

Appendix G

Noise Measurements

Field Noise Data Sheets

FIELD NOISE MEASUREMENT DATA

DUDEK

PROJECT	THE MEADOWS		PROJECT #	10328
SITE ID			OBSERVER(S)	PEXE VITAR
SITE ADDRESS			START DATE	10/20/20
START TIME	10/20/20	END DATE	10/20/20	END TIME

METEOROLOGICAL CONDITIONS				
TEMP	63 F	HUMIDITY	67 % R.H.	WIND
WINDSPD	MPH	DIR.	N NE S SE S SW W NW	☒ CALM ☐ LIGHT ☐ MODERATE
SKY	☒ SUNNY ☒ CLEAR	OVRCAST	PRTLY CLDY	RAIN
ACoustic MEASUREMENTS				
MEAS. INSTRUMENT	PICCOLO SLM-3		TYPE	1 2
CALIBRATOR	BSWA CA 114		SERIAL #	140317004
CALIBRATION CHECK	PRE-TEST	dBA SPL	POST-TEST	dBA SPL

SETTINGS	A-WTD	☒ SLOW	FAST	FRONTAL	RANDOM	ANSI	OTHER:
REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50
1-2	4:29	9:44	52.7	69.1	49.9		

COMMENTS: ON SITE OF MARYA DOLOROSA RETREAT GROUNDS, READING TAKEN Apx 50' NORTH OF NORTH PROPERTY LINE OF RESIDENCE AT 301 N. SUNNYSIDE AVE AND Apx 70' EAST OF EASTERN PROPERTY LINE OF RESIDENCE ON EDGEVIEW DR. PRIMARY NOISE SOURCE IS BIRD CHIRPING; SOME DISTANT TRAFFIC NOISE FROM 210 FWY

SOURCE INFO AND TRAFFIC COUNTS									
PRIMARY NOISE SOURCE					TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER:				
ROADWAY TYPE: ASPHALT					DIST. TO RDWY C/L OR EOP: Apx 190' TO C/L ON N. SUNNYSIDE AVE				
TRAFFIC COUNT DURATION: -- MIN					SPEED				
DIRECTION NB/EB SB/WB					NB/EB SB/WB				
COUNT 1 (OR RDWY 1)					COUNT 2 (OR RDWY 2)				
AUTOS					AUTOS				
MED TRKS					MED TRKS				
HVV TRKS					HVV TRKS				
BUSES					BUSES				
MOTOCLS					MOTOCLS				
SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE									
POSTED SPEED LIMIT SIGNS SAY:									
OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS ☒ BIRDS DIST. INDUSTRIAL									
DIST. KIDS PLAYING ☒ DIST. CONVERSATIONS/YELLING DIST. TRAFFIC (LIST ROWS BELOW) DIST. GARDENERS/LANDSCAPING NOISE									
OTHER: DISTANT CONVERSATIONS FROM NEARBY RESIDENCES; SOME DISTANT TRAFFIC NOISE FROM 210 FWY									

DESCRIPTION / SKETCH	
TERRAIN	HARD SOFT ☒ MIXED FLAT OTHER:
PHOTOS	9103; 9105; 9106; 9107
OTHER COMMENTS / SKETCH	



FIELD NOISE MEASUREMENT DATA

DUDEK

PROJECT	THE MEADOWS		PROJECT #	10328
SITE ID			OBSERVER(S)	PETE VITAR
SITE ADDRESS				
START DATE	10/20/20	END DATE	10/20/20	
START TIME		END TIME		

METEOROLOGICAL CONDITIONS

TEMP 63 F HUMIDITY 75 % R.H. WIND CALM LIGHT MODERATE
WINDSPD MPH DIR. N NE S SE S SW W NW VARIABLE STEADY GUSTY
SKY SUNNY CLEAR OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT PICCOLLO SCM-3 TYPE 1 2 SERIAL# 140317004
CALIBRATOR BSSA CA 114 SERIAL# 480151
CALIBRATION CHECK PRE-TEST dBA SPL POST-TEST dBA SPL WINDSCRN YES

SETTINGS A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC)
<u>34</u>	<u>10:03</u>	<u>10:18</u>	<u>55.4</u>	<u>70.6</u>	<u>52.8</u>				

COMMENTS

READING TAKEN IN FOUNTAIN PLAZA AREA IN CENTER OF MATHAR DOLOROSA NEXT
GROUND. PRIMARY NOISE SOURCE IS TWO FOUNTAINS IN PLAZA AREA; ~~FOUNTAIN~~
~~FOUNTAIN~~ PRIMARY FOUNTAIN NOISE ADB 35' AWAY FROM NOISE
MEXA;

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE				TRAFFIC	AIRCRAFT	RAIL	INDUSTRIAL	OTHER: <u>FOUNTAINS</u>			
ROADWAY TYPE: <u>ASPHALT</u>				DIST. TO RDWY C/L OR EOP:							
TRAFFIC COUNT DURATION: <u>MIN</u>				SPEED				MIN			
								SPEED			
COUNT 1 (OR RDWY 1)	DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB	IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE	COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB	SB/WB
	AUTOS										
	MED TRKS										
	HVY TRKS										
	BUSES										
	MOTRCLS										

SPEEDS ESTIMATED BY: RADAR/DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS/YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DIST. GARDENERS/LANDSCAPING NOISE
OTHER: 210 FWT

DESCRIPTION / SKETCH

TERRAIN HARD SOFT MIXED FLAT OTHER:
PHOTOS 9109; 9110; 9111; 9112; 9113; 9114; 9115
OTHER COMMENTS / SKETCH



DUDEK

PROJECT THE MEADOWS PROJECT # 10328
SITE ID _____ OBSERVER(S) PEXE VITAR
SITE ADDRESS _____
START DATE 10/20/20 END DATE 10/20/20
START TIME _____ END TIME _____

METEOROLOGICAL CONDITIONS

TEMP 68 F HUMIDITY 68 % R.H. WIND CALM LIGHT MODERATE
WINDSPD _____ MPH DIR. N NE S SE S SW W NW VARIABLE STEADY GUSTY
SKY (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT PICCOLO SCM-3 TYPE 1 2 SERIAL # 140317004
CALIBRATOR BELA CA 114 SERIAL # 480151
CALIBRATION CHECK _____ PRE-TEST _____ dBA SPL POST-TEST _____ dBA SPL WINDSCREEN YES

SETTINGS A-WTD (SLOW) FAST FRONTAL RANDOM ANSI OTHER: _____

REC. # BEGIN END Leq Lmax Lmin L90 L50 L10 OTHER (SPECIFY METRIC)

5-6 10:42 10:58 52.1 58.3 50.6 _____ _____ _____ _____

COMMENTS

READING TAKEN AT SOUTHWEST GATE OF BAILEY CANYON PARK;

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: ROADWAY TRAFFIC: AS ONLY AIRCRAFT: _____ RAIL: _____ INDUSTRIAL: _____ OTHER: _____

ROADWAY TYPE: AS ONLY DIST. TO RDWY C/L OR EOP: _____

TRAFFIC COUNT DURATION: _____ MIN SPEED: _____

COUNT 1 (OR RDWY 1)

DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS	_____	_____	_____	_____
MED TRKS	_____	_____	_____	_____
HVY TRKS	_____	_____	_____	_____
BUSES	_____	_____	_____	_____
MOTOCLS	_____	_____	_____	_____

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE: _____

COUNT 2 (OR RDWY 2)

DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS	_____	_____	_____	_____
MED TRKS	_____	_____	_____	_____
HVY TRKS	_____	_____	_____	_____
BUSES	_____	_____	_____	_____
MOTOCLS	_____	_____	_____	_____

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE

POSTED SPEED LIMIT SIGNS SAY: _____

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVERSATIONS/YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DIST. GARDENERS/LANDSCAPING NOISE
OTHER: _____

DESCRIPTION / SKETCH		TERRAIN	HARD	SOFT	MIXED	FLAT	OTHER:
PHOTOS		9117;	9118;	9119;	9120;	9122;	9123
OTHER COMMENTS / SKETCH							

FIELD NOISE MEASUREMENT DATA

DUDEK

PROJECT <u>THE MEADOWS</u>	PROJECT # <u>10328</u>
SITE ID _____	OBSERVER(S) <u>PETE VITAIR</u>
SITE ADDRESS _____	
START DATE <u>10/20/20</u>	END DATE <u>10/20/20</u>
START TIME _____	END TIME _____

METEOROLOGICAL CONDITIONS	
TEMP <u>68</u> F	HUMIDITY <u>68</u> % R.H.
WINDSPD _____ MPH	DIR. N NE S SE S SW W NW
SKY <u>SUNNY</u> <u>CLEAR</u>	OVRCAST PRTLY CLDY FOG RAIN
WIND <u>CALM</u>	LIGHT MODERATE VARIABLE STEADY GUSTY
ACOUSTIC MEASUREMENTS	
MEAS. INSTRUMENT <u>PICCOLLO SCM-3</u>	TYPE 1 2
CALIBRATOR <u>ISSUA CA 114</u>	SERIAL # <u>140317004</u>
CALIBRATION CHECK _____	SERIAL # <u>480151</u>
PRE-TEST _____ dBA SPL	POST-TEST _____ dBA SPL
WINDSCREEN <u>PES</u>	
SETTINGS	
A-WTD <u>SLOW</u>	FAST FRONTAL RANDOM ANSI OTHER: _____
REC. # <u>7-8</u>	BEGIN <u>11:05</u> END <u>11:20</u>
<u>STH</u>	Leq <u>56.1</u> Lmax <u>75.9</u> Lmin <u>46.4</u>
	L90 _____ L50 _____ L10 _____
	OTHER (SPECIFY METRIC) _____
COMMENTS	
<u>READING TAKEN IN FRONT OF 390 W. CARTER AVE (RESIDENTIAL);</u>	
<u>PRIMARY NOISE SOURCE IS LIGHT TRAFFIC ON W. CARTER AVE AND ON AL LIMA ST</u>	
<u>TO THE EAST;</u>	

SOURCE INFO AND TRAFFIC COUNTS	
PRIMARY NOISE SOURCE <u>TRAFFIC</u>	AIRCRAFT RAIL INDUSTRIAL OTHER: _____
ROADWAY TYPE <u>AS PAVL</u>	DIST. TO RDWY <u>C/L OR EOP: APX 7' 90 W. CARTER AVE</u>
TRAFFIC COUNT DURATION: <u>15</u> MIN	SPEED _____
COUNT 1 (OR RDWY 1)	COUNT 2 (OR RDWY 2)
DIRECTION NB/EB SB/WB NB/EB SB/WB	DIRECTION NB/EB SB/WB NB/EB SB/WB
AUTOS <u>3</u>	AUTOS _____
MED TRKS <u>0</u>	MED TRKS _____
HVY TRKS <u>0</u>	HVY TRKS _____
BUSES <u>0</u>	BUSES _____
MOTOCLS <u>0</u>	MOTOCLS _____
SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE	
POSTED SPEED LIMIT SIGNS SAY: _____	
OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS <u>BIRDS</u> DIST. INDUSTRIAL	
DIST. KIDS PLAYING DIST. CONVERSATIONS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DIST. GARDENERS / LANDSCAPING NOISE	
OTHER: <u>GARDENERS WORKING (LAWN MOWER) EDLE TRIMMING</u>	
<u>APX 100+ FEET TO THE EAST STARTING APX 11:09 AM;</u>	

DESCRIPTION / SKETCH	
TERRAIN <u>HARD</u>	SOFT <u>MIXED</u> FLAT OTHER: _____
PHOTOS <u>4/11</u>	
OTHER COMMENTS / SKETCH	
	

FIELD NOISE MEASUREMENT DATA

DUDEK

PROJECT THE MEADOWS PROJECT # 10328
 SITE ID _____ OBSERVER(S) PEXE VITAC
 SITE ADDRESS _____
 START DATE 10/20/20 END DATE 10/20/20
 START TIME _____ END TIME _____

METEOROLOGICAL CONDITIONS

TEMP 68 F HUMIDITY 68 % R.H. WIND CALM LIGHT MODERATE
 WINDSPD _____ MPH DIR. N NE S SE S SW W NW VARIABLE STEADY GUSTY
 SKY SUNNY CLEAR OVCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT PICCOLLO SCM-3 TYPE 1 2 SERIAL# 140317004
 CALIBRATOR ISSWA CA 114 SERIAL# 480151
 CALIBRATION CHECK _____ PRE-TEST _____ dBA SPL POST-TEST _____ dBA SPL WINDSCREEN YES

SETTINGS

A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER: _____

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC)
<u>9-10</u>	<u>11:24</u>	<u>11:45</u>	<u>56.1</u>	<u>74.1</u>	<u>51.6</u>				

COMMENTS

READING TAKEN IN FRONT OF 441 N. SUNNYSIDE AVE (RESIDENTIAL);
PRIMARY NOISE SOURCE IS LIGHT TRAFFIC ON N. SUNNYSIDE AVE;

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE

ROADWAY TYPE: ASPHALT

TRAFFIC AIRCRAFT

RAIL

INDUSTRIAL

OTHER:

DIST. TO RDWY C/L OR EOP: APX 15' TO FL ON SUNNYSIDE AVE

TRAFFIC COUNT DURATION: 15 MIN

SPEED

MIN

SPEED

COUNT 1
(OR RDWY 1)

DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS	<u>4</u>			
MED TRKS	<u>0</u>			
HVY TRKS	<u>0</u>			
BUSES	<u>0</u>			
MOTOCLS	<u>0</u>			

IF COUNTING
BOTH
DIRECTIONS
AS ONE,
CHECK HERE
☒

COUNT 2
(OR RDWY 2)

NB/EB	SB/WB	NB/EB	SB/WB

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE

POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
 DIST. KIDS PLAYING DIST. CONVERSATIONS / YELLING DIST. TRAFFIC (LIST ROWS BELOW) DIST. GARDENERS / LANDSCAPING NOISE
 OTHER: _____

DESCRIPTION / SKETCH

TERRAIN HARD SOFT MIXED FLAT OTHER: _____

PHOTOS 9/26, 9/27, 9/29, 9/30;

OTHER COMMENTS / SKETCH



Construction Noise Modeling
Input and Output

Roadway Construction Noise Model (RCNM), Version 1.1

11/11/2020

The Meadows_Sierra Madre - Clear and Grub

		Baselines (dBA)			---- Receptor #1 ----		
Description	Land Use	Daytime	Evening	Night			
Nearest Residences_W	Residential	60	55	50			
		Equipment					
		Impact	Spec	Actual	Receptor	Estimated	
Description		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Tractor		No	40	84		25	0
Tractor		No	40	84		50	0
Backhoe		No	40		77.6	75	0

		Results					
		Calculated (dBA)			Noise Limits (dBA)		
		Day			Evening		
		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		90	86	N/A	N/A	N/A	N/A
Tractor		84	80	N/A	N/A	N/A	N/A
Backhoe		74	70.1	N/A	N/A	N/A	N/A
	Total	90	87.1	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.							

		---- Receptor #2 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Typical Residences-W	Residential	60	55	50			
		Equipment					
		Impact		Spec	Actual	Receptor	Estimated
Description		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Tractor		No	40	84		500	0
Tractor		No	40	84		500	0
Backhoe		No	40		77.6	500	0

		Results					
		Calculated (dBA)			Noise Limits (dBA)		
		Day			Evening		
		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		64	60	N/A	N/A	N/A	N/A
Tractor		64	60	N/A	N/A	N/A	N/A
Backhoe		57.6	53.6	N/A	N/A	N/A	N/A
	Total	64	63.5	N/A	N/A	N/A	N/A
		*Calculated Lmax is the Loudest value.					

		Baselines (dBA)			---- Receptor #3 ----			
Description	Land Use	Daytime	Evening	Night				
Nearest Park Visitors-E	Residential	60	55	50				
				Equipment				
		Impact		Spec	Actual	Receptor	Estimated	
Description		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)	

Tractor	No	40	84	120	0
Tractor	No	40	84	150	0
Backhoe	No	40	77.6	175	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Tractor	76.4	72.4	N/A	N/A	N/A	N/A
Tractor	74.5	70.5	N/A	N/A	N/A	N/A
Backhoe	66.7	62.7	N/A	N/A	N/A	N/A
Total	76.4	74.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Typical Park Visitors - E	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Tractor	No	40	84		550	0
Tractor	No	40	84		550	0
Backhoe	No	40		77.6	550	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Tractor	63.2	59.2	N/A	N/A	N/A	N/A
Tractor	63.2	59.2	N/A	N/A	N/A	N/A
Backhoe	56.7	52.8	N/A	N/A	N/A	N/A
Total	63.2	62.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Resort - N	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec	Actual		
			Lmax (dBA)	Lmax (dBA)		
Tractor	No	40	84		75	0
Tractor	No	40	84		100	0
Backhoe	No	40		77.6	150	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Tractor	80.5	76.5	N/A	N/A	N/A	N/A
Tractor	78	74	N/A	N/A	N/A	N/A
Backhoe	68	64	N/A	N/A	N/A	N/A
Total	80.5	78.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

Description	Land Use	Baselines (dBA)			Equipment	Receptor	Estimated
		Daytime	Evening	Night			
Typical Resort - N	Residential	60	55	50			
Description		Impact	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Distance (feet)	Shielding (dBA)
Tractor		No	40	84		500	0
Tractor		No	40	84		500	0
Backhoe		No	40		77.6	500	0
Equipment		Results			Noise Limits (dBA)		
		Calculated (dBA)		Day			
		*Lmax	Leq	Lmax	Leq	Evening Lmax	Leq
Tractor		64	60	N/A	N/A	N/A	N/A
Tractor		64	60	N/A	N/A	N/A	N/A
Backhoe		57.6	53.6	N/A	N/A	N/A	N/A
	Total	64	63.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/11/2020
Case Description: The Meadows_Sierra Madre - Remedial & Mass Excvtm

		Baselines (dBA)			Equipment		
		Daytime	Evening	Night	Spec	Actual	Receptor
		60	55	50	Lmax	Lmax	Distance
					(dBA)	(dBA)	(feet)
		Impact	Usage(%)				Estimated
		Device					Shielding
							(dBA)
Nearest Residences_W		No	40	84		25	0
Tractor		No	40	84		50	0
Tractor		No	40		81.7	75	0
Dozer		No	40		83.6	75	0
Scraper		No	40		83.6	100	0
Scraper		No	40		83.6	150	0
Scraper		No	40		83.6	200	0
Scraper		No	40		83.6	250	0
Scraper		No	40		83.6	300	0
Scraper		No	40		83.6	350	0
Scraper		No	40		83.6	400	0
Scraper		No	40		83.6	100	0
Equipment		Results			Noise Limits (dBA)		
		Calculated (dBA)		Day			
		*Lmax	Leq	Lmax	Leq	Evening Lmax	Leq
Tractor		90	86	N/A	N/A	N/A	N/A
Tractor		84	80	N/A	N/A	N/A	N/A
Dozer		78.1	74.2	N/A	N/A	N/A	N/A
Scraper		80.1	76.1	N/A	N/A	N/A	N/A
Scraper		77.6	73.6	N/A	N/A	N/A	N/A

Scraper		74	70.1	N/A	N/A	N/A	N/A
Scraper		71.5	67.6	N/A	N/A	N/A	N/A
Scraper		69.6	65.6	N/A	N/A	N/A	N/A
Scraper		68	64	N/A	N/A	N/A	N/A
Scraper		66.7	62.7	N/A	N/A	N/A	N/A
Scraper		65.5	61.5	N/A	N/A	N/A	N/A
Scraper		77.6	73.6	N/A	N/A	N/A	N/A
Total		90	88.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Typical Residences-W	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Tractor	No	40		84	500	0
Tractor	No	40		84	500	0
Dozer	No	40		81.7	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Tractor	64	60	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A
Dozer	61.7	57.7	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Total	64	70.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Park Visitors-E	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Tractor	No	40		84	120	0

Tractor	No	40	84	150	0
Dozer	No	40	81.7	175	0
Scraper	No	40	83.6	200	0
Scraper	No	40	83.6	250	0
Scraper	No	40	83.6	300	0
Scraper	No	40	83.6	350	0
Scraper	No	40	83.6	200	0
Scraper	No	40	83.6	400	0
Scraper	No	40	83.6	450	0
Scraper	No	40	83.6	500	0
Scraper	No	40	83.6	150	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
Equipment				Day	Evening		
		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		76.4	72.4	N/A	N/A	N/A	N/A
Tractor		74.5	70.5	N/A	N/A	N/A	N/A
Dozer		70.8	66.8	N/A	N/A	N/A	N/A
Scraper		71.5	67.6	N/A	N/A	N/A	N/A
Scraper		69.6	65.6	N/A	N/A	N/A	N/A
Scraper		68	64	N/A	N/A	N/A	N/A
Scraper		66.7	62.7	N/A	N/A	N/A	N/A
Scraper		71.5	67.6	N/A	N/A	N/A	N/A
Scraper		65.5	61.5	N/A	N/A	N/A	N/A
Scraper		64.5	60.5	N/A	N/A	N/A	N/A
Scraper		63.6	59.6	N/A	N/A	N/A	N/A
Scraper		74	70.1	N/A	N/A	N/A	N/A
Total		76.4	78.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		Baselines (dBA)			---- Receptor #4 ----		
Description	Land Use	Daytime	Evening	Night			
Typical Park Visitors - E	Residential	60	55	50			
		Equipment					
		Impact		Spec	Actual	Receptor	Estimated
Description		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Tractor		No	40	84		550	0
Tractor		No	40	84		550	0
Dozer		No	40		81.7	550	0
Scraper		No	40		83.6	550	0
Scraper		No	40		83.6	550	0
Scraper		No	40		83.6	550	0
Scraper		No	40		83.6	550	0
Scraper		No	40		83.6	550	0
Scraper		No	40		83.6	550	0
Scraper		No	40		83.6	550	0
Scraper		No	40		83.6	550	0
Scraper		No	40		83.6	550	0
Scraper		No	40		83.6	550	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
Equipment				Day	Evening		
		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		63.2	59.2	N/A	N/A	N/A	N/A
Tractor		63.2	59.2	N/A	N/A	N/A	N/A
Dozer		60.8	56.9	N/A	N/A	N/A	N/A
Scraper		62.8	58.8	N/A	N/A	N/A	N/A

