



COUNTY OF HUMBOLDT

AGENDA ITEM NO.

C-14

For the meeting of: ^{May 31} June 7, 2016

Date: May 23, 2016
To: HUMBOLDT COUNTY BOARD OF SUPERVISORS
From: WILLIAM DAMIANO, CHIEF PROBATION OFFICER
Subject: Approval of 30-Year Staffing Plan and Operational Cost of Juvenile Hall Replacement Facility Construction Project, Project Number 170212

RECOMMENDATION(S):

That the Board of Supervisors approve the attached 30-Year Staffing Plan and Operational Cost Analysis.

SOURCE OF FUNDING:

Criminal Justice Construction Fund, Board of State and Community Corrections Senate Bill 81; Local Youthful Offender Rehabilitative Facility Construction Funding and Certificates of Participation.

DISCUSSION:

In 2007, SB 81 (Chapter 175, Statutes of 2007) established the Youthful Offender Block Grant Program to enhance the capacity of the counties to provide appropriate rehabilitative and supervision services to youthful offenders. In 2011 the Humboldt County Board of Supervisors initiated the acceptance of a grant with the State of California for the SB-81 Juvenile Hall Replacement Project.

Prepared by Tim Toste

CAO Approval

REVIEW:

Auditor _____ County Counsel _____ Personnel _____ Risk Manager _____ Other _____

TYPE OF ITEM:

- Consent
- Departmental
- Public Hearing
- Other

BOARD OF SUPERVISORS, COUNTY OF HUMBOLDT

Upon motion of Supervisor Fennell Seconded by Supervisor Bass

- Ayes Sundberg, Fennell, Lovelace, Bohn, Bass
- Nays
- Abstain
- Absent

PREVIOUS ACTION/REFERRAL:

Board Order No. E-2, E-3, G-6, C-19, H-3, C-8, C-17, C-24, C-9, C-18, C-18, H-5

and carried by those members present, the Board hereby approves the recommended action contained in this Board report.

Meeting of: 10/28/08, 12/16/08, 3/1/11, 6/14/11, 4/10/12, 12/11/12, 5/14/13, 8/13/13, 4/8/14, 7/1/14, 10/6/15, 12/8/15

Dated: May 31, 2016
By: Kathy Hayes
Kathy Hayes, Clerk of the Board

One of the grant requirements is to establish staffing patterns needed to staff the new Juvenile Hall, estimate staffing costs over a 30-year period, project operating costs of the new facility over a 30-year period, and prepare an Operational Program Statement. The Board of State and Community Corrections (BSCC) requires our Board to review and approve these items prior entering into a construction agreement with the County. The attachments address each of these items in detail and lays out future operational costs and staffing cost projections over a 30-year period. The staffing needed for the new Juvenile Hall is exactly the same as the current Juvenile Hall while the operational costs of the new facility will actually be a cost savings to the County do to efficiencies in equipment and building materials. Your Board should be aware that pursuant to the Prison Rape Elimination Act (PREA) of 2003 (§ 115.313c) all states and counties who operate juvenile facilities will be required to establish and maintain by October 1, 2017 a one to eight (1:8) staffing ration of one staff to every eight youth. For our Juvenile Hall it will mean an increase of approximately 2.8 Full Time Equivalent (FTE) over our current staffing levels of one staff to every ten youth (1:10).

FINANCIAL IMPACT:

This Board item has no additional financial impact to the County at this time. . The cost of staffing and operating the new facility is shown on attachment 1 and estimated to be \$1,224,367 annually starting in 2017. These costs will be covered by the existing Juvenile Hall budget and no additional General Fund contribution is required.

This project conforms to the Board of Supervisors' Strategic Framework Core Roles of providing for and maintaining county infrastructure.

OTHER AGENCY INVOLVEMENT: County Public Works

ALTERNATIVES TO STAFF RECOMMENDATIONS:

To not approve of the attached Staffing Plan with Operational Cost Analysis; however, this would significantly delay the project schedule and increase costs to the project.

ATTACHMENTS:

1. Staffing Plan with Operational Cost Analysis
2. Operational Program Statement



Humboldt County Juvenile Hall Replacement Facility

SB-81

Plan Review 023-7114.01

SFM PRA: 59500

BSCC #: J08-09

Staffing Plan with Operational Cost Analysis

April 12, 2016

A. Staffing Plan and Costs

Staffing by Shift – Humboldt County Juvenile Hall								
Shift	Position	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Day 7:00 a.m. - 3:00 p.m.	Supervising Juvenile Corrections Officer (4.0 FTE)	1	1	1	1	1	1	1
	Senior Juvenile Corrections Officer (4.0 FTE)	1	1	1	1	1	1	1
	Juvenile Corrections Officer I/II (6.4 FTE)	2	2	2	2	2	2	2
	Extra-help*	varies	varies	varies	varies	varies	varies	varies
	Day Total	4	4	4	4	4	4	4
Swing 3:00 p.m. – 11:00 p.m.	Supervising Juvenile Corrections Officer	1	1	1	1	1	1	1
	Senior Juvenile Corrections Officer	1	1	1	1	1	1	1
	Juvenile Corrections Officer I/II	2	2	2	2	2	2	2
	Extra-help*	varies	varies	varies	varies	varies	varies	varies
	Swing Total	4	4	4	4	4	4	4
Late Night 11:00 p.m. – 7:00 a.m.	Juvenile Corrections Officer I/II (male)	1	1	1	1	1	1	1
	Juvenile Corrections Officer I/II (female)	1	1	1	1	1	1	1
	Extra-help*	varies	varies	varies	varies	varies	varies	varies
	Late Night Total	2	2	2	2	2	2	2

- Extra-help Juvenile Corrections Officers are used when needed (e.g. to cover training, illness, vacation, approved leave, etc.).
- One teacher will be assigned to the Juvenile hall for every 20 students enrolled. Teachers aids and a part-time Special Education staff will be assigned as needed.
- A Registered Nurse will be assigned to the facility Monday through Friday 8am to 5pm. A doctor will review medical charts and see patients referred by the Registered Nurse once a week.
- Medical services are provided through a contract with California Forensic Medical Group (CFMG).
- A Mental Health Clinician will be available five days a week.
- Psychiatrist visits will be scheduled one day each week..

