

REQUEST FOR PROPOSAL

Database Maintenance and Development Services For the Web-based Annual Reporting System (WBARS)

For the
**THE WASHINGTON STATE
HOUSING FINANCE COMMISSION**
Asset Management & Compliance Division
1000 Second Avenue, Suite 2700
Seattle, Washington 98104

RFP Publication Date: Wednesday, September 4, 2019

**Deadline for submission: Friday, October 4, 2019
at 4:00PM Pacific Time**

FOR ADDITIONAL INFORMATION REGARDING THIS RFP CONTACT:
Melissa A. Donahue EMAIL: melissa.donahue@wshfc.org

REQUEST FOR PROPOSAL

DATABASE MAINTENANCE AND DEVELOPMENT SERVICES FOR WEB-BASED ANNUAL REPORTING SYSTEM (WBARS) FOR THE WASHINGTON STATE HOUSING FINANCE COMMISSION

1. OVERVIEW

The Washington State Housing Finance Commission (the “Commission”) is requesting proposals/bids from qualified database, software, and web developers to provide on-going custom database and software maintenance, development and support services for its Web-Based Annual Reporting System (WBARS).

The Commission finances the construction of affordable rental housing, cultural and social service capital facilities and other projects. The Commission also runs a first-time homebuyer program and monitors financed affordable rental housing projects for compliance with state and federal requirements.

WBARS is used by a dozen Commission staff as well as over 1,000 external stakeholders. Staff annually review report data submitted in WBARS by stakeholders to ensure compliance with state and federal requirements. WBARS data is also exported for the purposes of informing regional, legislative and national affordable housing research.

Important Dates

1. Written *Requests for Additional Information* deadline: Wednesday, September 18, 2019
2. Written Q&A to be published in response to all *Requests for Additional Information*: Wednesday, September 25, 2019
3. **Proposal Delivery Deadline:** **Friday, October 4, 2019**
4. Tentative Selection of Contractor: Friday, November 8, 2019

The RFP document, written response to *Requests for Additional Information* and any additional amendments to the RFP will be published on both the Commission’s website, <http://www.wshfc.org>, as well as the Washington Electronic Business Solution for Vendors <https://pr-webs-vendor.des.wa.gov/> (requires registration).

2. PURPOSE

The purpose of this document is to solicit proposals for maintaining the WBARS systems. The scope of work includes regular maintenance, performance optimization, trouble-shooting and fixing bugs, providing direct support to external users having software import issues, direct support to other funder entities like the Commission who have created interfaces between WBARS and various internal systems, as well as developing new features and product enhancements.

The Contractor must provide cloud hosting services for the live system and additional hosting services for testing and training instances of the main site. Contractor would also be responsible for taking care of domain renewals, SSL renewals and any other site upkeep issues.

All services will be performed under an agreement with the selected Contractor (the "Services"). Such agreement will be in the form of a master agreement (the "Master Agreement") describing the general terms under which unspecified statements of work and services will be individually defined. The amount of work and services executed under the Master Agreement cannot exceed the dollar limit for the initial two-year contract period.

The Contractor will be expected to communicate and coordinate their present and future development requirements with the Commission's WBARS project manager.

Time Period

The initial term of the contract will be for a two-year period beginning January 1, 2020 and terminating on December 30, 2021 with an option to renew for an additional one-year or a maximum two-year period, at the sole discretion of the Commission.

Contractor Reporting

The Contractor will be expected to meet on a weekly basis via conference call or remote meeting tool with the Commission's WBARS Project Manager to report on progress toward completing any specific projects under the Master Agreement. Contractor will also be expected to make key staff available for in-person meetings at least a few times each year.

Contract Amount

Services will be performed according to an agreed-upon monthly fee, which will include all development, quality assurance, testing, project management, maintenance, hosting and upkeep costs; this fee will also cover any travel expenses, meeting expenses or other administrative costs incurred by the Contractor in the normal course of doing business with the Commission. The Commission will not pay additional amounts above and beyond the contractual monthly fee; the Contractor must guarantee that all services provided can and will be provided for the contracted amount.

Method and Schedule of Contract Payment

Fees for work performed under the Master Agreement will be billed to the Commission on a monthly basis, with invoices submitted at the beginning of the month following the month in which the work was performed. The Contractor will be paid by check within 30 days of invoice submission unless the Commission indicates otherwise.

3. MINIMUM REQUIREMENTS

See Proposer Technical Experience Questionnaire included as part of this RFP as Attachment III.

