

# City of Fargo Parking Ramp Concepts Comparison Matrix



4/6/2015

Line #	Parking Ramp Shape	Site 1 - Warner						Site 2 - St Mark's	
		Concept 1-A	Concept 1-B	Concept 1-C	Concept 1-D	Concept 1-E	Concept 1-F	Concept 2-A	Concept 2-B
1	<b>General Parking Ramp Statistics</b>								
2	Number of Ramp Spaces	608	573	584	623	565	629	616	641
3	Existing Parking Public or Private	Private	Private	Private	Private	Private	Private	Private	Private
4	Existing Parking Spaces Displaced	93	93	93	93	93	93	106	104
5	<b>Net Gain of Spaces =</b>	515	480	491	530	472	536	510	537
6	Dimensions of Parking Ramp	124' X 297'	124' X 250'	124' X 290'	114' X 292'	124' X 200'	124' X 200' + 122' X 166'	124' X 215'	114' X 290'
7	Ramping System	Single Threaded Helix	Single Threaded Helix	Single Threaded Helix	Double Threaded Helix	Single Threaded Helix	Single Threaded Helix	Single Threaded Helix	Double Threaded Helix
8	Basement Level (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y
9	Number of Levels Above Grade	4	4	4	4.5	6	4	6	4.5
10	Total Number of Levels	6	6	6	6.5	8	6	8	6.5
11	<b>Parking Efficiency</b>								
12	Total Parking Ramp Area (SF)	205,350	195,200	200,150	203,050	195,300	243,300	209,250	207,000
13	Total Street Level Commercial Area (SF) Inside Parking Structure	10,660	0	8,190	9,640	0	35,400	0	0
14	<b>Total Area (SF) =</b>	216,010	195,200	208,340	212,690	195,300	278,700	209,250	207,000
15	Parking Ramp Efficiency (Sq. Ft./Space)	338	341	343	326	346	387	340	323
16	<b>Property Status</b>								
17	Land Ownership	Private X 2	Private X 2	Private X 2	Private X 2	Private X 2	Private X 2	Private	Private X 2
18	Property Acquisition Issues	Yes X 2	Yes X 2	Yes X 2	Yes X 2	TBD	Yes X 2	Yes	Yes X 2
19	<b>Parking Demand in Site Influence Area (2-Blocks in Each Direction)</b>								
20	Existing Influence Area Surplus / (Deficit)								
21	Estimated Future Influence Area Surplus / (Deficit)								
22	<b>General Items</b>								
23	User Comfort and Convenience of Circulation & Ramping System	Excellent	Excelent	Excellent	Okay	Good	Fair	Good	Fair
24	Distance from Elevator to 2nd Ave. & Broadway Central Intersection	3 Blocks	3 Blocks	3 Blocks	3 Blocks	3 Blocks	3 Blocks	3 Blocks	3 Blocks
25	Skywalk Adjacency?	No	No	No	No	No	No	No	No
26	Potential Spin Off Opportunities (H=Housing, I=Institutional, C=Commercial & Retail)	H & C	H & C	H & C	H & C	H & C	H & C	H & I	H & I