Scraper		62.8	58.8	N/A	N/A	N/A	N/A
Scraper		62.8	58.8	N/A	N/A	N/A	N/A
Scraper		62.8	58.8	N/A	N/A	N/A	N/A
Scraper		62.8	58.8	N/A	N/A	N/A	N/A
Scraper		62.8	58.8	N/A	N/A	N/A	N/A
Scraper		62.8	58.8	N/A	N/A	N/A	N/A
Scraper		62.8	58.8	N/A	N/A	N/A	N/A
Scraper		62.8	58.8	N/A	N/A	N/A	N/A
Total		63.2	69.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Nearest Resort - N	Residential	60	55	50			

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Tractor	No	40	84		75	0
Tractor	No	40	84		100	0
Dozer	No	40		81.7	125	0
Scraper	No	40		83.6	150	0
Scraper	No	40		83.6	250	0
Scraper	No	40		83.6	200	0
Scraper	No	40		83.6	300	0
Scraper	No	40		83.6	350	0
Scraper	No	40		83.6	450	0
Scraper	No	40		83.6	125	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	250	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Lmax	Leq
			Lmax			
Tractor	80.5	76.5	N/A	N/A	N/A	N/A
Tractor	78	74	N/A	N/A	N/A	N/A
Dozer	73.7	69.7	N/A	N/A	N/A	N/A
Scraper	74	70.1	N/A	N/A	N/A	N/A
Scraper	69.6	65.6	N/A	N/A	N/A	N/A
Scraper	71.5	67.6	N/A	N/A	N/A	N/A
Scraper	68	64	N/A	N/A	N/A	N/A
Scraper	66.7	62.7	N/A	N/A	N/A	N/A
Scraper	64.5	60.5	N/A	N/A	N/A	N/A
Scraper	75.6	71.6	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Scraper	69.6	65.6	N/A	N/A	N/A	N/A
Total	80.5	80.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Typical Resort - N	Residential	60	55	50			

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		

Tractor	No	40	84	500	0	
Tractor	No	40	84	500	0	
Dozer	No	40		81.7	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0
Scraper	No	40		83.6	500	0

		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		64		60 N/A	N/A	N/A	N/A
Tractor		64		60 N/A	N/A	N/A	N/A
Dozer		61.7	57.7	N/A	N/A	N/A	N/A
Scraper		63.6	59.6	N/A	N/A	N/A	N/A
Scraper		63.6	59.6	N/A	N/A	N/A	N/A
Scraper		63.6	59.6	N/A	N/A	N/A	N/A
Scraper		63.6	59.6	N/A	N/A	N/A	N/A
Scraper		63.6	59.6	N/A	N/A	N/A	N/A
Scraper		63.6	59.6	N/A	N/A	N/A	N/A
Scraper		63.6	59.6	N/A	N/A	N/A	N/A
Scraper		63.6	59.6	N/A	N/A	N/A	N/A
Total		64	70.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 11/11/2020
Case Description: The Meadows_Sierra Madre - Balance Site

		Baselines (dBA)			Equipment		
		Daytime	Evening	Night	Spec	Actual	Receptor
Description	Land Use				Lmax	Lmax	Distance
Nearest Residences_W	Residential	60	55	50			
		Impact	Usage(%)	(dBA)	(dBA)	(feet)	Estimated
Description		Device					Shielding
Front End Loader		No	40		79.1	25	0

		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		85.1	81.2	N/A	N/A	N/A	N/A
Total		85.1	81.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

----- Receptor #2 -----
Baselines (dBA)

Description	Land Use	Daytime	Evening	Night			
Typical Residences-W	Residential	60	55	50			
		Equipment					
		Impact		Spec	Actual	Receptor	Estimated
Description		Device	Usage(%)	Lmax	Lmax	Distance	Shielding
Front End Loader		No	40	(dBA)	(dBA)	(feet)	(dBA)
		79.1 500 0					
		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		59.1	55.1	N/A	N/A	N/A	N/A
Total		59.1	55.1	N/A	N/A	N/A	N/A
		*Calculated Lmax is the Loudest value.					
		---- Receptor #3 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Nearest Park Visitors-E	Residential	60	55	50			
		Equipment					
		Impact		Spec	Actual	Receptor	Estimated
Description		Device	Usage(%)	Lmax	Lmax	Distance	Shielding
Front End Loader		No	40	(dBA)	(dBA)	(feet)	(dBA)
		79.1 120 0					
		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		71.5	67.5	N/A	N/A	N/A	N/A
Total		71.5	67.5	N/A	N/A	N/A	N/A
		*Calculated Lmax is the Loudest value.					
		---- Receptor #4 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Typical Park Visitors - E	Residential	60	55	50			
		Equipment					
		Impact		Spec	Actual	Receptor	Estimated
Description		Device	Usage(%)	Lmax	Lmax	Distance	Shielding
Front End Loader		No	40	(dBA)	(dBA)	(feet)	(dBA)
		79.1 550 0					
		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		58.3	54.3	N/A	N/A	N/A	N/A
Total		58.3	54.3	N/A	N/A	N/A	N/A
		*Calculated Lmax is the Loudest value.					
		---- Receptor #5 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Nearest Resort - N	Residential	60	55	50			
		Equipment					

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	75	0

Results						
Calculated (dBA)			Noise Limits (dBA)			
			Day		Evening	
*Lmax	Leq		Lmax	Leq	Lmax	Leq
	75.6	71.6	N/A	N/A	N/A	N/A
	75.6	71.6	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.						

---- Receptor #6 ----						
Baselines (dBA)						
Description	Land Use	Daytime	Evening	Night		
Typical Resort - N	Residential	60	55	50		

Equipment						
Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	500	0

Results						
Calculated (dBA)			Noise Limits (dBA)			
			Day		Evening	
*Lmax	Leq		Lmax	Leq	Lmax	Leq
	64	60	N/A	N/A	N/A	N/A
	64	70.3	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.						

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/11/2020
Case Description: The Meadows_Sierra Madre - Finish Grading

---- Receptor #1 ----						
Baselines (dBA)						
Description	Land Use	Daytime	Evening	Night		
Nearest Residences_W	Residential	60	55	50		

Equipment						
Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40		84	25	0
Tractor	No	40		84	50	0
Grader	No	40		85	75	0

Results						
Calculated (dBA)			Noise Limits (dBA)			
			Day		Evening	
*Lmax	Leq		Lmax	Leq	Lmax	Leq
	90	86	N/A	N/A	N/A	N/A
	84	80	N/A	N/A	N/A	N/A
	81.5	77.5	N/A	N/A	N/A	N/A
	90	87.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #2 ----					
Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Typical Residences-W	Residential	60	55	50			
		Equipment					
Description		Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
				Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Tractor		No	40	84		500	0
Tractor		No	40	84		500	0
Grader		No	40	85		500	0
		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		64	60	N/A	N/A	N/A	N/A
Tractor		64	60	N/A	N/A	N/A	N/A
Grader		61.7	57.7	N/A	N/A	N/A	N/A
	Total	64	70.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #3 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Nearest Park Visitors-E	Residential	60	55	50			
		Equipment					
		Impact	Spec	Actual	Receptor	Estimated	
		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Tractor		No	40	84	120	0	
Tractor		No	40	84	150	0	
Grader		No	40	85	175	0	
		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		76.4	72.4	N/A	N/A	N/A	N/A
Tractor		74.5	70.5	N/A	N/A	N/A	N/A
Grader		70.8	66.8	N/A	N/A	N/A	N/A
	Total	76.4	78.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #4 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Typical Park Visitors - E	Residential	60	55	50			
		Equipment					
		Impact		Spec	Actual	Receptor	Estimated
		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Description		No	40	84		550	0
Tractor		No	40	84		550	0
Tractor		No	40	84		550	0
Grader		No	40	85		550	0

		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		63.2	59.2	N/A	N/A	N/A	N/A
Tractor		63.2	59.2	N/A	N/A	N/A	N/A
Grader		60.8	56.9	N/A	N/A	N/A	N/A
	Total	63.2	69.5	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.							

		---- Receptor #5 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Resort - N	Residential	60	55	50

		Equipment				
		Spec	Actual	Receptor	Estimated	
Impact		Lmax	Lmax	Distance	Shielding	
Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)	
Tractor	No	40	84	75	0	
Tractor	No	40	84	100	0	
Grader	No	40	85	125	0	

		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		80.5	76.5	N/A	N/A	N/A	N/A
Tractor		78	74	N/A	N/A	N/A	N/A
Grader		73.7	69.7	N/A	N/A	N/A	N/A
	Total	80.5	80.9	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.							

		---- Receptor #6 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Typical Resort - N	Residential	60	55	50

		Equipment				
		Spec	Actual	Receptor	Estimated	
Impact		Lmax	Lmax	Distance	Shielding	
Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)	
Tractor	No	40	84	500	0	
Tractor	No	40	84	500	0	
Grader	No	40	85	500	0	

		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		64	60	N/A	N/A	N/A	N/A
Tractor		64	60	N/A	N/A	N/A	N/A
Grader		61.7	57.7	N/A	N/A	N/A	N/A
	Total	64	70.3	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.							

Report date:
Case Description:

11/11/2020
The Meadows_Sierra Madre - Bldg Cnstr

		---- Receptor #1 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Nearest Residences_W	Residential	60	55	50			
		Equipment					
		Impact	Spec	Actual	Receptor	Estimated	
		Device	Usage(%)	Lmax	Lmax	Distance	Shielding
				(dBA)	(dBA)	(feet)	(dBA)
Crane		No	16		80.6	25	0
Man Lift		No	20		74.7	50	0
Man Lift		No	20		74.7	75	0
Man Lift		No	20		74.7	75	0
Generator		No	50		80.6	100	0
Backhoe		No	40		77.6	150	0
Front End Loader		No	40		79.1	200	0
Tractor		No	40	84		250	0
Welder / Torch		No	40		74	300	0

		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day	Evening		
		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		86.6	78.6	N/A	N/A	N/A	N/A
Man Lift		74.7	67.7	N/A	N/A	N/A	N/A
Man Lift		71.2	64.2	N/A	N/A	N/A	N/A
Man Lift		71.2	64.2	N/A	N/A	N/A	N/A
Generator		74.6	71.6	N/A	N/A	N/A	N/A
Backhoe		68	64	N/A	N/A	N/A	N/A
Front End Loader		67.1	63.1	N/A	N/A	N/A	N/A
Tractor		70	66	N/A	N/A	N/A	N/A
Welder / Torch		58.4	54.5	N/A	N/A	N/A	N/A
Total		86.6	80.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #2 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Typical Residences-W	Residential	60	55	50			
		Equipment					
		Impact	Spec	Actual	Receptor	Estimated	
Description		Device	Usage(%)	Lmax	Lmax	Distance	Shielding
				(dBA)	(dBA)	(feet)	(dBA)
Crane		No	16		80.6	500	0
Man Lift		No	20		74.7	500	0
Man Lift		No	20		74.7	500	0
Man Lift		No	20		74.7	500	0
Generator		No	50		80.6	500	0
Backhoe		No	40		77.6	500	0
Front End Loader		No	40		79.1	500	0
Tractor		No	40	84		500	0
Welder / Torch		No	40		74	500	0

		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day	Evening		
		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Equipment							

Crane	64	60	N/A	N/A	N/A	N/A
Man Lift	64	60	N/A	N/A	N/A	N/A
Man Lift	61.7	57.7	N/A	N/A	N/A	N/A
Man Lift	63.6	59.6	N/A	N/A	N/A	N/A
Generator	63.6	59.6	N/A	N/A	N/A	N/A
Backhoe	63.6	59.6	N/A	N/A	N/A	N/A
Front End Loader	63.6	59.6	N/A	N/A	N/A	N/A
Tractor	63.6	59.6	N/A	N/A	N/A	N/A
Welder / Torch	63.6	59.6	N/A	N/A	N/A	N/A
Total	64	70.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Nearest Park Visitors-E	Residential	60	55	50			
Description		Equipment					Estimated Shielding (dBA)
		Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	
Crane		No	16		80.6	120	0
Man Lift		No	20		74.7	150	0
Man Lift		No	20		74.7	175	0
Man Lift		No	20		74.7	200	0
Generator		No	50		80.6	250	0
Backhoe		No	40		77.6	300	0
Front End Loader		No	40		79.1	350	0
Tractor		No	40	84		200	0
Welder / Torch		No	40		74	400	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Crane	76.4	72.4	N/A	N/A	N/A	N/A
Man Lift	74.5	70.5	N/A	N/A	N/A	N/A
Man Lift	70.8	66.8	N/A	N/A	N/A	N/A
Man Lift	71.5	67.6	N/A	N/A	N/A	N/A
Generator	69.6	65.6	N/A	N/A	N/A	N/A
Backhoe	68	64	N/A	N/A	N/A	N/A
Front End Loader	66.7	62.7	N/A	N/A	N/A	N/A
Tractor	71.5	67.6	N/A	N/A	N/A	N/A
Welder / Torch	65.5	61.5	N/A	N/A	N/A	N/A
Total	76.4	78.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Typical Park Visitors - E	Residential	60	55	50			
Description		Equipment					Estimated Shielding (dBA)
		Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	
Crane		No	16		80.6	550	0
Man Lift		No	20		74.7	550	0
Man Lift		No	20		74.7	550	0
Man Lift		No	20		74.7	550	0
Generator		No	50		80.6	550	0

Backhoe	No	40		77.6	550	0
Front End Loader	No	40		79.1	550	0
Tractor	No	40	84		550	0
Welder / Torch	No	40		74	550	0

		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		63.2	59.2	N/A	N/A	N/A	N/A
Man Lift		63.2	59.2	N/A	N/A	N/A	N/A
Man Lift		60.8	56.9	N/A	N/A	N/A	N/A
Man Lift		62.8	58.8	N/A	N/A	N/A	N/A
Generator		62.8	58.8	N/A	N/A	N/A	N/A
Backhoe		62.8	58.8	N/A	N/A	N/A	N/A
Front End Loader		62.8	58.8	N/A	N/A	N/A	N/A
Tractor		62.8	58.8	N/A	N/A	N/A	N/A
Welder / Torch		62.8	58.8	N/A	N/A	N/A	N/A
Total		63.2	69.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #5 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Resort - N	Residential	60	55	50

		Equipment				
		Impact	Spec	Actual	Receptor	Estimated
Description		Device	Usage(%)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Crane		No	16		80.6	75
Man Lift		No	20		74.7	100
Man Lift		No	20		74.7	125
Man Lift		No	20		74.7	150
Generator		No	50		80.6	250
Backhoe		No	40		77.6	200
Front End Loader		No	40		79.1	300
Tractor		No	40	84		350
Welder / Torch		No	40		74	450

		Results					
		Calculated (dBA)			Noise Limits (dBA)		
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		80.5	76.5	N/A	N/A	N/A	N/A
Man Lift		78	74	N/A	N/A	N/A	N/A
Man Lift		73.7	69.7	N/A	N/A	N/A	N/A
Man Lift		74	70.1	N/A	N/A	N/A	N/A
Generator		69.6	65.6	N/A	N/A	N/A	N/A
Backhoe		71.5	67.6	N/A	N/A	N/A	N/A
Front End Loader		68	64	N/A	N/A	N/A	N/A
Tractor		66.7	62.7	N/A	N/A	N/A	N/A
Welder / Torch		64.5	60.5	N/A	N/A	N/A	N/A
Total		80.5	80.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #6 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Typical Resort - N	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Crane	No	16		80.6	500	0
Man Lift	No	20		74.7	500	0
Man Lift	No	20		74.7	500	0
Man Lift	No	20		74.7	500	0
Generator	No	50		80.6	500	0
Backhoe	No	40		77.6	500	0
Front End Loader	No	40		79.1	500	0
Tractor	No	40	84		500	0
Welder / Torch	No	40		74	500	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day		Evening	
Crane	64	60	N/A	N/A	N/A	N/A
Man Lift	64	60	N/A	N/A	N/A	N/A
Man Lift	61.7	57.7	N/A	N/A	N/A	N/A
Man Lift	63.6	59.6	N/A	N/A	N/A	N/A
Generator	63.6	59.6	N/A	N/A	N/A	N/A
Backhoe	63.6	59.6	N/A	N/A	N/A	N/A
Front End Loader	63.6	59.6	N/A	N/A	N/A	N/A
Tractor	63.6	59.6	N/A	N/A	N/A	N/A
Welder / Torch	63.6	59.6	N/A	N/A	N/A	N/A
Total	64	70.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date:	11/11/2020
Case Description:	The Meadows_Sierra Madre - Wet Utilities

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Residences - W	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Excavator	No	40		80.7	25	0
Excavator	No	40		80.7	50	0
Excavator	No	40		80.7	75	0
Front End Loader	No	40		79.1	75	0
Front End Loader	No	40		79.1	100	0
Backhoe	No	40		77.6	150	0
Tractor	No	40	84		200	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Excavator	86.7	82.8	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A
Excavator	77.2	73.2	N/A	N/A	N/A	N/A

Front End Loader		75.6	71.6	N/A	N/A	N/A	N/A
Front End Loader		73.1	69.1	N/A	N/A	N/A	N/A
Backhoe		68	64	N/A	N/A	N/A	N/A
Tractor		72	68	N/A	N/A	N/A	N/A
Total		86.7	84.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Typical Residences-W	Residential	60	55	50			

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Excavator	No	40		80.7	500	0
Excavator	No	40		80.7	500	0
Excavator	No	40		80.7	500	0
Front End Loader	No	40		79.1	500	0
Front End Loader	No	40		79.1	500	0
Backhoe	No	40		77.6	500	0
Tractor	No	40	84		500	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Excavator	64	60	N/A	N/A	N/A	N/A
Excavator	64	60	N/A	N/A	N/A	N/A
Excavator	61.7	57.7	N/A	N/A	N/A	N/A
Front End Loader	63.6	59.6	N/A	N/A	N/A	N/A
Front End Loader	63.6	59.6	N/A	N/A	N/A	N/A
Backhoe	63.6	59.6	N/A	N/A	N/A	N/A
Tractor	63.6	59.6	N/A	N/A	N/A	N/A
Total	64	70.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Nearest Park Visitors-E	Residential	60	55	50			

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Excavator	No	40		80.7	120	0
Excavator	No	40		80.7	150	0
Excavator	No	40		80.7	175	0
Front End Loader	No	40		79.1	200	0
Front End Loader	No	40		79.1	250	0
Backhoe	No	40		77.6	300	0
Tractor	No	40	84		350	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Excavator	76.4	72.4	N/A	N/A	N/A	N/A
Excavator	74.5	70.5	N/A	N/A	N/A	N/A

Excavator		78	74	N/A	N/A	N/A	N/A
Excavator		73.7	69.7	N/A	N/A	N/A	N/A
Front End Loader		74	70.1	N/A	N/A	N/A	N/A
Front End Loader		69.6	65.6	N/A	N/A	N/A	N/A
Backhoe		71.5	67.6	N/A	N/A	N/A	N/A
Tractor		68	64	N/A	N/A	N/A	N/A
	Total	80.5	80.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #6 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Typical Resort - N	Residential	60	55	50			
		Equipment					
		Impact		Spec	Actual	Receptor	Estimated
Description		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Excavator		No	40		80.7	500	0
Excavator		No	40		80.7	500	0
Excavator		No	40		80.7	500	0
Front End Loader		No	40		79.1	500	0
Front End Loader		No	40		79.1	500	0
Backhoe		No	40		77.6	500	0
Tractor		No	40	84		500	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		64	60	N/A	N/A	N/A	N/A
Excavator		64	60	N/A	N/A	N/A	N/A
Excavator		61.7	57.7	N/A	N/A	N/A	N/A
Front End Loader		63.6	59.6	N/A	N/A	N/A	N/A
Front End Loader		63.6	59.6	N/A	N/A	N/A	N/A
Backhoe		63.6	59.6	N/A	N/A	N/A	N/A
Tractor		63.6	59.6	N/A	N/A	N/A	N/A
	Total	64	70.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/11/2020
Case Description: The Meadows_Sierra Madre - Dry Utilities

		---- Receptor #1 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Nearest Residences_W	Residential	60	55	50			
		Equipment					
		Impact		Spec	Actual	Receptor	Estimated
Description		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Front End Loader		No	40		79.1	25	0
Front End Loader		No	40		79.1	125	0
Backhoe		No	40		77.6	50	0
Tractor		No	40	84		75	0

Calculated (dBA)		Results			
		Noise Limits (dBA)			
		Day		Evening	
*Lmax	Leq	Lmax	Leq	Lmax	Leq
85.1	81.2	N/A	N/A	N/A	N/A
71.2	67.2	N/A	N/A	N/A	N/A
77.6	73.6	N/A	N/A	N/A	N/A
80.5	76.5	N/A	N/A	N/A	N/A
85.1	83.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Baselines (dBA)

Daytime Evening Night

60 55 50

Impact Device	Usage(%)	Equipment			
		Spec	Actual	Receptor	Estimated
		Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
No	40		79.1	500	0
No	40		79.1	500	0
No	40		77.6	500	0
No	40	84		500	0

Calculated (dBA)		Results			
		Day		Evening	
*Lmax	Leq	Lmax	Leq	Lmax	Leq
59.1	55.1	N/A	N/A	N/A	N/A
59.1	55.1	N/A	N/A	N/A	N/A
57.6	53.6	N/A	N/A	N/A	N/A
64	60	N/A	N/A	N/A	N/A
64	62.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Baselines (dBA)

Daytime Evening Night

60 55 50

Impact Device	Usage(%)	Equipment			
		Spec	Actual	Receptor	Estimated
		Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
No	40		79.1	120	0
No	40		79.1	175	0
No	40		77.6	150	0
No	40	84		250	0

Calculated (dBA)		Results			
		Noise Limits (dBA)			
		Day		Evening	
*Lmax	Leq	Lmax	Leq	Lmax	Leq
71.5	67.5	N/A	N/A	N/A	N/A
68.2	64.2	N/A	N/A	N/A	N/A
68	64	N/A	N/A	N/A	N/A
70	66	N/A	N/A	N/A	N/A
71.5	71.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #4 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Typical Park Visitors - E	Residential	60	55	50			
		Equipment					
		Impact	Spec	Actual	Receptor	Estimated	
		Device	Usage(%)	Lmax	Lmax	Distance	
				(dBA)	(dBA)	(feet)	
						Shielding	
						(dBA)	
Front End Loader		No	40		79.1	550	0
Front End Loader		No	40		79.1	550	0
Backhoe		No	40		77.6	550	0
Tractor		No	40	84		550	0
		Results					
		Calculated (dBA)			Noise Limits (dBA)		
					Evening		
		Day					
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		58.3	54.3	N/A	N/A	N/A	N/A
Front End Loader		58.3	54.3	N/A	N/A	N/A	N/A
Backhoe		56.7	52.8	N/A	N/A	N/A	N/A
Tractor		63.2	59.2	N/A	N/A	N/A	N/A
	Total	63.2	61.9	N/A	N/A	N/A	N/A
		*Calculated Lmax is the Loudest value.					