Staffing Costs

The staffing level's for the new facility match the staffing at the existing Juvenile Hall that will be displaced by the replacement facility constructed in this project. The County does not anticipate any additional costs for staffing the Juvenile Hall.

Current staffing costs for the Humboldt County Juvenile Hall = **\$1,075,627 / year**

B. Maintenance and Energy Costs

Maintenance Costs

Total Maintenance Cost Estimate = **\$65,100 / year**

HVAC Maintenance is estimated at approximately \$6,100 / year. Equipment replacement will be expected in 15 to 20 years. It is recommended that the County plan for this replacement and budget accordingly. Estimated budget for equipment replacement is approximately \$8,000. Additional miscellaneous Maintenance on the facility is estimated at approximately \$51,000 / year.

Utility Costs

Total Utilities Cost Estimate = **\$83,640 / year**

Gas & Electric:	\$5,000 / month	=	\$60,000 / year
Water & Sewer:	\$750 / month	=	\$9,000 / year
Garbage:	\$620 / month	=	\$7,440 / year
Misc:	\$600 / month	=	\$7,200 / year

See attached "Operations Estimates – Humboldt Juvenile Hall", by Costa Engineers for more estimate of energy usage for the Humboldt County Juvenile Hall.

C. 30-Year Overall Cost Analysis.

Refer to the attached "30-Year projected Operational Cost Analysis" for estimated annual costs for the Humboldt County Juvenile Hall. The following escalation factors have been used:

Staffing Costs:	3% increase every 5 years.
Maintenance Costs:	3.5%
Utility Costs:	4.5%

**Humboldt County Juvenile Hall
30-Year Overall Cost Analysis.**

Year	Staffing	Maintenance	Utilities	Total
2017	\$1,075,627	\$65,100	\$83,640	\$1,224,367
2018	\$1,075,627	\$67,379	\$87,404	\$1,230,409
2019	\$1,075,627	\$69,737	\$91,337	\$1,236,701
2020	\$1,075,627	\$72,178	\$95,447	\$1,243,252
2021	\$1,075,627	\$74,704	\$99,742	\$1,250,073
2022	\$1,075,627	\$77,318	\$104,231	\$1,257,176
2023	\$1,075,627	\$80,025	\$108,921	\$1,264,573
2024	\$1,107,896	\$82,825	\$113,822	\$1,304,544
2025	\$1,107,896	\$85,724	\$118,944	\$1,312,565
2026	\$1,107,896	\$88,725	\$124,297	\$1,320,917
2027	\$1,107,896	\$91,830	\$129,890	\$1,329,616
2028	\$1,107,896	\$95,044	\$135,735	\$1,338,675
2029	\$1,141,133	\$98,371	\$141,844	\$1,381,347
2030	\$1,141,133	\$101,814	\$148,226	\$1,391,173
2031	\$1,141,133	\$105,377	\$154,897	\$1,401,406
2032	\$1,141,133	\$109,065	\$161,867	\$1,412,065
2033	\$1,141,133	\$112,882	\$169,151	\$1,423,166
2034	\$1,175,367	\$116,833	\$176,763	\$1,468,963
2035	\$1,175,367	\$120,923	\$184,717	\$1,481,006
2036	\$1,175,367	\$125,155	\$193,029	\$1,493,551
2037	\$1,175,367	\$129,535	\$201,716	\$1,506,618
2038	\$1,175,367	\$134,069	\$210,793	\$1,520,229
2039	\$1,210,628	\$138,761	\$220,279	\$1,569,668
2040	\$1,210,628	\$143,618	\$230,191	\$1,584,437
2041	\$1,210,628	\$148,645	\$240,550	\$1,599,822
2042	\$1,210,628	\$153,847	\$251,375	\$1,615,849
2043	\$1,210,628	\$159,232	\$262,686	\$1,632,546
2044	\$1,246,946	\$164,805	\$274,507	\$1,686,259
2045	\$1,246,946	\$170,573	\$286,860	\$1,704,380
2046	\$1,246,946	\$176,543	\$299,769	\$1,723,259
2047	\$1,246,946	\$182,722	\$313,258	\$1,742,927

March 22, 2016



COSTA ENGINEERS INC.

3274 Villa Lane, Napa, CA 94558-3085 ph: 707-252-9177 fax: 707-252-6473

Kyle,

For electrical & gas utilities, the county should budget for about \$4,500-\$5,000/mo, although costs will likely fall in the lower end of that range.

For filter costs, at current prices (less shipping), expect to spend \$2,260.80 for the first year.

For maintenance labor, calculated at \$60/hr, expect to spend about \$3,840/year.

Please see below for breakdown.

Expected life of major equipment is 15-20 years. Equipment replacement will be difficult as equipment will need to be pulled through the air intake louvers necessitating replacement duct fabrication, replacement flue/combustion air, condensate piping, etc...

Energy Use:

Energy costs were computed using the latest PG&E rate schedule information which corresponds to the rate schedules indicated in the Juvenile Hall utility bills. Electrical rate schedule E19-S & gas rate schedule GNR1.

Software uses baseline T-24 assumptions for lighting & domestic hot water usage. Software scheduling was overridden for cell block and intake areas to provide heating & ventilation 24/7. Lobby, kitchen, multi-purpose, and day rooms all use baseline HVAC schedules.

Using current energy rates, annual energy cost is predicted to be about \$51,157. Based on the 4 energy bills provided, monthly energy cost (gas & electricity combined) averages out over these 4 data points to about 156% over current usage. Given the increase in area of the facility (143%), the energy model doesn't seem to be far off. The discrepancy is attributed to the 100% heating/ventilation schedule overrides applied to the energy model. Without this override, reverting back to standard inputs, energy use averages out to a cost increase of 138%.