27	Liner Building Floor Area (Levels/Area)								
28	Concept at Appropriate Contextual Height?	Yes	Yes	Yes	Yes	Yes	Yes	No	No
29	Architectural Treatment of Sloping Floor Facing Toward Street	North Side	South Side	North Side	North & South Sides	East & West Sides	East Side	East & West Sides	North & South Sides
30	Site Area (If > 1 Acre then On-Site Storm Water Mgmt Required)	1.31 ac	1.31 ac	1.31 ac	1.31 ac	1.31 ac	1.31 ac	.83 ac	1.17 ac
31	Overhead Electric Power Line Impacts?	Yes	Yes	Yes	Yes	Yes	Yes	No	No
32	Future Parking Expansion Capability (Horz. Or Vertical)	Vertical	Vertical	Vertical	Vertical	None	Vertical	None	Vert. & Horz.
33	<b>Traffic Access</b>								
34	Convenient Traffic Access for Users?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
35	Traffic Access Congestion?	No	No	No	No	No	No	No	No
36	Entry Lane Street Access	4th Ave. N	4th Ave. N	4th Ave. N	5th St. N	4th Ave. N	4th Ave. N & Depot	7th St. N	Roberts & 7th St. N
37	Exit Lane Street Access	4th Ave. N	4th Ave. N	4th Ave. N	5th St. N	4th Ave. N	4th Ave. N & Depot	7th St. N	7th St. N
38	<b>Vertical Circulation</b>								
39	12% Express (Non-parking) Ramp Area (SF)	0%	0%	0%	0%	0%	3%	0%	0%
40	Parking Ramp Slopes	5.5%-6.0%	2.0%-5.1%	5.7%-6.0%	5.2%-6.0%	5.2%	5.2%-12.0%	4.5%-4.8%	5.3%
41	Floor Elevation of Top Level (Feet)	46.50	57.83	46.50	51.00	68.00	53.67	73.33	52.92
42	Parapet Elevation of Top Level (Feet)	50.25	61.58	50.25	54.75	71.75	57.42	77.09	56.67
43	Percentage of Area on Non-Ramping Floors @ Typ. Level	69%	26%	69%	26%	48%	50%	43%	25%
44	Dead End(s)	2	2	2	0	2	2	2	0
45	<b>Parking Geometrics &amp; Circulation</b>								
46	Number of Bays	2	2	2	2	2	4	2	2
47	Angle of Parking	90 Degree	90 Degree	90 Degree	75 Degree	90 Degree	90 Degree	90 Degree	75 Degree
48	1-Way or 2-Way Traffic Flow	2 Way	2 Way	2 Way	1 Way	2 Way	2 Way	2 Way	1 Way
49									
50	<b>Site Comparative Ranking for Satisfying the Parking Demand of the Downtown Core Parking</b>								
51	Site Ranking (1 = Best & 7 = Worst)	2	2	2	2	2	2	6	4
52	<b>Comments</b>								
53	<b>Conceptual Comparative Construction Cost</b>								
54	<b>Parking Ramp Construction Cost</b>								
55	Base Parking Ramp Unit Cost (\$/SF) <sup>2</sup>	52.50	52.50	52.50	52.50	52.50	52.50	52.50	52.50