		---- Receptor #5 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Nearest Resort - N	Residential	60	55	50			
		Equipment					
		Impact	Spec	Actual	Receptor	Estimated	
		Device	Usage(%)	Lmax	Lmax	Distance	
				(dBA)	(dBA)	(feet)	
						Shielding	
						(dBA)	
Front End Loader		No	40		79.1	75	0
Front End Loader		No	40		79.1	125	0
Backhoe		No	40		77.6	200	0
Tractor		No	40	84		150	0
		Results					
		Calculated (dBA)			Noise Limits (dBA)		
					Day		
					Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		75.6	71.6	N/A	N/A	N/A	N/A
Front End Loader		71.2	67.2	N/A	N/A	N/A	N/A
Backhoe		65.5	61.5	N/A	N/A	N/A	N/A
Tractor		74.5	70.5	N/A	N/A	N/A	N/A
	Total	75.6	75.1	N/A	N/A	N/A	N/A
		*Calculated Lmax is the Loudest value.					

		---- Receptor #6 ----					
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Typical Resort - N	Residential	60	55	50			
		Equipment					
		Impact	Spec	Actual	Receptor	Estimated	
		Device	Usage(%)	Lmax	Lmax	Distance	Shielding
			(dBA)	(dBA)	(dBA)	(feet)	(dBA)
Front End Loader		No	40		79.1	500	0

Front End Loader	No	40		79.1	500	0
Backhoe	No	40		77.6	500	0
Tractor	No	40	84		500	0

Results						
Calculated (dBA)			Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader	59.1	55.1	N/A	N/A	N/A	N/A
Front End Loader	59.1	55.1	N/A	N/A	N/A	N/A
Backhoe	57.6	53.6	N/A	N/A	N/A	N/A
Tractor	64	60	N/A	N/A	N/A	N/A
Total	64	62.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/11/2020
Case Description: The Meadows_Sierra Madre - Surface Improvements

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Residences_W	Residential	60	55	50

		Equipment				
		Impact	Spec	Actual	Receptor	Estimated
Description	Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Grader	No	40		85	25	0
Paver	No	50		77.2	50	0
Paver	No	50		77.2	75	0
Concrete Pump Truck	No	20		81.4	75	0
Concrete Mixer Truck	No	40		78.8	100	0
Roller	No	20		80	150	0
Roller	No	20		80	200	0
Scraper	No	40		83.6	250	0
Backhoe	No	40		77.6	300	0

Results						
Calculated (dBA)			Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	91	87	N/A	N/A	N/A	N/A
Paver	77.2	74.2	N/A	N/A	N/A	N/A
Paver	73.7	70.7	N/A	N/A	N/A	N/A
Concrete Pump Truck	77.9	70.9	N/A	N/A	N/A	N/A
Concrete Mixer Truck	72.8	68.8	N/A	N/A	N/A	N/A
Roller	70.5	63.5	N/A	N/A	N/A	N/A
Roller	68	61	N/A	N/A	N/A	N/A
Scraper	69.6	65.6	N/A	N/A	N/A	N/A
Backhoe	62	58	N/A	N/A	N/A	N/A
Total	91	87.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		---- Receptor #2 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night

Typical Residences-W

Residential

60

55

50

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Grader	No	40		85	500	0
Paver	No	50		77.2	500	0
Paver	No	50		77.2	500	0
Concrete Pump Truck	No	20		81.4	500	0
Concrete Mixer Truck	No	40		78.8	500	0
Roller	No	20		80	500	0
Roller	No	20		80	500	0
Scraper	No	40		83.6	500	0
Backhoe	No	40		77.6	500	0

Equipment	Results		Noise Limits (dBA)			
	Calculated (dBA)					
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Grader	65	61	N/A	N/A	N/A	N/A
Paver	57.2	54.2	N/A	N/A	N/A	N/A
Paver	57.2	54.2	N/A	N/A	N/A	N/A
Concrete Pump Truck	61.4	54.4	N/A	N/A	N/A	N/A
Concrete Mixer Truck	58.8	54.8	N/A	N/A	N/A	N/A
Roller	60	53	N/A	N/A	N/A	N/A
Roller	60	53	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Backhoe	57.6	53.6	N/A	N/A	N/A	N/A
Total	65	65.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Park Visitors-E	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Grader	No	40		85	120	0
Paver	No	50		77.2	150	0
Paver	No	50		77.2	175	0
Concrete Pump Truck	No	20		81.4	200	0
Concrete Mixer Truck	No	40		78.8	250	0
Roller	No	20		80	300	0
Roller	No	20		80	350	0
Scraper	No	40		83.6	200	0
Backhoe	No	40		77.6	400	0

Equipment	Results		Noise Limits (dBA)			
	Calculated (dBA)					
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Grader	77.4	73.4	N/A	N/A	N/A	N/A
Paver	67.7	64.7	N/A	N/A	N/A	N/A
Paver	66.3	63.3	N/A	N/A	N/A	N/A
Concrete Pump Truck	69.4	62.4	N/A	N/A	N/A	N/A
Concrete Mixer Truck	64.8	60.8	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A

Roller		63.1	56.1	N/A	N/A	N/A	N/A
Scraper		71.5	67.6	N/A	N/A	N/A	N/A
Backhoe		59.5	55.5	N/A	N/A	N/A	N/A
	Total	77.4	75.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Typical Park Visitors - E	Residential	60	55	50			
Description		Equipment		Receptor Distance (feet)	Estimated		
		Impact Device	Usage(%)		Spec Lmax (dBA)	Actual Lmax (dBA)	
Grader		No	40	550	85		0
Paver		No	50	550		77.2	0
Paver		No	50	550		77.2	0
Concrete Pump Truck		No	20	550		81.4	0
Concrete Mixer Truck		No	40	550		78.8	0
Roller		No	20	550		80	0
Roller		No	20	550		80	0
Scraper		No	40	550		83.6	0
Backhoe		No	40	550		77.6	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq
Grader	64.2	60.2	N/A	N/A	N/A	N/A
Paver	56.4	53.4	N/A	N/A	N/A	N/A
Paver	56.4	53.4	N/A	N/A	N/A	N/A
Concrete Pump Truck	60.6	53.6	N/A	N/A	N/A	N/A
Concrete Mixer Truck	58	54	N/A	N/A	N/A	N/A
Roller	59.2	52.2	N/A	N/A	N/A	N/A
Roller	59.2	52.2	N/A	N/A	N/A	N/A
Scraper	62.8	58.8	N/A	N/A	N/A	N/A
Backhoe	56.7	52.8	N/A	N/A	N/A	N/A
	Total	64.2	65.1	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Nearest Resort - N	Residential	60	55	50			
Description		Equipment		Receptor Distance (feet)	Estimated		
		Impact Device	Usage(%)		Spec Lmax (dBA)	Actual Lmax (dBA)	
Grader		No	40	75	85		0
Paver		No	50	100		77.2	0
Paver		No	50	125		77.2	0
Concrete Pump Truck		No	20	150		81.4	0
Concrete Mixer Truck		No	40	250		78.8	0
Roller		No	20	200		80	0
Roller		No	20	300		80	0
Scraper		No	40	350		83.6	0
Backhoe		No	40	450		77.6	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Grader	81.5	77.5	N/A	N/A	N/A	N/A
Paver	71.2	68.2	N/A	N/A	N/A	N/A
Paver	69.3	66.3	N/A	N/A	N/A	N/A
Concrete Pump Truck	71.9	64.9	N/A	N/A	N/A	N/A
Concrete Mixer Truck	64.8	60.8	N/A	N/A	N/A	N/A
Roller	68	61	N/A	N/A	N/A	N/A
Roller	64.4	57.4	N/A	N/A	N/A	N/A
Scraper	66.7	62.7	N/A	N/A	N/A	N/A
Backhoe	58.5	54.5	N/A	N/A	N/A	N/A
Total	81.5	78.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Typical Resort - N	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Grader	No	40	85		500	0
Paver	No	50		77.2	500	0
Paver	No	50		77.2	500	0
Concrete Pump Truck	No	20		81.4	500	0
Concrete Mixer Truck	No	40		78.8	500	0
Roller	No	20		80	500	0
Roller	No	20		80	500	0
Scraper	No	40		83.6	500	0
Backhoe	No	40		77.6	500	0

Results

Equipment	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day	Leq	Evening	
			Lmax		Lmax	Leq
Grader	65	61	N/A	N/A	N/A	N/A
Paver	57.2	54.2	N/A	N/A	N/A	N/A
Paver	57.2	54.2	N/A	N/A	N/A	N/A
Concrete Pump Truck	61.4	54.4	N/A	N/A	N/A	N/A
Concrete Mixer Truck	58.8	54.8	N/A	N/A	N/A	N/A
Roller	60	53	N/A	N/A	N/A	N/A
Roller	60	53	N/A	N/A	N/A	N/A
Scraper	63.6	59.6	N/A	N/A	N/A	N/A
Backhoe	57.6	53.6	N/A	N/A	N/A	N/A
Total	65	65.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/11/2020
Case Description: The Meadows_Sierra Madre - Architectural Coating

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night

Nearest Residences_W	Residential	60	55	50			
Description	Compressor (air)	Equipment					
		Impact		Spec	Actual	Receptor	Estimated
		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
		No	40		77.7	25	0
Results							
Calculated (dBA)				Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		83.7	79.7	N/A	N/A	N/A	N/A
	Total	83.7	79.7	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.							
---- Receptor #2 ----							
Baselines (dBA)							
Description	Land Use	Daytime	Evening	Night			
Typical Residences-W	Residential	60	55	50			
Description	Compressor (air)	Equipment					
		Impact		Spec	Actual	Receptor	Estimated
		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
		No	40		77.7	500	0
Results							
Calculated (dBA)				Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		57.7	53.7	N/A	N/A	N/A	N/A
	Total	57.7	53.7	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.							
---- Receptor #3 ----							
Baselines (dBA)							
Description	Land Use	Daytime	Evening	Night			
Nearest Park Visitors-E	Residential	60	55	50			
Description	Compressor (air)	Equipment					
		Impact		Spec	Actual	Receptor	Estimated
		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
		No	40		77.7	120	0
Results							
Calculated (dBA)				Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		70.1	66.1	N/A	N/A	N/A	N/A
	Total	70.1	66.1	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.							
---- Receptor #4 ----							
Baselines (dBA)							
Description	Land Use	Daytime	Evening	Night			
Typical Park Visitors - E	Residential	60	55	50			
Description		Equipment					
		Spec	Actual	Receptor	Estimated		

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Equipment		56.8	52.9	N/A	N/A	N/A	N/A
Compressor (air)		56.8	52.9	N/A	N/A	N/A	N/A
	Total	56.8	52.9	N/A	N/A	N/A	N/A
		*Calculated Lmax is the Loudest value.					

Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	75	0
Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Compressor (air)	77	69.1	N/A	N/A	N/A	N/A
Total	77	72.5	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.						

Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	500	0
Results						
Equipment	Calculated (dBA)		Noise Limits (dBA)			
			Day	Evening		
	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		60.6	52.6	N/A	N/A	N/A
		64	64.1	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.						

Traffic Noise Modeling
Input and Output

INPUT: ROADWAYS
13028

Dudek											
MG											
INPUT: ROADWAYS				13028				Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA			
PROJECT/CONTRACT:				13028							
RUN:				The Meadows at Sierra Madre Existing							
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Sunnyside Ave - north of Fairview Ave	24.0	point1	1	2,787.6	5,892.6	1,100.00				Average	
		point3	3	2,784.1	4,191.6	1,100.00					
Michillinda Ave - north of Sierra Madre A	24.0	point10	10	1,735.8	4,187.8	1,100.00				Average	
		point8	8	1,724.8	1,608.8	1,100.00					
Sunnyside Ave - Fairview Ave to Sierra	24.0	point11	11	2,784.1	4,191.6	1,100.00				Average	
		point4	4	2,781.9	1,613.2	1,100.00				Average	
		point5	5	2,782.3	1,609.9	1,100.00					
Sierra Madre Ave - Sunnyside Ave to Mi	24.0	point12	12	2,782.3	1,609.9	1,100.00				Average	
		point6	6	1,740.1	1,597.5	1,100.00					
Michillinda Ave - s. of Sierra Madre Ave	24.0	point23	23	1,724.8	1,608.8	1,100.00				Average	
		point2	2	1,724.8	264.2	1,100.00					

INPUT: TRAFFIC FOR LAeq1h Percentages
13028

Dudek													
MG													
INPUT: TRAFFIC FOR LAeq1h Percentages													
PROJECT/CONTRACT:	13028												
RUN:	The Meadows at Sierra Madre Existing												
Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
Sunnyside Ave - north of Fairview Ave	point1	1	340	97	30	2	30	1	25	0	0	0	0
	point3	3											
Michillinda Ave - north of Sierra Madre A	point10	10	7390	97	35	2	35	1	30	0	0	0	0
	point8	8											
Sunnyside Ave - Fairview Ave to Sierra	point11	11	490	97	30	2	30	1	25	0	0	0	0
	point4	4	490	97	30	2	30	1	25	0	0	0	0
	point5	5											
Sierra Madre Ave - Sunnyside Ave to Mi	point12	12	6970	97	30	2	30	1	25	0	0	0	0
	point6	6											
Michillinda Ave - s. of Sierra Madre Ave	point23	23	9550	97	35	2	35	1	30	0	0	0	0
	point2	2											

INPUT: RECEIVERS
13028

Dudek												
MG												
INPUT: RECEIVERS												
PROJECT/CONTRACT:	13028											
RUN:	The Meadows at Sierra Madre Existing											
Receiver												
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active	
			X	Y	Z	above	Existing	Impact Criteria		NR	in	
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.	
			ft	ft	ft	ft	dBA	dBA	dB	dB		
ST1	1	1	2,670.2	4,977.3	1,100.00	5.00	0.00	66	10.0	8.0	Y	
ST2	2	1	2,917.6	5,691.4	1,100.00	5.00	0.00	66	10.0	8.0	Y	
ST5	3	1	2,717.4	4,509.8	1,100.00	5.00	0.00	66	10.0	8.0	Y	
M1	4	1	1,844.7	3,989.0	1,100.00	5.00	0.00	66	10.0	8.0	Y	
M2	5	1	1,837.5	1,246.0	1,100.00	5.00	0.00	66	10.0	8.0	Y	
M3	6	1	2,249.7	1,721.9	1,100.00	5.00	0.00	66	10.0	8.0	Y	

INPUT: BARRIERS

13028

Dudek					19 November 2020														
MG					TNM 2.5														
INPUT: BARRIERS																			
PROJECT/CONTRACT:	13028																		
RUN:	The Meadows at Sierra Madre Existing																		
Barrier										Points									
Name	Type	Height Min	Max	If Wall \$ per Unit Area	If Berm \$ per Unit Vol.	Top Width	Run:Rise ft:ft	Add'tnl \$ per Unit Length	Name	No.	Coordinates (bottom) X	Y	Z	Height at Point	Segment Seg Ht Perturbs Incre- #Up #Dn	On Struct?	Important Reflec- tions?		
Barrier1	W	0.00	100.00	0.00				0.00	point1	1	2,475.8	5,182.2	1,100.00	25.00	0.00 0 0				
									point3	3	2,462.7	4,884.8	1,100.00	25.00	0.00 0 0				
									point4	4	2,707.6	4,876.0	1,100.00	25.00	0.00 0 0				
									point5	5	2,714.5	1,709.9	1,100.00	25.00	0.00 0 0				
									point6	6	1,846.6	1,737.7	1,100.00	25.00	0.00 0 0				
									point7	7	1,853.6	5,292.6	1,100.00	25.00					
Barrier1-2-2	W	0.00	100.00	0.00				0.00	point12	12	1,857.2	859.2	1,100.00	25.00	0.00 0 0				
									point9	9	1,851.7	1,520.5	1,100.00	25.00	0.00 0 0				
									point10	10	2,683.8	1,526.0	1,100.00	25.00	0.00 0 0				
									point2	2	2,678.3	842.6	1,100.00	25.00					

RESULTS: SOUND LEVELS

13028

Dudek MG													
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		13028											
RUN:		The Meadows at Sierra Madre Existing											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing	No Barrier					With Barrier				
			LAeq1h	LAeq1h		Increase over existing	Type	Calculated	Noise Reduction				
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated	
							Sub'l Inc					minus	
												Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
ST1	1	1	0.0	52.6	66	52.6	10	----	52.6	0.0	8	-8.0	
ST2	2	1	0.0	51.1	66	51.1	10	----	51.1	0.0	8	-8.0	
ST5	3	1	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0	
M1	4	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0	
M2	5	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0	
M3	6	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		6	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

INPUT: ROADWAYS
13028

Dudek											
MG											
INPUT: ROADWAYS				13028				Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA			
PROJECT/CONTRACT:				13028							
RUN:				The Mdws@Sierra Madre Exist w Prj							
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Sunnyside Ave - north of Fairview Ave	24.0	point1	1	2,787.6	5,892.6	1,100.00				Average	
		point3	3	2,784.1	4,191.6	1,100.00					
Michillinda Ave - north of Sierra Madre A	24.0	point10	10	1,735.8	4,187.8	1,100.00				Average	
		point8	8	1,724.8	1,608.8	1,100.00					
Sunnyside Ave - Fairview Ave to Sierra	24.0	point11	11	2,784.1	4,191.6	1,100.00				Average	
		point4	4	2,781.9	1,613.2	1,100.00				Average	
		point5	5	2,782.3	1,609.9	1,100.00					
Sierra Madre Ave - Sunnyside Ave to Mi	24.0	point12	12	2,782.3	1,609.9	1,100.00				Average	
		point6	6	1,740.1	1,597.5	1,100.00					
Michillinda Ave - s. of Sierra Madre Ave	24.0	point23	23	1,724.8	1,608.8	1,100.00				Average	
		point2	2	1,724.8	264.2	1,100.00					

INPUT: TRAFFIC FOR LAeq1h Percentages
13028

Dudek													
MG													
INPUT: TRAFFIC FOR LAeq1h Percentages													
PROJECT/CONTRACT:	13028												
RUN:	The Mdws@Sierra Madre Exist w Prj												
Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
Sunnyside Ave - north of Fairview Ave	point1	1	740	97	30	2	30	1	25	0	0	0	0
	point3	3											
Michillinda Ave - north of Sierra Madre A	point10	10	7390	97	35	2	35	1	30	0	0	0	0
	point8	8											
Sunnyside Ave - Fairview Ave to Sierra	point11	11	850	97	30	2	30	1	25	0	0	0	0
	point4	4	850	97	30	2	30	1	25	0	0	0	0
	point5	5											
Sierra Madre Ave - Sunnyside Ave to Mi	point12	12	7310	97	30	2	30	1	25	0	0	0	0
	point6	6											
Michillinda Ave - s. of Sierra Madre Ave	point23	23	9680	97	35	2	35	1	30	0	0	0	0
	point2	2											

INPUT: RECEIVERS
13028

Dudek						19 November 2020					
MG						TNM 2.5					
INPUT: RECEIVERS											
PROJECT/CONTRACT:		13028									
RUN:		The Mdws@Sierra Madre Exist w Prj									
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'I	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	2,670.2	4,977.3	1,100.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	2,917.6	5,691.4	1,100.00	5.00	0.00	66	10.0	8.0	Y
ST5	3	1	2,717.4	4,509.8	1,100.00	5.00	0.00	66	10.0	8.0	Y
M1	4	1	1,844.7	3,989.0	1,100.00	5.00	0.00	66	10.0	8.0	Y
M2	5	1	1,837.5	1,246.0	1,100.00	5.00	0.00	66	10.0	8.0	Y
M3	6	1	2,249.7	1,721.9	1,100.00	5.00	0.00	66	10.0	8.0	Y

INPUT: BARRIERS

13028

Dudek					19 November 2020														
MG					TNM 2.5														
INPUT: BARRIERS																			
PROJECT/CONTRACT:	13028																		
RUN:	The Mdws@Sierra Madre Exist w Prj																		
Barrier										Points									
Name	Type	Height Min	Max	If Wall \$ per Unit Area	If Berm \$ per Unit Vol.	Top Width	Run:Rise	Add'tnl \$ per Unit Length	Name	No.	Coordinates (bottom) X	Y	Z	Height at Point	Segment Seg Ht Perturbs Incre- #Up #Dn	On Struct?	Important Reflec- tions?		
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	100.00	0.00				0.00	point1	1	2,475.8	5,182.2	1,100.00	25.00	0.00 0 0				
									point3	3	2,462.7	4,884.8	1,100.00	25.00	0.00 0 0				
									point4	4	2,707.6	4,876.0	1,100.00	25.00	0.00 0 0				
									point5	5	2,714.5	1,709.9	1,100.00	25.00	0.00 0 0				
									point6	6	1,846.6	1,737.7	1,100.00	25.00	0.00 0 0				
									point7	7	1,853.6	5,292.6	1,100.00	25.00					
Barrier1-2-2	W	0.00	100.00	0.00				0.00	point12	12	1,857.2	859.2	1,100.00	25.00	0.00 0 0				
									point9	9	1,851.7	1,520.5	1,100.00	25.00	0.00 0 0				
									point10	10	2,683.8	1,526.0	1,100.00	25.00	0.00 0 0				
									point2	2	2,678.3	842.6	1,100.00	25.00					

RESULTS: SOUND LEVELS

13028

Dudek													
MG													
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		13028											
RUN:		The Mdws@Sierra Madre Exist w Prj											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing	No Barrier					With Barrier				
			LAeq1h	LAeq1h		Increase over existing	Type	Calculated	Noise Reduction				
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated	
							Sub'l Inc					minus	
												Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
ST1	1	1	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0	
ST2	2	1	0.0	54.4	66	54.4	10	----	54.4	0.0	8	-8.0	
ST5	3	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0	
M1	4	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0	
M2	5	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0	
M3	6	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		6	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