Comparative checks:

	Cost	Usage (kW)	Peak Demand (kW/h)	Gas (Therms)
Jan 2015 (Bill):	\$3010.13	11755	20.5	1361
Predicted January:	\$4045	15706	37.4	2338
% increase:	134.4%	133.6%	182.4%	171.8%
April 2015 (Bill):	\$2423.83	10439	19.2	976
Predicted April:	\$3622	16151	38.0	2032
% increase:	149.4%	154.7%	198.9%	208.2%
July 2015 (Bill):	\$2871.17	13831	25.3	401
Predicted July:	\$4596	16747	39.6	1738
% increase:	160.1%	121.1%	156.5%	433.4%
October 2015 (Bill)	\$2600.72	12354	23.4	513
Predicted October:	\$4686	16216	40.2	1939
% increase:	180.2%	131.3%	171.8%	378%

March 22, 2016

Filters:

For major HVAC equipment w/ quarterly filter replacement, filter costs are expected to be as follows:

(52) 16x16x4 MERV 13 @ \$16.54 ea

(52) 16x20x4 MERV 13 @ \$18.50 ea

(16) 16x25x4 MERV 13 @ \$18.50 ea

(8) 20x25x4 MERV 13 @ \$17.84 ea

Total comes to \$2260.80 (less shipping) annually on filters.

Labor:

For maintenance, we predict at least 1.5 man-hour per piece of major equipment and 1 man-hour per piece of minor equipment per quarter. With 3 AC/heating units and 5 heating only units at 1.5hr/quarter, 3 ductless splits and the kitchen hood exhaust fan at 1hr/quarter, think there would be about 64 hours for maintenance at \$60/hr... About \$3,840 per year in labor.

Thanks,
-Dave

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MECHANICAL EQUIPMENT DETAILS

(Part 1 of 2)

MECH-5C

Project Name

Date

3/22/2016

CHILLER AND TOWER SUMMARY

					PUMPS			
Equipment Name	Type	Qty.	Efficiency	Tons	Qty.	GPM	BHP	Pump Control

DHW / BOILER SUMMARY

System Name	Type	Distribution	Qty.	Rated Input	Vol. (Gals).	Energy Factor or RE	Standby Loss or Pilot	Tank Ext. R-Value	Status
AOSMIT BTH 400	Large Gas	Kitchen Pipe Ins	1	399,900	119	0.95	176.00 %	n/a	New

MULTI-FAMILY CENTRAL WATER HEATING DETAILS

Hot Water Pump			Hot Water Piping Length (ft)				
Control	Qty.	HP	Type	In Plenum	Outside	Buried	Add ½" Insulation
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

CENTRAL SYSTEM RATINGS

System Name	Type	Qty.	HEATING			COOLING		Status
			Output	Aux. kW	Efficiency	Output	Efficiency	
AC-1 SHH-130C	Packaged DX	1	120,520	0.0	92% AFUE	61,200	13.0 SEER / 11.4 EER	New
AC-2 SHH-130C	Packaged DX	1	120,520	0.0	92% AFUE	60,200	13.0 SEER / 11.4 EER	New
AC-3 SHH-130C	Packaged DX	1	120,520	0.0	91% AFUE	59,700	13.0 SEER / 11.4 EER	New
HV-1 SDH-150	Packaged DX	1	121,500	0.0	81% AFUE	0	n/a	New
HV-2 SDH-100	Packaged DX	1	81,000	0.0	81% AFUE	0	n/a	New
HV-3 SHH-260D	Packaged DX	1	236,600	0.0	91% TE	0	n/a	New
HV-4 SHH-180C	Packaged DX	1	159,300	0.0	91% AFUE	0	n/a	New

CENTRAL SYSTEM FAN SUMMARY

System Name	Fan Type	Economizer Type	SUPPLY FAN		RETURN FAN	
			CFM	BHP	CFM	BHP
AC-1 SHH-130C	Constant Volume	No Economizer	1,300	1.00	none	
AC-2 SHH-130C	Constant Volume	No Economizer	1,125	1.00	1,125	0.25
AC-3 SHH-130C	Constant Volume	No Economizer	1,950	1.00	1,950	1.00
HV-1 SDH-150	Constant Volume	100% Outside Air	2,550	1.00	none	
HV-2 SDH-100	Constant Volume	100% Outside Air	1,005	0.25	1,005	0.25
HV-3 SHH-260D	Constant Volume	No Economizer	3,960	3.00	none	
HV-4 SHH-180C	Constant Volume	100% Outside Air	1,810	0.50	none	

MECHANICAL EQUIPMENT DETAILS

(Part 1 of 2)

MECH-5C

Project Name

Date

3/22/2016

CHILLER AND TOWER SUMMARY

					PUMPS			
Equipment Name	Type	Qty.	Efficiency	Tons	Qty.	GPM	BHP	Pump Control

DHW / BOILER SUMMARY

System Name	Type	Distribution	Qty.	Rated Input	Vol. (Gals.)	Energy Factor or RE	Standby Loss or Pilot	Tank Ext. R-Value	Status

MULTI-FAMILY CENTRAL WATER HEATING DETAILS

Hot Water Pump				Hot Water Piping Length (ft)			
Control	Qty.	HP	Type	In Plenum	Outside	Buried	Add ½" Insulation
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

CENTRAL SYSTEM RATINGS

System Name	Type	Qty.	HEATING			COOLING		Status
			Output	Aux. kW	Efficiency	Output	Efficiency	
HV-5 SDH-100	Packaged DX	1	81,000	0.0	81% AFUE	0	n/a	New
Mitsubishi PUZA24	Split DX	1	26,000	2.3	10.20 HSPF	24,000	16.0 SEER / 11.4 EER	New

CENTRAL SYSTEM FAN SUMMARY

System Name	Fan Type	Economizer Type	SUPPLY FAN		RETURN FAN	
			CFM	BHP	CFM	BHP
HV-5 SDH-100	Constant Volume	100% Outside Air	1,050	0.25	1,050	0.25
Mitsubishi PUZA24	Constant Volume	No Economizer	740	0.16	none	

