



STATE OF MICHIGAN
CENTRAL PROCUREMENT SERVICES
 Department of Technology, Management, and Budget
 525 W. ALLEGAN ST., LANSING, MICHIGAN 48913
 P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number **2**

to

Contract Number **071B7700125**

CONTRACTOR	HOEKSTRA TRANSPORTATION, INC
	3741 Roger B Chaffee
	Grand Rapids, MI 49548
	Steve Bolin
	616-299-5170
	sbolin@hoekstratruck.com
	CV0045588

STATE	Program Manager	Jeff Turner	MDOT
		517-335-3282	
		Turnerj3@Michigan.gov	
	Contract Administrator	Yvon Dufour	DTMB
		(517) 249-0455	
		dufoury@michigan.gov	

CONTRACT SUMMARY				
SMALL CLASS NON-LIFT AND LIFT BUSES				
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE	
April 1, 2017	March 31, 2019	2 - 1 Year	March 31, 2019	
PAYMENT TERMS		DELIVERY TIMEFRAME		
Net 45 Days				
ALTERNATE PAYMENT OPTIONS				EXTENDED PURCHASING
<input type="checkbox"/> P-Card <input type="checkbox"/> PRC <input type="checkbox"/> Other				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS				
DESCRIPTION OF CHANGE NOTICE				
OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input checked="" type="checkbox"/>	one year	<input type="checkbox"/>		March 31, 2020
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$11,134,124.80	\$0.00	\$11,134,124.80		
DESCRIPTION				
Effective 4/1/2019, the first option year available on this contract is hereby exercised. The revised contract expiration date is 3/31/2020. In addition, pricing on this contract hereby updated, per revised Schedule G - Pricing. All other terms, conditions, specifications and pricing remain the same. Per contractor request, and DTMB Procurement approval.				

STATE OF MICHIGAN

Contract No. 071B7700125

Small Class of Non-Lift and Lift Transit Buses

SCHEDULE G PRICING (Composite Body)

MICHIGAN SMALL CLASS OF BUSES - Composite Body

Class 1 - Minimum 5 Years/150,000 Miles

Class 2 - Minimum 7 Years/200,000 Miles

Body Manufacturer:		ELDORADO NATIONAL		
Bidder Company Name:		HOEKSTRA TRANSPORTATION, INC.		
Bidder Address:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
Preparer's Name:		Steve Bolin		
Inspection Facility:		HOEKSTRA TRANSPORTATION, INC.		
Address of Inspection Facility:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
II				
	Qty	Description	Unit Price	Extended Total
		Base Bus Floor Plans – Class One		
		138” (min) Wheelbase Bus – Vinyl Seat Covers		
A.	2	10 passenger without lift	\$52,349.83	104,699.67
B.	5	4 + 2 passenger with lift	\$58,074.01	290,370.07
C.	4	11 passenger without lift	\$52,546.30	210,185.22
D.	3	5 + 2 passenger with lift	\$58,302.34	174,907.03
		138” (min) Wheelbase Bus – Fabric Seat Covers		
E.	2	10 passenger without lift	\$52,615.33	105,230.67
F.	25	4 + 2 passenger with lift	\$58,339.51	1,458,487.85
G.	3	11 passenger without lift	\$52,838.35	158,515.06
H.	12	5 + 2 passenger with lift	\$58,594.39	703,132.73
		Base Bus Floor Plans – Class Two		
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
I.	1	18 passenger without lift	\$57,992.84	57,992.84
J.	8	10 + 1 passenger with lift	\$62,293.94	498,351.55
K.	6	8 + 2 passenger with lift	\$63,265.67	379,594.04
L.	5	4 + 2 passenger with lift	\$64,486.97	322,434.87
		158” (min) Wheelbase Bus – Fabric Seat Covers		
M.	1	18 passenger without lift	\$58,470.74	58,470.74
N.	15	10 + 1 passenger with lift	\$62,612.54	939,188.16
O.	7	8 + 2 passenger with lift	\$63,584.27	445,089.92
P.	4	4 + 2 passenger with lift	\$64,911.77	259,647.10
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
Q.	2	22 passenger without lift	\$57,641.50	115,283.01
R.	10	6 + 2 passenger with lift	\$64,651.58	646,515.84
S.	18	10 + 2 passenger with lift	\$64,650.70	1,163,712.67
T.	12	4 + 2 passenger with lift	\$66,886.21	802,634.57
		158” (min) Wheelbase Bus – Fabric Seat Covers		

U.	2	22 passenger without lift	\$58,225.60	116,451.21
V.	8	6 + 2 passenger with lift	\$65,076.38	520,611.07
W.	30	10 + 2 passenger with lift	\$65,022.40	1,950,672.12
X.	15	4 + 2 passenger with lift	\$67,364.11	1,010,461.71
SUBTOTAL (Buses A-X)				12,492,639.72
AA.		Equipment Options		
1	40	Air Conditioning – Split System	4,069.58	162,783.36
2	40	Air Conditioning – Tie-in System	2,655.00	106,200.00
3	30	Air Conditioning - Rooftop System	7,168.50	215,055.00
4	75	Auxiliary Coolant Heater	1,741.68	130,626.00
5	50	Auxiliary Air Heater	3,239.10	161,955.00
6	5	Destination Sign – Roller Curtain	2,230.20	11,151.00
7	25	Destination Sign – LED	3,717.00	92,925.00
8	50	Donation box (in lieu of standard farebox – deduct)	-902.70	-45,135.00
9	50	Driver Side Running Board	318.60	15,930.00
10	50	Farebox Electrical Prep Only (less standard farebox- deduct)	-1,189.44	-59,472.00
11	50	Limited Slip Differential	318.60	15,930.00
12	50	Rear Emergency Exit Window	-955.80	-47,790.00
13	40	Paint - One stripe	477.90	19,116.00
14	40	Paint - Roof second color	106.20	4,248.00
15	40	Paint - Different Full body	1,486.80	59,472.00
16	25	Reflective Vinyl Belt Stripe	531.00	13,275.00
17	20	Lift – Type I (in lieu of standard lift - deduct)	0.00	0.00
18	20	Lift – Type II – Powered outer barrier (in lieu of standard lift)	-212.40	-4,248.00
19	20	Lift - Folding Platform (in lieu of standard lift)	-212.40	-4,248.00
20	30	Alternate Standard Lift Manufacturer	531.00	15,930.00
21	100	Wheelchair Single Point Securement System (in lieu of one standard L-Track position)	265.50	26,550.00
22	15	Additional Wheelchair Position – L Track System	637.20	9,558.00
23	15	Additional Wheelchair Position – Single Point System	722.16	10,832.40
24	40	Two-way radio prep package	223.02	8,920.80
25	40	Radio - AM/FM stereo system w/ four speakers	371.70	14,868.00
26	10	Public Address (PA) System Only w/ two speakers	371.70	3,717.00
27	10	Radio – AM/FM/PA System w/ four speakers	531.00	5,310.00
28	10	Radio – Speaker only (additional)	106.20	1,062.00
29	20	Raised Flooring (No Wheel Wells)	637.20	12,744.00
30	75	Rubber Flooring (In lieu of smooth slip resistant flooring)	0.00	0.00
31	75	Entrance Stepwell Heater	318.60	23,895.00
32	50	Manual Entrance Door	-106.20	-5,310.00
33	5	Seating – Forward Facing Standard Double Seat – Vinyl	477.90	2,389.50
34	5	Seating – Forward Facing Standard Double Seat – Fabric	531.00	2,655.00
35	5	Seating – Forward Facing Standard Double Seat – Vinyl (Deduct)	-477.90	-2,389.50
36	5	Seating – Forward Facing Standard Double Seat – Fabric (Deduct)	-531.00	-2,655.00
37	5	Seating – Forward Facing Double Fold-A-Way – Vinyl	759.33	3,796.65
38	5	Seating – Forward Facing Double Fold-A-Way – Fabric	812.43	4,062.15
39	5	Seating – Forward Facing Double Fold-A-Way – Vinyl (Deduct)	-759.33	-3,796.65
40	5	Seating – Forward Facing Double Fold-A-Way – Fabric (Deduct)	-812.43	-4,062.15
41	5	Seating – Single Flip-up – Vinyl	361.08	1,805.40
42	5	Seating – Single Flip-up – Fabric	387.63	1,938.15

43	5	Seating – Double Flip-up – Vinyl	536.31	2,681.55
44	5	Seating – Double Flip-up – Fabric	589.41	2,947.05
45	5	Seating – Double w/Single Integrated Child Seat (ICS) - Vinyl	1,083.24	5,416.20
46	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric	1,136.34	5,681.70
47	5	Seating – Double w/Single Integrated Child Seat (ICS) – Vinyl (Deduct)	-1,083.24	-5,416.20
48	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric (Deduct)	-1,136.34	-5,681.70
49	5	Seating – Double w/Double Integrated Child Seat (ICS) - Vinyl	1,593.00	7,965.00
50	5	Seating – Double w/Double Integrated Child Seat (ICS) - Fabric	1,646.10	8,230.50
51	50	Power Seat Base (Driver)	424.80	21,240.00
52	10	Stop Request System	1,274.40	12,744.00
53	80	Back-up Sensor System	849.60	67,968.00
54	5	Alternate Engine - CNG Class I	0.00	0.00
55	5	Alternate Engine - CNG Class II	26,550.00	132,750.00
56	10	Alternate Engine LPG 40 GGE Class I	0.00	0.00
57	10	Alternate Engine LPG 40 GGE Class II	16,992.00	169,920.00
58	10	Alternate Engine LPG 64 GGE Class I	0.00	0.00
59	10	Alternate Engine LPG 64 GGE Class II	20,178.00	201,780.00
60	40	Video Surveillance – Two Camera System	1,593.00	63,720.00
61	20	Video Surveillance - Four Camera System	2,973.60	59,472.00
62	5	Video Surveillance - Six Camera System	4,991.40	24,957.00
63	10	Video Surveillance - DVR System Upgrade	743.40	7,434.00
64	10	Video Surveillance – Extra Interior Cameras	531.00	5,310.00
65	10	Video Surveillance – Extra Exterior Cameras	531.00	5,310.00
66	10	Video Surveillance Prep Package	796.50	7,965.00
67	20	Spare Tire - Steer Axle	371.70	7,434.00
68	40	Spare Tire - Drive Asle	371.70	14,868.00
69	50	Interior Mirror	63.72	3,186.00
70	30	Ceiling Handrails – For buses less than 22 Feet (Deduct)	-212.40	-6,372.00
71	1	Seating – Rear five place passenger – Vinyl	265.50	265.50
72	1	Seating – Rear five place passenger - Fabric	318.60	318.60
		SUBTOTAL (Options AA.)		1,801,688.31
GRAND TOTAL EVALUATION PRICE OF A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA ABOVE				14,294,328.03

Refer to “Standard Contract Terms”, section 7, regarding administration fee.

STATE OF MICHIGAN

Contract No. 071B7700125

Small Class of Non-Lift and Lift Transit Buses

SCHEDULE G PRICING (Metal Body)

MICHIGAN SMALL CLASS OF BUSES - Metal Body

Class 1 - Minimum 5 Years/150,000 Miles

Class 2 - Minimum 7 Years/200,000 Miles

Body Manufacturer:		GOSHEN COACH		
Bidder Company Name:		HOEKSTRA TRANSPORTATION, INC.		
Bidder Address:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
Preparer's Name:		Steve Bolin		
Inspection Facility:		HOEKSTRA TRANSPORTATION, INC.		
Address of Inspection Facility:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
II				
	Qty	Description	Unit Price	Extended Total
		Base Bus Floor Plans – Class One		
		138” (min) Wheelbase Bus – Vinyl Seat Covers		
A.	2	10 passenger without lift	53,692.20	107,384.40
B.	5	4 + 2 passenger with lift	59,746.66	298,733.32
C.	4	11 passenger without lift	53,077.30	212,309.22
D.	3	5 + 2 passenger with lift	60,082.26	180,246.77
		138” (min) Wheelbase Bus – Fabric Seat Covers		
E.	2	10 passenger without lift	53,957.70	107,915.40
F.	25	4 + 2 passenger with lift	60,012.16	1,500,304.10
G.	3	11 passenger without lift	53,369.35	160,108.06
H.	12	5 + 2 passenger with lift	60,374.31	724,491.67
		Base Bus Floor Plans – Class Two		
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
I.	1	18 passenger without lift	55,390.94	55,390.94
J.	8	10 + 1 passenger with lift	58,529.15	468,233.23
K.	6	8 + 2 passenger with lift	59,596.46	357,578.78
L.	5	4 + 2 passenger with lift	60,743.42	303,717.12
		158” (min) Wheelbase Bus – Fabric Seat Covers		
M.	1	18 passenger without lift	55,868.84	55,868.84
N.	15	10 + 1 passenger with lift	58,847.75	882,716.31
O.	7	8 + 2 passenger with lift	59,915.06	419,405.45
P.	4	4 + 2 passenger with lift	60,737.05	242,948.21
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
Q.	2	22 passenger without lift	53,714.23	107,428.46
R.	10	6 + 2 passenger with lift	60,780.59	607,805.94
S.	18	10 + 2 passenger with lift	60,062.86	1,081,131.55
T.	12	4 + 2 passenger with lift	61,050.52	732,606.29

		158" (min) Wheelbase Bus – Fabric Seat Covers		
U.	2	22 passenger without lift	54,298.33	108,596.66
V.	8	6 + 2 passenger with lift	61,205.39	489,643.15
W.	30	10 + 2 passenger with lift	60,434.56	1,813,036.92
X.	15	4 + 2 passenger with lift	61,560.28	923,404.26
SUBTOTAL (Buses A-X)				11,941,005.06
AA.		Equipment Options		
1	40	Air Conditioning – Split System	4,069.58	162,783.36
2	40	Air Conditioning – Tie-in System	2,655.00	106,200.00
3	30	Air Conditioning - Rooftop System	7,168.50	215,055.00
4	75	Auxiliary Coolant Heater	1,741.68	130,626.00
5	50	Auxiliary Air Heater	3,239.10	161,955.00
6	5	Destination Sign – Roller Curtain	2,230.20	11,151.00
7	25	Destination Sign – LED	3,717.00	92,925.00
8	50	Donation box (in lieu of standard farebox – deduct)	-902.70	-45,135.00
9	50	Driver Side Running Board	318.60	15,930.00
10	50	Farebox Electrical Prep Only (less standard farebox- deduct)	-1,189.44	-59,472.00
11	50	Limited Slip Differential	318.60	15,930.00
12	50	Rear Emergency Exit Window	-955.80	-47,790.00
13	40	Paint - One stripe	1,593.00	63,720.00
14	40	Paint - Roof second color	531.00	21,240.00
15	40	Paint - Different Full body	2,655.00	106,200.00
16	25	Reflective Vinyl Belt Stripe	531.00	13,275.00
17	20	Lift – Type I (in lieu of standard lift - deduct)	0.00	0.00
18	20	Lift – Type II – Powered outer barrier (in lieu of standard lift)	0.00	0.00
19	20	Lift - Folding Platform (in lieu of standard lift)	0.00	0.00
20	30	Alternate Standard Lift Manufacturer	531.00	15,930.00
21	100	Wheelchair Single Point Securement System (in lieu of one standard L-Track position)	265.50	26,550.00
22	15	Additional Wheelchair Position – L Track System	637.20	9,558.00
23	15	Additional Wheelchair Position – Single Point System	722.16	10,832.40
24	40	Two-way radio prep package	223.02	8,920.80
25	40	Radio - AM/FM stereo system w/ four speakers	371.70	14,868.00
26	10	Public Address (PA) System Only w/ two speakers	371.70	3,717.00
27	10	Radio – AM/FM/PA System w/ four speakers	531.00	5,310.00
28	10	Radio – Speaker only (additional)	106.20	1,062.00
29	20	Raised Flooring (No Wheel Wells)	637.20	12,744.00
30	75	Rubber Flooring (In lieu of smooth slip resistant flooring)	0.00	0.00
31	75	Entrance Stepwell Heater	318.60	23,895.00
32	50	Manual Entrance Door	-106.20	-5,310.00
33	5	Seating – Forward Facing Standard Double Seat – Vinyl	477.90	2,389.50
34	5	Seating – Forward Facing Standard Double Seat – Fabric	531.00	2,655.00
35	5	Seating – Forward Facing Standard Double Seat – Vinyl (Deduct)	-477.90	-2,389.50
36	5	Seating – Forward Facing Standard Double Seat – Fabric (Deduct)	-531.00	-2,655.00
37	5	Seating – Forward Facing Double Fold-A-Way – Vinyl	759.33	3,796.65
38	5	Seating – Forward Facing Double Fold-A-Way – Fabric	812.43	4,062.15
39	5	Seating – Forward Facing Double Fold-A-Way – Vinyl (Deduct)	-759.33	-3,796.65
40	5	Seating – Forward Facing Double Fold-A-Way – Fabric (Deduct)	-812.43	-4,062.15
41	5	Seating – Single Flip-up – Vinyl	361.08	1,805.40

42	5	Seating – Single Flip-up – Fabric	387.63	1,938.15
43	5	Seating – Double Flip-up – Vinyl	536.31	2,681.55
44	5	Seating – Double Flip-up – Fabric	589.41	2,947.05
45	5	Seating – Double w/Single Integrated Child Seat (ICS) - Vinyl	1,083.24	5,416.20
46	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric	1,136.34	5,681.70
47	5	Seating – Double w/Single Integrated Child Seat (ICS) – Vinyl (Deduct)	-1,083.24	-5,416.20
48	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric (Deduct)	-1,136.34	-5,681.70
49	5	Seating – Double w/Double Integrated Child Seat (ICS) - Vinyl	1,593.00	7,965.00
50	5	Seating – Double w/Double Integrated Child Seat (ICS) - Fabric	1,646.10	8,230.50
51	50	Power Seat Base (Driver)	424.80	21,240.00
52	10	Stop Request System	1,274.40	12,744.00
53	80	Back-up Sensor System	849.60	67,968.00
54	5	Alternate Engine - CNG Class I	0.00	0.00
55	5	Alternate Engine - CNG Class II	26,550.00	132,750.00
56	10	Alternate Engine LPG 40 GGE Class I	0.00	0.00
57	10	Alternate Engine LPG 40 GGE Class II	16,992.00	169,920.00
58	10	Alternate Engine LPG 64 GGE Class I	0.00	0.00
59	10	Alternate Engine LPG 64 GGE Class II	20,178.00	201,780.00
60	40	Video Surveillance – Two Camera System	1,593.00	63,720.00
61	20	Video Surveillance - Four Camera System	2,973.60	59,472.00
62	5	Video Surveillance - Six Camera System	4,991.40	24,957.00
63	10	Video Surveillance - DVR System Upgrade	743.40	7,434.00
64	10	Video Surveillance – Extra Interior Cameras	531.00	5,310.00
65	10	Video Surveillance – Extra Exterior Cameras	531.00	5,310.00
66	10	Video Surveillance Prep Package	796.50	7,965.00
67	20	Spare Tire - Steer Axle	371.70	7,434.00
68	40	Spare Tire - Drive Asle	371.70	14,868.00
69	50	Interior Mirror	63.72	3,186.00
70	30	Ceiling Handrails – For buses less than 22 Feet (Deduct)	-212.40	-6,372.00
71	1	Seating – Rear five place passenger – Vinyl	265.50	265.50
72	1	Seating – Rear five place passenger - Fabric	318.60	318.60
		SUBTOTAL (Options AA.)		1,918,508.31
GRAND TOTAL EVALUATION PRICE OF A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA ABOVE				13,859,513.37

Refer to “Standard Contract Terms”, section 7, regarding administration fee.



STATE OF MICHIGAN
ENTERPRISE PROCUREMENT
Department of Technology, Management, and Budget
525 W. ALLEGAN ST., LANSING, MICHIGAN 48913
P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number **1**
to
Contract Number **071B7700125C**

CONTRACTOR	Hoekstra Transportation, Inc.
	3741 Roger B Chaffee
	Grand Rapids, MI 49548
	Steve Bolin
	616-299-5170
	sbolin@hoekstratruck.com
	*****0325

STATE	Program Manager	Jeff Turner	MDOT
		517-335-3282	
		Turnerj3@Michigan.gov	
	Contract Administrator	Yvon Dufour	DTMB
		(517) 284-6996	
		dufoury@michigan.gov	

CONTRACT SUMMARY				
SMALL CLASS NON-LIFT AND LIFT BUSES				
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW	
April 1, 2017	March 31, 2019	2 - 1 Year	March 31, 2019	
PAYMENT TERMS		DELIVERY TIMEFRAME		
Net 45 Days				
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING	
<input type="checkbox"/> P-Card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
MINIMUM DELIVERY REQUIREMENTS				
DESCRIPTION OF CHANGE NOTICE				
OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
<input type="checkbox"/>		<input type="checkbox"/>		March 31, 2019
CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE		
\$11,134,124.80	\$0.00	\$11,134,124.80		
DESCRIPTION				
Effective 11/1/2017 pricing on this contract hereby updated (added two seating options), per revised Schedule G - Pricing (Composite & Metal Bodies). All other terms, conditions, specifications and pricing remain the same. Per agency request, and DTMB Procurement approval.				

STATE OF MICHIGAN

Contract No. 071B7700125

Small Class of Non-Lift and Lift Transit Buses

SCHEDULE G PRICING (Composite Body)

MICHIGAN SMALL CLASS OF BUSES - Composite Body

Class 1 - Minimum 5 Years/150,000 Miles

Class 2 - Minimum 7 Years/200,000 Miles

Body Manufacturer:		ELDORADO NATIONAL		
Bidder Company Name:		HOEKSTRA TRANSPORTATION, INC.		
Bidder Address:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
Preparer's Name:		Steve Bolin		
Inspection Facility:		HOEKSTRA TRANSPORTATION, INC.		
Address of Inspection Facility:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
II				
	Qty	Description	Unit Price	Extended Total
		Base Bus Floor Plans – Class One		
		138” (min) Wheelbase Bus – Vinyl Seat Covers		
A.	2	10 passenger without lift	50,632.00	101,264.00
B.	5	4 + 2 passenger with lift	56,022.00	280,110.00
C.	4	11 passenger without lift	50,817.00	203,268.00
D.	3	5 + 2 passenger with lift	56,237.00	168,711.00
		138” (min) Wheelbase Bus – Fabric Seat Covers		
E.	2	10 passenger without lift	50,882.00	101,764.00
F.	25	4 + 2 passenger with lift	56,272.00	1,406,800.00
G.	3	11 passenger without lift	51,092.00	153,276.00
H.	12	5 + 2 passenger with lift	56,512.00	678,144.00
		Base Bus Floor Plans – Class Two		
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
I.	1	18 passenger without lift	56,036.00	56,036.00
J.	8	10 + 1 passenger with lift	60,086.00	480,688.00
K.	6	8 + 2 passenger with lift	61,001.00	366,006.00
L.	5	4 + 2 passenger with lift	62,151.00	310,755.00
		158” (min) Wheelbase Bus – Fabric Seat Covers		
M.	1	18 passenger without lift	56,486.00	56,486.00
N.	15	10 + 1 passenger with lift	60,386.00	905,790.00
O.	7	8 + 2 passenger with lift	61,301.00	429,107.00
P.	4	4 + 2 passenger with lift	62,551.00	250,204.00
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
Q.	2	22 passenger without lift	55,751.00	111,502.00
R.	10	6 + 2 passenger with lift	62,306.00	623,060.00
S.	18	10 + 2 passenger with lift	62,351.00	1,122,318.00
T.	12	4 + 2 passenger with lift	64,456.00	773,472.00
		158” (min) Wheelbase Bus – Fabric Seat Covers		

U.	2	22 passenger without lift	56,301.00	112,602.00
V.	8	6 + 2 passenger with lift	62,706.00	501,648.00
W.	30	10 + 2 passenger with lift	62,701.00	1,881,030.00
X.	15	4 + 2 passenger with lift	64,906.00	973,590.00
SUBTOTAL (Buses A-X)				12,047,631.00
AA.		Equipment Options		
1	40	Air Conditioning – Split System	3,832.00	153,280.00
2	40	Air Conditioning – Tie-in System	2,500.00	100,000.00
3	30	Air Conditioning - Rooftop System	6,750.00	202,500.00
4	75	Auxiliary Coolant Heater	1,640.00	123,000.00
5	50	Auxiliary Air Heater	3,050.00	152,500.00
6	5	Destination Sign – Roller Curtain	2,100.00	10,500.00
7	25	Destination Sign – LED	3,500.00	87,500.00
8	50	Donation box (in lieu of standard farebox – deduct)	-850.00	-42,500.00
9	50	Driver Side Running Board	300.00	15,000.00
10	50	Farebox Electrical Prep Only (less standard farebox- deduct)	-1,120.00	-56,000.00
11	50	Limited Slip Differential	300.00	15,000.00
12	50	Rear Emergency Exit Window	-900.00	-45,000.00
13	40	Paint - One stripe	450.00	18,000.00
14	40	Paint - Roof second color	100.00	4,000.00
15	40	Paint - Different Full body	1,400.00	56,000.00
16	25	Reflective Vinyl Belt Stripe	500.00	12,500.00
17	20	Lift – Type I (in lieu of standard lift - deduct)	0.00	0.00
18	20	Lift – Type II – Powered outer barrier (in lieu of standard lift)	-200.00	-4,000.00
19	20	Lift - Folding Platform (in lieu of standard lift)	-200.00	-4,000.00
20	30	Alternate Standard Lift Manufacturer	500.00	15,000.00
21	100	Wheelchair Single Point Securement System (in lieu of one standard L-Track position)	250.00	25,000.00
22	15	Additional Wheelchair Position – L Track System	600.00	9,000.00
23	15	Additional Wheelchair Position – Single Point System	680.00	10,200.00
24	40	Two-way radio prep package	210.00	8,400.00
25	40	Radio - AM/FM stereo system w/ four speakers	350.00	14,000.00
26	10	Public Address (PA) System Only w/ two speakers	350.00	3,500.00
27	10	Radio – AM/FM/PA System w/ four speakers	500.00	5,000.00
28	10	Radio – Speaker only (additional)	100.00	1,000.00
29	20	Raised Flooring (No Wheel Wells)	600.00	12,000.00
30	75	Rubber Flooring (In lieu of smooth slip resistant flooring)	0.00	0.00
31	75	Entrance Stepwell Heater	300.00	22,500.00
32	50	Manual Entrance Door	-100.00	-5,000.00
33	5	Seating – Forward Facing Standard Double Seat – Vinyl	450.00	2,250.00
34	5	Seating – Forward Facing Standard Double Seat – Fabric	500.00	2,500.00
35	5	Seating – Forward Facing Standard Double Seat – Vinyl (Deduct)	-450.00	-2,250.00
36	5	Seating – Forward Facing Standard Double Seat – Fabric (Deduct)	-500.00	-2,500.00
37	5	Seating – Forward Facing Double Fold-A-Way – Vinyl	715.00	3,575.00
38	5	Seating – Forward Facing Double Fold-A-Way – Fabric	765.00	3,825.00
39	5	Seating – Forward Facing Double Fold-A-Way – Vinyl (Deduct)	-715.00	-3,575.00
40	5	Seating – Forward Facing Double Fold-A-Way – Fabric (Deduct)	-765.00	-3,825.00
41	5	Seating – Single Flip-up – Vinyl	340.00	1,700.00
42	5	Seating – Single Flip-up – Fabric	365.00	1,825.00

43	5	Seating – Double Flip-up – Vinyl	505.00	2,525.00
44	5	Seating – Double Flip-up – Fabric	555.00	2,775.00
45	5	Seating – Double w/Single Integrated Child Seat (ICS) - Vinyl	1,020.00	5,100.00
46	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric	1,070.00	5,350.00
47	5	Seating – Double w/Single Integrated Child Seat (ICS) – Vinyl (Deduct)	-1,020.00	-5,100.00
48	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric (Deduct)	-1,070.00	-5,350.00
49	5	Seating – Double w/Double Integrated Child Seat (ICS) - Vinyl	1,500.00	7,500.00
50	5	Seating – Double w/Double Integrated Child Seat (ICS) - Fabric	1,550.00	7,750.00
51	50	Power Seat Base (Driver)	400.00	20,000.00
52	10	Stop Request System	1,200.00	12,000.00
53	80	Back-up Sensor System	800.00	64,000.00
54	5	Alternate Engine - CNG Class I	0.00	0.00
55	5	Alternate Engine - CNG Class II	25,000.00	125,000.00
56	10	Alternate Engine LPG 40 GGE Class I	0.00	0.00
57	10	Alternate Engine LPG 40 GGE Class II	16,000.00	160,000.00
58	10	Alternate Engine LPG 64 GGE Class I	0.00	0.00
59	10	Alternate Engine LPG 64 GGE Class II	19,000.00	190,000.00
60	40	Video Surveillance – Two Camera System	1,500.00	60,000.00
61	20	Video Surveillance - Four Camera System	2,800.00	56,000.00
62	5	Video Surveillance - Six Camera System	4,700.00	23,500.00
63	10	Video Surveillance - DVR System Upgrade	700.00	7,000.00
64	10	Video Surveillance – Extra Interior Cameras	500.00	5,000.00
65	10	Video Surveillance – Extra Exterior Cameras	500.00	5,000.00
66	10	Video Surveillance Prep Package	750.00	7,500.00
67	20	Spare Tire - Steer Axle	350.00	7,000.00
68	40	Spare Tire - Drive Asle	350.00	14,000.00
69	50	Interior Mirror	60.00	3,000.00
70	30	Ceiling Handrails – For buses less than 22 Feet (Deduct)	-200.00	-6,000.00
71	1	Seating – Rear five place passenger – Vinyl	250.00	250.00
72	1	Seating – Rear five place passenger - Fabric	300.00	300.00
		SUBTOTAL (Options AA.)		1,696,505.00
GRAND TOTAL EVALUATION PRICE OF A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA ABOVE				13,744,136.00

Refer to “Standard Contract Terms”, section 7, regarding administration fee.

STATE OF MICHIGAN

Contract No. 071B7700125

Small Class of Non-Lift and Lift Transit Buses

SCHEDULE G PRICING (Metal Body)

MICHIGAN SMALL CLASS OF BUSES - Metal Body

Class 1 - Minimum 5 Years/150,000 Miles

Class 2 - Minimum 7 Years/200,000 Miles

Body Manufacturer:		GOSHEN COACH		
Bidder Company Name:		HOEKSTRA TRANSPORTATION, INC.		
Bidder Address:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
Preparer's Name:		Steve Bolin		
Inspection Facility:		HOEKSTRA TRANSPORTATION, INC.		
Address of Inspection Facility:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
II				
	Qty	Description	Unit Price	Extended Total
		Base Bus Floor Plans – Class One		
		138” (min) Wheelbase Bus – Vinyl Seat Covers		
A.	2	10 passenger without lift	51,896.00	103,792.00
B.	5	4 + 2 passenger with lift	57,597.00	287,985.00
C.	4	11 passenger without lift	51,317.00	205,268.00
D.	3	5 + 2 passenger with lift	57,913.00	173,739.00
		138” (min) Wheelbase Bus – Fabric Seat Covers		
E.	2	10 passenger without lift	52,146.00	104,292.00
F.	25	4 + 2 passenger with lift	57,847.00	1,446,175.00
G.	3	11 passenger without lift	51,592.00	154,776.00
H.	12	5 + 2 passenger with lift	58,188.00	698,256.00
		Base Bus Floor Plans – Class Two		
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
I.	1	18 passenger without lift	53,586.00	53,586.00
J.	8	10 + 1 passenger with lift	56,541.00	452,328.00
K.	6	8 + 2 passenger with lift	57,546.00	345,276.00
L.	5	4 + 2 passenger with lift	58,626.00	293,130.00
		158” (min) Wheelbase Bus – Fabric Seat Covers		
M.	1	18 passenger without lift	54,036.00	54,036.00
N.	15	10 + 1 passenger with lift	56,841.00	852,615.00
O.	7	8 + 2 passenger with lift	57,846.00	404,922.00
P.	4	4 + 2 passenger with lift	58,620.00	234,480.00
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
Q.	2	22 passenger without lift	52,053.00	104,106.00
R.	10	6 + 2 passenger with lift	58,661.00	586,610.00
S.	18	10 + 2 passenger with lift	58,031.00	1,044,558.00
T.	12	4 + 2 passenger with lift	58,961.00	707,532.00

		158" (min) Wheelbase Bus – Fabric Seat Covers		
U.	2	22 passenger without lift	52,603.00	105,206.00
V.	8	6 + 2 passenger with lift	59,061.00	472,488.00
W.	30	10 + 2 passenger with lift	58,381.00	1,751,430.00
X.	15	4 + 2 passenger with lift	59,441.00	891,615.00
SUBTOTAL (Buses A-X)				11,528,201.00
AA.		Equipment Options		
1	40	Air Conditioning – Split System	3,832.00	153,280.00
2	40	Air Conditioning – Tie-in System	2,500.00	100,000.00
3	30	Air Conditioning - Rooftop System	6,750.00	202,500.00
4	75	Auxiliary Coolant Heater	1,640.00	123,000.00
5	50	Auxiliary Air Heater	3,050.00	152,500.00
6	5	Destination Sign – Roller Curtain	2,100.00	10,500.00
7	25	Destination Sign – LED	3,500.00	87,500.00
8	50	Donation box (in lieu of standard farebox – deduct)	-850.00	-42,500.00
9	50	Driver Side Running Board	300.00	15,000.00
10	50	Farebox Electrical Prep Only (less standard farebox- deduct)	-1,120.00	-56,000.00
11	50	Limited Slip Differential	300.00	15,000.00
12	50	Rear Emergency Exit Window	-900.00	-45,000.00
13	40	Paint - One stripe	1,500.00	60,000.00
14	40	Paint - Roof second color	500.00	20,000.00
15	40	Paint - Different Full body	2,500.00	100,000.00
16	25	Reflective Vinyl Belt Stripe	500.00	12,500.00
17	20	Lift – Type I (in lieu of standard lift - deduct)	0.00	0.00
18	20	Lift – Type II – Powered outer barrier (in lieu of standard lift)	0.00	0.00
19	20	Lift - Folding Platform (in lieu of standard lift)	0.00	0.00
20	30	Alternate Standard Lift Manufacturer	500.00	15,000.00
21	100	Wheelchair Single Point Securement System (in lieu of one standard L-Track position)	250.00	25,000.00
22	15	Additional Wheelchair Position – L Track System	600.00	9,000.00
23	15	Additional Wheelchair Position – Single Point System	680.00	10,200.00
24	40	Two-way radio prep package	210.00	8,400.00
25	40	Radio - AM/FM stereo system w/ four speakers	350.00	14,000.00
26	10	Public Address (PA) System Only w/ two speakers	350.00	3,500.00
27	10	Radio – AM/FM/PA System w/ four speakers	500.00	5,000.00
28	10	Radio – Speaker only (additional)	100.00	1,000.00
29	20	Raised Flooring (No Wheel Wells)	600.00	12,000.00
30	75	Rubber Flooring (In lieu of smooth slip resistant flooring)	0.00	0.00
31	75	Entrance Stepwell Heater	300.00	22,500.00
32	50	Manual Entrance Door	-100.00	-5,000.00
33	5	Seating – Forward Facing Standard Double Seat – Vinyl	450.00	2,250.00
34	5	Seating – Forward Facing Standard Double Seat – Fabric	500.00	2,500.00
35	5	Seating – Forward Facing Standard Double Seat – Vinyl (Deduct)	-450.00	-2,250.00
36	5	Seating – Forward Facing Standard Double Seat – Fabric (Deduct)	-500.00	-2,500.00
37	5	Seating – Forward Facing Double Fold-A-Way – Vinyl	715.00	3,575.00
38	5	Seating – Forward Facing Double Fold-A-Way – Fabric	765.00	3,825.00
39	5	Seating – Forward Facing Double Fold-A-Way – Vinyl (Deduct)	-715.00	-3,575.00
40	5	Seating – Forward Facing Double Fold-A-Way – Fabric (Deduct)	-765.00	-3,825.00
41	5	Seating – Single Flip-up – Vinyl	340.00	1,700.00

42	5	Seating – Single Flip-up – Fabric	365.00	1,825.00
43	5	Seating – Double Flip-up – Vinyl	505.00	2,525.00
44	5	Seating – Double Flip-up – Fabric	555.00	2,775.00
45	5	Seating – Double w/Single Integrated Child Seat (ICS) - Vinyl	1,020.00	5,100.00
46	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric	1,070.00	5,350.00
47	5	Seating – Double w/Single Integrated Child Seat (ICS) – Vinyl (Deduct)	-1,020.00	-5,100.00
48	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric (Deduct)	-1,070.00	-5,350.00
49	5	Seating – Double w/Double Integrated Child Seat (ICS) - Vinyl	1,500.00	7,500.00
50	5	Seating – Double w/Double Integrated Child Seat (ICS) - Fabric	1,550.00	7,750.00
51	50	Power Seat Base (Driver)	400.00	20,000.00
52	10	Stop Request System	1,200.00	12,000.00
53	80	Back-up Sensor System	800.00	64,000.00
54	5	Alternate Engine - CNG Class I	0.00	0.00
55	5	Alternate Engine - CNG Class II	25,000.00	125,000.00
56	10	Alternate Engine LPG 40 GGE Class I	0.00	0.00
57	10	Alternate Engine LPG 40 GGE Class II	16,000.00	160,000.00
58	10	Alternate Engine LPG 64 GGE Class I	0.00	0.00
59	10	Alternate Engine LPG 64 GGE Class II	19,000.00	190,000.00
60	40	Video Surveillance – Two Camera System	1,500.00	60,000.00
61	20	Video Surveillance - Four Camera System	2,800.00	56,000.00
62	5	Video Surveillance - Six Camera System	4,700.00	23,500.00
63	10	Video Surveillance - DVR System Upgrade	700.00	7,000.00
64	10	Video Surveillance – Extra Interior Cameras	500.00	5,000.00
65	10	Video Surveillance – Extra Exterior Cameras	500.00	5,000.00
66	10	Video Surveillance Prep Package	750.00	7,500.00
67	20	Spare Tire - Steer Axle	350.00	7,000.00
68	40	Spare Tire - Drive Asle	350.00	14,000.00
69	50	Interior Mirror	60.00	3,000.00
70	30	Ceiling Handrails – For buses less than 22 Feet (Deduct)	-200.00	-6,000.00
71	1	Seating – Rear five place passenger – Vinyl	250.00	250.00
72	1	Seating – Rear five place passenger - Fabric	300.00	300.00
		SUBTOTAL (Options AA.)		1,806,505.00
GRAND TOTAL EVALUATION PRICE OF A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA ABOVE				13,334,706.00

Refer to “Standard Contract Terms”, section 7, regarding administration fee.



STATE OF MICHIGAN ENTERPRISE PROCUREMENT

Department of Technology, Management, and Budget

525 W. Allegan St., Lansing, Michigan 48913

P.O. Box 30026 Lansing, Michigan 48909

NOTICE OF CONTRACT

NOTICE OF CONTRACT NO. **071B7700125**

between

THE STATE OF MICHIGAN

and

CONTRACTOR	Hoekstra Transportation, Inc.
	3741 Roger B Chaffee
	Grand Rapids, MI 49548
	Steve Bolin
	(616) 299-5170
	sbolin@hoekstratruck.com
	*****0325

STATE	Program Manager	Jeff Turner	MDOT
		(517) 335-3282	
		Turnerj3@michigan.gov	
	Contract Administrator	Yvon Dufour	DTMB
		(517) 284-6996	
		dufoury@michigan.gov	

CONTRACT SUMMARY

DESCRIPTION: Small Class Non-Lift and Lift Buses

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW
April 1, 2017	March 31, 2019	2, one year	
PAYMENT TERMS		DELIVERY TIMEFRAME	
45 Days		90-120 Days	
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
<input type="checkbox"/> P-card <input type="checkbox"/> Direct Voucher (DV) <input type="checkbox"/> Other			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
MINIMUM DELIVERY REQUIREMENTS			
F.O.B. Destination			
MISCELLANEOUS INFORMATION			
ESTIMATED CONTRACT VALUE AT TIME OF EXECUTION			\$11,134,124.80



STATE OF MICHIGAN

STANDARD CONTRACT TERMS

This STANDARD CONTRACT ("**Contract**") is agreed to between the State of Michigan (the "**State**") and Hoekstra Transportation, Inc. ("**Contractor**"), a Michigan corporation. This Contract is effective on April 1, 2017 ("**Effective Date**"), and unless terminated, expires on March 31, 2019.

This Contract may be renewed for up to two (2) additional one (1) year periods. Renewal must be by written agreement of the parties and will automatically extend the Term of this Contract.

The parties agree as follows:

1. **Duties of Contractor.** Contractor must perform the services and provide the deliverables described in **Schedule A – Statement of Work** (the "**Contract Activities**"). An obligation to provide delivery of any commodity is considered a service and is a Contract Activity.

Contractor must furnish all labor, equipment, materials, and supplies necessary for the performance of the Contract Activities, and meet operational standards, unless otherwise specified in Schedule A.

Contractor must: (a) perform the Contract Activities in a timely, professional, safe, and workmanlike manner consistent with standards in the trade, profession, or industry; (b) meet or exceed the performance and operational standards, and specifications of the Contract; (c) provide all Contract Activities in good quality, with no material defects; (d) not interfere with the State's operations; (e) obtain and maintain all necessary licenses, permits or other authorizations necessary for the performance of the Contract; (f) cooperate with the State, including the State's quality assurance personnel, and any third party to achieve the objectives of the Contract; (g) return to the State any State-furnished equipment or other resources in the same condition as when provided when no longer required for the Contract; (h) not make any media releases without prior written authorization from the State; (i) assign to the State any claims resulting from state or federal antitrust violations to the extent that those violations concern materials or services supplied by third parties toward fulfillment of the Contract; (j) comply with all State physical and IT security policies and standards which will be made available upon request; and (k) provide the State priority in performance of the Contract except as mandated by federal disaster response requirements. Any breach under this paragraph is considered a material breach.

Contractor must also be clearly identifiable while on State property by wearing identification issued by the State, and clearly identify themselves whenever making contact with the State.

2. **Notices.** All notices and other communications required or permitted under this Contract must be in writing and will be considered given and received: (a) when verified by written receipt if sent by courier; (b) when actually received if sent by mail without verification of receipt; or (c) when verified by automated receipt or electronic logs if sent by facsimile or email.

If to State:	If to Contractor:
Yvon Dufour 525 W. Allegan, Constitution Hall, 1 st Floor NE Lansing, MI 48933 dufoury@michigan.gov (517) 284-6996	Steve Bolin Hoekstra Transportation, Inc. 3741 Roger B Chaffee Blvd Grand Rapids, MI 49548 SBolin@HoekstraInc.com 616-389-1130

3. **Contract Administrator.** The Contract Administrator for each party is the only person authorized to modify any terms of this Contract, and approve and execute any change under this Contract (each a "**Contract Administrator**"):

State:	Contractor:
Yvon Dufour 525 W. Allegan, Constitution Hall, 1 st Floor NE Lansing, MI 48933 dufoury@michigan.gov (517) 284-6996	Steve Bolin Hoekstra Transportation, Inc. 3741 Roger B Chaffee Blvd Grand Rapids, MI 49548 SBolin@Hoekstralnc.com 616-389-1130

4. **Program Manager.** The Program Manager for each party will monitor and coordinate the day-to-day activities of the Contract (each a “**Program Manager**”):

State:	Contractor:
Jeff Turner 425 W Ottawa St Lansing, MI 48908 turnerj3@michigan.gov 517-335-3282	Steve Bolin Hoekstra Transportation, Inc. 3741 Roger B Chaffee Blvd Grand Rapids, MI 49548 SBolin@Hoekstralnc.com 616-389-1130

5. **Performance Guarantee.** Contractor must at all times have financial resources sufficient, in the opinion of the State, to ensure performance of the Contract and must provide proof upon request. The State may require a performance bond (as specified in Schedule A) if, in the opinion of the State, it will ensure performance of the Contract.
6. **Insurance Requirements.** Contractor must maintain the insurances identified below and is responsible for all deductibles. All required insurance must: (a) protect the State from claims that may arise out of, are alleged to arise out of, or result from Contractor's or a subcontractor's performance; (b) be primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the State; and (c) be provided by a company with an A.M. Best rating of "A" or better, and a financial size of VII or better.

Required Limits	Additional Requirements
Commercial General Liability Insurance	
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence Limit \$1,000,000 Personal & Advertising Injury Limit \$2,000,000 General Aggregate Limit \$2,000,000 Products/Completed Operations <u>Deductible Maximum:</u> \$50,000 Each Occurrence	Contractor must have their policy endorsed to add “the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents” as additional insureds using endorsement CG 20 10 11 85, or both CG 2010 07 04 and CG 2037 07 0. Coverage must not have exclusions or limitations related to sexual abuse and molestation liability.
Automobile Liability Insurance	
<u>Minimal Limits:</u> \$1,000,000 Per Occurrence	Contractor must have their policy: (1) endorsed to add “the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents” as additional insureds; and (2) include Hired and Non-Owned Automobile coverage.
Workers' Compensation Insurance	

<u>Minimal Limits:</u> Coverage according to applicable laws governing work activities.	Waiver of subrogation, except where waiver is prohibited by law.
Employers Liability Insurance	
<u>Minimal Limits:</u> \$500,000 Each Accident \$500,000 Each Employee by Disease \$500,000 Aggregate Disease.	
Hired and Non-Owned Motor Vehicle Insurance	
<u>Minimal Limits:</u> \$1,000,000 Per Accident	Contractor must have their policy endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds.

