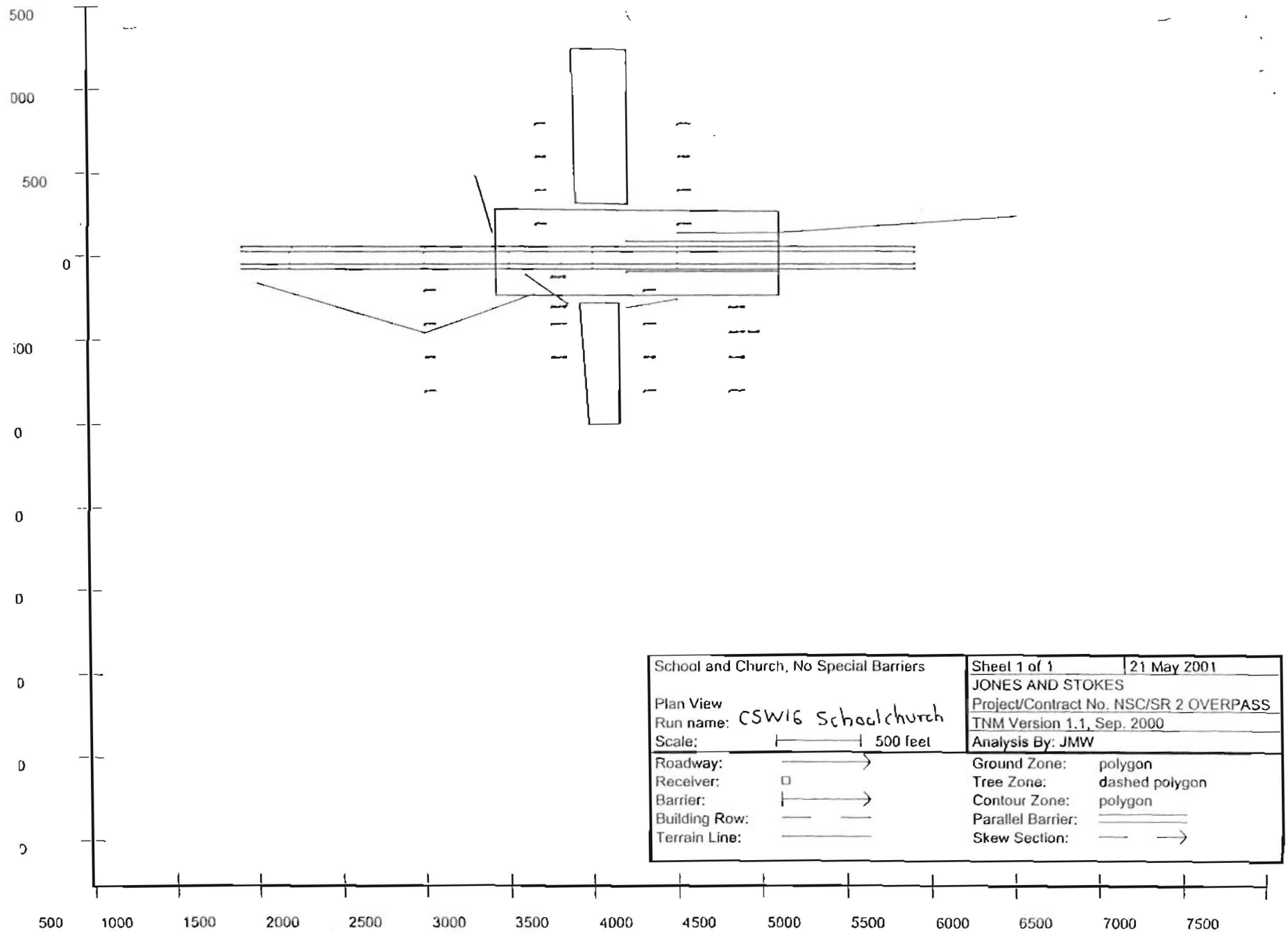
Appendix A

TNM Modeling Files



School and Church, No Special Barriers	Sheet 1 of 1	21 May 2001
	JONES AND STOKES	
Plan View	Project/Contract No. NSC/SR 2 OVERPASS	
Run name: CSW16 Schoolchurch	TNM Version 1.1, Sep. 2000	
Scale: 500 feet	Analysis By: JMW	
Roadway:	Ground Zone:	polygon
Receiver:	Tree Zone:	dashed polygon
Barrier:	Contour Zone:	polygon
Building Row:	Parallel Barrier:	
Terrain Line:	Skew Section:	

