

NPS Facility Planning Model Report

NOTE: Nothing in this report should be published as an Official Report of the NPS Facility Planning Model without Approval by the Office of Construction Program Management

Identification:

Project Title: **BADL Admin APPROVED**
 Model: Administration Facility
 Type of Project: New Construction, Replacement of Existing, M
 PMIS Number: 147428
 Region: Midwest
 Park Name: Badlands NP
 Your Name: Ken Thompson
 Job Title: Facility Operations Specialist
 Park Suggested GSF: 13,000
 Concurred by (Region): A. Hutchings 4/1/09
 Recommended by (WASO, CPM): 13,600 gsf +/- 10%
 Approved by (DAB):
 Created Date: 3/10/2009 9:09:13 AM
 Modified Date: 4/1/2009 8:11:11 AM
 Calculator Mode: Custom Calculator

Comments on this report:

The model benchmarks a need for 13,600 gsf plus or minus 10%.

Using basement for tornado shelter and spaces that are not normally occupied during the day, the main floor will need to be 7500sf, a full basement under this is slightly larger than required, but still within 10% of the recommended model sf at 15000 including basement.

All Modifications Subject To Approval

Drivers:

Total NPS Staff 49

Benchmark Calculations:

Drivers:	Standard Database Calculations
Office and Support Spaces (NSF)	8,300
Building Support	531
Tare at 35% (nearest 100)	4,800
Building (GSF, nearest 100)	13,600
Recommended:	
Area Per Person in Office Spaces (NTE)	169

NPS Park Specific Calculations:

Administration Facility Model Calculations	
Office and Support Spaces (NSF)	8,289
Building Support	531
Tare at 35% (nearest 100)	4,700
Building (GSF, nearest 100)	13,600
Site (Acres)	1.40
Total Net Construction Cost (Not Calculated)	-
Area Per Person in Office Spaces:	
Recommended	169
Actual	169

Estimated Square Footage Report:

<u>Room Description</u>	<u># Persons</u>	<u># Spaces or Units</u>	<u>Park Modified Spaces with Standard Drivers</u>
Core Administration Functions			

Core Administration Functions

General Administration Staff Offices	28	1	2,800
Workstations	14	1	1,120
Superintendent / Supervisor Offices	7	1	840
General Storage	1	1	800
Break Room	17	1	437
Conference Room	35	1	400
File / Mail / Copy Room	0	1	350
Staff Restrooms	49	2	275
Lobby	49	1	200
Secured Storage	0	1	80
Recycle Bins	0	1	40
Staff Showers	0	1	35
Staff Lockers	0	3	21

<i>Core: Net Assignable</i>			7,398
<i>Tare at 35%</i>			3,984
<i>Gross Square Feet</i>			11,382

Administration Facility Additional Functions

Dispatch	1	1	160
Drafting/Flat Files	0	6	148
Counting/Remit Room	0	1	80
Evidence Room	0	1	50
Armory	0	1	24
Others			
Conference	0	1	200
lockers	0	1	100
showers	0	1	80
Benchmark space	0	1	580

<i>Additional Functions: Net Assignable</i>			1,422
<i>Tare at 35%</i>			766
<i>Gross Square Feet</i>			2,188

Subtotal: Building Area

<i>Buildings: Net Assignable</i>			8,820
<i>Gross Square Feet (rounded to 100)</i>			13,600

Exterior Requirements

Building			13,600
Parking	0	32	10,560
Patio	49	1	735

<i>Site: Net Assignable</i>			24,895
<i>Tare + Site Constraints</i>			37,342
<i>Site GSF (rounded to 100)</i>			62,200
<i>Site Acres</i>			1.40
Building Demolition			8,245

Physical and Environmental Constraints

Environmental			1.00
Soils			1.50
Slope			1.00
Archaeology			1.00

Definitions:

GSF- Gross Square Feet

GSR- Gross Square Feet

NASF- Net Assignable Square Feet

NSF- Net Square Feet

NTE- Not to exceed

Tare (for buildings)- Corridors, walls, mechanical, electrical, vertical shafts, vertical circulation, janitor closets, etc.