INPUT: ROADWAYS
13028

Dudek											
MG											
INPUT: ROADWAYS								Average pavement type shall be used unless			
PROJECT/CONTRACT:				13028				a State highway agency substantiates the use			
RUN:				The Mdws@Sierra Madre Yr2025 wo Prj				of a different type with the approval of FHWA			
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control	Speed	Percent	Pvmt	On
							Device	Constraint	Vehicles	Type	Struct?
									Affected		
	ft			ft	ft	ft		mph	%		
Sunnyside Ave - north of Fairview Ave	24.0	point1	1	2,787.6	5,892.6	1,100.00				Average	
		point3	3	2,784.1	4,191.6	1,100.00					
Michillinda Ave - north of Sierra Madre A	24.0	point10	10	1,735.8	4,187.8	1,100.00				Average	
		point8	8	1,724.8	1,608.8	1,100.00					
Sunnyside Ave - Fairview Ave to Sierra	24.0	point11	11	2,784.1	4,191.6	1,100.00				Average	
		point4	4	2,781.9	1,613.2	1,100.00				Average	
		point5	5	2,782.3	1,609.9	1,100.00					
Sierra Madre Ave - Sunnyside Ave to Mi	24.0	point12	12	2,782.3	1,609.9	1,100.00				Average	
		point6	6	1,740.1	1,597.5	1,100.00					
Michillinda Ave - s. of Sierra Madre Ave	24.0	point23	23	1,724.8	1,608.8	1,100.00				Average	
		point2	2	1,724.8	264.2	1,100.00					

INPUT: TRAFFIC FOR LAeq1h Percentages

13028

Dudek													
MG													
INPUT: TRAFFIC FOR LAeq1h Percentages													
PROJECT/CONTRACT:	13028												
RUN:	The Mdws@Sierra Madre Yr2025 wo Prj												
Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos	MTrucks		HTrucks		Buses		Motorcycles		
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
Sunnyside Ave - north of Fairview Ave	point1	1	340	97	30	2	30	1	25	0	0	0	0
	point3	3											
Michillinda Ave - north of Sierra Madre A	point10	10	7390	97	35	2	35	1	30	0	0	0	0
	point8	8											
Sunnyside Ave - Fairview Ave to Sierra	point11	11	490	97	30	2	30	1	25	0	0	0	0
	point4	4	490	97	30	2	30	1	25	0	0	0	0
	point5	5											
Sierra Madre Ave - Sunnyside Ave to Mi	point12	12	6970	97	30	2	30	1	25	0	0	0	0
	point6	6											
Michillinda Ave - s. of Sierra Madre Ave	point23	23	9550	97	35	2	35	1	30	0	0	0	0
	point2	2											

INPUT: RECEIVERS
13028

Dudek												
MG												
INPUT: RECEIVERS												
PROJECT/CONTRACT:	13028											
RUN:	The Mdws@Sierra Madre Yr2025 wo Prj											
Receiver												
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active	
			X	Y	Z	above	Existing	Impact Criteria		NR	in	
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.	
			ft	ft	ft	ft	dBA	dBA	dB	dB		
ST1	1	1	2,670.2	4,977.3	1,100.00	5.00	0.00	66	10.0	8.0	Y	
ST2	2	1	2,917.6	5,691.4	1,100.00	5.00	0.00	66	10.0	8.0	Y	
ST5	3	1	2,717.4	4,509.8	1,100.00	5.00	0.00	66	10.0	8.0	Y	
M1	4	1	1,844.7	3,989.0	1,100.00	5.00	0.00	66	10.0	8.0	Y	
M2	5	1	1,837.5	1,246.0	1,100.00	5.00	0.00	66	10.0	8.0	Y	
M3	6	1	2,249.7	1,721.9	1,100.00	5.00	0.00	66	10.0	8.0	Y	

INPUT: BARRIERS

13028

Dudek					19 November 2020														
MG					TNM 2.5														
INPUT: BARRIERS																			
PROJECT/CONTRACT:	13028																		
RUN:	The Mdws@Sierra Madre Yr2025 wo Prj																		
Barrier										Points									
Name	Type	Height Min	Max	If Wall \$ per Unit Area	If Berm \$ per Unit Vol.	Top Width	Run:Rise	Add'tnl \$ per Unit Length	Name	No.	Coordinates (bottom) X	Y	Z	Height at Point	Segment Seg Ht Perturbs Incre- #Up #Dn	On Struct?	Important Reflec- tions?		
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	100.00	0.00				0.00	point1	1	2,475.8	5,182.2	1,100.00	25.00	0.00 0 0				
									point3	3	2,462.7	4,884.8	1,100.00	25.00	0.00 0 0				
									point4	4	2,707.6	4,876.0	1,100.00	25.00	0.00 0 0				
									point5	5	2,714.5	1,709.9	1,100.00	25.00	0.00 0 0				
									point6	6	1,846.6	1,737.7	1,100.00	25.00	0.00 0 0				
									point7	7	1,853.6	5,292.6	1,100.00	25.00					
Barrier1-2-2	W	0.00	100.00	0.00				0.00	point12	12	1,857.2	859.2	1,100.00	25.00	0.00 0 0				
									point9	9	1,851.7	1,520.5	1,100.00	25.00	0.00 0 0				
									point10	10	2,683.8	1,526.0	1,100.00	25.00	0.00 0 0				
									point2	2	2,678.3	842.6	1,100.00	25.00					

RESULTS: SOUND LEVELS

13028

Dudek													
MG													
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		13028											
RUN:		The Mdws@Sierra Madre Yr2025 wo Prj											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing	No Barrier					With Barrier				
			LAeq1h	LAeq1h		Increase over existing	Type	Calculated	Noise Reduction				
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated	
							Sub'l Inc					minus	
												Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
ST1	1	1	0.0	52.6	66	52.6	10	----	52.6	0.0	8	-8.0	
ST2	2	1	0.0	51.1	66	51.1	10	----	51.1	0.0	8	-8.0	
ST5	3	1	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0	
M1	4	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0	
M2	5	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0	
M3	6	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		6	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

INPUT: ROADWAYS
13028

Dudek											
MG											
INPUT: ROADWAYS							Average pavement type shall be used unless				
PROJECT/CONTRACT:				13028			a State highway agency substantiates the use				
RUN:				The Mdws@Sierra Madre Yr2025 w Prj			of a different type with the approval of FHWA				
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control	Speed	Percent	Pvmt	On
							Device	Constraint	Vehicles	Type	Struct?
									Affected		
	ft			ft	ft	ft		mph	%		
Sunnyside Ave - north of Fairview Ave	24.0	point1	1	2,787.6	5,892.6	1,100.00				Average	
		point3	3	2,784.1	4,191.6	1,100.00					
Michillinda Ave - north of Sierra Madre A	24.0	point10	10	1,735.8	4,187.8	1,100.00				Average	
		point8	8	1,724.8	1,608.8	1,100.00					
Sunnyside Ave - Fairview Ave to Sierra	24.0	point11	11	2,784.1	4,191.6	1,100.00				Average	
		point4	4	2,781.9	1,613.2	1,100.00				Average	
		point5	5	2,782.3	1,609.9	1,100.00					
Sierra Madre Ave - Sunnyside Ave to Mi	24.0	point12	12	2,782.3	1,609.9	1,100.00				Average	
		point6	6	1,740.1	1,597.5	1,100.00					
Michillinda Ave - s. of Sierra Madre Ave	24.0	point23	23	1,724.8	1,608.8	1,100.00				Average	
		point2	2	1,724.8	264.2	1,100.00					

INPUT: TRAFFIC FOR LAeq1h Percentages

13028

Dudek													
MG													
INPUT: TRAFFIC FOR LAeq1h Percentages													
PROJECT/CONTRACT:	13028												
RUN:	The Mdws@Sierra Madre Yr2025 w Prj												
Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos	MTrucks		HTrucks		Buses		Motorcycles		
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
Sunnyside Ave - north of Fairview Ave	point1	1	740	97	30	2	30	1	25	0	0	0	0
	point3	3											
Michillinda Ave - north of Sierra Madre A	point10	10	7390	97	35	2	35	1	30	0	0	0	0
	point8	8											
Sunnyside Ave - Fairview Ave to Sierra	point11	11	850	97	30	2	30	1	25	0	0	0	0
	point4	4	850	97	30	2	30	1	25	0	0	0	0
	point5	5											
Sierra Madre Ave - Sunnyside Ave to Mi	point12	12	7310	97	30	2	30	1	25	0	0	0	0
	point6	6											
Michillinda Ave - s. of Sierra Madre Ave	point23	23	9680	97	35	2	35	1	30	0	0	0	0
	point2	2											

INPUT: RECEIVERS
13028

Dudek												
MG												
INPUT: RECEIVERS												
PROJECT/CONTRACT:	13028											
RUN:	The Mdws@Sierra Madre Yr2025 w Prj											
Receiver												
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active	
			X	Y	Z	above	Existing	Impact Criteria		NR	in	
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.	
			ft	ft	ft	ft	dBA	dBA	dB	dB		
ST1	1	1	2,670.2	4,977.3	1,100.00	5.00	0.00	66	10.0	8.0	Y	
ST2	2	1	2,917.6	5,691.4	1,100.00	5.00	0.00	66	10.0	8.0	Y	
ST5	3	1	2,717.4	4,509.8	1,100.00	5.00	0.00	66	10.0	8.0	Y	
M1	4	1	1,844.7	3,989.0	1,100.00	5.00	0.00	66	10.0	8.0	Y	
M2	5	1	1,837.5	1,246.0	1,100.00	5.00	0.00	66	10.0	8.0	Y	
M3	6	1	2,249.7	1,721.9	1,100.00	5.00	0.00	66	10.0	8.0	Y	

INPUT: BARRIERS

13028

Dudek					19 November 2020														
MG					TNM 2.5														
INPUT: BARRIERS																			
PROJECT/CONTRACT:	13028																		
RUN:	The Mdws@Sierra Madre Yr2025 w Prj																		
Barrier										Points									
Name	Type	Height Min	Max	If Wall \$ per Unit Area	If Berm \$ per Unit Vol.	Top Width	Run:Rise	Add'tnl \$ per Unit Length	Name	No.	Coordinates (bottom)			Height at Point	Segment Seg Ht	Perturbs #Up	On #Dn	Struct?	Important Reflec- tions?
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft		ft	ft	ft	ft			
Barrier1	W	0.00	100.00	0.00				0.00	point1	1	2,475.8	5,182.2	1,100.00	25.00	0.00	0	0		
									point3	3	2,462.7	4,884.8	1,100.00	25.00	0.00	0	0		
									point4	4	2,707.6	4,876.0	1,100.00	25.00	0.00	0	0		
									point5	5	2,714.5	1,709.9	1,100.00	25.00	0.00	0	0		
									point6	6	1,846.6	1,737.7	1,100.00	25.00	0.00	0	0		
									point7	7	1,853.6	5,292.6	1,100.00	25.00					
Barrier1-2-2	W	0.00	100.00	0.00				0.00	point12	12	1,857.2	859.2	1,100.00	25.00	0.00	0	0		
									point9	9	1,851.7	1,520.5	1,100.00	25.00	0.00	0	0		
									point10	10	2,683.8	1,526.0	1,100.00	25.00	0.00	0	0		
									point2	2	2,678.3	842.6	1,100.00	25.00					

RESULTS: SOUND LEVELS

13028

Dudek													
MG													
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		13028											
RUN:		The Mdws@Sierra Madre Yr2025 w Prj											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing	No Barrier					With Barrier				
			LAeq1h	LAeq1h		Increase over existing	Type	Calculated	Noise Reduction				
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated	
							Sub'l Inc					minus	
												Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
ST1	1	1	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0	
ST2	2	1	0.0	54.4	66	54.4	10	----	54.4	0.0	8	-8.0	
ST5	3	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0	
M1	4	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0	
M2	5	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0	
M3	6	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		6	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

HVAC Specifications

**24VNA9 Infinity® 19VS
Variable Speed Air Conditioner
with Puron® Refrigerant
2 – 5 Ton**



Product Data



INFINITY® 19VS

The Infinity 19VS air conditioner offers high-efficiency variable speed performance in a remarkably small cabinet and provides up to 19 SEER cooling efficiency. The variable speed inverter capacity control delivers up to 5 stages of operation for exceptional load matching, dehumidification and zoning performance.

This product has been designed and manufactured to provide flexible system matching and work with a wide variety of indoor units and controls.

NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory (www.ahridirectory.org) for the most up-to-date ratings information.

INDUSTRY LEADING FEATURES / BENEFITS

Energy Efficiency

- Up to 19 SEER / up to 12.5 EER
- Microtube Technology™ refrigeration system

Sound

- Sound level as low as 56 dBA in low speed (Silencer System II).
- Soft start and smooth ramp to operating speeds

Comfort

- Variable speed compressor operates at 5 stages with capacity range from as wide as 25-100%
- Air cooled Inverter variable speed drive
 - System requires Infinity Touch Control with version 11 software or newer for 5 stage operation
 - Ratings provided with 2-stage thermostats and suitable non-communicating indoor products for 2-stage operation.

Reliability

- Puron® refrigerant - environmentally sound, won't deplete the ozone layer and low lifetime service cost.
- Front-seating service valves
- Inverter control drives compressor and fan motor
- No control module attached to fan motor
- Infinity intelligence monitors critical system parameters
- Pressure equalizer valve for easy compressor starting
- High pressure switch
- Suction pressure transducer
- Compressor discharge temperature sensor
- Suction temperature sensor
- Filter drier (field installed)
- Internal crankcase heater standard

Flexibility and installation:

- 2 control wires to outdoor unit in complete Infinity system and Touch Control
- Smaller and lighter than 2-stage units
- Minimum and Maximum adjustments with Infinity Touch Control
- Compatible with non-communicating thermostats

Durability

WeatherArmor Ultra™ protection package:

- Solid, Durable sheet metal construction
- Steel louver coil guard
- Baked-on, complete outer coverage, powder paint

Applications

- Line sets up to 100 ft (30.5 m) equivalent length
- No long-line accessories required.

MODEL NUMBER NOMENCLATURE

1 N	2 N	3 A	4 A	5 A/N	6 N	7 N	8 N	9 A/N	10 A/N	11 A/N	12 N	13 N
2	4	V	N	A	9	3	6	A	0	0	3	0
Product Series	Product Family	Tier	Major Series	SEER	Cooling Capacity	Variations	Open	Open	Voltage	Minor Series		
24 = AC	V = VS HP	N = Infinity Series	A = Puron	9 = 19 SEER	1,000 Btuh (nominal)	A = Standard B = Design Variation	0 = Not Defined	0 = Not Defined	3 = 208/230 – 1	0, 1, 2...		



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



STANDARD FEATURES

FEATURES	Unit Size – Voltage, Series				
	24A–30 24B–30	25–30	36–30	48–30	60–30
Puron Refrigerant	X	X	X	X	X
Variable Speed Rotary Compressor	X	X	X	X	X
Air–Cooled Integrated Inverter Drive	X	X	X	X	X
Louvered Coil Guard	X	X	X	X	X
Field Installed Filter Drier	X	X	X	X	X
Front Seating Service Valves	X	X	X	X	X
Internal Pressure and Temperature Protection	X	X	X	X	X
Suction Pressure Transducer	X	X	X	X	X
High Pressure Switch	X	X	X	X	X
Internal Crankcase Heater	X	X	X	X	X
Enhanced Diagnostics with Infinity Touch™ Control (version 11 software or newer)	X	X	X	X	X
Deluxe Sound Blanket	X	X	X	X	X
Outdoor Air Temperature Sensor	X	X	X	X	X

X = Standard

REFRIGERANT PIPING LENGTH LIMITATIONS

Maximum Line Lengths:

The maximum allowable total equivalent length for air conditioners can vary depending on the vertical separation. See the tables below for allowable lengths depending on whether the outdoor unit is on the same level, above or below the outdoor unit.

Maximum Line Lengths for Air Conditioner Applications

	MAXIMUM ACTUAL LENGTH ft (m)	MAXIMUM EQUIVALENT LENGTH† ft (m)	MAXIMUM VERTICAL SEPARATION ft (m)
Units on equal level	100 (30.5)	100 (30.5)	N/A
Outdoor unit ABOVE indoor unit	100 (30.5)	100 (30.5)	100 (30.5)
Outdoor unit BELOW indoor unit	See Table 'Maximum Total Equivalent Length: Outdoor Unit BELOW Indoor Unit'		

† Total equivalent length accounts for losses due to elbows or fitting. See the Long Line Guideline for details.

Maximum Total Equivalent Length† - Outdoor Unit BELOW Indoor Unit

Size	Liquid Line Diameter w/ TXV	AC with Puron® Refrigerant – Maximum Total Equivalent Length† Vertical Separation ft (m) Outdoor unit BELOW indoor unit;						
		0–20 (0 – 6.1)	21–30 (6.4 – 9.1)	31–40 (9.4 – 12.2)	41–50 (12.5 – 15.2)	51–60 (15.5 – 18.3)	61–70 (18.6 – 21.3)	71–80 (21.6 – 24.4)
2–Ton	3/8	100*	100*	100*	100*	100*	100*	100*
3–Ton	3/8	100*	100*	100*	100*	100*	100*	100*
4–Ton	3/8	100*	100*	100*	100*	100	100	--
5–Ton	3/8	100*	100*	100*	100*	100	100	--

* Maximum actual length not to exceed 100 ft (30.5 m)

† Total equivalent length accounts for losses due to elbows or fitting.

-- = outside acceptable range

LONG LINE APPLICATIONS

Unit is approved for up to 100 ft (30.5 m) equivalent length and vertical separations shown above with no additional accessories. Longer line set applications are not permitted.

COOLING CAPACITY LOSS TABLE

Nominal Size (Btuh)	Line OD (in.)	24VNA9 Cooling Capacity Loss (%)				
		Total Equivalent Line Length (ft)				
		25	50	75	80	100
24B–30	5/8	0.5	1.2	1.8	1.9	2.4
	3/4	0.1	0.4	0.6	0.7	0.8
24A–30 25–30	5/8	0.5	1.2	1.8	1.9	2.4
	3/4	0.1	0.4	0.6	0.7	0.8
	7/8	0.0	0.1	0.3	0.3	0.4
36–30	5/8	1.1	2.4	3.7	4.0	5.0
	3/4	0.3	0.8	1.3	1.4	1.8
	7/8	0.0	0.3	0.5	0.6	0.8
48–30	3/4	0.7	1.6	2.4	2.6	3.2
	7/8	0.3	0.7	1.1	1.2	1.6
	1 1/8	0.0	0.1	0.2	0.3	0.4
60–30	3/4	1.0	2.3	3.5	3.8	4.8
	7/8	0.4	1.0	1.7	1.8	2.3
	1 1/8	0.0	0.1	0.3	0.4	0.5

Rating Line Size in **BOLD**

MIN/MAX AIRFLOW TABLES

The indoor airflow delivered by this system varies significantly based on outdoor temperature, indoor unit combination, and system demand. The airflows on these tables are for duct design considerations. Duct systems capable of these ranges will ensure

the system will deliver full capacity at all outdoor temperatures. Minimum and maximum airflows can be adjusted from these numbers in the Infinity Control Setup screen.

Cooling – Comfort Mode			Minimum Cooling (Dehum or Zoning)
Size	Max Capacity Airflow	Highest Min Capacity Airflow	
2–Ton	739	263	222
3–Ton	990	289	236
4–Ton	1389	542	457
5–Ton	1600	700	600

Cooling – Efficiency Mode		
Size	Max Capacity Airflow	Highest Min Capacity Airflow
2–Ton	825	585
3–Ton	1050	600
4–Ton	1400	875
5–Ton	1800	975

LEGEND::

Max Capacity Airflow – Stage 5 airflow varies depending on conditions. This is the highest airflow the system will attempt to deliver in this particular mode. Ductwork for non–zoned systems should be sized for this airflow to ensure the system can deliver full capacity when needed. Improper duct design may result in excessive airflow noise and/or cutback occurrences at max airflow conditions.

Highest Min. Capacity Airflow – Stage 1 airflow also varies depending on conditions. In zoned systems, each zone must be capable of delivering this airflow for the system to deliver full capacity into the zone. Otherwise, airflow may be diverted to other zones or cutback may occur.

Min Cooling (Dehum or Zoning) – Lowest airflow the system will deliver. May operate down to this airflow in dehumidification mode or in zoning applications where ductwork restrictions have caused the blower to cut–back.

PHYSICAL DATA

UNIT SIZE SERIES	24A–30	24B–30	25–30	36–30	48–30	60–30
Operating Weight lb (kg)	160 (72.6)	135 (61.2)	160 (72.6)	160 (72.6)	216 (98.0)	241 (109.3)
Shipping Weight lb (kg)	186 (84.4)	158 (71.7)	186 (84.4)	186 (84.4)	255 (115.7)	282 (127.9)
Compressor Type	Variable Speed Rotary					
REFRIGERANT	Puron® (R–410A)					
Control	TXV (Puron® Hard Shutoff)					
Charge lb (kg)	5.5 (2.50)	4.80 (2.18)	5.5 (2.50)	6.0 (2.72)	7.5 (3.40)	8.30 (3.76)
COND FAN	Forward Swept Propeller Type, Direct Drive					
Air Discharge	Vertical					
Air Qty (CFM)	2500	2500	2500	2500	4500	4500
Motor HP	1/3	1/5	1/3	1/3	1/3	1/3
Motor RPM	1050	825	1050	1050	850	900
COND COIL						
Face Area (Sq ft)	13.90	11.12	13.90	13.90	21.50	23.65
Fins per In.	20	20	20	20	20	20
Rows	1	1	1	1	1	1
Circuits	6	6	6	6	8	8
VALVE CONNECT. (In. ID)						
Vapor	3/4	5/8	3/4	3/4	7/8	7/8
Liquid	3/8					
REFRIGERANT TUBES (In. OD)						
Rated Vapor*	7/8	3/4	7/8	7/8	1–1/8	1–1/8
Max Liquid Line	3/8					

* Units are rated with 25 ft (7.6 m) of lineset length. See Vapor Line Sizing and Cooling Capacity Loss table when using other sizes and lengths of lineset.

Note: See unit Installation Instruction for proper installation.