If any of the required policies provide **claims-made** coverage, the Contractor must: (a) provide coverage with a retroactive date before the effective date of the contract or the beginning of Contract Activities; (b) maintain coverage and provide evidence of coverage for at least three (3) years after completion of the Contract Activities; and (c) if coverage is canceled or not renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, Contractor must purchase extended reporting coverage for a minimum of three (3) years after completion of work.

Contractor must: (a) provide insurance certificates to the Contract Administrator, containing the agreement or purchase order number, at Contract formation and within 20 calendar days of the expiration date of the applicable policies; (b) require that subcontractors maintain the required insurances contained in this Section; (c) notify the Contract Administrator within 5 business days if any insurance is cancelled; and (d) waive all rights against the State for damages covered by insurance. Failure to maintain the required insurance does not limit this waiver.

This Section is not intended to and is not be construed in any manner as waiving, restricting or limiting the liability of either party for any obligations under this Contract (including any provisions hereof requiring Contractor to indemnify, defend and hold harmless the State).

7. **Administrative Fee and Reporting.** Contractor must pay an administrative fee of .25% on all payments made to Contractor under the Contract including transactions with the State (including its departments, divisions, agencies, offices, and commissions), and authorized Michigan transit agencies. Administrative fee payments must be made by check payable to the State of Michigan and mailed to:

Department of Technology, Management and Budget
Financial Services – Cashier Unit
Lewis Cass Building
320 South Walnut St.
P.O. Box 30681
Lansing, MI 48909

Contractor must submit an itemized purchasing activity report, which includes at a minimum, the name of the purchasing entity and the total dollar volume in sales. Reports should be mailed to DTMB-Procurement.

The administrative fee and purchasing activity report are due within 30 calendar days from the last day of each calendar quarter.

8. **Reserved.**
9. **Independent Contractor.** Contractor is an independent contractor and assumes all rights, obligations and liabilities set forth in this Contract. Contractor, its employees, and agents will not be considered

employees of the State. No partnership or joint venture relationship is created by virtue of this Contract. Contractor, and not the State, is responsible for the payment of wages, benefits and taxes of Contractor's employees and any subcontractors. Prior performance does not modify Contractor's status as an independent contractor

10. **Subcontracting.** Contractor may not delegate any of its obligations under the Contract without the prior written approval of the State. Contractor must notify the State at least 90 calendar days before the proposed delegation, and provide the State any information it requests to determine whether the delegation is in its best interest. If approved, Contractor must: (a) be the sole point of contact regarding all contractual matters, including payment and charges for all Contract Activities; (b) make all payments to the subcontractor; and (c) incorporate the terms and conditions contained in this Contract in any subcontract with a subcontractor. Contractor remains responsible for the completion of the Contract Activities, compliance with the terms of this Contract, and the acts and omissions of the subcontractor. The State, in its sole discretion, may require the replacement of any subcontractor.
11. **Staffing.** The State's Contract Administrator may require Contractor to remove or reassign personnel by providing a notice to Contractor.
12. **Background Checks.** Upon request, Contractor must perform background checks on all employees and subcontractors and its employees prior to their assignment. The scope is at the discretion of the State and documentation must be provided as requested. Contractor is responsible for all costs associated with the requested background checks. The State, in its sole discretion, may also perform background checks.
13. **Assignment.** Contractor may not assign this Contract to any other party without the prior approval of the State. Upon notice to Contractor, the State, in its sole discretion, may assign in whole or in part, its rights or responsibilities under this Contract to any other party. If the State determines that a novation of the Contract to a third party is necessary, Contractor will agree to the novation and provide all necessary documentation and signatures.
14. **Change of Control.** Contractor will notify, at least 90 calendar days before the effective date, the State of a change in Contractor's organizational structure or ownership. For purposes of this Contract, a change in control means any of the following: (a) a sale of more than 50% of Contractor's stock; (b) a sale of substantially all of Contractor's assets; (c) a change in a majority of Contractor's board members; (d) consummation of a merger or consolidation of Contractor with any other entity; (e) a change in ownership through a transaction or series of transactions; (f) or the board (or the stockholders) approves a plan of complete liquidation. A change of control does not include any consolidation or merger effected exclusively to change the domicile of Contractor, or any transaction or series of transactions principally for bona fide equity financing purposes.

In the event of a change of control, Contractor must require the successor to assume this Contract and all of its obligations under this Contract.

15. **Ordering.** Contractor is not authorized to begin performance until receipt of authorization as identified in Schedule A.
16. **Acceptance.** Contract Activities are subject to inspection and testing by the State within 30 calendar days of the State's receipt of them ("**State Review Period**"), unless otherwise provided in Schedule A. If the Contract Activities are not fully accepted by the State, the State will notify Contractor by the end of the State Review Period that either: (a) the Contract Activities are accepted, but noted deficiencies must be corrected; or (b) the Contract Activities are rejected. If the State finds material deficiencies, it may: (i) reject the Contract Activities without performing any further inspections; (ii) demand performance at no additional cost; or (iii) terminate this Contract in accordance with Section 23, Termination for Cause.

Within 10 business days from the date of Contractor's receipt of notification of acceptance with deficiencies or rejection of any Contract Activities, Contractor must cure, at no additional cost, the deficiency and deliver unequivocally acceptable Contract Activities to the State. If acceptance with deficiencies or rejection of the Contract Activities impacts the content or delivery of other non-completed Contract Activities, the parties' respective Program Managers must determine an agreed to number of days for re-submission that minimizes the overall impact to the Contract. However, nothing herein affects, alters, or relieves Contractor of its obligations to correct deficiencies in accordance with the time response

standards set forth in this Contract.

If Contractor is unable or refuses to correct the deficiency within the time response standards set forth in this Contract, the State may cancel the order in whole or in part. The State, or a third party identified by the State, may perform the Contract Activities and recover the difference between the cost to cure and the Contract price plus an additional 10% administrative fee.

17. **Delivery.** Contractor must deliver all Contract Activities F.O.B. destination, within the State premises with transportation and handling charges paid by Contractor, unless otherwise specified in Schedule A. All containers and packaging becomes the State's exclusive property upon acceptance.
18. **Risk of Loss and Title.** Until final acceptance, title and risk of loss or damage to Contract Activities remains with Contractor. Contractor is responsible for filing, processing, and collecting all damage claims. The State will record and report to Contractor any evidence of visible damage. If the State rejects the Contract Activities, Contractor must remove them from the premises within 10 calendar days after notification of rejection. The risk of loss of rejected or non-conforming Contract Activities remains with Contractor. Rejected Contract Activities not removed by Contractor within 10 calendar days will be deemed abandoned by Contractor, and the State will have the right to dispose of it as its own property. Contractor must reimburse the State for costs and expenses incurred in storing or effecting removal or disposition of rejected Contract Activities.
19. **Warranty Period.** The warranty period, if applicable, for Contract Activities is a fixed period commencing on the date specified in Schedule A. If the Contract Activities do not function as warranted during the warranty period the State may return such non-conforming Contract Activities to the Contractor for a full refund.
20. **Terms of Payment.** Invoices must conform to the requirements communicated from time-to-time by the State. All undisputed amounts are payable within 45 days of the State's receipt. Contractor may only charge for Contract Activities performed as specified in Schedule A. Invoices must include an itemized statement of all charges. The State is exempt from State sales tax for direct purchases and may be exempt from federal excise tax, if Services purchased under this Agreement are for the State's exclusive use. Notwithstanding the foregoing, all prices are inclusive of taxes, and Contractor is responsible for all sales, use and excise taxes, and any other similar taxes, duties and charges of any kind imposed by any federal, state, or local governmental entity on any amounts payable by the State under this Contract.

The State has the right to withhold payment of any disputed amounts until the parties agree as to the validity of the disputed amount. The State will notify Contractor of any dispute within a reasonable time. Payment by the State will not constitute a waiver of any rights as to Contractor's continuing obligations, including claims for deficiencies or substandard Contract Activities. Contractor's acceptance of final payment by the State constitutes a waiver of all claims by Contractor against the State for payment under this Contract, other than those claims previously filed in writing on a timely basis and still disputed.

The State will only disburse payments under this Contract through Electronic Funds Transfer (EFT). Contractor must register with the State at <http://www.michigan.gov/cpexpress> to receive electronic fund transfer payments. If Contractor does not register, the State is not liable for failure to provide payment. Without prejudice to any other right or remedy it may have, the State reserves the right to set off at any time any amount then due and owing to it by Contractor against any amount payable by the State to Contractor under this Contract.
21. **Liquidated Damages.** Liquidated damages, if applicable, will be assessed as described in Schedule A.
22. **Stop Work Order.** The State may suspend any or all activities under the Contract at any time. The State will provide Contractor a written stop work order detailing the suspension. Contractor must comply with the stop work order upon receipt. Within 90 calendar days, or any longer period agreed to by Contractor, the State will either: (a) issue a notice authorizing Contractor to resume work, or (b) terminate the Contract or purchase order. The State will not pay for Contract Activities, Contractor's lost profits, or any additional compensation during a stop work period.
23. **Termination for Cause.** The State may terminate this Contract for cause, in whole or in part, if Contractor, as determined by the State: (a) endangers the value, integrity, or security of any location, data, or personnel; (b) becomes insolvent, petitions for bankruptcy court proceedings, or has an involuntary bankruptcy proceeding filed against it by any creditor; (c) engages in any conduct that may

expose the State to liability; (d) breaches any of its material duties or obligations; or (e) fails to cure a breach within the time stated in a notice of breach. Any reference to specific breaches being material breaches within this Contract will not be construed to mean that other breaches are not material.

If the State terminates this Contract under this Section, the State will issue a termination notice specifying whether Contractor must: (a) cease performance immediately, or (b) continue to perform for a specified period. If it is later determined that Contractor was not in breach of the Contract, the termination will be deemed to have been a Termination for Convenience, effective as of the same date, and the rights and obligations of the parties will be limited to those provided in Section 24, Termination for Convenience.

The State will only pay for amounts due to Contractor for Contract Activities accepted by the State on or before the date of termination, subject to the State's right to set off any amounts owed by the Contractor for the State's reasonable costs in terminating this Contract. The Contractor must pay all reasonable costs incurred by the State in terminating this Contract for cause, including administrative costs, attorneys' fees, court costs, transition costs, and any costs the State incurs to procure the Contract Activities from other sources.

- 24. Termination for Convenience.** The State may immediately terminate this Contract in whole or in part without penalty and for any reason, including but not limited to, appropriation or budget shortfalls. The termination notice will specify whether Contractor must: (a) cease performance of the Contract Activities immediately, or (b) continue to perform the Contract Activities in accordance with Section 25, Transition Responsibilities. If the State terminates this Contract for convenience, the State will pay all reasonable costs, as determined by the State, for State approved Transition Responsibilities.

In addition, if there is more than one award resulting from this RFP, the maximum quantities shall be 400 buses per contract. Once one (1) of the contracts reaches the bus order maximum of 400, all awarded contracts shall be terminated.

- 25. Transition Responsibilities.** Upon termination or expiration of this Contract for any reason, Contractor must, for a period of time specified by the State (not to exceed 90 calendar days), provide all reasonable transition assistance requested by the State, to allow for the expired or terminated portion of the Contract Activities to continue without interruption or adverse effect, and to facilitate the orderly transfer of such Contract Activities to the State or its designees. Such transition assistance may include, but is not limited to: (a) continuing to perform the Contract Activities at the established Contract rates; (b) taking all reasonable and necessary measures to transition performance of the work, including all applicable Contract Activities, training, equipment, software, leases, reports and other documentation, to the State or the State's designee; (c) taking all necessary and appropriate steps, or such other action as the State may direct, to preserve, maintain, protect, or return to the State all materials, data, property, and confidential information provided directly or indirectly to Contractor by any entity, agent, vendor, or employee of the State; (d) transferring title in and delivering to the State, at the State's discretion, all completed or partially completed deliverables prepared under this Contract as of the Contract termination date; and (e) preparing an accurate accounting from which the State and Contractor may reconcile all outstanding accounts (collectively, "**Transition Responsibilities**"). This Contract will automatically be extended through the end of the transition period.

- 26. General Indemnification.** Contractor must defend, indemnify and hold the State, its departments, divisions, agencies, offices, commissions, officers, and employees harmless, without limitation, from and against any and all actions, claims, losses, liabilities, damages, costs, attorney fees, and expenses (including those required to establish the right to indemnification), arising out of or relating to: (a) any breach by Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable) of any of the promises, agreements, representations, warranties, or insurance requirements contained in this Contract; (b) any infringement, misappropriation, or other violation of any intellectual property right or other right of any third party; (c) any bodily injury, death, or damage to real or tangible personal property occurring wholly or in part due to action or inaction by Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable); and (d) any acts or omissions of Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable).

The State will notify Contractor in writing if indemnification is sought; however, failure to do so will not relieve Contractor, except to the extent that Contractor is materially prejudiced. Contractor must, to the satisfaction of the State, demonstrate its financial ability to carry out these obligations.

The State is entitled to: (i) regular updates on proceeding status; (ii) participate in the defense of the proceeding; (iii) employ its own counsel; and to (iv) retain control of the defense if the State deems necessary. Contractor will not, without the State's written consent (not to be unreasonably withheld), settle, compromise, or consent to the entry of any judgment in or otherwise seek to terminate any claim, action, or proceeding. To the extent that any State employee, official, or law may be involved or challenged, the State may, at its own expense, control the defense of that portion of the claim.

Any litigation activity on behalf of the State, or any of its subdivisions under this Section, must be coordinated with the Department of Attorney General. An attorney designated to represent the State may not do so until approved by the Michigan Attorney General and appointed as a Special Assistant Attorney General.

27. **Infringement Remedies.** If, in either party's opinion, any piece of equipment, software, commodity, or service supplied by Contractor or its subcontractors, or its operation, use or reproduction, is likely to become the subject of a copyright, patent, trademark, or trade secret infringement claim, Contractor must, at its expense: (a) procure for the State the right to continue using the equipment, software, commodity, or service, or if this option is not reasonably available to Contractor, (b) replace or modify the same so that it becomes non-infringing; or (c) accept its return by the State with appropriate credits to the State against Contractor's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.
28. **Limitation of Liability.** The State is not liable for consequential, incidental, indirect, or special damages, regardless of the nature of the action.
29. **Disclosure of Litigation, or Other Proceeding.** Contractor must notify the State within 14 calendar days of receiving notice of any litigation, investigation, arbitration, or other proceeding (collectively, "**Proceeding**") involving Contractor, a subcontractor, or an officer or director of Contractor or subcontractor, that arises during the term of the Contract, including: (a) a criminal Proceeding; (b) a parole or probation Proceeding; (c) a Proceeding under the Sarbanes-Oxley Act; (d) a civil Proceeding involving: (1) a claim that might reasonably be expected to adversely affect Contractor's viability or financial stability; or (2) a governmental or public entity's claim or written allegation of fraud; or (e) a Proceeding involving any license that Contractor is required to possess in order to perform under this Contract.
30. **State Data.** All data and information provided to Contractor by or on behalf of the State, and all data and information derived therefrom, is the exclusive property of the State ("**State Data**"); this definition is to be construed as broadly as possible. Upon request, Contractor must provide to the State, or a third party designated by the State, all State Data within 10 calendar days of the request and in the format requested by the State. Contractor will assume all costs incurred in compiling and supplying State Data. No State Data may be used for any marketing purposes.
31. **Reserved.**
32. **Non-Disclosure of Confidential Information.** The parties acknowledge that each party may be exposed to or acquire communication or data of the other party that is confidential, privileged communication not intended to be disclosed to third parties. The provisions of this Section survive the termination of this Contract.
 - a. **Meaning of Confidential Information.** For the purposes of this Contract, the term "**Confidential Information**" means all information and documentation of a party that: (a) has been marked "confidential" or with words of similar meaning, at the time of disclosure by such party; (b) if disclosed orally or not marked "confidential" or with words of similar meaning, was subsequently summarized in writing by the disclosing party and marked "confidential" or with words of similar meaning; and, (c) should reasonably be recognized as confidential information of the disclosing party. The term "Confidential Information" does not include any information or documentation that was: (a) subject to disclosure under the Michigan Freedom of Information Act (FOIA); (b) already in the possession of the receiving party without an obligation of confidentiality; (c) developed independently by the receiving party, as demonstrated by the receiving party, without violating the disclosing party's proprietary rights; (d) obtained from a source other than the disclosing party without an obligation of confidentiality; or, (e) publicly available when received,

or thereafter became publicly available (other than through any unauthorized disclosure by, through, or on behalf of, the receiving party). For purposes of this Contract, in all cases and for all matters, State Data is deemed to be Confidential Information.

- b. Obligation of Confidentiality. The parties agree to hold all Confidential Information in strict confidence and not to copy, reproduce, sell, transfer, or otherwise dispose of, give or disclose such Confidential Information to third parties other than employees, agents, or subcontractors of a party who have a need to know in connection with this Contract or to use such Confidential Information for any purposes whatsoever other than the performance of this Contract. The parties agree to advise and require their respective employees, agents, and subcontractors of their obligations to keep all Confidential Information confidential. Disclosure to a subcontractor is permissible where: (a) use of a subcontractor is authorized under this Contract; (b) the disclosure is necessary or otherwise naturally occurs in connection with work that is within the subcontractor's responsibilities; and (c) Contractor obligates the subcontractor in a written contract to maintain the State's Confidential Information in confidence. At the State's request, any employee of Contractor or any subcontractor may be required to execute a separate agreement to be bound by the provisions of this Section.
- c. Cooperation to Prevent Disclosure of Confidential Information. Each party must use its best efforts to assist the other party in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limiting the foregoing, each party must advise the other party immediately in the event either party learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Contract and each party will cooperate with the other party in seeking injunctive or other equitable relief against any such person.
- d. Remedies for Breach of Obligation of Confidentiality. Each party acknowledges that breach of its obligation of confidentiality may give rise to irreparable injury to the other party, which damage may be inadequately compensable in the form of monetary damages. Accordingly, a party may seek and obtain injunctive relief against the breach or threatened breach of the foregoing undertakings, in addition to any other legal remedies which may be available, to include, in the case of the State, at the sole election of the State, the immediate termination, without liability to the State, of this Contract or any Statement of Work corresponding to the breach or threatened breach.
- e. Surrender of Confidential Information upon Termination. Upon termination of this Contract or a Statement of Work, in whole or in part, each party must, within 5 calendar days from the date of termination, return to the other party any and all Confidential Information received from the other party, or created or received by a party on behalf of the other party, which are in such party's possession, custody, or control; provided, however, that Contractor must return State Data to the State following the timeframe and procedure described further in this Contract. Should Contractor or the State determine that the return of any Confidential Information is not feasible, such party must destroy the Confidential Information and must certify the same in writing within 5 calendar days from the date of termination to the other party.

33. **Reserved.**

34. **Reserved.**

35. **Reserved.**

36. **Records Maintenance, Inspection, Examination, and Audit.** The State or its designee may audit Contractor to verify compliance with this Contract. Contractor must retain, and provide to the State or its designee and the auditor general upon request, all financial and accounting records related to the Contract through the term of the Contract and for 4 years after the latter of termination, expiration, or final payment under this Contract or any extension ("**Audit Period**"). If an audit, litigation, or other action involving the records is initiated before the end of the Audit Period, Contractor must retain the records until all issues are resolved.

Within 10 calendar days of providing notice, the State and its authorized representatives or designees have the right to enter and inspect Contractor's premises or any other places where Contract Activities

are being performed, and examine, copy, and audit all records related to this Contract. Contractor must cooperate and provide reasonable assistance. If any financial errors are revealed, the amount in error must be reflected as a credit or debit on subsequent invoices until the amount is paid or refunded. Any remaining balance at the end of the Contract must be paid or refunded within 45 calendar days.

This Section applies to Contractor, any parent, affiliate, or subsidiary organization of Contractor, and any subcontractor that performs Contract Activities in connection with this Contract.

- 37. Warranties and Representations.** Contractor represents and warrants: (a) Contractor is the owner or licensee of any Contract Activities that it licenses, sells, or develops and Contractor has the rights necessary to convey title, ownership rights, or licensed use; (b) all Contract Activities are delivered free from any security interest, lien, or encumbrance and will continue in that respect; (c) the Contract Activities will not infringe the patent, trademark, copyright, trade secret, or other proprietary rights of any third party; (d) Contractor must assign or otherwise transfer to the State or its designee any manufacturer's warranty for the Contract Activities; (e) the Contract Activities are merchantable and fit for the specific purposes identified in the Contract; (f) the Contract signatory has the authority to enter into this Contract; (g) all information furnished by Contractor in connection with the Contract fairly and accurately represents Contractor's business, properties, finances, and operations as of the dates covered by the information, and Contractor will inform the State of any material adverse changes; and (h) all information furnished and representations made in connection with the award of this Contract is true, accurate, and complete, and contains no false statements or omits any fact that would make the information misleading. A breach of this Section is considered a material breach of this Contract, which entitles the State to terminate this Contract under Section 23, Termination for Cause.
- 38. Conflicts and Ethics.** Contractor will uphold high ethical standards and is prohibited from: (a) holding or acquiring an interest that would conflict with this Contract; (b) doing anything that creates an appearance of impropriety with respect to the award or performance of the Contract; (c) attempting to influence or appearing to influence any State employee by the direct or indirect offer of anything of value; or (d) paying or agreeing to pay any person, other than employees and consultants working for Contractor, any consideration contingent upon the award of the Contract. Contractor must immediately notify the State of any violation or potential violation of these standards. This Section applies to Contractor, any parent, affiliate, or subsidiary organization of Contractor, and any subcontractor that performs Contract Activities in connection with this Contract.
- 39. Compliance with Laws.** Contractor must comply with all federal, state and local laws, rules and regulations.
- 40. Reserved.**
- 41. Reserved.**
- 42. Nondiscrimination.** Under the Elliott-Larsen Civil Rights Act, 1976 PA 453, MCL 37.2101, *et seq.*, and the Persons with Disabilities Civil Rights Act, 1976 PA 220, MCL 37.1101, *et seq.*, Contractor and its subcontractors agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, or mental or physical disability. Breach of this covenant is a material breach of this Contract.
- 43. Unfair Labor Practice.** Under MCL 423.324, the State may void any Contract with a Contractor or subcontractor who appears on the Unfair Labor Practice register compiled under MCL 423.322.
- 44. Governing Law.** This Contract is governed, construed, and enforced in accordance with Michigan law, excluding choice-of-law principles, and all claims relating to or arising out of this Contract are governed by Michigan law, excluding choice-of-law principles. Any dispute arising from this Contract must be resolved in Michigan Court of Claims. Contractor consents to venue in Ingham County, and waives any objections, such as lack of personal jurisdiction or *forum non conveniens*. Contractor must appoint agents in Michigan to receive service of process.

45. **Non-Exclusivity.** Nothing contained in this Contract is intended nor will be construed as creating any requirements contract with Contractor. This Contract does not restrict the State or its agencies from acquiring similar, equal, or like Contract Activities from other sources.
46. **Force Majeure.** Neither party will be in breach of this Contract because of any failure arising from any disaster or acts of god that are beyond their control and without their fault or negligence. Each party will use commercially reasonable efforts to resume performance. Contractor will not be relieved of a breach or delay caused by its subcontractors. If immediate performance is necessary to ensure public health and safety, the State may immediately contract with a third party.
47. **Dispute Resolution.** The parties will endeavor to resolve any Contract dispute in accordance with this provision. The dispute will be referred to the parties' respective Contract Administrators or Program Managers. Such referral must include a description of the issues and all supporting documentation. The parties must submit the dispute to a senior executive if unable to resolve the dispute within 15 business days. The parties will continue performing while a dispute is being resolved, unless the dispute precludes performance. A dispute involving payment does not preclude performance.
- Litigation to resolve the dispute will not be instituted until after the dispute has been elevated to the parties' senior executive and either concludes that resolution is unlikely, or fails to respond within 15 business days. The parties are not prohibited from instituting formal proceedings: (a) to avoid the expiration of statute of limitations period; (b) to preserve a superior position with respect to creditors; or (c) where a party makes a determination that a temporary restraining order or other injunctive relief is the only adequate remedy. This Section does not limit the State's right to terminate the Contract.
48. **Media Releases.** News releases (including promotional literature and commercial advertisements) pertaining to the Contract or project to which it relates must not be made without prior written State approval, and then only in accordance with the explicit written instructions of the State.
49. **Website Incorporation.** The State is not bound by any content on Contractor's website unless expressly incorporated directly into this Contract.
50. **Order of Precedence.** In the event of a conflict between the terms and conditions of the Contract, the schedules, a purchase order, or an amendment, the order of precedence is: **(a)** *Federal Contract Clauses - Schedule C*; **(b)** The following Mandatory sections of *Standard Contract Terms*: *First paragraph - Contract Terms*, *section 20 - Terms of Payment*, *section 5 - Insurance Requirements*, *section 26 - General Indemnification*, *section 23 - Termination for Cause*, *section 24 - Termination for Convenience*, *section 43 - Governing Law*, *section 28 - Limitation of Liability*; **(c)** *Schedule A - Statement of Work*, *Schedule B - Specification for Small Class Non-Lift and Lift Transit Buses*; **(d)** All sections from *Standard Contract Terms* not listed in subsection (b); **(e)** Any other attachment or Schedule to the contract documents; **(f)** Any Purchase order, Direct Voucher, or Procurement Card Order issued under the Contract; and **(g)** Contractor Responses contained in any of the RFP documents.
51. **Severability.** If any part of this Contract is held invalid or unenforceable, by any court of competent jurisdiction, that part will be deemed deleted from this Contract and the severed part will be replaced by agreed upon language that achieves the same or similar objectives. The remaining Contract will continue in full force and effect.
52. **Waiver.** Failure to enforce any provision of this Contract will not constitute a waiver.
53. **Survival.** The provisions of this Contract that impose continuing obligations, including warranties and representations, termination, transition, insurance coverage, indemnification, and confidentiality, will survive the expiration or termination of this Contract.
54. **Entire Contract and Modification.** This Contract is the entire agreement and replaces all previous agreements between the parties for the Contract Activities. This Contract may not be amended except by signed agreement between the parties (a "**Contract Change Notice**").

STATE OF MICHIGAN

Request For Proposal No. 071B7700125

Small Class of Non-Lift and Lift Transit Buses

SCHEDULE A STATEMENT OF WORK CONTRACT ACTIVITIES

Background: This contract is used to provide funding to authorized transit agencies in Michigan for the purchase of small class non-lift and lift transit buses.

1. Specifications

1.1 The Contractor must provide the following:

- A. The Contractor must provide small non-lift and lift transit buses per **Schedule B, Small Bus Specifications**.
- B. The Contractor supplying these buses shall quick title and deliver the bus and the title to the location specified by the State of Michigan, Office of Passenger Transportation.
- C. Chassis serial number, body number, axle ratio, gross vehicle weight rating (GVWR), seating capacity and paint codes shall be imprinted on a permanent decal(s) or stamped on a metal plate(s) and affixed in the driver's area of the bus (location to be approved by the State).
- D. The Contractor shall be a licensed motor vehicle dealer in their state, county, or municipality.
- E. The Contractor must be capable of handling final inspection and corrections required by the State prior to acceptance of the buses after a contract is awarded.
- F. Repair facilities shall be established throughout the State to provide chassis and body service support to transit agencies to minimize agency travel to reach the nearest repair facility. Please list all established repair facilities in the State of Michigan (name and location).
- G. The Contractor must be capable of providing parts and service for a period of ten years after the buses have been placed in service throughout the State of Michigan.
- H. The Contractor must be able to supply replacement parts within 5 working days of a request by a transit agency unless the Contractor notifies the transit agency that the part is not available for shipment and provides the shipping date when the part will be available.
- I. Regardless of options and seating plan ordered, the Contractor shall be responsible for certifying that all buses delivered:
 - 1) Shall not exceed 100% of front spring and 100% of rear spring capacity rating at ground without exceeding GVWR of chassis as bid (determined by engineering calculated loaded bus axle weights).
 - 2) Bus length when measured bumper to bumper excluding the energy absorbing portion of the bumper shall not exceed the following:

Class	Bus Length	Shall not exceed the following lengths
Class 1	19'	19' 11"
Class 1	20'	20' 11"
Class 1 and 2	21'	21' 11"
Class 2	22'	22' 11"
Class 2	23'	23' 11"
Class 2	24'	24' 11"
Class 2	25'	25' 11"

Manufacturers shall comply with the chassis company's quality vehicle manufacturing programs such as Ford's Quality Vehicle Modifier (QVM).

1.2 Warranties

- A. Warranty requirements for components and/or systems shall be in accordance with **Schedule B, Small Bus Specifications.**
- B. Please notify Contractor for warranty service: **Customer Service (800)444-4104**

1.3 Recall Requirements and Procedures

The Contractor complies with all state and federal requirements. If a recall is issued, the Ordering Entity, the Contract Administrator, and the Program Manager or Designee shall be notified by the OEM and/or Upfitter via email within 24 hours, and provided a pathway to resolution.

If the vehicle requires a visit to a repair facility, the Contractor shall facilitate the scheduling, service, parts, and paperwork in order to expedite the process.

1.4 Incentives

The Contractor shall offer incentives or programs the OEM offers. The Contractor shall consider trade-in product opportunities.

2. Service Levels

2.1 Time Frames/Delivery

All Contract Activities must be delivered within **210** calendar days from receipt of order. The receipt of order date is pursuant to Section 5. Delivery will be made to the Ordering Entity.

2.2 Training

The Contractor will provide training when necessary, including but not limited to, aspects of ordering, shipping, billing, receiving, and vehicle maintenance. At the request of the State or the Ordering Entity, the Contractor will provide in-service training on products, installation, and product safety issues. The Contractor will also provide training jointly with the Ordering Entity as needed during the period covered by the Contract at no additional charge.

2.3 Reporting

The Contractor must submit, to the Program Manager quarterly reports, which include agency name, vehicle(s) purchased, options, price, date ordered, date delivered, and funding used (Federal/State/Local). The State reserves the right to request additional reports.

By the second Friday of every December, the Contractor must submit a report of recycled content in commodities sold in that calendar year to contact **Yvon Dufour, or DTMB Procurement Designee.**

2.4 Meetings

- A. Meetings requested by the State include, but are not limited to, the pre-pilot model review, the pilot and production meetings as required per Section 7 - Acceptance, Inspection and Testing.
- B. The State may request other meetings as it deems appropriate.

3. Staffing

3.1 Contractor Representative

The Contractor must appoint a Service Manager or a Product Representative specifically assigned to State of Michigan accounts, that will respond to State inquiries regarding the Contract Activities, answering questions related to ordering and delivery, etc. (the "Contractor Representative").

Steve Bolin – Commercial Products Manager
Hoekstra Transportation
3741 Roger B Chaffee Blvd.
Grand Rapids, MI 49548

Mobile 616.299.5170
Office 616.389.1130
Toll Free 800-444-4104
Fax 616.245.7726

Email SBolin@HoekstraTruck.com

The Contractor must notify the Contract Administrator at least **14** calendar days before removing or assigning a new Contractor Representative.

3.2 Customer Service & Technical Support, Repairs and Maintenance Toll-Free Number

The Contractor must specify its toll-free number for the State to make contact with the Contractor Representative for customer support, technical support, repairs, and maintenance. The Contractor Representative should be available for calls during the hours of 8 am to 5 pm EST.

Steve Bolin – Commercial Products Manager
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Grand Rapids, MI 49548

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3.3 Disclosure of Subcontractors

A. If the Contractor intends to utilize subcontractors, the Contractor must disclose the following:

- 1)** The legal business name; address; telephone number; a description of subcontractor's organization and the services it will provide; and information concerning subcontractor's ability to provide the Contract Activities.
- 2)** The relationship of the subcontractor to the Contractor.
- 3)** Whether the Contractor has a previous working experience with the subcontractor. If yes, provide the details of that previous relationship.
- 4)** A complete description of the Contract Activities that will be performed or provided by the subcontractor.
- 5)** The price of the subcontractor's work.

4. Pricing

4.1 Price Term

Pricing is firm for the entire length of the Contract with exceptions per section "4.2 Price Changes".

Multi-Award: This Contract is part of a Split-award. The State will reimburse the Ordering Entity up to the amount of the lowest price, as designated by MDOT.

4.2 Price Changes

- A.**
- 1)** Pricing is firm for a 365 day period ("Pricing Period"). The first pricing period begins on the Effective Date. Adjustments for changes in the chassis manufacturers OEM standard equipment may be requested, in writing, by either party and will take effect no earlier than the next Pricing Period subject to D., and E. of this section.
 - 2)** Adjustments for changes in federal regulations may be submitted at any time during the contract term subject to C., D., and E. of this section.
- B.** The Ordering Entity shall receive the benefit of any decreases in the cost incurred by the Contractor. If the chassis manufacturers OEM standard equipment pricing increases during the Contract period by more than one hundred dollars (\$100.00), the Contractor may request a price revision to reflect the actual cost experienced. The request for a cost increase must be accompanied by evidence from the chassis manufacturer that a change actually affected the Contractor's cost. Additionally, it shall be the Contractor's responsibility to provide written notice to the State of its qualification for price reductions.
- C.** If changes in federal regulations affect the cost of the buses required during the Contract period by more than one hundred dollars (\$100.00), the Contractor may request a price revision to reflect the actual cost increase experienced. The request must be accompanied by evidence that the change actually affected the Contractor's cost.
- D.** Requests for price changes shall be received in writing at least 30 days prior to their effective date, and are subject to written acceptance before becoming effective. In the event new prices are not acceptable, the Contract may be canceled.

E. Per Federal Transit Administration (FTA) requirements, a cost or price analysis is required for all price changes.

- 1) The State may request a Review upon 30 days written notice that specifies what Deliverable is being reviewed. At the Review, each party may present supporting information including information created by, presented, or received from third parties.
- 2) Following the presentation of supporting information, both parties will have 30 days to review the supporting information and prepare any written response.
- 3) In the event the Review reveals no need for modifications of any type, pricing will remain unchanged unless mutually agreed to by the parties. However, if the Review reveals that change may be recommended, both parties will negotiate in good faith for 30 days unless extended by mutual agreement of the parties.
- 4) If the supporting information reveals a reduction in prices is necessary and Contractor agrees to reduce rates accordingly, then the State may elect to exercise the next one year option, if available.
- 5) If the supporting information reveals a reduction in prices is necessary and the parties are unable to reach agreement, then the State may eliminate all remaining Contract renewal options.

Any changes based on the Review must be implemented through the issuance of a Contract Change Notice.

5. Ordering

5.1 Authorizing Document

The appropriate authorizing document for the Contract will be a purchase order from the authorizing transit agency.

5.2 Order Verification

The Contractor shall have internal controls to verify abnormal orders and to ensure that only authorized individuals place orders. Orders shall be verified referencing **Schedule E – Authorized Michigan Transit Agencies**.

5.3 Quantity

- A. The State is not obligated to purchase in any specific quantity. Minimum quantities shall be one (1) bus (pilot model) up to a maximum of 400 buses.
- B. **Multi-Award:** The maximum quantities shall be 400 buses per contract. Once one (1) of these split award contracts reaches the bus order maximum of 400, both awarded contracts shall be terminated.

6. Delivery

6.1 Driver Delivery

- A. The Contractor will be permitted to drive vehicle(s) to final destinations in compliance with the “**Schedule D - Affidavit for Driver Delivery**”, however, the affidavit must be completed and submitted with the Contractor's proposal.
 - 1) Delivery must be made between the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday ONLY, excluding Holidays.
 - 2) The Contractor is in agreement, and will pay the Ordering Entity if they pick the vehicle up at the Contractor's location. The rate will be equal to the rate paid to the Contractor's drivers plus provide or reimburse the cost of gasoline/fuel.
 - 3) The vehicle will be driven to the final destination and delivery will be scheduled with the Ordering Entity.

6.2 General Delivery

The Ordering Entities have the right to refuse bus delivery if the following conditions are not met:

- A. For the delivery of all units that may be released against the Contract the following must apply:
 - 1) The Contractor should produce the pilot model as the first bus ordered by the State for its transit agencies.
 - 2) The bus should be:
 - a. Lift / non-lift equipped
 - b. Air conditioned
 - c. The largest size on request by the transit agencies.
 - 3) All necessary testing and equipment placement should be performed on the pilot models before final inspection/acceptance by the State.
 - 4) The pilot model should serve as a standard for the following units as ordered but should not relieve the Contractor from an obligation to manufacture all units in compliance with all specifications

7. Acceptance, Inspection, and Testing

7.1 Acceptance

A. The State will use the following criteria to determine acceptance of the Contract Activities:

B.

- 1) The Contractor shall complete all corrections required by the State prior to delivery and final acceptance.
- 2) Delivery of Production Chassis to the Body Manufacturer should be within **120** days after the Pre-Pilot Model Meeting.
- 3) Exact Production for Delivery Due Dates, will be determined by the delivery schedule, plus (+) seven (7) calendar days from issue dated indicated on the Purchase Order. Delivery should be at the rate of one (1) unit per week minimum until completion of the quantity ordered.

7.2 Inspection

A. Pilot, Production Model and Plant Inspections:

- 1) Pilot Model Review Meeting at the Manufacturer Facility, or at a mutually agreed upon location, shall be conducted within thirty (30) calendar days from the date of the Purchase Order.
- 2) Pilot Model Approvals, shall be completed by the State and/or receiving agency within thirty (30) calendar days after delivery of the pilot model by the ordering agency.
- 3) Periodic Production/Plant Inspections, by the Michigan Department of Transportation, Office of Passenger Transportation include two (2) per contract period.
- 4) Final inspection shall be made at a site(s) as agreed upon by the Contractor and the ordering agencies. The Contractor should be capable of handling final inspection and corrections required by the State prior to acceptance of the buses.
- 5) The Contractor should be responsible for transportation (air fare, rail fare, car rental, taxi, or mileage), lodging, parking expenses, meals, and tips for up to three (3) individuals, as determined by the Michigan Department of Transportation, Office of Passenger Transportation, for involvement in any of the above pilot model and production schedule review or plant inspections. All travel expenses should be based on the DTMB, Vehicle and Travel Services Schedule of Travel Rates for Classified and Unclassified Employees Effective January 1, 2011 or subsequent updates.
http://www.michigan.gov/dmb/0,4568,7-150-9141_13132---,00.html

7.3 Testing

A. Testing - Prior to delivery, the Contractor must certify that:

- 1) All quality assurance activities have been completed.
- 2) All applicable testing has been completed.
- 3) All material deficiencies discovered during the quality assurance activities and testing have been corrected.
- 4) The Deliverable or Service is in a suitable state of readiness for the State's review and approval.

B. If a Deliverable includes installation at the Ordering Entity location the Contractor must:

- 1) Perform any applicable testing.
- 2) Correct all material deficiencies discovered during the quality assurance activities and testing.
- 3) Inform the State that the unit is in a suitable state of readiness for the State's review and approval.

C. To the extent that testing occurs at the Ordering Entity's location personnel are entitled to observe or otherwise participate in testing.

7.4 Final Acceptance

Final Acceptance is when the project is completed and functions according to the requirements listed in all previous sections of this document. Any intermediate acceptance of sub-Deliverables does not complete the requirement of Final Acceptance.

The State and /or the Ordering Entity have the right to refuse vehicle delivery when the conditions listed above are not met.

8. Invoice and Payment
8.1 Invoice Requirements
All invoices submitted to the State must include: (a) date; (b) purchase order number; (c) contract number; (d) quantity; (e) description of the Contract Activities; (f) line items for up-fitting options (g) unit price; (h) shipping cost (if any); and (i) total price. (j) Ordering Entity.
8.2 Payment
The Ordering Entities will make payment for Contract Activities to the Contractor.
8.3 Procedure
The Ordering Entities have been instructed to make immediate inspection on receipt of units and to process payment documents promptly. Payments; however, will be delayed if the bus fails to comply with specification requirements. Therefore, it is incumbent upon the Contractor to close pre-delivery inspection in accordance with the contract requirements.
9. Additional Requirements
9.1 Environmental and Energy Efficient Products
The Contractor must include any relevant third-party certification, including the verification of a United States department of agriculture certified bio based product label. The Contractor shall identify any energy efficient, bio-based, or otherwise environmental friendly products used in their products to the Program Manager (PM) 2 weeks prior to delivery.
9.2 Recycled Content and Recyclability
Without compromising performance or quality, the State prefers Deliverable(s) containing higher percentages of recycled materials. The Contractor must indicate an estimate of the percentage of recycled materials, if any, contained in each Deliverable: <ul style="list-style-type: none"> • (total estimated percentage of recovered material) • (estimated percentage of post-consumer material) • (estimated percentage of post-industrial waste)
9.3 Hazardous Chemical Identification
In accordance with the federal Emergency Planning and Community Right-to-Know Act, 42 USC 11001, <i>et seq.</i> , as amended, the Contractor must provide a Safety Data Sheet (SDS) listing any hazardous chemicals, as defined in 40 CFR §370.2, to be delivered. Each hazardous chemical must be properly identified, including any applicable identification number, such as a National Stock Number or Special Item Number. The Contractor must identify any hazardous chemicals that will be provided under any resulting contract. The Contractor shall provide all current SDS to the Program Manager (PM) 2 weeks prior to delivery.
9.4 Mercury Content
Pursuant to MCL 18.1261d, mercury-free products must be procured when possible. The Contractor must explain if it intends to provide products containing mercury, the amount or concentration of mercury, and whether cost competitive alternatives exist. If a cost competitive alternative does exist, the Contractor must provide justification as to why the particular product is essential. All products containing mercury must be labeled as containing mercury. The Contractor shall report if it intends to provide products containing mercury to the Program Manager (PM) no later than 48 hours after a purchase order is issued.
9.5 Brominated Flame Retardants
The State prefers to purchase products that do not contain brominated flame retardants (BFRs) whenever possible. The Contractor must disclose whether the products contain BFRs. The Contractor must disclose to the Program Manager (PM) whether their products contain BFRs no later than 48 hours after a purchase order is issued.

9.6 Key Personnel

The Contractor must appoint one individual who will be directly responsible for the day-to-day operations of the Contract ("Key Personnel"). Key Personnel must be specifically assigned to the State account, be knowledgeable on the contractual requirements, and respond to State inquiries within 24 hours.

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Mark Hoekstra – President of Hoekstra Companies

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Grand Rapids, MI 49548
1-800-444-4104 x 1102

Tom Hoekstra – Vice President

Hoekstra Transportation, Inc.
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1-800-444-4104 x 1123

Rebecca Lallo – Warranty Admin, Sales Administration

Hoekstra Transportation, Inc.
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1-800-444-4104 x 1129

Jim Harned – Parts Dpt. Director

Hoekstra Transportation, Inc.
3741 Roger B Chaffee Blvd.
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1-800-444-4104 x 1126

Randy Trimm – 23 years – Technical Assistance and Parts Director MDOT

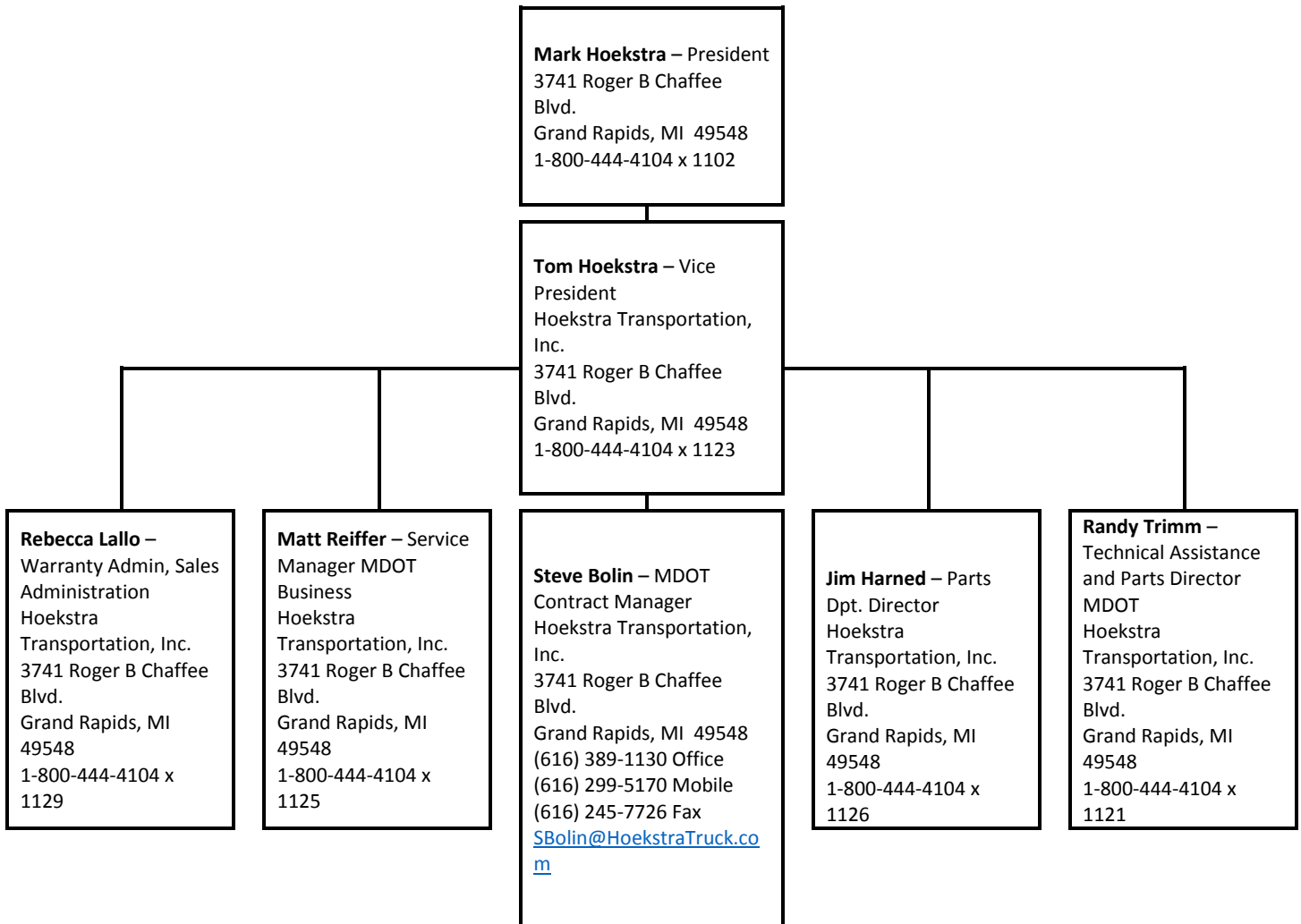
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Contractor's Key Personnel must be available during the following times: 8:00 am – 5:00 pm EST

The Contractor may not remove or assign Key Personnel without the prior consent of the State. Prior consent is not required for reassignment for reasons beyond the Contractor's control, including illness, disability, death, leave of absence, personal emergency circumstances, resignation, or termination for cause. The State may request a résumé and conduct an interview before approving a change. The State may require a 30 calendar day training period for replacement personnel.