56	Premium for Vertical Development (\$/SF)						2.75		
57	Base Parking Ramp Cost	\$10,780,875	\$10,248,000	\$10,507,875	\$10,660,125	\$10,253,250	\$13,442,325	\$10,985,625	\$10,867,500
58	Street Level Commercial Shell Cost at \$80/SF	\$852,800	\$0	\$655,200	\$771,200	\$0	\$2,832,000	\$0	\$0
59	Below Grade Premium	26.30	26.30	26.30	26.30	26.30	26.30	26.30	26.30
60	Footprint Area for Below Grade	36,800	12,600	36,000	33,300	24,800	45,100	26,700	33,100
61	Below Grade Cost Premium	\$967,840	\$331,380	\$946,800	\$875,790	\$652,240	\$1,186,130	\$702,210	\$870,530
62	Storm Water Management System Allowance (\$250k/acre)	\$327,500	\$327,500	\$327,500	\$327,500	\$327,500	\$327,500	\$0	\$292,500
63	Façade Area (SF)	27,400	23,000	27,000	28,500	32,100	42,400	42,700	26,900
64	Façade Premium Cost at \$30/SF	\$822,000	\$690,000	\$810,000	\$855,000	\$963,000	\$1,272,000	\$1,281,000	\$807,000
65	<b>Site Work Construction Cost</b>								
66	Demolition of Parking Lot at \$250/space	\$23,250	\$23,250	\$23,250	\$23,250	\$23,250	\$23,250	\$26,500	\$26,000
67	Demolition of Existing Building(s)	\$35,400	\$35,400	\$35,400	\$35,400	\$35,400	\$35,400		
68	<b>Total Parking Ramp Construction Cost =</b>	<b>\$13,809,665</b>	<b>\$11,655,530</b>	<b>\$13,306,025</b>	<b>\$13,548,265</b>	<b>\$12,254,640</b>	<b>\$19,118,605</b>	<b>\$12,995,335</b>	<b>\$12,863,530</b>
69	Total Parking Ramp Cost per SF =	\$63.93	\$59.71	\$63.87	\$63.70	\$62.75	\$68.60	\$62.10	\$62.14
70	Cost Per Ramp Parking Space (Including Commercial) =	\$22,713	\$20,341	\$22,784	\$21,747	\$21,690	\$30,395	\$21,096	\$20,068
71	Cost Per Net Parking Space (Including Commercial) =	\$26,815	\$24,282	\$27,100	\$25,563	\$25,963	\$35,669	\$25,481	\$23,954
72	Preliminary Soft Costs (@ 15%)= <sup>1</sup>	\$2,071,400	\$1,748,300	\$1,995,900	\$2,032,200	\$1,838,200	\$2,867,800	\$1,949,300	\$1,929,500
73	Owners Construction Phase Contingency (@ 3%) =	\$414,300	\$349,700	\$399,200	\$406,400	\$367,600	\$573,600	\$389,900	\$385,900
74	Conceptual Design Cost Contingency (@ 10%) =	\$1,381,000	\$1,165,600	\$1,330,600	\$1,354,800	\$1,225,500	\$1,911,900	\$1,299,500	\$1,286,400
74	<b>Total Project Cost =</b>	<b>\$17,676,365</b>	<b>\$14,919,130</b>	<b>\$17,031,725</b>	<b>\$17,341,665</b>	<b>\$15,685,940</b>	<b>\$24,471,905</b>	<b>\$16,634,035</b>	<b>\$16,465,330</b>