ELECTRICAL DATA

UNIT SIZE – VOLTAGE, SERIES	V/PH	OPER VOLTS*		COMPR		FAN	MCA	MAX FUSE ** or CKT BRK AMPS
		MAX	MIN	LRA	RLA	FLA		
24A – 30	208 – 230 – 1	253	197	N/A	17.7	1.20	23.6	40
24B – 30				N/A	10.32	0.58	13.5	20
25 – 30				N/A	17.7	1.20	23.6	40
36 – 30				N/A	18.3	1.20	24.4	40
48 – 30				N/A	23.9	1.20	31.4	50
60 – 30				N/A	31.3	1.40	40.8	60

* Permissible limits of the voltage range at which the unit will operate satisfactorily

** Time – Delay fuse.

FLA – Full Load Amps

LRA – Locked Rotor Amps

MCA – Minimum Circuit Amps

RLA – Rated Load Amps

NOTE: Control circuit is 24–V on all units and requires external power source. Copper wire must be used from service disconnect to unit.

All motors/compressors contain internal overload protection.

Complies with 2010 requirements of ASHRAE Standards 90.1

CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

UNIT SIZE – VOLTAGE, SERIES	If a Touch Control is installed, subcooling recommendation displayed in Charging Mode must be followed. If not, subcooling chart shown on the charging label must be followed
24A – 30, 24B – 30	
25 – 30	
36 – 30	
48 – 30	
60 – 30	

RPM-CAPACITY-SOUND (dBA)*

STAGE #	COMP RPM	CAPACITY %	SOUND (dBA)
24VNA924A			
1	1200	36%	56
2	1900	58%	61
3	2400	73%	64
4	2600	79%	68
5	3300	100%	71
24VNA924B			
1	1500	35%	55
2	2566	56%	60
3	3150	69%	65
4	3950	87%	66
5	4700	100%	68
24VNA925			
1	1200	36%	56
2	1900	58%	61
3	2400	73%	63
4	2600	79%	67
5	3300	100%	69
24VNA936			
1	1200	25%	56
2	2400	50%	61
3	3300	69%	65
4	4200	88%	69
5	4800	100%	71
24VNA948			
1	1500	35%	62
2	2460	57%	65
3	2800	65%	67
4	3650	84%	70
5	4320	100%	72
24VNA960			
1	1200	32%	57
2	2180	55%	61
3	2850	70%	64
4	3700	90%	70
5	4140	100%	72

*Estimated sound for stages 2, 3, and 4

For 2–stage operation: Low = Stage 2, High = Stage 5

SOUND POWER LEVEL (dBA)

Unit Size – Voltage, Series	Typical Octave Band Spectrum (without tone adjustment)	Min Speed Cooling	Max Speed Cooling
024A – 30	Freq (Hz)	1200 RPM	3300 RPM
	125	40.4	43.9
	250	44.4	53.9
	500	46.3	61.8
	1000	45.0	59.0
	2000	37.2	56.7
	4000	31.0	60.0
	8000	28.4	45.4
024B – 30	Sound Rating (dBA)	56	71
	Freq (Hz)	1500 RPM	4700 RPM
	125	40.5	44.0
	250	45.5	49.5
	500	41.5	53.0
	1000	44.0	52.5
	2000	39.0	50.5
	4000	34.5	53.0
025 – 30	8000	31.0	45.0
	Sound Rating (dBA)	55	67
	Freq (Hz)	1200 RPM	3300 RPM
	125	40.4	45.4
	250	44.4	57.9
	500	46.3	61.3
	1000	45.0	58.0
	2000	37.2	54.7
036 – 30	4000	31.0	52.0
	8000	28.4	41.9
	Sound Rating (dBA)	56	69
	Freq (Hz)	1200 RPM	4800 RPM
	125	40.4	43.9
	250	44.4	53.9
	500	46.3	61.8
	1000	45.0	59.0
048 – 30	2000	37.2	56.7
	4000	31.0	60.0
	8000	28.4	45.4
	Sound Rating (dBA)	56	71
	Freq (Hz)	1500 RPM	4320 RPM
	125	40.9	42.4
	250	46.4	54.4
	500	47.3	60.3
060 – 30	1000	56.5	63.5
	2000	39.2	56.7
	4000	35.0	56.0
	8000	31.9	44.9
	Sound Rating (dBA)	62	72
	Freq (Hz)	1200 RPM	4140 RPM
	125	39.0	49.5
	250	48.0	59.5
060 – 30	500	46.5	62.0
	1000	45.5	60.0
	2000	39.5	58.5
	4000	36.5	55.0
	8000	35.5	48.0
	Sound Rating (dBA)	57	72

NOTE: Tested in compliance with AHRI 270–2008 but not listed with AHRI.

ACCESSORIES

KIT NUMBER	KIT NAME	24A–30 24B–30 25–30	36–30	48–30	60
KSASF0101AAA	SPRT FEET KIT			X	X
KSASF0201AAA	SPRT FEET KIT	X	X		
KSATX0201PUR	TXV KIT	X			
KSATX0301PUR	TXV KIT		X		
KSATX0401PUR	TXV KIT			X	
KSATX0501PUR	TXV KIT				X
KSBTX0201PUR	TXV KIT	X			
KSBTX0301PUR	TXV KIT		X		
KSBTX0401PUR	TXV KIT			X	

x = Accessory S = Standard

Accessory Description and Usage

Support Feet

Raises unit above base pad. 2 and 3 ton kit contains 5 feet for stable installation with small base. 4 and 5 ton kit contains 4 feet.

Usage Guideline:

Recommended for rooftop applications

Thermostatic Expansion Valve (TXV)

A modulating flow-control valve which meters refrigerant liquid flow rate into the evaporator in response to the superheat of the refrigerant gas leaving the evaporator.

Usage Guideline:

Required if indoor unit does not already contain Puron® refrigerant TXV

CONTROLS

SYSTXCCITN01–A	Infinity Touch Control (non–Wi–Fi) version 11 or newer
SYSTXCCITC01–A	Infinity Touch Control (Wi–Fi)
SYSTXCCITW01–A	Infinity Touch Control with Wi–Fi & Wireless Access Point
SYSTXCC4ZC01	Infinity 4–Zone Damper Control Module
SYSTXCCSMS01	Infinity Smart Sensor (Optional wall control used to monitor temperature and/or fan control in an individual zone.)
SYSTXCCNIM01	Infinity Network Interface Module (Connects Heat Recovery and Energy Recovery Ventilators on non–zoning applications.)
SYSTXCCSMS01	Infinity Smart Sensor

THERMOSTATS

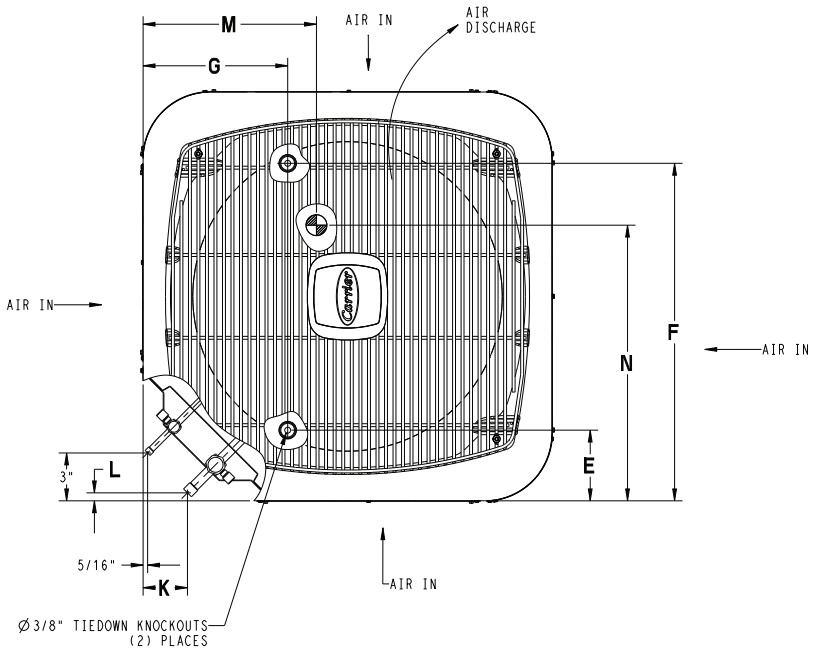
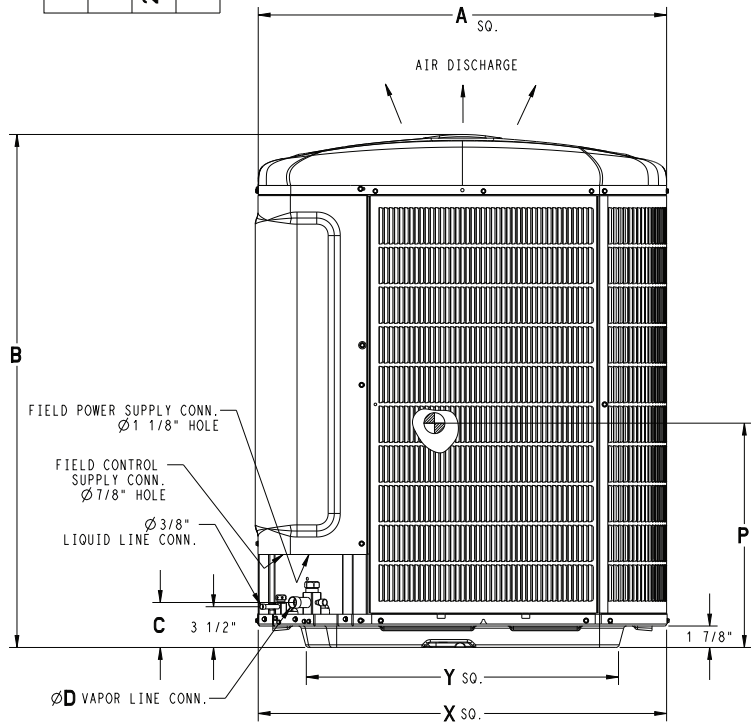
PART NUMBER	PROGRAM	GAS	ELECTRIC	HEAT	COOL
TP–PAC01	7–Day	√	√	1	1
TP–NRH01–A	NP	√	√	3	2
TP–NAC01	NP	√	√	1	1

DIMENSIONS - ENGLISH

UNIT	SERIES	ELECTRICAL CHARACTERISTICS					A	B	C	D	E	F	G	K	L	M	N	P	OPERATING WEIGHT (lbs)	SHIPPING WEIGHT (lbs)	SHIPPING DIMENSIONS (L x W x H)
24VNA924A	0	X	0	0	0	0	23 1/8"	38 7/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	10 3/4"	10 3/4"	18 1/4"	160	186	25 1/4" X 25 1/4" X 43 3/8"
24VNA924B	0	X	0	0	0	0	23 1/8"	31 5/8"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	11 1/4"	11 1/4"	14 1/2"	135	158	25 1/4" X 25 1/4" X 35 5/8"
24VNA925A	0	X	0	0	0	0	23 1/8"	38 7/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	10 3/4"	10 3/4"	18 1/4"	160	186	25 1/4" X 25 1/4" X 43 3/8"
24VNA936A	0	X	0	0	0	0	23 1/8"	38 7/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	10 3/4"	10 3/4"	18 1/4"	160	186	25 1/4" X 25 1/4" X 43 3/8"
24VNA948A	0	X	0	0	0	0	31 3/16"	39 3/4"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	14 1/2"	14 5/8"	18 3/4"	216	255	33 3/8" X 33 3/8" X 46 1/8"
24VNA960A	0	X	0	0	0	0	31 3/16"	43 3/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	16 1/2"	15"	20"	241	282	33 3/8" X 33 3/8" X 49 9/16"

208-230+60
230+60
208/230-3-60
460-3-60

X = YES
0 = NO



UNIT SIZE	"X" MIN GROUND MOUNTING PAD APPLICATION DIMENSIONS	"Y" MIN ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS
24, 25, 36	23 1/8"	17 3/4"
-	25 3/4"	20 7/16"
48, 60	31 3/16"	23"
-	35"	26 3/4"

When installing, allow sufficient space for airflow clearance, wiring, refrigerant piping, and service. Allow 24 in. (609.6 mm) clearance to service end of unit and 48 in. (1219.2 mm) (above unit). For proper airflow, a 6-in. (152.4 mm) clearance on 1 side of unit and 12-in. (304.8 mm) on all remaining sides must be maintained. Maintain a distance of 24 in. (609.6 mm) between units or 18 in. (457.2 mm) if no overhang within 12 ft. (3.66 m) Position so water, snow, or ice from roof or eaves cannot fall directly on unit.

NOTE: 18" (457.2 mm) clearance option described above is approved for outdoor units with wire grille coil guard only. Units with lower panels require 24" (609.6 mm) between units.

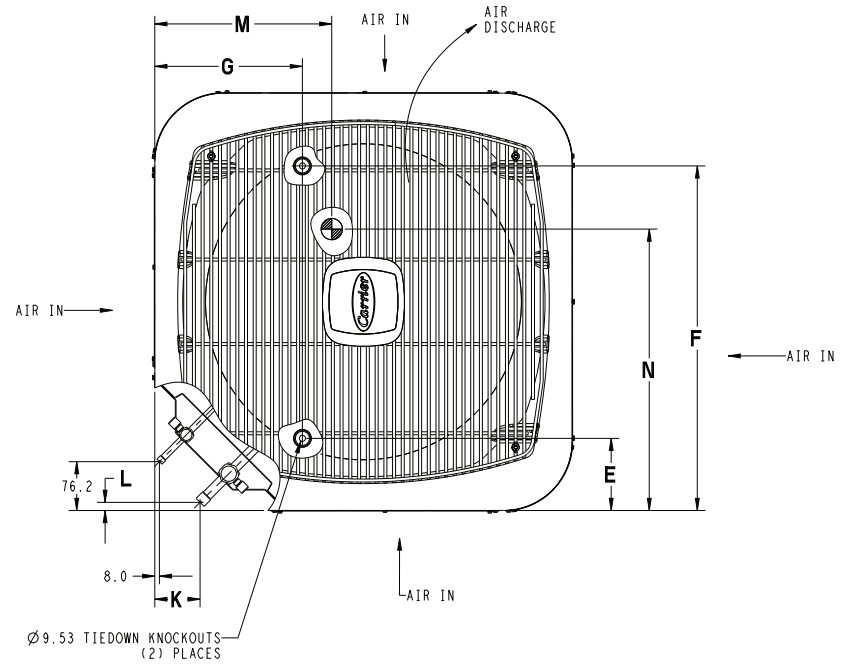
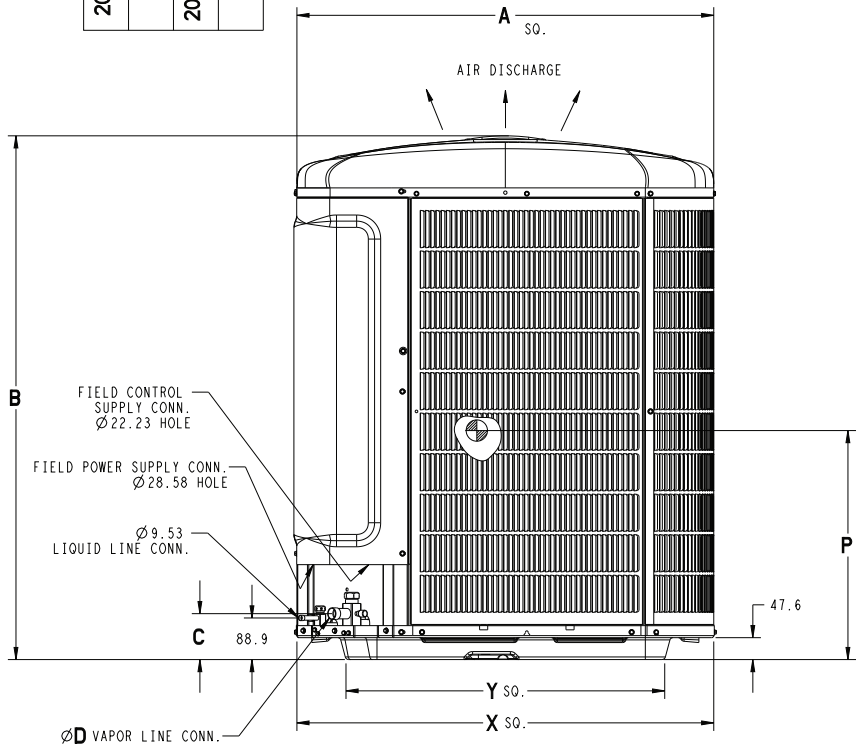
On rooftop applications, locate unit at least 6 in. (152.4 mm) above roof surface.

DIMENSIONS - SI

UNIT	SERIES	ELECTRICAL CHARACTERISTICS					A	B	C	D	E	F	G	K	L	M	N	P	OPERATING WEIGHT (Kgs)	SHIPPING WEIGHT (Kgs)	SHIPPING DIMENSIONS (L x W x H)
24VNA924A	0	X	0	0	0		587.3	975.9	96.1	19.1	112.7	458.8	198.4	71.4	12.7	273.1	273.1	463.6	72.6	84.4	641.5 X 641.5 X 1102.2
24VNA924B	0	X	0	0	0		587.3	803.1	96.1	19.1	112.7	458.8	198.4	71.4	12.7	285.8	285.8	368.3	61.2	71.7	641.5 X 641.5 X 905.2
24VNA925A	0	X	0	0	0		587.3	975.9	96.1	19.1	112.7	458.8	198.4	71.4	12.7	273.1	273.1	463.6	72.6	84.4	641.5 X 641.5 X 1102.2
24VNA936A	0	X	0	0	0		587.3	975.9	96.1	19.1	112.7	458.8	198.4	71.4	12.7	273.1	273.1	463.6	72.6	84.4	641.5 X 641.5 X 1102.2
24VNA948A	0	X	0	0	0		792.2	1010.3	98.4	22.2	166.7	627.1	231.8	74.6	15.9	368.3	371.5	476.3	98.0	115.7	846.6 X 846.6 X 1172.2
24VNA960A	0	X	0	0	0		792.2	1096.7	98.4	22.2	166.7	627.1	231.8	74.6	15.9	419.1	381.0	508.0	109.3	127.9	846.6 X 846.6 X 1258.6

208-230-160
230-160
208/230-3-60
460-3-60

X = YES
O = NO



UNIT SIZE	"X" MIN GROUND MOUNTING PAD APPLICATION DIMENSIONS	"Y" MIN ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS
24, 25, 36	587.4	451.3
-	654.0	518.5
48, 60	792.2	583.2
-	889.0	679.7

When installing, allow sufficient space for airflow clearance, wiring, refrigerant piping, and service. Allow 24 in. (609.6 mm) clearance to service end of unit and 48 in. (1219.2 mm) (above unit). For proper airflow, a 6-in. (152.4 mm) clearance on 1 side of unit and 12-in. (304.8 mm) on all remaining sides must be maintained. Maintain a distance of 24 in. (609.6 mm) between units or 18 in. (457.2 mm) if no overhang within 12 ft. (3.66 m) Position so water, snow, or ice from roof or eaves cannot fall directly on unit.

NOTE: 18" (457.2 mm) clearance option described above is approved for outdoor units with wire grille coil guard only. Units with louver panels require 24" (609.6 mm) between units.

On rooftop applications, locate unit at least 6 in. (152.4 mm) above roof surface.

TESTED AHRI COMBINATION RATINGS*

NOTE: Ratings contained in this document are subject to change at any time.

For AHRI ratings certificates, please refer to the AHRI directory www.ahridirectory.org

Additional ratings and system combinations can be accessed via the Carrier database at: www.MyCarrierRatings.com

For performance data at specific application &/or design conditions with various indoor unit combinations, the equipment performance calculator can be accessed at : <http://rpmob.wrightsoft.com/>

Model Number	Coil Model Number	Furnace Model Number	Cooling Capacity High	SEER	EER	ID CFM
24VNA924A**30	FE4AN(B,F)005L+UI		23000	18.0	11.0	825
24VNA924A**30	FV4CN(B,F)003L		22600	16.0	11.0	700
24VNA924B**30	FE4ANF002L+UI		24000	18.0	11.0	825
24VNA924B**30	FV4CNF002L		23800	16.0	11.0	700
24VNA925A**30	FE4AN(B,F)005L+UI		24000	19.0	12.5	825
24VNA925A**30	FV4CN(B,F)003L		22600	19.0	12.2	700
24VNA936A**30	FE4AN(B,F)005L+UI		35000	18.0	10.5	1050
24VNA936A**30	FV4CN(B,F)005L		35000	16.0	10.5	1050
24VNA948A**30	FE4ANB006L+UI		46500	19.0	11.0	1400
24VNA948A**30	FV4CNB006L		46000	15.5	11.0	1400
24VNA960A**30	FE4ANB006L+UI		57000	17.0	10.0	1600
24VNA960A**30	FV4CNB006L		57500	15.0	10.0	1750

* Ratings are net values reflecting the effects of circulating fan heat. Supplemental electric heat is not included. Ratings are based on:
Cooling Standard: 80°F (27°C) db 67°F (19°C) wb indoor entering air temperature and 95°F (35°C) db air entering outdoor unit.
EER — Energy Efficiency Ratio
SEER — Seasonal Energy Efficiency Ratio
UI — User Interface

NOTE: Ratings contained in this document are subject to change at any time.