JONES AND STOKES
JMW

25 May 2001
TNM 1.1
Calculated with TNM 1.1

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: NSC/SR 2 OVERPASS
RUN: School and Church, 16 foot wall at CSW
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
B-S-200	42	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0
B-S-400	43	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
B-S-600	44	1	0.0	50.5	66	50.5	10	----	50.5	0.0	8	-8.0
B-S-800	45	1	0.0	50.3	66	50.3	10	----	50.3	0.0	8	-8.0
C-S-200	56	1	0.0	70.2	66	70.2	10	Snd Lvl	70.2	0.0	8	-8.0
C-S-400	57	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0
C-S-600	58	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
C-S-800	59	1	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0
Church-300	69	0	0.0	59.7	0	59.7	0	Snd Lvl	59.7	0.0	0	0.0
church-450 (Church)	70	0	0.0	57.3	0	57.3	0	Snd Lvl	57.3	0.0	0	0.0
Church-600	71	0	0.0	56.4	0	56.4	0	Snd Lvl	56.4	0.0	0	0.0
Church-800	73	0	0.0	55.9	0	55.9	0	Snd Lvl	55.9	0.0	0	0.0
School-120	75	0	0.0	76.1	0	76.1	0	Snd Lvl	76.1	0.0	0	0.0
School-300	76	0	0.0	60.9	0	60.9	0	Snd Lvl	60.9	0.0	0	0.0
School-400	77	0	0.0	56.5	0	56.5	0	Snd Lvl	56.5	0.0	0	0.0
School-600	78	0	0.0	56.3	0	56.3	0	Snd Lvl	56.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	8	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

JONES AND STOKES 25 May 2001
JMW TNM 1.1

INPUT: TRAFFIC FOR LAeq1h Percentages
PROJECT/CONTRACT: NSC/SR 2 OVERPASS
RUN: School and Church, 16 foot wall at CSW

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
B-WB-1	point27	27	948	87	60	8	60	5	60	0	0	0	0
	point28	28	948	87	60	8	60	5	60	0	0	0	0
	point65	65	948	87	60	8	60	5	60	0	0	0	0
	point29	29											
B-WB-2	point31	31	948	87	60	8	60	5	60	0	0	0	0
	point66	66	948	87	60	8	60	5	60	0	0	0	0
	point32	32	948	87	60	8	60	5	60	0	0	0	0
	point33	33											
B-EB-1	point34	34	331	87	60	8	60	5	60	0	0	0	0
	point68	68	331	87	60	8	60	5	60	0	0	0	0
	point35	35	331	87	60	8	60	5	60	0	0	0	0
	point36	36											
B-EB-2	point39	39	331	87	60	8	60	5	60	0	0	0	0
	point67	67	331	87	60	8	60	5	60	0	0	0	0
	point40	40	331	87	60	8	60	5	60	0	0	0	0
	point41	41											
C-WB-1	point45	45	834	87	60	8	60	5	60	0	0	0	0
	point69	69	834	87	60	8	60	5	60	0	0	0	0
	point46	46	834	87	60	8	60	5	60	0	0	0	0
	point47	47	834	87	60	8	60	5	60	0	0	0	0
	point48	48											
C-WB-2	point49	49	834	87	60	8	60	5	60	0	0	0	0

	point70	70	834	87	60	8	60	5	60	0	0	0	0
	point50	50	834	87	60	8	60	5	60	0	0	0	0
	point51	51	834	87	60	8	60	5	60	0	0	0	0
	point52	52											
C-EB-1	point53	53	331	87	60	8	60	5	60	0	0	0	0
	point72	72	331	87	60	8	60	5	60	0	0	0	0
	point54	54	331	87	60	8	60	5	60	0	0	0	0
	point55	55	331	87	60	8	60	5	60	0	0	0	0
	point56	56											
C-EB-2	point57	57	331	87	60	8	60	5	60	0	0	0	0
	point71	71	331	87	60	8	60	5	60	0	0	0	0
	point58	58	331	87	60	8	60	5	60	0	0	0	0
	point59	59	331	87	60	8	60	5	60	0	0	0	0
	point60	60											