4. SCOPE OF WORK TO BE PERFORMED

- The scope of work involved will be, in general, the upkeep and enhancement of the current WBARS system. Contractors will be expected to perform regular performance analysis and optimization commensurate with scaling up of data and users, maintenance tasks, security checks, domain/SSL updates, respond to users with support requests, fix bugs in regular releases, do quality assurance and regression testing on all builds, and provide consistent project management of all tasks.
- Contractor must provide dedicated project manager to meet weekly with the Commission and be able to send staff to Seattle on a periodic basis (no more than quarterly, in general) for status and/or planning meetings, or to develop use cases and gather user feedback.
- Contractor must have way of tracking bugs and tasks for each build with ability to prioritize and maintain requirements documents and other support files that are needed to document system processes and expectations.
- Contractor should be prepared to build a Section 504/508-compliant version of WBARS to satisfy State web accessibility requirements.
- Contractors should be prepared to implement enhancements to WBARS based on user feedback and long-term use strategy. For new enhancements, Contractor is expected to create use cases and write requirements to clarify all aspects of new functionality and confirm expectations.
- Specific tasks Contractor is required to complete each year will be mapped out in yearly Scope of Work amendments to the Master Agreement and will be further detailed and tracked in the weekly status meetings.

5. SUBMISSION REQUIREMENTS

Proposal Content

1. Cover letter
2. Completed **Attachment II**: Proposer Questionnaire
3. Completed **Attachment III**: Proposer Technical Experience Questionnaire
4. Relevant Projects: A brief description of ongoing and/or successfully executed projects most similar to that which is described in this RFP. Include the names of the specific individuals who would be assigned to the WBARS contract.
5. References: A list of references by name, address and telephone, for each engagement described, as well as the type of engagement. List only the engagements that are pertinent to the staff who will be assigned to this contract. Your references should attest to your past history in meeting schedules, timelines, budgets, cooperation with the contracting agency, and the performance of quality work.

6. Authorized Negotiator: Include name, address, email address, and telephone number of person in the organization authorized to negotiate contract terms and render binding decisions on contract matters.
7. Conflict of Interest: Contractor must disclose and provide an affidavit of any potential conflicts with any of the Commission's affiliated Developments, Owners and/or Management Companies.
8. Price Proposal: The bid amount must include all costs associated with all tasks involved in maintaining and enhancing WBARS, per Contract Amount section under Part 2.

The Commission reserves the right to seek clarification of each proposal and the right to negotiate a final contract in its best interest.

SUBMISSION DEADLINE

All proposals must be submitted to Melissa Donahue by 4:00 p.m., Pacific Time, Friday, October 4, 2019. A proposal will be considered late if received at any time after 4:00 p.m. Late proposals will not be considered.

RFP Coordinator at the Commission:

Melissa A. Donahue, Division Manager
Asset Management & Compliance Division
melissa.donahue@wshfc.org

Proposals must be submitted in the following manner:

1. 1 electronic copy emailed to Melissa Donahue
2. 5 physical hard copies mailed to Melissa Donahue at the following address:

WSHFC

ATTN: Melissa Donahue, Asset Mgmt. & Compliance Division

1000 2nd Avenue, Suite 2700

Seattle WA 98104

NO facsimile (FAX) transmitted proposals will be accepted.

Contractors are to rely on written statements and responses issued by the RFP Coordinator. Communication directed to parties other than the RFP Coordinator may result in disqualification of the Contractor.

Revisions to the RFP

In the event it becomes necessary to revise any part of this RFP, addenda will be published on the Commission's website at <http://www.wshfc.org>, and will be posted on the State of Washington's Web Based vendor system at <https://pr-webs-vendor.des.wa.gov/>. For this proposal, the published questions and answers and any other pertinent information shall be provided as an addendum to the RFP and will be placed on the Commission's website as well as the WEBS site.

Questions about the RFP:

Proposers may email the RFP Coordinator with questions regarding the information contained in this RFP no later than 5:00PM Pacific Time on **Wednesday, September 18, 2019**. This will be the sole opportunity to ask questions about the RFP. The RFP Coordinator will respond to all written questions received by 9/25/19 by creating a written **Questions and Answers** document which will be published to the Commission's website, <http://www.wshfc.org>, and Washington State's W.E.B.S. website, <https://pr-webs-vendor.des.wa.gov/>. The Q&A document will be published no later than 5:00PM Pacific Time on **Wednesday, September 25, 2019**.

ADDITIONAL INFORMATION ABOUT THE RFP PROCESS:

By submitting a proposal, Contractors agree that they waive any claim against the Commission, the State of Washington, and their respective agents, affiliates, officers, and employees for recovery of any costs or expenses incurred in or associated with preparing and submitting a proposal.

