

Change Orders for Government Procurement since 1792...



Cape Henry Lighthouse is the first federally funded public works project of the newly formed United States government. It was authorized by George Washington and overseen by Alexander Hamilton in 1792.

It was also the first federal construction project under the Constitution, for an original contract amount of \$15,200 (an additional \$2,500 was required to finish the lighthouse).



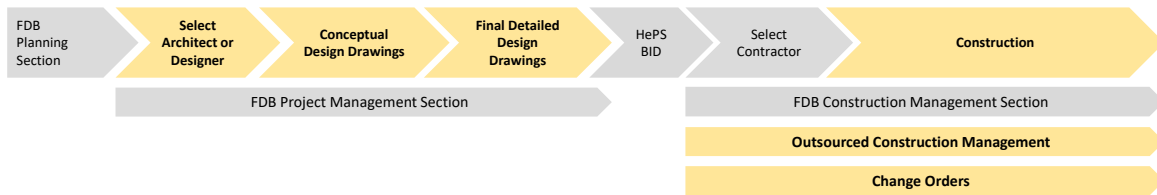
Current Process to Repair Schools

Design Bid Build



Design Bid Build

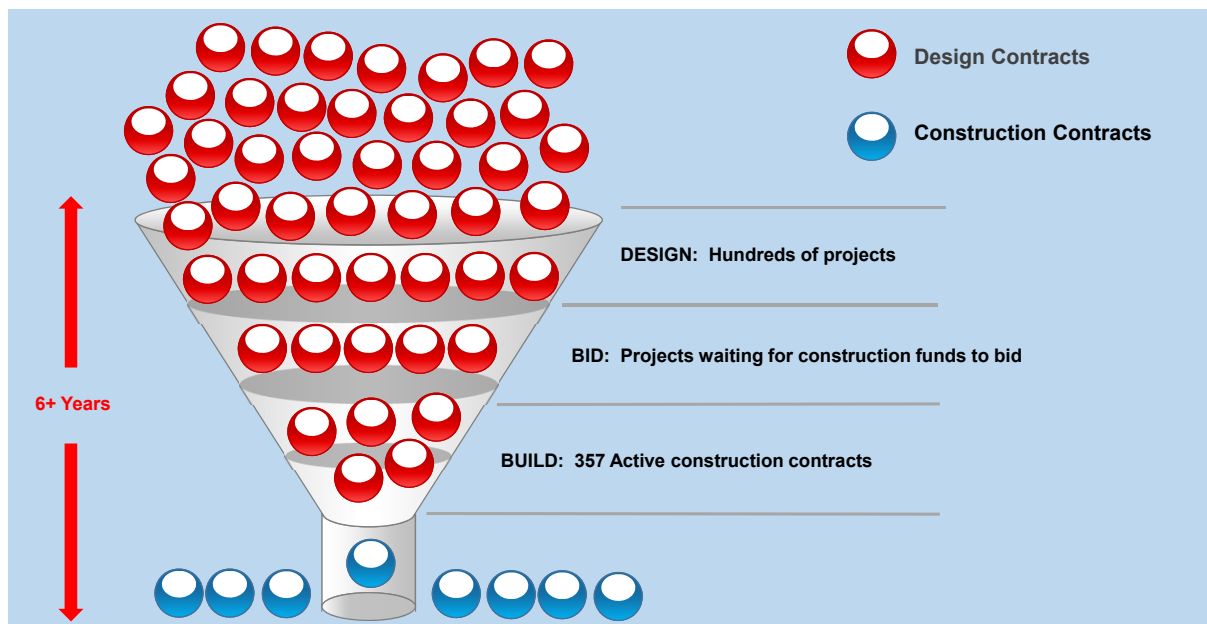
Design Bid Build = 6+ Years



Often Takes Two Biennium Budgets – 6+ Years

FY	BFY	Budget Act/SLH	Action	2013	2014	2015	2016	2017	2018	2019	2020	2021
2014	2013	Act 134/SLH13	Apprn Lapse Date				6/30/16					
			Claims Encumbrance Liquidation									
2015	2014	Act 122/SLH14	Apprn Lapse Date				6/30/16					
			Claims Encumbrance Liquidation									
2016	2015	Act 119/SLH15	Apprn Lapse Date					6/30/18				
			Claims Encumbrance Liquidation									
2017	2016	Act 124/SLH16	Apprn Lapse Date					6/30/18				
			Claims Encumbrance Liquidation									
2018	2017	Act 49/SLH17	Apprn Lapse Date							6/30/20		
			Claims Encumbrance Liquidation									
2019	2018	Act 49/SLH18	Apprn Lapse Date							6/30/20		
			Claims Encumbrance Liquidation									

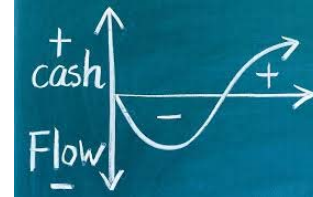
Too many designs...