JONES AND STOKES 25 May 2001
JMW TNM 1.1

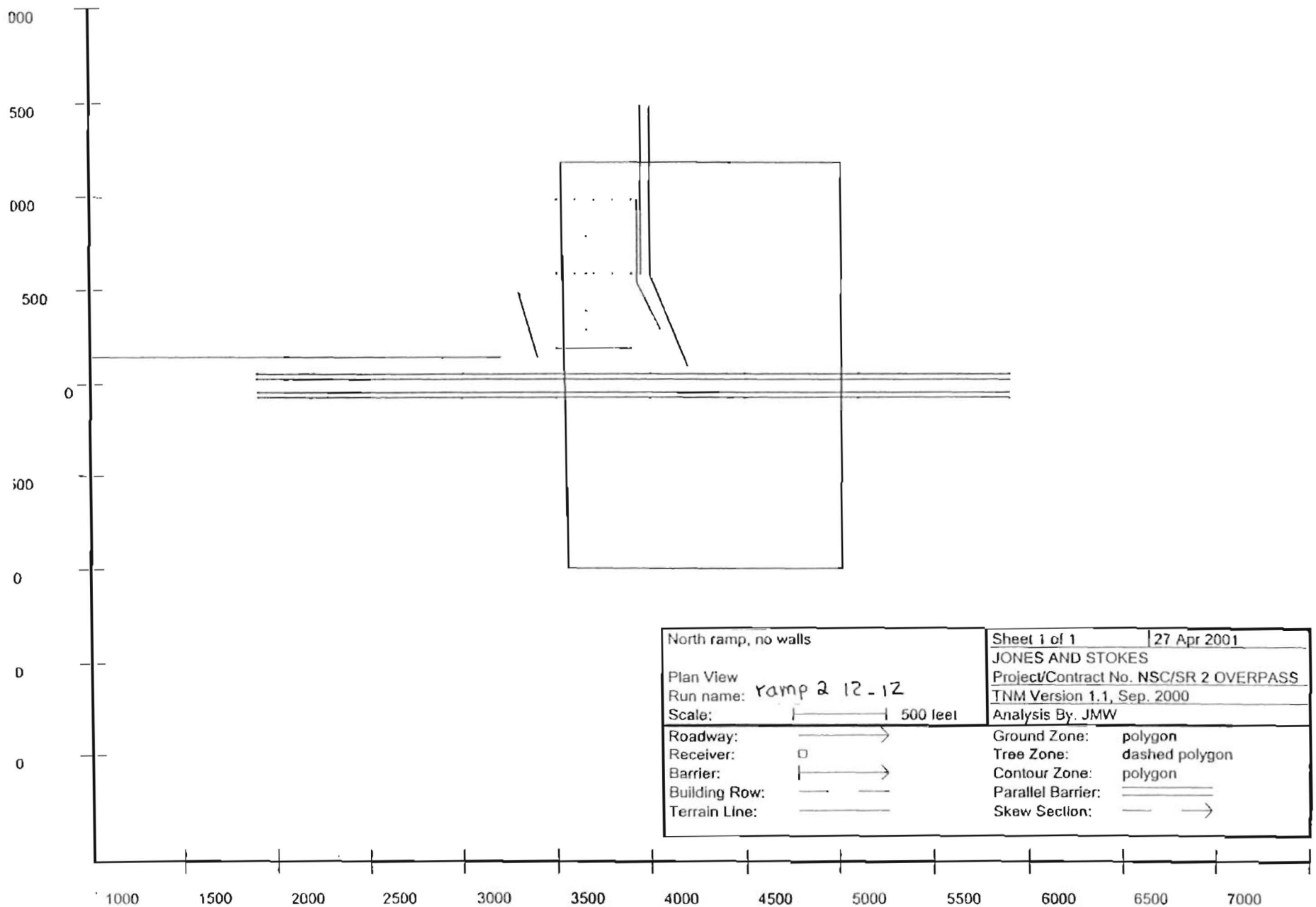
INPUT: RECEIVERS
PROJECT/CONTRACT: NSC/SR 2 OVERPASS
RUN: School and Church, 16 foot wall at CSW