Criteria for Evaluating Proposals

The Commission's staff will evaluate all proposals/bids and accept the one that it believes to be in the best interest of the Commission. Price will not be the sole determining factor in the selection of a proposal/bid. The Commission shall not be obligated to award a contract pursuant to this Request for Proposal/Bid and may reject any or all proposals/bids.

Principal considerations will be:

1. The qualifications and relevant experience of the individual personnel assigned to the Master Agreement. Specifically, staff who are qualified in development, quality assurance, programming, and maintenance skills set forth in the proposal.
2. Contractor's capacity to effectively project manage large-scale database systems with multiple stakeholder types and government requirements (as evidenced in past experience).
3. Contractor's ability to contribute strategic and substantive improvements to the system over time (as evidenced in past experience).

Award Notice

After completing the evaluation of all proposals and, if deemed necessary, interviews, the selection committee will tentatively select the company that will provide the services. An announcement of

tentative award is expected to be made sometime in November 2019. A final award, however, will be contingent upon successful negotiation of a final Master Agreement. The effective date of the Master Agreement will be January 1, 2020.

If the Commission is unable to negotiate a mutually satisfactory Master Agreement with its first choice, it may, in its sole discretion, negotiate with its secondary choices or cancel and reissue a new RFP.

Commission Support for the Contractor

Identified members of the Commission staff will assist in coordinating the work of the Contractor with the Commission staff and other persons as required for the completion of the Master Agreement. The staff will work with the Contractor to complete the work in a timely manner as required by the Master Agreement.

Selection Process

Oral Interviews May be Required

Written submittals and oral interviews, if considered necessary, will be utilized in selecting the winning proposal. The Commission, at its sole discretion, may elect to select the top scoring finalists from the written evaluation for an oral presentation. The oral presentation will determine the apparently successful proposer. Commitments made by a Contractor at the oral interview, if any, will be considered binding.

Debriefing of Unsuccessful Contractors

Contractors whose proposals have not been selected for further consideration will be notified via e-mail. Only Contractors who have submitted a proposal under the criteria established by the Commission may protest the rejection of a proposal and request a debriefing. Upon request a debriefing will be scheduled with an unsuccessful Contractor. The request for a debriefing must be received by the RFP Coordinator within three (3) business days after the Notification of Unsuccessful Bidder Letter is e-mailed to the bidder. The debriefing must be held within three (3) business days of the request.

Discussion will be limited to a critique of the requesting Contractor's proposal. Comparisons between proposals or evaluations of the other proposals will not be allowed. Debriefing conferences may be conducted in person or on the telephone and will be scheduled for a maximum of one hour.

Protest Procedures

This procedure is available to Contractors who submitted a response to this solicitation document and who have participated in a debriefing conference. Upon completing the debriefing conference, the Contractor is allowed three (3) business days to file a protest of the solicitation with the RFP Coordinator. Protests must be submitted by e-mail or postal mail. Bidders protesting this solicitation must follow the procedures described below. Protests that do not follow these procedures shall not be considered. This protest procedure constitutes the sole administrative remedy available to bidders under this solicitation.

The protest must state the grounds for the protest with specific facts and complete statements of the action(s) being protested. A description of the relief or corrective action being requested must also be included. All protests will be addressed to the RFP Coordinator.

Only protests stipulating an issue of fact concerning the following subjects shall be considered:

- A matter of bias, discrimination or conflict of interest on the part of an evaluator.
- Errors in computing the score.
- Non-compliance with procedures described in the procurement document or Commission policy.

Protests not based on procedural matters will not be considered. Protests will be rejected as without merit if they address such issues as: (1) an evaluator's professional judgment on the quality of the proposal, or (2) the Commission's assessment of its own and/or other agencies needs or requirements.

Upon receipt of a protest, a protest review will be held by the Commission. The Director of the Commission or an employee delegated by the Director who was not involved in the procurement will consider the record and all facts available and issue a decision within five (5) business days of receipt of protest unless additional time is required, in which case the protesting party will be notified by the Commission.

In the event a protest may affect the interest of another Contractor that submitted a proposal, such Contractor will be given an opportunity to submit its views and any relevant information on the protest to the RFP Coordinator.

The final determination of the protest shall:

- Find the protest lacking in merit and uphold the Commission's action; or
- Find only technical or harmless errors in the Commission's solicitation process and determine the Commission to be in substantial compliance and reject the protest; or
- Find merit in the protest and provide the Commission options which may include:
 - Correct the errors and re-evaluate all proposals and/or
 - Reissue the solicitation document and begin a new process, or
 - Make other findings and determine other courses of action as appropriate.