ENERGY USE AND COST SUMMARY

ECON-1

Project Name

Date
3/22/2016

Rate: PG&E E-19S

Fuel Type: Electricity

	STANDARD			PROPOSED			MARGIN		
	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)
Jan				15,706	37.4	2,275			
Feb				14,470	37.5	2,164			
Mar				16,643	37.7	2,369			
Apr				16,151	38.0	2,320			
May				16,037	38.1	3,358			
Jun				16,484	39.2	3,481			
Jul				16,747	39.6	3,476			
Aug				16,969	39.5	3,549			
Sep				16,288	39.4	3,460			
Oct				16,216	40.2	3,442			
Nov				15,647	38.6	2,284			
Dec				15,972	37.7	2,305			
Year				193,330	40.2	34,482			
CO ₂		lbs/yr		133,398	lbs/yr			lbs/yr	

Rate: PGE G-NR1

Fuel Type: Natural Gas

	STANDARD			PROPOSED			MARGIN		
	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)
Jan				2,338	630.6	1,770			
Feb				2,173	688.6	1,648			
Mar				2,228	584.4	1,688			
Apr				2,032	560.4	1,302			
May				2,003	492.6	1,284			
Jun				1,799	426.9	1,158			
Jul				1,738	353.5	1,120			
Aug				1,738	369.9	1,121			
Sep				1,653	510.3	1,068			
Oct				1,939	516.4	1,244			
Nov				2,008	590.3	1,527			
Dec				2,304	598.4	1,744			
Year				23,953	688.6	16,674			
CO ₂		lbs/yr		19,330	lbs/yr			lbs/yr	

Annual Totals	Energy	Demand	Cost	Cost/sqft	Virtual Rate
Electricity	193,330 kWh	40 kW	\$ 34,482	\$ 2.34 /sqft	\$ 0.18 /kWh
Natural Gas	23,953 therms	689 kBtu/hr	\$ 16,674	\$ 1.13 /sqft	\$ 0.70 /therm
		Total	\$ 51,157	\$ 3.46 /sqft	

Avoided CO₂ Emissions: lbs/yr

DOE-2 OUTPUT REPORT

Proposed

Proposed Building (Non-Compliance)

DOE-2.1E-124 Tue Mar 22 16:18:15 2016EDL RUN 1
COSTA ENGINEERS, INC

REPORT- ES-D ENERGY COST SUMMARY

UTILITY-RATE	RESOURCE	METERS	METERED ENERGY UNITS/YR	TOTAL CHARGE (\$)	VIRTUAL RATE (\$/UNIT)	RATE USED ALL YEAR?
OELEC-PG&E E-19S	ELECTRICITY	1 2 3 4 5	193331. KWH	34845.	0.1802	YES
OGAS-PGE G-NR1	NATURAL-GAS	1 2 3 4 5	23953. THERM	16674.	0.6961	YES
0				=====		
0				51519.		

ENERGY COST/GROSS BLDG AREA: 3.49
ENERGY COST/NET BLDG AREA: 3.49

DOE-2 OUTPUT REPORT

Proposed

Proposed Building (Non-Compliance)

DOE-2.1E-124 Tue Mar 22 16:18:15 2016EDL RUN 1
COSTA ENGINEERS, INC

REPORT- ES-E SUMMARY OF UTILITY-RATE: ELEC-PG&E E-19S

UTILITY-RATE: ELEC-PG&E E-19S RESOURCE: ELECTRICITY DEMAND-WINDOW: HOUR 3413. BTU/KWH
METERS: 1 2 3 4 5 BILLING-DAY: 31 RATE-LIMITATION: 0.0000
POWER-FACTOR: 0.80 EXCESS-KVAR-FRAC: 0.30 EXCESS-KVAR-CHG: 0.0000

RATE-QUALIFICATIONS	BLOCK-CHARGES	DEMAND-RATCHETS	MIN-MON-RATCHETS
MIN-ENERGY: 0.0	RATE-01-ELECTRIC		
MAX-ENERGY: 0.0	RATE-11-ELECTRIC		
MIN-DEMAND: 0.0	RATE-21-ELECTRIC		
MAX-DEMAND: 0.0	RATE-31-ELECTRIC		
QUALIFY-RATE: ALL-MONTHS	RATE-41-ELECTRIC		
USE-MIN-QUAL: NO			

MONTH	METERED ENERGY KWH	BILLING ENERGY KWH	METERED DEMAND KW	BILLING DEMAND KW	ENERGY CHARGE (\$)	DEMAND CHARGE (\$)	ENERGY CST ADJ (\$)	TAXES (\$)	SURCHRG (\$)	FIXED CHARGE (\$)	MINIMUM CHARGE (\$)	VIRTUAL RATE (\$/UNIT)	TOTAL CHARGE (\$)
0 JAN	15706	15706	37.4	37.4	1484	653	0	0	0	138	0	0.1448	2275
0 FEB	14470	14470	37.5	37.5	1371	655	0	0	0	138	0	0.1496	2164
0 MAR	16643	16643	37.7	37.7	1585	658	0	0	0	138	0	0.1430	2381
0 APR	16151	16151	38.0	38.0	1537	664	0	0	0	138	0	0.1448	2339
0 MAY	16037	16037	38.1	38.1	1690	1567	0	0	0	138	0	0.2117	3396
0 JUN	16484	16484	39.2	39.2	1778	1613	0	0	0	138	0	0.2141	3529
0 JUL	16747	16747	39.6	39.6	1782	1626	0	0	0	138	0	0.2118	3546
0 AUG	16969	16969	39.5	39.5	1822	1630	0	0	0	138	0	0.2115	3590
0 SEP	16288	16288	39.4	39.4	1745	1624	0	0	0	138	0	0.2154	3508
0 OCT	16216	16216	40.2	40.2	1712	1653	0	0	0	138	0	0.2160	3503
0 NOV	15647	15647	38.6	38.6	1487	674	0	0	0	138	0	0.1470	2300
0 DEC	15972	15972	37.7	37.7	1519	658	0	0	0	138	0	0.1449	2314
TOTAL	193331	193331	40.2		19512	13677	0	0	0	1656		0.1802	34845

DOE-2 OUTPUT REPORT

Proposed

Proposed Building (Non-Compliance)