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP AIR	24VNA924B / FE4ANF002L Efficiency Mode Condenser Entering Air Temperature °F (°C)																													
	EWB °F (°C)	115 (46.1)					105 (40.5)					95 (35)					85 (29.4)					75 (23.9)					65 (18.3)				
		ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**						
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡		Total	Sens‡	Total	Sens‡		
STAGE 5																															
75 (23.9)	72 (22.2)	825	23.43	9.90	2.85	825	25.03	10.49	2.52	825	26.46	11.02	2.20	825	28.00	11.60	1.91	825	29.51	12.16	1.63	825	31.01	12.73	1.37						
	67 (19.4)		21.30	13.70	2.81		22.76	14.32	2.49		24.07	14.89	2.18		25.46	15.50	1.90		26.82	16.10	1.63		28.19	16.70	1.38						
	63 (17.2)		19.74	16.69	2.78		21.07	17.34	2.47		22.29	17.94	2.17		23.58	18.57	1.89		24.85	19.20	1.63		26.11	19.82	1.39						
	57 (13.9)		18.74	18.74	2.76		19.81	19.81	2.45		20.78	20.78	2.15		21.79	21.79	1.88		22.78	22.78	1.63		23.74	23.74	1.39						
80 (26.7)	72 (22.2)	825	23.36	13.70	2.85	825	24.96	14.32	2.52	825	26.39	14.88	2.20	825	27.93	15.49	1.91	825	29.44	16.09	1.63	825	30.94	16.69	1.37						
	67 (19.4)		21.24	17.45	2.81		22.69	18.11	2.49		24.00	18.72	2.18		25.39	19.36	1.90		26.76	19.99	1.63		28.12	20.63	1.38						
	63 (17.2)		19.96	19.96	2.78		21.18	20.93	2.47		22.35	21.63	2.17		23.61	22.34	1.89		24.86	23.02	1.63		26.10	23.70	1.38						
	57 (13.9)		19.93	19.93	2.78		21.05	21.05	2.47		22.07	22.07	2.16		23.12	23.12	1.89		24.16	24.16	1.63		25.17	25.17	1.39						
STAGE 3																															
75 (23.9)	72 (22.2)	650	16.60	7.18	1.72	650	17.75	7.59	1.53	650	18.75	7.96	1.31	650	19.88	8.37	1.12	650	20.99	8.78	0.94	650	22.08	9.18	0.77						
	67 (19.4)		15.01	10.22	1.72		16.06	10.66	1.53		16.99	11.06	1.32		18.00	11.49	1.14		18.99	11.92	0.97		19.97	12.34	0.81						
	63 (17.2)		13.88	12.59	1.71		14.82	13.06	1.54		15.70	13.48	1.32		16.62	13.94	1.15		17.52	14.38	0.99		18.40	14.82	0.84						
	57 (13.9)		13.48	13.48	1.71		14.25	14.25	1.54		14.97	14.97	1.32		15.70	15.70	1.16		16.40	16.40	1.01		17.10	17.10	0.86						
80 (26.7)	72 (22.2)	650	16.54	10.24	1.72	650	17.69	10.68	1.53	650	18.68	11.07	1.31	650	19.81	11.51	1.12	650	20.92	11.94	0.94	650	22.01	12.37	0.77						
	67 (19.4)		14.98	13.23	1.72		16.01	13.70	1.53		16.94	14.13	1.32		17.95	14.59	1.14		18.93	15.05	0.97		19.91	15.50	0.81						
	63 (17.2)		14.42	14.42	1.72		15.24	15.24	1.53		15.99	15.99	1.32		16.77	16.77	1.15		17.61	17.39	0.99		18.46	17.89	0.83						
	57 (13.9)		14.40	14.40	1.72		15.22	15.22	1.53		15.96	15.96	1.32		16.74	16.74	1.15		17.50	17.50	0.99		18.23	18.23	0.84						
STAGE 1																															
75 (23.9)	72 (22.2)	650	14.01	6.30	1.38	650	15.00	6.65	1.24	585	9.25	4.60	0.54	585	9.85	4.81	0.46	585	10.45	5.01	0.37	585	11.04	5.22	0.29						
	67 (19.4)		12.64	9.35	1.39		13.52	9.73	1.25		8.32	7.38	0.55		8.85	7.61	0.48		9.37	7.84	0.40		9.89	8.07	0.33						
	63 (17.2)		11.71	11.62	1.39		12.49	12.06	1.26		8.11	8.11	0.55		8.56	8.56	0.48		9.00	9.00	0.41		9.43	9.43	0.34						
	57 (13.9)		11.67	11.67	1.39		12.35	12.35	1.26		8.11	8.11	0.55		8.55	8.55	0.48		8.98	8.98	0.41		9.42	9.42	0.34						
80 (26.7)	72 (22.2)	650	13.95	9.39	1.38	650	14.94	9.76	1.24	585	9.20	7.43	0.54	585	9.80	7.66	0.45	585	10.39	7.90	0.37	585	10.98	8.13	0.29						
	67 (19.4)		12.66	12.32	1.39		13.52	12.75	1.25		8.77	8.77	0.54		9.26	9.26	0.47		9.73	9.73	0.39		10.19	10.19	0.31						
	63 (17.2)		12.55	12.55	1.39		13.28	13.28	1.26		8.77	8.77	0.54		9.25	9.25	0.47		9.72	9.72	0.39		10.18	10.18	0.31						
	57 (13.9)		12.53	12.53	1.39		13.26	13.26	1.26		8.76	8.76	0.54		9.24	9.24	0.47		9.71	9.71	0.39		10.17	10.17	0.31						

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 34

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP AIR	24VNA925/FE4ANF005 Efficiency Mode Condenser Entering Air Temperature °F (°C)																												
		115 (46.1)					105 (40.5)					95 (35)					85 (29.4)					75 (23.9)					65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**					
			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†		Total	Sens†	Total	Sens†	
STAGE 5																														
75 (23.9)	72 (22.2)	825	23.68	9.99	2.51	825	25.12	10.51	2.21	825	26.43	11.00	1.90	825	27.77	11.50	1.62	825	29.08	11.99	1.34	825	30.34	12.47	1.07					
	67 (19.4)		21.55	13.82	2.50		22.88	14.39	2.21		24.10	14.93	1.92		25.35	15.48	1.65		26.55	16.01	1.39		27.72	16.54	1.13					
	63 (17.2)		19.97	16.81	2.49		21.22	17.43	2.22		22.38	18.00	1.93		23.54	18.59	1.67		24.67	19.16	1.42		25.77	19.72	1.17					
	57 (13.9)		18.96	18.96	2.48		19.97	19.97	2.21		20.91	20.91	1.94		21.84	21.84	1.69		22.75	22.75	1.45		23.62	23.62	1.21					
80 (26.7)	72 (22.2)	825	23.52	13.77	2.50	825	24.94	14.33	2.20	825	26.25	14.85	1.90	825	27.59	15.38	1.61	825	28.89	15.91	1.34	825	30.15	16.42	1.07					
	67 (19.4)		21.46	17.56	2.50		22.78	18.18	2.21		24.00	18.75	1.92		25.24	19.33	1.65		26.45	19.90	1.39		27.61	20.46	1.13					
	63 (17.2)		20.19	20.19	2.49		21.30	21.10	2.22		22.43	21.76	1.93		23.57	22.40	1.67		24.68	23.02	1.42		25.77	23.62	1.17					
	57 (13.9)		20.15	20.15	2.49		21.20	21.20	2.22		22.18	22.18	1.93		23.15	23.15	1.67		24.09	24.09	1.43		25.00	25.00	1.19					
STAGE 3																														
75 (23.9)	72 (22.2)	650	15.55	6.67	1.25	650	16.54	7.02	1.17	650	17.29	7.30	1.03	650	18.23	7.64	0.91	650	19.14	7.98	0.77	650	20.05	8.32	0.61					
	67 (19.4)		14.11	9.43	1.25		15.02	9.82	1.18		15.76	10.15	1.05		16.63	10.52	0.95		17.47	10.89	0.82		18.29	11.25	0.67					
	63 (17.2)		13.09	11.60	1.25		13.94	12.02	1.19		14.67	12.38	1.06		15.47	12.78	0.97		16.26	13.17	0.85		17.02	13.56	0.71					
	57 (13.9)		12.65	12.65	1.25		13.36	13.36	1.20		13.97	13.97	1.07		14.62	14.62	0.98		15.26	15.26	0.87		15.89	15.89	0.75					
80 (26.7)	72 (22.2)	650	15.43	9.41	1.24	650	16.40	9.79	1.17	650	17.14	10.08	1.03	650	18.08	10.45	0.91	650	18.99	10.81	0.77	650	19.94	11.19	0.61					
	67 (19.4)		14.07	12.14	1.25		14.97	12.56	1.18		15.70	12.91	1.05		16.56	13.31	0.94		17.39	13.70	0.82		18.21	14.09	0.67					
	63 (17.2)		13.49	13.49	1.25		14.23	14.23	1.19		14.84	14.84	1.06		15.54	15.49	0.96		16.30	15.95	0.84		17.05	16.38	0.71					
	57 (13.9)		13.47	13.47	1.25		14.20	14.20	1.19		14.81	14.81	1.06		15.50	15.50	0.96		16.17	16.17	0.85		16.81	16.81	0.72					
STAGE 1																														
75 (23.9)	72 (22.2)	650	12.12	5.39	0.73	650	12.92	5.68	0.75	585	10.55	4.66	0.46	585	11.18	4.89	0.44	585	11.84	5.13	0.39	585	12.52	5.37	0.28					
	67 (19.4)		10.98	7.95	0.74		11.73	8.27	0.77		9.58	6.85	0.47		10.16	7.10	0.47		10.74	7.35	0.43		11.36	7.61	0.34					
	63 (17.2)		10.22	9.94	0.74		10.91	10.29	0.77		8.93	8.56	0.49		9.46	8.83	0.49		10.00	9.10	0.46		10.55	9.37	0.38					
	57 (13.9)		10.14	10.14	0.74		10.74	10.74	0.78		8.82	8.82	0.49		9.29	9.29	0.50		9.75	9.75	0.47		10.21	10.21	0.40					
80 (26.7)	72 (22.2)	650	11.99	7.94	0.73	650	12.79	8.25	0.75	585	10.41	6.81	0.46	585	11.06	7.06	0.44	585	11.73	7.32	0.38	585	12.41	7.59	0.28					
	67 (19.4)		10.97	10.45	0.74		11.70	10.80	0.76		9.55	8.98	0.47		10.13	9.25	0.47		10.71	9.53	0.43		11.32	9.81	0.34					
	63 (17.2)		10.83	10.83	0.74		11.46	11.46	0.77		9.40	9.40	0.48		9.89	9.89	0.48		10.37	10.37	0.44		10.87	10.87	0.36					
	57 (13.9)		10.82	10.82	0.74		11.44	11.44	0.77		9.39	9.39	0.48		9.87	9.87	0.48		10.35	10.35	0.44		10.85	10.85	0.36					

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 34

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB ° F (° C)	EVAP. AIR ° F (° C)	24VNA936 / FE4ANF005 Efficiency Mode Condenser Entering Air Temperature ° F (° C)																																			
		115 (46.1)						105 (40.5)						95 (35)						85 (29.4)						75 (23.9)						65 (18.3)					
		ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**												
Total	Sens‡		Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡		Total	Sens‡	Total	Sens‡								
STAGE 5																																					
75 (23.9)	72 (22.2)	1050	34.24	14.18	4.44	1050	36.41	14.99	3.89	1050	38.29	15.70	3.36	1050	40.30	16.47	2.87	1050	42.28	17.24	2.41	1050	44.18	17.98	1.98												
	67 (19.4)		31.38	19.07	4.38		33.35	19.95	3.85		35.13	20.75	3.34		36.99	21.60	2.87		38.79	22.42	2.43		40.52	23.22	2.02												
	63 (17.2)		29.21	22.90	4.33		31.07	23.84	3.81		32.74	24.70	3.31		34.48	25.59	2.86		36.17	26.47	2.44		37.79	27.32	2.04												
	57 (13.9)		27.05	27.05	4.27		28.50	28.50	3.77		29.85	29.85	3.28		31.20	31.20	2.84		32.65	32.25	2.44		34.08	33.21	2.06												
80 (26.7)	72 (22.2)	1050	34.04	18.92	4.44	1050	36.21	19.79	3.88	1050	38.09	20.56	3.35	1050	40.10	21.39	2.86	1050	42.08	22.22	2.41	1050	43.98	23.01	1.98												
	67 (19.4)		31.25	23.78	4.38		33.23	24.72	3.84		35.00	25.57	3.33		36.86	26.47	2.86		38.66	27.35	2.42		40.39	28.21	2.02												
	63 (17.2)		29.21	27.55	4.33		31.05	28.56	3.81		32.70	29.48	3.31		34.43	30.44	2.86		36.11	31.38	2.43		37.72	32.28	2.04												
	57 (13.9)		28.61	28.61	4.32		30.14	30.14	3.80		31.53	31.53	3.30		32.95	32.95	2.85		34.31	34.31	2.44		35.64	35.64	2.05												
STAGE 3																																					
75 (23.9)	72 (22.2)	900	21.81	9.32	1.96	900	23.25	9.85	1.83	900	24.29	10.24	1.67	900	25.66	10.75	1.50	900	27.01	11.26	1.31	900	28.33	11.75	1.10												
	67 (19.4)		19.85	13.12	1.96		21.18	13.71	1.84		22.21	14.19	1.68		23.48	14.77	1.52		24.72	15.33	1.35		25.94	15.89	1.15												
	63 (17.2)		18.41	16.08	1.95		19.66	16.73	1.85		20.68	17.29	1.68		21.87	17.91	1.54		23.02	18.53	1.37		24.16	19.14	1.19												
	57 (13.9)		17.71	17.71	1.95		18.75	18.75	1.85		19.63	19.63	1.68		20.61	20.61	1.54		21.57	21.57	1.39		22.50	22.50	1.22												
80 (26.7)	72 (22.2)	900	21.64	13.06	1.95	900	23.07	13.65	1.83	900	24.08	14.08	1.66	900	25.46	14.65	1.49	900	26.81	15.21	1.31	900	28.13	15.76	1.10												
	67 (19.4)		19.77	16.83	1.95		21.09	17.48	1.84		22.11	18.01	1.67		23.37	18.64	1.52		24.60	19.26	1.35		25.82	19.87	1.15												
	63 (17.2)		18.86	18.86	1.95		19.95	19.95	1.84		20.82	20.82	1.68		21.94	21.67	1.53		23.07	22.38	1.37		24.19	23.06	1.19												
	57 (13.9)		18.83	18.83	1.95		19.91	19.91	1.84		20.79	20.79	1.68		21.82	21.82	1.53		22.82	22.82	1.37		23.80	23.80	1.20												
STAGE 1																																					
75 (23.9)	72 (22.2)	800	14.74	6.58	0.98	800	15.80	6.96	1.00	600	10.82	4.81	0.48	600	11.57	5.09	0.46	600	12.38	5.38	0.39	600	13.21	5.69	0.27												
	67 (19.4)		13.36	9.71	0.98		14.34	10.16	1.02		9.83	7.10	0.49		10.52	7.42	0.49		11.24	7.76	0.44		11.99	8.11	0.34												
	63 (17.2)		12.47	12.13	0.98		13.37	12.65	1.03		9.17	8.88	0.51		9.81	9.25	0.51		10.45	9.62	0.47		11.13	10.00	0.38												
	57 (13.9)		12.37	12.37	0.98		13.18	13.18	1.03		9.09	9.09	0.51		9.66	9.66	0.52		10.22	10.22	0.48		10.81	10.81	0.40												
80 (26.7)	72 (22.2)	800	14.58	9.69	0.97	800	15.63	10.12	1.00	600	10.67	7.06	0.47	600	11.46	7.39	0.46	600	12.27	7.73	0.39	600	13.08	8.07	0.27												
	67 (19.4)		13.36	12.75	0.98		14.32	13.27	1.02		9.80	9.32	0.49		10.49	9.70	0.49		11.21	10.08	0.44		11.95	10.47	0.34												
	63 (17.2)		13.20	13.20	0.98		14.04	14.04	1.02		9.68	9.68	0.49		10.28	10.28	0.49		10.89	10.89	0.45		11.52	11.52	0.36												
	57 (13.9)		13.18	13.18	0.98		14.02	14.02	1.02		9.67	9.67	0.49		10.26	10.26	0.49		10.87	10.87	0.45		11.50	11.50	0.36												

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 34

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP AIR °F (°C)	24VNA948 / FE4BNB006 Efficiency Mode Condenser Entering Air Temperature °F (°C)																							
		115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
		ID SCFM	Capacity MBTuh		Total Sys. KW**	ID SCFM	Capacity MBTuh		Total Sys. KW**	ID SCFM	Capacity MBTuh		Total Sys. KW**	ID SCFM	Capacity MBTuh		Total Sys. KW**	ID SCFM	Capacity MBTuh		Total Sys. KW**	ID SCFM	Capacity MBTuh		Total Sys. KW**
			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†	
STAGE 5																									
75 (23.9)	72 (22.2)	1400	44.82	18.57	5.52	1400	47.96	19.76	4.88	1400	50.99	20.91	4.29	1400	53.98	22.06	3.74	1400	56.89	23.19	3.23	1400	59.70	24.29	2.75
	67 (19.4)		40.99	24.95	5.42		43.86	26.26	4.80		46.65	27.54	4.23		49.36	28.80	3.70		52.01	30.04	3.21		54.60	31.27	2.75
	63 (17.2)		38.13	29.97	5.34		40.79	31.36	4.74		43.37	32.72	4.18		45.91	34.07	3.67		48.37	35.40	3.19		50.78	36.72	2.74
	57 (13.9)		35.29	35.29	5.26		37.41	37.41	4.66		39.46	39.46	4.12		41.45	41.45	3.62		43.58	43.09	3.16		45.70	44.59	2.73
80 (26.7)	72 (22.2)	1400	44.60	24.79	5.51	1400	47.74	26.09	4.88	1400	50.77	27.36	4.28	1400	53.76	28.62	3.73	1400	56.66	29.86	3.22	1400	59.48	31.07	2.75
	67 (19.4)		40.84	31.14	5.42		43.71	32.55	4.80		46.50	33.94	4.23		49.21	35.31	3.70		51.86	36.65	3.20		54.45	37.98	2.75
	63 (17.2)		38.13	36.06	5.34		40.76	37.59	4.74		43.33	39.07	4.18		45.84	40.54	3.67		48.30	41.98	3.18		50.70	43.40	2.74
	57 (13.9)		37.36	37.36	5.32		39.59	39.59	4.72		41.72	41.72	4.16		43.81	43.81	3.64		45.84	45.84	3.17		47.82	47.82	2.73
STAGE 3																									
75 (23.9)	72 (22.2)	1200	29.42	12.62	2.82	1200	31.60	13.43	2.56	1200	33.63	14.20	2.26	1200	35.75	15.00	2.00	1200	37.82	15.78	1.74	1200	39.85	16.55	1.49
	67 (19.4)		26.82	17.86	2.80		28.83	18.79	2.56		30.73	19.68	2.27		32.66	20.60	2.02		34.57	21.50	1.77		36.44	22.40	1.52
	63 (17.2)		24.93	21.96	2.79		26.79	22.99	2.55		28.58	23.99	2.26		30.39	25.00	2.02		32.16	26.00	1.78		33.91	26.99	1.55
	57 (13.9)		24.03	24.03	2.78		25.61	25.61	2.55		27.12	27.12	2.26		28.62	28.62	2.03		30.11	30.11	1.80		31.55	31.55	1.57
80 (26.7)	72 (22.2)	1200	29.22	17.78	2.81	1200	31.39	18.70	2.55	1200	33.41	19.57	2.25	1200	35.52	20.47	2.00	1200	37.60	21.37	1.74	1200	39.62	22.25	1.48
	67 (19.4)		26.71	22.96	2.80		28.71	24.01	2.56		30.60	25.01	2.26		32.52	26.03	2.01		34.42	27.05	1.77		36.30	28.05	1.52
	63 (17.2)		25.56	25.56	2.80		27.23	27.23	2.55		28.80	28.80	2.26		30.48	30.24	2.02		32.21	31.42	1.78		33.93	32.55	1.55
	57 (13.9)		25.52	25.52	2.80		27.19	27.19	2.55		28.76	28.76	2.26		30.35	30.35	2.02		31.90	31.90	1.78		33.43	33.43	1.55
STAGE 1																									
75 (23.9)	72 (22.2)	1100	25.50	10.99	2.21	1100	27.46	11.73	2.07	875	19.62	8.56	0.95	875	20.96	9.06	0.84	875	22.29	9.57	0.72	875	23.61	10.07	0.57
	67 (19.4)		23.22	15.65	2.21		25.04	16.51	2.08		17.88	12.38	0.98		19.11	12.99	0.88		20.32	13.60	0.76		21.53	14.21	0.62
	63 (17.2)		21.57	19.30	2.21		23.24	20.26	2.08		16.68	15.37	1.00		17.82	16.07	0.90		18.95	16.77	0.79		20.07	17.46	0.66
	57 (13.9)		20.89	20.89	2.20		22.32	22.32	2.08		16.33	16.33	1.00		17.34	17.34	0.91		18.34	18.34	0.81		19.33	19.33	0.68
80 (26.7)	72 (22.2)	1100	25.31	15.59	2.21	1100	27.26	16.44	2.06	875	19.42	12.31	0.95	875	20.76	12.92	0.84	875	22.09	13.52	0.71	875	23.43	14.14	0.57
	67 (19.4)		23.13	20.20	2.21		24.93	21.18	2.07		17.82	16.09	0.98		19.04	16.80	0.88		20.25	17.51	0.76		21.44	18.21	0.62
	63 (17.2)		22.25	22.25	2.21		23.77	23.77	2.08		17.35	17.35	0.98		18.41	18.41	0.89		19.46	19.46	0.78		20.50	20.50	0.65
	57 (13.9)		22.21	22.21	2.21		23.73	23.73	2.08		17.32	17.32	0.98		18.39	18.39	0.89		19.43	19.43	0.78		20.47	20.47	0.65