If the Commission determines that the protest was without merit, the Commission will enter into a Master Agreement with the apparently successful Contractor. If the protest is determined to have merit one of the alternatives noted in the preceding paragraph will be taken.

Commission Perspective

The Commission has the sole discretion and reserves the right to reject any and all proposals received in response to this RFP and to cancel this solicitation if it is deemed in the best interest of the Commission to do so. Issuance of this RFP in no way constitutes a commitment by the Commission to award a Master Agreement, or to pay Contractor's costs incurred either in the preparation of a response to this RFP or during negotiations, if any, of a Master Agreement for services. The Commission also reserves the right

to make amendments to this RFP by giving written notice to Contractors, and to request clarification, supplements and additions to the information provided by a Contractor.

By submitting a proposal in response to this solicitation, Contractors understand and agree that any selection of a Contractor or any decision to reject any or all responses or to establish no Master Agreement shall be at the sole discretion of the Commission. Additionally, by submitting a proposal, Contractors agree that they waive any claim against the Commission, the State of Washington, and their respective officers, employees, and agents for the recovery of any costs or expenses incurred in preparing and submitting a proposal.

No negotiations by the Commission, or any officer, employee, or agent thereof, shall constitute an offer or counteroffer by the Commission. The Commission shall not be bound to any Master Agreement until and unless its authorized representative has executed a written Master Agreement with a Contractor.

The Commission shall not be required to accept any proposal solely on the basis that it contains the lowest price for completion of the work contemplated by this RFP and the Commission reserves the right to negotiate the final Master Agreement price.

Commission Support for the Contractor

Identified members of the Commission staff will assist in coordinating the work of the Contractor with the Commission staff and other persons as required for the completion of the Master Agreement. The staff will work with the Contractor to complete the work in a timely manner as required by the Master Agreement. Contractor is expected to provide their own materials necessary to complete the work under the Master Agreement Contract.

Management of Contract

The Contractor will be expected to meet on a periodic basis with the Commission's lead staff person to report on progress toward completing specific work under the Master Agreement Contract.

Method and Schedule of Contract Payment

The Contractor will submit an invoice for payment at the beginning of the month following a month of services completed. The Commission will pay each invoice with 30 days in the form of a check mailed to the Contractor.

Contract Terms

The Master Agreement shall contain the terms set forth in the below section titled "MASTER AGREEMENT AND GENERAL TERMS AND CONDITIONS" and other terms and conditions customary for this type of contract.

MASTER AGREEMENT AND GENERAL TERMS AND CONDITIONS

The apparent successful Contractor will be expected to enter into the Master Agreement generated by the Commission in accordance with guidelines provided by the State of Washington, including its general terms and conditions (as set forth in Attachment I hereto), and other standard provisions customary to such services agreements. In no event is the Contractor to submit its own standard terms and conditions in response to this procurement. The Contractor may submit exceptions to the general terms and conditions. The Commission will review requested exceptions and accept or reject the same at its sole discretion.

Insurance Coverage

The selected Contractor is to furnish the Agency with a certificate(s) of insurance executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth below.

The Contractor shall, at its own expense, obtain and keep in force insurance coverage that shall be maintained in full force and effect during the term of the Master Agreement. The Contractor shall furnish evidence in the form of a Certificate of Insurance that insurance shall be provided, and a copy shall be forwarded to the Commission within fifteen (15) days of the Master Agreement effective date.

Liability Insurance

- 1) Commercial General Liability Insurance: Contractor shall maintain general liability (CGL) insurance and, if necessary, commercial umbrella insurance, with a limit of not less than \$1,000,000 per each occurrence. If CGL insurance contains aggregate limits, the General Aggregate limit shall be at least twice the "each occurrence" limit. CGL insurance shall have products-completed operations aggregate limit of at least two times the "each occurrence" limit. All insurance shall cover liability assumed under an insured contract (including the tort liability of another assumed in a business contract), and contain separation of insured's (cross liability) condition.
- 2) Additionally, the Contractor is responsible for ensuring that any subcontractors provide adequate insurance coverage for the activities arising out of subcontracts. In the event that services delivered pursuant to this contract involve the use of vehicles, either owned or unowned by the Contractor, automobile liability insurance shall be required. The minimum limit for automobile liability is:

\$1,000,000 per occurrence, using a Combined Single Limit for bodily injury and property damage.

- 3) The insurance required shall be issued by an insurance company/ies authorized to do business within the state of Washington, and shall name the state of Washington, its agents and employees as additional insureds under the insurance policy/ies.