Unmanageable cash flow from low bid procurement...

357 – Active Construction Contracts

\$20M/year	Change order costs
<u>\$15M/year</u>	Construction management costs
\$35M/year	Needed to complete construction

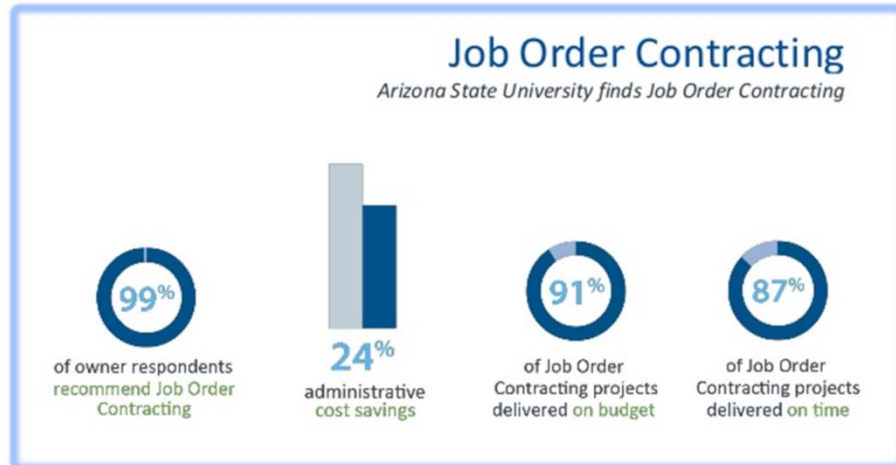


Better Process to Repair Schools



A better way to repair schools: JOC

Job Order Contracting (JOC)
Contract delivery method used to accomplish a large number of individual projects under a single master contract awarded to the most qualified prequalified bidder who is licensed, bonded and general liability insured. Bidder agrees to a fixed period, fixed unit price, and indefinite quantity contract.



Who Uses Job Order Contracting?

MUNICIPALITIES, such as The City of Chicago, have used JOC since November 1992. To date, 8 departments within The City of Chicago have completed over \$330,000,000 in construction and maintenance services.

EDUCATIONAL Institutions, K-12, Colleges and Universities benefit greatly from JOC. The New York City Board of Education instituted a JOC program in 1996 and since then has realized a 91% decrease in procurement time, plus the average project cost is 11.7% under the estimate.

HOUSING AUTHORITIES use JOC for demolition as well as construction. The Housing Authority of Baltimore City has used JOC since 1994 with the focus on modernization and rehabilitation projects. Over 50% of the work was subcontracted to minority and women owned businesses.

FEDERAL need sparked the invention of JOC in 1981. Since then JOC has been developed and implemented for the Department of Defense, including the U.S. Army, the SABER system for the U.S. Air Force, and the Work Order Contracting system for the U.S. Navy. The U.S. Postal Service uses JOC to operate a nationwide program to maintain and rehabilitate over 38,000 separate facilities.

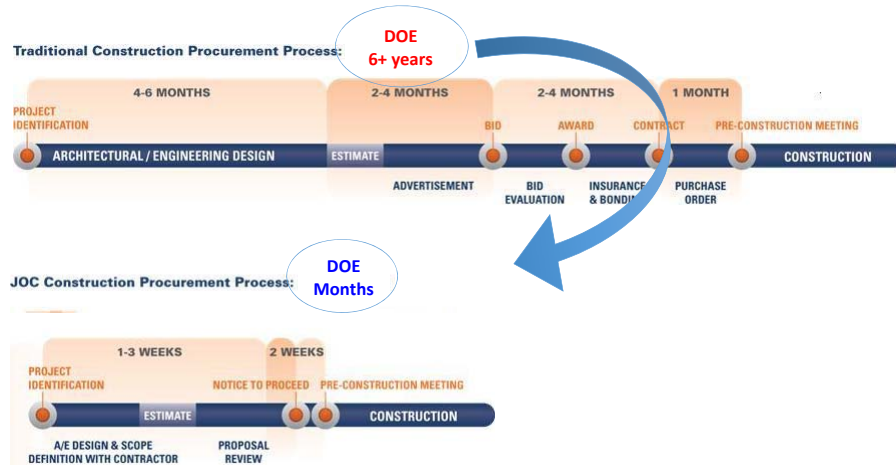
TRANSPORTATION authorities like Pennsylvania Turnpike Commission, WMATA and MARTA utilize JOC everyday. MARTA's JOC program, in Atlanta, includes projects for the rehabilitation of facilities, passenger areas, roofing and paving, plus installation of security devices. 43% of all Job Order work was subcontracted to local minority firms.