DOE-2.1E-124 Tue Mar 22 16:18:15 2016EDL RUN 1
COSTA ENGINEERS, INC

REPORT- ES-F BLOCK-CHARGE AND RATCHET SUMMARY FOR: ELEC-PG&E E-19S

UTILITY-RATE: ELEC-PG&E E-19S
RESOURCE: ELECTRICITY
ENERGY-UNITS: KWH
DEMAND-UNITS: KW
DEMAND-WINDOW: HOUR

BLOCK-CHARGES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
ORATE-01-ELECTRIC USE: TIME-OF-USE													
METERED ENERGY:	7802	6917	7402	7229	0	0	0	0	0	0	7132	7243	
BILLING ENERGY:	7802	6917	7402	7229	0	0	0	0	0	0	7132	7243	43725
METERED DEMAND:	33.8	33.5	34.2	34.5	0.0	0.0	0.0	0.0	0.0	0.0	34.7	33.8	
BILLING DEMAND:	33.8	33.5	34.2	34.5	0.0	0.0	0.0	0.0	0.0	0.0	34.7	33.8	
ENERGY CHGS (\$):	680	603	645	630	0	0	0	0	0	0	622	631	3811
DEMAND CHGS (\$):	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CHGS (\$):	680	603	645	630	0	0	0	0	0	0	622	631	3811
ORATE-11-ELECTRIC USE: TIME-OF-USE													
METERED ENERGY:	7904	7553	9241	8922	0	0	0	0	0	0	8515	8728	
BILLING ENERGY:	7904	7553	9241	8922	0	0	0	0	0	0	8515	8728	50864
METERED DEMAND:	37.4	37.5	37.7	38.0	0.0	0.0	0.0	0.0	0.0	0.0	38.6	37.7	
BILLING DEMAND:	37.4	37.5	37.7	38.0	0.0	0.0	0.0	0.0	0.0	0.0	38.6	37.7	
ENERGY CHGS (\$):	803	768	939	907	0	0	0	0	0	0	866	887	5170
DEMAND CHGS (\$):	5	5	5	5	0	0	0	0	0	0	5	5	30
TOTAL CHGS (\$):	808	773	944	912	0	0	0	0	0	0	871	892	5200
ORATE-21-ELECTRIC USE: TIME-OF-USE													
METERED ENERGY:	0	0	0	0	7555	6923	7536	7302	7086	7597	0	0	
BILLING ENERGY:	0	0	0	0	7555	6923	7536	7302	7086	7597	0	0	43998
METERED DEMAND:	0.0	0.0	0.0	0.0	34.5	35.7	35.7	35.7	35.4	34.9	0.0	0.0	
BILLING DEMAND:	0.0	0.0	0.0	0.0	34.5	35.7	35.7	35.7	35.4	34.9	0.0	0.0	
ENERGY CHGS (\$):	0	0	0	0	609	558	607	588	571	612	0	0	3545
DEMAND CHGS (\$):	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CHGS (\$):	0	0	0	0	609	558	607	588	571	612	0	0	3545
ORATE-31-ELECTRIC USE: TIME-OF-USE													
METERED ENERGY:	0	0	0	0	4173	4690	4519	4737	4501	4216	0	0	
BILLING ENERGY:	0	0	0	0	4173	4690	4519	4737	4501	4216	0	0	26836
METERED DEMAND:	0.0	0.0	0.0	0.0	38.1	39.2	39.6	39.2	38.9	39.0	0.0	0.0	
BILLING DEMAND:	0.0	0.0	0.0	0.0	38.1	39.2	39.6	39.2	38.9	39.0	0.0	0.0	
ENERGY CHGS (\$):	0	0	0	0	447	502	484	507	482	452	0	0	2875
DEMAND CHGS (\$):	0	0	0	0	199	205	207	205	203	204	0	0	1224
TOTAL CHGS (\$):	0	0	0	0	646	707	691	712	686	656	0	0	4099
ORATE-41-ELECTRIC USE: TIME-OF-USE													
METERED ENERGY:	0	0	0	0	4309	4872	4692	4930	4701	4404	0	0	
BILLING ENERGY:	0	0	0	0	4309	4872	4692	4930	4701	4404	0	0	27908
METERED DEMAND:	0.0	0.0	0.0	0.0	37.8	38.9	39.1	39.5	39.4	40.2	0.0	0.0	
BILLING DEMAND:	0.0	0.0	0.0	0.0	37.8	38.9	39.1	39.5	39.4	40.2	0.0	0.0	
ENERGY CHGS (\$):	0	0	0	0	635	717	691	726	692	649	0	0	4110
DEMAND CHGS (\$):	0	0	0	0	708	729	732	740	738	753	0	0	4400
TOTAL CHGS (\$):	0	0	0	0	1342	1447	1423	1466	1431	1401	0	0	8510
TOTAL ENERGY:	15706	14470	16643	16151	16037	16484	16747	16969	16288	16216	15647	15972	193330
TOTAL CHARGES (\$):	1488	1376	1589	1542	2597	2712	2722	2767	2687	2669	1492	1524	25165

DOE-2 OUTPUT REPORT

Proposed

Proposed Building (Non-Compliance)