All policies shall be primary to any other valid and collectable insurance. Contractor shall instruct the insurers to give the Commission thirty (30) calendar days advance notice of any insurance cancellation.

Contractor shall submit to the Commission within fifteen (15) calendar days of the contract effective date, a certificate of insurance that outlines the coverage and limits defined in the Insurance section. Contractor shall submit renewal certificates as appropriate during the term of the contract.

Employers Liability ("Stop Gap") Insurance

In addition, the Contractor shall buy employers liability insurance and, if necessary, commercial umbrella liability insurance with limits not less than \$1,000,000 each accident for bodily injury by accident or \$1,000,000 each employee for bodily injury by disease.

Additional Provisions

Above insurance policy shall include the following provisions:

1. Additional Insured. The state of Washington, Washington State Housing Finance Commission, its elected and appointed officials, agents and employees shall be named as an additional insured on all general liability, excess, umbrella and property insurance policies. All insurance provided in compliance with the Master Agreement shall be primary as to any other insurance or self-insurance programs afforded to or maintained by the State.
2. Cancellation. State of Washington, Washington State Housing Finance Commission shall be provided written notice before cancellation or non-renewal of any insurance referred to therein, in accord with the following specifications. Insurers subject to 48.18 RCW (Admitted and Regulation by the Insurance Commissioner): The insurer shall give the State forty-five (45) days advance notice of cancellation or non-renewal. If cancellation is due to non-payment of premium, the State shall be given ten (10) days advance notice of cancellation. Insurers subject to 48.15 RCW (Surplus lines): The State shall be given twenty (20) days advance notice of cancellation. If cancellation is due to non-payment of premium, the State shall be given ten (10) days advance notice of cancellation.
3. Identification. Policy must reference the State's contract number and the agency name.
4. Insurance Carrier Rating. All insurance and bonds should be issued by companies admitted to do business within the state of Washington and have a rating of A-, Class VII or better in the most recently published edition of Best's Reports. Any exception shall be reviewed and approved by Washington State Housing Finance Commission. If an insurer is not admitted,

all insurance policies and procedures for issuing the insurance policies must comply with Chapter 48.15 RCW and 284-15 WAC.

5. Excess Coverage. By requiring insurance herein, the State does not represent that coverage and limits will be adequate to protect Contractor, and such coverage and limits shall not limit Contractor's liability under the indemnities and reimbursements granted to the State in this Master Agreement.

Worker's Compensation Coverage

The Contractor will at all times comply with all applicable workers' compensation, occupational disease, and occupational health and safety laws, statutes, and regulations to the full extent applicable.

Proprietary Information/ Public Disclosure

All proposals will become the property of the Commission and will not be returned to the proposer.

All proposals received shall remain confidential until the Master Agreement. If any Master Agreement resulting from this RFP is signed by the Executive Director of the Commission and the apparent successful Contractor, the proposals shall be deemed public records as defined in RCW 42.17.250 to 42.17.340, "Public Records."

Any information in the proposal that the Contractor desires to claim as proprietary and exempt from disclosure under the provisions of RCW 42.17.250 to 42.17.340 must be clearly designated. The page must be identified and the particular exception from disclosure upon which the Contractor is making the claim. Each page claimed to be exempt from disclosure must be clearly identified by the word "Confidential" printed on the lower right hand corner of the page.

The Commission will consider a Contractor's request for exemption from disclosure; however, the Commission will make a decision predicated upon Chapter 42.17 RCW and Chapter 143-06 of the Washington Administrative Code. Marking the entire proposal exempt from disclosure will not be honored. The Contractor must be reasonable in designating information as confidential. If any information is marked as proprietary in the proposal, such information will not be made available until the affected proposer has been given an opportunity to seek a court injunction against the requested disclosure.

A charge will be made for copying and shipping, as outlined in RCW 42.17.300. No fee shall be charged for inspection of Master Agreement files, but twenty-four (24) hours notice to the RFP Coordinator is required. All requests for information should be directed to the RFP Coordinator.

Attachment One (I)

SELECTED STANDARD TERMS AND CONDITIONS

By submitting a response to this Request for Proposal, the Contractor agrees to acceptance of the following Standard Terms and Conditions and any other provisions that are specific to this solicitation and standard for Master Agreement.

ASSIGNMENT, TRANSFER AND SUBCONTRACTING: The Contractor shall not assign, transfer or subcontract any portion of the Master Contract without the express written consent of the Commission.