Additional Responses:

Staff Location Issues

Currently there are three buildings used to for offices. Removal of these locations will reduce the energy, maintenance costs and restore the landscape to pre-construction conditions.

Unusual Functions Noted by Facility Calculator

Evidence Room: additional space.

Armory: additional space.

Museum collection space associated with the administration building.

Secured storage: additional space.

Dispatch: additional space.

Counting Room: additional space.

Drafting/Flat Files: additional space.

Environmental Costs

Additional study required for HAZMAT costs.

Additional study required for sustainable design costs.

Additional study required for impact of cultural landscape.

PROJECT: Remove Conference/Maintenance Building

Project name General

Estimator KL THOMPSON

Labor rate table LAB-2013-Burd/WC

Equipment rate table EQP-2013

Bid date 3/16/2009 12:54 PM

Location Number 20481
Work Order No 2878455
Revision No 00
Park Alpha Code BADL
Work Order Type FM
Database CESSDATA08
Pricing Date 1/1/2008
WorkSubType DEM
Site Number P065
Status EXPORTED

Report format Sorted by 'Group phase/Phase'
'Detail' summary

Cost index BADL

Item	Description	Location	Takeoff Qty	W%	Conversion	Order Qty	Unit Price	Amount
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0110.0000 SUMMARY

0110.0001 Summary
 0000 NPS CESS Data Update 2013;
 Prices as of 1/1/2013; Revision 0
 Release 3
 0000 NPS CESS Data Update 2013;
 Prices as of 1/1/2013; Revision 0
 Release 3

SUMMARY

0241.0000 SITE DEMOLITION

0241.1613 Building Demolition
 n 1220 Building demo, 2fam, 2stry, wld,
 20mi hl, exc fnd demo, dump
 fees, min
 Building Demolition

1.00	ea	Oth				1.00	ea	8,351.200	8,351
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0241.1919 Slectv Demltn,Dump Charges
 n 0100 Dump charges, urban city, bldg
 const mat, incl tipping fees only
 Slectv Demltn,Dump Charges

76.25	tn	Lab Mat Eqp	15.00000 tn/ea 15.00000 tn/ea			5.08 tn 5.08 ea	ea tn ea	55.042 90.16 29.42	280 6,874 150
									7,304

0241.1921 Slectv Demoltn,Gutting
 n 0580 Gutting, bldng int, resi bldng, incl
 disposal, exc dumpster fees, max
 Slectv Demoltn,Gutting

2,500.00	sf	Lab Eqp	360.00000 sf/cd 360.00000 sf/cd			6.94 cd 6.94 cd	cd cd	1,258.65 477.16	8,741 3,314
									12,054

SITE DEMOLITION

222.222 Labor hours
 55.56 Equipment hours

27,709

3123.0000 EXCAVATION & FILL

3123.2318 Hauling
 n 1255 Hauling, LCY, no loading, 20 c,y
 dump trailer, 20 MI RT, 5 lds/hr
 Hauling

66.45	cy	Lab Eqp	78.00000 cy/cd 78.00000 cy/cd			0.85 cd 0.85 cd	cd cd	310.84 547.953	265 467
									732

6.82 Labor hours
 13.631 Equipment hours

Item	Description	Location	Takeoff Qty	W%	Conversion	Order Qty	Unit Price	Amount
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EXCAVATION & FILL

6.82 Labor hours

13.631 Equipment hours

732

Estimate Totals

Description	Amount	Totals	Hours	Rate	Cost Basis	Cost per Unit	Percent of Total
Labor	9,285		##### hrs				18.37%
Material	6,874						13.60%
Subcontract							
Equipment	3,930		##### hrs				7.77%
Other	8,351						16.52%
	28,440	#####					56.26
c Preservation Factor							
Contingency (Std 20%)	5,688			#### %	T		11.25%
Total Allocatable Cost	5,688	#####					11.25
Administrative (15%)	5,119			#### %	T		10.13%
Overhead (Standard 15%)	5,887			#### %	T		11.65%
Profit (Standard 12%)	5,416			#### %	T		10.71%
Total Services Cost	16,422	#####					32.49
Total		#####					