Receiver Name	No.	# DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l Inc	NR Goal	Active In Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
B-S-200	42	1	2500.0	-200.0	1848.00	4.92	0.00	66	10.0	8.0	Y
B-S-400	43	1	2500.0	-400.0	1840.00	4.92	0.00	66	10.0	8.0	Y
B-S-600	44	1	2500.0	-600.0	1832.00	4.92	0.00	66	10.0	8.0	Y
B-S-800	45	1	2500.0	-800.0	1830.00	4.92	0.00	66	10.0	8.0	Y
C-S-200	56	1	3800.0	-200.0	1874.00	4.92	0.00	66	10.0	8.0	Y
C-S-400	57	1	3800.0	-400.0	1852.00	4.92	0.00	66	10.0	8.0	Y
C-S-600	58	1	3800.0	-600.0	1844.00	4.92	0.00	66	10.0	8.0	Y
C-S-800	59	1	3800.0	-800.0	1840.00	4.92	0.00	66	10.0	8.0	Y
Church-300	69	0	4300.0	-300.0	1843.00	4.92	0.00	0	0.0	0.0	Y
church-450 (Church)	70	0	4300.0	-450.0	1843.00	4.92	0.00	0	0.0	0.0	Y
Church-600	71	0	4300.0	-600.0	1843.00	4.92	0.00	0	0.0	0.0	Y
Church-800	73	0	4300.0	-800.0	1843.00	4.92	0.00	0	0.0	0.0	Y
School-120	75	0	3250.0	-120.0	1835.00	4.92	0.00	0	0.0	0.0	Y
School-300	76	0	3250.0	-300.0	1835.00	4.92	0.00	0	0.0	0.0	Y
School-400	77	0	3250.0	-400.0	1835.00	4.92	0.00	0	0.0	0.0	Y
School-600	78	0	3250.0	-600.0	1835.00	4.92	0.00	0	0.0	0.0	Y

INPUT: BARRIERS
PROJECT/CONTRACT: **NSC/SR 2 OVERPASS**
RUN: **School and Church, 16 foot wall at CSW**

Barrier Name	Type	Height Min	Height Max	If Wall $ per unit area	If Berm $ per unit volume	Top Width	Run:Rise	Add'tnl $ per unit length
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft
School offramp	W	0.00	99.99	0.00				0.00
ssroverpass2	W	0.00	99.99	0.00				0.00
ssroverpass3	W	0.00	99.99	0.00				0.00
CSWWall	W	0.00	99.99	0.00				0.00

Points Name	No.	Coordinates (bottom) X	Y	Z	Height at Point	Segment Seg Ht Increment	Perturbs #Up	#Dn	On Struct?	Important Reflections?
		ft	ft	ft	ft	ft				
point26	26	1500.0	-150.0	1852.00	10.00	0.00	0	0		
point27	27	2500.0	-450.0	1852.00	10.00	0.00	0	0		
point28	28	3150.0	-220.0	1834.00	30.00					
point30	30	3100.0	-100.0	1834.00	40.00	0.00	0	0		
point31	31	3350.0	-275.0	1835.00	20.00					
point32	32	3700.0	-300.0	1842.00	12.00	0.00	0	0		
point33	33	4000.0	-250.0	1850.00	0.00					
point39	39	3500.0	-100.0	1835.00	16.00	0.00	0	0		
point40	40	4000.0	-100.0	1850.00	16.00	0.00	0	0		
point41	41	4600.0	-100.0	1836.00	16.00					