WATER and WASTEWATER departments like the NYC Department of Environmental Protection, Bureau of Waste Water Treatment, have used JOC since 1999 for projects involving actuators, pumps, settlement tanks, roofs, valves and grinders.



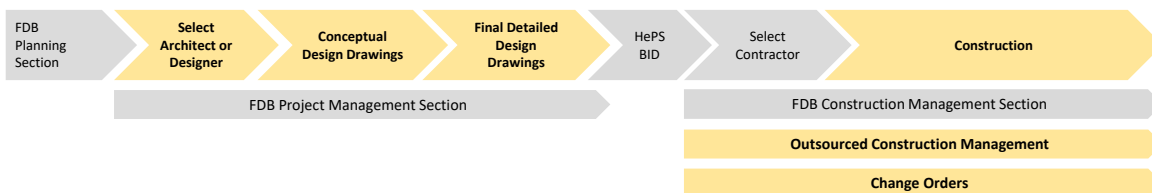
USPS on Kauai uses JOC!

Design Bid Build vs. Job Order Contracting

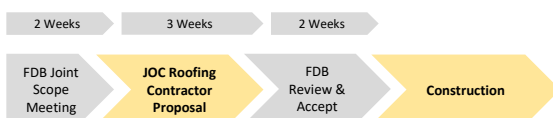


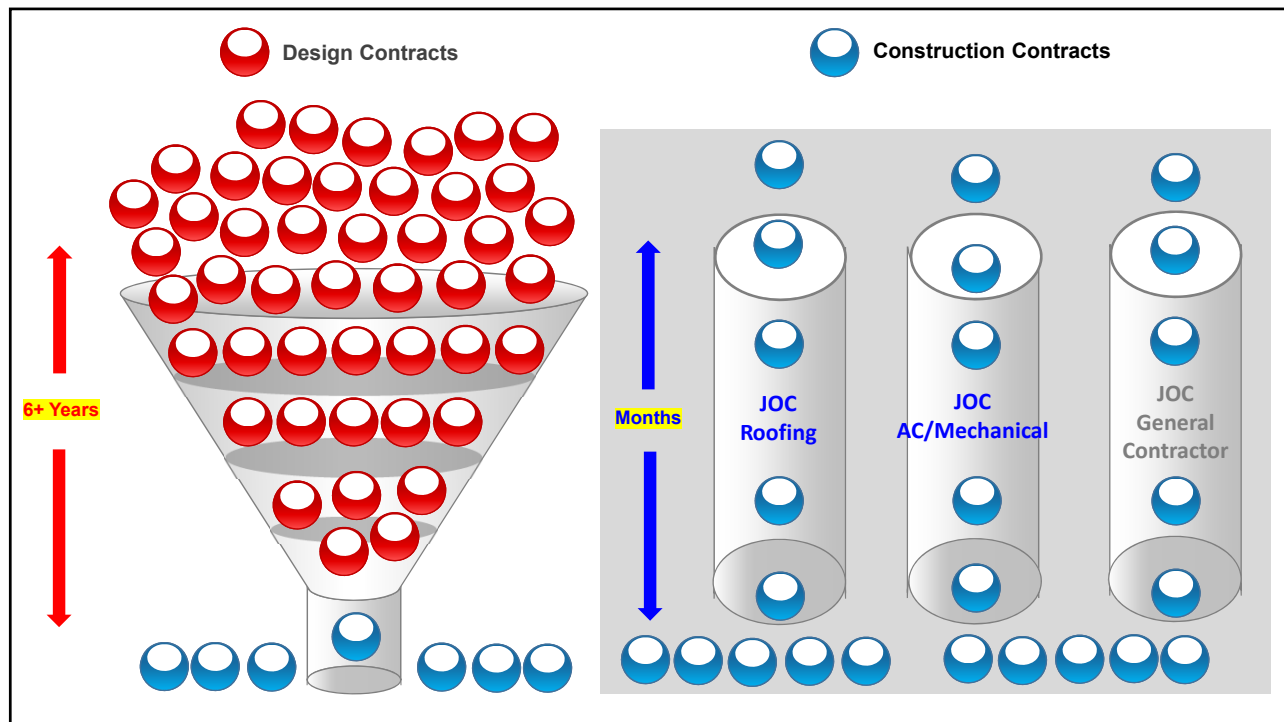
JOC with Roofing Contractors - 2019

Design Bid Build = 6+ Years



Job Order Contracting = Months





JOC Repairs to Maintain Classroom Integrity



Roof Replacements/yearly

AC Replacements/yearly

Design Bid Build

- Years
- \$.15 Design
- \$.17 Outsourced CM
- \$.68 Construction

\$.15 Design

\$.17 Outsourced
Construction
Management (CM)

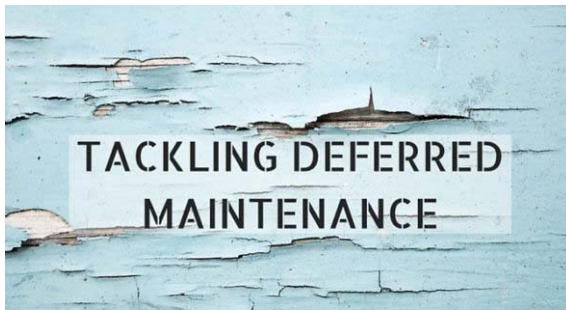
\$.68 Construction
Low Bid or Invitation for Bid (IFB) One-time Contract

Job Order Contracting

- Months
- \$.06 JOC
- \$.06 Outsourced CM
- \$.88 Construction

\$.12 JOC

\$.88 Construction
Best Bid or Request for Proposals (RFP) Multi-year Contract



Facility Condition Index (FCI)

An industry-standard measure used to compare relative building conditions

$$FCI = \frac{\text{total cost of existing deficiencies}}{\text{current replacement value}}$$



HVAC is the System
Most Affected by
Deferred Maintenance



Chronology of Events

Date	Event
August 2017	<ul style="list-style-type: none"> National Institute of Governmental Purchasing Conference
October 2017	<ul style="list-style-type: none"> Assistant Superintendent Carlson approval to use JOC for DOE R&M Projects DOE started preparing the JOC consultant RFP
January 24, 2018	<ul style="list-style-type: none"> RFP posted
May 22, 2018	<ul style="list-style-type: none"> Consultant selected (Gordian) Initial contract term: 18 months; renewals five (5) additional twelve-month periods
May 23, 2018	<ul style="list-style-type: none"> Notice to Proceed Outreach meetings were held on Oahu and the Big Island