The Contractor must identify the Key Personnel, indicate where they will be physically located, and describe the functions they will perform.

9.7 Organizational Chart



STATE OF MICHIGAN

Contract No. 071B7700125

Schedule B
State of Michigan
Office of Passenger Transportation
Specifications for
Small Class of Buses, Class I - 5 Years/150,000 Miles (minimum); Class II - 7-Years/200,000 Miles (minimum)
of Non-lift and Lift Transit Buses with Alternate Seating

I. PURPOSE OF SPECIFICATIONS

These specifications are setting forth the minimum requirements for a two-axle, transit class commercial non-lift bus or a Paratransit type commercial bus equipped with a commercial wheelchair lift. The body shall be mounted on a commercial or recreational vehicle (RV) chassis. At a minimum, buses must meet all applicable Michigan Motor Carrier Vehicle Codes, all applicable Federal Motor Vehicle Safety Standards (FMVSS), and the Americans with Disabilities Act (ADA).

Buses in these specifications shall be defined by the following classes:

- A. Small Class One: Minimum 11,500 GVWR
- B. Small Class Two: Minimum 14,200 GVWR

The Small Class of buses must be capable of seating a minimum of 11 adult forward facing passengers or an alternate capacity of ambulatory adult passengers and wheelchair passengers. The buses shall be fully and/or partially tested (a related full report shall be submitted with any partial test for each fuel type, Gasoline, and Propane) at the Penn State/Thomas D. Larson Pennsylvania Transportation Institute – the Altoona Bus Research and Testing Center and must certify the following with a copy of the “Altoona Bus Test Report”:

- A. The bus model(s) offered is a minimum Class One - 5 years/150,000, Class Two – 7 years/200,000 mile bus service life category.
- B. Will meet the requirements of Federal Register Rules and Regulations 49 CFR Part 665, Bus Testing Program.
- C. Testing is required for a manufacturer of a new bus model or a bus produced with a major change in component or configuration shall provide a copy of the test report(s) as specified in §665.11 and § 665.13.
- D. Contractors shall submit any and all reports related to the buses as specified in §665.11 and § 665.13

Chassis serial number, body number, axle ratio, gross vehicle weight rating (GVWR), seating capacity and paint codes shall be imprinted on a permanent decal(s) or stamped on a metal plate(s) and affixed in the driver's area of the bus (location to be approved by the State).

Regardless of options and seating plan ordered, the successful Contractor shall be responsible for certifying that all buses delivered: 1) shall not exceed the GVWR of chassis as bid (determined by engineering calculated loaded vehicle axle weights), and 2) single wheelchair securement area buses shall not exceed 21' 11" in length measured bumper to bumper excluding the energy absorbing portion of the bumper (distance of travel allowed for compression of the bumper without body deformation). Manufacturers shall comply with the chassis company's quality vehicle manufacturing program such as Ford's Quality Vehicle Modifier (QVM).

A. Please refer to Schedule A Statement of Work, section 1.1, A. thru J. for additional specification requirements.

II. BODY SPECIFICATIONS

A. GENERAL DESIGN AND CONSTRUCTION

- 1) SAFETY:** The chassis and body shall be designed using only prudent, proven engineering principles with all work performed only by professional established firms. The bus purchased shall comply with all State regulations and requirements applicable to the design and manufacture of motor buses for the State of Michigan.
- 2) DRIVER SIZE and COMFORT:** Design criteria of bus purchased shall be for all females from the 5th percentile, to males of the 95th percentile, to be equally as comfortable in using all controls required to safely drive and maneuver the bus. All driver controls shall comply with FMVSS 101, with hand and foot controls required to operate the bus safely, including the placement of exterior adjustable mirrors, positioned to meet this safety requirement.
- 3) QUALITY of WORKMANSHIP:** All labor employed in both the manufacturing and assembly processes of the bus purchased shall be to the highest industry standards. The entire bus shall be within all established engineering tolerances set by all parties involved in the design and production of the bus. All added components shall be installed and positioned according to the component manufacturer's installation procedures which shall be available upon request.
- 4) WELDING:** All welding procedures used throughout the construction of the bus, including materials, qualifications and training of personnel, shall be in accordance with the standards of the American Society for Testing and Materials (ASTM) and the American Welding Society (AWS). Contact surfaces of all material to be welded shall be clean, and free of grease, paint, rust and scale. After welding, all rough edges and surfaces on parts shall be ground smooth and coated with a corrosion inhibiting primer and paint.

<p>5) ATTACHMENT HARDWARE: All rivets, screws, bolts, nuts, washers and other types of fasteners used in the construction process, including those that would be exposed to the elements, shall be of appropriate size and strength rating for the application. They shall be sprayed with or dipped in a rust-resistant coating material, be plated, be stainless steel, or otherwise be made of rust-resistant type material, all of which will pass the 480 hour ASTM B117 Salt Spray test and the 480 hour ASTM D2247 Humidity Resistance test. Fasteners used by the respective component manufacturers in their assemblies are acceptable as part of the assembly.</p>
<p>B. BODY STRUCTURE AND EXTERIOR PANELS</p>
<p>1) Metal Rollover Frame, Cage-type Construction</p>
<p>a. The bus shall have a heavy-duty, unit-body structure type. The body structure (rollover frame, cage type of gauge #16 steel, 0.060" or equal, minimum) shall be of durable steel or aluminum construction insulated against electrolysis between dissimilar metals, and adequately reinforced at all joints and points of stress, with sufficient strength to comply with the FMVSS 220 rollover protection test. All body and floor structural members (tubes, channels, etc.) shall be Gas Metal Arc Welded (GMAC) or equal at each joint. A MIG welding system is acceptable provided it meets the requirements of this specification. Each Contractor shall provide certification that the bus meets the FMVSS 220 rollover protection test as bid.</p>
<p>b. The bus shall be designed to withstand road shocks, stop, and start operations, seasonal weather and road extremes, and other conditions found in Michigan transit bus service. The body shall be securely fastened to the chassis frame structure using a method of uniform attachment consisting of strategically placed rubber isolators/cushions <u>consistent with cab/chassis isolators/cushions</u> with connector bolts that permit body flexing independent of chassis flexing. Roof, side, front, and back panels shall be secured to the body vertical and horizontal frame members, and these, when fastened to the floor structural members, result in a permanent, fully-integrated structural unit adequately reinforced at all points where stress concentration may occur. The wall structure shall be bolted to the floor with grade 8 bolts to provide adequate stability in the event of a non-static rollover event. The body floor sub-frame assembly, including lower skirt reinforcements, shall be, at a minimum, gauge number 14 (.075" thickness) galvanized steel (mill applied), or gauge number 16 stainless steel, or gauge number 12 aluminum, or gauge number 14 steel treated with a corrosion resistant coating. All body floor sub-frame assembly shall meet the 480 hour salt spray test per ASTM procedure B-117, with no structural detrimental effects to normally visible surfaces. Certification of compliance with this requirement shall be published by an independent company. Wheelwells shall have minimum yield strength of gauge number 14 (.075" thickness) galvanized steel, gauge number 16 (.060" thickness) stainless steel, or gauge number 12 (.10" thickness) aluminum properly welded or secured with approved corrosion resistant fasteners to the floor structure. The entire body cage and frame including floor structure shall be properly coated with a corrosion resistant coating or a non-water permeable primer/paint. All components treated to resist corrosion shall be properly cleaned to remove greases, oils, and residues before application of the corrosion resistant material. Passage holes provided for wiring and hoses shall be thoroughly sealed to prevent dust and moisture intrusion and be sufficiently protected to ensure against wear from friction and the elements. When completed, all body side sections and roof sections including structure shall be at a minimum 1-½" thick. Where body segments are joined they shall be properly sealed to prevent intrusion of drafts, fumes, dust, and water to the interior of the bus body.</p>
<p>c. All exterior side and roof panel material shall be fiberglass reinforced plastic (FRP), it shall have as a minimum, of 2.16 mm (0.080") thick material (comprised of various layers of gel-coat, reinforcement and resins). It shall be designed to resist impact caused by flying road debris. The material must resist rot, corrosion, and mildew and cannot be affected by cleaning related chemicals, road residue, or environmental exposure. Reinforcements shall be installed around all window openings in order to transfer stress around the opening. All door openings shall have full structural framing (tube) or imbedded reinforcements, equal to the structural members of the body that will adequately support concentrations of stress around openings. All exposed doorframe structure shall be made of 304 stainless steel (including the fasteners), which does not discolor with age. Where a stiffener or a backer material (substrate) is used for the exterior panels, it shall be bonded with waterproof adhesive to the exterior panel; it shall be a water resistant material that will not wick water; and it must be thoroughly sealed from the elements when installed so that the substrate will not be exposed to or absorb moisture and cause corrosion to the interior of the panel or any body structure. Exterior panel substrate shall not be of wood composition, plywood or a pressed wood product. Where body segments are joined, they shall be properly sealed to prevent intrusion of drafts, fumes, dust, and water to the interior of the bus body.</p>
<p>d. All interior panels and trim may be made of scuff-resistant laminate/FRP or molded ABS finished material. Interior panels shall have as a minimum the physical properties of gauge number 24 (.024" thickness). Interior panel substrate shall not be of wood composition, plywood or a pressed wood product. Interior panel threaded fasteners or rivets shall secure panels to body framing structure. Where fasteners are in the panels only, a reinforcing nut or reinforcing panel shall be installed for added strength and fastener retention.</p>
<p>e. Exterior lower skirt panels shall be fiberglass or composite material and shall be sufficiently stiff to prevent vibration, drumming, or flexing while the bus is in service. Lower edge of skirt panels shall be re-enforced to prevent cracking/breaking due to excessive flexing. Body front and/or rear endcaps may be molded fiberglass panels installed with required structural framing or a FRP composite structure. Lower skirt panels may be one piece in length at manufacture but shall be repairable in sections. Lower skirt panels shall not use a wood substrate material for a panel stiffener. Where exterior panels are lapped, the upper or forward panels shall act as a watershed. Exterior panels that are cut shall have the cut edge sealed</p>

<p>(paint or special sealing compound). Sealing and fastening of panel joints, including front and rear cap-to-body joints, shall prevent entrance of moisture and dirt. Joint sealing shall be made through use of a non-shrinking bonding sealant, and joint sealing shall not be solely dependent on an exterior trim strip or a trim cap nor shall the sealing of the panels be dependent on caulking alone. Any visible caulk shall be painted after water testing is complete. All exterior panels shall be buck riveted and/or bonded to the body frame structure.</p>
<p>f. The exterior body panels shall have on each side one heavy-duty rubrail. Rubrails (1½" x ½" minimum) shall be extruded UV resistant plastic with a flexible, rubber-type resilient material insert or a solid rubber-type of flexible, resilient material. Rubrails shall be located no less than 25" nor more than 43" above the ground on each side. Where the rubrails and fender opening guards are not an integral part of the body, installation of rubrails shall be made after the finish coat of paint is applied to the bus. Rubrails shall be sealed to prevent debris seepage into and from behind rubrail.</p>
<p>g. Gun installed huckbolt fastenings, buck rivets, bonding adhesives, or approved equivalent shall be utilized on all exterior body panels, rubrails, and all other locations where stress is concentrated. All rivets, screws, bolts, nuts, washers, clamps, and other types of fasteners used in the construction process, including those that would be exposed to the elements, on the exterior and interior of the unit shall be properly plated to resist corrosion. No sheet metal screws shall be permitted, except for rubrails and rubber fender splash guards (see mudflaps/splash guards) which can be secured with stainless steel or equivalent plated locking-type, self-tapping fasteners. Fastener materials shall be compatible with materials being fastened. Where self-tapping fasteners are used, body panels shall be reinforced with steel backing, aluminum backing, or stainless steel backing.</p>
<p>h. Window openings cut into body panels shall have a maximum frame clearance of 1/8" on each side to minimize the need for caulking (see Section 24, Windows). All openings cut into metal body exterior panels must have the exposed cut edges primed or properly coated to inhibit water intrusion and corrosion before further assembly or painting occurs. Window frames installed in the body openings shall be properly caulked/sealed to prevent intrusion of moisture and dust.</p>
<p>i. The Contractor shall submit roof, sidewall, and flooring drawings showing structure and structural specifications indicating metal size and type used. Include side sheathing and inside panels.</p>
<p>2) Fiberglass Reinforced Plastic (FRP) Composite Unitized-type Body</p>
<p>a. The bus body shall have a heavy-duty unitized structure and shall be of durable fiberglass reinforced plastic (FRP) composite construction. The body panels shall consist of an exterior high gloss gelcoat (.020" thickness, minimum) on a resin-hardened FRP (3/16" thickness, minimum) attached to a center layer of resin hardened Nida-Core® or equal honeycomb (¾" thickness, minimum) with an inner FRP panel (3/16" thickness, minimum); or may be ¾" polyurethane foam insulation gelcoated to ¼" FRP exterior with ¼" FRP interior, reinforced with steel perimeter and transverse supports, completely fiberglassed to adjoining body parts. It shall use proper adhesive materials to adequately bond and mechanically fasten all joints and points of stress with sufficient strength to comply with the FMVSS 220 rollover protection test. Each Contractor shall provide certification that the bus meets the FMVSS 220 rollover protection test as bid.</p>
<p>b. The bus shall be designed to withstand road shocks, stop and start operations, seasonal weather and road extremes, and other conditions found in Michigan transit bus service. The body shall be securely fastened to the chassis frame structure using a method of uniform attachment consisting of strategically placed rubber isolators/cushions <u>consistent with cab/chassis isolators/cushions</u> with connector bolts that permit body flexing independent of chassis flexing. Roof, side, front, and back panels shall be secured to the floor and lower body frame members; all of which shall result in a permanent, fully-integrated structural unit adequately reinforced at all points where stress concentration may occur. The body floor sub-frame assembly, including lower skirt reinforcements, shall be, at a minimum, gauge number 14 (.075" thickness) galvanized steel (mill applied), or gauge number 16 stainless steel, or gauge number 12 aluminum, or gauge number 14 steel treated with a corrosion resistant coating, insulated against electrolysis between dissimilar metals. All body floor sub-frame assembly shall meet 1,000 hour salt spray test per ASTM procedure B-117, with no structural detrimental effects to normally visible. Certification of compliance with this requirement shall be published by an independent company. Wheel wells shall have minimum yield strength of gauge number 14 galvanized steel, gauge number 16 (.060" thickness) stainless steel, or gauge number 12 (.10" thickness) aluminum properly welded or secured with approved corrosion resistant fasteners to the floor structure. Passage holes provided for wiring and hoses shall be thoroughly sealed to prevent dust and moisture intrusion. The entire lower body frame shall be coated with corrosion resistant primer/paint (steel) or properly treated to resist corrosion (other materials). All treated components shall be properly cleaned to remove greases, oils, and residues before application of the corrosion resistant material.</p>
<p>c. All exterior side and roof panels when completed shall be at a minimum 1-1/8" thick. Bond lines at the sidewalls, rear endcap, roof, and front cap shall be interlocked by adhesives, resin saturated fiberglass matting, and mechanical fasteners, forming a unibody design without exposed fasteners or protruding moldings. Imbedded reinforcements shall be installed at all door openings in order to support door mounting hardware and door operating mechanisms. All door openings shall have full structural framing to maintain integrity of the body structure. All exposed doorframe structure shall be made of 304 stainless steel (including the fasteners), which does not discolor with age. Where a stiffener or a backer material (substrate) is used for the exterior panels, it shall be bonded with waterproof adhesive to the exterior panel; it shall be a water resistant material that will not wick water; and it must be thoroughly sealed from the elements when installed so that the substrate will not be exposed to or absorb moisture and cause corrosion to the interior of the panel or any body structure.</p>

d.	Interior panels may be an integral part of the FRP composite panel or may be made of scuff-resistant laminate/FRP finished material. Where threaded fasteners are in the interior panel only, an imbedded reinforcing nut or a reinforcing panel shall be integrated into the FRP composite for added strength and fastener retention.
e.	Exterior panels may be an integral part of the FRP composite panel. Exterior panels shall be sufficiently stiff to prevent vibration, drumming, or flexing while the bus is in service. Lower skirt panels shall be sufficiently fastened and braced to prevent damage from ice and snow build-up. Lower skirt panels may be one piece in length at manufacture but shall be repairable in sections. Where panels are lapped, the upper and/or forward panels shall overlap the lower and/or rearward panels to prevent intrusion of water under the panels. Sealing and fastening of joints, including front and rear cap-to-body joints, shall prevent entrance of moisture and dirt. Any visible caulk shall be painted after water testing is complete. All exterior panels shall be bonded to the lower body frame. In no case shall the sealing of the panels be dependent on caulking alone.
f.	The exterior body panels shall have on each side one heavy-duty rubrail. Rubrails (1½" x ½" minimum) shall be extruded UV resistant plastic with a flexible, rubber-type resilient material insert or a solid rubber-type of flexible, resilient material. Rubrails shall be located no less than 25" nor more than 43" above the ground on each side. Where the rubrails are not an integral part of the body, installation of rubrails shall be made after the finish coat of paint is applied to the bus. Rubrails shall be sealed to prevent debris seepage into and from behind rubrail.
g.	No sheet metal screws shall be permitted, except for rubrails and rubber fender splash guards which can be secured with stainless steel or equivalent plated locking-type, self-tapping fasteners. Fastener materials shall be compatible with materials being fastened and meet the 480 hour ASTM B117 Salt Spray test and the 480 hour ASTM D2247 Humidity Resistance test. Where self-tapping fasteners are used in body panels, the body panels shall have an imbedded reinforcing nut or a reinforcing panel shall be integrated into the FRP composite for added strength and fastener retention.
h.	Window openings cut into body panels shall have a maximum frame clearance of 1/8" on each side, to minimize the need for caulking (see section B. Body Structure and Exterior Panels, subsection 24. Windows). All openings cut into body exterior panels must have the exposed edges of the cutout properly coated to prevent moisture intrusion before further assembly or painting occurs. Window frames installed in the body openings shall be properly caulked/sealed to prevent intrusion of moisture and dust.
i.	The Contractor shall submit roof, sidewall, and flooring drawings showing structure and structural specifications indicating metal size and type used. Include side sheathing and inside panels.
3) Passenger Door	
a.	The manufacturer shall provide a heavy duty electrically operated passenger entrance door. The passenger entrance door shall be an anodized aluminum frame, split-type double leaf swing door. This door shall have a flexible soft rubber cushion on the meeting edge 1½" in width, minimum. The door glass shall be see-through, AS-2 tint (70% luminous transmittance) safety glass. Under all operating conditions and bus speeds, an airtight, watertight, and dust-proof seal shall be formed between the door and the stepwell, between the door and body opening, and between the door leaf sections. The door leading edge opening speed shall not exceed 18 inches per second and the closing speed shall not exceed 12 inches per second to provide a total door closing or opening in 2 to 4 seconds. The front passenger entrance door shall not extend below the step frame. The door shall be located on the right side of the bus near the front wheel. Any door with an exposed (metal showing) outer frame shall be made of 304 stainless steel (including the fasteners), which does not discolor with age. The entrance door shall provide a 30" clear width opening, minimum. Door opening height from the top of the first step to the door header shall be a minimum of 76". Where interior height is low at the entrance header, the header shall be padded to prevent injury to those exiting the bus. Suggest Source: A&M Systems Inc .
b.	The doorframe strength and electric door operator strength shall be designed to match the entrance door size. Door fasteners shall be anchored through a metal frame, <u>NOT</u> through a wood frame. The operator for the entrance door shall be located in an overhead compartment above the passenger entrance doorway; it shall be concealed from passengers, and shall be easily accessible for servicing through a hinged access door. The electronic control module shall be located in a weatherproof enclosure to prevent water damage. The access door shall be hinged to open up with a holding device or shall be a complete access cover that is secured with ¼" threaded knobs (knobs shall match access cover). The access door or cover shall be as large as will fit in the overhead compartment space. Door motor operation shall be limited electrically to control door travel at full open and full closed positions and shall be adjustable to keep the door closed during bus operation. Physical doorstops shall be used to prevent marring or damage to doors and/or surrounding parts. An entrance door manual release that allows disconnection and simple re-engagement of the door operator shall be provided so that the entrance doors can be manually opened in the event of loss of electrical power or other emergency. The door operator motor shall not run continuously when the manual release is operated. Electric door operator, door linkage, and baseplate components shall be of a single manufacturer. Suggested source: A&M Systems Inc., Excell, Vapor.
c.	The passenger door control switch shall be located in the driver's compartment within easy reach of the driver and be clearly marked for "open" and "close" (switch shall operate the same on all buses). The control switch shall be powered by a constant battery feed circuit with circuit breaker protection. The control switch shall be "hold on" for operation and of a different color than the standard switch.

d.	A method shall be provided to lock all entrances to the bus when it is not in use. Except for the OEM driver's door and ignition, all secondary door locks shall be keyed the same.
e.	The Contractor shall submit detailed engineering drawing(s) for the design of the entrance door and door-opening device.
4) Passenger Stepwell	
a.	All entrance steps and stepwells shall be gauge number 14 (.075" thickness) stainless steel, minimum. Steps and stepwells shall have adequate structural bracing. All metal trim hardware in the stepwell area shall be stainless steel. All fasteners in the stepwell area shall be stainless steel that will pass the 480 hour ASTM B117 Salt Spray test and the 480 hour ASTM D2247 Humidity Resistance test. Ground to first step shall not exceed 12" in height, each additional vertical step shall not exceed 9½" and all tread depths shall be 9" minimum. All steps in the entrance stepwell shall be of the same width. A suspension kneeling feature may be used to achieve the required 12" step height. Stepwells shall be covered with flooring material as described in section B. Body Structure and Exterior Panels, subsection 6. Flooring, item c. Step shall not retain water. Any interior stainless steel except for exposed door frames shall be brushed, not painted.
b.	The Contractor shall submit detailed engineering drawing(s) for the design of the entrance step configuration.
5) Interior	
a.	The interior of the bus shall provide a pleasant, aesthetically pleasing atmosphere. The door and driver instrument panel are to be painted or otherwise finished with a non-reflective, anti-glare finish that matches the overall interior tones of interior panels. All interior hinged access doors shall use quarter-turn, <u>non-corrosive</u> metal, thumb latches with positive stop mechanism (except the storage area in this section, item f., shall have one lockable latch) to hold the door positively closed. All interior markings shall be durable materials affixed to the interior panels' smooth surfaces or markings shall be durable materials affixed to metal plates fastened to the interior panels of the bus. The interior design and colors shall be approved by the State.
b.	All interior panels shall be made of laminate/FRP finished material scuff-resistant materials.
c.	A white or light gray color shall be installed in the interior area above the seat rail lines, in the ceiling area, and on the rear endwall. All materials and treatments shall be easily cleaned. Panel fastening devices shall match color of panels. All interior finished surfaces shall be impervious to diesel fuel, gasoline, and commercial cleaning agents. Finished surfaces shall not be damaged by controlled applications of graffiti-removing chemicals.
d.	The interior height of the passenger compartment at center aisle shall be 76" minimum. At 6" from the sidewall there shall be 67" of interior height, minimum, with a gradual contour to the center aisle (no bulkheads). Interior headroom at the back of bus (rear air conditioning evaporator area) may be reduced to a minimum of 60", but it shall increase to the normal ceiling height at the front of the rear seat cushion. The interior width at seat line shall be 90", minimum.
e.	<u>All surfaces, items, or hardware in the passenger compartment having sharp edges, corners, or angles that could cause injury, shall be padded with a heavy-duty, vinyl-covered, energy absorbing material to match interior colors.</u> Areas inside the passenger compartment of low headroom where a person is prone to strike his head shall be marked and padded. All handrails shall have rounded edges where exposed.
f.	A storage area with a hinged, lockable, access door shall be provided in the interior area either above the windshield (without destination sign) or on the side above the driver as space permits. This area above the windshield shall also be constructed to adequately support 60 pounds of two way radio communication equipment. Storage area door shall open upward, be hinged at the top and have a clip/spring to retain the door in the open position.
6) Flooring	
a.	The floor deck may be integral with the basic structure or mounted on the structure securely to prevent chafing or horizontal movement. All floor fasteners shall be corrosion resistant steel and shall remain secured and corrosion resistant for the service life of the bus. The floor deck shall be ¾" C/D plywood of marine grade material or ¾" fiberglass encased composite material, minimum, with sealed edges to prevent moisture intrusion. The floor deck upper surface shall have all cracks and voids filled and the whole surface rough sanded before installing the flooring material. A layer of sealer shall be installed between floor deck edges that butt against structural members and other deck sections to prevent dust and moisture intrusion. Passage holes provided for wiring and hoses in the floor deck shall be thoroughly sealed to prevent dust and moisture intrusion. Passenger seating floor rail/track shall not be installed in the wheelchair lift or wheelchair securement areas. The floor deck, including the sealer, attachments, and coverings, shall be waterproof, non-hygroscopic, resistant to wet and dry rot, and resistant to mold growth. The floor deck shall not be sandwiched between the wall structural members and the floor structural members.
b.	The entire passenger area including the wheelchair securement area, entrance steps and stepwell area, shall be overlaid with smooth, slip resistant flooring material. The resilient sheet flooring system (2.2 mm thickness minimum) shall be a high quality vinyl with aluminum oxide and color quartz grains throughout the thickness, silicon carbide grains in the surface layer and a non-woven polyester/cellulose backing with glass fiber reinforcement. The flooring shall extend up the sidewall and rearwall to the seat rail line and shall be coved at the floor/wall joint to form a smooth water tight transition. A cove molding radius backing block, approved by the flooring manufacturer, shall be installed behind all floor coving and shall be 1.5" radius (minimum). Installation of flooring must be done strictly according to the flooring manufacturer's directions using the proper accessories, tools, and adhesives. Suggested Sources: Altro Transflor™ Meta, Altro Transflor™ Chroma.

c.	Step treads shall be one-piece resilient sheet flooring system matching the passenger compartment flooring. All step edges (nosings of step tread material) shall have a band of bright yellow contrasting color running full width of the step. Step tread to stepwell joints shall be sealed to prevent intrusion of moisture and debris.
d.	An aisle width standee line of bright yellow contrasting color shall be in the aisle just behind stepwell (must meet ADA contrast requirement). Suggested Sources: Altro Safety Step System
e.	Color of all flooring and step tread shall be equal to Altro Transflor genome (grey) or bison (tan) as requested by the agencies.
f.	Standee decals shall be furnished and mounted at the center of the bus above the windshield.
g.	Wheelwells shall be thoroughly sealed to prevent intrusion of moisture and dirt. Metal wheelwells inside the passenger compartment shall be covered with flooring material or molded fiberglass (FRP or ABS).
7) Emergency Exits	
a.	Each bus shall be equipped with a rear exit door with an minimum opening of 1296 square inches (a rear exit window in place of the door is optional). All exposed exit door frame/jamb structure shall be made of 304 stainless steel, a grade which does not discolor with aging. The rear door exit and side window exits shall meet federal requirements of FMVSS 217. The manufacturer shall provide a method to lock the rear exit door. The rear exit door shall have an audible alarm at the driver's area activated when the exit door latch handle starts to open and when the exit door is locked with the ignition on. A bus with a rear exit door shall have one small window on each side of the exit door in the rear endcap.
b.	The rear exit door shall have two windows, an upper window and a lower window, as a part of the door. The door glass shall be see-through, AS-2 tint (70% luminous transmittance) safety glass. The upper door window height shall match top of rear bus windows as close as practical, one on each side of rear door. Door windows shall match design of bus rear windows. Heavy-duty door latch mechanism with handle guard shall provide a quick release for opening from inside and outside the bus but be designed to offer protection against accidental release. The door latch shall cause the door to compress the perimeter door seal to provide an airtight, dustproof and watertight seal around the door under all operating conditions and speeds. Door panels shall match exterior and interior body panels (see section B., Body Structure and Exterior Panels, subsection 3, items a., and b.)) and have spray foam insulation in between panels. All doors shall be fitted with screwed or bolted-on heavy-duty stainless steel piano hinges or heavy duty hinges of a noncorrosive material. A restraint shall be installed to prevent the door from opening beyond 105° or striking the rear panel of the bus when the door is opened.
c.	A passage way of 16" minimum width shall be provided to the rear exit door. No seats or other objects shall be placed in bus, which restricts passageway to rear exit door.
d.	One-closing static exhaust vent, a combination roof vent-emergency exit (23" by 23" minimum), shall be installed at the mid-point on the longitudinal center line of the roof of the passenger section of the bus. The roof vent-escape hatch shall provide fresh air flow inside the bus when opened and when the bus is in a forward motion. The escape hatch shall have an inside and an outside release handle. There is no warning buzzer requirement for the escape hatch. Suggested source: DMA 1122, Specialty Manufacturing Co., Transpec Inc.
e.	Instructions for proper use of all emergency exits shall be marked in close proximity to the release mechanisms. All interior markings shall be durable materials affixed to the interior panels' smooth surfaces or markings shall be durable materials affixed to metal plates fastened to the interior panels of the bus. Instructions may be labels, of contrasting color, affixed to a location that shall be approved by the state. All emergency exits shall be marked on the exterior of the bus.
f.	Lever-type latches used for emergency windows shall secure the windows tightly shut, shall be easily operated, and shall not unlatch due to vibration during bus operation. The latches shall be made of non-corrosive materials and be designed for minimal maintenance needs. Latches shall be located on the sides, NOT the bottom.
g.	Each exit used for passenger egress shall be identified with a red ½" LED indicator lamp, illuminated with the vehicle marker lighting when ignition is in the "ON" position, above each exit, so that it may be seen by a passenger in an adjacent seat. Suggested Source: Series 29, Sorenson Lighting Company
8) Gauges	
a.	Chassis Original Equipment Manufacturer (OEM) gauges shall be used in the driver's instrument cluster, but if they are not available, VDO brand gauges or Stewart Warner gauges shall be used. Each bus shall have an instrument cluster with the following non-glare needle-type gauges which are easily monitored by sight from the driver's position (lights in lieu of gauges are not acceptable).
b.	Voltmeter and its wiring shall be compatible with generating capacities.
c.	Engine oil pressure gauge.
d.	Engine coolant temperature gauge.
e.	Fuel gauge.
f.	Air system pressure gauge with low air warning alarm and light for buses with an air system.
9) Farebox	

- a. The farebox (a donation box is optional) shall be mounted with the trip handle toward the driver and within easy reach of the driver. The farebox shall be mounted on an adequately braced stanchion; shall be located over a flat floor surface near the driver; and shall be accessible to passengers entering the bus (meet ADA requirements). An indirect farebox light shall be connected through an entrance door jamb switch to the running light circuit operational only when door is opened.
- b. The farebox shall be lockable and supplied with two vaults that are interchangeable and lockable (2 keys for each lock). The vaults shall be keyed alike. The vault and farebox exteriors shall be marked with key reference. (Location shall be approved by the State at pilot model inspection.) Suggested source: Diamond Model NV

10) Bumpers

The front bumper shall be an OEM bumper. The rear bumper shall be a high energy absorbing bumper. The rear bumper shall be installed per bumper manufacturer's specifications. Bumper attachment shall use a minimum of SAE grade 8 fasteners with thread locking feature or other shake-proof (Nord-Lock) mounting in all attachment brackets. Rear anti-ride bumper installation shall allow space between the bumper and the body for energy absorption movement without body damage. Lifting pads shall be provided as part of the bus so that the bus may be lifted (at curb weight) at the front and/or the rear without any deformation or damage to the bus or bumpers and mounting hardware. Rear bumper Suggested source: Romeo R.I.M. Inc. H.E.L.P. bumper, SMI.

11) Mud Flaps and Splash Guards

- a. The bus shall have commercial grade anti-sail mud flaps/splash aprons behind front and rear wheels which contain no visible imprinted logo or advertising. Front mud flaps shall be rubber and rear shall be rigid type mud flaps. The flaps/aprons shall be securely fastened with full width metal strips and appropriate fasteners. The flaps/aprons shall be compressed between a gauge number 11 (.125" thickness, minimum) support bracket and a gauge number 14 (.075" thickness, minimum) metal strip. The support bracket shall be fastened securely to the body substructure or chassis frame. The flaps shall extend to within 6" of the road surface at curb weight. The mud flaps/aprons shall be at least 1" wider than the tire widths (single front, dual rear) to control splash at the rear of wheel openings.
- b. Other mud flaps/splash aprons/shields shall be installed to protect bus equipment (AC components, batteries, front wheel inner shield, auxiliary heater box, and the like) from road splash.
- c. Rubber fender splash guards, secured with stainless fasteners shall be installed on the rear wheel well opening.
- d. Where the mud flaps and splash guards are not an integral part of the body, installation shall be made after the finish coat of paint is applied to the bus using appropriate fasteners and adhesive.

12) Towing

Tow hooks shall be provided with two in the rear and two in the front of the bus, which shall be of sufficient strength to tow 1½ times the GVWR of the bus. Tow hooks shall be equipped with a spring safety clips (rear only), easily accessed, and free of interference with the bumper system when in use. Access to tow hooks may be made through holes in the bumper assembly. The intended use for tow hooks is only to safely move the bus to a point of tow truck hook-up. Tow hooks shall be installed to prevent them from dragging when the bus is driven over an incline. The tow hooks, equal to Original Equipment Manufacturer (OEM) units, shall be mounted and adequately secured to the chassis frame as recommended by the tow hook manufacturer or may be supplied by the OEM as standard equipment on the chassis. The bus shall be designed to be towed from the front or from the rear with either a frame contact or a wheel lift. A fuel tank protection frame shall not interfere with a frame contact lift. The Contractor shall provide the towing and lifting procedure at delivery.

13) Undercoating/Rustproofing

- a. When the unit is completed, the sections of the underside of the bus exposed to the elements shall be treated with an undercoating material except those areas of the OEM chassis where undercoating is not recommended. Undercoating shall be warranted for the same period covered by the body/structure warranty. Suggested source: Tectyl 121-B.
- b. Rustproofing - All box type steel tubing (except stainless steel) used in the floor structure and sidewall structure from the top of the window down, shall have the interior of the tube coated with corrosion resistant material conforming to MIL-C-62218 as outlined in Federal Standard 297E. Sections that are treated shall be properly cleaned to remove greases, oils, and residues before application of the corrosion-proofing material. All mechanisms (moving or stationary parts) that are affected by or rendered useless by an application of sealant or insulation shall be cleaned free of sealant or insulation including vent canisters and drain pipes. Rustproofing shall be warranted for the same period covered by the body/structure warranty. Suggested source: Waxoyl, Ziebart Type-A.

14) Interior Mirrors/Sun Visors

- a. Interior mirror rearview shall be OEM
- b. Windshield sun visor system shall be standard Original Equipment Manufacturer (OEM) chassis visor(s). If the OEM chassis is not equipped with a windshield sun visor, two large transit-type, fully adjustable, double-knuckle, arm-type Plexiglas sun visors shall be provided for the driver at the windshield, and at the side window. Suggested source: OEM or Manufacturer's standard.

15) Exterior Mirrors

- a. Each bus shall be equipped with exterior, powered-remote, heated, left-hand and right-hand rear view mirrors of flat glass with convex mirrors (3" in diameter, minimum) attached or a combination flat/convex glass in a single mirror head. Both flat and convex glass shall be power remote adjustable. The mirror brackets shall be brushed stainless steel or die-cast, anodized aluminum. The mirror shall contain at least 70 square inches of flat glass viewing area. ALL MIRROR MOUNTING SHALL NOT CAUSE PREMATURE BODY DAMAGE. No use of self-tapping screws to mount mirrors. Suggested source: B&R Manufacturing, OEM, Mirror Lite Co, Inc., ROSCO, Velvac.
- b. To prevent obstructed front and right-hand view, a convex, asymmetric, exterior cross view mirror (8" minimum diameter) shall be provided on the left front corner of the bus. Suggested sources: ROSCO Eye-max LP Hawk, Mirror Lite Co, Inc., Bus Boy.
- c. All exterior mirrors shall be constructed with high impact plastic or stainless steel housings. Mirrors shall be remote adjusting and shall move independently of the mirror housing. The mirrors shall be modular in design so that the glass can be replaced using the "twist lock" mechanism for service without removing the entire mirror assembly from the bus.
- d. Mirror mountings shall be reinforced when not in a structural frame member to prevent mirror vibration, with approval by the State at the time of Pilot Model Inspection. The mirror placement shall not obstruct driver vision nor have window divider bars between the driver and mirror face. ALL MIRROR MOUNTING SHALL NOT CAUSE PREMATURE BODY DAMAGE

16) Driver's Seats

- a. The driver's seat shall comfortably hold and support the human body in the ergonomically correct position for driving and meet the flammability requirements of FVMSS 302. The driver's seat with arm rests (right side seat arm rest, left side door arm rest) shall have adjustments for fore and aft slide, 4" minimum travel, back recline, 20° minimum, and weight range capacity up to 350 pounds. While seated, the driver shall be able to make all of these adjustments by hand without complexity, excessive effort, or being pinched. Manual operated adjustment mechanisms shall hold the adjustments and shall not be subject to inadvertent changes. The seat shall be high-backed and shall be properly aligned (centered) behind steering wheel to allow for maximum seat adjustments and operator comfort. The seat belt with shoulder harness, automatic retractor and supplemental restraint (SRS) system shall be chassis Original Equipment Manufacturer (OEM) equipment. All seats and seat mountings shall meet applicable federal standards. An option for an electric 6-way power adjustable seat shall be available. Suggested sources: OEM, USSC G2E, Recaro Ergo Metro with headrest and armrests.
- b. The driver's seat cushion shall be molded high resilient (HR) polyurethane foam padding with indentation load deflection (ILD) 35 pounds minimum, and the back cushion shall be molded or fabricated high resilient (HR) polyurethane foam padding (ILD) 25 pounds minimum. There shall be no welt or bead across the front of the seat cushion under the driver's legs. Compressions to 10 percent maximum and tensile strength, 15 lbs. per square inch minimum. Seat and back cushion foam shall meet the typical physical properties of ASTM D-3574 and the flammability requirements of FVMSS 302.
- c. The driver's seat covering shall be gray Cloth-type Woven Fabric (with flame retardant qualities) or material and color matching bus seats if possible, meeting the requirements listed below in All Seats (see section B. Body Structure and Exterior Panels, subsection 19. Seat Material, item b. Cloth-type Woven Fabric Requirements(with flame resistance)).

17) Passenger Seats

- a. All passenger seats shall be mid-back and are required to meet all applicable FMVSS testing including FMVSS 210.
- b. Two passenger, forward facing seats shall be 35" minimum width with a non-foam, black energy-absorbent, vandal-proof grab handle mounted to the top of each seat back (two per double seat). Grab handles are not required on seats that have a back against a wall.
- c. Single passenger seats shall be 17-½" minimum width with a black, energy-absorbent, vandal-proof grab handle mounted to the top of the seat back.
- d. Forward facing seats shall have 27" minimum knee to hip room.
- e. Aisle facing seats shall have arm rests on both ends if the seat is not against a modesty panel.
- f. Aisles shall not be less than 16" wide except as noted in Part 18 of this section.
- g. The first double seat, aisle side, on the passenger side of the bus shall have an integrated child restraint seat capable of safely carrying children of 20 to 50 pounds.
- h. All seats shall be supported on the floor with high carbon steel support brackets. Seat frame shall be cold-roll steel tubing. Floor anchorage shall be neat and not interfere with entering and exiting the seat. All seat mounting bolts shall be corrosion resistant coated/plated fasteners. Passenger seating floor rail/track shall not be installed in the wheelchair lift or wheelchair securement areas. The Contractor shall provide certification test data that the installation of the seats, seat mountings including floor anchorage and floor fasteners shall meet all applicable FMVSS including FMVSS 207, 208, 209, and 210 for the bus model being offered in this contract.

- i. All metal components of the seat assembly shall be coated with a powder coat epoxy paint finish that shall meet the following tests:

Salt Spray	480 hours	ASTM B117
Humidity Resistance	480 hours	ASTM D2247
Impact Resistance	To 80 inch-pounds	ASTM D2794

All testing is to be performed on standard metal seating materials that have coating thickness of 1.3 to 1.8 mils. Certified test documents are required.

- j. The seating arrangements and configuration shall be furnished by the Program Manager or Designee and/or Ordering Entity.
- k. Suggested sources: American Seating Horizon™ 8535 Mid-Back Series; C.E. White LE Series; Freedman Feather Weight.

18) Wheelchair Lift-Equipped Buses Folding Seats

- a. Forward facing (double) fold-away or flip (double) seats with seat belts shall be provided in the wheelchair securement area per seating arrangements (**see Section B. 28, Wheelchair Securement Area**). All aisle facing seats provided shall be flip seats. Fold-away or flip seats shall include all dimensional, structural and testing requirements of the standard seat specification. Seat locking/latching devices shall be of high quality and be easy to latch and unlatch. Seats must positively latch in the seated and folded position to prevent inadvertent folding or unfolding of the seat. Any support legs resting on flooring shall be non-marring or rest on metal plates flush mounted with flooring. All fold-away seats shall be able to pass FMVSS 210 without having to fasten additional latches or cables. All fold-away seats shall fold against the wall when wheelchair space is required (no further than 12" from wall in the vertical folded position). Seat may not extend into bus more than 37½" (two passenger) and 18½" (1 passenger) when folded down for passenger seating. Aisle space may be reduced to 14 inches where fold-up seating is placed on each side of the aisle or 15½" where placed opposite a stationary seat. The seat bottom cushion shall be a 5° tilt up from level, minimum, and back cushion shall be at 95°, minimum. The seats shall be of the same design as the other passenger seats. All seat backs of the fold-away/fold-up seats shall be covered with material matching seat cushion color and fabric. Suggested source: American Seating Horizon™ 8800 Cantilevered Folding Seat or 8700 Flip-up; C.E. White LE Series; Freedman Feather Weight Foldaway or Mid-Hi Flip; Braun #125.

19) Seat Material

- a. Seats shall be individually contoured to each passenger for occupant comfort and retention. Seats shall be covered with cloth-type woven fabric or vinyl fabric at the transit agency's option. Cloth-type fabric or vinyl shall completely enclose the seat cushion and the seat back. Seat background colors shall be gray, red, blue, and other in-stock colors (Contractor to provide available choices). All background colors shall be approved by the Program Manager or Designee.

b. Cloth-type Woven Fabric Requirements (with flame resistance)

- i Minimum weight 23 ounces per linear yard.
- ii 50,000 minimum double rubs (ASTM - 3597-77 Wyzewbeek Method).
- iii Color fastness to light 300 hours minimum (AATCC-16-1977 Carbon Arc.)
- iv Comply with California BLT-117.
- v All cloth-type woven fabrics except Holdsworth Wool shall be treated with a flame proofing solution following the manufacturer's specifications, No-Flame by Amalgamated Chemical Inc., or equal.
- vi The fabric shall be a plush material.
- vii Suggested source: Flame Resistant Fabrics by, CMI, Holdsworth Wool, or LaFrance Mills. Contractor shall provide technical data sheet including flammability and smoke emissions for the seat covering material supplied.

c. Vinyl Fabric

- i Shall be transportation grade expanded vinyl, 35 ounces per linear yard minimum.
- ii Suggested source: Flame Resistant vinyl by CMI or Omnova. Contractor shall provide technical data sheet including flammability and smoke emissions for the seat covering material supplied.

d. Cushions

- i Seat cushion and back cushion shall be molded high resilient (HR) polyurethane foam padding. Seat cushion indentation load deflection (ILD) shall be 35 pounds minimum, with compression to 15% maximum, and tensile-strength of 15 minimum. Seat and back cushion shall meet the physical properties of ASTM D-3574 and the flammability requirements of FMVSS 302, minimum. The technical data sheet for the foam supplied shall be included with the seat information. Suggested source: Manufacturer's standard.

