

NEW UTAH STATE PRISON PRICE ESCALATION & VALUE ENGINEERING

During a time when the cost of construction has increased at a record-setting rate, DFCM's management of the new Utah State Correctional Facility has saved tax payers hundreds of millions of dollars.

Over the last several years, the construction industry has seen unprecedented levels of price escalation. As the demand for materials and skilled labor have skyrocketed, supply hasn't been able to keep up and prices have increased dramatically. Additionally, supply chain interruptions caused by the pandemic have further complicated the challenges that we face. It's sobering to think that the industry has seen the price of steel increase by over 200% in the last year alone and the current wait for steel joists just climbed to 14 months.

The New Utah State Prison project hasn't been immune to the market conditions that face the nation. In January of 2016, DFCM estimated that the new prison would cost \$860M. During the planning stages of the project, Salt Lake City requested that the State include \$124M of sewer infrastructure in the project, bringing the total potential estimate to nearly \$1B. When that number is escalated to today's dollars, the prison could have cost more than \$1.31B.



Fortunately, DFCM was able to negotiate with Salt Lake City and avoid paying the additional \$125M plus the escalation that would have accrued during the project. In addition to saving hundreds of millions of dollars through negotiations, the team found extensive savings through value engineering. We went through the budget, line-by-line and identified items that could be done differently to maximize value. Choosing a forced main instead of a gravity sewer line, compacting the drenched soil by using wick drains instead of piles, reducing the overall footprint of the site, and the many other items listed to the right combined to save the project over \$130M, all without sacrificing inmate or staff safety.

Considering the unprecedented escalation and demand for construction services that the market has seen over the last several years, the savings that DFCM and its partners were able to achieve in planning, procuring, designing, and building the new Utah State Prison without compromising quality or functionality is astounding.

AVOIDED ADDITIONAL COSTS	SAVINGS
SLC Sewer Infrastructure Improvements	\$124,820,000
700 South Lift Station Upgrade	\$3,260,000
700 South Pipe Upgrade	\$13,190,000
500 South Pipe Upgrade	\$8,900,000
500 South Diversion Project	\$10,370,000
10 Million Gallon Waste Treatment Water Plant Buildout	\$89,100,000
AVOIDED ADDITIONAL COSTS TOTAL	\$124,820,000

AVOIDED INCLUDED COSTS	SAVINGS
Site Development Savings	\$110,015,000
Forced Main in lieu of gravity sewer line	\$60,000,000
Emergency power loop	\$2,500,000
Reduce overall site	\$7,800,000
RMP circuits on one pole route	\$2,315,000
Soil Mitigation	\$10,000,000
Donations of Land (Rio Tinto)	\$2,300,000
Donation of Land (Epperson)	\$2,100,000
Purchase of Brighton Drain and re-route storm drain	\$1,500,000
Reduce off site road width to 30'	\$2,200,000
Sewer Line savings on site	\$8,500,000
Site Utility Savings on site	\$9,800,000
Savings from CVE	\$1,000,000

Detention Savings	\$2,750,000
Reduction in Detention glazing	\$250,000
60% dorms vs Cells - ROM	\$2,500,000

Architectural / Structural Savings	\$1,717,664
Change WWF in architectural wythe to macro-ficer in WGP	\$11,765
Limit A60 galvanized HM to exterior door frames only	\$5,000
Remove skylights- does not include chapel areas	\$15,000
Remove manufacturer skylight curb, build from wood	\$3,500
Remove Sheet Waterproofing where its not effective	\$44,300
Change ACM on SCR building to metal wall panel.	\$10,511
Remove insulation at interior of elec. and mech rooms.	\$10,000
Ceiling tile VE	\$214,047
Simplify Storage cabinets built from mill work	\$25,000
Tile on wet walls only	\$33,672
Alternate tile manufacturer (includes lobby stair)	\$33,272
Remove A60 Requirement from door frames	\$4,700
Remove solid surface thresholds from job	\$20,000
Change Refrigeration boxes manufacturers	\$197,811
Include wall padding in gym up to 5' a.f.f. ILO 10' a.f.f.	\$5,240
Change security ceilings in WGP (steel to security gyp)	\$512,284
Use alternate pre-cast sound wall option (smooth wall)	\$526,179
Change size of ribbon curb	\$25,196
Change road profile to helipad to match perimeter road	\$6,918
Remove rebar, go to fiber for curb under fence	\$13,269

Mechanical and Electrical Savings	\$9,726,685
UPS System	\$9,447,509
Change air ducts in dining halls of GFS	\$10,483
Reduce plumbing insulation to code - WCI	\$4,500
Uponor piping - WCI, WDN, WUC	\$17,500
Lightning protection cable from copper to aluminum	\$26,693
Change grounding methods at light pole bases	\$220,000

Management Strategies Savings	\$6,668,000
Equipment Rental Management - ROM	\$200,000
Mobile On-site Lab - ROM	\$568,000
Horticulture Building	\$380,000
Program management was 2% on CO's	\$480,000
On-site Rental Yard - ROM	\$500,000
Inmate labor to install equipment	\$140,000
UCI products - ROM	\$800,000
UCI Signage	\$600,000
RMP repayments from connecting other users	\$3,000,000

AVOIDED INCLUDED COSTS TOTAL	\$130,877,349
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