COMPLIANCE WITH LAWS: The Contractor must, in performance of work under the Master Agreement, fully comply with all applicable federal, state, or local laws, rules and regulation. Any subletting or subcontracting by the Contractor subjects Sub-Contractors to the same provision. The Contractor agrees that the hiring of persons to perform the contract will be made on the basis of merit and qualifications and there will be no discrimination based upon race, color, religion, creed, political ideas, sex, age, marital status, physical or mental disability, or national origin by the persons performing the contract.

CONFORMANCE WITH MASTER AGREEMENT: No alteration of the terms, conditions, delivery, price, quality, quantities, or specifications of the Master Agreement shall be granted without prior written consent of the Commission.

FACSIMILE RESPONSES: Facsimile responses will not be accepted for responses to this Request for Proposal.

FORCE MAJEURE: Neither party shall be responsible for failure to fulfill its obligations due to causes beyond its reasonable control, including without limitation, acts or omissions of government or military authority, acts of God, materials shortages, transportation delays, fires, floods, labor disturbances, riots, wars, terrorist acts, or any other causes, directly or indirectly beyond the reasonable control of the nonperforming party, so long as such party is using its best efforts to remedy such failure or delays.

HOLD HARMLESS/INDEMNIFICATION: The Contractor agrees to protect, defend, and save the Commission, its agents and employees, while acting within the scope of their duties as such, harmless from and against all claims, demands, causes of action of any kind or character, including the cost of defense thereof, arising in favor of the Contractor's employees or third parties on account of bodily or personal injuries, death, or damage to property arising out of services performed or omissions of services or in any way resulting from the acts or omissions of the Contractor and/or its agents, employees, representatives, assigns, Sub-Contractors, except the sole negligence of the Commission, under the Master Agreement.

MASTER AGREEMENT: The apparent successful Contractor will be expected to enter into a Master Agreement generated by the Commission in accordance with guidelines provided by the

State of Washington, including its general terms and conditions (as set forth in Attachment I hereto), and other standard provisions customary to such services agreements.

MILESTONES, ACCEPTANCE AND PAYMENT: The Contractor's performance and payment shall be tied to milestones as set forth in the Master Agreement and corresponding Statements of Work.

MINORITY AND WOMEN-OWNED BUSINESS PARTICIPATION

Minority and women-owned businesses that are qualified to perform the work desired under this contract are encouraged to apply. The Commission has a goal of supporting women or minority owned businesses. However, no preference will be included in the evaluation of proposals. No minimum level of MWBE participation shall be required as a condition of receiving an award and proposals will not be rejected or considered non-responsive on that basis.

OWNERSHIP OF PROPRIETARY INFORMATION AND INTELLECTUAL PROPERTY: The deliverables will have been specially ordered and commissioned by the Commission. Contractor agrees that all proprietary and intellectual property rights in the deliverables shall be owned by the Commission and the deliverables shall be "works made for hire". Contractor agrees to assign to the Commission, its successors and assigns, all rights, title and interest in and to the deliverables. Contractor and the Commission acknowledge that each party's existing proprietary information and intellectual property will remain the property to the respective party. Contractor warrants that it has the right to use all proprietary information and intellectual property used to fulfill its obligations under the Master Agreement.

SERVICES: The Contractor will provide the services and personnel as set forth in various mutually agreed statements of work or mutually agreed proposal documents (each, a "Statement of Work" or "SOW"). Each SOW's terms will specify the Contractor's duties and responsibilities as to the respective set of services described in that SOW. The Statements of Work will be provided by the Contractor within fifteen (15) days of the request by the Commission. Each Statement of Work will specify the purpose, scope, responsibilities, timing and fees prior to work on each individual project and will be consistent with the response to this Request for Proposal.

TERM OF MASTER AGREEMENT: The initial term of the Master Agreement will be for a one-year period with an option to renew for up to 3 additional one-year periods, at the sole discretion of the Commission.

TERMINATION OF MASTER AGREEMENT: Unless otherwise stated, the Commission may, by written notice to the Contractor, terminate the Master Agreement in whole or in part at any time the Contractor materially fails to perform the Master Agreement.

LICENSE TO USE OF DELIVERABLES - OTHER GOVERNMENTAL ENTITIES: The Contractor acknowledges and agrees that the Commission may permit other governmental entities within Washington State, including without limitation the Department of Commerce, to use the deliverables that are provided to the Commission pursuant to the Master Agreement.

Attachment Two (II) **PROPOSER QUESTIONNAIRE**

Please answer the following questions.