DOE-2.1E-124 Tue Mar 22 16:18:15 2016EDL RUN 1
COSTA ENGINEERS, INC

REPORT- ES-E SUMMARY OF UTILITY-RATE: GAS-PGE G-NR1

UTILITY-RATE: GAS-PGE G-NR1

RESOURCE: NATURAL-GAS
METERS: 1 2 3 4 5

DEMAND-WINDOW: HOUR
BILLING-DAY: 31

100000. BTU/THERM
RATE-LIMITATION: 0.0000

RATE-QUALIFICATIONS

MIN-ENERGY: 0.0
MAX-ENERGY: 0.0
MIN-DEMAND: 0.0
MAX-DEMAND: 0.0
QUALIFY-RATE: ALL-MONTHS
USE-MIN-QUAL: NO

BLOCK-CHARGES

RATE-01-NATURAL-
RATE-11-NATURAL-

DEMAND-RATCHETS

MIN-MON-RATCHETS

MONTH	METERED ENERGY THERM	BILLING ENERGY THERM	METERED DEMAND THERMS	BILLING DEMAND THERMS	ENERGY CHARGE (\$)	DEMAND CHARGE (\$)	ENERGY CST ADJ (\$)	TAXES (\$)	SURCHRG (\$)	FIXED CHARGE (\$)	MINIMUM CHARGE (\$)	VIRTUAL RATE (\$/UNIT)	TOTAL CHARGE (\$)
0 JAN	2338	2338	6.3	6.3	1718	0	0	0	0	52	0	0.7567	1770
0 FEB	2173	2173	6.9	6.9	1597	0	0	0	0	52	0	0.7584	1648
0 MAR	2228	2228	5.8	5.8	1637	0	0	0	0	52	0	0.7578	1688
0 APR	2032	2032	5.6	5.6	1250	0	0	0	0	52	0	0.6405	1302
0 MAY	2003	2003	4.9	4.9	1232	0	0	0	0	52	0	0.6408	1284
0 JUN	1799	1799	4.3	4.3	1106	0	0	0	0	52	0	0.6438	1158
0 JUL	1738	1738	3.5	3.5	1069	0	0	0	0	52	0	0.6448	1120
0 AUG	1738	1738	3.7	3.7	1069	0	0	0	0	52	0	0.6448	1121
0 SEP	1653	1653	5.1	5.1	1017	0	0	0	0	52	0	0.6463	1068
0 OCT	1939	1939	5.2	5.2	1193	0	0	0	0	52	0	0.6417	1244
0 NOV	2008	2008	5.9	5.9	1475	0	0	0	0	52	0	0.7604	1527
0 DEC	2304	2304	6.0	6.0	1692	0	0	0	0	52	0	0.7571	1744
TOTAL	23953	23953	6.9		16055	0	0	0	0	619		0.6961	16674

DOE-2 OUTPUT REPORT

Proposed

Proposed Building (Non-Compliance)

DOE-2.1E-124 Tue Mar 22 16:18:15 2016EDL RUN 1
COSTA ENGINEERS, INC

REPORT- ES-F BLOCK-CHARGE AND RATCHET SUMMARY FOR: GAS-PGE G-NR1

UTILITY-RATE: GAS-PGE G-NR1
RESOURCE: NATURAL-GAS
ENERGY-UNITS: THERM
DEMAND-UNITS: THERMS
DEMAND-WINDOW: HOUR

BLOCK-CHARGES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
ORATE-01-NATURAL- USE: SEASONAL													
METERED ENERGY:	0	0	0	2032	2003	1799	1738	1738	1653	1939	0	0	
BILLING ENERGY:	0	0	0	2032	2003	1799	1738	1738	1653	1939	0	0	12901
METERED DEMAND:	0.0	0.0	0.0	5.6	4.9	4.3	3.5	3.7	5.1	5.2	0.0	0.0	
BILLING DEMAND:	0.0	0.0	0.0	5.6	4.9	4.3	3.5	3.7	5.1	5.2	0.0	0.0	
ENERGY CHGS (\$):	0	0	0	1250	1232	1106	1069	1069	1017	1193	0	0	7935
DEMAND CHGS (\$):	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CHGS (\$):	0	0	0	1250	1232	1106	1069	1069	1017	1193	0	0	7935
ORATE-11-NATURAL- USE: SEASONAL													
METERED ENERGY:	2338	2173	2228	0	0	0	0	0	0	0	2008	2304	
BILLING ENERGY:	2338	2173	2228	0	0	0	0	0	0	0	2008	2304	11052
METERED DEMAND:	6.3	6.9	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	6.0	
BILLING DEMAND:	6.3	6.9	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	6.0	
ENERGY CHGS (\$):	1718	1597	1637	0	0	0	0	0	0	0	1475	1692	8119
DEMAND CHGS (\$):	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CHGS (\$):	1718	1597	1637	0	0	0	0	0	0	0	1475	1692	8119
TOTAL ENERGY:	2338	2173	2228	2032	2003	1799	1738	1738	1653	1939	2008	2304	23953
TOTAL CHARGES (\$):	1718	1597	1637	1250	1232	1106	1069	1069	1017	1193	1475	1692	16055



Humboldt Juvenile Hall Replacement Project

2002 Harrison Ave, Eureka, CA 95501

OPERATIONAL PROGRAM STATEMENT

Schematic Design

September 15, 2014

CBC Title 24, Part 1: Section 13-201(c)3

- A. **Intended Capacity of Facility** – The 30-bed facility will be comprised of one 30-bed living unit.
- B. **Security and Classification of Minors to be Housed** – The living units will be designed with a mix of single and double sleeping rooms to provide supervision staff with the ability to separate and/or group individuals to modify behavior, provide a more homelike setting, provide gender specific programming, and assure smoother operations within the living units.
- C. **Movement within the Facility and Entry and Exit from Secure Areas** –The new Juvenile replacement facility is a very efficient design which minimizes circulation and provides services relatively close to the Youth. The objective for the facility is to provide a safe and secure detention environment for juveniles, while providing a safe and efficient environment for the staff. With the Central Control station located adjacent/within the singular housing unit, the majority of supervision of Youth will be direct line of sight into the living unit. All movement through the primary security perimeter will be through a double interlocked door sally port controlled by Central Control, utilizing integrated electronic audio/visual communications and door control systems. Central Control will manage all security, communications and life safety systems, and operate all passages through the security perimeter. The housing pod will constitute an internal security zone with a discreet security perimeter system.

Minors entering the facility will be arrestees who are brought in through the vehicle sally port or pedestrian gate. A single point security control area for the new facility will provide one entrance for all public access to the facility. A separate secure point of entry for staff will be designated for Juvenile Corrections Officer staff. The perimeter walls, roof and floors of the buildings will establish a secure perimeter encompassing the entire Juvenile Hall facility. Separate vehicle circulation will be provided to separate the public from the police and security entrance areas and from other activities from which public access should be precluded. The police entrance includes a vehicle sally port with gates controlled by Central Control. The outdoor recreation areas will be locked on the opposite side of the facility from the public areas and will be enclosed by security fencing.

