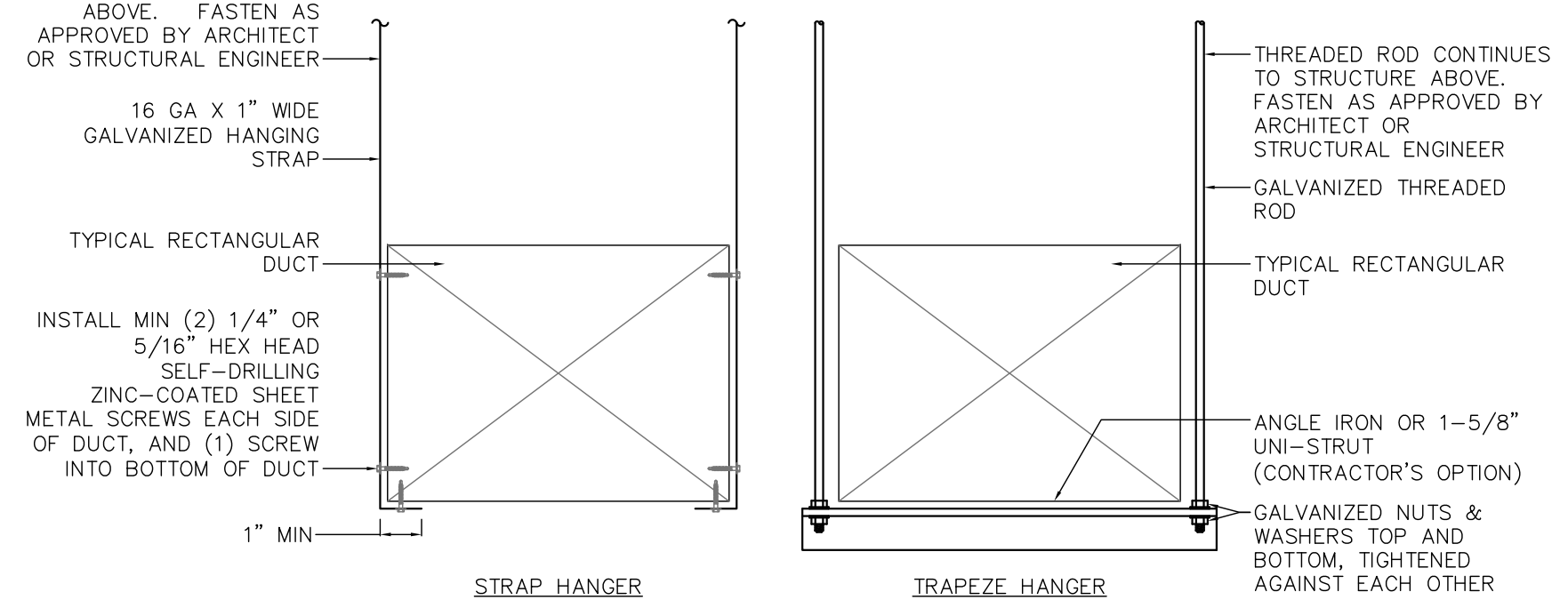


2 TYPICAL DUCT TRANSITION NOT TO SCALE

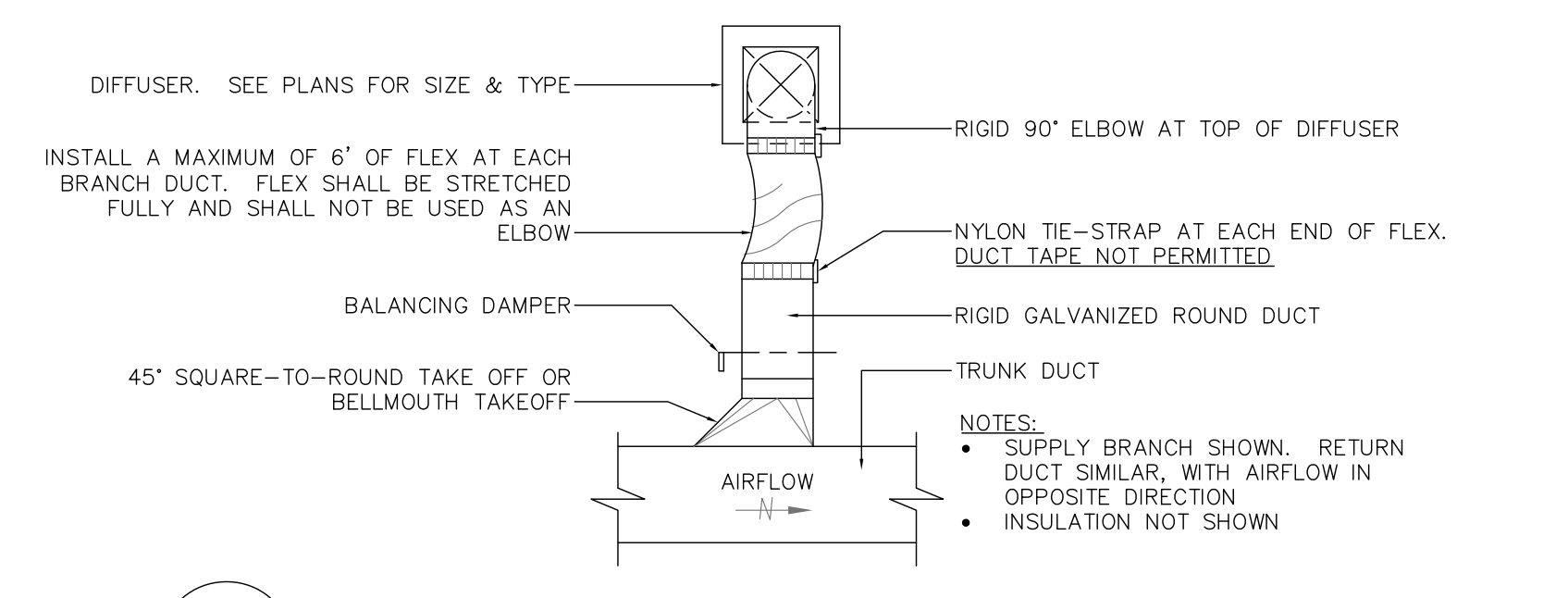


3 TYPICAL RECTANGULAR BRANCH TAKEOFF NOT TO SCALE

NOTES:
1. REFER TO SMACNA HVAC DUCT CONSTRUCTION STANDARDS FOR ACCEPTABLE APPLICATIONS OF EACH HANGER TYPE SHOWN
2. HANGER SPACING SHALL BE GOVERNED BY DUCT METAL GAUGE AND JOINT LENGTH ACCORDING TO SMACNA STANDARDS.
3. DUCT INSULATION (WHERE APPLICABLE) NOT SHOWN FOR CLARITY