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 34

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

24VNA948

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FE4ANB006L	1.00	1.00	
FE4AN(B,F)005L	0.98	0.98	
CAP**4817AL*	0.97	1.01	58CV(A,X)090-16
CSPH*4812AL*	0.98	1.03	58CV(A,X)090-16
CSPH*6012AL*	0.99	0.99	58CV(A,X)090-16
CAP**4821AL*	0.97	1.01	58CV(A,X)110-20
CAP**6021AL*	0.99	0.99	58CV(A,X)110-20
CNPH*4821AL*	0.97	1.06	58CV(A,X)110-20
CNPV*4821AL*	0.97	1.01	58CV(A,X)110-20
CSPH*4812AL*	0.98	1.03	58CV(A,X)110-20
CSPH*6012AL*	1.00	1.00	58CV(A,X)110-20
CAP**4824AL*	0.97	0.97	58CV(A,X)135-22
CAP**6024AL*	0.99	0.99	58CV(A,X)135-22
CNPH*6024AL*	0.99	1.04	58CV(A,X)135-22
CNPH*6124AL*	1.00	1.05	58CV(A,X)135-22
CNPV*4824AL*	0.98	1.03	58CV(A,X)135-22
CNPV*6024AL*	0.99	0.99	58CV(A,X)135-22
CNPV*6124AL*	1.00	1.00	58CV(A,X)135-22
CSPH*4812AL*	0.98	0.98	58CV(A,X)135-22
CSPH*6012AL*	1.00	1.00	58CV(A,X)135-22
CAP**4824AL*	0.97	0.97	58CV(A,X)155-22
CAP**6024AL*	0.99	0.99	58CV(A,X)155-22
CNPH*6024AL*	0.99	0.99	58CV(A,X)155-22
CNPH*6124AL*	1.00	1.05	58CV(A,X)155-22
CNPV*4824AL*	0.98	0.98	58CV(A,X)155-22
CNPV*6024AL*	0.99	0.99	58CV(A,X)155-22
CNPV*6124AL*	1.00	1.00	58CV(A,X)155-22
CSPH*4812AL*	0.98	0.98	58CV(A,X)155-22
CSPH*6012AL*	1.00	1.00	58CV(A,X)155-22
CAP**4821AL*	0.97	1.01	59*N*A080V21**20
CAP**6021AL*	0.99	1.04	59*N*A080V21**20
CNPH*4821AL*	0.97	1.06	59*N*A080V21**20
CNPV*4821AL*	0.97	1.01	59*N*A080V21**20
CSPH*4812AL*	0.98	1.03	59*N*A080V21**20
CSPH*6012AL*	0.99	0.99	59*N*A080V21**20
CAP**4821AL*	0.97	1.01	59*N*A100V21**22
CAP**6021AL*	0.99	0.99	59*N*A100V21**22
CNPH*4821AL*	0.97	1.01	59*N*A100V21**22
CNPV*4821AL*	0.97	1.01	59*N*A100V21**22
CSPH*4812AL*	0.98	1.03	59*N*A100V21**22
CSPH*6012AL*	0.99	0.99	59*N*A100V21**22
CAP**4824AL*	0.97	1.01	59*N*A120V24**22
CAP**6024AL*	0.99	1.04	59*N*A120V24**22
CNPH*6024AL*	0.99	1.04	59*N*A120V24**22
CNPH*6124AL*	0.99	1.04	59*N*A120V24**22
CNPV*4824AL*	0.97	1.01	59*N*A120V24**22
CNPV*6024AL*	0.99	1.04	59*N*A120V24**22
CNPV*6124AL*	1.00	1.05	59*N*A120V24**22
CSPH*4812AL*	0.98	1.03	59*N*A120V24**22
CSPH*6012AL*	0.99	0.99	59*N*A120V24**22
CAP**4821AL*	0.96	1.05	59MN7A060V21**20
CAP**6021AL*	0.98	1.08	59MN7A060V21**20
CNPH*4821AL*	0.97	1.06	59MN7A060V21**20
CNPV*4821AL*	0.97	1.06	59MN7A060V21**20
CSPH*4812AL*	0.97	1.06	59MN7A060V21**20
CSPH*6012AL*	0.99	1.04	59MN7A060V21**20

2-STAGE (Hi-Stage 5, Lo-Stage 2)					
Cooling Indoor Model	High Speed Cap.	Power	Low Speed Cap.	Power	Furnace Model
*FV4CNB006L	1.00	1.00	1.00	1.00	
FV4CN(B,F)005L	0.99	0.99	0.99	1.03	
CAP**4817AL*	0.96	1.11	0.97	1.12	58PH*070-16
CSPH*4812AL*	0.97	1.06	0.98	1.13	58PH*070-16
CAP**4821AL*	0.96	1.00	0.98	1.06	58PH*090-16
CAP**6021AL*	0.99	1.04	0.98	1.05	58PH*090-16
CNPH*4821AL*	0.97	1.01	0.98	1.06	58PH*090-16
CNPV*4821AL*	0.97	1.01	0.98	1.06	58PH*090-16
CSPH*4812AL*	0.97	1.01	0.98	1.06	58PH*090-16
CAP**4821AL*	0.96	1.00	0.98	1.05	58PH*110-20
CAP**6021AL*	0.99	0.99	0.99	1.09	58PH*110-20
CNPH*4821AL*	0.97	1.01	0.98	1.05	58PH*110-20
CNPV*4821AL*	0.97	1.01	0.98	1.05	58PH*110-20
CSPH*4812AL*	0.97	0.97	0.99	1.10	58PH*110-20
CSPH*6012AL*	0.99	0.99	0.99	1.04	58PH*110-20
CAP**6024AL*	0.99	0.99	0.99	1.10	58PH*135-20
CSPH*4812AL*	0.97	1.01	0.99	1.11	58PH*135-20
CAP**4821AL*	0.96	1.00	0.97	1.05	58CTW090-16
CAP**6021AL*	0.99	1.04	0.98	1.04	58CTW090-16
CNPH*4821AL*	0.97	1.01	0.98	1.04	58CTW090-16
CNPV*4821AL*	0.97	1.01	0.98	1.04	58CTW090-16
CSPH*4812AL*	0.97	1.01	0.98	1.05	58CTW090-16
CAP**4821AL*	0.97	1.01	0.98	1.03	58CTW110-22
CAP**6021AL*	0.99	0.99	0.98	1.02	58CTW110-22
CNPH*4821AL*	0.97	1.01	0.98	1.03	58CTW110-22
CNPV*4821AL*	0.97	1.01	0.98	1.03	58CTW110-22
CSPH*4812AL*	0.98	1.02	0.98	1.03	58CTW110-22
CSPH*6012AL*	1.00	1.00	0.99	1.02	58CTW110-22
CAP**4824AL*	0.97	1.01	0.98	1.03	58CTW135-22
CAP**6024AL*	0.99	0.99	0.98	1.02	58CTW135-22
CNPH*6024AL*	0.99	0.99	0.99	1.02	58CTW135-22
CNPH*6124AL*	1.00	1.05	0.98	1.02	58CTW135-22
CNPV*4824AL*	0.97	1.01	0.98	1.02	58CTW135-22
CNPV*6024AL*	0.99	0.99	0.99	1.02	58CTW135-22
CNPV*6124AL*	1.00	1.00	1.00	1.02	58CTW135-22
CSPH*6012AL*	1.00	1.00	0.99	1.02	58CTW135-22
CAP**4817AL*	0.97	1.01	0.98	1.06	59*P2A080E17**16
CSPH*4812AL*	0.97	1.01	0.98	1.07	59*P2A080E17**16
CAP**4821AL*	0.97	1.01	0.97	1.03	59*P2A080E21**20
CAP**6021AL*	0.99	0.99	0.98	1.03	59*P2A080E21**20
CNPH*4821AL*	0.97	1.01	0.98	1.03	59*P2A080E21**20
CNPV*4821AL*	0.97	1.01	0.98	1.03	59*P2A080E21**20
CSPH*4812AL*	0.98	1.02	0.98	1.04	59*P2A080E21**20
CAP**4821AL*	0.97	1.01	0.97	1.04	59*P2A100E21**20
CAP**6021AL*	0.99	0.99	0.98	1.03	59*P2A100E21**20
CNPH*4821AL*	0.97	1.01	0.98	1.03	59*P2A100E21**20
CNPV*4821AL*	0.97	1.01	0.98	1.03	59*P2A100E21**20
CSPH*4812AL*	0.98	1.02	0.98	1.04	59*P2A100E21**20
CSPH*6012AL*	1.00	1.00	0.99	1.03	59*P2A100E21**20
CAP**4824AL*	0.97	1.01	0.98	1.04	59*P2A120E24**20
CAP**6024AL*	0.99	0.99	0.98	1.03	59*P2A120E24**20
CNPH*6024AL*	0.99	1.04	0.99	1.03	59*P2A120E24**20
CNPH*6124AL*	1.00	1.05	0.98	1.03	59*P2A120E24**20
CNPV*4824AL*	0.97	1.01	0.98	1.04	59*P2A120E24**20
CNPV*6024AL*	0.99	0.99	0.99	1.03	59*P2A120E24**20
CNPV*6124AL*	1.00	1.00	0.99	1.02	59*P2A120E24**20
CSPH*4812AL*	0.98	1.02	0.98	1.04	59*P2A120E24**20

2-STAGE (Hi-Stage 5, Lo-Stage 2)					
Cooling Indoor Model	High Speed Cap.	Power	Low Speed Cap.	Power	Furnace Model
CSPH*6012AL*	1.00	1.00	0.99	1.03	59*P2A120E24**20
CAP**4817AL*	0.96	1.05	0.97	1.08	59*P5A080E17**16
CSPH*4812AL*	0.97	1.06	0.97	1.08	59*P5A080E17**16
CNPH*4821AL*	0.97	1.01	0.96	1.02	59*P5A080E21**20
CNPV*4821AL*	0.97	1.01	0.96	1.02	59*P5A080E21**20
CSPH*4812AL*	0.97	1.01	0.96	1.02	59*P5A080E21**20
CAP**4821AL*	0.96	1.00	0.98	1.11	59*P5A100E21**20
CAP**6021AL*	0.99	1.04	0.99	1.10	59*P5A100E21**20
CAP**6024AL*	0.99	1.04	0.99	1.10	59*P5A100E21**20
CNPH*4821AL*	0.97	1.01	0.99	1.11	59*P5A100E21**20
CSPH*4812AL*	0.97	1.01	0.99	1.11	59*P5A100E21**20
CSPH*6012AL*	0.99	0.99	1.00	1.10	59*P5A100E21**20
CAP**6024AL*	0.99	1.04	0.99	1.14	59*P5A120E24**22

See notes on page 34

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP AIR °F (°C)	24VNA960 / FE4BNB006L Efficiency Mode Condenser Entering Air Temperature °F (°C)																																			
		115 (46.1)						105 (40.5)						95 (35)						85 (29.4)						75 (23.9)						65 (18.3)					
		ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**												
			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†		Total	Sens†	Total	Sens†								
STAGE 5																																					
75 (23.9)	72 (22.2)	1600	55.38	22.79	7.70	1600	59.00	24.17	6.73	1600	62.54	25.53	5.88	1600	65.96	26.86	5.13	1600	69.30	28.16	4.47	1600	72.59	29.46	3.89												
	67 (19.4)		50.63	30.18	7.50		53.95	31.68	6.54		57.12	33.14	5.70		60.22	34.57	4.96		63.25	35.99	4.32		66.21	37.38	3.75												
	63 (17.2)		47.11	36.00	7.35		50.18	37.58	6.40		53.13	39.12	5.57		55.99	40.62	4.84		58.78	42.11	4.21		61.52	43.58	3.65												
	57 (13.9)		43.16	43.16	7.19		45.55	45.55	6.23		47.97	47.63	5.40		50.44	49.37	4.69		52.86	51.01	4.06		55.26	52.62	3.52												
80 (26.7)	72 (22.2)	1600	55.24	30.04	7.70	1600	58.86	31.53	6.73	1600	62.40	33.00	5.88	1600	65.82	34.44	5.13	1600	69.15	35.85	4.47	1600	72.44	37.26	3.89												
	67 (19.4)		50.50	37.37	7.50		53.83	38.98	6.54		57.00	40.53	5.70		60.10	42.07	4.96		63.13	43.59	4.32		66.10	45.08	3.75												
	63 (17.2)		47.09	43.10	7.35		50.13	44.81	6.40		53.07	46.46	5.57		55.91	48.08	4.84		58.70	49.67	4.21		61.44	51.25	3.65												
	57 (13.9)		45.62	45.62	7.29		48.12	48.12	6.33		50.51	50.51	5.49		52.83	52.83	4.76		55.06	55.06	4.12		57.24	57.24	3.56												
STAGE 3																																					
75 (23.9)	72 (22.2)	1350	35.94	15.07	3.39	1350	38.40	15.98	3.08	1350	40.44	16.73	2.76	1350	42.79	17.61	2.51	1350	45.10	18.48	2.29	1350	47.36	19.34	2.08												
	67 (19.4)		32.49	20.54	3.35		34.72	21.48	3.05		36.67	22.32	2.72		38.80	23.24	2.47		40.88	24.15	2.24		42.94	25.05	2.04												
	63 (17.2)		29.95	24.83	3.33		32.01	25.81	3.03		33.87	26.70	2.69		35.85	27.65	2.44		37.78	28.59	2.22		39.68	29.52	2.01												
	57 (13.9)		28.14	28.14	3.32		29.76	29.76	3.02		31.24	31.24	2.67		32.75	32.75	2.42		34.21	34.21	2.19		35.65	35.65	1.99												
80 (26.7)	72 (22.2)	1350	35.82	20.59	3.39	1350	38.29	21.54	3.08	1350	40.32	22.34	2.76	1350	42.67	23.26	2.51	1350	44.98	24.17	2.29	1350	47.24	25.07	2.08												
	67 (19.4)		32.39	26.01	3.35		34.62	26.99	3.05		36.56	27.87	2.72		38.70	28.83	2.47		40.78	29.77	2.24		42.84	30.72	2.04												
	63 (17.2)		30.07	30.04	3.29		32.09	31.18	3.03		33.90	32.16	2.69		35.85	33.17	2.44		37.76	34.16	2.22		39.65	35.14	2.01												
	57 (13.9)		30.02	30.02	3.33		31.70	31.70	3.03		33.22	33.22	2.68		34.80	34.80	2.43		36.33	36.33	2.21		37.82	37.82	2.00												
STAGE 1																																					
75 (23.9)	72 (22.2)	1200	26.64	11.34	1.89	1200	28.56	12.02	1.84	975	20.89	8.78	1.03	975	22.26	9.26	1.00	975	23.59	9.73	0.91	975	24.89	10.21	0.75												
	67 (19.4)		23.86	15.71	1.89		25.60	16.40	1.84		18.63	11.93	1.02		19.89	12.40	1.00		21.11	12.85	0.92		22.30	13.31	0.77												
	63 (17.2)		21.85	19.14	1.89		23.45	19.83	1.84		16.95	14.38	1.01		18.11	14.83	1.00		19.24	15.26	0.92		20.34	15.69	0.79												
	57 (13.9)		20.91	20.91	1.88		22.14	22.14	1.84		15.97	15.97	1.01		16.81	16.81	1.00		17.62	17.62	0.94		18.38	18.38	0.81												
80 (26.7)	72 (22.2)	1200	26.55	15.84	1.89	1200	28.46	16.52	1.84	975	20.81	12.06	1.03	975	22.18	12.52	1.00	975	23.51	12.97	0.91	975	24.81	13.42	0.75												
	67 (19.4)		23.79	20.16	1.89		25.52	20.85	1.84		18.58	15.17	1.02		19.83	15.62	1.00		21.05	16.05	0.92		22.24	16.48	0.77												
	63 (17.2)		22.48	22.48	1.89		23.77	23.77	1.84		17.25	17.25	1.01		18.20	17.98	1.00		19.28	18.43	0.92		20.35	18.85	0.79												
	57 (13.9)		22.44	22.44	1.89		23.72	23.72	1.84		17.21	17.21	1.01		18.08	18.08	1.00		18.91	18.91	0.93		19.70	19.70	0.80												

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 34

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

24VNA960

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FE4ANB006L	1.00	1.00	
CAP**6021AL*	0.99	0.99	58CV(A,X)110-20
CAP**6024AL*	0.99	0.99	58CV(A,X)110-20
CNPH*6024AL*	0.99	1.04	58CV(A,X)110-20
CNPH*6124AL*	0.99	1.04	58CV(A,X)110-20
CNPV*6024AL*	0.98	0.98	58CV(A,X)110-20
CNPV*6124AL*	1.00	1.00	58CV(A,X)110-20
CSPH*6012AL*	1.00	1.00	58CV(A,X)110-20
CAP**6024AL*	0.99	0.99	58CV(A,X)135-22
CNPH*6024AL*	0.99	0.99	58CV(A,X)135-22
CNPH*6124AL*	1.00	1.00	58CV(A,X)135-22
CNPV*6024AL*	0.98	0.98	58CV(A,X)135-22
CNPV*6124AL*	1.00	1.00	58CV(A,X)135-22
CSPH*6012AL*	1.00	1.00	58CV(A,X)135-22
CAP**6024AL*	1.00	1.00	58CV(A,X)155-22
CNPH*6024AL*	1.00	1.00	58CV(A,X)155-22
CNPH*6124AL*	1.00	1.00	58CV(A,X)155-22
CNPV*6024AL*	0.99	0.99	58CV(A,X)155-22
CNPV*6124AL*	1.00	1.00	58CV(A,X)155-22
CSPH*6012AL*	1.00	1.00	58CV(A,X)155-22
CAP**6021AL*	0.99	1.04	59*N*A080V21**20
CAP**6024AL*	0.99	1.04	59*N*A080V21**20
CNPH*6024AL*	0.99	1.04	59*N*A080V21**20
CNPH*6124AL*	0.99	1.04	59*N*A080V21**20
CNPV*6024AL*	0.98	1.03	59*N*A080V21**20
CNPV*6124AL*	0.99	1.04	59*N*A080V21**20
CSPH*6012AL*	0.99	1.04	59*N*A080V21**20
CAP**6021AL*	0.99	1.04	59*N*A100V21**22
CAP**6024AL*	0.99	0.99	59*N*A100V21**22
CNPH*6024AL*	0.99	1.04	59*N*A100V21**22
CNPH*6124AL*	0.99	1.04	59*N*A100V21**22
CNPV*6024AL*	0.98	0.98	59*N*A100V21**22
CNPV*6124AL*	1.00	1.00	59*N*A100V21**22
CSPH*6012AL*	1.00	1.00	59*N*A100V21**22
CAP**6024AL*	0.99	1.04	59*N*A120V24**22
CNPH*6024AL*	0.99	1.04	59*N*A120V24**22
CNPH*6124AL*	0.99	1.04	59*N*A120V24**22
CNPV*6024AL*	0.98	1.03	59*N*A120V24**22
CNPV*6124AL*	0.99	0.99	59*N*A120V24**22
CSPH*6012AL*	1.00	1.00	59*N*A120V24**22
CAP**6021AL*	0.98	1.03	59MN7A060V21**20
CAP**6024AL*	0.98	1.03	59MN7A060V21**20
CNPH*6024AL*	0.98	1.09	59MN7A060V21**20
CNPH*6124AL*	0.98	1.09	59MN7A060V21**20
CNPV*6024AL*	0.97	1.02	59MN7A060V21**20
CNPV*6124AL*	0.99	1.04	59MN7A060V21**20
CSPH*6012AL*	0.99	1.04	59MN7A060V21**20

2-STAGE (Hi-Stage 5, Lo-Stage 2)					
Cooling Indoor Model	High Speed Cap.	Power	Low Speed Cap.	Power	Furnace Model
*FV4CNB006L	1.00	1.00	1.00	1.00	
CAP**6021AL*	1.01	1.06	1.01	1.07	58PH*110-20
CSPH*6012AL*	1.02	1.07	1.00	1.04	58PH*110-20
CAP**6024AL*	1.01	1.06	1.00	1.11	58PH*135-20
CNPH*6024AL*	1.01	1.06	1.01	1.06	58PH*135-20
CNPH*6124AL*	1.01	1.06	1.01	1.12	58PH*135-20
CNPV*6024AL*	1.00	1.05	1.01	1.06	58PH*135-20
CNPV*6124AL*	1.02	1.07	1.00	1.03	58PH*135-20
CSPH*6012AL*	1.02	1.07	1.01	1.05	58PH*135-20
CAP**6021AL*	1.01	1.06	1.01	1.07	58CTW110-22
CSPH*6012AL*	1.02	1.07	1.00	1.04	58CTW110-22
CAP**6024AL*	1.01	1.06	1.01	1.06	58CTW135-22
CNPH*6024AL*	1.01	1.06	1.01	1.06	58CTW135-22
CNPH*6124AL*	1.01	1.06	1.01	1.06	58CTW135-22
CNPV*6024AL*	1.00	1.05	1.01	1.06	58CTW135-22
CNPV*6124AL*	1.02	1.07	1.01	1.04	58CTW135-22
CSPH*6012AL*	1.02	1.07	1.00	1.04	58CTW135-22
CAP**6021AL*	1.01	1.06	1.01	1.07	59*P2A080E21**20
CSPH*6012AL*	1.02	1.07	1.00	1.05	59*P2A080E21**20
CAP**6024AL*	1.01	1.06	1.01	1.07	59*P2A100E21**20
CSPH*6012AL*	1.01	1.06	1.00	1.05	59*P2A100E21**20
CAP**6024AL*	1.01	1.06	1.01	1.07	59*P2A120E24**20
CNPH*6024AL*	1.01	1.06	1.01	1.07	59*P2A120E24**20
CNPH*6124AL*	1.01	1.06	1.01	1.07	59*P2A120E24**20
CNPV*6024AL*	1.00	1.05	1.01	1.07	59*P2A120E24**20
CNPV*6124AL*	1.02	1.07	1.00	1.04	59*P2A120E24**20
CSPH*6012AL*	1.02	1.07	1.00	1.05	59*P2A120E24**20
CAP**6021AL*	0.99	1.04	1.01	1.11	59*P5A080E21**20
CSPH*6012AL*	1.00	1.05	1.01	1.10	59*P5A080E21**20
CAP**6024AL*	1.00	1.05	1.01	1.11	59*P5A120E24**22
CNPH*6024AL*	1.00	1.05	1.01	1.11	59*P5A120E24**22
CNPH*6124AL*	1.00	1.05	1.01	1.10	59*P5A120E24**22
CNPV*6024AL*	0.99	1.04	1.01	1.11	59*P5A120E24**22
CNPV*6124AL*	1.00	1.05	1.01	1.09	59*P5A120E24**22
CSPH*6012AL*	1.00	1.05	1.00	1.09	59*P5A120E24**22
CSPH*6012AL*	1.00	1.05	1.01	1.10	59*P6A080E21**20
CSPH*6012AL*	1.01	1.06	1.00	1.11	59*P6A100E21**20
CAP**6024AL*	0.99	1.04	1.01	1.11	59*P6A120E24**22
CNPH*6124AL*	1.00	1.05	1.01	1.10	59*P6A120E24**22
CNPV*6024AL*	0.98	1.03	1.01	1.10	59*P6A120E24**22
CNPV*6124AL*	1.00	1.05	1.01	1.09	59*P6A120E24**22
CSPH*6012AL*	1.00	1.05	1.00	1.08	59*P6A120E24**22
CAP**6024AL*	1.00	1.05	1.01	1.09	OVLAAB060154
CNPV*6024AL*	0.99	1.04	1.01	1.09	OVLAAB060154
CNPV*6124AL*	1.01	1.06	1.01	1.07	OVLAAB060154
CNPV*6124AL*	1.01	1.06	1.01	1.11	OVMAAB060154
CSPH*6012AL*	1.01	1.06	1.00	1.11	OVMAAB060154