D. Food Preparation and Serving – The new central kitchen and food storage area will be designed to feed the Juvenile Hall population plus the population at the adjacent Northern California Regional Facility. The kitchen will operate on a two shift production schedule and will contain space for food preparation, cooking production, ware-washing and meal assembly, break and toilet facilities, and a supervision office. Breakfast and Dinner meals for the existing Regional Facility population will be prepared and “trayed”, loaded onto insulated carts and transported to the Regional Facility. Lunch for the Regional Facility is served by a second Correctional Cook. Meals for the new Juvenile Hall minors will be prepared and served directly through a serving counter opening where Youth will dine in the multi-purpose room.

E. Staffing –

Staffing by Shift – Humboldt County Juvenile Hall								
Shift	Position	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Day 7:00 a.m. - 3:00 p.m.	Supervising Juvenile Corrections Officer (4.0 FTE)	1	1	1	1	1	1	1
	Senior Juvenile Corrections Officer (4.0 FTE)	1	1	1	1	1	1	1
	Juvenile Corrections Officer I/II (6.4 FTE)	2	2	2	2	2	2	2
	Extra-help*	varies	varies	varies	varies	varies	varies	varies
	Day Total	4	4	4	4	4	4	4
Swing 3:00 p.m. – 11:00 p.m.	Supervising Juvenile Corrections Officer	1	1	1	1	1	1	1
	Senior Juvenile Corrections Officer	1	1	1	1	1	1	1
	Juvenile Corrections Officer I/II	2	2	2	2	2	2	2
	Extra-help*	varies	varies	varies	varies	varies	varies	varies
	Swing Total	4	4	4	4	4	4	4
Late Night 11:00 p.m. – 7:00 a.m.	Juvenile Corrections Officer I/II (male)	1	1	1	1	1	1	1
	Juvenile Corrections Officer I/II (female)	1	1	1	1	1	1	1
	Extra-help*	varies	varies	varies	varies	varies	varies	varies
	Late Night Total	2	2	2	2	2	2	2

- Extra-help Juvenile Corrections Officers are used when needed (e.g. to cover training, illness, vacation, approved leave, etc.).
- One teacher will be assigned to the Juvenile hall for every 20 students enrolled. Teachers aids and a part-time Special Education staff will be assigned as needed.
- A Registered Nurse will be assigned to the facility Monday through Friday 8am to 5pm. A doctor will review medical charts and see patients referred by the Registered Nurse once a week.
- Medical services are provided through a contract with California Forensic Medical Group (CFMG).
- A Mental Health Clinician will be available five days a week.
- Psychiatrist visits will be scheduled one day each week.

- F. **Booking** – A secure Intake area has been included in the design where Central Control will monitor and control all access into the Intake area. Juveniles accompanied by law enforcement will arrive via the vehicle sally port or pedestrian gate and pass through another sally port before being admitted to the intake area. A gun locker will be provided in the vehicle sally port for law enforcement weapons. The booking area will have seats or benches for the minor to sit. If the minor is disruptive or dangerous he or she may be placed in one of the holding cells. A toilet will be available for their use. The minor will be interviewed, fingerprinted, and photographed at the admissions counter area. Upon completing intake/admissions screening, the minor will be pat searched in the search area and personal property will be stored in the property storage area, and the minor will be issued institutional clothes. Minors will shower and change clothing in the shower/changing area. A minor may be released through the public lobby.
- G. **Visiting and Attorney Interviews** – The regular visiting program will offer contact visitation privileges at a minimum of two times per week in accordance with minimum standards. Contact visiting will occur in the multi-purpose room that serves as a designated visitor's center under the direct supervision of staff. Visitor's will be processed through the main lobby of the facility and will be screened by checking picture identification, searching for weapons and contraband via a metal detector, and registering all authorized visitors. A family visiting room will be available in the multi-purpose room to accommodate family visits and when more privacy is needed. There will also be a non-contact visiting area available for visits involving security concerns. Attorney or other professional interviews will occur in the non-contact visitation rooms or in a private interview room located in the multi-purpose room.
- H. **Exercise** – Recreational and exercise activities will be scheduled during the day and/or evening to ensure compliance with minimum standards including the one-hour per day of large muscle activity requirement. The facility will provide several outdoor recreational areas within the secure perimeter and accessible directly from the housing unit. A larger recreation yard will be available for such activities as soccer, baseball, or football and a hard-court surface area will provide for basketball and volleyball activities. The multi-purpose room and the day room in the housing unit will include open space for exercise programs during inclement weather. All exercise programs will be under direct supervision of facility staff.
- I. **Programs** – Programs can be provided in a variety of spaces such as both of the classrooms (after school and weekend hours), the multi-purpose room, program room located on the unit, the living unit dayroom and outdoor recreation areas. These spaces will accommodate a variety of programs such as religious, educational, vocational, exercise/recreation, and individual or group counseling. The classrooms will be technologically equipped with computers and video interfaces that will allow programs and outside courses to be made available to minors. Designated program rooms will provide spacing for smaller group educational and treatment programming. Such programming will include drug and alcohol interventions, skill streaming, gender-specific programming, college prep and job readiness courses, and other evidence-based programs facilitated by facility staff and community-based providers.