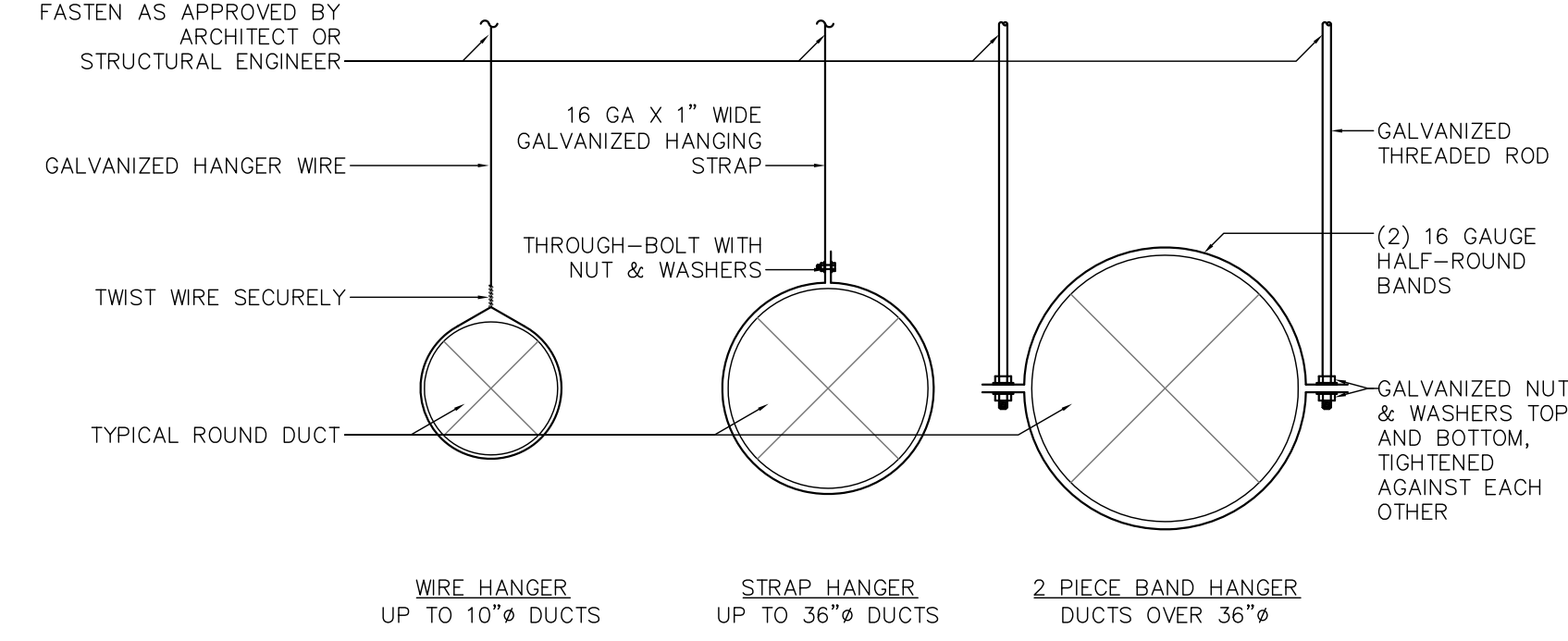


4 TYPICAL HANGERS - RECTANGULAR DUCT NOT TO SCALE



5 TYPICAL ROUND BRANCH DUCT & DIFFUSER NOT TO SCALE

NOTES:
1. REFER TO SMACNA HVAC DUCT CONSTRUCTION STANDARDS FOR ACCEPTABLE APPLICATIONS OF EACH HANGER TYPE SHOWN
2. HANGER SPACING SHALL BE GOVERNED BY DUCT METAL GAUGE AND JOINT LENGTH ACCORDING TO SMACNA STANDARDS.
3. DUCT INSULATION (WHERE APPLICABLE) NOT SHOWN FOR CLARITY



6 TYPICAL HANGERS - ROUND DUCT NOT TO SCALE