<p>ii Seat and back cushions shall be supported with a spring-type support system. Seat and back cushions shall be completely covered with seat cushion covering material. Seat back depth shall not exceed 3½" overall.</p>
<p>e. Passenger Seat Belts</p> <p>i The Contractor shall provide certification test data that the seat belts, and the installation are in compliance with FMVSS-207, 208, 209, and 210 where applicable for the bus model being offered.</p> <p>ii Two universal "Buckle Up" decals approximately 6" by 6" shall be furnished loose with each bus. Decals shall indicate that seat belt use is recommended.</p> <p>iii All seats shall be equipped with seat belts for each designated seating position.</p> <p>iv The latch end of the belt will have a locking retractor. The retractor will be mounted underneath the seat to the seat frame and there shall be no lap retractors except on the rear center bench seats (if equipped).</p> <p>v Belts shall have a push button latch release mechanism with push button on aisle side of seat.</p>
<p>20) Handrails, Stanchions (Shall meet ADA regulations)</p>
<p>a. The handrails and stanchions shall be a minimum of 1¼" outside diameter. All handrails and stanchions shall be positioned so as not to interfere with wheelchair movement and shall meet ADA requirements for position and size. All handrails and stanchions in the passenger entrance area shall be highly visible yellow in color. All other handrails and stanchions shall be brushed stainless steel. Mounting brackets and fittings shall be composed of the same kind of material used for the stanchion or handrail. Stanchion mounting rubber grommets shall be able to handle roof to floor flex without excessive damage or ejection.</p> <p>b. All handrail and stanchion mountings shall have reinforcement plates welded to or imbedded in the structure behind surface panels of sufficient size and strength. Final locations shall be determined at pilot model inspection. Self-tapping/threading screws shall NOT be used.</p> <p>c. A floor-to-ceiling vertical stanchion shall be provided in close proximity to the rear of the driver's area. A guardrail shall be provided in back of the driver's area extending from the vertical stanchion to the left side of the bus 30" plus or minus 2" above the floor. A padded modesty panel shall be provided from the guardrail to within 8" of the floor. Stanchion and guardrail shall not restrict any driver's seat adjustments.</p> <p>d. A smoked Plexiglas panel, 3/8" thick, shall be provided behind driver from top of the driver's seat to within 12" of bus ceiling. The panel shall not impair driver's seat adjustments. The panel shall be fastened with bolt and nuts or double screw heads. Self-tapping/threading screws shall NOT be used. The panel shall be located to allow the driver's seat back to recline to ½ its maximum reclined adjustment with the driver's seat in the position furthest from the steering wheel. Panel may be incorporated into the stanchion and guardrail behind the driver and shall have cutouts to give hand access to the vertical stanchion.</p> <p>e. Floor-to-ceiling stanchions (yellow) shall be provided near aisle on each side of front entrance.</p> <p>f. Left and right side entrance handrails (yellow) shall be installed from low stepwell to floor-to-ceiling stanchions near aisle. Entrance handrails shall be positioned so passengers entering or exiting the bus will have handrail support throughout the entering/exiting process and so that articles of clothing may not become entangled in the handrail-stanchion-guardrail assemblies.</p> <p>g. A guardrail (yellow) shall be provided in front of and at the rear of the front entrance steps, extending from the vertical stanchions to the right side of the bus 30" plus or minus 2" above the floor. A modesty panel (padded both sides, vinyl clad) shall be provided to the left (rear side) of the entrance from guardrail to floor (in case of lift bus, provide floor-to-ceiling stanchion with guardrail and modesty panel to rear of platform lift).</p>
<p>h. Ceiling Handrails</p> <p>i Two full length transit-type ceiling handrails shall be provided and securely attached to roof structure. The handrails shall be a minimum of 1¼" outside diameter, brushed finish, stainless steel including mounting brackets and fittings. The handrail ends shall curve toward and terminate at the ceiling. All handrails shall meet ADA regulation in 49 CFR Part 38, Subpart B--Buses, Vans and Systems, §38.29 requirements for position and size.</p> <p>ii All handrail mountings shall have steel reinforcement plates welded to or imbedded in structure behind surface panels of sufficient strength to withstand passenger force. Final locations shall be determined at pilot model production.</p>
<p>21) Interior Lighting</p>
<p>a. Overhead entrance and stepwell lights shall be LED and provide no less than two foot-candles of illumination on the entrance step tread, or lift or ramp with the door open. Outside light(s) shall provide at least 1 foot-candle of illumination on the street surface within 3 feet of step tread outer edge. This system shall provide illumination automatically when the door is open and meet ADA requirements.</p> <p>b. All lights shall have access holes large enough to easily remove electrical connector.</p>

- c. Overhead entrance and stepwell lights shall be wired to and be automatically activated by a door controlled switch. Lights shall operate any time the ignition key is on and the door is opened.
- d. Stepwell light shall be on the side away from wheel splash.
- e. Interior lighting shall be LED and provide a minimum of two foot-candles of illumination at a reading level. Interior lighting fixtures shall be reasonably flush with the interior walls and ceiling so no hazard exists for the passengers. All lights shall have lead wire long enough to remove light at least 6" from bus and easy access to the connectors for service. All interior lights shall be grounded by an in-harness ground attached in the fuse panel to a common grounding point.
- f. Light installation shall be designed to illuminate the lift platform when deployed at floor level at no less than two foot-candles of illumination. Outside light(s) shall provide at least 1 foot-candle of illumination on the street surface within 3 feet of step tread outer edge. This system shall provide illumination automatically when the lift door is open and meet ADA requirements. On-off light switch shall be lift door-actuated.

22) Exterior Lighting

- a. All exterior body lights shall be from the same manufacturer throughout the body.
- b. Exterior lighting shall be in accordance with Federal Motor Carrier Safety Regulations (393.11) and ADA regulations. All lights shall have the lead wires long enough to remove the light at least 6" from bus for service. All exterior lights shall be grounded by an in-harness ground attached in the fuse panel to a common grounding point. Unless specified, all exterior lights of the bus shall be light emitting diodes (LED) sealed lamps retained in a rubber grommet mounting except for front headlamp/turn signal assemblies. All lights shall have the mounting to body sealed to prevent moisture intrusion and grounded to the frame.
- c. All lights shall have access holes large enough to easily remove electrical connector
- d. Exterior marker lights shall be light emitting diodes (LED) (2" in diameter sealed lamp) retained in a rubber grommet mounting and conform to Federal Motor Carrier Safety Regulations Part 393.
- e. All marker lights shall have a weather proof two prong (one positive and one ground) plug-style connector with the ground wire connected to an in-harness ground attached to a common grounding point.
- f. Marker and tail lights shall be operated through a relay controlled by the headlight switch. Suggested Sources: Dialight, Grote, Optronics, Peterson, SoundOff Signal, Trucklite. Headlights shall be Halogen lamps and the standard front park/turn lights may be a part of the OEM headlight assembly.
- g. An amber, LED, mid-ship light (sealed) shall be installed on both sides of the bus and shall operate with the hazard flashers, marker, and turn signals, license plate LED shall be Peterson Model M153C-MV with Peterson Model 150-40 bracket or Optronics LPL-55 series for those not mounted in the preformed recess in the rear panel.
- h. A red, 4" round, voltage regulated LED high mount stop lamp shall be mounted centrally in the rear panel of the bus and work in conjunction with the brake lights. The high mount stop lamp shall be mounted either above the rear emergency exit door or above the rear emergency exit window. Final location of high mount stop lamps shall be determined at pilot model production. Suggested Sources: Command Electronics model 003-82, Dialight, Grote, Optronics, Peterson, SoundOff Signal, Truck-Lite.
- i. Brake/tail lights shall be red 4" round sealed voltage regulated LED lamps and shall not override hazard flashers or turn signals.
- j. Directional rear turn signal lamps shall be amber 4" round sealed voltage regulated LED lamps.
- k. Back-up lamps shall be clear, 4", round, sealed, voltage regulated LED lamps. Back-up lights shall be 500 lumens minimum.

23) Heating/Ventilating/Air Conditioning (HVAC)

- a. During normal passenger service, front and rear heavy-duty heating system shall be capable of raising the interior temperature of a bus from 0°F to 60°F at knee level (22" above the floor) throughout the interior of bus within 30 minutes from engine startup. After initial warm-up, while the bus is in passenger service, the front and rear heavy-duty heating system shall be sufficient to maintain a minimum of 64°F at knee level throughout interior of bus and at the driver's foot space when the outside temperature is 0°F. Heating system operation will be verified by the required system testing as defined in Section C.4. Heating/Ventilating (HV) Certification. In addition to the front heater and windshield defrosters, for increased air circulation, one 6" two speed fan with non-glare blades and body shall be mounted away from passenger and driver traffic in the driver's area near the windshield. The fan shall be mounted securely with nuts, bolts, and washers. Grounding for all heater fan motors shall be supplied by an in harness ground wire attached in the fuse panel to a common grounding point. All HVAC fan motors shall be supplied with proper radio frequency (RF) suppression equipment to remove two-way radio interference.
- b. Front heating unit shall be automotive in-dash type, chassis Original Equipment Manufacturer (OEM), and shall be capable of delivering heat, fresh air ventilation, and air conditioning (optional) to the driver's area. The front heater shall have a temperature control valve which can be regulated from the driver's area. The driver's area shall have air circulation in each mode of defrost, heat, fresh air ventilation, and air conditioning (optional) of 125 cfm at the foot area, with a total driver's area circulation of 400 cfm minimum.
- c. Rear heating unit(s) shall distribute heat in at least a 180° direction and ensure air distribution to all passenger areas of the bus interior. Heating unit(s) shall have a minimum ¾" I.D. heater inlet and outlet ports with a BTU/hr output rating to match the specified HVAC performance requirements. Coolant flow through the heating units shall not be restricted by excessive bends or kinks in hoses or excessive lengths of hoses. Heating units shall have rubber or nylon insulator(s) between their mounting base and floor of the bus. Suggested sources: ACC Climate Control, A. R. Lintern, Bergstrom, Pro-Air, MCC Mobile Climate Control.
- d. The premium heater hose (¾" ID minimum) shall be high temperature resistant Ethylene Propylene Diene Monomer (EPDM) material. Hose shall be a reinforced type with Aramid knitted fiber reinforcement between the EPDM tube and EPDM cover. Heater hose material shall be compatible with all types of coolant including long life coolant. Rated temperature limits of the hose shall be -40°F to +300°F minimum, with a burst pressure of 130 PSI minimum.
- e. Manual shut off valves for the rear heater shall be placed as close to the engine as is practical. The ¾" ID heavy-duty brass gate shut off valves shall be located in the heater outlet line (from engine to heater) and in the heater inlet line (to engine from heater). Shut off valves shall be accessible by personnel without going under the bus with access panels. Location to be determined at pilot model inspection.
- f. Front heater shall have coolant temperature control valve or other controls which can regulate heater temperature from the driver's area.
- g. All heat lines and hoses shall: have exterior routing along the bus frame rail where possible; be sufficiently protected to ensure against wear from friction and the elements; be insulated to reduce heat loss; use routing that eliminates excessive bends and hose lengths; and have heater hose passage holes through engine cowl and floor area thoroughly sealed to prevent air, dust, and moisture intrusion.
- h. Air conditioning charge ports shall be protected from road debris to prevent corrosion.
- i. Air Conditioning (**see section B. Body Structure and Exterior Panels, subsection 56. Options, item a. Air Conditioning – Split System, and item b. Air Conditioning Tie-in System, and item c. Air Conditioning/Heat – Rooftop System**).

24) Windows

- a. Passenger compartment windows shall be T-type slider at top, full slider, or top tip-in type for window ventilation. Windows shall have tempered safety glass and heavy-duty locking features which shall meet FMVSS 217 for emergency exits, if applicable. Window glazing material shall be able to maintain its seal and glass retention for the life of the unit. Caulking around windows shall be used only as a seal, not to make up for body defects or out of tolerance window openings (maximum clearance of 1/4" around the frame, 1/8" on each side). All window glass shall be tinted – passenger windows AS-3 tint 31% luminous transmittance, right and left driver's side windows AS-2 tint 70% luminous transmittance, and windshield shaded-tinted AS-1 tint – and meet applicable federal standards.
- b. Driver's compartment right and left side windows shall be designed for maximum window area to provide unobstructed vision. Driver's compartment left side window shall be adjustable vent type (moveable front section of lower portion for ventilation) or chassis Original Equipment Manufacturer (OEM) door window. Driver's right side window shall be one piece. Suggested sources: Clear-Vision, Hehr, Kinro, Sampers.
- c. Black trim shall be installed or painted to completely cover the space between all side passenger windows. The trim line shall match the bottom edge of the windows. If equipped with a side lift door, a black trim stripe shall be painted from and around the lift door windows to match the trim of the side windows. The window trim shall give the illusion of one solid window.
- d. Windshield shall be OEM.

25) Paint

- a. All exterior surfaces shall be smooth and free of visible fasteners (excluding round head structural rivets), dents, and wrinkles. As appropriate for the paint used and prior to application of paint, the exterior surfaces to be painted shall be properly cleaned and primed to assure a proper bond between the substrate and successive coats of original paint. All FRP body paint must match OEM chassis paint codes. Paint shall be applied smoothly and evenly, with the finished surface free of dirt, runs, orange peel, and other imperfections. All exterior finished surfaces shall be impervious to diesel fuel, gasoline, and commercial cleaning agents. Finished surfaces shall not be damaged by controlled applications of commonly used graffiti-removing chemicals.
- b. All exterior paint shall be a two part acrylic-urethane-type or polyurethane-type with low volatile organic compound (VOC) emission. The finish coat of paint shall be applied before rubrail covers or inserts, fender flares, exterior lights, and other body mounted accessories are installed. Paint shall be applied in the following method:
 - i If on bare aluminum, use proper cleaner. Suggested sources: DuPont 2253, PPG followed by aluminum conversion. Suggested sources: DuPont 2265, PPG.
 - ii If on bare steel, use proper cleaner. Suggested sources: DuPont 5717S, PPG followed with steel conversion.
 - iii For all bare metal, use primer. Suggested sources: DuPont Prime 615/616 (two coats), PPG.
 - iv Appropriate prep to stainless steel surfaces shall be used to ensure proper paint adhesion.
 - v Appropriate primer as required shall be used on fiberglass surfaces.
 - vi Coat entire prepared surface to be painted with minimum of two coats of paint properly activated and reduced and have a minimum thickness of three millimeters. Suggested sources: DuPont, PPG Concept System, Sikkens Corporation U-Tech brand.
- c. Standard paint color for all buses shall be the manufacturer's pre-finished white exterior panels (to match OEM chassis white). Color scheme on all buses shall be provided at the time of ordering. Additional paint schemes will be quoted in **section B. Body Structure and Exterior Panels, subsection 56. Options, item i. Paint – Optional Designs**. Special design paint application pricing will be negotiated at the time of ordering by the transit agency.

26) Insulation

- a. Inside walls, ceiling, passenger floor area, driver floor area, and fire wall area shall be adequately insulated for sub-zero winters with spray-type foam insulation or glued in place insulation with a minimum R factor of 5. The insulation shall be non-formaldehyde, fire-resistant (FMVSS 302 minimum), non-hygroscopic, and resistant to fungus. Insulation shall prevent condensation and thoroughly seal bus so that drafts cannot be felt by the driver or passengers during operations with the passenger door closed. Insulation shall not cover up electrical wiring harnesses, electrical switches, or other devices and shall not be sprayed in wheelwells. All mechanisms (moving or stationary parts) that are affected, create a fire hazard, or are rendered useless by an application of sealant or insulation shall be cleaned free of sealant or insulation, including vent canisters and drain pipes. Tectyl 121-B shall not be applied over foam insulation.
- b. Engine hood cover and driver's area shall have adequate insulation to keep driver's foot area cool during summer months, warm during winter months, and reduce engine noise to an acceptable level.

27) Type I Lift, (Platform Type) (Shall Meet ADA Requirements)

- a. The Type I platform lift (passive lift) shall be installed in a separate door opening for use by persons with disabilities. The lift assembly shall be mounted within the bus body on the right (curb) side. The bus manufacturer must provide documentation (reviewed by the State at pilot model production) that the lift installation complies with the lift manufacturer's lift installation requirements. The overhead clearance between the top of the door opening and the raised lift platform, or highest point of a ramp shall be a minimum of 68" to meet ADA requirements.
- b. The lift doors shall be manually operated, double-door with an outside key locking handle. Spring loaded struts, gas struts shall be provided on the lift doors to positively hold the doors in the open position. All door openings shall have full structural framing around the opening equal to the structural members of the body. The lift door(s) shall have an upper window similar to the side windows of the bus. Any exposed lift door frame structure shall be constructed of 304 stainless steel, a grade which does not discolor with aging.
- c. The lift shall be an electro-hydraulic type. If the lift has a crossbar, it shall be above the door opening and well padded. The platform lift equipment shall be a double "C" channel parallel arm construction, hydraulically operated by two single-acting cylinders with gravity unfold, gravity down, power up, and power fold (stow) operation. No part of the lift platform shall exceed 6 inches/second during the lowering and lifting of an occupant, and shall not exceed 12 inches/second during deploying or stowing. The lift shall have a mechanical outboard safety wheel stop to prevent wheelchair from rolling off the platform during the lifting cycle. The Contractor shall deliver the lift equipped bus with the type of lift equipment requested by the State. Suggested sources: Braun, Ricon.
- d. A manual safety override shall be provided that will remain operable. Lift shall have manual override instructions visible from inside and outside the bus with door open.
- e. The entire lift assembly shall be installed inside the bus body and shall have adequate protection installed on all sharp corners or items that protrude into the passenger area to prevent accidental injury to passengers. Wall and floor mounting points shall be reinforced and shall be attached with fasteners having a thread locking feature. Lift installation shall insure that no lift rattling exists when the bus is operated while the lift is stowed.
- f. A lift control interlock system shall be installed that shall ensure that the bus cannot be moved when the lift is not stowed and that the lift cannot be deployed unless the interlock is engaged [to meet ADA regulation in 49 CFR Part 38, Subpart B-Buses, Vans and Systems, §38.23, (b)(2)(I)]. The interlock system shall engage when the lift operation sequence is followed. Interlock operating instructions shall be included with the bus at delivery. An indicator light (red, labeled) shall be provided at the driver's station that is activated when the lift door is open and when the lift is in operation. An interlock override system shall be installed that allows service personnel to move the bus to a safe area for repairs. Suggested Source: Intelligent Lift Interlock System (ILIS) by Intermotive Products
- g. All lift equipped buses shall display the international symbol of accessibility, one each on left and right side of the bus. Location shall be determined at pilot model inspection.
- h. The lift shall meet ADA requirements as well as these minimum requirements.
 - i Capacity 1,000 pounds minimum.
 - ii Usable platform width 34" minimum.
 - iii Usable platform length 54" minimum.
 - iv Platform shall include automatic locking inboard safety wheel stop (minimum 6" height) and outboard safety wheel stops to prevent wheelchair from rolling off.
 - v Platform shall automatically stop at floor level.
 - vi Platform shall automatically stop when lowered to ground level.
 - vii Hand held controls shall be conveniently located on a flexible or coiled, cut- resistant cable and shall be mounted with access from inside or outside the bus. The cable shall be routed to eliminate being pinched in any moving parts.
 - viii Platform, bridge plate, and area between bridge plate and aisle shall be skid resistant.
 - ix Bridge plate and platform shall be coated to resist rust.
 - x Platform shall have horizontal handrails (one each side) on platform to assist passenger during lift operations. Handrails (yellow) shall fold automatically to prevent any obstructions into the bus passenger area.
 - xi Lift door operated interrupt switch shall prevent use of lift with lift door(s) closed. Heavy duty long life switches shall be used in this application.
 - xii The color of the lift shall coordinate with bus interior colors and be approved by the Program Manager or Designee or the Ordering Entity. The outside edges of the platform shall either be painted yellow or use 3M™ vinyl safety stripe tape to enhance visibility when extended on the ground.
 - xiii Sharp corners of lift platform shall be padded (remove for lift use) when in the stored position.
 - xiv The wheelchair lift shall comply with all federal, Americans with Disabilities Act (ADA), and Veterans' Administration regulations.
 - xv Lift platform shall be fitted with device to prevent the platform from touching or leaning against door after being returned to stored position when the lift assembly is not in use.

28) Wheel Chair Securement Area

- a.** The wheelchair securement system shall be installed according to ADA requirements. Securement location shall be installed as shown by the seating plan option and approved at pilot model production. Fold-away seating shall be provided for use when wheelchairs are not being carried as shown in floor plans. The integrated securement system shall restrain the occupant and the wheelchair separately and securely.
- b.** Wheelchair securement shall meet these minimum requirements:
 - i** Forward facing wheelchair tie down and occupant restraint shall consist of four floor attachment points for the chair and a retractable combination, lap belt/shoulder restraint with manual height adjuster for the occupant per location.
 - ii** Securement floor anchorage points shall be anodized aluminum, stainless steel or other noncorrosive metal construction and consist of aircraft type insert pockets that can be flush mounted with the flooring (Flanged "L" style track, Q'Straint, Sure-Lok – Omni aluminum 6061-T6 or equivalent with matching end caps). Anchorages and securements must be tested together and compatible. Floor anchorage points for the first securement space shall be spaced at a minimum of 54" from center of front track to center of rear track. Floor anchorage points shall be located no closer than 8" from a stationary wall or obstruction (forward or rearward) that would hinder an operator from attaching the securement system. The center run of anchorage track between two securement locations can be shared with the rear anchorage of the front securement system and the front anchorage of the rear securement system. Width of anchorage track shall be no less than 30" wide allowing for the widest of mobility devices.
 - iii** Shoulder belt wall anchorage shall be permanently fastened to the body structure in the wall according to the securement manufacturer's installation instructions. Shoulder belts manual height adjustment shall allow approximately 12" of vertical height adjustment allowing for differences in height of the secured mobility aid passenger.
 - iv** The four belts that attach to the wheelchair from the floor anchorage points shall use a simple speed hook end ("J" or "S" style) for chair attachment and have automatic self-tensioning heavy duty retractors with a hard metal cover and have available tightening knob. Knob is for aiding in additional securement control. All floor attachment belts shall be the same and work in any of the four floor attachment points and be equipped with pin connector brackets for the lap belt assembly. Automatic self-tensioning and self-locking retractors with metal covers shall be part of the four floor belt assemblies for automatic belt tensioning. Belt ends with floor anchor attachments shall be easily identified for placement in the floor track.
 - v** All belt components and there attachments to such vehicles shall meet ADA design load requirements of 2,500 lbs. per securement leg and a minimum of 5000 lbs. for each mobility device.
 - vi** All components shall meet SAE J2249 requirements and be 30 MPH/20G impact tested.
 - vii** All components shall be installed to the securement manufacturer's recommended specifications.
 - viii** Suggested sources: Q'Straint Model Q-8100-A1L; Sure-Lok's Retraktor™ Systems for L track AL-712S-4C.
- c. Restraint Storage System**
 - i** A wheelchair restraint storage system shall be positioned under the foldaway seats at each wheelchair space. Storage system shall:
 - 1. Keep restraints clean.
 - 2. Be free of any sharp edges.
 - 3. Provide easy accessibility to restraints.
 - 4. Restraints shall be stored securely to prevent noise while the vehicle is in motion.
 - 5. Restraint storage system shall be compatible with the installed securement system (L-Track or 360 degree single point securement system). Suggested Source: Freedman Tie-Down Storage System.
 - ii** A storage pouch, from the securement manufacturer, shall be provided for the lap belt restraints so that the restraints can be stored off the floor in the bus when not in use. Location of storage pouch shall be determined by ordering agency.

29) Chassis

- a.** The chassis shall have a pre-delivery inspection performed by a representative of the chassis manufacturer before the bus manufacturing process begins. A copy of the completed pre-delivery inspection form shall accompany the bare chassis and accompany the bus during manufacturing as part of the build order. All standard or optional chassis equipment to be included shall be as advertised by the manufacturer and factory installed and shall not consist of substitute or aftermarket equipment. Optional chassis equipment not available from the factory may be dealer installed. The chassis shall meet the following minimum requirements.
- b.** Class I - Chassis shall have one front axle with single wheels and one rear axle with dual wheels. It shall have a driver and passenger OEM door with co-pilot seat or it shall have a driver OEM door without a co-pilot seat.
- c.** Class II - Commercial rated chassis shall be the highest Gross Vehicle Weight Rating (GVWR) available for the wheelbase and shall have one front axle with single wheels and one rear axle with dual wheels.

30) Tilt Wheel/Power Steering
Chassis shall be equipped with power steering and a tilt wheel steering column. The steering column shall be adjustable for various up and down positions of the steering wheel. The steering gear shall be a full hydraulic power assist type.
31) Wheel Base
The minimum wheelbase shall be 138" (small class I) and 158" (small class II) using the wheelbase for each of the specified bus lengths which will provide proper approach and departure angles, proper handling, and proper ride characteristics. Maximum rear overhang shall not exceed 1/3 bus overall length.
32) Engine
<ul style="list-style-type: none"> a. Small class one shall be gasoline V8 or V10, fuel injected, 330cid, 5.4L minimum b. Small class two shall be gasoline V8 or V10, fuel injected, 415cid, 6.8L minimum
33) Transmission
The electronically controlled transmission shall be a minimum, heavy-duty, five-speed automatic cooled by an "H.D. transmission oil cooler" in series with radiator cooler or equal (cooler capacity to match GVWR of bus). The transmission shall have an external spin-on type filter. Suggested source: Allison Transmission 1000 or 2000 series or Ford Torqshift matched to the electronic engine and chassis.
34) Alignment
The bus shall have a four wheel alignment at final point of inspection, just prior to delivery to the transit agency. A copy of the work order indicating the camber, caster and toe-in settings at time of final inspection shall be provided with the bus at delivery. All axle alignment required.
35) Gross Bus Weight Rating
<ul style="list-style-type: none"> a. Small Class One <ul style="list-style-type: none"> i Front Axle Rating – 3,700-lb. minimum. Bus shall not exceed chassis manufacturer's rated front axle weight capacity. ii Rear Axle Rating, -7,800-lb. minimum. Bus axle weight shall not exceed chassis manufacturer's rear axle weight rating or spring and tire capacity. iii Chassis GVWR - 11,500-lb. minimum. (see Section I Purpose of Specifications.) Engineering calculated loaded bus axle weight charts are required. b. Small Class Two <ul style="list-style-type: none"> i I-Beam Front Axle Rating – 4,600-lb. minimum. Bus axle weight shall not exceed chassis manufacturer's front axle weight rating or spring and tire capacity ii Rear Axle Rating, - 9,450-lb. minimum. Bus axle weight shall not exceed chassis manufacturer's rear axle weight rating or spring and tire capacity. iii Chassis GVWR -14,200-lb. minimum. (see Section I Purpose of Specifications.) Engineering calculated loaded bus axle weight charts are required.
36) Differential
Heavy-duty rear axle with full floating axles. Gear ratio shall allow buses to travel approximately 65 miles M.P.H. loaded, maximize fuel economy, and not exceed manufacturer's recommended engine operating R.P.M. Axles shall be marked if synthetic oil is used.
37) Battery, Cables, and Grounds
<ul style="list-style-type: none"> a. The battery equipment shall be furnished by the chassis manufacturer where available. The dual batteries shall be maintenance free with reserve capacity of 400 minutes @ 80° F, 950CCA minimum, 12-volt minimum. The batteries installed in the bus must be a pair of matching units. b. The batteries must be fresh, fully charged units when the finished bus leaves the manufacturing plant. Batteries that have been in the bus during the manufacturing process which were allowed to become fully discharged for a period of time shall be replaced with fresh new batteries. One battery shall be mounted under the hood and the second battery shall be mounted on a slide-out tray with nonmetal battery hold down secured with bolts. Both batteries shall have a protective cover over the positive charge. The tray, covers, slides and rollers shall be stainless steel. The slide-out tray shall be mounted on properly supported mechanism, all of which shall have adequate capacity to support the battery equipment. The battery slide-out tray shall allow movement to permit full service of batteries outside of the bus body. The inside of the battery compartment shall be covered with a durable insulating material to prevent electrical shorts. The totally enclosed battery compartment shall be vented and the tray shall be coated with an acid resistant coating. The battery compartment must be located below the floor line with adequate reinforcement brackets mounted to floor supports. The battery compartment shall be fitted with an insulated standard exterior access door to prevent accidental grounding with hinge and quarter-turn, non-corrosive metal, thumb latches with positive stop mechanism or flush pull-style latch(es) (SouthCo Model #M1-61-1), which match latches on other compartment access doors. The battery box compartment must be marked to say "auxiliary battery inside". Or the battery may utilize the passenger stepwell as a storage compartment. The stepwell shall remain gage number 14 (.075" thickness) stainless steel, with a stainless steel battery tray that is easily accessible with a removable step cover. The battery compartment shall be vented in a manner that prevents debris from entering and the tray shall be coated with an acid

resistant coating. The stepwell shall have adequate capacity to support the battery equipment. The battery tray shall allow movement to permit full service of batteries outside of the bus body. The stepwell compartment must be marked to say "auxiliary battery inside". Recommended Battery Sources: OEM

- c. Battery positive and ground cables shall be AWG size 2/0 minimum, fine stranded, flexible copper wire with permanently affixed cable connector ends with heat shrink tubing applied. All cable ends shall be fastened in a manner equal to the method used by the chassis Original Equipment Manufacturer (OEM). Positive cable ends at the battery shall use a protective cover or cap as an added insulator. Cable assemblies installed in place of chassis manufacturer's battery cables shall be sized to match the electrical system's maximum current draw to provide proper engine starting and operation of all systems.
- d. Engine, body, and equipment grounds (properly sized) shall be installed to handle subsystem electrical capacity. For all ground wire connections; 1) paint shall be removed at the grounding point to provide a cleaned surface; 2) grounding wires and cables fastened to the frame or body structure shall use a bolt with nut installed in a proper sized hole; and 3) a coating of dielectric material shall be applied to the cleaned surfaces, cable ends, bolts, and nuts where each positive or grounding cable or wire is attached. The following is a list of grounding locations:
 - i A ground of the battery cable size shall be installed between the engine and chassis frame.
 - ii Between the transmission case and the chassis frame.
 - iii The bus body shall be properly grounded with cables to the chassis frame in at least two places.
 - iv Lift pump motor shall be grounded directly to chassis frame using a cable of the same size as the pump motor feed wire.
 - v All exterior lights and accessories, added by the body manufacturer, shall be grounded by an in-harness ground attached at a common grounding point. There may be a common grounding point in the rear of the bus along with a required grounding point at the fuse panel.
- e. All buses shall be supplied with proper radio frequency (RF) suppression equipment to reduce radio interference and improve radio transmission and reception performance. High corrosion resistance and high conductivity braided ground straps shall be added: between the engine and the chassis frame of 1" width, minimum; between the engine and the firewall of ½" width, minimum; two between the frame and the body sections of ½" width, minimum; and between the separate body sections of ½" width, minimum. For all braided ground wire connections, paint shall be removed and a coating of dielectric material applied to the cleaned surfaces where each braided cable attaches as is required in other ground wire applications. All removable covers in the engine area including fiberglass hoods need to be shielded and RF grounded. All braided high corrosion resistance and high conductivity ground straps shall be as short as possible and shall use the negative battery cable attachment point (except those between separate body sections) as the termination point of the RF grounding.

38) Alternator

The alternator equipment shall be furnished by the chassis manufacturer where high output will match system needs. This system shall be a 12-volt serpentine belt drive with internal or external voltage regulator. It shall be capable of maintaining the battery at a state of full charge under all operating conditions and equipment loads, 200 amp minimum. The alternator(s) shall be supplied with proper radio frequency (RF) suppression equipment and have a ½" wide braided ground strap connected between the alternator frame and the engine block to reduce two-way radio interference. Any bracket modifications shall not reduce the strength of the mounting bracket. Chassis alternator equipment available that is unable to meet electrical needs may be replaced by Delco/Remy, Mitsubishi, Leece-Neville, or PennTex that will meet system needs. Any non-Original Equipment Manufacturer (OEM) alternator equipment installed on a bus by the body manufacturer shall be covered by a minimum warranty period equal to the chassis OEM alternator warranty. It is the responsibility of the manufacturer (bus supplier) to match the alternator performance to the bus's electrical system needs.

39) Engine Fast Idle

The engine shall be equipped with fast idle control which includes manual and automatic control features. Fast idle shall not activate unless the transmission control is in park (P). The control system shall have a manual switch, volt sensor, an indicator light, and activate automatically from voltage sensors. The system shall automatically deactivate when bus is shifted into gear and when the bus foundation brakes are applied. Suggested source: Chassis manufacturer's equipment, Gateway by Intermotive Products, Penntex Model PX-HI-(mod no) with time out module, Vortec MD30-2500.

40) Brakes

- a. The bus foundation brakes shall be a power-actuated hydraulic split system of a four wheel disc type with a three channel anti-lock braking system. The system shall be the heaviest-duty available for stop and go operation. The brake system shall include a red brake warning lamp (RBWL) in the instrument cluster that lights when the parking brake is on, when a front or rear hydraulic failure occurs, or when brake fluid is low in the reservoir and act as a low brake warning system. The parking brake shall be re-buildable and the heaviest-duty available from the chassis manufacturer.
- b. Parking Brake – Rebuildable and repairable by trained technician, heaviest-duty available from chassis manufacturer.

41) Fuel Tank

- a. Fuel tank capacity shall be the largest size available for each chassis. Fuel fill shall not extend beyond the exterior surface of the bus and may have the fuel cap set in a recess similar to a Ford OEM unit. Fuel fill shall be on the street (left) side of the bus. Fuel tank capacity shall be minimum for the following chassis/buses:

<ul style="list-style-type: none"> i Small Class I: 40 gallons ii Small Class II: 55 gallons
42) Hazard Flashers
Hazard flashers shall use the OEM switch and control system with an electronic flasher.
43) Shock Absorbers
Chassis shall have gas filled shock absorbers front and rear, most heavy-duty available from chassis manufacturer. It is the responsibility of the manufacturer (bus supplier) to match the shock absorber performance to the buses GVWR.
44) Springs and Suspension
<ul style="list-style-type: none"> a. The chassis shall be equipped with a heavy-duty tapered leaf (parabolic) spring or coil spring front suspension to match the specified gross axle weight rating. b. Chassis shall be equipped with a heavy-duty rear suspension fitted with a rubber shear spring suspension that works in conjunction with the OEM chassis leaf spring suspension to match the specified gross axle weight rating. The added suspension shall consist of a spring carrier assembly, a frame hanger assembly, a cross-member tube assembly, and a carrier spring assembly, shall be installed in place of the original spring hanger and shackle assembly. The frame hanger must bolt into the existing Original Equipment Manufacturer (OEM) spring hanger holes in the frame. The added suspension system must not alter the OEM gross axle weight rating. MOR/ryde® "RL" Suspension System.
45) Stabilizer
Chassis shall have heavy-duty OEM suspension stabilizers if available.
46) Wheels
Bus wheels (6) shall be 16.0" x 6.0" minimum, steel disc, hub piloted type, 8-hole flange nut style. Wheels shall have all stainless steel or all brass valve stems a minimum of 1½" in length retained by threaded nuts fitted with stainless steel, steel or brass valve caps with an inner air seal. Wheels shall be OEM white.
47) Tires
<ul style="list-style-type: none"> a. All tires (6) shall be tubeless, steel radial blackwall, single front, and dual rear. All tires shall be all season tubeless. Suggested sources: Goodyear, Michelin XZA, Unisteel. The tires shall be the largest size available from chassis manufacturer to meet the GVWR.
48) Driveshaft
The multi-piece drive shaft shall be OEM and have guards of sufficient strength to prevent any drive shaft section from striking the floor of the bus or the ground in the event of a tube or universal joint failure. Drive shaft guards, (OEM chassis equipment preferred, or may installed by the chassis manufacturer) shall be secured properly and be equal in materials and design to drive shaft guarding installed on a school bus chassis. Any modifications to driveline shall not create vibrations or cause premature wear.
49) Wipers and Horn
Electric wipers shall be two speed, delay style, dual jet washers (electric), with manufacturer's standard arms and blades (OEM equipment preferred). Wiper motors shall be mounted for easy access and not interfere with other equipment mounted in the front bulkhead/cowl of the bus. Where individual wiper motors are used (one for each side), each shall be supplied by its own fused feed wire. The bus shall have two electric horns.
50) Radiator and Colling System
The cooling system shall have an extra cooling capacity radiator (aluminum or copper core), water pump, pulley, and clutch-type fan with coolant recovery system with a factory installed coolant filter (heavy duty system installed by chassis manufacturer). Cooling system shall be winterized with 50/50 mixture (minimum) of permanent antifreeze and distilled water or a factory premix (minimum -35°F freezing point). Radiator removal instructions and estimated removal time shall be furnished with first bus to each agency. Coolant integrity shall be maintained throughout the manufacturing process to insure that the coolant, including additives, in the delivered bus is equal to the coolant installed at the chassis OEM factory. All cooling system hose connections in the engine compartment shall use constant tension spring loaded band clamps (Breeze Constant-Torque®, Clampco Products Inc., Oetiker that automatically adjust for thermal expansion and contraction to control leakage.
51) Fluids
Fluids shall be checked and filled from inside front hood where application allows. Engine oil fill/check, transmission oil fill/check, and coolant fill/check shall be located for easy access per approval at pilot model inspection. All fluids shall be at proper levels at delivery.
52) Engine Cover and Trim
<ul style="list-style-type: none"> a. The engine cover shall be insulated from engine heat, engine noise, and road noise. Additional equipment, including flooring, added to the engine cover area shall not interfere with removal/installation of the engine cover. b. The buses shall be equipped with an OEM chrome trim package for the grill and front trim (if available). c. A main wiring harness with Weatherpack connectors shall be use to disconnect and switches mounted on engine cover. Preferably one main connector for all switches.
53) Exhaust System

The exhaust shall exit the rear of the bus and be flush with the rear bumper. If bus is equipped with a rear lift door, the exhaust shall exit the rear of the bus on the street (left) side flush with left end of the rear bumper. The exhaust system shall meet FMVSS §393.83 and current Environmental Protection Agency (EPA) requirements. The exhaust system must be installed to provide maximum ground clearance and departure angle at the rear of the bus. Any exhaust system extensions shall be of the same material as OEM exhaust system, i.e. – stainless steel. All exhaust system extension hangers shall be OEM type.

54) Safety Items

- a. The following safety items shall be provided on each bus and items noted with an asterisk (*) shall be in a location approved by the state at pilot model inspection:
- b. *One UL listed 5 pound, 2A-10BC dry chemical fire extinguisher. Fire extinguisher shall have a metal head, a gauge to indicate state of charge, and a bracket with strap for securement. Fire extinguisher shall be serviceable and rechargeable for the life of the bus with metal mounting brackets. Fire extinguisher shall be shipped loose. Source: Manufacturer's Standard.
- c. *One container of bi-directional emergency reflective triangles that meets FMVSS 125 and shall be in a location easily accessible to the driver.
- d. *A 12-volt 97-db sealed solid state electronic warning alarm that is readily audible from outside the bus when transmission is in reverse. The alarm shall: be steam cleanable; have passed a 1 million cycle test; and meet SAE J994, OSHA, Bureau of Mines and all State Regulations. The alarm shall be mounted with bolts and properly grounded and mounted on the rear of the bus. Suggested source: OEM standard.
- e. *An exterior height (clearance) decal shall be mounted in the driver's dash area.
- f. The rear door shall have an audible alarm at driver area that is energized when the rear door latch handle starts to open and when the rear door is locked with the ignition in the on or accessory position.
- g. An interlock system shall be provided to ensure that the bus cannot be moved when the lift is not stowed and that the lift cannot be deployed unless the interlock is engaged (to meet ADA regulation). The interlock system shall engage when the lift operation sequence is followed. Interlock operating instructions shall be included with each bus at delivery.
- h. An automatic daytime headlight control system shall be provided. The system shall illuminate the headlights when the ignition switch is on and the headlight switch is off. The system shall activate automatically after engine start up with the headlamp switch off and shall deactivate automatically when the headlamp switch is on or the ignition switch is turned off. Suggested source: Chassis OEM.
- i. A low profile electronic strobe light (white) with a clear lens and branch guard shall be provided. The light shall meet SAE J1318 requirements and be mounted centrally on the roof of the bus approximately 6 feet forward of the rear of the bus. Strobe light mounting shall have free access to connector with enough room to remove connector without removing any panels. The 12 volt light shall have a control switch in the driver's area. The light shall be approximately 4" in height, produce 80 (±10) double flashes per minute, and have a light intensity of 1 million candlepower with a current draw of approximately 1 ampere. Suggested Sources: Meteorlite, Peterson, Target Tech Pulsator® 451, Truck-Lite

55) Electrical

- a. All non OEM connections shall be WeatherPack
- b. All wiring supplied by body builder shall have each wire permanently labeled with its function at least every eighteen inches.
- c. Lift equipped buses shall have a circuit breaker with a manual reset in the lift feed circuit. The circuit breaker shall be installed vertically (on the side wall) in the battery box, in the positive power cable leading to the lift power pack.
- d. Install a 12 volt power point for hand held equipment in the driver's area.
- e. All cable and wires added by the body manufacturer shall be continuous color coded and numbered or function coded. The manufacturer shall furnish complete as built wiring diagrams with integrated body and chassis wiring marked to show the codes used. Mating harnesses and harness connectors shall use matching wiring and coding unless chassis OEM wiring and coding is different from body manufacturer's. The wiring shall be designed to be a "plug and play" system where the harnesses and components are fastened through common standard terminal ends and connectors.
- f. Electrical panels installed by the body builders shall be located for easy access. Circuit breaker circuit protection shall be standard but blade type fuses may be used when expressly required by the component manufacturer. The master electrical panel shall use a separate "plug and play" connector and terminal system. Highest quality components available shall be used. Two spare electrical fuses that match fuses used on the bus body and chassis shall be supplied with the bus and stored in a box or spare circuit area at fuse box. All components shall be placed on the front of the electrical panel for ease of service.
- g. All wiring added to chassis fuse block shall be securely fastened to prevent wires from being knocked loose or loosening from vibration. The manufacturer shall use wire raceways where needed. Wiring, harnesses, and raceways shall be supported at regular intervals by "P" clamps, or by other supporting hangers where necessary, and routed in separate hangers from heater hoses or air conditioning hoses. Body fuse/electrical panel shall be sufficiently sealed to prevent intrusion of dirt and moisture.
- h. All wiring shall be heavy-duty; be properly grounded to body frame structure and the chassis; use a common grounding point; and be adequate for electrical system capacity. All wiring passage holes through engine cowl, floor area, and other partitions shall be thoroughly sealed to prevent dust and moisture intrusion.

- i. All accessories and accessory electrical equipment shall be wired through a constant solenoid energized when the bus's ignition switch is in "ignition on" or "run" mode. A master switch with light in the driver's control panel shall control this constant solenoid and act as a quiet switch overriding individual switches for accessories. This master switch is wired in series with the ignition switch to control the constant solenoid. The constant solenoid shall not control headlights, taillights, emergency lights, charging system voltage regulator energizer lead, a fused power lead for the passenger door, and a fused constant power lead for all electronic control units' long term memory.
- j. All control switches, relays, and circuit breakers used for the various electrical circuits shall have a current carrying capacity adequate for the circuit that they control and shall be properly marked for their function. The illuminated switch markings shall be permanent and not wear off with switch use. Control switches shall be positioned for easy access from driver's seat. (Location to be determined at pilot model production).
- k. All added wiring shall be installed in a properly sized and supported split open-type loom or a properly supported raceway for protection. All wiring harnesses shall have adequate length to allow for harness flexing from supporting brackets and where harnesses connect to electrical equipment. Any wiring added by splicing into an existing chassis Original Equipment Manufacturer (OEM) harness or wire shall match modification standards set forth by the chassis manufacturer, such as Ford's QVM. Any added accessories or electrical circuits shall not interfere with nor back-feed into other electrical circuits. Any excess harnesses shall be properly secured.
- l. Wiring added from OEM chassis wiring to rear lights, fuel tank, and/or other accessories shall be supported and protected from the ice and snow build-up. Wiring shall be inside bus where possible. Wiring to taillights and other exterior lights shall be long enough to remove assembly by 6" for service. Exterior connections shall be weatherproof positive lock connectors coated with dielectric grease. Suggested sources: Weather-Pak.
- m. Scotch lock wire connectors are not acceptable and shall not be used for wiring installation. Terminals shall be as follows:
 - i Machine crimped on wire ends shall be used on all harnesses and cable assemblies used in the production of buses. Harness assemblies shall have connectors matching a mating connector where harnesses attach to other harnesses, switches, or other electrical units. Connections made in any harness assembly shall use Sta-Kon® disconnects and splice connectors where machine applied connectors cannot be used. Connectors shall be properly crimped with Sta-Kon® tools and covered with heat shrink tubing. In-line fuse assemblies shall use spade type fuses in a Weather-Pak holder and shall be located for ease of service.
 - ii All exterior wiring connectors (plug-ins) including harnesses shall be weatherproof positive lock with the connector pins applied with the proper crimping tool (Weather-Pak, Metri-Pak). All exterior ground connections, except factory supplied braided ground straps, shall have properly applied terminal ends with heat shrink insulation applied. All connections exposed to the weather shall have dielectric grease applied to prevent corrosion.