1. Name of the legal entity with which the Master Agreement is to be entered.
2. Names of the legal entities that may be used as subcontractors.
3. Name, address, and telephone number of the principal officer of the Contractor and subcontractor (if applicable).
4. The legal status of the organization (Contractor and subcontractors).
5. Employer identification number.
6. Washington State tax registration number (Contractor and subcontractor).
7. If the Contractor or subcontractor was engaged by the State of Washington within the past 24 months, indicate the contract number and/or any other information available to identify the engagement.
8. Brief summaries of primary individual(s) who will be assigned to this Project. *(can be added to this form or attached as a separate file).*
9. Describe your organization's business continuity plan in the event of a disaster and how it is implemented.
10. How would your system continue to operate and how is data preserved in the event of a non-disaster computer failure? Describe the redundancy features of your system. What disaster recovery testing procedures do you employ?
11. What warranties will you provide?
12. What assurances will you provide to ensure you or your agents will keep all data and information collected confidential?
13. The location of the facility from which the Contractor and subcontractors would operate.

Attachment Three (III)

PROPOSER TECHNICAL EXPERIENCE QUESTIONNAIRE

Please briefly describe your experience with the following (can be done using this form or in a separate attachment):

Database Application Development Services, including:

- Web application and database development and support using tools as outlined in **Attachment IV**
- Business analysis
- Requirements definition
- Development of database applications in a multi-user environment
- Database splitting, linking, and compacting/repair utilities
- Differentiation of data from application and distribution of database components
- Error handling
- Record locking
- Table relationships for databases which may contain several thousand related fields per record
- Stability of database when using connections to other applications
- Regression testing
- Project management
- Application testing and performance tuning
- Deployment support

Multi-Application Platforms, including:

- Cell-specific links to Excel and export of data calculated from embedded formulae
- Web-based data exchange, html forms, data extraction utilities
- Dynamic data exchange in conjunction with various data transfer applications
- Web Hosting Services
- 99.8% or better uptime with guarantee
- Network security certifications
- Multiple redundant power supplies and backbone connections

Web Hosting, including use of cloud services

Web Design, including experience designing to meet Section 504/508 requirements

Web-Based Reporting, including:

- Database analysis and data mapping
- Web-based database development
- Data integrity checking and audit methodology

Development and Coordination with staff, including:

- Code annotation for long term viability of application
- User training
- Documentation for client's employee training.
- Customer service and customer satisfaction.

Attachment Four (IV)

CURRENT SYSTEM PROFILE AND ARCHITECTURE

Washington State public funders have implemented an online reporting system, WBARS, used by owners and managers to report data about their affordable multifamily rental projects. Currently several major public funders have adopted the system and participation is growing throughout Washington State. The public funders include Washington State Housing Finance Commission, State Department of Commerce (Housing Trust Fund), City of Seattle, King County, Snohomish County, City of Tacoma, City of Spokane and City of Bellingham.

The system satisfies program and contractual reporting requirements and tracks most of the main components of project performance (e.g., tenant activity, income/rent limits, HOME requirements, and operational expense and income data).

The Web-Based Annual Reporting System (WBARS) is the way to submit the Combined Funder Annual Report (Table 1,2,3,4) along with Report Cover Sheet.

1. Report Cover Sheet – General report information & report overview text from contractors.
2. Table 1 – Resident/Household details (move in, cert dates, income, rent household size)
3. Table 2 & 3 – Demographics, special need counts for year
4. Table 4, 4(a) & 4(b) – Financial data for calendar year (project income, expenses, reserves)

Each Report Table is submitted separately. A history of all submittals is tracked in the system and viewable on the Report Cover Sheet. The levels of the Hierarchy are:

1. On Site Managers (if applicable) - submit to the PROPERTY MANAGER
2. Property Managers—submit to the CONTRACTOR/OWNER
3. Contractor/Owners—submit to the FUNDER

Technologies Used

User	The user of the application.
React.js	An open-source web application framework maintained by Facebook.
Redux	Redux is an open-source JavaScript library for managing application state. It is most commonly used with libraries such as React or Angular for building user interfaces.
Material UI	Material UI is a free and open-source front-end library for designing websites and web applications. It contains React Component based design templates for typography, forms, buttons, navigation and other interface components, as well as optional third party extensions. Unlike many web frameworks, it concerns itself with front-end development only.