North ramp, no walls	Sheet 1 of 1 | 27 Apr 2001
	JONES AND STOKES
Plan View	Project/Contract No. NSC/SR 2 OVERPASS
Run name: ramp 2 12-12	TNM Version 1.1, Sep. 2000
Scale: 500 feet	Analysis By. JMW

Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	

JONES AND STOKES
JMW

25 May 2001
TNM 1.1
Calculated with TNM 1.1

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: NSC/SR 2 OVERPASS
RUN: Shady Slope Neighborhood, 12' Walls
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 60% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
C-N-300	51	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0
C-N-400	52	1	0.0	62.5	66	62.5	10	----	62.5	0.0	8	-8.0
C-N-600	53	1	0.0	61.0	66	61.0	10	----	61.0	0.0	8	-8.0
C-N-800	54	1	0.0	60.3	66	60.3	10	----	60.3	0.0	8	-8.0
RAMP-I-100	69	1	0.0	59.7	0	59.7	0	Snd Lvl	59.7	0.0	0	0.0
RAMP-I-200	67	1	0.0	60.4	0	60.4	0	Snd Lvl	60.4	0.0	0	0.0
RAMP-I-300	70	1	0.0	61.2	0	61.2	0	Snd Lvl	61.2	0.0	0	0.0
RAMP-I-400	71	1	0.0	60.5	0	60.5	0	Snd Lvl	60.5	0.0	0	0.0
RAMP-I-500	73	1	0.0	59.8	0	59.8	0	Snd Lvl	59.8	0.0	0	0.0
RAMP-H-100	75	1	0.0	62.5	0	62.5	0	Snd Lvl	62.5	0.0	0	0.0
RAMP-H-200	76	1	0.0	60.9	0	60.9	0	Snd Lvl	60.9	0.0	0	0.0
RAMP-H-300	77	1	0.0	58.9	0	58.9	0	Snd Lvl	58.9	0.0	0	0.0
RAMP-H-400	78	1	0.0	57.5	0	57.5	0	Snd Lvl	57.5	0.0	0	0.0
RAMP-H-500	79	1	0.0	56.1	0	56.1	0	Snd Lvl	56.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	14	0.0	0.0	0.0
All Impacted	10	0.0	0.0	0.0
All that meet NR Goal	10	0.0	0.0	0.0

JONES AND STOKES 25 May 2001
JMW TNM 1.1

INPUT: ROADWAYS
PROJECT/CONTRACT: NSC/SR 2 OVERPASS
RUN: Shady Slope Neighborhood, 12' Walls

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

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	%		
B-WB-1	15.0	point27	27	3000.0	65.0	1834.00				Average	
		point28	28	2500.0	65.0	1852.00				Average	
		point65	65	1700.0	65.0	1867.00				Average	
		point29	29	1401.0	65.0	1872.00					
B-WB-2	15.0	point31	31	1401.0	35.0	1872.00				Average	
		point66	66	1700.0	35.0	1867.00				Average	
		point32	32	2500.0	35.0	1852.00				Average	
		point33	33	3000.0	35.0	1834.00					
B-EB-1	15.0	point34	34	1402.0	-65.0	1872.00				Average	
		point68	68	1700.0	-65.0	1867.00				Average	
		point35	35	2500.0	-65.0	1852.00				Average	
		point36	36	3000.0	-65.0	1834.00					
B-EB-2	15.0	point39	39	1402.0	-35.0	1872.00				Average	
		point67	67	1700.0	-35.0	1867.00				Average	
		point40	40	2500.0	-35.0	1852.00				Average	
		point41	41	3000.0	-35.0	1834.00					
C-WB-1	15.0	point45	45	3000.0	65.0	1834.00				Average	
		point69	69	3500.0	65.0	1835.00				Average	
		point46	46	4000.0	65.0	1850.00				Average	
		point47	47	4600.0	65.0	1836.00				Average	
		point48	48	5400.0	65.0	1861.00					