Notes:  
1. Excludes land acquisition and City of Fargo administration, legal, and financing costs.  
2. Assumes March 2016 start of construction.



# City of Fargo Parking Ramp Concepts Comparison Matrix



4/6/2015

Line #	Parking Ramp Shape	Site 5 - Civic Ctr Ramp		Site 6 - City Hall	Site 7 - NP Avenue			
		Concept 5-A	Concept 5-B	Concept 6-A	Concept 7-A	Concept 7-B	Concept 7-C	Concept 7-D
<b>1</b>	<b>General Parking Ramp Statistics</b>							
2	Number of Ramp Spaces	79	155	553	493	504	626	572
3	Existing Parking Public or Private	Public	Public	Public	Public	Public	Public/Private	Public/Private
4	Existing Parking Spaces Displaced	8	8	172	145	145	248	248
5	<b>Net Gain of Spaces =</b>	<b>71</b>	<b>147</b>	<b>381</b>	<b>348</b>	<b>359</b>	<b>378</b>	<b>324</b>
6	Dimensions of Parking Ramp	107.75' x 236.25'	124' X 297'	124' X 252'	174' X 250'	174' X 200'	179' X 290'	168' X 290'
7	Ramping System	Double Threaded Helix	Double Threaded Helix	Single Threaded Helix	Side by Side Helix	Side by Side Helix	Side by Side Helix	Double Threaded Helix
8	Basement Level (Y/N)	n/a	n/a	Y	Y	Y	Y	Y
9	Number of Levels Above Grade	4.5	5.5	4	2	3	2	2
10	Total Number of Levels	5.5	6.5	6	4	5	4	4
<b>11</b>	<b>Parking Efficiency</b>							
12	Total Parking Ramp Area (SF)	24,500	49,000	179,600	166,400	170,200	197,600	189,100
13	Total Street Level Commercial Area (SF) Inside Parking Structure	0	0	0	4,800	0	0	0
14	<b>Total Area (SF) =</b>	<b>24,500</b>	<b>49,000</b>	<b>179,600</b>	<b>171,200</b>	<b>170,200</b>	<b>197,600</b>	<b>189,100</b>
15	Parking Ramp Efficiency (Sq. Ft./Space)	310	316	325	338	338	316	331
<b>16</b>	<b>Property Status</b>							
17	Land Ownership	Public	Public	Public	Public	Public	Public/Private	Public/Private
18	Property Acquisition Issues	No	No	No	No	No	No	No
<b>19</b>	<b>Parking Demand in Site Influence Area (2-Blocks in Each Direction)</b>							
20	Existing Influence Area Surplus / (Deficit)							
21	Estimated Future Influence Area Surplus / (Deficit)							
<b>22</b>	<b>General Items</b>							
23	User Comfort and Convenience of Circulation & Ramping System	Okay	Okay	Excellent	Excellent	Okay	Excellent	Good
24	Distance from Elevator to 2nd Ave. & Broadway Central Intersection	1.5 Blocks	1.5 Blocks	4 Blocks	3 Blocks	3 Blocks	3 Blocks	3 Blocks
25	Skywalk Adjacency?	Yes	Yes	Yes	No	No	No	No
26	Potential Spin Off Opportunities (H=Housing, I=Institutional, C=Commercial & Retail)	None	None	H, I & C	H & C	H & C	H & C	H & C
27	Liner Building Floor Area (Levels/Area)							
28	Concept at Appropriate Contextual Height?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
29	Architectural Treatment of Sloping Floor Facing Toward Street	North & South Sides	North & South Sides	North & South Sides	East & West Sides	East & West Sides	None	South Side
30	Site Area (If > 1 Acre then On-Site Storm Water Mgmt Required)	n/a	n/a	1.22 ac	1.03 ac	1.03 ac	1.70 ac	1.70 ac
31	Overhead Electric Power Line Impacts?	No	No	No	No	No	Yes	Yes
32	Future Parking Expansion Capability (Horz. Or Vertical)	None	None	Vert. & Horz.	Vert. & Horz.	Vert. & Horz.	Vertical	Vertical
<b>33</b>	<b>Traffic Access</b>							
34	Convenient Traffic Access for Users?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
35	Traffic Access Congestion?	No	No	No	No	No	No	No
36	Entry Lane Street Access	2nd Ave. N	2nd Ave. N	3rd St. N	NP Ave. & 8th St. N	NP Ave. & 8th St. N	NP Ave. & 8th St. N	NP Ave. & 8th St. N