56) Equipment Options

a. Air Conditioning – Split System

- i The air conditioning system (AC) shall have a separate compressor, condenser, and evaporator for the front system and for the rear system (two separate systems). The systems shall be 12-volt and use refrigerant type R-134A. The systems shall be of sufficient capacity to maintain interior temperature requirements stated in the test procedure for air conditioning systems during summer operation (**see section C. Contractor/Manufacturer Requirements, subsection 3. Air Conditioning Certification**).
- ii The front AC system shall be integrated as part of the front heating/ventilating unit including the driver's area evaporator unit (complete front system may be Chassis OEM with OEM controls and sensors). The front system shall provide temperature control with sufficient cooling ventilators for driver comfort with no reliance on the rear system for front temperature control. Front and rear air flow and temperature shall be controlled by separate switches on the driver's control panel or dash panel. Front and rear systems shall have separate fan, evaporator, and compressor controls.
- iii The rear system shall have an electronic control system capable of providing automatic temperature control, freeze protection, compressor protection, and diagnostic functions. The driver's automatic temperature and system control panel shall be mounted in the driver's station. The control system shall be an integral part of the system temperature controls. The system shall be able to monitor system voltage, high refrigerant pressure, low refrigerant charge, and clutch cycling intervals and shall protect the system by controlling compressor clutch engagement. The system shall be able to interpret associated problems and provide codes for technician diagnosis. Suggested sources: ACC Climate Control Model MDS, MCC ECO Temp Lite, Thermo King Clima Aire.
- iv Compressors: There shall be two engine mounted, serpentine belt driven air conditioning compressors of nominal 13cu. in. displacement each, minimum, one for the front system (may be chassis OEM) and one for the rear system. Hose end metal fittings connecting hoses to the compressor shall be electro-coated steel that pass the ASTM B117 480 hour Salt Spray test. The compressor clutch circuit shall be interrupted when abnormal pressures are detected by the pressure monitoring switches. Low pressure switch shall be located between the expansion valve and the compressor in the low pressure side of the system. The high pressure switch shall be located between compressor and condenser (for TXV systems) or between the condenser and the orifice tube (for orifice tube systems) in the high pressure side of the system. Suggested sources: ACC Climate Control, American Cooling Technology, Inc., Thermo King, Trans/Air; MCC Mobile Climate Control

- v Condensers: The rear system's condenser shall be roof mounted (10" or less in height) and the front system may use the Chassis OEM radiator mounted condenser. The protective external grille work for the roof mounted condenser coil fins shall not be mounted directly against the condenser fins. The condenser fans and motors shall be enclosed within the condenser housing. The housing shall be galvanized or aluminum with heat-fused powdered epoxy coating. The condenser coil shall be copper or aluminum tube expanded into aluminum fins or MCHX condenser. Hose end metal fittings connecting hoses to the condenser shall be electro-coated steel that pass the ASTM B117 480 hour Salt Spray test. High pressure cut out switches shall be wired into the clutch circuit. The condensers shall be equipped with axial fans dynamically balanced with permanent magnet totally enclosed motors. The condensers shall blow air upward and toward the rear of the bus assisted by the forward motion of the bus. A refrigerant dryer and a sight glass where necessary shall be included in the system. A branch guard the same height as the condenser shall be mounted just forward of the condenser assembly on the roof of the bus which shall not restrict air flow into the condenser assembly. Suggested sources for roof mounted condenser: ACC Climate Control, American Cooling Technology, Inc., Thermo King, Trans/Air.; MCC Mobile Climate Control
- vi The front evaporator (may be chassis OEM equipment) and rear evaporator(s) shall have three-speed continuous duty permanently lubricated blower motors with sufficient CFM capacity to maintain interior temperature requirements stated in test procedure. The rear evaporator cores shall be a copper coil with aluminum fins (three rows deep, minimum), galvanized heavy-duty frame and coil end sheets with a galvanized or plastic drain pan. The rear evaporator expansion valve or orifice tube shall have "O" ring refrigerant connections. Suggested sources: ACC Climate Control, American Cooling Technology, Inc., Thermo King, Trans/Air; MCC Mobile Climate Control
- vii The driver's evaporator (may be chassis OEM equipment) shall be controlled separately from the rear passenger area evaporator. The controls shall include an on/off switch and a three-speed blower switch. The in-dash unit shall not interfere with removal or replacement of the engine cover or be blocked by the entrance door control mechanism.
- viii The passenger area evaporator system shall be separately controlled from a control station at the driver's position. The controls shall include an on/off switch and a three-speed blower switch. The evaporator shall be ceiling mounted at the rear of the passenger compartment.
- ix The components of the air conditioning system shall be readily accessible for maintenance. Service/charging ports shall be accessible under-hood without removing any other component or item. The refrigerant hose construction shall comply/exceed SAE specification J2064 Type D or E. Refrigerant fitting construction shall comply/exceed SAE specification J2064 Type D or E. All refrigerant hose end fittings shall be electro-coated steel that will pass the ASTM B117 480 hour Salt Spray test. The hose coupling end of all fittings shall include two hose barbs and two areas of elastomeric or HNBR seals. Refrigerant hose clamp construction shall: comply/exceed SAE specification J2064 Type D or E; be made of stainless steel to ensure coupling integrity; properly align hose end fitting; and clamp the hose directly over the elastomeric or HNBR seals. Refrigerant hose fittings shall be Aeroquip E-Z Clip system, ATCO Air-O-Crimp, MCC FlexCLIK.
- x The wiring shall meet all applicable specifications (**see Section B. Body Structure and Exterior Panels, subsection 55. Electrical**). The evaporator and condenser wiring (power and ground circuits) shall be properly sized to provide maximum voltage drop of 1.5v to farthest system component.
- xi Air conditioning electrical circuits shall be protected with manual resettable circuit breakers or fuses.
- xii The rear air conditioning system shall be supplied from the equipment manufacturer as a complete unit including controls, wiring and hoses. The whole system shall be warranted from in-service date, by the manufacturer, for a period of two years with unlimited mileage.
- xiii All fault codes shall be cleared upon delivery.

b. Air Conditioning – Tie-in System

- i The air conditioning system (AC) shall use the OEM compressor, condenser, and evaporator for the front system and a separate condenser and evaporator for the rear system (two tied systems). The systems shall be 12-volt and use refrigerant type R-134A. The systems shall be of sufficient capacity to maintain interior temperature requirements stated in the test procedure for air conditioning systems during summer operation (**see section C. Contractor/Manufacturer Requirements, subsection 3. Air Conditioning Certification**).
- ii Evaporator: One (1) free blow evaporator rated up to 45,000 BTU/hr. The evaporator shall have one (1) dual shaft blower assembly. The motor is minimum three (3) speed continuous duty permanent magnet and utilizes a resistor to limit amperage requirements. Drain pan shall not be part of evaporator cover, but shall be part of the evaporator module with drain valleys to insure proper drains of the condensation. The return air filter is located at the coil and is easily accessible for maintenance without removal of the evaporator cover. The evaporator coil is copper tube design with aluminum fins. Evaporator assembly shall be a galvanized design. The evaporator shall utilize and orifice tube in lieu of a thermal expansion valve for a more trouble free operation. The evaporator cover have no sharp edges and must meet FMVSS 302 specification standards. High Pressure and Low Pressure (switch) protection shall be part of the evaporator assembly to maximize compressor and entire system protection. Evaporator air outlet louvers shall be adjustable to provide maximum directional airflow throughout the vehicle.
- iii Driver's area in-dash evaporator: The OE Chassis supplied drivers in-dash evaporator shall be utilized and is tied into to passenger area air conditioning system.

<p>iv Condenser: One (1) skirt mounted condenser rated @ 67,000 BTU/hr. The condenser shall have two (2) 11" high performance fan/motor assemblies with extended brush life motors. The coil shall be a parallel flow design for lighter weight and maximum heat rejection efficiency. The condenser assembly shall be designed to distribute air away from the vehicle floor. The condenser is installed in such a manner to assure the entire coil face area is exposed to fresh air from the outside of the vehicle skirt (the skirt of the vehicle will not in any way interfere with direct airflow through the coil). The system design shall use an accumulator with filter desiccant in lieu of a filter drier. The accumulator shall be mounted at the lowest point of the system (on the chassis frame rail) for maximum system protection. In addition, the accumulator shall include an oil pickup tube to insure proper compressor lubrication upon startup of the a/c system. The electrical connections shall be corrosion resistant</p> <p>v A three (3) speed fan switch and a rotary thermostat control shall be included and located in an area easily accessible to the driver. All wiring shall be color coded. The entire electrical system shall utilize a relay board with ground leg switching. The relay board shall consist of LED's to aid in the diagnosis of electrical continuity. Each circuit shall be protected by individual fuses for greater protection of the relay board components. The system shall be protected with manual reset circuit breakers.</p>	<p>c. Air Conditioning/Heat – Rooftop System</p> <p>The rooftop AC system shall meet all of the requirements of the AC split system except that the rear evaporator and heating unit shall be an integral part of the rooftop AC unit so that the condenser unit, evaporator unit, and heating unit are part of a single roof mounted unit. A coolant circulating pump shall be installed in the coolant lines for the rooftop heating unit. The auxiliary coolant heating unit and coolant pump for the rooftop heating unit shall be connected electrically to run whenever the bus's rooftop unit calls for heat. The rooftop unit shall be a free blow system installed in the central roof area of the passenger compartment of the bus with stainless steel fasteners and cover bolted down. <u>No ¼ turn fasteners on cover.</u> The air conditioning/heating system shall be supplied from the equipment manufacturer as a complete unit including controls, wiring, electrical protection devices, and hoses. A branch guard shall be installed to protect the roof-mounted air conditioner. The whole system shall be warranted from in-service date, by the manufacturer, for a period of two years with unlimited mileage. Suggested Sources: ACC Climate Control, American Cooling Technology, Inc., Thermo King, Trans/Air.; MCC Mobile Climate Control</p>
<p>d. Auxiliary Coolant Heater</p> <p>i All buses shall be equipped with an auxiliary heater system that shall be able to preheat, provide supplemental heat, and maintain heat for the engine and the interior of the bus. The auxiliary heater system shall be supplied in heated coolant model for all engines. The heater system shall be complete with all fuel and electrical controls, exhaust system, and standard warranty. All auxiliary heaters shall be 12-volt units with a fused power supply and with protection for high and low voltage conditions. The auxiliary heater system shall meet FMVSS 301 fuel system integrity requirements. The heating units shall be fueled from the bus's primary fuel supply. The auxiliary heating units shall be connected electrically to run whenever the bus's rear heat exchanger fan is turned on. The on/off seven day programmable modular electronic timer controls for the heating units shall be located in the driver's area of each bus. The seven-day timer control shall be capable of a two hour preheat control, minimum, and be capable of continuous run control when the key is on with the engine running. The electrical connection shall be a one piece harness from the control switch to the heating unit with all exterior connections Weather-Pak. Location shall be determined at the Pre-Pilot Model Review Meeting.</p> <p>ii The heated coolant model shall be a self-contained unit mounted under the bus near the rear heating unit, and connected to the heater hoses leading to the rear heating unit. The auxiliary heating unit inlet and outlet hoses shall have ¾" ID heavy-duty brass ¼ turn ball valves for shut off when the heater needs to be removed for servicing. It shall be in an enclosure supplied by the auxiliary heater manufacturer, be installed so that adequate ground clearance exists below the heater enclosure box, be easily accessible for servicing, be weather resistant, and be complete with mounting brackets/hardware and coolant circulator pump. The coolant circulator pump shall provide a minimum flow of 3.5 gallons per minute. The heated coolant system units shall have safety features for temperature regulating and overheat shut down switches. A seven day digital timer shall be used to control operation. The auxiliary heater exhaust shall exit just below the heater enclosure toward the rear of the bus or at the side of the bus. The coolant heater shall control coolant temperature between a low of 154°F and a high of 185°F. Coolant heater output shall operate automatically at different levels with a high heat output of 25,500 BTU/hr minimum (boost setting may be higher). Suggested sources: Espar Inc., Hydronic 10 (heated coolant), OEM, Webasto Thermo 90S (heated coolant).</p>	<p>e. Auxiliary Air Heater</p> <p>i The auxiliary air heater systems provided shall be able to preheat, provide supplemental heat, and maintain heat for the interior of the bus for all engines. The auxiliary heater systems shall be supplied as a heated air model with an on/off, variable digital temperature display, and with a seven-day electronic timer control. The seven-day timer control shall be capable of a two hour preheat, minimum and be capable of continuous run control when the key is on with the engine running. The auxiliary direct heated air heater unit(s) shall be connected electrically to automatically run whenever the bus's rear heat exchanger fan is turned on. The system control units shall be located in the driver's area of the bus and shall indicate to the operator that the heater is operating normally or that the heater is not operating normally and needs technical service. The direct heated air heater control shall indicate heater diagnostic codes and descriptions directly from the heaters electronic control module.</p> <p>ii The heater system shall be complete with all fuel and electrical controls, exhaust system, and standard warranty. All heaters shall be 12 volt units with a fused power supply and with protection for high and low voltage conditions. The auxiliary heater system shall meet FMVSS 301 fuel system integrity requirements. The heating units shall be fueled by the</p>

<p>bus's primary fuel supply. The electrical connection shall be a one piece harness from the control switch to the heating unit with weather-pak or equal exterior connections.</p> <p>iii The heated air model (with mounting brackets) shall be a self-contained unit placed in the passenger area either between the bus seat and bus floor or in a clear free space in the interior of the bus (placement shall be decided at the time of installation). The heated air system shall be a variable output, multi-stage heater for all engines. The heating unit shall have, 1) 16,000 BTU heat output, minimum (high heat setting), 2) 100 CFM of air delivery, minimum, and 3) automatic cycling between heat output stages. The unit shall have automatic overheat protection. All heater systems' fuel and exhaust connections shall be made outside the passenger compartment of the bus. The auxiliary heater exhaust shall be connected to a section of rigid exhaust pipe with a down sweep that exits just beyond the body side. The heating unit shall be fueled from the bus's primary fuel supply. Suggested sources: Espar Inc., Webasto.</p> <p>iv Option 1: Provide an auxiliary air heater for a gas powered bus as specified above.</p>	<p>f. Destination Signs</p> <p>i Option 1 – Roller/Curtain: A 12-volt destination sign with a motor driven movable sign curtain mechanism shall be provided which meets ADA requirements (one front sign and one side sign). The sign curtain shall be approximately 36" wide and illuminated. The sign box shall have a door to open for the operator to view the sign curtain position. The door shall be positioned for ease of driver operation. A restraint shall be installed to prevent the storage door from opening beyond 105° when the installation allows the door to swing open. Suggest source: Transign LLC.</p> <p>ii Option 2 – LED: A solid state, LED destination sign shall be provided which meets ADA requirements (one front and one side sign). Signs shall be programmable using latest version of Microsoft Windows® based software. All hardware and/or software shall be provided with the first bus purchased by each transit agency. Suggested sources: Transign LLC Destinator, TwinVision MobiLite.</p>
<p>g. Donation Box</p> <p>A donation box (in lieu of the farebox) shall be mounted on an adequately braced stanchion; shall be located over a flat floor surface near the driver; and shall be accessible to passengers entering the bus (meet ADA requirements). The lockable donation box shall be supplied with two keys (location shall be approved by the State at pilot model inspection). Suggested source: Diamond.</p>	<p>h. Running Boards/Steps & Grab-handle</p> <p>The bus shall be equipped with either driver's side steps (suggested source: chassis OEM) or a 12" wide running board. The steps or running board shall be securely attached to the chassis and have the capacity to support 300 pounds. When available from OEM, a grab-handle shall be supplied on the outside driver's side.</p>
<p>i. Farebox Electrical Prep</p> <p>Electrical connections and wiring only (no farebox) along with support stanchion shall be supplied to the area where the standard farebox would be mounted (location shall be approved by the State at pilot model inspection)</p>	<p>j. Limited Slip Differential</p> <p>The limited slip differential powers both wheels yet freely permits wheel speed differentiation when required during turning using standard OEM equipment.</p>
<p>k. Rear Emergency Exit Window</p> <p>i A bus equipped with a rear exit window shall have the window opening be approximately 1,200 square inches. The rear window shall have a latching device for opening from the inside of the bus which may be quickly released but designed to offer protection against accidental release. Latches shall be located on the sides of the exit window. Lever-type latches shall be used for rear emergency exit windows and shall secure the windows tightly shut, shall be easily operated, and shall not unlatch due to vibration during normal bus operation. The latches shall be made of non-corrosive materials and be designed for minimal maintenance needs. The rear window exit shall meet federal requirements (FMVSS 217). The rear window exit shall have an audible alarm and red LED warning light connected with Weatherpack connectors at the driver's area energized when the window starts to open with the ignition on. A clear full width path of 16" minimum height shall be provided to the rear exit window. No objects shall be placed in bus which restricts passageway to rear exit window. All emergency exits shall be marked with instructions for proper use.</p> <p>ii The bus rear exit window shall have a glue-on wide angle view Fresnel lens to improve vision directly in back of bus. Minimum size shall be 80 square inches. Suggested source: Vanguard made by 3M.</p>	<p>l. Paint – Optional Designs</p> <p>i The bus shall have an 11" belt painted stripe (no decals). An example would be: an OEM white bus with a 11" belt stripe.</p> <p>ii The bus shall have the roof painted a different color. An example would be: an OEM white bus with the roof painted red.</p> <p>iii The bus shall be painted a full body color, including the roof, other than OEM white. An example would be: a bus painted all red.</p> <p>iv The bus shall have a 6", 10-year, reflective, vinyl belt stripe. An example would be: an OEM white bus with a 6" vinyl belt stripe.</p>

m. Lifts (Platform) (Meet ADA Requirements)

- i** All lifts listed below shall meet all of the lift requirements stated in **section B. Body Structure and Exterior Panels, subsection 27. Type I Lift**, except lifts that have an 800 lb capacity (in lieu of the standard Type I lift)
- ii** Type I: A type I platform lift shall be offered in lieu of the standard 1,000 lb lift. Suggested sources: Braun, Ricon
- iii** Type II: The Type II platform lift shall have a power operated outer barrier on the lift platform. Suggested sources: Braun, Ricon
- iv** Folding Platform: The folding platform lift shall have a platform that folds in the center during stowage and the lift platform is 32" usable width and 50" usable length. The folding platform lift provides an unobstructed view from inside the bus through the lift opening. Suggested Sources: Ricon KlearVue model K-5005 ADA
- v** An alternate lift manufacturer shall be offered as an option for agencies.

n. Wheelchair Securement Optional Systems

- i** The restraint system shall be a retractor style system and comply with ADA, SAE J-2249, and additionally the new 2016 WC 18 standard for WC-19 wheelchairs. This system shall be a single point securement system and meet the same requirements as listed in **section B. Body Structure and Exterior Panels, subsection 28. Wheel Chair Securement Area**. Single Point Securement System: A wheelchair single point securement system (in lieu of "L" track anchorage system) shall offer 360 degree directional usage "pucks" and shall be cast stainless steel with a 2½" bolt to be secured to the floor positions. Measurement of the securement locations shall be 54" from front plane to rear plane within the securement locations. The single point securement system shall meet the same requirements as listed in **section B. Body Structure and Exterior Panels, subsection 28. Wheel Chair Securement Area**. Center pucks between securement locations can share the same center of plane but the pucks shall not be shared from each securement locations. (i.e. separate single point securement systems for each wheelchair securement area). Pucks for each location, Location #1 Location #2 etc., shall be identified with color coded debris/bolt covers available from the securement supplier. Spacing of front securement pucks shall be no less than 30". Spacing of rear securement pucks shall be centered in the rear plane of securement area 13" to 15" apart. Each securement space shall have an additional anchorage puck as to aid in the securement of scooters or difficult mobility devices. This additional anchorage puck shall be centered between the rear anchorages. Suggested Sources: QRT 360 Q'Strain Slide N' Click, Sure-Lok, Titan 800 Slide N' Click, OMNI Slide N' Click Systems or equivalent.
- ii** Additional Wheelchair Securement Positions: Ordering agencies shall have the ability to add additional wheelchair securement positions to the provided floor plans. The position shall match the same system as installed on the bus (L-track or 360 degree single point securement) and shall meet requirements as stated in **section B. Body Structure and Exterior Panels, subsection 28. Wheel Chair Securement Area** and **section B. Body Structure and Exterior Panels, subsection 56. m., Wheelchair Securement Optional Systems, Item k**. Seating shall be added or deducted to accommodate the additional wheelchair systems and shall meet vehicle weight requirements.

o. Two Way Radio Antenna/Power

- i** All material and labor required for a pre-installation package for two-way radio equipment shall be furnished by the manufacturer. All equipment and accessories installed as part of the buses shall have no measurable radio frequency (RF) interference. All equipment installed on the bus must operate in its normal mode while radio transmissions are being made from an on board transmitter producing 110 watts or more of transmit power while operating in the range of 43 Megahertz (Mhz) to 900 Mhz. Proper RF suppression shall be provided by the manufacturer in any equipment and accessories that can produce interference to eliminate such interference. The bus frame and body shall be designed to provide no measurable radio interference (shielding) for improved radio emissions and reception performance.
- ii** Two (2) antenna mounting plates (.060" steel minimum) shall be mounted in the roof of the bus for the purpose of providing a connection to the ground plane and providing a secure mount for the antenna. On buses with a metal exterior skin, one plate shall be mounted forward of the roof escape hatch on the roof center line and the second plate shall be mounted to the left (driver's side) of the first plate just above the bus side window. For buses with FRP composite bodies, the mounting plates may be installed in the front cap of the bus-one centered in the roof section of the cap and one centered in the left (driver's) side section of the cap. Each mounting plate must be properly positioned in relation to its ground plane to ensure proper operation of an antenna installed at that mounting point. The total thickness of the exterior shell of the bus in the mounting plate area including the mounting plate shall be no more than ½".
- iii** Two (2) antenna ground planes, which are required for proper antenna operation, shall be mounted in each bus. All ground planes shall be radio frequency (RF) grounded to the chassis structure using high corrosion resistance and high conductivity braided ground straps of the proper size (3/8" minimum width). Ground planes shall provide a comparable area of radio transmission coverage whether buses have a metal exterior body covering or have a FRP composite exterior. At each antenna access opening and mounting plate area, the ground planes shall be of proper size and shape for proper communication operations. The ground planes shall be a solid piece and operate over the range of frequencies from 43 Mhz to 900 Mhz. The ground plane material used by the manufacturer must be a durable material that can be connected to the antenna mounting plate and grounded to the chassis frame. The ground plane shall be of the proper size to protect passengers in the bus from unnecessary radiation from the transmitting antenna at the bus's antenna access openings. Antenna wiring shall be adjacent to power wiring.

- iv** A 6" high branch deflector shall be installed on the roof of the bus 6" forward of the antenna mounting area.
- v** Two threaded type access holes with covers approximately 6" in diameter shall be installed at the following antenna mounting plate locations:
 - 1. The interior ceiling forward of the roof escape hatch.
 - 2. For buses with metal exterior skin directly to the left (driver's) side above the side window line of the bus.
 - 3. For buses with FRP composite bodies the screw-type access holes may be installed in the front cap of the bus, one centered in the roof section of the cap and one centered in the left side section of the cap. Adequate space shall be provided between the installed access cover and the inner body to allow for routing of the antenna lead and its connections without interference.
- vi** A concealed thin wall plastic conduit, 5/8" I.D. minimum, (with antenna cable pull wire) shall extend from the antenna mounting plate locations (roof and above side window or in front cap) to the mounting location for the radio. When installed, the conduit shall have no sharp or right angle bends or be distorted to prevent insertion of the antenna lead. For both antenna mounting plate locations, sufficient space shall be left at each end of the conduit to allow easy removal and replacement of the devices attached to the cable. The antenna pull wire shall terminate behind the driver's seat with 2 feet of extra length extending into the bus interior.
- vii** 12-Volt Power for the Two-Way Radio - The positive lead (red 8 ga wire fused at 40 amperes) for the radio connection shall be provided directly from the battery positive post. The ground lead (black, 8 ga) shall be connected directly to the chassis frame with a bolt, external tooth lock washers, and nut for fastening. Proper suppression equipment shall be incorporated in the bus's electrical system to eliminate interference with radio and television transmission and reception shall not cause interference with any electronic system on the bus. The radio power and ground leads shall terminate directly behind the driver's seat with 12 feet of extra length extending into the bus interior or as specified by Ordering Entity.
- viii** A split loom or other flexible wire race-way (1" minimum) shall be installed from the radio location to the dash mounted microphone control location.
- ix** The modesty panel behind the driver shall be used for radio mounting and shall be constructed to support 60 pounds of weight. To provide for radio mounting, a 5" minimum distance shall be provided between the driver's seat and the modesty panel when the driver's seat is in its most rearward travel position.

p. Stereo/Radio and Public Address System

- i** **Option 1:** An AM/FM stereo radio system shall be installed in the dashboard area within reach of the driver. At a minimum, the stereo system shall have an illuminated or LCD display along with controls for power, tuning, volume, and the ability to turn off sound to the rear speakers. A total of four (4) speakers shall be installed in the bus with two (2) speakers mounted in the front (audible to the driver and front passengers) and two (2) speakers mounted in the top rear wall of the bus. Suggested sources: OEM
- ii** **Option 2:** A public address (PA) system shall be installed in the dashboard area within reach of the driver and utilize a hand held microphone. At a minimum, the PA system shall be equipped with controls for power and volume. A total of two (2) speakers shall be mounted with one in the front and one in the top rear wall of the bus. Suggested sources: Custom Radio Corporation model PA6, Jensen, Mobile Page Model 470, REI
- iii** **Option 3:** A combined AM/FM stereo radio and a public address system shall be installed with four (4) speakers. The combined system shall meet or exceed the specifications outlined in option 1 and option 2. The speakers shall be mounted per locations specified in option 1. Suggested Sources: Jensen, Panasonic, REI
- iv** **Option 4:** Additional speakers shall be offered at locations requested by the ordering agency.
- v** System shall fade from front to rear and left to right for all systems.

q. Raised Floor (No Wheel Wells)

The bus shall be equipped with a raised floor where no wheel wells are showing in the rear of the bus. The raised floor shall not cause changes to any other requirements as stated in this specification. In addition, the stepwell shall meet the same requirements as specified in part 4, section A. The steps shall all be in line located in the passenger stepwell.

r. Rubber Flooring

- i** In lieu of smooth, slip resistant flooring, the stepwell, entrance area, and center aisle floor area shall be overlaid with ribbed, slip resistant, oil resistant commercial 1/8" floor and 3/16" step tread thickness. Suggested Sources: RCA Rubber Transit-Flor®, Rubber Solutions N.A., SMI SpecFlor
- ii** The aisle to door area flooring joint shall make a miter so that aisle and door area flooring grooves line up for easy cleaning.
- iii** The 1/8" thickness flooring under the seats and in the wheelchair area shall be smooth, slip resistant, oil resistant. The flooring shall extend up the sidewall and rear wall to the seat rail line and shall be coved at the floor/wall joint to form a smooth water-tight transition. A 3" cove molding radius backing block shall be installed behind all floor coving. Flooring adhesive shall be oil resistant. Suggested Sources: RCA Rubber Transit-Flor®, Rubber Solutions N.A., SMI SpecFlor
- iv** Color of all rubber flooring and step treads shall be equal to RCA Rubber Transit-Flor® grey (#766) or tan (#777) as requested by agencies.

<p>v Step treads shall be one-piece ribbed rubber flooring with steel backing plate. Each tread shall have a band of bright yellow contrasting color molded in the full width of the step (must meet ADA contrast requirement). Step tread to stepwell joints shall be sealed to prevent intrusion of moisture and debris.</p>
<p>s. Entrance Stepwell Heater</p> <p>The entrance stepwell shall include a 12-volt electric heating element/unit for the lower step to prevent icing of entrance steps. The low voltage step heater shall consist of one or more wire elements laminated and vulcanized between two plies of .026" silicone rubber impregnated fiberglass cloth to maintain an approximate temperature of 160° F with a low temperature (30°F) sensing switch (Warm Welcome® by Lighthouse International, Ltd.). The entire lower step heating unit with power wires shall be enclosed between the stepwell and the step tread (beneath the step tread) of the lower step. Lead wires shall be loomed, supported by brackets, and protected by grommets where they pass through structure. The heaters shall be controlled by a on/off switch (labeled and located in the driver's switch bank) with an indicator light showing when the unit is on or thermostatically controlled.</p>
<p>t. Manual Entrance Door</p> <p>The manufacturer shall provide a heavy duty manually-operated passenger entrance door with control handle located in the driver's compartment within easy reach of the driver. The passenger entrance door shall not extend below the step frame. All exposed door frame structure shall be made of 304 stainless steel acid-etched, coated with zinc based primer and powder coated OEM white (including the fasteners). The door shall be located on the right side of the bus behind the right front wheel. The entrance door shall provide a 30" clear width opening, minimum, with all handrails installed. Door opening height from the top of the first step to the door header shall be a minimum of 76".</p> <p>Passenger entrance door shall be a double-folding, split-type double leaf swing door. This door shall have a flexible soft rubber cushion on the meeting edge 1 1/2" in width, minimum. The door glass shall be see-through, tinted (AS-2) safety glass. Under all operating conditions and bus speeds, an airtight and dust-proof seal shall be formed between the door and the stepwell, between the door and body opening, and between the door leaf sections.</p> <p>A method shall be provided to lock the bus when the bus is parked.</p>
<p>u. Seating (Additions and Deductions)</p> <p>i On buses with a rear exit window, forward facing seating for five passengers shall replace two double place forward facing seats at the rear wall of the passenger compartment increasing the passenger capacity by one. The five passenger seating shall be available for buses without a lift or with the lift forward of the rear axle (no wheelchair lift and/or securement location at the rear of the bus). The five passenger seat shall be 88" minimum width and shall not be equipped with grab handles.</p> <p>ii The Ordering Entity shall have the ability to add or deduct seats from the provided floor plans.</p> <p>iii All additional transit style seats shall be of the same design and color as the other passenger seats, shall be equipped with passenger seat belts, and shall meet requirements stated in section B. Body Structure and Exterior Panels, subsection 16. Driver's Seats, and subsection 19. Seat material.</p>
<p>v. Driver's Power Seat Base</p> <p>Provide a six-way power seat base for standard driver's seat that allows for fore and aft, up and down, front tilt and rear tilt for the driver. Suggested source: Chassis Original Equipment Manufacturer (OEM) Deluxe Power Seat Base.</p>
<p>w. Alternative Engines</p> <p>i Liquefied Petroleum Gas (LPG) or Compressed Natural Gas (CNG) The bus shall accept liquefied petroleum gas (LPG) or compressed natural gas (CNG) application if required for fleet compliance by federal Environmental Protection Agency (EPA) alternate fuel application guidelines. The engine/chassis shall include a gaseous fuel preparation package and the cylinder heads shall have hardened valve seats. All LPG and CNG conversions shall maintain OEM powertrain warranties.</p> <p>ii On buses ordered with alternate fuels options (LPG, CNG, etc.) auxiliary heater systems installed shall meet the same specifications for the systems operating on gasoline. All heated air models shall have a 12-volt heater booster pump installed in the coolant line forward of the first rear heater. Additional equipment needed for auxiliary heater shall be included in the option. Suggested sources: Bergstrom 863040</p>
<p>x. Stop Request System</p> <p>i An interior "Stop Requested" sign, chime, and driver signal activation system shall be installed, and activated by 1/4" diameter yellow cord mounted on the side wall even with the bottom of the tip-in-transom portion of the windows. Signal touch buttons mounted in an ADA mandated wheelchair accessible area shall be no higher than 4' above the floor, with no exposed wiring. A single "stop request" chime shall sound when the system is first activated and a tell-tale light indicator on the driver console will stay light continuously until the passenger door is opened. A double chime shall sound when the system is first activated from wheelchair passenger areas.</p> <p>ii A "Stop Requested" message in Helvetica medium yellow letters on a green background shall be illuminated when the passenger "Stop Requested" system is activated. The "Stop Requested" message shall remain visible until doors are opened. The sign unit shall be flush mounted on the front destination compartment door and the message shall be visible to the seated operator and all seated passengers. The operator shall be able to deactivate the signal system from the operator's area as well as automatic deactivation each time the passenger door is opened.</p>

y. Back-up Sensor System

A rear back-up sensor system shall be installed with a minimum of four water-resistant and corrosion resistant sensors flush-mounted to the rear bumper (painted to match the bumper). The system shall automatically engage when the vehicle is in reverse and warn of objects and/or people up to a distance of seven feet (minimum). The system shall utilize an LED monitor, mounted within view of the driver, which displays the distance (in feet) from the object(s). The system shall also emit a pulsating alarm or beep that is audible to the driver as the vehicle approaches the object(s) and then the system shall emit a steady alarm within at a minimum of 1.5 feet from the object(s). Suggested Sources: Ackton Transportation Technologies, American Road Products, Intermotive Hawkeye

z. Video Surveillance System

- i** The onboard digital video surveillance system shall include a four channel (minimum) mobile rated digital video recorder (DVR) that can be configured for a one to four camera system. The on-board DVR System shall include a lockable/removable 1 terabyte (minimum) hard disk drive caddy. USB data ports, analog audio/video RCA out terminals, a 10/100base-T Ethernet port, two analog audio/video (RCA) outputs, eight vehicle sensor inputs, a GPS input and one accelerometer input. The DVR shall begin recording at the start of the "engine run" switch of the vehicle or be programmable to begin recording at a specified time prior to "engine run" switch being activated. The DVR can remain functional up to 99 minutes after the ignition has been turned off, and shall record continuously without operator assistance. The DVR shall be able to retrieve video by alarm, calendar based date, time and camera search functions. The DVR shall be capable of a display resolution of 720 x 480. The DVR shall be constructed with a rugged outer housing that protects against shock, moisture and dust. System shall perform to standards in various temperature extremes of a range between -20°F to 95°F.
- ii** An accelerometer shall document hard breaking and other erratic driving events. A panic button or event marker shall also be installed within reach and view of the driver.
- iii** Sensors shall record bus signals including turn, hazards lights, and lift operations at a minimum.
- iv** A GPS receiver shall continuously monitor bus location, heading, and speed, as well as configurable and automatic time and date synchronization. The GPS antenna shall be roof mounted or as specified by Ordering Entity.
- v** Microsoft® Windows compliant viewing software shall be included with the first bus delivered to the agency. Software shall be able to view and search video from the hard drive, display a GPS map, graph speed, and save the videos.
- vi** Interior and exterior cameras shall be color, infrared and shall supply an image that is clear and stable, free from vibration. Images shall be able to be used to positively identify a passenger riding in a vehicle. The interior cameras shall also have a high sensitivity microphone. Ordering agencies shall have the flexibility to position cameras.

Below is a list of interior locations and optional cameras:

1. Two Camera System: A two camera system shall be provided capturing the driver, passengers, stepwell, and farebox/donation box at a minimum.
2. Four Camera System: The four camera system shall include the camera locations listed in option one and include a cameras capturing wheelchair lift and a rear passengers at a minimum.
3. Six Camera System: A six camera system shall include an eight channel (minimum) DVR and a one terabyte minimum hard drive. Camera locations shall be same the two and four camera system with the addition of another interior camera (located at the requested of the ordering agency) and an exterior camera facing forward capturing the passenger door.
4. Additional Interior Cameras: Ordering agencies shall have the ability to order additional cameras and select a location at time of order. Additional cameras shall include all additional wiring and mounting hardware.
5. Exterior Cameras: Ordering agencies shall have the ability to order exterior cameras and select a location at time of order. Additional cameras shall include all additional wiring and mounting hardware.
6. DVR system upgrade shall provide an option to upgrade the DVR system to an eight channel one terabyte hard drive minimum.
7. Back-up monitor system shall include active monitor in driver's station for programing and shall be operational when vehicle is in reverse.
8. Correct time and date shall be programmed in system upon delivery.
9. Suggested sources: Radio Engineering Incorporated (REI), SafetyVision, AngelTrax

aa. Video Surveillance Preparation Package

A video surveillance preparation package shall be offered (less cameras and digital video recorder system) allowing for one to four camera locations. The preparation package shall include the installation of camera wiring or conduit, DVR electrical connections, location for the DVR, and access covers for camera mounting/locations. Ordering agency shall specify the camera system to use and have the flexibility to position cameras.

bb. Spare Tires

A spare tire option shall be offered for both the steer and drive axle tires if they are of different tread design. Spare tire shall match brand and specifications on delivered vehicle.

cc. Interior Mirror

Interior mirror (with adjustable mounting bracket) shall be a 6" by 8" convex mirror glass with rounded corners, minimum. The driver shall be able to adjust the mirror so that the complete passenger compartment can be viewed through interior mirror. Mirror mounting points shall be reinforced when not in a structural frame member, with location approval by the State at the time of pilot model inspection. Suggested source: B&R Manufacturing, ROSCO (with bracket).

C. CONTRACTOR/MANUFACTURER REQUIREMENTS**1) Bus Information Furnished**

Bus information in this section shall be submitted and reviewed at the pre-pilot model review meeting, at final pilot model production. Bus information identified by " * " shall also be supplied with each bus at delivery where indicated. All manuals shall be provided in an electronic copy (CD, DVD, or USB flash drive). The Contractor/manufacturer shall maintain record or proof that all bus information was supplied to the transit agency.

- a. Copy of manufacturer's statement of origin for a bus.
- b. * Warranty papers for chassis, body, and additional equipment with each bus at delivery.
- c. * As built drawings showing color coded wiring schematics of all electrical circuits, body, and chassis with each specific bus at delivery. Wiring drawings shall be in an electronic copy (CD, DVD, or USB flash drive).
- d. * Operator's manual for bus and all add-on equipment with each bus.
- e. * A complete set of repair manuals (and up-fitter manual if available from OEM) for the chassis and a manufacturer's parts manual for the body, and auxiliary equipment for the first bus of each model year delivered to each transit agency. Repair manuals shall be in an electronic copy (CD, DVD, or USB flash drive) as soon as available from OEM.
- f. * Drivability and emissions manual for the first bus of each model year delivered to each transit agency.
- g. * Bus operating instructions showing controls and operation for the first bus delivered to each transit agency and also in an electronic copy (CD, DVD, or USB flash drive).
- h. * Standard manufacturer's production option sheet(s)/decal(s) for chassis and body shall be installed in manufacturer's standard location, with no holes or rivets obscuring writing and numbers. Sheet shall include rear axle ratio. A paper copy of the service broadcast sheet for chassis shall also be provided with each bus.
- i. * Maintenance and inspection schedule incorporating the required maintenance and inspection of the basic bus and its subsystems (i.e., wheelchair lift) with each bus at delivery.
- j. * Proof of bus suspension alignment (work order or bill) at final bus inspection and with each bus. Four wheel alignment shall include adjustments to front and rear suspension and steering parts so that axle alignment, camber, caster, and toe settings are within manufacturer's desired limits.
- k. * Proof of undercoating (warranty) at final bus inspection and with each bus.
- l. * Front end and rear towing and lifting instructions with each bus.
- m. * Wheelchair securement product instructions and training program.
- n. * The bus manufacturer shall provide air conditioning system performance certification (**see section C. Contractor/Manufacturer Requirements, subsection 3. Air Conditioning Certification**).
- o. * The bus manufacturer shall provide test results that certify the performance of the heating/ventilating system (**see section C. Contractor/Manufacturer Requirements, subsection 4. Heating/Ventilating Certification**).

2) Manufacturer Quality Control

- a. Bus contractor/manufacturer shall provide a plan for quality control during bus construction. Bus contractor/manufacturer shall also provide the name of the chief of quality control for bus construction.
- b. The contractor shall establish and maintain an effective in-plant quality assurance organization. It shall be a specifically defined organization and should be directly responsible to the contractor's management and completely independent from production. The quality assurance organization shall exercise quality control over all phases of production from initiation of design through manufacture and preparation for delivery. The organization shall also control the quality of supply articles. The quality assurance organization shall verify inspection operation instructions to ascertain that the manufactured product meets all prescribed requirements. The quality assurance organization shall detect and promptly assure correction of any conditions that may result in the production of defective transit buses. These conditions may occur in design, purchases, manufacture, tests or operations that culminate in defective supplies, services, facilities, technical data, or standards. The contractor shall maintain drawings and other documentation that completely describe a qualified bus that meets all of the options and special requirements of this procurement. The quality assurance organization shall verify that each transit bus is manufactured in accordance with these controlled drawings and documentation.

- c. The contractor shall ensure that all basic production operations, as well as other processing and fabricating, are performed under controlled conditions. Establishment of these controlled conditions shall be based on the documented work instructions, adequate production equipment, and special work environments if necessary. A system for final inspection and test of completed transit buses shall be provided by the quality assurance organization. It shall measure the overall quality of each completed bus. A system shall be maintained by the quality assurance organization for identifying the inspection status of components and completed transit buses. Identification may include cards, tags, or other quality control devices. Inspection stations shall be at the best locations to provide for the work content and characteristics to be inspected. Stations shall provide the facilities and equipment to inspect structural, electrical, hydraulic, and other components and assemblies for compliance with the design requirements. Stations shall also be at the best locations to inspect or test characteristics before they are concealed by subsequent fabrication or assembly operations. These locations shall minimally include, as practical, under-body structure completion, body framing completion, body prior to paint preparation, water test before interior trim and insulation installation, engine installation completion, under-body dress-up and completion, bus prior to final paint touch-up, bus prior to road test, bus final road completion and presentation to resident inspectors. Tests shall be performed by the bus manufacturer to ensure that the unit is dustproof, water-tight, fumeproof, and that all bus fluids are per specifications. The quality assurance organization shall be responsible for presenting the completed bus to the resident inspectors. Sufficiently trained inspectors shall be used to ensure that all materials, components, and assemblies are inspected for conformance with the qualified bus design.
- d. The State and/or the Ordering Entity may be represented at the contractor's plant by resident inspectors. They shall monitor, in the contractor's plant, the manufacture of transit buses built under this procurement. The contractor shall provide office space for the resident inspectors in close proximity to the final assembly area. This office space shall be equipped with desks, chairs, outside and interplant telephones, and other items sufficient to accommodate the resident inspector staff. Inspectors shall have lifting equipment available for raising vehicles for under vehicle inspections.

3) Air Conditioning Certification

- a. The bus manufacturer shall provide air conditioning system performance certification at delivery (conducted by an independent laboratory, or testing agency, or the air conditioner manufacturer and supported by documentation of the actual test on the pilot model bus) that the air conditioning system installed in the bus meets or exceeds performance levels required by these specifications. Tests shall be performed on all classes of buses.
- b. The air conditioning system performance testing shall be conducted using a heating chamber of sufficient size to contain the basic bus, to heat soak the bus at 100°F for 4 hours minimum, to simulate sun load entering windshield, and to maintain 100°F exterior temperature continuously after heat soak during testing. *Four hour soak will commence once bus internal temperature reaches 100°F.* An interior temperature of 72°F ($\pm 3^\circ\text{F}$) must be reached within 30 minutes from the beginning of the test. Engine speed shall be maintained at 1300 RPM (± 200 RPM) during the test.
- c. Instrumentation for temperature monitoring of the bus interior shall be a minimum of 3 points in the passenger area 30" above the floor - one in driver's area, and one at the mid-point of the bus, and one at the rear seat area. Evaporators' air inlet and air outlet temperatures shall be recorded. Instrumentation and recording equipment shall be able to monitor all points, record data at one minute intervals, and print a data report.

4) Heating/Ventilating Certification

- a. The bus manufacturer shall provide test results at delivery, that certify the performance of the heating/ventilating system as installed in the bus meets or exceeds performance levels required by these specifications. Tests shall be performed on all classes of buses. The test should be conducted by an independent laboratory or testing agency and supported by documentation of the actual tests on the pilot model bus. Testing may be performed in natural cold climate conditions. Tests shall be performed on all classes of buses.
- b. The bus will be cold soaked at 0°F (+/- 3°F) for 4 hours minimum. An exterior temperature of 0°F (+/- 3°F) shall be maintained during the test. An interior temperature of 64°F (+/- 3°F) must be reached within 30 minutes from the beginning of the test. Engine speed shall be maintained at 1300 RPM (+/- 200 RPM) during the test. No dynamometer will be used.
- c. Instrumented monitoring for the bus interior temperature to determine pass/fail, shall be a minimum of three points located front, center, and rear in the passenger area 30" above the floor. Additional monitoring points shall be; one in driver's area at knee level 22" above the floor, at front heater's air inlets and air outlets, and at rear heater's air inlets and air outlets. Other temperature monitoring points shall be: engine operating (coolant) at radiator; engine outlet to rear heater; rear heater return to engine; and exterior ambient.
- d. Coolant flow shall be monitored from the engine outlet to the heaters only. Supplemental heat shall be supplied to raise engine to normal operating temperature. Supplemental heat shall be engaged 60 minutes prior to the start of the test. Instrumentation and recording equipment shall be able to monitor all points, record data at one minute intervals, and print a data report.

5) Purchaser Inspection

The State and/or the Ordering Entity reserves the right and shall be at liberty to inspect all material and workmanship at all times during the progress of the work, and shall have the right to reject all material and workmanship which do not conform to the specifications or accepted practice. Where a resident inspector is used, upon the request to the quality assurance supervisor, the

resident inspectors shall have access to the Contractor's quality assurance files related to this procurement. These files shall include drawings, material standards, parts lists, inspection processing and records, and record of defects.

6) Warranty

- a. Warranty shall become effective on the date the bus is placed into service by the Ordering Entity. Warranty service performed at the manufacturer's facilities at the manufacturer's request shall have all costs covered by the manufacturer. Warranty for the bus shall be the following as a minimum:
- b. Two (2) years or OEM on chassis.
- c. Two (2) years or OEM on transmission.
- d. Three (3) years on body structure, exterior, undercoating, rustproofing, and paint.
- e. Eighteen (18) months on lift.
- f. All wiring shall be warranted for one 1 year from date bus is put into service.
- g. Manufacturer's standard warranty or one (1) year, whichever is greater, on other add-on components and items.
- h. The chassis, body, and all add-on components shall be warranted by the successful contractor.