August 15, 2018	<ul style="list-style-type: none"> Three RFPs posted (up to three contractors each): <ul style="list-style-type: none"> Oahu roofing projects Big Island roofing projects HVAC projects (Oahu, Maui, Big Island)
January 16, 2019	<ul style="list-style-type: none"> Seven contracts were executed: <ul style="list-style-type: none"> Oahu roofing projects (3) Big Island roofing projects (2) HVAC projects (Oahu, Maui, Big Island) (2)
February 2019	<ul style="list-style-type: none"> King Intermediate School Cafeteria Roof Replacement The cost was \$877,88.30 for approximately 18,900 square feet of roof Take away the extra items work, the average cost of roof replacement is \$43 per sq. ft. which is comparable to market price
Present	<ul style="list-style-type: none"> POs issued as of 09.27.19 <u>\$10,818,862.48</u> HVAC projects starting in October with FY2020 funds

Lessons Learned

Number	Description
Alternate Procurement	<ul style="list-style-type: none"> JOC is an alternative method of procurement The umbrella contracts save State time and work in procuring contractors for every project
Best Fit	<ul style="list-style-type: none"> JOC is at its best when we use it for projects requiring minimal design It fits better for R&M projects and not for CIP projects with new facilities
State Benefits	<ol style="list-style-type: none"> The unit prices eliminates conflicts due to price State can keep good contractors that perform and producing quality work to the State
Contractor Benefits	<ol style="list-style-type: none"> The contractors have up to 5 years of steady work With the steady work, they can maintain a good crew The contractors paid a fair price for their work
Pilot Program	<ul style="list-style-type: none"> Learning curve for DOE Facilities, Gordian and JOC Contractors It takes hard work from all three parties to make JOC program a success Scheduling with schools while classes are in session is necessary to fix schools, working after hour or weekends may increase the cost of the project