37	Exit Lane Street Access	2nd Ave. N	2nd Ave. N	3rd St. N	NP Ave. & 8th St. N	NP Ave. & 8th St. N	NP Ave. & 8th St. N	NP Ave. & 8th St. N
<b>38</b>	<b>Vertical Circulation</b>							
39	12% Express (Non-parking) Ramp Area (SF)	0%	0%	0%	0%	0%	0%	0%
40	Parking Ramp Slopes	6.0%	6.0%	2.0%-5.0%	1.5%-5.9%	3.1%-6.0%	5.7%	5.3%
41	Floor Elevation of Top Level (Feet)	55.00	66.00	51.00	27.92	39.67	34.00	34.00
42	Parapet Elevation of Top Level (Feet)	58.75	69.75	54.75	31.67	43.42	37.75	37.75
43	Percentage of Area on Non-Ramping Floors @ Typ. Level	30%	30%	36%	31%	40%	24%	51%
44	Dead End(s)	0	0	2	0	0	0	0
<b>45</b>	<b>Parking Geometrics &amp; Circulation</b>							
46	Number of Bays	2	2	2	3	3	3	3
47	Angle of Parking	75 Degree	75 Degree	90 Degree	70/90 Degree	70/90 Degree	75/90 Degree	70 Degree
48	1-Way or 2-Way Traffic Flow	1 Way	1 Way	2 Way	1 Way/2 Way	1 Way/2 Way	1 Way/2 Way	1 Way
49								
<b>50</b>	<b>Site Comparative Ranking for Satisfying the Parking Demand of the Downtown Core Parking</b>							
51	Site Ranking (1 = Best & 7 = Worst)	3	3	7	5	5	5	5
<b>52</b>	<b>Comments</b>							
53	<b>Conceptual Comparative Construction Cost</b>							
<b>54</b>	<b>Parking Ramp Construction Cost</b>							
55	Base Parking Ramp Unit Cost (\$/SF) <sup>2</sup>	85.00	85.00	52.50	52.50	52.50	52.50	52.50
56	Premium for Vertical Development (\$/SF)			2.75			2.75	2.75
57	Base Parking Ramp Cost	\$2,082,500	\$4,165,000	\$9,922,900	\$8,736,000	\$8,935,500	\$10,917,400	\$10,447,775
58	Street Level Commercial Shell Cost at \$80/SF	\$0	\$0	\$0	\$384,000	\$0	\$0	\$0
59	Below Grade Premium			26.30	26.30	26.30	26.30	26.30
60	Footprint Area for Below Grade			31,200	43,500	34,800	51,900	48,700
61	Below Grade Cost Premium	\$0	\$0	\$820,560	\$1,144,050	\$915,240	\$1,364,970	\$1,280,810
62	Storm Water Management System Allowance (\$250k/acre)	\$0	\$0	\$305,000	\$257,500	\$257,500	\$425,000	\$425,000
63	Façade Area (SF)			34,100	21,300	24,900	17,500	17,300
64	Façade Premium Cost at \$30/SF	\$0	\$0	\$1,023,000	\$639,000	\$747,000	\$525,000	\$519,000
<b>65</b>	<b>Site Work Construction Cost</b>							
66	Demolition of Parking Lot at \$250/space	\$0	\$0	\$43,000	\$36,250	\$36,250	\$62,000	\$62,000
67	Demolition of Existing Building(s)							
68	<b>Total Parking Ramp Construction Cost =</b>	<b>\$2,082,500</b>	<b>\$4,165,000</b>	<b>\$12,114,460</b>	<b>\$11,196,800</b>	<b>\$10,891,490</b>	<b>\$13,294,370</b>	<b>\$12,734,585</b>
69	Total Parking Ramp Cost per SF =	\$85.00	\$85.00	\$67.45	\$65.40	\$63.99	\$67.28	\$67.34
70	Cost Per Ramp Parking Space (Including Commercial) =	\$26,361	\$26,871	\$21,907	\$22,712	\$21,610	\$21,237	\$22,263
71	Cost Per Net Parking Space (Including Commercial) =	\$29,331	\$28,333	\$31,796	\$32,175	\$30,338	\$35,170	\$39,304
72	Preliminary Soft Costs (@ 15%) <sup>1</sup>	\$312,400	\$624,800	\$1,817,200	\$1,679,500	\$1,633,700	\$1,994,200	\$1,910,200
	Owners Construction Phase Contingency (@ 3%) =	\$62,500	\$125,000	\$363,400	\$335,900	\$326,700	\$398,800	\$382,000
73	Conceptual Design Cost Contingency (@ 10%) =	\$208,300	\$416,500	\$1,211,400	\$1,119,700	\$1,089,100	\$1,329,400	\$1,273,500
74	<b>Total Project Cost =</b>	<b>\$2,665,700</b>	<b>\$5,331,300</b>	<b>\$15,506,460</b>	<b>\$14,331,900</b>	<b>\$13,940,990</b>	<b>\$17,016,770</b>	<b>\$16,300,285</b>

Notes:

- Excludes land acquisition and City of Fargo administration, legal, and financing costs.
- Assumes March 2016 start of construction.