7) Miscellaneous

- a. The Contractor shall furnish the State with the delivery schedule of chassis to the Contractor and a delivery date of completed buses within 30 calendar days from date of order.
- b. Any in-line equipment changes shall have prior written approval of the State.
- c. The Contractor shall supply the bus turning radius: wheel-to-wheel and wall-to-wall.
- d. The Contractor shall furnish warranty procedure instructions and necessary forms used by customers to obtain necessary warranty repairs.
- e. The manufacturer(s) shall produce as the pilot model the first bus ordered by the State for its transit agencies. The bus shall be: 1) lift equipped, 2) air conditioned, and 3) the largest size on request by the transit agencies. All necessary testing and equipment placement shall be performed on the pilot models before final inspection/acceptance by the State (**see Schedule A Statement of Work, section 7.4 Final Acceptance**). The pilot model shall serve as a standard for the following units as ordered but shall not relieve the contractor from an obligation to manufacture all units in compliance with all specifications.

TABLE 1

54254

Federal Register / Vol. 58, No. 201 / Wednesday, October 20, 1993 / Notices

1. Materials tested for surface flammability should not exhibit any flaming running, or flaming dripping.

2. The surface flammability and smoke emission characteristics of seat cushion materials should be demonstrated to be permanent after testing according to ASTM D-3574 Dynamic Fatigue Tests I_s (Procedure B).

3. The surface flammability and smoke emission characteristics of a material should be demonstrated to be permanent by washing, if appropriate, according to FED-STD-191A Textile Test Method 5830.

4. The surface flammability and smoke emission characteristics of a material should be demonstrated to be permanent by dry cleaning, if appropriate, according to ASTM D-2724. Materials that cannot be washed or dry-cleaned should be so labeled, and should meet the applicable performance criteria after being cleaned as recommended by the manufacturer.

5. ASTM E-662 maximum test limits for smoke emission (specific optical density) should be measured in either the flaming or non-flaming mode, depending on which mode generates more smoke.

6. Flooring and Fire Wall assemblies should meet the performance criteria during a nominal test period determined by the transit property. The nominal test period should be twice the maximum expected period of time, under normal circumstances, for a vehicle to come to a complete, safe stop from maximum speed, plus the time necessary to evacuate all passengers from a vehicle to a safe area. The nominal test period should not be less than 15 minutes. Only one specimen need be tested. A proportional reduction may be made in dimensions of the specimen provided that it represents a true test of its ability to perform as a barrier against vehicle fires. Penetrations (ducts, piping, etc.) should be designed against acting as conduits for fire and smoke.

7. Carpeting should be tested in according with ASTM E-848 with its padding, if the padding is used in actual installation.

8. Arm rests, if foamed plastic, are tested as cushions.

9. Testing is performed without upholstery.

Definition of Terms

1. Flame spread index (I_s) as defined in ASTM E-162 is a factor derived from the rate of progress of the flame front (F) and the rate of heat liberation by the material under test (Q), such that $I_s = F \times Q$.

2. Specific optical density (D_s) is the optical density measured over unit path length within a chamber of unit volume produced from a specimen of unit surface area, that is irradiated by a heat flux of 2.5 watts/cm² for a specified period of time.

3. Surface flammability denotes the rate at which flames will travel along surfaces.

4. Flaming running denotes continuous flaming material leaving the site of the during material at its installed location.

5. Flaming dripping denotes periodic dripping of flaming material from the site of burning material at its installed location.

Referenced Fire Standards

The source of test procedures listed in Table 1 is as follows:

(1) Leaching Resistance of Cloth, FED-STD-191A-Textile Test Method 5830.

Availability from: General Services Administration Specifications Division,

Building 197, Washington, Navy Yard, Washington, DC 20407.

(2) Federal Aviation Administration Vertical Burn Test, FAR-25-853.

Available from: Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

(3) American Society for Testing Materials (ASTM)

(a) Surface Flammability of Materials Using a Radiant Heat Energy Source, ASTM E-162;

(b) Surface Flammability for Flexible Cellular Materials Using a Radiant Heat Energy Source, ASTM D-3675;

(c) Fire Tests of Building Construction and Materials, ASTM E-119;

(d) Specific Optical Density of Smoke Generated by Solid Materials, ASTM E-662;

(e) Bonded and Laminated Apparel Fabrics, ASTM D-2724;

(f) Flexible Cellular Materials—Slab, Bonded, and Molded Urethane Foams, ASTM D-3574.

Available from: American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

In all instances, the most recent issue of the document or the revision in effect at the time of request should be employed in the evaluation of the material specified herein.

Issued: October 14, 1993.

Grace Crumican,
Deputy Administrator.

[FR Doc. 93-25709 Filed 10-19-93; 8:45 am]
BILLING CODE 4910-57-P

IX. TABLE 1

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TABLE 1: RECOMMENDATIONS FOR TESTING THE FLAMMABILITY AND SMOKE EMISSION CHARACTERISTICS OF TRANSIT BUS AND VAN MATERIALS

Category	Function of Material	Test Procedure	Performance Criteria
Seating	Cushion ^{1,2,3,5,9*}	ASTM D-3675	$I_s \leq 25$
		ASTM E-662	$D_s (1.5) \leq 100; D_s (4.0) \leq 200$
	Frame ^{1,5,8}	ASTM E-162	$I_s \leq 35$
		ASTM E-662	$D_s (1.5) \leq 100; D_s (4.0) \leq 200$
	Shroud ^{1,5}	ASTM E-162	$I_s \leq 35$
		ASTM E-662	$D_s (1.5) \leq 100; D_s (4.0) \leq 200$
	Upholstery ^{1,3,4,5}	FAR 25.853 (Vertical)	Flame time ≤ 10 seconds; burn length ≤ 6 inches
		ASTM E-662	$D_s (4.0) \leq 250$ coated; $D_s (4.0) \leq 100$ uncoated
Panels	Wall ^{1,5}	ASTM E-162	$I_s \leq 35$
		ASTM E-662	$D_s (1.5) \leq 100; D_s (4.0) \leq 200$
	Ceiling ^{1,5}	ASTM E-162	$I_s \leq 35$
		ASTM E-662	$D_s (1.5) \leq 100; D_s (4.0) \leq 200$
	Partition ^{1,5}	ASTM E-162	$I_s \leq 35$
		ASTM E-662	$D_s (1.5) \leq 100; D_s (4.0) \leq 200$
	Windscreen ^{1,5}	ASTM E-162	$I_s \leq 35$
		ASTM E-662	$D_s (1.5) \leq 100; D_s (4.0) \leq 200$
	HVAC Ducting ^{1,5}	ASTM E-162	$I_s \leq 35$
		ASTM E-662	$D_s (4.0) \leq 100$
Flooring	Wheel Well and Structural ⁶	ASTM E-119	Pass
		ASTM E-648	C.R.F. ≥ 0.5 w/cm ²
Insulation	Thermal ^{1,3,5}	ASTM E-162	$I_s \leq 25$
		ASTM E-662	$D_s (4.0) \leq 100$
	Acoustic ^{1,3,5}	ASTM E-162	$I_s \leq 25$
		ASTM E-662	$D_s (4.0) \leq 100$
Miscellaneous	Firewall ⁶	ASTM E-119	Pass
	Exterior Shell ^{1,5}	ASTM E-162	$I_s \leq 35$
		ASTM E-662	$D_s (1.5) \leq 100; D_s (4.0) \leq 200$

* Refers to Notes on Table 1

X. BUS SEATING ARRANGEMENTS

Standard non-lift buses and lift buses shall be supplied as requested in the following seating arrangements:

Class 1 (138" minimum):

- A.** 10 passenger without lift
 - i. 3 standard double forward facing seats
 - ii. 4 single forward facing seats
 - iii. 1 co-pilot seat (OEM)
- B.** 4 + 2 passenger with lift
 - i. 1 standard double forward facing seats
 - ii. 2 single forward facing seats
 - iii. 1 co-pilot seat (OEM)
 - iv. 2 wheelchair positions
 - v. 3 double fold-away seats
- C.** 11 passenger without lift
 - i. 3 standard double forward facing seats
 - ii. 5 single forward facing seats
- D.** 5 + 2 passenger with lift
 - i. 1 standard double forward facing seats
 - ii. 3 single aisle facing fold-away seats
 - iii. 2 wheelchair positions
 - iv. 3 double fold-away seats

Class 2 (158" minimum):

- E.** 18 passenger without lift
 - i. 9 standard double forward facing seats
- F.** 10 + 1 passenger with lift
 - i. 5 standard double forward facing seats
 - ii. 1 wheelchair positions
 - iii. 2 double fold-away seats
- G.** 8 + 2 passenger with lift
 - i. 3 standard double forward facing seats
 - ii. 2 wheelchair positions
 - iii. 2 double fold-away seats
 - iv. 1 double aisle facing fold-away seat
- H.** 4 + 2 passenger with lift
 - i. 2 standard double forward facing seats
 - ii. 2 wheelchair positions
 - iii. 6 double fold-away seats
- I.** 22 passenger without lift

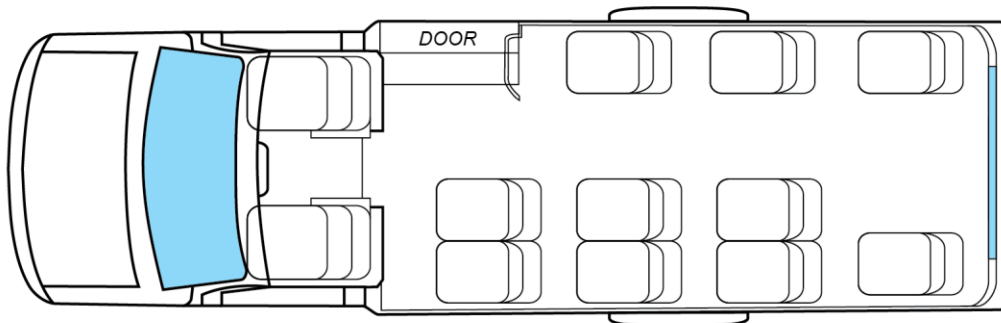
- i. 11 standard double forward facing seats
- J. 6 + 2 passenger with lift**
 - i. 3 standard double forward facing seats
 - ii. 2 wheelchair positions
 - iii. 5 double fold-away seats
- K. 10 + 2 passenger with lift**
 - i. 5 standard double forward facing seats
 - ii. 2 wheelchair positions
 - iii. 2 double fold-away seats
- L. 4 + 2 passenger with lift**
 - i. 2 standard double forward facing seats
 - ii. 2 wheelchair positions
 - iii. 7 double fold-away seats

Drawings for the suggested seating arrangements are supplied on the following pages.

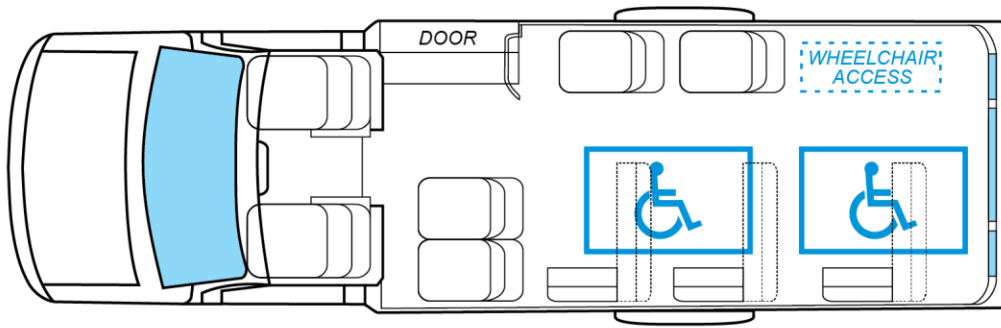
Bus Floor Plans

Class 1

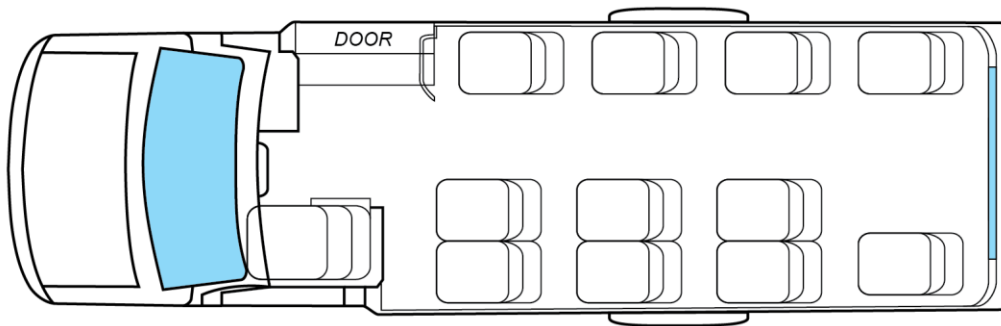
Wheelbase 138" Minimum



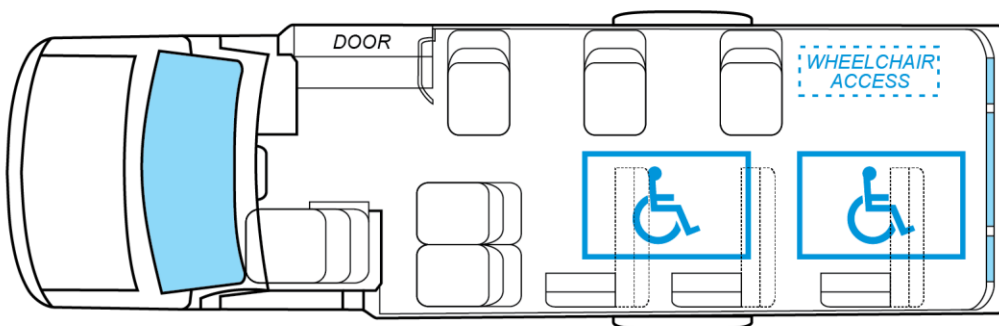
10 Passenger Bus without Lift



4 + 2 Passenger Bus with Lift



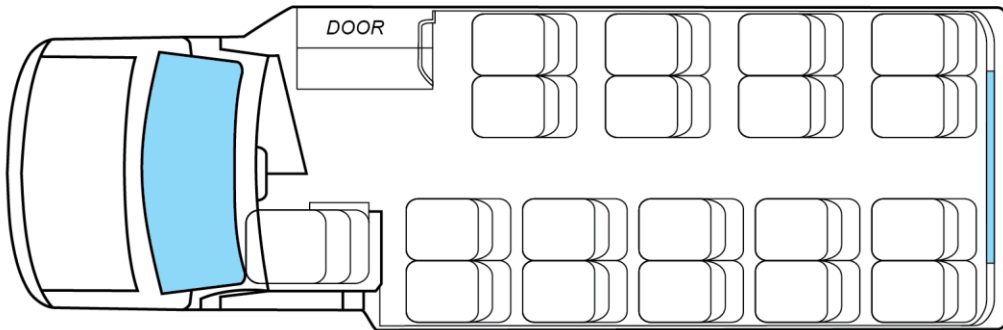
11 Passenger Bus without Lift



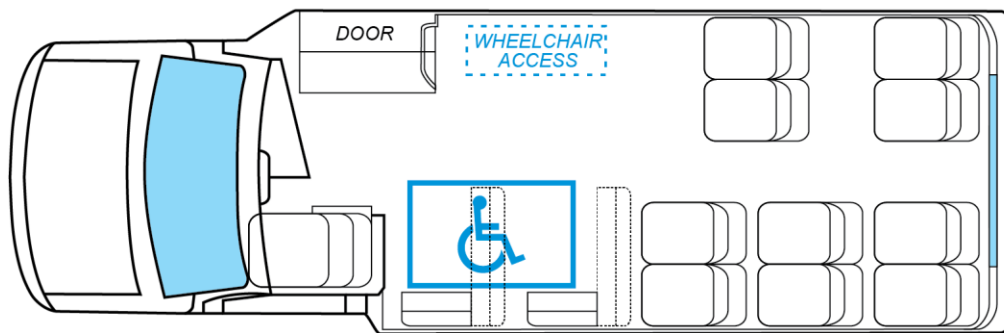
5 + 2 Passenger Bus with Lift

Class 2

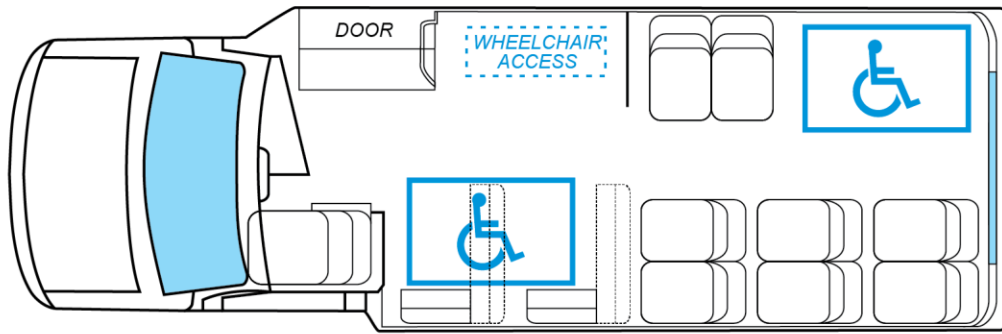
Wheelbase 158" Minimum



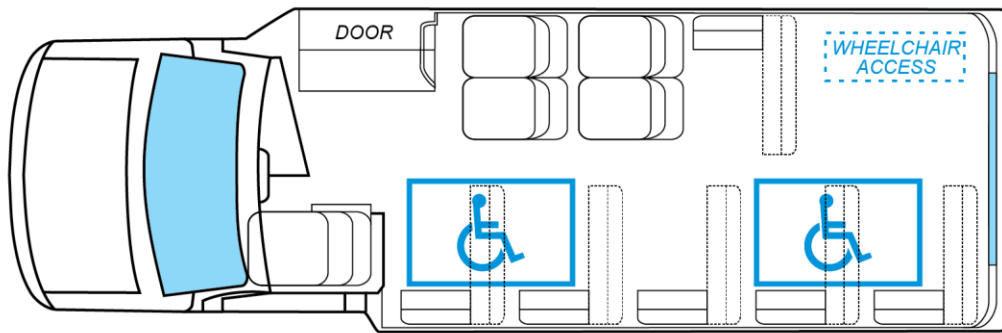
18 Passenger Bus without Lift



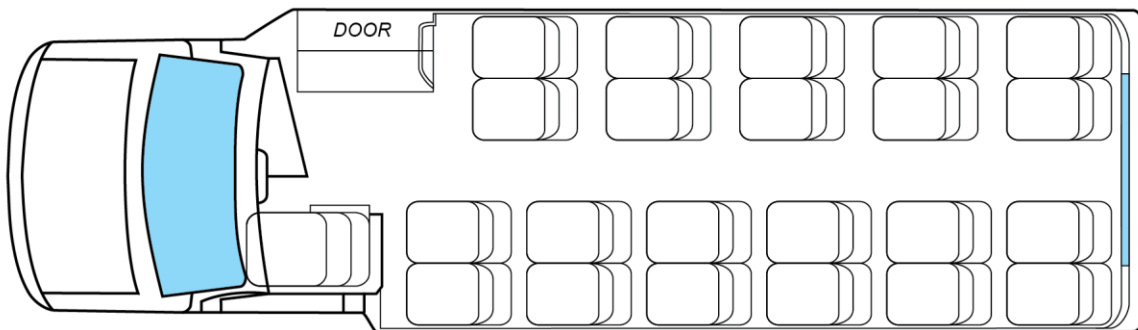
10 + 1 Passenger Bus with Lift



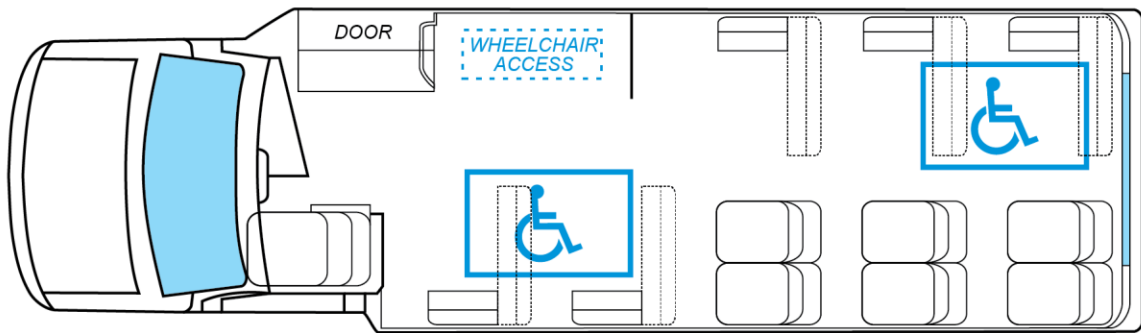
8 + 2 Passenger Bus with Lift



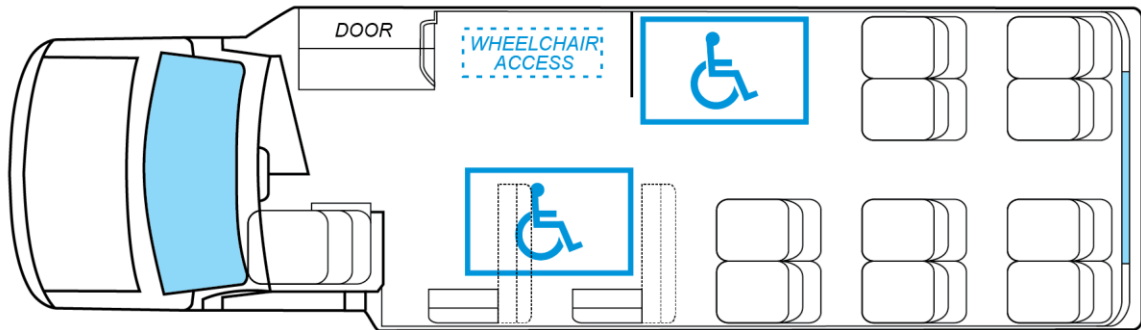
4 + 2 Passenger Bus with Lift



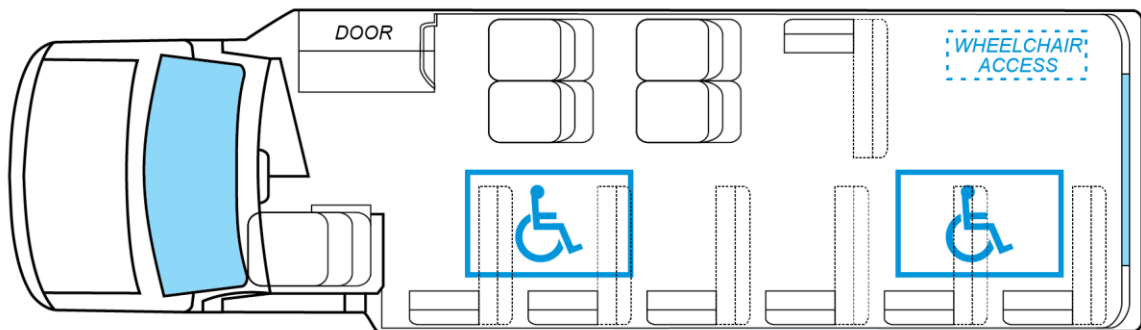
22 Passenger Bus without Lift



6 + 2 Passenger Bus with Lift



10 + 2 Passenger Bus with Lift



4 + 2 Passenger Bus with Lift

This specification was developed as a cooperative effort between the Michigan Department of Transportation and a committee of representatives from various Michigan public transit agencies. Upon request, this specification can be obtained in alternative format such as braille, large print, or audio tape.

1. BUY AMERICA REQUIREMENTS

The contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. Part 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. 661.7, and include microcomputer equipment and software. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11. Rolling stock must be assembled in the United States and have a 60 percent domestic content.

A bidder or offeror must submit to the FTA recipient the appropriate Buy America certification (below) with all bids or offers on FTA-funded contracts, except those subject to a general waiver. Bids or offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive. This requirement does not apply to lower tier subcontractors.

Certification requirement for procurement of steel, iron, or manufactured products.

Certificate of Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it will meet the requirements of 49 U.S.C. 5323(j)(1) and the applicable regulations in 49 C.F.R. Part 661.5.

Date November 16, 2016 _____

Signature Kathleen Gaffney _____

Company Name Goshen _____

Title Transit Sales Representative _____

Schedule C
Federal Contract Clauses (Rolling Stock) Page 4

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(1) and 49 C.F.R. 661.5, but it may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 C.F.R. 661.7.

Date _____

Signature _____

Company Name _____

Title _____

Certification requirement for procurement of buses, other rolling stock and associated equipment.

Certificate of Compliance with 49 U.S.C. 5323(j)(2)(C)

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j)(2)(C) and the regulations at 49 C.F.R. Part 661.11.

Date November 16, 2016

Signature 

Company Name Goshen

Title Transit Sales Representative

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(2)(C)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11, but may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 CFR 661.7.

Date _____

Signature _____

Company Name _____

Title _____

5. BUS TESTING 49 U.S.C. 5323(c)/49 CFR Part 665

The Contractor [Manufacturer] agrees to comply with 49 U.S.C. A 5323(c) and FTA's implementing regulation at 49 CFR Part 665 and shall perform the following:

- 1) A manufacturer of a new bus model or a bus produced with a major change in components or configuration shall provide a copy of the final test report to the recipient at a point in the procurement process specified by the recipient which will be prior to the recipient's final acceptance of the first vehicle.
- 2) A manufacturer who releases a report under paragraph 1 above shall provide notice to the operator of the testing facility that the report is available to the public.
- 3) If the manufacturer represents that the vehicle was previously tested, the vehicle being sold should have the identical configuration and major components as the vehicle in the test report, which must be provided to the recipient prior to recipient's final acceptance of the first vehicle. If the configuration or components are not identical, the manufacturer shall provide a description of the change and the manufacturer's basis for concluding that it is not a major change requiring additional testing.
- 4) If the manufacturer represents that the vehicle is "grandfathered" (has been used in mass transit service in the United States before October 1, 1988, and is currently being produced without a major change in configuration or components), the manufacturer shall provide the name and address of the recipient of such a vehicle and the details of that vehicle's configuration and major components.

CERTIFICATION OF COMPLIANCE WITH FTA'S BUS TESTING REQUIREMENTS

The undersigned [Contractor/Manufacturer] certifies that the vehicle offered in this procurement complies with 49 U.S.C. A 5323(c) and FTA's implementing regulation at 49 CFR Part 665.

The undersigned understands that misrepresenting the testing status of a vehicle acquired with Federal financial assistance may subject the undersigned to civil penalties as outlined in the Department of Transportation's regulation on Program Fraud Civil Remedies, 49 CFR Part 31. In addition, the undersigned understands that FTA may suspend or debar a manufacturer under the procedures in 49 CFR Part 29.

Date: November 16, 2016

Signature: _____

Kathleen Giffney

Company Name: Goshen

Title: Transit Sales Representative

6. PRE-AWARD AND POST DELIVERY AUDITS REQUIREMENTS 49 U.S.C. 5323/49 CFR Part 663

The Contractor agrees to comply with 49 U.S.C. § 5323(l) and FTA's implementing regulation at 49 C.F.R. Part 663 and to submit the following certifications:

- (1) Buy America Requirements: The Contractor shall complete and submit a declaration certifying either compliance or noncompliance with Buy America. If the Bidder/Offeror certifies compliance with Buy America, it shall submit documentation which lists 1) component and subcomponent parts of the rolling stock to be purchased identified by manufacturer of the parts, their country of origin and costs; and 2) the location of the final assembly point for the rolling stock, including a description of the activities that will take place at the final assembly point and the cost of final assembly.
- (2) Solicitation Specification Requirements: The Contractor shall submit evidence that it will be capable of meeting the bid specifications.
- (3) Federal Motor Vehicle Safety Standards (FMVSS): The Contractor shall submit 1) manufacturer's FMVSS self-certification sticker information that the vehicle complies with relevant FMVSS or 2) manufacturer's certified statement that the contracted buses will not be subject to FMVSS regulations.

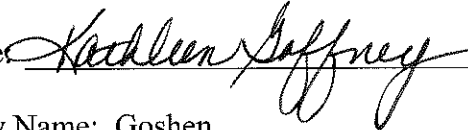
**BUY AMERICA CERTIFICATE OF COMPLIANCE WITH FTA REQUIREMENTS
FOR BUSES, OTHER ROLLING STOCK, OR ASSOCIATED EQUIPMENT**

(To be submitted with a bid or offer exceeding the small purchase threshold for Federal assistance programs, currently set at \$100,000.)

Certificate of Compliance

The bidder hereby certifies that it will comply with the requirements of 49 U.S.C. Section 5323(j)(2)(C), Section 165(b)(3) of the Surface Transportation Assistance Act of 1982, as amended, and the regulations of 49 C.F.R. 661.11:

Date: November 16, 2016

Signature: 

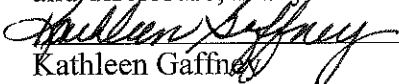
Company Name: Goshen

Title: Transit Sales Representative

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Manufacturer, Goshen, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, apply to this certification and disclosure, if any.

 Signature of Contractor's Authorized Official
Kathleen Gaffney

Transit Sales Representative Name and Title of Contractor's Authorized Official

November 16, 2016 Date

8. ACCESS TO RECORDS AND REPORTS 49 U.S.C. 5325/18 CFR 18.36 (i)/49 CFR 633.17

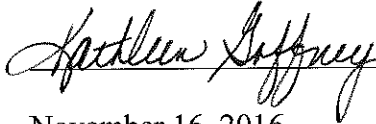
The following access to records requirements apply to this Contract:

1. Where the Purchaser is not a State but a local government and is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C.F.R. 18.36(i), the Contractor agrees to provide the Purchaser, the FTA Administrator, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 C.F.R. 633.17 to provide the FTA Administrator or his authorized representatives including any PMO Contractor access to Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311.

20. DBE TRANSIT VEHICLE MANUFACTURER CERTIFICATION

Goshen (Name of Manufacturer), a TVM, hereby certifies that it has complied with the requirement of Section 26.49 of 49 CFR, Part 26 by submitting a current annual DBE goal to FTA. The goals apply to Federal Fiscal Year 2017 (October 1, 2016 to September 30, 2017) and have been approved or not disapproved by FTA.

____ (Name of Contract Vendor), hereby certifies that the manufacturer of the transit vehicle to be supplied _____ (Name of Manufacturer) has complied with the above referenced requirement of Section 26.49 of 49 CFR Part 26.

Signature: 

Date: November 16, 2016

Title: Transit Sales Representative

Manufacturer: Goshen

21. INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS
FTA Circular 4220.1F

The preceding provisions include, in part, certain Standard Terms and Conditions required by U.S. DOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by U.S. DOT, as set forth in FTA Circular 4220.1F, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any **State of Michigan** requests which would cause **State of Michigan** to be in violation of the FTA terms and conditions.

Federally Required Contract Clauses (Rolling Stock)
Governing Documents

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INSTRUCTIONS

About: This document contains the federally required contract clauses for a rolling stock procurement greater than \$100,000.

Bidder/Vendor Instructions: Return copies of these pages with your bids. Fill in parts 1, 5, 6, 7, and 20.

I. BUY AMERICA REQUIREMENTS

The contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. Part 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. 661.7, and include microcomputer equipment and software. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11. Rolling stock must be assembled in the United States and have a 60 percent domestic content.

A bidder or offeror must submit to the FTA recipient the appropriate Buy America certification (below) with all bids or offers on FTA-funded contracts, except those subject to a general waiver. Bids or offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive. This requirement does not apply to lower tier subcontractors.

Certification requirement for procurement of steel, iron, or manufactured products.

Certificate of Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it will meet the requirements of 49 U.S.C. 5323(j)(1) and the applicable regulations in 49 C.F.R. Part 661.5.

Date _____
Signature _____
Company Name _____
Title _____

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(1) and 49 C.F.R. 661.5, but it may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 C.F.R. 661.7.

Date _____

Signature _____

Company Name _____

Title _____

Certification requirement for procurement of buses, other rolling stock and associated equipment.

Certificate of Compliance with 49 U.S.C. 5323(j)(2)(C)

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j)(2)(C) and the regulations at 49 C.F.R. Part 661.11.

Date 11/15/16

Signature GA BLC

Company Name Hockstra Transportation

Title CPM

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(2)(C)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11, but may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 CFR 661.7.

Date _____

Signature _____

Company Name _____

Title _____

2. CARGO PREFERENCE REQUIREMENTS 46 U.S.C. 1241/46 CFR Part 381

Use of United States-Flag Vessels - The contractor agrees:

- a. to use privately owned United States-Flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to the underlying contract to the extent such vessels are available at fair and reasonable rates for United States-Flag commercial vessels;
- b. to furnish within 20 working days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in the preceding paragraph to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to the FTA recipient (through the contractor in the case of a subcontractor's bill-of-lading.)
- c. to include these requirements in all subcontracts issued pursuant to this contract when the subcontract may involve the transport of equipment, material, or commodities by ocean vessel.

3. ENERGY CONSERVATION REQUIREMENTS 42 U.S.C. 6321 et seq./49 CFR Part 18

The contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

4. CLEAN WATER REQUIREMENTS 33 U.S.C. 1251

- (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.
 - (2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.
-

5. BUS TESTING 49 U.S.C. 5323(c)/49 CFR Part 665

The Contractor [Manufacturer] agrees to comply with 49 U.S.C. A 5323(c) and FTA's implementing regulation at 49 CFR Part 665 and shall perform the following:

- 1) A manufacturer of a new bus model or a bus produced with a major change in components or configuration shall provide a copy of the final test report to the recipient at a point in the procurement process specified by the recipient which will be prior to the recipient's final acceptance of the first vehicle.
- 2) A manufacturer who releases a report under paragraph 1 above shall provide notice to the operator of the testing facility that the report is available to the public.
- 3) If the manufacturer represents that the vehicle was previously tested, the vehicle being sold should have the identical configuration and major components as the vehicle in the test report, which must be provided to the recipient prior to recipient's final acceptance of the first vehicle. If the configuration or components are not identical, the manufacturer shall provide a description of the change and the manufacturer's basis for concluding that it is not a major change requiring additional testing.
- 4) If the manufacturer represents that the vehicle is "grandfathered" (has been used in mass transit service in the United States before October 1, 1988, and is currently being produced without a major change in configuration or components), the manufacturer shall provide the name and address of the recipient of such a vehicle and the details of that vehicle's configuration and major components.

CERTIFICATION OF COMPLIANCE WITH FTA'S BUS TESTING REQUIREMENTS

The undersigned [Contractor/Manufacturer] certifies that the vehicle offered in this procurement complies with 49 U.S.C. A 5323(c) and FTA's implementing regulation at 49 CFR Part 665.

The undersigned understands that misrepresenting the testing status of a vehicle acquired with Federal financial assistance may subject the undersigned to civil penalties as outlined in the Department of Transportation's regulation on Program Fraud Civil Remedies, 49 CFR Part 31. In addition, the undersigned understands that FTA may suspend or debar a manufacturer under the procedures in 49 CFR Part 29.

Date: 11/15/16

Signature: SARL

Company Name: Hockstra Transportation

Title: CRM

6. PRE-AWARD AND POST DELIVERY AUDITS REQUIREMENTS 49 U.S.C. 5323/49 CFR Part 663

The Contractor agrees to comply with 49 U.S.C. § 5323(l) and FTA's implementing regulation at 49 C.F.R. Part 663 and to submit the following certifications:

- (1) Buy America Requirements: The Contractor shall complete and submit a declaration certifying either compliance or noncompliance with Buy America. If the Bidder/Offeror certifies compliance with Buy America, it shall submit documentation which lists 1) component and subcomponent parts of the rolling stock to be purchased identified by manufacturer of the parts, their country of origin and costs; and 2) the location of the final assembly point for the rolling stock, including a description of the activities that will take place at the final assembly point and the cost of final assembly.
- (2) Solicitation Specification Requirements: The Contractor shall submit evidence that it will be capable of meeting the bid specifications.
- (3) Federal Motor Vehicle Safety Standards (FMVSS): The Contractor shall submit 1) manufacturer's FMVSS self-certification sticker information that the vehicle complies with relevant FMVSS or 2) manufacturer's certified statement that the contracted buses will not be subject to FMVSS regulations.

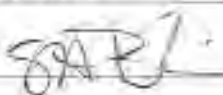
BUY AMERICA CERTIFICATE OF COMPLIANCE WITH FTA REQUIREMENTS FOR BUSES, OTHER ROLLING STOCK, OR ASSOCIATED EQUIPMENT

(To be submitted with a bid or offer exceeding the small purchase threshold for Federal assistance programs, currently set at \$100,000.)

Certificate of Compliance

The bidder hereby certifies that it will comply with the requirements of 49 U.S.C. Section 5323(j)(2)(C), Section 165(b)(3) of the Surface Transportation Assistance Act of 1982, as amended, and the regulations of 49 C.F.R. 661.11:

Date: 11/15/16

Signature: 

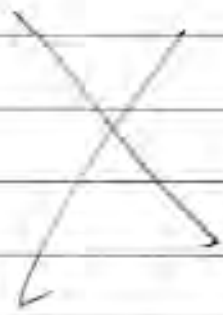
Company Name: Hockstra Transportation

Title: CPM

Certificate of Non-Compliance

The bidder hereby certifies that it cannot comply with the requirements of 49 U.S.C. Section 5323(j)(2)(C) and Section 165(b)(3) of the Surface Transportation Assistance Act of 1982, as amended, but may qualify for an exception to the requirements consistent with 49 U.S.C. Sections 5323(j)(2)(B) or (j)(2)(D), Sections 165(b)(2) or (b)(4) of the Surface Transportation Assistance Act, as amended, and regulations in 49 C.F.R. 661.7.

Date: _____
Signature: _____
Company Name: _____
Title: _____



7. LOBBYING 31 U.S.C. 1352/49 CFR Part 19/49 CFR Part 20

Byrd Anti-Lobbying Amendment, 31 U.S.C. 1352, as amended by the Lobbying Disclosure Act of 1995, P.L. 104-65 [to be codified at 2 U.S.C. § 1601, et seq.] - Contractors who apply or bid for an award of \$100,000 or more shall file the certification required by 49 CFR part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier to tier up to the recipient.

APPENDIX A, 49 CFR PART 20—CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

(To be submitted with each bid or offer exceeding \$100,000)

The undersigned [Contractor] certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, et seq.)]

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Contractor, Hockstra, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, apply to this certification and disclosure, if any.

SAB Signature of Contractor's Authorized Official

Steve Boivin, CPM Name and Title of Contractor's Authorized Official

11/5/16 Date

8. ACCESS TO RECORDS AND REPORTS 49 U.S.C. 5325/18 CFR 18.36 (i)/49 CFR 633.17

The following access to records requirements apply to this Contract:

1. Where the Purchaser is not a State but a local government and is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C.F.R. 18.36(i), the Contractor agrees to provide the Purchaser, the FTA Administrator, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 C.F.R. 633.17 to provide the FTA Administrator or his authorized representatives including any PMO Contractor access to Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311.

2. Where the Purchaser is a State and is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C.F.R. 633.17, Contractor agrees to provide the Purchaser, the FTA Administrator or his authorized representatives, including any PMO Contractor, access to the Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)(1), which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311. By definition, a major capital project excludes contracts of less than the simplified acquisition threshold currently set at \$100,000.
 3. Where the Purchaser enters into a negotiated contract for other than a small purchase or under the simplified acquisition threshold and is an institution of higher education, a hospital or other non-profit organization and is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C.F.R. 19.48, Contractor agrees to provide the Purchaser, FTA Administrator, the Comptroller General of the United States or any of their duly authorized representatives with access to any books, documents, papers and record of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions.
 4. Where any Purchaser which is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 U.S.C. 5325(a) enters into a contract for a capital project or improvement (defined at 49 U.S.C. 5302(a)(1)) through other than competitive bidding, the Contractor shall make available records related to the contract to the Purchaser, the Secretary of Transportation and the Comptroller General or any authorized officer or employee of any of them for the purposes of conducting an audit and inspection.
 5. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
 6. The Contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the Purchaser, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. Reference 49 CFR 18.39(i)(11).
 7. FTA does not require the inclusion of these requirements in subcontracts.
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Requirements for Access to Records and Reports by Types of Contract

Contract Characteristics	Operational Service Contract	Turnkey	Construction	Architectural Engineering	Acquisition of Rolling Stock	Professional Services
<u>I State Grantees</u>						
a. Contracts below SAT (\$100,000)	None	Those imposed on state pass thru to Contractor	None	None	None	None
b. Contracts above \$100,000/Capital Projects	None unless ¹ non-competitive award		Yes, if non-competitive award or if funded thru ² 5307/5309/5311	None unless non-competitive award	None unless non-competitive award	None unless non-competitive award
<u>II Non State Grantees</u>						
a. Contracts below SAT (\$100,000)	Yes ³	Those imposed on non-state Grantee pass thru to Contractor	Yes	Yes	Yes	Yes
b. Contracts above \$100,000/Capital Projects	Yes ³		Yes	Yes	Yes	Yes

Sources of Authority:

¹ 49 USC 5325 (a)

² 49 CFR 633.17

³ 18 CFR 18.36 (i)

9. FEDERAL CHANGES 49 CFR Part 18

Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between Purchaser and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

10. CLEAN AIR 42 U.S.C. 7401 et seq/40 CFR 15.61/49 CFR Part 18

- (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.
- (2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

11. RECYCLED PRODUCTS 42 U.S.C. 6962/40 CFR Part 247/Executive Order 12873

The contractor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247.

12. NO GOVERNMENT OBLIGATION TO THIRD PARTIES

No Obligation by the Federal Government.

- (1) The Purchaser and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the Purchaser, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.
 - (2) The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.
-

13. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS

31 U.S.C. 3801 et seq. /49 CFR Part 31 18 U.S.C. 1001/49 U.S.C. 5307

- (1) The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.
 - (2) The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. § 5307, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.
 - (3) The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.
-

14. TERMINATION 49 U.S.C. Part 18/FTA Circular 4220.1F

a. Termination for Convenience (General Provision) The (Recipient) may terminate this contract, in whole or in part, at any time by written notice to the Contractor when it is in the Government's best interest. The Contractor shall be paid its costs, including contract close-out costs, and profit on work performed up to the time of termination. The Contractor shall promptly submit its termination claim to (Recipient) to be paid the Contractor. If the Contractor has any property in its possession belonging to the (Recipient), the Contractor will account for the same, and dispose of it in the manner the (Recipient) directs.

b. Termination for Default [Breach or Cause] (General Provision) If the Contractor does not deliver supplies in accordance with the contract delivery schedule, or, if the contract is for services, the Contractor fails to perform in the manner called for in the contract, or if the Contractor fails to comply with any other provisions of the contract, the (Recipient) may terminate this contract for default. Termination shall be effected by serving a notice of termination on the contractor setting forth the manner in which the Contractor is in default. The contractor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the contract. If it is later determined by the (Recipient) that the Contractor had an excusable reason for not performing, such as a strike, fire, or flood, events which are not the fault of or are beyond the control of the Contractor, the (Recipient), after setting up a new delivery of performance schedule, may allow the Contractor to continue work, or treat the termination as a termination for convenience.

c. Opportunity to Cure (General Provision) The (Recipient) in its sole discretion may, in the case of a termination for breach or default, allow the Contractor [an appropriately short period of time] in which to cure the defect. In such case, the notice of termination will state the time period in which cure is permitted and other appropriate conditions

If Contractor fails to remedy to (Recipient)'s satisfaction the breach or default of any of the terms, covenants, or conditions of this Contract within [ten (10) days] after receipt by Contractor of written notice from (Recipient) setting forth the nature of said breach or default, (Recipient) shall have the right to terminate the Contract without any further obligation to Contractor. Any such termination for default shall not in any way operate to preclude (Recipient) from also pursuing all available remedies against Contractor and its sureties for said breach or default.

d. Waiver of Remedies for any Breach In the event that (Recipient) elects to waive its remedies for any breach by Contractor of any covenant, term or condition of this Contract, such waiver by (Recipient) shall not limit (Recipient)'s remedies for any succeeding breach of that or of any other term, covenant, or condition of this Contract.

e. Termination for Convenience (Professional or Transit Service Contracts) The (Recipient), by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the Recipient shall be liable only for payment under the payment provisions of this contract for services rendered before the effective date of termination.

f. Termination for Default (Supplies and Service) If the Contractor fails to deliver supplies or to perform the services within the time specified in this contract or any extension or if the Contractor fails to comply with any other provisions of this contract, the (Recipient) may terminate this contract for default. The (Recipient) shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of the default. The Contractor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner or performance set forth in this contract.

If, after termination for failure to fulfill contract obligations, it is determined that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Recipient.

g. Termination for Default (Transportation Services) If the Contractor fails to pick up the commodities or to perform the services, including delivery services, within the time specified in this contract or any extension or if the Contractor fails to comply with any other provisions of this contract, the (Recipient) may terminate this contract for default. The (Recipient) shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of default. The Contractor will only be paid the contract price for services performed in accordance with the manner of performance set forth in this contract.

If this contract is terminated while the Contractor has possession of Recipient goods, the Contractor shall, upon direction of the (Recipient), protect and preserve the goods until surrendered to the Recipient or its agent. The Contractor and (Recipient) shall agree on payment for the preservation and protection of goods. Failure to agree on an amount will be resolved under the Dispute clause.

If, after termination for failure to fulfill contract obligations, it is determined that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the (Recipient).

h. Termination for Default (Construction) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract or any extension or fails to complete the work within this time, or if the Contractor fails to comply with any other provisions of this contract, the (Recipient) may terminate this contract for default. The (Recipient) shall terminate by delivering to the

Contractor a Notice of Termination specifying the nature of the default. In this event, the Recipient may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Recipient resulting from the Contractor's refusal or failure to complete the work within specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Recipient in completing the work.