PROJECT: Remove Fitness Center/Administration Storage

Project name General

Estimator KLTHOMPSON

Labor rate table LAB-2013-Burd/WC

Equipment rate table EQP-2013

Bid date 3/16/2009 12:59 PM

Location Number 27634
Work Order No 2878458
Revision No 00
Park Alpha Code BADL
Work Order Type FM
Database CESSDATA08
Pricing Date 1/1/2008
WorkSubType DEM
Site Number P065
Status EXPORTED

Report format Sorted by 'Group phase/Phase'
'Detail' summary

Cost index BADL

Item	Description	Location	Takeoff Qty	W%	Conversion	Order Qty	Unit Price	Amount
0110.0000 SUMMARY								
0110.0001	Summary							
0000	NPS CESS Data Update 2013: Prices as of 1/1/2013; Revision 0 Release 3					ver		
0000	NPS CESS Data Update 2013: Prices as of 1/1/2013; Revision 0 Release 3					ver		

SUMMARY

0241.0000 SITE DEMOLITION

0241.1613	Building Demolition							
n 1000	Building demo, 2fam, 1stry, wd, 20mi hl, exc fld demo, dump fees, mln		1.00 ea			ea	3,340.48	3,340
Building Demolition								
3,340								

0241.1617	Bldg Ftrg & Frnt Demtn							
n 0280	Ftrgs/frndrs demo, floors, SOG, wire mesh, 4", no dsp/dmp cost		887.00 sf			cd	1,566.055	2,956
n 4250	Ftrgs/frndrs demo, add for disp, up to 5mi, exc dspst costs/dump fees		14.783 cy			cd	181.790	343
						cd	1,005.302	68
						cd	1,741.984	117
Bldg Ftrg & Frnt Demtn								
	77.102 Labor hours							3,483
	77.102 Equipment hours							

0241.1919	Sltcv Demltn,Dump Charges							
n 0100	Dump charges, urban city, blndg const mat, incl tipping fees only		42.70 tn			ea	55.042	157
n 0500	Dump chrgs, urban city, reclmtrn stn, usual chrg, incl tpng fees only		22.18 tn			ea	29.42	84
Sltcv Demltn,Dump Charges								
6,089								

0241.1921	Selectv Demoltn,Gutting							
n 0560	Gutting, blndg int, resi blndg, incl disposal, exc dumpster fees, mln		1,400.00 sf			cd	1,258.65	4,405
Selectv Demoltn,Gutting								
	112.00 Labor hours							1,670
	28.00 Equipment hours							6,075

SITE DEMOLITION

189.102 Labor hours
105.102 Equipment hours

18,988

3123.0000 EXCAVATION & FILL

Item	Description	Location	Takeoff Qty	W%	Conversion	Order Qty	Unit Price	Amount
3123.2313	Backfill, General							
n 1700	Backfill, bulk, 6"-12"lifts, dozer blking, compaction w/shpsft roller		32.852 cy		750.00000 cy/cd	0.04 cd	538.19	24
	Backfill, General				750.00000 cy/cd	0.04 cd	1,393.512	61
								85
	0.53 Labor hours							
	0.701 Equipment hours							

3123.2315	Borrow, Ldng/Sprng							
n 0020	Borrow, material only, bank run gravel		55.44 tn			55.44 tn	16.23	900
	Borrow, Ldng/Sprng							900

3123.2318	Hauling							
n 1255	Hauling, LCY, no loading, 20 c.y dump trailer, 20 MI RT, .5 lds/hr		37.211 cy		78.00000 cy/cd	0.48 cd	310.84	148
n 1255	Hauling, LCY, no loading, 20 c.y dump trailer, 20 MI RT, .5 lds/hr		14.783 cy		78.00000 cy/cd	0.48 cd	547.953	261
	Hauling				78.00000 cy/cd	0.19 cd	310.84	59
								104
	5.333 Labor hours							
	10.67 Equipment hours							