Construction Procurement Challenges

Procurement
burden relative to
job size and scope

Time

Lack of
transparency/
auditability

Staff limitations

Inclusion
requirements

Cost control/
change orders

Construction Procurement Methods



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How is JOC Utilized



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Where Is JOC Used

State & Local Agencies

Arizona Dept. of Administration
 Pennsylvania Dept. of General Services
 Los Angeles County Dept. of Public Works
 Chicago Dept. of General Services
 Utah Div. of Purchasing
 Northern Virginia Joint Procurement

Water/Waste Water Agencies

San Francisco Public Utility Commission
 NYC Department of Sanitation
 Chicago Dept. of Environment
 Metropolitan Water Reclamation District
 NYS Dept. of Environmental Conservation
 Sacramento County Water

Transportation Agencies

Maryland Dept. of Transportation
 New Jersey Dept. of Transportation
 Indiana Dept. of Transportation
 New York Dept. of Transportation

Housing Agencies

Seattle Housing Authority
 Los Angeles County CDC
 Chicago Housing Authority
 District of Columbia Housing Auth.
 Baltimore City Housing Authority



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Job Order Contracting

Definition

- Indefinite delivery/indefinite quantity process (IDIQ)
- Enable contractors to complete a substantial number of individual projects with a **single bid**
- Tasks based on competitively-bid, **preset prices**

Value

- Saves time and money
- Provides transparency and auditability
- Promotes Contractor Performance



Umbrella Contract

Part 1 Bidding the Umbrella Job Order Contracting Contract

Owner
Advertizes
Job Order
Contracting
Contract

Contractors
Submit
Bids

Owner
Awards
Umbrella
Job Order
Contracting
Contract

Part 2 Procuring Individual Projects From Owner

Owner
Project A

Subcontracting
Opportunities

Owner
Project B

Subcontracting
Opportunities

Owner
Project C

Subcontracting
Opportunities



The Process – Individual Job Orders



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Types of Projects

From one competitively awarded contract,
you are able to procure an indefinite number of projects



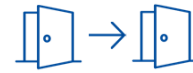
Straightforward
new construction



Repairs



Renovations



Replacement
in-kind



Maintenance



Emergency
Work



Time sensitive
projects

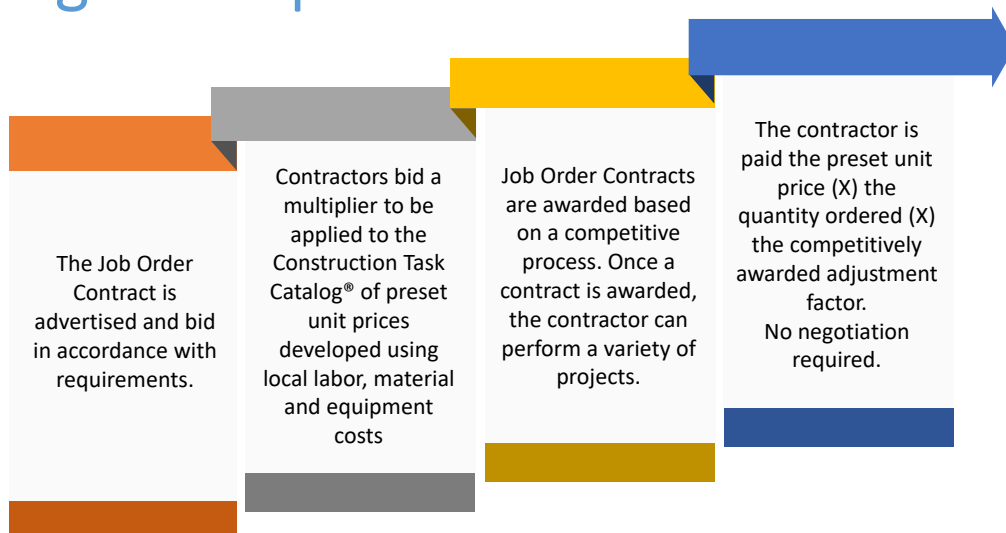


Alterations

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Program Implementation



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Contract Documents



1. Construction Task Catalog® (CTC)
 - Construction tasks with unit prices
 - Unit prices based:
 - Local prevailing wage rates
 - Local material and equipment costs
2. Technical Specifications
 - Standard technical specifications
3. Bid Documents
 - Form of contract, bid forms, general conditions, etc.



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The Benefits

- Simplifies the procurement process
- Faster response time
- Improves the quality of work
- Increases local subcontractor participation
- Virtually eliminates defaults, terminations and claims
- Fully transparent process