The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause if-

1. the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include: acts of God, acts of the Recipient, acts of another Contractor in the performance of a contract with the Recipient, epidemics, quarantine restrictions, strikes, freight embargoes; and
2. the contractor, within [10] days from the beginning of any delay, notifies the (Recipient) in writing of the causes of delay. If in the judgment of the (Recipient), the delay is excusable, the time for completing the work shall be extended. The judgment of the (Recipient) shall be final and conclusive on the parties, but subject to appeal under the Disputes clauses.
 - a. If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Recipient.

i. Termination for Convenience or Default (Architect and Engineering) The (Recipient) may terminate this contract in whole or in part, for the Recipient's convenience or because of the failure of the Contractor to fulfill the contract obligations. The (Recipient) shall terminate by delivering to the Contractor a Notice of Termination specifying the nature, extent, and effective date of the termination. Upon receipt of the notice, the Contractor shall (1) immediately discontinue all services affected (unless the notice directs otherwise), and (2) deliver to the Contracting Officer all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this contract, whether completed or in process.

If the termination is for the convenience of the Recipient, the Contracting Officer shall make an equitable adjustment in the contract price but shall allow no anticipated profit on unperformed services.

If the termination is for failure of the Contractor to fulfill the contract obligations, the Recipient may complete the work by contract or otherwise and the Contractor shall be liable for any additional cost incurred by the Recipient.

If, after termination for failure to fulfill contract obligations, it is determined that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Recipient.

j. Termination for Convenience of Default (Cost-Type Contracts) The (Recipient) may terminate this contract, or any portion of it, by serving a notice of termination on the Contractor. The notice shall state whether the termination is for convenience of the (Recipient) or for the default of the Contractor. If the termination is for default, the notice shall state the manner in which the contractor has failed to perform the requirements of the contract. The Contractor shall account for any property in its possession paid for from funds received from the (Recipient), or property supplied to the Contractor by the (Recipient). If the termination is for default, the (Recipient) may fix the fee, if the contract provides for a fee, to be paid the contractor in proportion to the value, if any, of work performed up to the time of termination. The Contractor shall promptly submit its termination claim to the (Recipient) and the parties shall negotiate the termination settlement to be paid the Contractor.

If the termination is for the convenience of the (Recipient), the Contractor shall be paid its contract close-out costs, and a fee, if the contract provided for payment of a fee, in proportion to the work performed up to the time of termination.

If, after serving a notice of termination for default, the (Recipient) determines that the Contractor has an excusable reason for not performing, such as strike, fire, flood, events which are not the fault of and are beyond the control of the contractor, the (Recipient), after setting up a new work schedule, may allow the Contractor to continue work, or treat the termination as a termination for convenience.

15. GOVERNMENT-WIDE DEBARMENT AND SUSPENSION (NONPROCUREMENT)

49 CFR Part 29/Executive Order 12549/Executive Order 12689/31 U.S.C. 6101 note (Section 2455, Public Law 103-355, 108 Stat. 3327)

Suspension and Debarment

This contract is a covered transaction for purposes of 49 CFR Part 29. As such, the contractor is required to verify that none of the contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945.

The contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by the **State of Michigan**. If it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to **State of Michigan**, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

16. PRIVACY ACT REQUIREMENTS 5 U.S.C. 552

The following requirements apply to the Contractor and its employees that administer any system of records on behalf of the Federal Government under any contract:

(1) The Contractor agrees to comply with, and assures the compliance of its employees with, the information restrictions and other applicable requirements of the Privacy Act of 1974, 5 U.S.C. § 552a. Among other things, the Contractor agrees to obtain the express consent of the Federal Government before the Contractor or its employees operate a system of records on behalf of the Federal Government. The Contractor understands that the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying contract.

(2) The Contractor also agrees to include these requirements in each subcontract to administer any system of records on behalf of the Federal Government financed in whole or in part with Federal assistance provided by FTA.

17. CIVIL RIGHTS REQUIREMENTS 29 U.S.C. § 623, 42 U.S.C. § 2000/42 U.S.C. § 6102, 42 U.S.C. § 12112/42 U.S.C. § 12132, 49 U.S.C. § 5332/29 CFR Part 1630/41 CFR Parts 60 et seq.

The following requirements apply to the underlying contract:

(1) Nondiscrimination - In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12132, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

(2) Equal Employment Opportunity - The following equal employment opportunity requirements apply to the underlying contract:

(a) Race, Color, Creed, National Origin, Sex - In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(b) Age - In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. § § 623 and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(c) Disabilities - In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the Contractor agrees that it will comply with the requirements of

U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(3) The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

18. BREACHES AND DISPUTE RESOLUTION 49 CFR Part 18/FTA Circular 4220.1F

Disputes - Disputes arising in the performance of this Contract which are not resolved by agreement of the parties shall be decided in writing by the authorized representative of (Recipient)'s [title of employee]. This decision shall be final and conclusive unless within [ten (10)] days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the [title of employee]. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the [title of employee] shall be binding upon the Contractor and the Contractor shall abide by the decision.

Performance During Dispute - Unless otherwise directed by (Recipient), Contractor shall continue performance under this Contract while matters in dispute are being resolved.

Claims for Damages - Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the party or of any of his employees, agents or others for whose acts he is legally liable, a claim for damages therefor shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

Remedies - Unless this contract provides otherwise, all claims, counterclaims, disputes and other matters in question between the (Recipient) and the Contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State in which the (Recipient) is located.

Rights and Remedies - The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the (Recipient), (Architect) or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

19. DISADVANTAGED BUSINESS ENTERPRISE (DBE) 49 CFR Part 26

- a. The contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this U.S. DOT-assisted contract. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the **State of Michigan** deems appropriate. Each subcontract the contractor signs with a subcontractor must include the assurance in this paragraph (*see* 49 CFR 26.13(b)).
 - b. This contract is subject to the requirements of Title 49, Code of Federal Regulations, Part 26, *Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs*. Each subcontract the contractor signs with a subcontractor must include the assurance in this paragraph (*see* 49 CFR 26.13(b)). Accordingly, as a condition of permission to bid, a certification must be completed and submitted with the bid. A bid which does not include certification may not be considered.
-

20. DBE TRANSIT VEHICLE MANUFACTURER CERTIFICATION

Eldorado National (Name of Manufacturer), a TVM, hereby certifies that it has complied with the requirement of Section 26.49 of 49 CFR, Part 26 by submitting a current annual DBE goal to FTA. The goals apply to Federal Fiscal Year 2016 (October 1, _____ to September 30, _____) and have been approved or not disapproved by FTA.

Hoekstra Transportation (Name of Contract Vendor), hereby certifies that the manufacturer of the transit vehicle to be supplied Eldorado (Name of Manufacturer) has complied with the above referenced requirement of Section 26.49 of 49 CFR Part 26.

Signature: 

Date: 11/15/16

Title: CPM

Manufacturer: Eldorado National

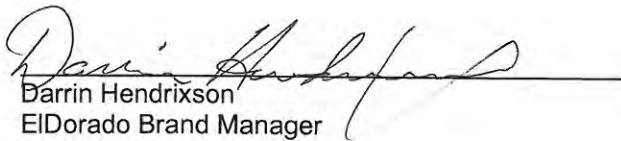
21. INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS
FTA Circular 4220.1F

The preceding provisions include, in part, certain Standard Terms and Conditions required by U.S. DOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by U.S. DOT, as set forth in FTA Circular 4220.1F, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any **State of Michigan** requests which would cause **State of Michigan** to be in violation of the FTA terms and conditions.



ALTOONA BUS TESTING CERTIFICATION

Eldorado, hereby certifies that the vehicle(s) being offered for sale have been fully tested as a "family of vehicles" for a minimum service life of seven (7) years or 200,000 miles at the Altoona Bus Testing Center as required by the Surface Transportation and Uniform Relocation assistance Act of 1987 and in accordance with CFR 49, Part 665, as amended.


Darrin Hendrixson
Eldorado Brand Manager

Date



BUS MANUFACTURER'S CERTIFICATION

Eldorado, hereby certifies that the vehicle(s) offered in this bid has been designed, manufactured, assembled and tested for transit purposes and is suitable for extended service in heavy stop-and-go traffic.


Darrin Hendrixson
Eldorado Brand Manager

Date



BUY AMERICA PROGRAM STEEL & MANUFACTURED PRODUCTS – ADDITIONAL CERTIFICATION

In accordance with Section 165 of the Surface Transportation Act of 1982, PL 97-424, January 6, 1983, as amended, Eldorado agrees that all steel, cement and manufactured products utilized on this FTA assisted project must be produced in the United States. Exceptions to the above may only be granted upon a Secretarial determination:

1. That their application would be inconsistent with the public interest;
2. That such materials and products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality;
3. In the case of the procurement of bus and other rolling stock (including train control, communication and traction power equipment) under the Federal Mass Transportation Act of 1964, that (a) the cost of components which are produced in the United States is more than 50% of the cost of all components of the vehicle or equipment described in this paragraph, and (b) final assembly of the vehicle or equipment described in this paragraph has taken place in the United States;
4. That inclusion of domestic material will increase the cost of the overall project contract by more than 10% in the case of projects for the acquisition of rolling stock, and 25% in the case of all other projects.

The Manufacturer hereby certifies that with the exception of items listed above, steel and manufactured products to be incorporated into this project have been produced in the United States.


Darrin Hendrixson
Eldorado Brand Manager

Date



BUY AMERICA CERTIFICATION

Company Name: Eldorado

Address: 1655 Wall Street
Salina, KS 67401

Phone #: 785-827-1033 **email:** gary.gragg@eldorado-bus.com

The above named supplier does hereby certify that **at least 60 percent** of the cost of the components supplied To Eldorado, in support of the manufacture of its transit buses, is of domestic (U.S.) origin.

As defined under the Buy America Requirement: Final Rule, 49 CFR Part 661.11, the cost includes the cost of labor, material, allowance for profit, and the administrative and overhead cost attributable to those components under normal accounting principles.

I. COMPONENTS

Subcomponent

Fiberglass shell, windows, steel sub-frame, electrical wiring and systems, interior paneling, flooring, floor covering and seats

II. TOTAL COST/PERCENT: 60%

III. LOCATION OF FINAL ASSEMBLY: Salina, KS

IV. AUTHORIZING

SIGNATURE:  **DATE:** 4/14/16

PRINTED NAME: Gary Gragg

TITLE: Controller

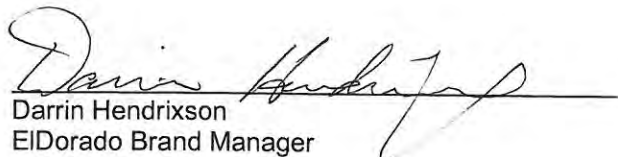
*Please fax or email the completed form to Eldorado ♦ Attention: Jennie Graham
Phone#: 785-827-1033 ext. 158 ♦ Fax#: 785-823-9471 ♦ Email: jennie.graham@eldorado-bus.com
Thank you for your response.*



CERTIFICATION OF COMPLIANCE WITH THE CLEAN AIR ACT

EIDorado, agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. EIDorado agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and appropriate EPA Regional Office.

EIDorado also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.


Darrin Hendrixson
EIDorado Brand Manager

Date



TRANSIT VEHICLE MANUFACTURER (TVM)
CERTIFICATION OF COMPLIANCE WITH SUBPART D, PART 26

This procurement is subject to the provisions of Section 26.49 of 49 CFR Part 26. Accordingly, as a condition of permission to bid, the following certification must be completed and submitted with the bid. A bid which does not include the certification will not be considered.

TRANSIT VEHICLE MANUFACTURER CERTIFICATION

(Name of Firm), a TVM, hereby certifies that it has complied with the requirements of Section 26.49 of 49 CFR Part 26 by submitting a current annual DBE Goal to FTA. The goals apply to fiscal year 2016 (October 1, 2015 to September 30, 2016) and have been approved or not disapproved by FTA.

_____, hereby certifies that the manufacturer of the transit vehicle to be supplied _____
(Name of Firm) (Name of Manufacturer)
has complied with the above referenced requirement of Section 26.49 of 49 CFR Part 26.

Signature: _____

Darrin Hendrixson

Date: _____

Title: _____
Eldorado Brand Manager

Firm: _____
Eldorado

Telephone No: _____ (785) 827-1033 Fax No: _____ (785) 823-9471



CERTIFICATION REGARDING LOBBYING

The undersigned [Contractor] certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

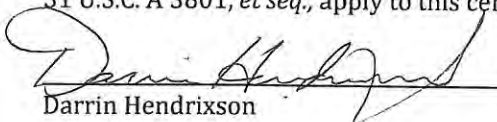
(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, *et seq.*)]

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Contractor, ElDorado, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, apply to this certification and disclosure, if any.


Darrin Hendrixson

Signature of Contractor's Authorized Official

ElDorado Brand Manager Name and Title of Contractor's Authorized Official

_____ Date

Schedule D
Affidavit For Driver Delivery

Small Bus

Vehicles may be driven to the final delivery destination if the following conditions are met:

1. The drivers of the vehicles are correctly licensed and trained in proper vehicle operation.
2. The Contractor accepts all responsibility and liability for vehicles in transit.
3. The Contractor should sign the affidavit below and submit this with the bid.

The contractor accepts all responsibility and liability for vehicles in transit and guarantees the vehicles shall be transported in a safe, proper, and efficient manner.

I understand that the State and/or the Ordering Entity may cancel approval of this affidavit at any time during the contract if the contractor fails to meet the above obligations.

SABL

Signed

9.28.16

Date

Commercial Products Manager

Title

Hoekstra Transportation, Inc.

Contractor



Authorized Michigan Transit Agencies

For

Purchase on the State of Michigan MiDEAL

Purchasing Program for Vehicles

July 7, 2014

7/7/2014

Transit Agency Address/Phone Numbers

Lenawee

MS. MARCIA BOHANNON

Adrian Dial-A-Ride

135 East Maumee Street
Adrian, MI 49221

Telephone No.: (517) 264-4849

Fax No.: (517) 264-8016

Email: mbohannon@adrianmi.gov

Allegan

MR. DANIEL WEDGE

Allegan County - Transportation Services

750 Airway Drive
Allegan, MI 49010

Telephone No.: (269) 686-4529

Fax No.: (269) 673-2190

Email: dwedge@allegancounty.org

Gratiot

MR. RANDY SUMNER

Alma Dial-A-Ride

City of Alma Transit Center
1105 Willow Run Dr. PO BOX 278
Alma, MI 48801-0278

Telephone No.: 989 463-6016

Fax No.: 989 466-5307

Email: rsumner@ci.alma.mi.us

Alger

MS. ROCHELLE COTEY

ALTRAN Transit Authority

P.O. Box 69
Munising, MI 49862

Telephone No.: (906) 387-4845

Fax No.: (906) 387-2963

Email: altranco@jamadots.com

Kent

MR. MARK EVANS

American Red Cross Of Greater Grand Rapids

1050 Fuller NE
Grand Rapids, MI 49503

Telephone No.: (616) 456-8661

Fax No.: (616) 235-2355

Email: mark.evans@redcross.org

Muskegon

MR. MARK EVANS

American Red Cross Serving Muskegon, Oceana and Newaygo Counti

313 W. Webster Avenue
Muskegon, MI 49440

Telephone No.: (231) 343-4462

Fax No.: (231) 722-4126

Email: mark.evans@redcross.org

Washtenaw

MR. MICHAEL FORD

Ann Arbor Area Transportation Authority

2700 S. Industrial Hwy.
Ann Arbor, MI 48104

Telephone No.: (734) 973-6500

Fax No.: (734) 973-6338

Email: cwhite@theride.org

7/7/2014

Transit Agency Address/Phone Numbers

Antrim

MR. ALAN MEACHAM
Antrim County Transportation
P.O. Box 120
Bellaire, MI 49615

Telephone No.: (231) 533-8644

Fax No.: (231) 533-8504

Email: meachama@antrimcounty.org

Wayne

MR. JIM MCGUIRE
Area Agency on Aging Region 1-B
400 Franklin Center, 29100 Northwestern Highway
Southfield, MI 48034

Telephone No.: (313) 569-0333

Fax No.:

Email:

Kent

MR. JACOB MAAS
Area Community Service Employ. and Trng.
1550 Leonard NE
Grand Rapids, MI 49505

Telephone No.: (616) 336-4128

Fax No.: (616) 336-4118

Email: scervantes@acset.org

Arenac

MR. ERIC SPRAGUE
Arenac/Bay Service
1510 North Johnson
Bay City, MI 48708

Telephone No.: 989 894-2900

Fax No.: 989 894-2621

Email: esprague@baymetro.com

Houghton

MS. JEAN LABERGE
Baraga/Houghton/Keweenaw CAA
926 Dodge Street
Houghton, MI 49931

Telephone No.: (906) 482-5528

Fax No.: (906) 482-5512

Email: bhkcaa@att.net

Baraga

MS. PAMELA ANDERSON
Baragaland Senior Citizen, Inc.
Six North Main Street
L'Anse, MI 49946

Telephone No.: (906) 524-6711

Fax No.: (906) 524-6922

Email: apamela720@hotmail.com

Barry

MR. WILLIAM VOIGT
Barry County Transit
1216 W. State St.
Hastings, MI 49058

Telephone No.: (269) 948-8174

Fax No.: (269) 948-8154

Email: bvoigt@barrycountytransit.com

7/7/2014

Transit Agency Address/Phone Numbers

Calhoun

MR. RICHARD WERNER

Battle Creek Transit

339 West Michigan Ave.
Battle Creek, MI 49037

Telephone No.: (269) 966-3588

Fax No.: (269) 966-3652

Email: rwwerner@ci.battle-creek.mi.us

Grand Traverse

MR. THOMAS MENZEL

Bay Area Transportation Authority

3233 Cass Road
Traverse City, MI 49684

Telephone No.: (231) 933-5545

Fax No.: (231) 941-9091

Email: thompsonc@bata.net

Bay

MR. ERIC SPRAGUE

Bay Metro Transportation Authority

1510 North Johnson
Bay City, MI 48708

Telephone No.: 989 894-2900

Fax No.: 989 894-2621

Email: esprague@baymetro.com

Charlevoix

MS. BARBARA SCHWARTZFISHER

Beaver Island Transportation Authority

P.O. Box 426
Beaver Island, MI 49782

Telephone No.: (231) 448-3049

Fax No.: 231-448-3120

Email: bitaboat@tds.net

Monroe

MS. MEG SMITH

Bedford Health Van

1623 West Sterns Road
Temperance, MI 48182

Telephone No.: (734) 850-6034

Fax No.:

Email:

Ionia

MR. KEVEN KRIEGER

Belding Dial-A-Ride

Pere Marquette Depot
100 Depot Street
Belding, MI 48809

Telephone No.: (616) 794-3278

Fax No.: (616) 794-4817

Email: dialaride@ci.belding.mi.us

Wayne

MS. DIANE KOLLMEYER

Belleville, City of

Six Main Street
Belleville, MI 48111

Telephone No.: (734) 697-9323

Fax No.: (313) 697-6837

Email:

7/7/2014

Transit Agency Address/Phone Numbers

Benzie

MR. WILLIAM KENNIS
Benzie Transportation Authority
14150 US Highway 31
Beulah, MI 49617

Telephone No.: (231) 325-3000

Fax No.: (231) 325-3007

Email: bill@benziebus.net

Oakland

MS. CHRIS DOE
Berkley
2400 Robina
Berkley, MI 48072

Telephone No.: (248) 546-2450

Fax No.:

Email:

Berrien

MR. DENNIS SCHUH
Berrien County
701 Main Street
St. Joseph, MI 49085

Telephone No.: (269) 983-7111

Fax No.: (269) 982-8611

Email: dschuh@berriencounty.org

Mecosta

MS. DAWN FULLER
Big Rapids Dial-A-Ride
226 N Michigan Ave
Big Rapids, MI 49307

Telephone No.: 231 796-6243

Fax No.: 231 796-0797

Email: dfuller@ci.big-rapids.mi.us

Oakland

MS. THERESA MANSOUR
Birmingham Area Seniors
2121 Midvale Avenue
Birmingham, MI 48009

Telephone No.: (248) 203-5270

Fax No.:

Email:

St. Clair

MR. JIM WILSON
Blue Water Transportation Commission
2021 Lapeer Avenue
Port Huron, MI 48060

Telephone No.: (810) 987-7381

Fax No.: (810) 987-2431

Email: jwilson@bwbus.com

Lenawee

Boysville of Michigan, Inc.
8759 Clinton-Macon Road
Clinton, MI 49236

Telephone No.: (517) 423-7555

Fax No.: (517) 423-5442

Email: fboyland@hccsnet.org

7/7/2014

Transit Agency Address/Phone Numbers

Branch

MS. KARA DERRICKSON
Branch Area Transit Authority
306 South Clay Street, P.O. Box 979
Coldwater, MI 49036

Telephone No.: (517) 279-8671

Fax No.: (517) 278-2300

Email: authoritbr@cbpu.com

Oakland

MS. B. JEAN MCCREERY
Brandon
P.O. Box 929
Ortonville, MI 48462-0929

Telephone No.: (313) 627-2851

Fax No.:

Email:

Livingston

MS. NIKKI GREATHOUSE
Brighton Community Education
850 Spencer Road
Brighton, MI 48116

Telephone No.: (810) 299-3822

Fax No.: (810) 299-4148

Email: greathn@brightonk12.com

Wayne

MS. KARI WOLFE
Brownstown Township
21311 Telegraph Road
Brownstown Township, MI 48183

Telephone No.: (313) 675-2692

Fax No.:

Email:

Berrien

MS. KIMBERLY O'HAVER
Buchanan Dial-A-Ride
310 Main Street
St. Joseph, Michigan 49085

Telephone No.: (269) 983-8990

Fax No.: (269) 983-4248

Email: kohaver4@yahoo.com

Wexford

MR. VANCE EDWARDS
Cadillac/Wexford Transit Authority
951 Casa Road
Cadillac, MI 49601

Telephone No.: (231) 775-9411

Fax No.: (231) 775-9420

Email: cwtadirector@yahoo.com

Genesee

MS. BEVERLY DIFFIN
Campbell Lewellyn Montrose Senior Center Advisory Council
P.O. Box 3128
Montrose, MI 48457

Telephone No.: (810) 639-2822

Fax No.: (810) 639-5899

Email: memmendorfer@montrosetownship.org

7/2/2014

Transit Agency Address/Phone Numbers

Wayne

MR. TIM FAAS
Canton Township
1150 Canton Center Drive
Canton, Michigan 48188-1699

Telephone No.: (734) 394-5160

Fax No.: (734) 397-5382

Email: tim.faas@canton-mi.org

Ingham

MS. SANDRA DRAGGOO
Capital Area Transportation Authority
4615 Tranter Street
Lansing, MI 48910

Telephone No.: (517) 394-1100

Fax No.: (517) 394-3733

Email: dwalexander@cata.org

Genesee

MS. LINDA MOORE
Carmen Ainsworth-Flint Twp.
2071 S. Graham Rd.
Flint, MI 48532

Telephone No.: (810) 732-6290

Fax No.: (810) 732-6305

Email: lindacasc@yahoo.com

Tuscola

MR. WILLIAM DILLON
Caro Transit Authority
PO Box 325
Caro, MI 48723

Telephone No.: 989 673-8488

Fax No.: 989-672-1761

Email: briann@hdc-caro.org

Cass

MS. JULIE HARTMAN
Cass County Transportation Authority
400 E. State Street
Cassopolis, MI 49031

Telephone No.: (269) 445-2455

Fax No.: (269) 445-2647

Email: hartmanjb@comcast.net

Macomb

MS. SUZANNE SZCZEPANSKI-WHITE
Catholic Services of Macomb
P.O. Box 380290, 15945 Canal Rd.
Clinton Twp., MI 48038

Telephone No.: (586) 412-8054

Fax No.: (586) 412-8084

Email:

Wayne

MS. MARY NIMS
Catholic Social Serv of Wayne (Macomb Co.)
9851 Hamilton Avenue
Detroit, MI 48202

Telephone No.: (313) 883-7762

Fax No.: (313) 883-3957

Email:

7/2/2014

Transit Agency Address/Phone Numbers

Wayne

MS. MARY NIMS

Catholic Social Serv of Wayne (SMART)

9851 Hamilton Avenue
Detroit, MI 48202

Telephone No.: (313) 883-2100

Fax No.: (313) 883-3957

Email:

Oakland

MS. KERRI GENTRY

Catholic Social Services of Oakland County

18310 West 12 Mile Road
Southfield, Michigan 48076

Telephone No.: (248) 557-7373

Fax No.: (248) 559-2390

Email:

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STATE OF MICHIGAN

Contract No. 071B7700125

Small Class of Non-Lift and Lift Transit Buses

CLASS 1: Minimum 5 Years/150,000 Miles

CLASS 2: Minimum 7 Years/200,000 Miles

SCHEDULE F

EQUIPMENT CHECKLIST (Metal Body)

I BODY SPECIFICATIONS				
		Item	Product Name and Model	Size, Material, and/or Type
A.		General design and construction	Goshen Impulse and Pacer Models	The vehicle is a "cutaway type" bus utilizing the most current model year FORD E-350 or E-450 cutaway chassis based on seating capacity and designed and constructed to ensure a minimum service life of at least 7 years/200,000 miles in daily or revenue service. Metal Cage style construction methods.
B.		1 Body structure and exterior panels	Goshen Impulse and Pacer Models	Exterior body materials shall be a high gloss, color impregnated white, fiberglass, reinforced polyester with a nominal thickness of 3mm. Steel cage construction with composite exterior sidewalls and composite one-piece roof.
		2 Rollover frame, steel cage type	Goshen Impulse and Pacer Models	IMPULSE: Multi-point rubber isolators shall be used to mount the welded steel cage structure to the cab chassis. All structural fabrication shall consist of 1010/1020 low carbon cold rolled steel. The substructure shall consist of a combination of 2" x 2" x 16-gauge and 2" x 2" x 11-gauge tubular steel outriggers, 1" x 3" x 16-gauge and 1" x 4", 11-gauge C-channel, 12-gauge "seat track" welded into a ladder type structure and bolted to the OEM chassis frame on rubber grommets PACER: Wall and roof structure is constructed of 1.5" x 1.5" 16 gauge tubular steel. The floor frame is constructed of 11 gauge 2" x 2.88" x 2" channel cross members with an outer 14-gauge angle steel impact rail. The wall structure is bolted to the floor.
		3 Body section thickness	Goshen Impulse and Pacer Models	IMPULSE: Wall structure shall include a 1" x 3" wide longitudinal section of 16-gauge tubular steel extending from the forward body seam to the rearward body seam to provide an additional attachment point for the integrally welded sidewall seat rail. Also include a minimum of (6) 1" x 1 6" x 16 gauge tubular steel from the floor to just below ceiling height. PACER: Structural cage is 1.5" x 1.5" gauge tubular steel. Exterior sidewall skin is a TekModo composite material laminated to an Azdel composite backer.
		4 Body section thickness	Goshen Impulse and Pacer Models	Exterior surface shall be a minimum 3mm thickness of non-corrosive low-density laminate

				panel with gelcoat except the roof. The roof surface is CosmoLite – a thermoplastic substrate comprised of polypropylene resin reinforced with continuous bi-directional glass fibers. PACER: Structural cage is 1.5” x 1.5” gauge tubular steel. Exterior sidewall skin is a TekModo composite material laminated to an Azdel composite backer.
	5	Exterior panels	Goshen	See B1-B4 above
	6	Interior panels	Goshen	FRP as specified
	7	Interior length	Goshen	140 – 175.5” based on model/class
	8	Interior width	Goshen	83 - 91” based on model/class
	9	Interior height	Goshen	75 - 79” based on model/class
	1	Exterior length	Goshen	240 – 296” based on model/class
	1	Exterior width	Goshen	88 - 97” based on model/class
	1	Exterior height	Goshen	109 - 115” excluding roof hatch & strobe based on model/class
	1	Rubrails	Goshen	IMPUSLE 2” rubber in plastic molding – PACER: Flexible PVC plastic extrusion with a mylar insert and a clear overlay.
	1	Body overhang	Goshen	76 – 88” based on model/class
C.	1	Passenger door	A & M	A & M as specified with accessibility to controls - Aluminum frame door panels with electric controls
	2	Opening Size	A & M	27 - 32” based on model/class
D.		Stepwell	Goshen	14 gauge stainless steel
E.		Interior – Color	Goshen	White and Light Gray
F.		Flooring	Goshen	Subfloor – ¾” Marine grade plywood, undercoated before and after installation onto steel floor structure. Floor covering per specification.
G.		Emergency exits	Goshen	Transpec Roof Hatch, Pushout Windows, Rear Door or Window as specified
H.		Gauges	OEM	OEM as specified
I.		Fare box	Diamond	Diamond NV with extra vault and keyed alike per specification
J.		Bumpers	ROMEO RIM	OEM front and Romeo and SMI energy absorbing HELP bumper on rear as specified
K.		Mud Flaps and Splash Guards	Goshen	Commercial grade anti sail with stainless steel T-brackets as specified
L.		Towing	Goshen	Front OEM and Goshen rear tow hooks
M.	1	Undercoating	Tectyl	Tectyl 121B as specified
	2	Rustproofing	Goshen	IMPULSE: Waxoyl inner steel tube coated as specified. PACER: Gatorshield
N.	1	Interior mirrors	Goshen	6x8 convex as specified
	2	Sun visors	OEM	OEM
O.		Exterior Mirrors	ROSCO	Heated and Remote Control as specified
P.	1	Seats – Driver	OEM	Ford OEM as specified
	2	Seats – Passenger	Freedman	Various Freedman seats per floor plan requirements
	3	Seats – Fold-up	Freedman	Featherweight folding
	4	Seats – Flip-up	Freedman	Featherweight flip
Q.		Handrails, stanchions	Goshen	Powder-coat Yellow/Stainless as specified
R.		Interior lighting – LED	Goshen Production	All LED as specified
S.		Exterior lighting - LED	Goshen Production	All LED as specified
T.	1	Heating / ventilating – Front System	OEM	As specified

	2	Heating / ventilating – Rear System	ProAir	Rear system heater as specified
U.		Windows	Clear Vision Star Quest	T-Slider with tint as specified
V.		Paint	Sikkens	As specified
W.		Insulation	Goshen	Sidewalls and rear wall shall be insulated with expanded polystyrene (EPS), commodity grade with a thickness of 1”. The roof shall be insulated with EPS with a thickness of 1 6”. The insulation shall provide an R-6 thermo-barrier, and sound absorption. Insulation shall meet or exceed all Federal requirements in FMVSS 302.
X.		Lift (platform type)	Braun	1000# Century NCL1000 size 34 x 54”
II		WHEELCHAIR SECUREMENT AREA		
		Item	Product Name and Model	Size, Material, and/or Type
A.		Wheelchair securement	Q’Strait	1 st position 54 x 30, 2 nd position 48 x 30” in either single point or L-track style based on option ordered
B.		Wheelchair restraints	Q’Strait	Q8100-A1-L or Q8100-A1-SC based on option order.
C.		Restraint storage system	Freedman	TDSS and additional storage bag per specification
III		CHASSIS SPECIFICATIONS		
		Item	Product Name/Model	Size, Material, and/or Type
A.		Chassis	Ford	E350/E450 based on model/class
B.		Tilt Wheel/Power Steering	OEM	As specified
C.	1	Wheelbase – 138” minimum (Class 1)	OEM	138”/158” based on model
	2	Wheelbase – 158” minimum (Class 2)	OEM	158”-190” based on model
D.		Class 1- Gasoline	Ford	6.8l V10 Gas
		Class 1- CNG	Ford	N/A – We have recently been informed that there are no systems available for the Class 1 - E350 chassis that have been Altoona Tested and Carb Certified. Currently the only FTA Funded availability is on the Class 2 – E450 Chassis.
		Class 1 - Propane	Ford	N/A – We have recently been informed that there are no systems available for the Class 1 - E350 chassis that have been Altoona Tested and Carb Certified. Currently the only FTA Funded availability is on the Class 2 – E450 Chassis.
		Class 2 -Gasoline	Ford	6.8l V10 Gas
		Class 2 – CNG	Ford	G91 OEM prepped - 6.8l V10 Gas w/conversion per specification 40GGE System
		Class 2 - Propane	Ford	G91 OEM prepped - 6.8l V10 Gas w/conversion per specification – 41 & 64 GGE Systems
E.		Auxiliary Coolant Heater	Espar	Hydronic coolant system with 10 day timer – Available on gasoline models only – See Bidders Notes for information on CNG conversions.
F.		Transmission	OEM	OEM automatic with overdrive as specified
G.		Alignment	Goshen	Aligned prior to shipment to Michigan to ensure proper arrival after 800 mile journey. If preferred by the State this can be changed to alignment in Michigan. (not recommended)
H.		Gross Vehicle Weight Rating (GVWR)	OEM	11,500 – 14,500 lb. based on model/class ordered. GVWR will match specification.
		Front axle rating	OEM	5,000 lb.
		Rear axle rating	OEM	8,500 – 9,600 lb. based on model/class. Will match specification
I.		Differential	OEM	OEM recommended differentials per specification. 3.73 – 4.63 depending on model/class ordered

J.		Battery	OEM	Dual matching 1250cca or more.
K.		Battery Cables and Grounds	Goshen	Protective cover on terminals – no exposed copper – meeting or exceeding specifications.
L.		Alternator	OEM	Dual 225amp total
M.		Engine Fast Idle	Intermotive	Ills gateway with interlock
N.		Brakes	OEM	Hydraulic heavy duty anti-lock brakes from the chassis manufacturer as specified. Heavy duty OEM parking brake per specifications.
O.		Fuel tank	OEM	40 Class 1 - 55 gallon Class 2 as specified based on model/class ordered.
P.		Hazard flashers	OEM	Steering column OEM specified
Q.		Shock absorbers	OEM	Gas pressurized – 35mm
R.		Suspension - Front	OEM	OEM front spring suspension per specification
S.		Suspension - Rear	Mor.Ryde	Heavy duty rear suspension by Mor.Ryde meeting specification
T.		Stabilizer	OEM	Front steering stabilizers 24mm
U.		Wheels	OEM	16x6 painted as specified
V.		Tires	OEM	OEM selected LT225/75R 16 single front and dual rear as specified
W.		Drive shaft	OEM	Tube steel guarded per specification
X.		Wipers / Horn	OEM	Intermittent / dual note horn as specified
Y.		Radiator and cooling system	OEM	708 sq. inches, 10 blade – 19.4” diameter fan
Z.		Fluids	OEM	OEM recommended as specified
AA.		Engine Cover/Trim	OEM	Insulated interior cover
AB.		Exhaust system	Goshen OEM	Aluminized steel / street side as specified on rear lift units

EQUIPMENT CHECKLIST

IV	OTHER ITEMS			
		Item	Product Name and Model	Size, Material, and/or Type
A.	1.	Safety – Fire extinguisher	Kidde	As specified
	2.	Safety – Reflective triangles	Goshen	Bi-directional
	3.	Safety – Reverse alarm	Goshen	Model 510SG located per specification
	4.	Safety-Rear door alarm	Goshen	Functioning as specified
	5.	Safety- Exterior height (clearance) decal	Goshen	As specified
	6.	Safety-Lift interlock system	ILIS	Functioning as specified
	7.	Safety-Warning/engine shutdown system	OEM	Ford OEM Chassis systems
	8.	Safety-Headlight control	OEM	OEM w/daytime running lights
	9.	Safety-Strobe light	Peterson	Located per specification w/guard
B.	1.	Lift circuit breaker	Braun	Functioning as specified
	2.	12-volt power point	OEM	As specified
	3.	Wire coding and harnesses	Goshen	Complete plug and play harness, each harness is tagged for function, each wire is color coded and stamped every 6 inches. Harness function tag stays on all harenesses if used or not
	4.	Electrical panel	Precision Works	EP4 As specified
	5.	Wiring support	Goshen	P clamps every 16” loomed and tied as specified
	6.	Wiring grounds and capacity	Goshen	Two main grounds to chassis frame at front and back of bus, all other ground go back to panel and are spread evenly on ground bar. As specified.
	7.	Constant run solenoid	Goshen	Master 80 – amp relay
	8.	Circuit capacity & function	Goshen	Circuits fused or relay. Spare circuit as required
	9.	Wiring protection	OEM	500 amp fuse inline after battery
	10.	Wiring routing	Goshen	Per specifications with looming and grommets
	11.	Wiring connections	Goshen	Color and function labeled – plug and

				play pin type and WeatherPak where required by specification.
V	OPTIONS – ALTERNATE QUOTES			
1		Air Conditioning – Single System	ACT Model 5CR3HD – with digital controller and roof branch guard - as specified.	ACT Model 5CR3HD – with digital controller and roof branch guard - as specified.
2		Air Conditioning – Dual System	ACT Model RTS75 – with digital controller and roof branch guard - as specified.	ACT Model RTS75 – with digital controller and roof branch guard - as specified.
3		Air Conditioning – Tie-in System	ACT Model 42T or ACC Model R2262T – with digital controller and roof branch guard - as specified.	ACT Model 42T or ACC Model R2262T – with digital controller and roof branch guard - as specified.
4		Auxiliary Air Heater	Espar	Airtronic fuel fired heater with timer – Not available on CNG or Propane conversions.
5		Auxiliary Air Heater & Block Heater (in lieu of Aux Coolant Heater)	Espar	Airtronic fuel fired heater with timer – Not available on CNG or Propane conversions.
6		Passenger Door/Stepwell	Lighthouse	Lighthouse Warm Welcome
7		Destination Sign – LED	Transign brand	Transign LED Front and Side Signs as specified
8		Destination Sign – Roller Curtain	Transign	Transign Roller
9		Driver Side Running Board	RC Industries	Aluminum per specification
10		Donation box (in lieu of standard farebox – deduct)	Diamond	As specified
11		CNG Engine	Ford/Green Alt. Systems Conversion.	G91 OEM prepped - 6.8l V10 Gas w/conversion per specification at 40GGE
12		Propane	Roush Cleantech	Dedicated propane conversion by Roush Cleantech with 41 GGE and 64GGE. All parts fitting in OEM locations and using OEM PCM as specified.
13		Power Seat Base (Driver)	OEM	OEM 6 way power seat.
14		Farebox Electrical Prep Only (less standard farebox-deduct)	Goshen	As specified
15		Limited Slip Differential	OEM	OEM limited slip option per specification.

16		Paint - One stripe	Sikkens & PPG	As specified
17		Paint - Roof second color	Sikkens & PPG	As specified
18		Paint - Different Full body	Sikkens & PPG	As specified
19		Reflective Vinyl Belt Stripe	3M	As specified
20		Lift - Folding Platform (in lieu of standard lift)	Braun	Vista NVL2
21		Wheelchair Single Point Securement System (in lieu of one standard L-Track position)	Q'Straint	Slide-n-Click QRT 360 Q8100-A1-SC including extra puck and color coded points per specifications.
22		Additional Wheelchair Position – L Track System	Q'Straint	Q8100-A1-L
23		Additional Wheelchair Position – Single Point System	Q'Straint	QRT 360 - Q8100-A1-SC
24		Two-way radio prep package	Goshen	Steel antenna mounting plates, antenna ground planes, 2, 6" access holes, Plastic conduit w/ pull cable, 12 volt power. Access and Ground planes as specified.
25		Radio - AM/FM stereo system w/ four speakers	OEM	OEM radio and speakers
26		Public Address (PA) System Only w/ two speakers	Jenson	PA with speakers – standalone
27		Radio – AM/FM/PA System w/ four speakers	Jenson	AM/FM/CD/PA with mic
28		Radio – Speaker only (additional)	Goshen	Additional speakers as requested.
29		Manual Entrance Door	A&M	Replaces electric door with the manual version as specified.
30		Entrance Stepwell Heater	Lighthouse	Lighthouse warm welcome electric step well heater
31		Rear Emergency Exit Window	Hehr	Replaces rear door with rear window option per specification.
32		Raised Flooring (No Wheel Wells)	Goshen	OEM construction as specified.
33		Rubber Flooring (In lieu of smooth slip resistant flooring)	RCA	Replaces Altro with RCA rubber per specification.
34		Seating – Forward Facing Standard Double Seat – Vinyl	Freedman	Freedman Featherweight - Constructed per specification
35		Seating – Forward Facing Standard Double Seat – Fabric	Freedman	Freedman Featherweight - Constructed per specification
36		Seating – Forward Facing Standard Double Seat – Vinyl (Deduct)	Freedman	Freedman Featherweight - Constructed per specification
37		Seating – Forward Facing Standard Double Seat – Fabric (Deduct)	Freedman	Freedman Featherweight -

				Constructed per specification
38		Seating – Forward Facing Double Fold-A-Way – Vinyl	Freedman	Freedman Featherweight - Constructed per specification
39		Seating – Forward Facing Double Fold-A-Way – Fabric	Freedman	Freedman Featherweight - Constructed per specification
40		Seating – Forward Facing Double Fold-A-Way – Vinyl (Deduct)	Freedman	Freedman Featherweight - Constructed per specification
41		Seating – Forward Facing Double Fold-A-Way – Fabric (Deduct)	Freedman	Freedman Featherweight - Constructed per specification
42		Seating – Single Flip-up – Vinyl	Freedman	Freedman Featherweight - Constructed per specification
43		Seating – Single Flip-up – Fabric	Freedman	Freedman Featherweight - Constructed per specification
44		Seating – Double Flip-up – Vinyl	Freedman	Freedman Featherweight - Constructed per specification
45		Seating – Double Flip-up – Fabric	Freedman	Freedman Featherweight - Constructed per specification
46		Seating – Double w/Single Integrated Child Seat (ICS) - Vinyl	Freedman	Freedman Featherweight - Constructed per specification
47		Seating – Double w/Single Integrated Child Seat (ICS) – Fabric	Freedman	Freedman Featherweight - Constructed per specification
48		Seating – Double w/Single Integrated Child Seat (ICS) – Vinyl (Deduct)	Freedman	Freedman Featherweight - Constructed per specification
49		Seating – Double w/Single Integrated Child Seat (ICS) – Fabric (Deduct)	Freedman	Freedman Featherweight - Constructed per specification
50		Seating – Double w/Double Integrated Child Seat (ICS) - Vinyl	Freedman	Freedman Featherweight - Constructed per specification
451		Seating – Double w/Double Integrated Child Seat (ICS) - Fabric	Freedman	Freedman Featherweight - Constructed per specification
52		Stop Request System	Goshen	Pull chords and chimes per

				specification for stop request system
53		Back-up Sensor System	Hawkeye	Specified HELP Bumper with the Hawkeye sensor system per specification.
54		Video Surveillance – Two Camera System	REI	4 CH HD400 DVR w/2 Cameras & 320GB Hard Drive
55		Video Surveillance - Four Camera System	REI	4 CH HD400 DVR w/4 Cameras & 320GB Hard Drive
56		Video Surveillance - Six Camera System	REI	8 CH HD800 DVR w/6 Camera & 500GB Hard Drive
57		Video Surveillance - DVR System Upgrade	REI	Upgrade from 320gb to 500gb Hard Drive
58		Video Surveillance – Extra Interior Cameras	REI	Same as system
59		Video Surveillance – Extra Exterior Cameras	REI	Same as system
60		Ceiling Handrails – For buses less than 22 Feet (Deduct)	Goshen	As specified
61		Spare Tire – Steer Axle	OEM	As specified
62		Spare Tire – Drive Axle	OEM	As specified
63		Alternate Standard Lift Manufacturer	Ricon	Ricon 1000# Titan Lift

EQUIPMENT CHECKLIST

VI	VENDOR / MANUFACTURER REQUIREMENTS		List electronic file names
A		Bus information furnished	Schedule F - METAL Equipment Checklist
B		Manufacturer quality control (name/title)	QAP - GOSHEN Quality Assurance Plan
C		Air conditioning certification	Will comply with specification testing
D		Heating/Ventilating certification	Will comply with specification testing
E		Purchaser inspection	As specified.
F		Warranty	I - Goshen Warranty I - Ford Warranties
VII	DOCUMENTS & DRAWINGS		List electronic file names
A.		The Michigan request for proposal (RFP) and bus specification forms completed in detail.	Schedule A - Statement of Work (Addendum 3)~1 Standard Contract Terms (Addendum 3)~1 Standard Terms and Conditions~1 Schedule D - Affidavit for Driver Delivery Schedule F - METAL Equipment Checklist
B.		Bus floor plans indicating dimensions and showing the interior layout of the bus. The plan shall include wheelchair placement, stanchion locations, engineering calculated loaded bus axle weights, and be drawn to scale for all configurations.	B - Goshen Class 1 Floorplan and Weights.pdf B - Goshen Class 2 Floorplan and Weights.pdf
C.		Detailed engineering drawing for the design of the entrance door and door-opening device.	C - ALL Door Mech Drw 2 C - ALL Door Mech Drw 1
D.		Detailed engineering drawing for the design of the entrance step configuration.	D - ALL Door Frame Step Drw
E.		Roof, sidewall, and flooring drawings showing structure and structural specifications indicating metal size and type used. Include side sheathing and inside panels.	E - Goshen Cab Drw E - Goshen Floor Drw E - Goshen Roof 2 E - Goshen Roof Drw E - Goshen Skin E - Goshen Wall 1 E - Goshen Wall 2
F.		Manufacturer's chassis description (specifications).	F - Manufacturer's Chassis Specifications F - OEM E350 Spec F - OEM E450 Spec
G.		Detailed engineering drawings of the body to chassis frame mounting.	G - ALL Body Mount
H.		Manufacturer's technical specifications for wheelchair lifts and wheelchair restraints. Manufacturer's sales literature is acceptable if it contains the technical specifications.	H - Braun Lift Millenium2 H - Braun Lift NCL1000 H - Braun Lift Vista2 H - QStraint - QRT Deluxe H - Ricon Titanium 1000lb
I.		The warranties for body, chassis, and drive train.	I - Goshen Warranty I - Ford Warranties
J.		If applicable, as required by Title 49 of the CFR, Part 663 – Subpart D, a copy of the manufacturer's self-certification information concerning the bus's compliance with relevant Federal Motor Vehicle Safety Standards (pre-award)	J - Goshen FMVSS J - GoshenFMVSSPre

K.		A copy of the Bus Rollover Protection Test (FMVSS 220), 49CFR §571.220 and School Bus Joint Strength (FMVSS 221), 49CFR § 571.221 results of the bus offered as specified in the bid.	K - Goshen FMVSS 220 ImpluseAdvantage K - Goshen Pacer 220 Test
L.		Completed Schedule C - Federal Transit Administration (FTA) clauses shall be attached to bid quotation.	L - Goshen FTA Clauses
M.		Buy America analysis of manufacturer's list of component and subcomponent parts (pre-award).	M - PREBuy America - Goshen Class 1 M - PREBUYAMERICA_IMPULSE
N.		The technical data sheet including flammability and smoke emissions for the seat covering material supplied.	N - Seat Flamability
O.		Seat frame salt spray test data and impact resistance test results.	O - Seat Coating
P.		Certification test data showing that the seats, the seat belts, and the installation are in compliance with FMVSS-207, 208, 209, and 210 where applicable for the bus model being offered in this bid.	P - Seat Belt Certs
Q.		Technical data sheet for the seat cushion foam supplied.	Q - Seat Foam
R.		Certification that the wiring and the switches for air conditioning and all add-on components are adequate to withstand transient loads expected.	R - Metal Class 1 Wiring Switch
S.		Proof of valid motor vehicle dealer licensing from state, county, or municipality.	S - Vehicle Dealer License
T.		A copy of the dealer agreement between the Bus Manufacturer and the designated bidder.	T - Dealer Agreement Goshen
U.		Certification that the bus model offered is a 5 year or 150,000 mile (small class one) or 7 years/200,000 mile (small class two) bus and will meet the requirements of Federal Register Rules and Regulations 49 CFR Part 665, Bus Testing Program. Stating from § 665.13 Test Report and Manufacturer Certification, Section (b)(1), "A manufacturer of a new bus model or a bus produced with a major change in component or configuration shall provide a copy of the test report to a recipient during the point in the procurement process specified by the recipient".	U - Altoona Goshen Impulse Advantage U - Altoona Goshen Pacer (Crusader) U - Altoona Propane ROUSH U - Altoona REV Bus Model Commonization U - FTA Letter REV Bus Group
V.		Certification for 480-hour salt spray test per ASTM procedure B-117.	VWX - Final Rpt_Salt Spray Test VWX - Metal Salt Spray Tests
W.		Certification for 1,000-hour salt spray test per ASTM procedure B-117.	VWX - Final Rpt_Salt Spray Test VWX - Metal Salt Spray Tests
X.		480 hour ASTM D2247 Humidity Resistance test.	VWX - Final Rpt_Salt Spray Test VWX - Metal Salt Spray Tests
Y.		<u>FULL</u> Altoona Test Report.	U - Altoona Goshen Impulse Advantage U - Altoona Goshen Pacer (Crusader) U - Altoona Propane ROUSH U - Altoona REV Bus Model Commonization U - FTA Letter REV Bus Group
Z.		Schedule D - Affidavit for Driver Delivery	Schedule D - Affidavit for Driver Delivery
AA.		Bus turning radius: wheel-to-wheel	Turning Radius
BB.		Bus turning radius: wall-to-wall	Turning Radius
VIII		NOTES	
1. This is the equipment checklist for the GOSHEN Class I and II (Metal Cage) proposal. See: <u>Schedule F – Metal Equipment Checklist (Metal Body) and Schedule G – Pricing (Metal Body).</u>			
2. The Ford Motor Company Mobility Concession of \$1000 is included in the pricing for the Lift Equipped Buses			
3. Alternative fuels installations for CNG or Propane up-fits are only available for the Class II – E450 Chassis.			
4. Auxiliary coolant heaters are available for both CNG and Propane models. The heaters are described as “12-volt heater booster pump installed in the coolant line forward of the first rear heater”. Customers who request this option will be charged \$500 additional above the gasoline versions. Both Wabasto and Bergstrom models are available. Customer’s choice.			