See notes on page 34

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE

EDB ° F (° C)	EVAP. AIR	24VNA924B / FE4ANF002L Comfort + Dehumidify Mode Condenser Entering Air Temperature ° F (° C)																			
		105 (40.5)					95 (35)			85 (29.4)			75 (23.9)				65 (18.3)				
	EWB ° F (° C)	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW
			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†	
STAGE 5																					
75 (23.9)	72 (22.2)	642	24.23	9.92	2.44	608	25.33	10.31	2.12	634	26.93	10.95	1.84	663	28.54	11.60	1.58	708	30.28	12.32	1.33
	67 (19.4)		22.01	12.96	2.42		23.01	13.22	2.10		24.45	14.00	1.83		25.91	14.82	1.58		27.51	15.77	1.34
	63 (17.2)		20.38	15.34	2.39		21.31	15.50	2.08		22.64	16.40	1.82		24.00	17.33	1.57		25.48	18.47	1.35
	57 (13.9)		18.45	18.45	2.36		19.08	18.80	2.05		20.28	19.87	1.80		21.49	20.99	1.57		22.82	22.37	1.36
80 (26.7)	72 (22.2)	642	24.17	12.95	2.44	608	25.27	13.22	2.12	634	26.87	14.00	1.84	663	28.48	14.82	1.58	708	30.22	15.77	1.33
	67 (19.4)		21.96	15.96	2.42		22.96	16.09	2.10		24.40	17.02	1.83		25.86	17.99	1.58		27.45	19.17	1.34
	63 (17.2)		20.36	18.31	2.39		21.28	18.35	2.08		22.61	19.39	1.82		23.97	20.49	1.57		25.45	21.85	1.35
	57 (13.9)		19.56	19.56	2.38		20.08	20.08	2.07		21.29	21.29	1.81		22.54	22.54	1.57		23.97	23.97	1.35
STAGE 3																					
75 (23.9)	72 (22.2)	437	16.80	6.88	1.49	415	17.53	7.13	1.28	437	18.69	7.60	1.10	456	19.82	8.06	0.92	484	21.04	8.55	0.76
	67 (19.4)		15.18	8.96	1.50		15.85	9.13	1.28		16.89	9.72	1.11		17.91	10.28	0.95		18.99	10.93	0.79
	63 (17.2)		13.98	10.59	1.50		14.60	10.69	1.28		15.56	11.37	1.13		16.49	12.01	0.97		17.48	12.77	0.82
	57 (13.9)		12.63	12.63	1.49		12.99	12.94	1.29		13.83	13.75	1.14		14.64	14.51	1.00		15.53	15.43	0.86
80 (26.7)	72 (22.2)	437	16.75	8.99	1.49	415	17.48	9.16	1.28	437	18.64	9.75	1.10	456	19.77	10.32	0.92	484	20.98	10.97	0.76
	67 (19.4)		15.14	11.05	1.50		15.81	11.13	1.28		16.85	11.84	1.11		17.87	12.51	0.95		18.95	13.31	0.79
	63 (17.2)		13.97	12.66	1.50		14.59	12.68	1.28		15.54	13.48	1.13		16.47	14.23	0.97		17.46	15.14	0.82
	57 (13.9)		13.43	13.43	1.50		13.78	13.78	1.29		14.66	14.66	1.13		15.51	15.51	0.99		16.47	16.47	0.84
STAGE 1																					
75 (23.9)	72 (22.2)	362	13.91	5.70	1.21	222	8.34	3.43	0.52	234	8.89	3.65	0.44	229	9.31	3.80	0.37	245	9.90	4.05	0.29
	67 (19.4)		12.50	7.42	1.22		7.48	4.49	0.53		7.97	4.78	0.46		8.34	4.91	0.40		8.86	5.24	0.33
	63 (17.2)		11.48	8.77	1.22		6.85	5.34	0.53		7.30	5.67	0.47		7.63	5.79	0.41		8.11	6.18	0.35
	57 (13.9)		10.41	10.41	1.22		6.25	6.25	0.54		6.65	6.65	0.48		6.87	6.87	0.43		7.32	7.32	0.37
80 (26.7)	72 (22.2)	362	13.87	7.46	1.21	222	8.31	4.53	0.52	234	8.86	4.82	0.44	229	9.28	4.96	0.37	245	9.87	5.29	0.29
	67 (19.4)		12.47	9.17	1.22		7.45	5.59	0.53		7.94	5.94	0.46		8.31	6.06	0.40		8.83	6.48	0.33
	63 (17.2)		11.48	10.51	1.22		6.85	6.43	0.53		7.30	6.83	0.47		7.62	6.93	0.41		8.10	7.41	0.35
	57 (13.9)		11.08	11.08	1.22		6.68	6.68	0.54		7.10	7.10	0.48		7.33	7.33	0.42		7.81	7.81	0.36

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 34

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE

EDB ° F (° C)	EVAP. AIR ° F (° C)	24VNA960 / FE4BNB006L Comfort + Dehumidify Mode Condenser Entering Air Temperature ° F (° C)																								
		105 (40.5)					95 (35)					85 (29.4)					75 (23.9)					65 (18.3)				
		ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW					
			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†						
STAGE 5																										
75 (23.9)	72 (22.2)	1367	57.74	23.45	6.51	1440	61.60	25.02	5.73	1514	65.43	26.57	5.06	1566	69.11	28.06	4.43	1488	71.73	29.06	3.80					
	67 (19.4)		52.75	29.96	6.32		56.26	31.94	5.56		59.74	33.92	4.89		63.08	35.74	4.28		65.39	36.48	3.66					
	63 (17.2)		49.06	35.05	6.19		52.31	37.35	5.43		55.53	39.67	4.77		58.62	41.74	4.17		60.75	42.26	3.56					
	57 (13.9)		44.14	42.48	6.02		47.05	45.25	5.27		49.93	48.04	4.62		52.69	50.49	4.02		54.52	50.74	3.43					
80 (26.7)	72 (22.2)	1367	57.61	29.82	6.52	1440	61.47	31.80	5.74	1514	65.28	33.78	5.06	1566	68.97	35.61	4.43	1488	71.59	36.37	3.80					
	67 (19.4)		52.65	36.25	6.32		56.15	38.64	5.56		59.62	41.04	4.89		62.96	43.19	4.28		65.29	43.67	3.66					
	63 (17.2)		48.99	41.31	6.19		52.23	44.02	5.43		55.45	46.75	4.77		58.54	49.15	4.17		60.67	49.42	3.56					
	57 (13.9)		45.90	45.90	6.08		48.92	48.92	5.33		51.93	51.93	4.67		54.72	54.72	4.07		55.91	55.91	3.46					
STAGE 3																										
75 (23.9)	72 (22.2)	959	36.98	15.01	3.25	1013	39.25	15.94	2.79	1066	41.77	16.95	2.44	1120	44.28	17.97	2.13	1210	47.05	19.11	1.87					
	67 (19.4)		33.40	19.03	3.22		35.55	20.23	2.75		37.83	21.50	2.39		40.10	22.76	2.09		42.62	24.30	1.84					
	63 (17.2)		30.77	22.16	3.21		32.82	23.59	2.72		34.94	25.04	2.37		37.04	26.50	2.06		39.38	28.36	1.81					
	57 (13.9)		27.31	26.75	3.18		29.19	28.48	2.69		31.09	30.22	2.34		32.99	31.96	2.04		35.10	34.26	1.79					
80 (26.7)	72 (22.2)	959	36.89	19.10	3.25	1013	39.15	20.27	2.79	1066	41.66	21.53	2.44	1120	44.17	22.80	2.13	1210	46.93	24.34	1.87					
	67 (19.4)		33.32	23.06	3.22		35.47	24.51	2.75		37.74	26.01	2.39		40.02	27.53	2.09		42.53	29.47	1.84					
	63 (17.2)		30.72	26.18	3.21		32.77	27.85	2.72		34.89	29.54	2.37		36.99	31.25	2.06		39.33	33.50	1.81					
	57 (13.9)		28.74	28.74	3.19		30.65	30.65	2.70		32.58	32.58	2.35		34.53	34.53	2.05		36.85	36.85	1.80					
STAGE 1																										
75 (23.9)	72 (22.2)	748	27.11	11.00	2.21	600	19.91	8.07	1.22	600	20.99	8.50	1.01	647	22.49	9.11	0.80	700	24.02	9.73	0.59					
	67 (19.4)		24.28	13.80	2.21		17.69	10.04	1.21		18.67	10.45	1.01		20.04	11.19	0.81		21.43	11.97	0.61					
	63 (17.2)		22.21	15.99	2.20		16.05	11.57	1.21		16.97	11.96	1.01		18.23	12.81	0.82		19.53	13.71	0.62					
	57 (13.9)		19.51	19.20	2.20		13.98	13.85	1.20		14.76	14.19	1.02		15.88	15.20	0.84		17.03	16.27	0.65					
80 (26.7)	72 (22.2)	748	27.04	13.93	2.21	600	19.86	10.20	1.22	600	20.94	10.61	1.01	647	22.43	11.35	0.80	700	23.96	12.13	0.59					
	67 (19.4)		24.22	16.71	2.21		17.65	12.16	1.21		18.63	12.54	1.01		19.99	13.42	0.81		21.39	14.35	0.61					
	63 (17.2)		22.18	18.88	2.20		16.04	13.68	1.21		16.95	14.04	1.01		18.21	15.03	0.82		19.50	16.08	0.62					
	57 (13.9)		20.65	20.65	2.20		14.90	14.90	1.20		15.50	15.50	1.02		16.63	16.63	0.83		17.82	17.82	0.64					

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 5 – Compressor speed limited to stage four at 65 outdoor. **Stage 1** – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 34

DETAILED COOLING CAPACITIES#- COMFORT + DEHUMIDIFY MODE CONTINUED

24VNA960

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FE4ANB006L	1.00	1.00	
CAP**6021AL*	0.99	0.99	58CV(A,X)110-20
CAP**6024AL*	0.99	0.99	58CV(A,X)110-20
CNPH*6024AL*	0.99	1.04	58CV(A,X)110-20
CNPH*6124AL*	0.99	1.04	58CV(A,X)110-20
CNPV*6024AL*	0.98	0.98	58CV(A,X)110-20
CNPV*6124AL*	1.00	1.00	58CV(A,X)110-20
CSPH*6012AL*	1.00	1.00	58CV(A,X)110-20
CAP**6024AL*	0.99	0.99	58CV(A,X)135-22
CNPH*6024AL*	0.99	0.99	58CV(A,X)135-22
CNPH*6124AL*	1.00	1.00	58CV(A,X)135-22
CNPV*6024AL*	0.98	0.98	58CV(A,X)135-22
CNPV*6124AL*	1.00	1.00	58CV(A,X)135-22
CSPH*6012AL*	1.00	1.00	58CV(A,X)135-22
CAP**6024AL*	1.00	1.00	58CV(A,X)155-22
CNPH*6024AL*	1.00	1.00	58CV(A,X)155-22
CNPH*6124AL*	1.00	1.00	58CV(A,X)155-22
CNPV*6024AL*	0.99	0.99	58CV(A,X)155-22
CNPV*6124AL*	1.00	1.00	58CV(A,X)155-22
CSPH*6012AL*	1.00	1.00	58CV(A,X)155-22
CAP**6021AL*	0.99	1.04	59*N*A080V21**20
CAP**6024AL*	0.99	1.04	59*N*A080V21**20
CNPH*6024AL*	0.99	1.04	59*N*A080V21**20
CNPH*6124AL*	0.99	1.04	59*N*A080V21**20
CNPV*6024AL*	0.98	1.03	59*N*A080V21**20
CNPV*6124AL*	0.99	1.04	59*N*A080V21**20
CSPH*6012AL*	0.99	1.04	59*N*A080V21**20
CAP**6021AL*	0.99	1.04	59*N*A100V21**22
CAP**6024AL*	0.99	0.99	59*N*A100V21**22
CNPH*6024AL*	0.99	1.04	59*N*A100V21**22
CNPH*6124AL*	0.99	1.04	59*N*A100V21**22
CNPV*6024AL*	0.98	0.98	59*N*A100V21**22
CNPV*6124AL*	1.00	1.00	59*N*A100V21**22
CSPH*6012AL*	1.00	1.00	59*N*A100V21**22
CAP**6024AL*	0.99	1.04	59*N*A120V24**22
CNPH*6024AL*	0.99	1.04	59*N*A120V24**22
CNPH*6124AL*	0.99	1.04	59*N*A120V24**22
CNPV*6024AL*	0.98	1.03	59*N*A120V24**22
CNPV*6124AL*	0.99	0.99	59*N*A120V24**22
CSPH*6012AL*	1.00	1.00	59*N*A120V24**22
CAP**6021AL*	0.98	1.03	59MN7A060V21**20
CAP**6024AL*	0.98	1.03	59MN7A060V21**20
CNPH*6024AL*	0.98	1.09	59MN7A060V21**20
CNPH*6124AL*	0.98	1.09	59MN7A060V21**20
CNPV*6024AL*	0.97	1.02	59MN7A060V21**20
CNPV*6124AL*	0.99	1.04	59MN7A060V21**20
CSPH*6012AL*	0.99	1.04	59MN7A060V21**20

2-STAGE (Hi-Stage 5, Lo-Stage 2)					
Cooling Indoor Model	High Speed Cap.	Power	Low Speed Cap.	Power	Furnace Model
*FV4CNB006L	1.00	1.00	1.00	1.00	
CAP**6021AL*	1.01	1.06	1.01	1.07	58PH*110-20
CSPH*6012AL*	1.02	1.07	1.00	1.04	58PH*110-20
CAP**6024AL*	1.01	1.06	1.00	1.11	58PH*135-20
CNPH*6024AL*	1.01	1.06	1.01	1.06	58PH*135-20
CNPH*6124AL*	1.01	1.06	1.01	1.12	58PH*135-20
CNPV*6024AL*	1.00	1.05	1.01	1.06	58PH*135-20
CNPV*6124AL*	1.02	1.07	1.00	1.03	58PH*135-20
CSPH*6012AL*	1.02	1.07	1.01	1.05	58PH*135-20
CAP**6021AL*	1.01	1.06	1.01	1.07	58CTW110-22
CSPH*6012AL*	1.02	1.07	1.00	1.04	58CTW110-22
CAP**6024AL*	1.01	1.06	1.01	1.06	58CTW135-22
CNPH*6024AL*	1.01	1.06	1.01	1.06	58CTW135-22
CNPV*6024AL*	1.00	1.05	1.01	1.06	58CTW135-22
CNPV*6124AL*	1.02	1.07	1.01	1.04	58CTW135-22
CSPH*6012AL*	1.02	1.07	1.00	1.04	58CTW135-22
CAP**6021AL*	1.01	1.06	1.01	1.07	59*P2A080E21**20
CSPH*6012AL*	1.02	1.07	1.00	1.05	59*P2A080E21**20
CAP**6021AL*	1.01	1.06	1.01	1.07	59*P2A100E21**20
CSPH*6012AL*	1.01	1.06	1.00	1.05	59*P2A100E21**20
CAP**6024AL*	1.01	1.06	1.01	1.07	59*P2A120E24**20
CNPH*6024AL*	1.01	1.06	1.01	1.07	59*P2A120E24**20
CNPH*6124AL*	1.01	1.06	1.01	1.07	59*P2A120E24**20
CNPV*6024AL*	1.00	1.05	1.01	1.07	59*P2A120E24**20
CNPV*6124AL*	1.02	1.07	1.00	1.04	59*P2A120E24**20
CSPH*6012AL*	1.02	1.07	1.00	1.05	59*P2A120E24**20
CAP**6021AL*	0.99	1.04	1.01	1.11	59*P5A080E21**20
CSPH*6012AL*	1.00	1.05	1.01	1.10	59*P5A080E21**20
CAP**6024AL*	1.00	1.05	1.01	1.11	59*P5A120E24**22
CNPH*6024AL*	1.00	1.05	1.01	1.11	59*P5A120E24**22
CNPH*6124AL*	1.00	1.05	1.01	1.10	59*P5A120E24**22
CNPV*6024AL*	0.99	1.04	1.01	1.11	59*P5A120E24**22
CNPV*6124AL*	1.00	1.05	1.01	1.09	59*P5A120E24**22
CSPH*6012AL*	1.00	1.05	1.00	1.09	59*P5A120E24**22
CSPH*6012AL*	1.00	1.05	1.01	1.10	59*P6A080E21**20
CSPH*6012AL*	1.01	1.06	1.00	1.11	59*P6A100E21**20
CAP**6024AL*	0.99	1.04	1.01	1.11	59*P6A120E24**22
CNPH*6124AL*	1.00	1.05	1.01	1.10	59*P6A120E24**22
CNPV*6024AL*	0.98	1.03	1.01	1.10	59*P6A120E24**22
CNPV*6124AL*	1.00	1.05	1.01	1.09	59*P6A120E24**22
CSPH*6012AL*	1.00	1.05	1.00	1.08	59*P6A120E24**22
CAP**6024AL*	1.00	1.05	1.01	1.09	OVLAAB060154
CNPV*6024AL*	0.99	1.04	1.01	1.09	OVLAAB060154
CNPV*6124AL*	1.01	1.06	1.01	1.07	OVLAAB060154
CNPV*6124AL*	1.01	1.06	1.01	1.11	OVMAAB060154
CSPH*6012AL*	1.01	1.06	1.00	1.11	OVMAAB060154

NOTES:

* Tested combination.

† Total and sensible capacities are net capacities. Blower motor heat has been subtracted.

‡ Sensible capacities are shown for both 80°F (27°C) and 75°F (23.4°C) entering air at the indoor coil.

For sensible capacities at other than these, deduct 835 Btu/h (245 kW) per 1000 CFM (480 L/S) of indoor coil air for each degree below reference temperature, or add 835 Btu/h (245 kW) per 1000 CFM (480 L/S) of indoor coil air for each degree above reference temperature.

Detailed cooling capacities are based on indoor and outdoor unit at the same elevation per AHRI standard 210/240-2008. If additional tubing length and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur.

** System kw is total of indoor and outdoor unit kilowatts.

NOTE: When the required data falls between the published data, interpolation may be performed. Extrapolation is not an acceptable practice.

EWB — Entering Wet Bulb

GUIDE SPECIFICATIONS

GENERAL

System Description

Outdoor-mounted, air-cooled, split-system air conditioning unit suitable for ground or rooftop installation. Unit consists of a hermetic compressor, an air-cooled coil, forward-swept blade propeller-type condenser fan, and a control box. Unit will discharge supply air upward as shown on contract drawings. Unit will be used in a refrigeration circuit to match up to a packaged fan coil or coil unit.

Quality Assurance

- Unit will be rated in accordance with the latest edition of AHRI Standard 240.
- Unit will be certified for capacity and efficiency, and listed in the latest AHRI directory.
- Unit construction will comply with latest edition of ASHRAE and with NEC.
- Unit will be constructed in accordance with UL standards and will carry the UL label of approval. Unit will have C-UL approval.
- Unit cabinet will be capable of withstanding Federal Test Method Standard No. 141 (Method 6061) 500-hr salt spray test.
- Air-cooled condenser coils are pressure tested and the outdoor units are leak tested.
- Unit constructed in ISO9001 approved facility.

Delivery, Storage, and Handling

- Unit will be shipped as single package only and is stored and handled per unit manufacturer's recommendations.

Warranty (for inclusion by specifying engineer)

- U.S. and Canada only.

PRODUCTS

Equipment

- Factory-assembled, single-piece, air-cooled air conditioning unit. Contained within the unit enclosure is all factory wiring, piping, controls, compressor, refrigerant charge Puron® (R-410A) refrigerant, and special features required prior to field start-up.

Unit Cabinet

- Unit cabinet will be constructed of galvanized steel, bonderized, and coated with a powder coat paint.

Fans

- Condenser fan will be direct-drive propeller type, forward swept blade, discharging air upward.

AIR-COOLED, SPLIT-SYSTEM AIR CONDITIONER 24VNA9

- Condenser fan motors will be totally enclosed, 1-phase type with class B insulation and permanently lubricated.
- Shafts will be corrosion resistant.
- Fan blades will be statically and dynamically balanced.
- Condenser fan openings will be equipped with coated steel wire safety guards.

Compressor

- Compressor will be hermetically sealed.
- Compressor will be mounted on rubber vibration isolators.
- Compressor will be covered with a sound absorbing blanket.

Condenser Coil

- Condenser coil will be air cooled.
- Coil will be constructed of aluminum fins mechanically bonded to copper tubes which are then cleaned, dehydrated, and sealed.

Refrigeration Components

- Refrigeration circuit components will include liquid-line front-seating shutoff valve with sweat connections, vapor-line front-seating shutoff valve with sweat connections, system charge of Puron® (R-410A) refrigerant, POE compressor oil, accumulator, charge compensator, electronic expansion valve, and reversing valve.
- Unit will be equipped with high-pressure switch, suction pressure transducer, and filter drier for Puron® refrigerant.

Operating Characteristics

- The capacity of the unit will meet or exceed _____ Btuh at a suction temperature of _____ °F (°C). The power consumption at full load will not exceed _____ kW.
- Combination of the unit and the evaporator or fan coil unit will have a total net cooling capacity of _____ Btuh or greater at conditions of _____ CFM entering air temperature at the evaporator at _____ °F (°C) wet bulb and _____ °F (°C) dry bulb, and air entering the unit at _____ °F (°C).
- The system will have a SEER of _____ Btuh/watt or greater at DOE conditions.

Electrical Requirements

- Nominal unit electrical characteristics will be _____ v, single phase, 60 hz. The unit will be capable of satisfactory operation within voltage limits of _____ v to _____ v.
- Unit electrical power will be single point connection.
- Control circuit will be 24v.
- Compliant with IEC 61000-4-5 Transient Surge Requirement.

Special Features

- Refer to section of this literature identifying accessories and descriptions for specific features and available enhancements.
- Infinity control with appropriate software version is required for full featured operation.

SYSTEM DESIGN SUMMARY

1. Intended for outdoor installation with free air inlet and outlet. Outdoor fan external static pressure available is less than 0.01-in. wc.
2. This product is not qualified for low ambient cooling operation.
Minimum cooling outdoor operating temperatures:
 - Communicating systems: 40°F (4.44°C)
 - Non-communicating systems: 55°F (12.8°C)
3. For reliable operation, unit should be level in all horizontal planes.
4. This unit is qualified for up to 100 ft (30.5 m) equivalent length of line set without additional accessories.
5. If any refrigerant tubing is buried, provide a 6 in. (152.4 mm) vertical rise to the valve connections at the unit. Refrigerant tubing lengths up to 36 in. (914.4 mm) may be buried without further consideration. Do not bury refrigerant lines longer than 36 in. (914.4 mm).
6. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
7. Do not apply capillary tube indoor coils to these units.
8. Puron refrigerant TXV required on indoor coil.