EXCAVATION & FILL

5.86 Labor hours
11.37 Equipment hours

1,557

Estimate Totals

Description	Amount	Totals	Hours	Rate	Cost Basis	Cost per Unit	Percent of Total
Labor	7,816		##### hrs				21.40%
Material	6,748						18.48%
Subcontract							
Equipment	2,640		##### hrs				7.23%
Other	3,340						9.15%
	20,544	#####					56.26 ###
c Preservation Factor							
Contingency (Std 20%)	4,109			#### %	T		11.25%
Total Allocatable Cost	4,109	#####					11.25 ###
Administrative (15%)	3,698			#### %	T		10.13%
Overhead (Standard 15%)	4,253			#### %	T		11.65%
Profit (Standard 12%)	3,913			#### %	T		10.71%
Total Services Cost	11,864	#####					32.49 ###
Total		#####					

PROJECT: Remove Administration Building

Project name

General

Estimator

KLTHOMPSON

Labor rate table

LAB-2013-BurdWVC

Equipment rate table

EQP-2013

Bid date

3/16/2009 12:55 PM

Location Number

20480

Work Order No

2878453

Revision No

00

Park Alpha Code

BADL

Work Order Type

FM

Database

CESSDATA08

Pricing Date

1/1/2008

WorkSubType

DEM

Site Number

P065

Status

EXPORTED

Report format

Sorted by 'Group phase/Phase'
'Detail' summary

Cost index

BADL

Item	Description	Location	Takeoff Qty	W%	Conversion	Order Qty	Unit Price	Amount
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0110.0000 SUMMARY

0110.0001 Summary								
0000	NPS CESS Data Update 2013:							
	Prices as of 1/1/2013: Revision 0							
	Release 3							
0000	NPS CESS Data Update 2013:							
	Prices as of 1/1/2013: Revision 0							
	Release 3							

SUMMARY

0241.0000 SITE DEMOLITION

0241.1613 Building Demolition								
n	1220	Building demo, 2fam, 2stry, wd,	1.00		ea	1.00	ea	8,351.200
		20mi hl, exc fnd demo, dump						8,351
		fees, min						

Building Demolition

0241.1919 Sictv Demltn,Dump Charges								
n	0100	Dump charges, urban city, bldg	76.25		tn	5.08	ea	55,042
		const mat, incl tipping fees only				76.25	tn	90,16
						5.08	ea	29,42

Sictv Demltn,Dump Charges

0241.1921 Selectv Demoltn,Gutting								
n	0580	Gutting, bldg int, resi bldg, incl	2,500.00		sf	6.94	cd	1,258.65
		disposal, exc dumpster fees, max				6.94	cd	477.16
		Selectv Demoltn,Gutting						8,741
		222.222 Labor hours						3,314
		55.56 Equipment hours						12,054

SITE DEMOLITION

222.222 Labor hours
55.56 Equipment hours

27,709

3123.0000 EXCAVATION & FILL

3123.2318 Hauling								
n	1255	Hauling, LCY, no loading, 20 c,y	66.45		cy	0.85	cd	310.84
		dump trailer, 20 MI RT, 5 lds/hr				0.85	cd	547.953
		Hauling						265
		6.82 Labor hours						467
		13.631 Equipment hours						732

Item	Description	Location	Takeoff Qty	W%	Conversion	Order Qty	Unit Price	Amount
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EXCAVATION & FILL

	6.82	Labor hours						
	13.631	Equipment hours						

732

Estimate Totals

Description	Amount	Totals	Hours	Rate	Cost Basis	Cost per Unit	Percent of Total
Labor	9,285		##### hrs				18.37%
Material	6,874						13.60%
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Other	8,351						16.52%
	<u>28,440</u>	#####					56.26 ###
c Preservation Factor							
Contingency (Std 20%)	5,688			#### %	T		11.25%
Total Allocatable Cost	5,688	#####					11.25 ###
Administrative (15%)	5,119			#### %	T		10.13%
Overhead (Standard 15%)	5,887			#### %	T		11.65%
Profit (Standard 12%)	5,416			#### %	T		10.71%
Total Services Cost	16,422	#####					32.49 ###
Total		#####					