STATE OF MICHIGAN

Contract No. 071B7700125

Small Class of Non-Lift and Lift Transit Buses

CLASS 1: Minimum 5 Years/150,000 Miles

CLASS 2: Minimum 7 Years/200,000 Miles

SCHEDULE F

EQUIPMENT CHECKLIST (Composite Body)

I BODY SPECIFICATIONS				
		Item	Product Name and Model	Size, Material, and/or Type
A.		General design and construction	AeroTech and AeroLite Bodies	Fiberglass reinforced plastic body integrated with steel reinforced construction for secure attachment points.
B.	1.	Body structure and exterior panels	Eldorado Aero Bodies	Fiberglass reinforced plastic body integrated with steel reinforced construction for secure attachment points. Interlocked resin saturated fiberglass matten and mechanical fasteners, forming a unibody design. Matrix of fiberglass reinforced plastic with an inner thickness of Nidacor resin-hardened honeycomb material. Also includes Nidacore (plastic honeycomb) around all opeinings (i.e. windows, roof hatches etc.)
	2.	Rollover frame, steel cage type	SEE Schedule F - METAL	SEE Schedule F – METAL – for the Equipment Checklist for the Metal Cage style bus
	3.	Body section thickness	SEE Schedule F - METAL	SEE Schedule F – METAL – for the Equipment Checklist for the Metal Cage style bus
	4.	Body section thickness	Eldorado Aero Bodies	Exterior surface: 020" minimum high gloss gelcoat backed by 3/16" minimum thickness resin-hardened fiberglass reinforced plastic. The center composite is 3/4" resin-hardened matrix of honeycomb and nidacore laid on edge for maximum column strength of each cell. Steel sections are fully integrated into wall and roof structure to insure additional structural integrity and attachment points for stanchions and handrails. Final surface is a minimum 3/16" thickness of fiberglass reinforced plastic
	5.	Exterior panels	Eldorado Aero	See B1-B4 above
	6.	Interior panels	Eldorado Aero	FRP as specified
	7.	Interior length	Eldorado Aero	140 – 175.5" based on model/class
	8.	Interior width	Eldorado Aero	83 - 90.50" based on model/class
	9.	Interior height	Eldorado Aero	75 - 80" based on model/class
	10.	Exterior length	Eldorado Aero	240 – 280.37" based on model/class
	11.	Exterior width	Eldorado Aero	90 - 96" based on model/class
	12.	Exterior height	Eldorado Aero	109 - 112" excluding roof hatch & strobe based on model/class
	13.	Rubrails	Eldorado Aero	ENC 2" rubber in plastic molding
	14.	Body overhang	Eldorado Aero	69 – 92" based on model/class
C.	1.	Passenger door	A & M	A & M as specified with accessibility to controls
	2.	Opening Size	A & M	27 - 32" based on model/class

D.		Stepwell	ENC	14 gauge 304 stainless steel
E.		Interior – Color	ENC	Gelcoat white
F.		Flooring	ENC	Subfloor - Marine grade plywood, undercoated before and after installation onto steel floor structure. Floor covering per specification.
G.		Emergency exits	ENC	Transpec Roof Hatch, Pushout Windows, Rear Door or Window as specified
H.		Gauges	OEM	OEM as specified
I.		Fare box	Diamond	Diamond NV with extra vault and keyed alike per specification
J.		Bumpers	ROMEO RIM	OEM front and Romeo energy absorbing HELP bumper on rear as specified
K.		Mud Flaps and Splash Guards	ENC	Commercial grade anti sail with stainless steel T-brackets as specified
L.		Towing	ENC	Front OEM and ENC rear tow hooks
M.	1.	Undercoating	Tectyl	Tectyl 121B as specified
	2.	Rustproofing	ENC	Waxoyl inner steel tube coated as specified
N.	1.	Interior mirrors	ENC	6x8 convex as specified
	2.	Sun visors	OEM	OEM
O.		Exterior Mirrors	ROSCO	Heated and Remote Control as specified
P.	1.	Seats – Driver	OEM	Ford OEM as specified
	2.	Seats – Passenger	Freedman	Various Freedman seats per floor plan requirements
	3.	Seats – Fold-up	Freedman	Featherweight folding
	4.	Seats – Flip-up	Freedman	Featherweight flip
Q.		Handrails, stanchions	ENC	Powder-coat Yellow/Stainless as specified
R.		Interior lighting – LED	ENC Production	All LED as specified
S.		Exterior lighting - LED	ENC Production	All LED as specified
T.	1.	Heating / ventilating – Front System	OEM	As specified
	2.	Heating / ventilating – Rear System	ProAir	Rear system heater as specified
U.		Windows	Clear Vision Star Quest	T-Slider with tint as specified
V.		Paint	Sikkens	As specified
W.		Insulation	ENC	ENC construction
X.		Lift (platform type)	Braun	1000# Century NCL1000 size 34 x 54"
II WHEELCHAIR SECUREMENT AREA				
		Item	Product Name and Model	Size, Material, and/or Type
A.		Wheelchair securement	Q'Straint	1 st position 54 x 30, 2 nd position 48 x 30" in either single point or L-track style based on option ordered
B.		Wheelchair restraints	Q'Straint	Q8100-A1-L or Q8100-A1-SC based on option order.
C.		Restraint storage system	Freedman	TDSS and additional storage bag per specification
III CHASSIS SPECIFICATIONS				
		Item	Product Name/Model	Size, Material, and/or Type
A.		Chassis	Ford	E350/E450 based on model/class
B.		Tilt Wheel/Power Steering	OEM	As specified
C.	1.	Wheelbase – 138" minimum (Class 1)	OEM	138"
	2.	Wheelbase – 158" minimum (Class 2)	OEM	158"-176" based on model
D.		Class 1- Gasoline	Ford	6.8l V10 Gas
		Class 1- CNG	Ford	N/A – We have recently been informed that there are no systems available for the Class 1 - E350 chassis that have been Altoona Tested and Carb Certified. Currently the only FTA Funded availability is on the Class 2 – E450 Chassis.

		Class 1 - Propane	Ford	N/A – We have recently been informed that there are no systems available for the Class 1 - E350 chassis that have been Altoona Tested and Carb Certified. Currently the only FTA Funded availability is on the Class 2 – E450 Chassis.
		Class 2 -Gasoline	Ford	6.8l V10 Gas
		Class 2 – CNG	Ford	G91 OEM prepped - 6.8l V10 Gas w/conversion per specification 40GGE System
		Class 2 - Propane	Ford	G91 OEM prepped - 6.8l V10 Gas w/conversion per specification – 41 & 64 GGE Systems
E.		Auxiliary Coolant Heater	Espar	Hydronic coolant system with 10 day timer – Available on gasoline models only – See Bidders Notes for information on CNG conversions.
F.		Transmission	OEM	OEM automatic with overdrive as specified
G.		Alignment	ENC	Aligned prior to shipment to Michigan to ensure proper arrival after 800 mile journey. If preferred by the State this can be changed to alignment in Michigan. (not recommended)
H.		Gross Vehicle Weight Rating (GVWR)	OEM	11,500 – 14,500 lb. based on model/class ordered. GVWR will match specification.
		Front axle rating	OEM	4,600 lb.
		Rear axle rating	OEM	7,800 – 9,450 lb. based on model/class. Will match specification
I.		Differential	OEM	OEM recommended differentials per specification. 3.73 – 4.63 depending on model/class ordered
J.		Battery	OEM	Dual matching 1250cca or more. Motorcraft or Delco based on model
K.		Battery Cables and Grounds	ENC	Protective cover on terminals – no exposed copper – meeting or exceeding specifications.
L.		Alternator	OEM	Dual 225amp total
M.		Engine Fast Idle	Intermotive	Ills gateway with interlock
N.		Brakes	OEM	Hydraulic heavy duty anti-lock brakes from the chassis manufacturer as specified. Heavy duty OEM parking brake per specifications.
O.		Fuel tank	OEM	40 Class 1 - 55 gallon Class 2 as specified based on model/class ordered.
P.		Hazard flashers	OEM	Steering column OEM specified
Q.		Shock absorbers	OEM	Gas pressurized – 35mm
R.		Suspension - Front	OEM	OEM front spring suspension per specification
S.		Suspension - Rear	Mor.Ryde	Heavy duty rear suspension by Mor.Ryde meeting specification
T.		Stabilizer	OEM	Front steering stabilizers 24mm
U.		Wheels	OEM	16x6 painted as specified
V.		Tires	OEM	OEM selected LT225/75R 16 single front and dual rear as specified
W.		Drive shaft	OEM	Tube steel guarded per specification
X.		Wipers / Horn	OEM	Intermittent / dual note horn as specified
Y.		Radiator and cooling system	OEM	708 sq. inches, 10 blade – 19.4” diameter fan
Z.		Fluids	OEM	OEM recommended as specified
AA.		Engine Cover/Trim	OEM	Insulated interior cover
AB.		Exhaust system	ENC/OEM	Aluminized steel / street side as specified on rear lift units

EQUIPMENT CHECKLIST

IV	OTHER ITEMS			
		Item	Product Name and Model	Size, Material, and/or Type
A.	1.	Safety – Fire extinguisher	Kidde	As specified
	2.	Safety – Reflective triangles	ENC standard	Bi-directional
	3.	Safety – Reverse alarm	ENC	Model 510SG located per specification
	4.	Safety-Rear door alarm	ENC	Functioning as specified
	5.	Safety- Exterior height (clearance) decal	ENC	As specified
	6.	Safety-Lift interlock system	ENC/ILIS	Functioning as specified
	7.	Safety-Warning/engine shutdown system	OEM	Ford OEM Chassis systems
	8.	Safety-Headlight control	OEM	OEM w/daytime running lights
	9.	Safety-Strobe light	Peterson	Located per specification w/guard
B.	1.	Lift circuit breaker	Braun	Functioning as specified
	2.	12-volt power point	OEM	As specified
	3.	Wire coding and harnesses	ENC	Complete plug and play harness, each harness is tagged for function, each wire is color coded and stamped every 6 inches. Harness function tag stays on all harenesses if used or not
	4.	Electrical panel	Precision Works	EP4 As specified
	5.	Wiring support	ENC	P clamps every 16” loomed and tied as specified
	6.	Wiring grounds and capacity	ENC	Two main grounds to chassis frame at front and back of bus, all other ground go back to panel and are spread evenly on ground bar. As specified.
	7.	Constant run solenoid	ENC	Master 80 – amp relay
	8.	Circuit capacity & function	ENC	Circuits fused or relay. Spare circuit as required
	9.	Wiring protection	OEM	500 amp fuse inline after battery
	10.	Wiring routing	ENC	Per specifications with looming and grommets
	11.	Wiring connections	ENC	Color and function labeled – plug and

				play pin type and WeatherPak where required by specification.
V	OPTIONS – ALTERNATE QUOTES			
1		Air Conditioning – Single System	ACT	ACT Model 5CR3HD – with digital controller and roof branch guard - as specified.
2		Air Conditioning – Dual System	ACT	ACT Model RTS75 – with digital controller and roof branch guard - as specified.
3		Air Conditioning – Tie-in System	ACT or ACC	ACT Model 42T or ACC Model R2262T – with digital controller and roof branch guard - as specified.
4		Auxiliary Air Heater	Espar	Airtronic fuel fired heater with timer – See Bidders Notes on CNG or Propane conversions.
5		Auxiliary Air Heater & Block Heater (in lieu of Aux Coolant Heater)	Espar	Airtronic fuel fired heater with timer – Not available on CNG or Propane conversions.
6		Passenger Door/Stepwell	Lighthouse	Lighthouse Warm Welcome
7		Destination Sign – LED	Transign brand	Transign LED Front and Side Signs as specified
8		Destination Sign – Roller Curtain	Transign	Transign Roller
9		Driver Side Running Board	RC Industries	Aluminum per specification
10		Donation box (in lieu of standard farebox – deduct)	Diamond	As specified
11		CNG Engine	Ford/Green Alt. Systems Conversion.	G91 OEM prepped - 6.8l V10 Gas w/conversion per specification at 40GGE
12		Propane	Roush Cleantech	Dedicated propane conversion by Roush Cleantech with 41 GGE and 64 GGE. All parts fitting in OEM locations and using OEM PCM as specified.
13		Power Seat Base (Driver)	OEM	OEM 6 way power seat.
14		Farebox Electrical Prep Only (less standard farebox-deduct)	ENC	As specified
15		Limited Slip Differential	OEM	OEM limited slip option per specification.

16		Paint - One stripe	Sikkens	As specified
17		Paint - Roof second color	Sikkens	As specified
18		Paint - Different Full body	Sikkens	As specified
19		Reflective Vinyl Belt Stripe	3M	As specified
20		Lift - Folding Platform (in lieu of standard lift)	Braun	Vista NVL2
21		Wheelchair Single Point Securement System (in lieu of one standard L-Track position)	Q'Straint	Slide-n-Click Q8100-A1-SC including extra puck and color coded points per specifications.
22		Additional Wheelchair Position – L Track System	Q'Straint	Q8100-A1-L
23		Additional Wheelchair Position – Single Point System	Q'Straint	Q8100-A1-SC
24		Two-way radio prep package	ENC	Access and Ground planes as specified.
25		Radio - AM/FM stereo system w/ four speakers	OEM	OEM radio and speakers
26		Public Address (PA) System Only w/ two speakers	Jenson	PA with speakers – standalone
27		Radio – AM/FM/PA System w/ four speakers	Jenson	AM/FM/CD/PA with mic
28		Radio – Speaker only (additional)	ENC	Additional speakers as requested.
29		Manual Entrance Door	A&M	Replaces electric door with the manual version as specified.
30		Entrance Stepwell Heater	Lighthouse	Lighthouse warm welcome electric step well heater
31		Rear Emergency Exit Window	Kinro	Replaces rear door with rear window option per specification.
32		Raised Flooring (No Wheel Wells)	ENC	OEM construction as specified.
33		Rubber Flooring (In lieu of smooth slip resistant flooring)	RCA	Replaces Altro with RCA rubber per specification.
34		Seating – Forward Facing Standard Double Seat – Vinyl	Freedman	Freedman Featherweight - Constructed per specification
35		Seating – Forward Facing Standard Double Seat – Fabric	Freedman	Freedman Featherweight - Constructed per specification
36		Seating – Forward Facing Standard Double Seat – Vinyl (Deduct)	Freedman	Freedman Featherweight - Constructed per specification
37		Seating – Forward Facing Standard Double Seat – Fabric (Deduct)	Freedman	Freedman Featherweight - Constructed per specification
38		Seating – Forward Facing Double Fold-A-Way – Vinyl	Freedman	Freedman Featherweight - Constructed per specification
39		Seating – Forward Facing Double Fold-A-Way – Fabric	Freedman	Freedman Featherweight -

				Constructed per specification
40		Seating – Forward Facing Double Fold-A-Way – Vinyl (Deduct)	Freedman	Freedman Featherweight - Constructed per specification
41		Seating – Forward Facing Double Fold-A-Way – Fabric (Deduct)	Freedman	Freedman Featherweight - Constructed per specification
42		Seating – Single Flip-up – Vinyl	Freedman	Freedman Featherweight - Constructed per specification
43		Seating – Single Flip-up – Fabric	Freedman	Freedman Featherweight - Constructed per specification
44		Seating – Double Flip-up – Vinyl	Freedman	Freedman Featherweight - Constructed per specification
45		Seating – Double Flip-up – Fabric	Freedman	Freedman Featherweight - Constructed per specification
46		Seating – Double w/Single Integrated Child Seat (ICS) - Vinyl	Freedman	Freedman Featherweight - Constructed per specification
47		Seating – Double w/Single Integrated Child Seat (ICS) – Fabric	Freedman	Freedman Featherweight - Constructed per specification
48		Seating – Double w/Single Integrated Child Seat (ICS) – Vinyl (Deduct)	Freedman	Freedman Featherweight - Constructed per specification
49		Seating – Double w/Single Integrated Child Seat (ICS) – Fabric (Deduct)	Freedman	Freedman Featherweight - Constructed per specification
50		Seating – Double w/Double Integrated Child Seat (ICS) - Vinyl	Freedman	Freedman Featherweight - Constructed per specification
451		Seating – Double w/Double Integrated Child Seat (ICS) - Fabric	Freedman	Freedman Featherweight - Constructed per specification
52		Stop Request System	ENC	Pull chords and chimes per specification for stop request system
53		Back-up Sensor System	Hawkeye	Specified HELP Bumper with the Hawkeye sensor system per specification.

54		Video Surveillance – Two Camera System	REI	4 CH HD400 DVR w/2 Cameras & 320GB Hard Drive
55		Video Surveillance - Four Camera System	REI	4 CH HD400 DVR w/4 Cameras & 320GB Hard Drive
56		Video Surveillance - Six Camera System	REI	8 CH HD800 DVR w/6 Camera & 500GB Hard Drive
57		Video Surveillance - DVR System Upgrade	REI	Upgrade from 320gb to 500gb Hard Drive
58		Video Surveillance – Extra Interior Cameras	REI	Same as system
59		Video Surveillance – Extra Exterior Cameras	REI	Same as system
60		Ceiling Handrails – For buses less than 22 Feet (Deduct)	ENC	As specified
61		Spare Tire – Steer Axle	OEM	As specified
62		Spare Tire – Drive Axle	OEM	As specified
63		Alternate Standard Lift Manufacturer	Ricon	Ricon 1000# Titan Lift

EQUIPMENT CHECKLIST

VI	VENDOR / MANUFACTURER REQUIREMENTS		List electronic file names
A		Bus information furnished	Schedule F - COMPOSITE Equipment Checklist
B		Manufacturer quality control (name/title)	QAP - Eldorado Quality Assurance Plan
C		Air conditioning certification	Will comply with specification testing
D		Heating/Ventilating certification	Will comply with specification testing
E		Purchaser inspection	As specified.
F		Warranty	I - Ford Warranties I - Eldorado Warranties
VII	DOCUMENTS & DRAWINGS		List electronic file names
A.		The Michigan request for proposal (RFP) and bus specification forms completed in detail.	Schedule A - Statement of Work (Addendum 3)~1 Standard Contract Terms (Addendum 3)~1 Standard Terms and Conditions~1 Schedule D - Affidavit for Driver Delivery Schedule F - COMPOSITE Equipment Checklist
B.		Bus floor plans indicating dimensions and showing the interior layout of the bus. The plan shall include wheelchair placement, stanchion locations, engineering calculated loaded bus axle weights, and be drawn to scale for all configurations.	B - Eldo Class 1 Floorplans and Weights B - Eldo Class 2 Floorplans and Weights
C.		Detailed engineering drawing for the design of the entrance door and door-opening device.	C - ALL Door Mech Drw 2 C - ALL Door Mech Drw 1
D.		Detailed engineering drawing for the design of the entrance step configuration.	D - ALL Door Frame Step Drw
E.		Roof, sidewall, and flooring drawings showing structure and structural specifications indicating metal size and type used. Include side sheathing and inside panels.	E - Eldo Body Wall Drw E - Eldo Composite Body E - Eldo Floor Drw E - Eldo Roof Drw E - Eldo Side Wall E - Eldo Skirt Drw
F.		Manufacturer’s chassis description (specifications).	F - Manufacturer's Chassis Specifications F - OEM E350 Spec F - OEM E450 Spec
G.		Detailed engineering drawings of the body to chassis frame mounting.	G - ALL Body Mount
H.		Manufacturer's technical specifications for wheelchair lifts and wheelchair restraints. Manufacturer's sales literature is acceptable if it contains the technical specifications.	H - Braun Lift Millenium2 H - Braun Lift NCL1000 H - Braun Lift Vista2 H - QStraint - QRT Deluxe H - Ricon Titanium 1000lb
I.		The warranties for body, chassis, and drive train.	I - Ford Warranties I - Eldorado Warranties
J.		If applicable, as required by Title 49 of the CFR, Part 663 – Subpart D, a copy of the manufacturer's self-certification information concerning the bus’s compliance with relevant Federal Motor Vehicle Safety Standards (pre-award)	J – EIdoradoFMVSSPre J - TVM Impulse and Aero

K.		A copy of the Bus Rollover Protection Test (FMVSS 220), 49CFR §571.220 and School Bus Joint Strength (FMVSS 221), 49CFR § 571.221 results of the bus offered as specified in the bid.	K - FMVSS 220 Eldorado
L.		Completed Schedule C - Federal Transit Administration (FTA) clauses shall be attached to bid quotation.	L - Eldorado FTA Clauses
M.		Buy America analysis of manufacturer's list of component and subcomponent parts (pre-award).	M - PREBUYAMERICA_Aerotech M - PREBUYAMERICA_AeroLite
N.		The technical data sheet including flammability and smoke emissions for the seat covering material supplied.	N - Seat Flamability
O.		Seat frame salt spray test data and impact resistance test results.	O - Seat Coating
P.		Certification test data showing that the seats, the seat belts, and the installation are in compliance with FMVSS-207, 208, 209, and 210 where applicable for the bus model being offered in this bid.	P - Seat Belt Certs
Q.		Technical data sheet for the seat cushion foam supplied.	Q - Seat Foam
R.		Certification that the wiring and the switches for air conditioning and all add-on components are adequate to withstand transient loads expected.	R - Composite WiringSwitch
S.		Proof of valid motor vehicle dealer licensing from state, county, or municipality.	S - Vehicle Dealer License
T.		A copy of the dealer agreement between the Bus Manufacturer and the designated bidder.	T - Dealer Agreement Eldorado
U.		Certification that the bus model offered is a 5 year or 150,000 mile (small class one) or 7 years/200,000 mile (small class two) bus and will meet the requirements of Federal Register Rules and Regulations 49 CFR Part 665, Bus Testing Program. Stating from § 665.13 Test Report and Manufacturer Certification, Section (b)(1), "A manufacturer of a new bus model or a bus produced with a major change in component or configuration shall provide a copy of the test report to a recipient during the point in the procurement process specified by the recipient".	U - Altoona Propane ROUSH U - Altoona AeroLite U - Altoona AeroTech Family Altoona
V.		Certification for 480-hour salt spray test per ASTM procedure B-117.	VWX - Composite Salt Spray Tests VWX - Final Rpt_Salt Spray Test
W.		Certification for 1,000-hour salt spray test per ASTM procedure B-117.	VWX - Composite Salt Spray Tests VWX - Final Rpt_Salt Spray Test
X.		480 hour ASTM D2247 Humidity Resistance test.	VWX - Composite Salt Spray Tests VWX - Final Rpt_Salt Spray Test
Y.		<u>FULL</u> Altoona Test Report.	U - Altoona Propane ROUSH U - Altoona AeroLite U - Altoona AeroTech Family Altoona
Z.		Schedule D - Affidavit for Driver Delivery	Schedule D - Affidavit for Driver Delivery
AA.		Bus turning radius: wheel-to-wheel	Turning Radius
BB.		Bus turning radius: wall-to-wall	Turning Radius
VIII		NOTES	
1. This is the equipment checklist for the ELDORADO Class I and II (Composite Body) proposal. See: <u>Schedule F – Equipment Checklist (Composite Body)</u> and <u>Schedule G – Pricing (Composite Body)</u>			
2. The Ford Motor Company Mobility Concession of \$1000 is included in the pricing for the Lift Equipped Buses			
3. Alternative fuels installations for CNG or Propane up-fits are only available for the Class II – E450 Chassis.			
4. Auxiliary coolant heaters are available for both CNG and Propane models. The heaters are described as “12-volt heater booster pump installed in the coolant line forward of the first rear heater”. Customers who request this option will be charged \$500 additional above the gasoline versions. Both Wabasto and Bergstrom models are available. Customer’s choice.			

STATE OF MICHIGAN

Contract No. 071B7700125

Small Class of Non-Lift and Lift Transit Buses

SCHEDULE G PRICING (Metal Body)

MICHIGAN SMALL CLASS OF BUSES - Metal Body

Class 1 - Minimum 5 Years/150,000 Miles

Class 2 - Minimum 7 Years/200,000 Miles

Body Manufacturer:		GOSHEN COACH		
Bidder Company Name:		HOEKSTRA TRANSPORTATION, INC.		
Bidder Address:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
Preparer's Name:		Steve Bolin		
Inspection Facility:		HOEKSTRA TRANSPORTATION, INC.		
Address of Inspection Facility:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
II				
	Qty	Description	Unit Price	Extended Total
		Base Bus Floor Plans – Class One		
		138” (min) Wheelbase Bus – Vinyl Seat Covers		
A.	2	10 passenger without lift	51,896.00	103,792.00
B.	5	4 + 2 passenger with lift	57,597.00	287,985.00
C.	4	11 passenger without lift	51,317.00	205,268.00
D.	3	5 + 2 passenger with lift	57,913.00	173,739.00
		138” (min) Wheelbase Bus – Fabric Seat Covers		
E.	2	10 passenger without lift	52,146.00	104,292.00
F.	25	4 + 2 passenger with lift	57,847.00	1,446,175.00
G.	3	11 passenger without lift	51,592.00	154,776.00
H.	12	5 + 2 passenger with lift	58,188.00	698,256.00
		Base Bus Floor Plans – Class Two		
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
I.	1	18 passenger without lift	53,586.00	53,586.00
J.	8	10 + 1 passenger with lift	56,541.00	452,328.00
K.	6	8 + 2 passenger with lift	57,546.00	345,276.00
L.	5	4 + 2 passenger with lift	58,626.00	293,130.00
		158” (min) Wheelbase Bus – Fabric Seat Covers		
M.	1	18 passenger without lift	54,036.00	54,036.00
N.	15	10 + 1 passenger with lift	56,841.00	852,615.00
O.	7	8 + 2 passenger with lift	57,846.00	404,922.00
P.	4	4 + 2 passenger with lift	58,620.00	234,480.00
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
Q.	2	22 passenger without lift	52,053.00	104,106.00
R.	10	6 + 2 passenger with lift	58,661.00	586,610.00
S.	18	10 + 2 passenger with lift	58,031.00	1,044,558.00
T.	12	4 + 2 passenger with lift	58,961.00	707,532.00

		158" (min) Wheelbase Bus – Fabric Seat Covers		
U.	2	22 passenger without lift	52,603.00	105,206.00
V.	8	6 + 2 passenger with lift	59,061.00	472,488.00
W.	30	10 + 2 passenger with lift	58,381.00	1,751,430.00
X.	15	4 + 2 passenger with lift	59,441.00	891,615.00
SUBTOTAL (Buses A-X)				11,528,201.00
AA.		Equipment Options		
1	40	Air Conditioning – Split System	3,832.00	153,280.00
2	40	Air Conditioning – Tie-in System	2,500.00	100,000.00
3	30	Air Conditioning - Rooftop System	6,750.00	202,500.00
4	75	Auxiliary Coolant Heater	1,640.00	123,000.00
5	50	Auxiliary Air Heater	3,050.00	152,500.00
6	5	Destination Sign – Roller Curtain	2,100.00	10,500.00
7	25	Destination Sign – LED	3,500.00	87,500.00
8	50	Donation box (in lieu of standard farebox – deduct)	-850.00	-42,500.00
9	50	Driver Side Running Board	300.00	15,000.00
10	50	Farebox Electrical Prep Only (less standard farebox- deduct)	-1,120.00	-56,000.00
11	50	Limited Slip Differential	300.00	15,000.00
12	50	Rear Emergency Exit Window	-900.00	-45,000.00
13	40	Paint - One stripe	1,500.00	60,000.00
14	40	Paint - Roof second color	500.00	20,000.00
15	40	Paint - Different Full body	2,500.00	100,000.00
16	25	Reflective Vinyl Belt Stripe	500.00	12,500.00
17	20	Lift – Type I (in lieu of standard lift - deduct)	0.00	0.00
18	20	Lift – Type II – Powered outer barrier (in lieu of standard lift)	0.00	0.00
19	20	Lift - Folding Platform (in lieu of standard lift)	0.00	0.00
20	30	Alternate Standard Lift Manufacturer	500.00	15,000.00
21	100	Wheelchair Single Point Securement System (in lieu of one standard L-Track position)	250.00	25,000.00
22	15	Additional Wheelchair Position – L Track System	600.00	9,000.00
23	15	Additional Wheelchair Position – Single Point System	680.00	10,200.00
24	40	Two-way radio prep package	210.00	8,400.00
25	40	Radio - AM/FM stereo system w/ four speakers	350.00	14,000.00
26	10	Public Address (PA) System Only w/ two speakers	350.00	3,500.00
27	10	Radio – AM/FM/PA System w/ four speakers	500.00	5,000.00
28	10	Radio – Speaker only (additional)	100.00	1,000.00
29	20	Raised Flooring (No Wheel Wells)	600.00	12,000.00
30	75	Rubber Flooring (In lieu of smooth slip resistant flooring)	0.00	0.00
31	75	Entrance Stepwell Heater	300.00	22,500.00
32	50	Manual Entrance Door	-100.00	-5,000.00
33	5	Seating – Forward Facing Standard Double Seat – Vinyl	450.00	2,250.00
34	5	Seating – Forward Facing Standard Double Seat – Fabric	500.00	2,500.00
35	5	Seating – Forward Facing Standard Double Seat – Vinyl (Deduct)	-450.00	-2,250.00
36	5	Seating – Forward Facing Standard Double Seat – Fabric (Deduct)	-500.00	-2,500.00
37	5	Seating – Forward Facing Double Fold-A-Way – Vinyl	715.00	3,575.00
38	5	Seating – Forward Facing Double Fold-A-Way – Fabric	765.00	3,825.00
39	5	Seating – Forward Facing Double Fold-A-Way – Vinyl (Deduct)	-715.00	-3,575.00
40	5	Seating – Forward Facing Double Fold-A-Way – Fabric (Deduct)	-765.00	-3,825.00
41	5	Seating – Single Flip-up – Vinyl	340.00	1,700.00

42	5	Seating – Single Flip-up – Fabric	365.00	1,825.00
43	5	Seating – Double Flip-up – Vinyl	505.00	2,525.00
44	5	Seating – Double Flip-up – Fabric	555.00	2,775.00
45	5	Seating – Double w/Single Integrated Child Seat (ICS) - Vinyl	1,020.00	5,100.00
46	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric	1,070.00	5,350.00
47	5	Seating – Double w/Single Integrated Child Seat (ICS) – Vinyl (Deduct)	-1,020.00	-5,100.00
48	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric (Deduct)	-1,070.00	-5,350.00
49	5	Seating – Double w/Double Integrated Child Seat (ICS) - Vinyl	1,500.00	7,500.00
50	5	Seating – Double w/Double Integrated Child Seat (ICS) - Fabric	1,550.00	7,750.00
51	50	Power Seat Base (Driver)	400.00	20,000.00
52	10	Stop Request System	1,200.00	12,000.00
53	80	Back-up Sensor System	800.00	64,000.00
54	5	Alternate Engine - CNG Class I	0.00	0.00
55	5	Alternate Engine - CNG Class II	25,000.00	125,000.00
56	10	Alternate Engine LPG 40 GGE Class I	0.00	0.00
57	10	Alternate Engine LPG 40 GGE Class II	16,000.00	160,000.00
58	10	Alternate Engine LPG 64 GGE Class I	0.00	0.00
59	10	Alternate Engine LPG 64 GGE Class II	19,000.00	190,000.00
60	40	Video Surveillance – Two Camera System	1,500.00	60,000.00
61	20	Video Surveillance - Four Camera System	2,800.00	56,000.00
62	5	Video Surveillance - Six Camera System	4,700.00	23,500.00
63	10	Video Surveillance - DVR System Upgrade	700.00	7,000.00
64	10	Video Surveillance – Extra Interior Cameras	500.00	5,000.00
65	10	Video Surveillance – Extra Exterior Cameras	500.00	5,000.00
66	10	Video Surveillance Prep Package	750.00	7,500.00
67	20	Spare Tire - Steer Axle	350.00	7,000.00
68	40	Spare Tire - Drive Asle	350.00	14,000.00
69	50	Interior Mirror	60.00	3,000.00
70	30	Ceiling Handrails – For buses less than 22 Feet (Deduct)	-200.00	-6,000.00
		SUBTOTAL (Options AA.)		1,805,955.00
GRAND TOTAL EVALUATION PRICE OF A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA ABOVE				13,334,156.00

Refer to “Standard Contract Terms”, section 7, regarding administration fee.

STATE OF MICHIGAN

Contract No. 071B7700125

Small Class of Non-Lift and Lift Transit Buses

SCHEDULE G PRICING (Composite Body)

MICHIGAN SMALL CLASS OF BUSES - Composite Body

Class 1 - Minimum 5 Years/150,000 Miles

Class 2 - Minimum 7 Years/200,000 Miles

Body Manufacturer:		ELDORADO NATIONAL		
Bidder Company Name:		HOEKSTRA TRANSPORTATION, INC.		
Bidder Address:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
Preparer's Name:		Steve Bolin		
Inspection Facility:		HOEKSTRA TRANSPORTATION, INC.		
Address of Inspection Facility:		3741 Roger B Chaffee, Blvd - Grand Rapids, MI 49548		
II				
	Qty	Description	Unit Price	Extended Total
		Base Bus Floor Plans – Class One		
		138” (min) Wheelbase Bus – Vinyl Seat Covers		
A.	2	10 passenger without lift	50,632.00	101,264.00
B.	5	4 + 2 passenger with lift	56,022.00	280,110.00
C.	4	11 passenger without lift	50,817.00	203,268.00
D.	3	5 + 2 passenger with lift	56,237.00	168,711.00
		138” (min) Wheelbase Bus – Fabric Seat Covers		
E.	2	10 passenger without lift	50,882.00	101,764.00
F.	25	4 + 2 passenger with lift	56,272.00	1,406,800.00
G.	3	11 passenger without lift	51,092.00	153,276.00
H.	12	5 + 2 passenger with lift	56,512.00	678,144.00
		Base Bus Floor Plans – Class Two		
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
I.	1	18 passenger without lift	56,036.00	56,036.00
J.	8	10 + 1 passenger with lift	60,086.00	480,688.00
K.	6	8 + 2 passenger with lift	61,001.00	366,006.00
L.	5	4 + 2 passenger with lift	62,151.00	310,755.00
		158” (min) Wheelbase Bus – Fabric Seat Covers		
M.	1	18 passenger without lift	56,486.00	56,486.00
N.	15	10 + 1 passenger with lift	60,386.00	905,790.00
O.	7	8 + 2 passenger with lift	61,301.00	429,107.00
P.	4	4 + 2 passenger with lift	62,551.00	250,204.00
		158” (min) Wheelbase Bus – Vinyl Seat Covers		
Q.	2	22 passenger without lift	55,751.00	111,502.00
R.	10	6 + 2 passenger with lift	62,306.00	623,060.00
S.	18	10 + 2 passenger with lift	62,351.00	1,122,318.00
T.	12	4 + 2 passenger with lift	64,456.00	773,472.00
		158” (min) Wheelbase Bus – Fabric Seat Covers		

U.	2	22 passenger without lift	56,301.00	112,602.00
V.	8	6 + 2 passenger with lift	62,706.00	501,648.00
W.	30	10 + 2 passenger with lift	62,701.00	1,881,030.00
X.	15	4 + 2 passenger with lift	64,906.00	973,590.00
SUBTOTAL (Buses A-X)				12,047,631.00
AA.		Equipment Options		
1	40	Air Conditioning – Split System	3,832.00	153,280.00
2	40	Air Conditioning – Tie-in System	2,500.00	100,000.00
3	30	Air Conditioning - Rooftop System	6,750.00	202,500.00
4	75	Auxiliary Coolant Heater	1,640.00	123,000.00
5	50	Auxiliary Air Heater	3,050.00	152,500.00
6	5	Destination Sign – Roller Curtain	2,100.00	10,500.00
7	25	Destination Sign – LED	3,500.00	87,500.00
8	50	Donation box (in lieu of standard farebox – deduct)	-850.00	-42,500.00
9	50	Driver Side Running Board	300.00	15,000.00
10	50	Farebox Electrical Prep Only (less standard farebox- deduct)	-1,120.00	-56,000.00
11	50	Limited Slip Differential	300.00	15,000.00
12	50	Rear Emergency Exit Window	-900.00	-45,000.00
13	40	Paint - One stripe	450.00	18,000.00
14	40	Paint - Roof second color	100.00	4,000.00
15	40	Paint - Different Full body	1,400.00	56,000.00
16	25	Reflective Vinyl Belt Stripe	500.00	12,500.00
17	20	Lift – Type I (in lieu of standard lift - deduct)	0.00	0.00
18	20	Lift – Type II – Powered outer barrier (in lieu of standard lift)	-200.00	-4,000.00
19	20	Lift - Folding Platform (in lieu of standard lift)	-200.00	-4,000.00
20	30	Alternate Standard Lift Manufacturer	500.00	15,000.00
21	100	Wheelchair Single Point Securement System (in lieu of one standard L-Track position)	250.00	25,000.00
22	15	Additional Wheelchair Position – L Track System	600.00	9,000.00
23	15	Additional Wheelchair Position – Single Point System	680.00	10,200.00
24	40	Two-way radio prep package	210.00	8,400.00
25	40	Radio - AM/FM stereo system w/ four speakers	350.00	14,000.00
26	10	Public Address (PA) System Only w/ two speakers	350.00	3,500.00
27	10	Radio – AM/FM/PA System w/ four speakers	500.00	5,000.00
28	10	Radio – Speaker only (additional)	100.00	1,000.00
29	20	Raised Flooring (No Wheel Wells)	600.00	12,000.00
30	75	Rubber Flooring (In lieu of smooth slip resistant flooring)	0.00	0.00
31	75	Entrance Stepwell Heater	300.00	22,500.00
32	50	Manual Entrance Door	-100.00	-5,000.00
33	5	Seating – Forward Facing Standard Double Seat – Vinyl	450.00	2,250.00
34	5	Seating – Forward Facing Standard Double Seat – Fabric	500.00	2,500.00
35	5	Seating – Forward Facing Standard Double Seat – Vinyl (Deduct)	-450.00	-2,250.00
36	5	Seating – Forward Facing Standard Double Seat – Fabric (Deduct)	-500.00	-2,500.00
37	5	Seating – Forward Facing Double Fold-A-Way – Vinyl	715.00	3,575.00
38	5	Seating – Forward Facing Double Fold-A-Way – Fabric	765.00	3,825.00
39	5	Seating – Forward Facing Double Fold-A-Way – Vinyl (Deduct)	-715.00	-3,575.00
40	5	Seating – Forward Facing Double Fold-A-Way – Fabric (Deduct)	-765.00	-3,825.00
41	5	Seating – Single Flip-up – Vinyl	340.00	1,700.00
42	5	Seating – Single Flip-up – Fabric	365.00	1,825.00

43	5	Seating – Double Flip-up – Vinyl	505.00	2,525.00
44	5	Seating – Double Flip-up – Fabric	555.00	2,775.00
45	5	Seating – Double w/Single Integrated Child Seat (ICS) - Vinyl	1,020.00	5,100.00
46	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric	1,070.00	5,350.00
47	5	Seating – Double w/Single Integrated Child Seat (ICS) – Vinyl (Deduct)	-1,020.00	-5,100.00
48	5	Seating – Double w/Single Integrated Child Seat (ICS) – Fabric (Deduct)	-1,070.00	-5,350.00
49	5	Seating – Double w/Double Integrated Child Seat (ICS) - Vinyl	1,500.00	7,500.00
50	5	Seating – Double w/Double Integrated Child Seat (ICS) - Fabric	1,550.00	7,750.00
51	50	Power Seat Base (Driver)	400.00	20,000.00
52	10	Stop Request System	1,200.00	12,000.00
53	80	Back-up Sensor System	800.00	64,000.00
54	5	Alternate Engine - CNG Class I	0.00	0.00
55	5	Alternate Engine - CNG Class II	25,000.00	125,000.00
56	10	Alternate Engine LPG 40 GGE Class I	0.00	0.00
57	10	Alternate Engine LPG 40 GGE Class II	16,000.00	160,000.00
58	10	Alternate Engine LPG 64 GGE Class I	0.00	0.00
59	10	Alternate Engine LPG 64 GGE Class II	19,000.00	190,000.00
60	40	Video Surveillance – Two Camera System	1,500.00	60,000.00
61	20	Video Surveillance - Four Camera System	2,800.00	56,000.00
62	5	Video Surveillance - Six Camera System	4,700.00	23,500.00
63	10	Video Surveillance - DVR System Upgrade	700.00	7,000.00
64	10	Video Surveillance – Extra Interior Cameras	500.00	5,000.00
65	10	Video Surveillance – Extra Exterior Cameras	500.00	5,000.00
66	10	Video Surveillance Prep Package	750.00	7,500.00
67	20	Spare Tire - Steer Axle	350.00	7,000.00
68	40	Spare Tire - Drive Asle	350.00	14,000.00
69	50	Interior Mirror	60.00	3,000.00
70	30	Ceiling Handrails – For buses less than 22 Feet (Deduct)	-200.00	-6,000.00
		SUBTOTAL (Options AA.)		1,695,955.00
GRAND TOTAL EVALUATION PRICE OF A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA ABOVE				13,743,586.00

Refer to “Standard Contract Terms”, section 7, regarding administration fee.