- J. Medical Services, Including the Management of Communicable Diseases –** A sanitary and private medical screening room will be located on the living unit for routine medical assessments/screenings and minor medical procedures and to conduct pill call. Minors with communicable diseases or those who have significant illnesses or injuries that cannot be treated at the Juvenile Hall will be transferred outside of the facility to St. Joseph's Hospital. A Medical Clinic is located within the Juvenile Hall and will be used for minors needing more extensive diagnosis, female examinations and treatment. The medical room on the living unit will be technologically equipped so that medical staff can remotely access and make entries into electronic medical records. The Medical Clinic located at the Juvenile Hall will provide for the secure storage of pharmaceuticals.
- K. Cleaning and/or Laundering –** A secure janitorial closet will be provided in the living unit and in a centralized area of the facility. It is anticipated county staff will provide cleaning and housekeeping services in the secure areas of the facility. Laundry services will be located at the central laundry room in the Juvenile Hall. Sufficient storage will be provided to meet Title 15 clothing and exchange requirements.
- L. Separation of Minors –**For those minors needing separation due to behavior problems or for other reasons (protective, co-offender, medical, victimization, etc.), every effort will be made to keep these minors in a single room on the unit. Written procedures will be developed to insure the least restrictive disciplinary or classification process is used to correct the minor's behavior or safely program the minor. There will not be a mixing of minors on administrative separation and disciplinary separation. This will be accomplished through the use of scheduling the dayroom and recreation space. Minors so classified will be reviewed on a daily basis.
- M. Court Holding and Movement –** Court services will be conducted on-site in an existing court room of the adjacent Northern California Regional Facility. Minors will be escorted to the Regional Facility and placed in a secure holding area. The minors will be supervised at all times they are in this area. All movement to and from the court holding area would be under Deputy Probation Officer supervision along a secure corridor or pathway. Minors remanded to custody by the courts will be processed into the Juvenile Hall through the intake area and placed into the facility.
- N. Mental Health Services –** Mental health services will be available through Humboldt County Department of Health and Human Services; Mental Health Branch daily. Additionally, some minors have private counselors who will be consulted and who can continue with their services in the facility or through furloughs if appropriate. The medical/mental health clinic provides for a nurse's station, an examination area, and a medical supply storage room. Additional rooms are also provided in the multi-purpose room and on the living unit for individual and/or small group sessions.

- O. **Facilities for Administration and Operations Staff** – A staff workstation and restroom will be available on the living unit for supervision staff. A separate administrative area will provide office space for the Detention Facility Manager as well as a work room for all operations staff. The larger multi-purpose/visitor's center may also be utilized for staff training when a larger room is required.
- P. **Staff to Staff Communications System** – The communication system will include radios, intercoms, telephones and emails. The Juvenile Hall will support a modern, industry standard, touch screen security electronics system to ensure a safe and secure environment.
- Q. **Management of Disruptive Minors** – The management of disruptive minors will be done at the lowest possible level necessary to effect the change in the minor's behavior. The Juvenile Hall's current behavior modification system will continue in the new facility. The system rewards minors for positive/expected behavior and results in a loss of privileges for poor/unacceptable behavior. For major infractions minors can be locked down on the housing unit, moved to the intake area in a holding room with staff supervision, or moved to the medical/mental health exam room with staff supervision depending on the circumstances.

The rules and accepted behavior will be made clear to all minors on the living unit. Each minor will be provided an orientation manual to orient them to their rights, why they're in Juvenile Hall, behavior expected during their stay, and the consequences for poor behavior. The use of time-outs and less restrictive consequence for behavior will be encouraged. Minors will be told and will know when they are in jeopardy of losing their privileges. A privilege point system, such as is in place currently, will be used as an incentive for minors.

Control of disruptive minors will follow established policies and procedures and Title 15 mandates. Control techniques may range from verbal orders, to physically restraining a minor. The loss of privileges will be used to correct long-term disruptive behavior. All of the above techniques will be used in various degrees to control the minor's behavior at the lowest level necessary to effect positive change.

- R. **Management of Minors with Disabilities, with Provisions for Wheelchairs, Gurney Access, and for Evacuation During Emergencies** – Minors with disabilities, both male and female, will have total access to all programs, dayrooms, corridors, visiting and exercise areas. The housing unit has an accessible room for sleeping which is equipped with a toilet and sink. An accessible approved shower will be available as well as an ADA accessible dayroom table. During emergency evacuations, staff will be responsible for assisting disabled persons. It will be the responsibility of the staff to orient the disabled persons with the exact location of the building's safest exits. In emergencies requiring evacuation, disabled persons shall be assisted by staff to the nearest exit.

- S. Architectural Treatment of Space Relative to Preventing Suicides by Minors** – The entire facility will be designed to minimize the potential for self harm and suicide. Rooms will be designed to prevent self-harm and suicide by hanging. Double sleeping rooms are available so that minors identified with self-harm risks may have a roommate. No combustible finishes will be used in the rooms. All storage areas, fixtures, sprinkler heads, doors and hinges within the facility will be of a type to thwart the attachment of items to help reduce the risk of suicide. Within the shower areas all fixtures, where practical, will be of a “break away type”. Wherever practical all welds and attached items will be smooth faced to prevent anchoring or use in a potential suicide or self-harm. Any item architecturally that may be used to puncture or lacerate will be fastened securely by welding or tamper resistant screws. In addition to design details that reduce the potential for self-harm and suicide staff will be trained to recognize signs and symptoms as well as suicide prevention techniques. Mental health services will also be initiated as described in section N.
- T. Method of Implementing California Penal Code Section 4030 Relating to the Holding of Offenders Requiring Incarceration Without the Necessity of Unjustified Strip Searches** – The department recognizes that a strip search may, under certain conditions, be necessary to protect the safety of others, civilians and minors, as well as to maintain facility security and safety. Policies and procedures will be in compliance with legislative requirements for searches of minors and staff will be trained to said policies and legislative mandates. Any and all searches will be conducted only with proper authorization and justification, with due recognition and deference for the dignity of those being searched. Every effort will be made to minimize the discomfort and embarrassment of the minor during a strip search. A strip search shall never be performed to punish, harass or humiliate the individual being searched.
- U. School Programs** – The Humboldt County Office of Education is responsible for providing the teacher and teacher aide, the educational program and the coordination with the minor’s regular school. The school program will provide a full curriculum of required Title 15 Section 1370 classes that meet State Education Code and County Board of Education policies. The school program provides for Individual Education Plans and any related assessments to be completed for those students with special needs. A full range of textbooks from elementary through high school levels will be located within the designated classroom area. All academic programs will be provided in two classrooms located within the living units. All storage for academic instruction will be accommodated within the classrooms. Sufficient space will be provided for smart boards, dry eraser boards, projection screens, desk areas, cabinets with locking doors, designated computer areas, teacher’s desks, teacher’s offices and storage areas.