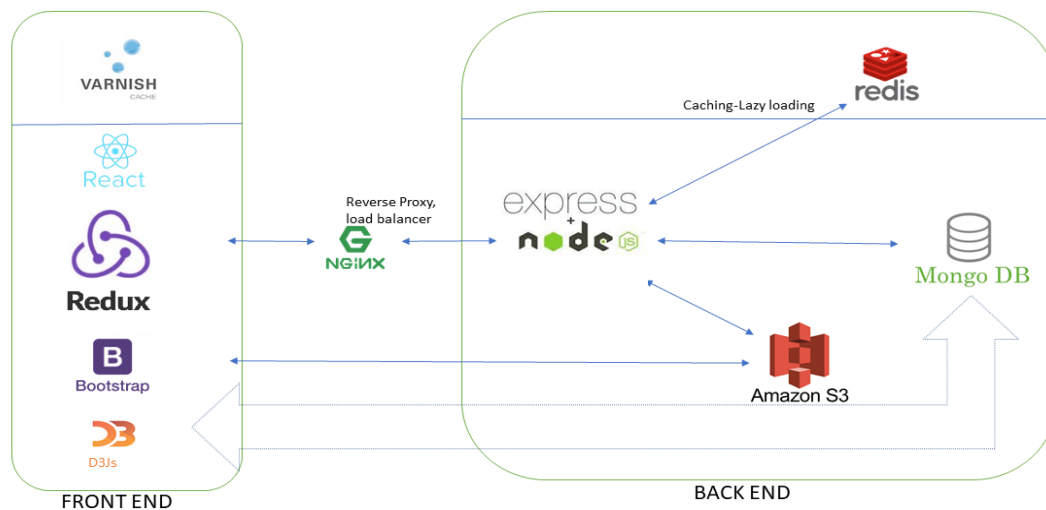
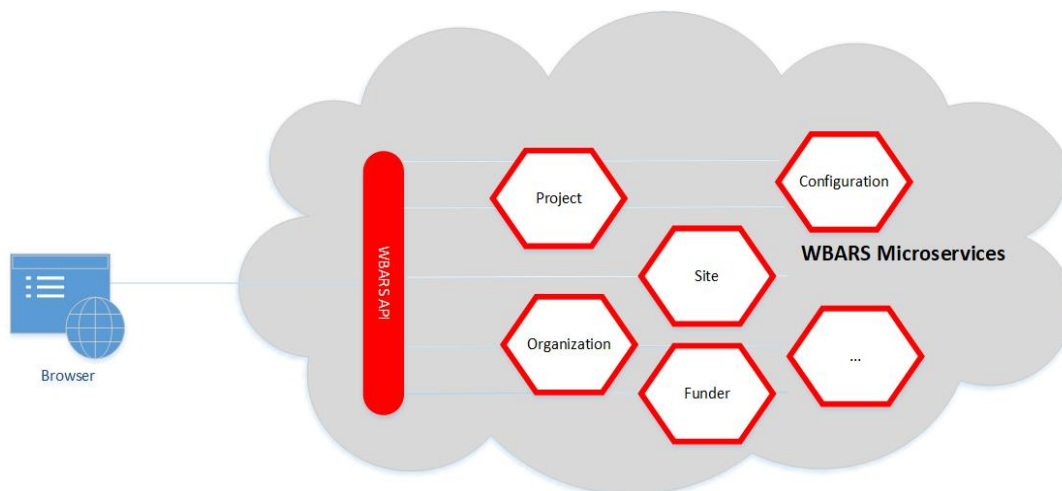
Node.js	A popular open-source JavaScript-based framework/platform built on Google Chrome's JavaScript V8 Engine.
D3.js	D3.js is a JavaScript library for producing dynamic, interactive data visualizations in web browsers. It makes use of the widely implemented SVG, HTML5, and CSS standards.
MongoDB	MongoDB is a free and open-source cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with schemas.
Webpack	Webpack is an open-source JavaScript module bundler. Webpack takes modules with dependencies and generates static assets representing those modules.
Babel	Babel is a JavaScript compiler
ECMAScript	ECMAScript is a trademarked scripting-language specification standardized by Ecma International in ECMA-262 and ISO/IEC 16262. It was created to standardize JavaScript, to foster multiple independent implementations.
Microservices	It is an architectural style that structures an application as a collection of loosely coupled services, which implement business capabilities.
Jest	react-test-renderer is a package that's able to take a React component and render it as a pure JavaScript object. This means it can then be saved to a file, and this is what Jest uses to keep track of our snapshots.

Abbreviations

Abbreviations	Description
JSON	JavaScript Object Notations
SDK	Software Development Kit
UI	User Interface
URL	Universal Resource Locator
API	Application Program Interface
MVC	Model View Controller
HTTPS	It is a communications protocol for secure communication over a computer network, website, Internet or URL
TCP/IP	A computer networking model and set of communication protocols used on the internet and similar computer networks, including the Transmission Control Protocol (TCP) and the Internet Protocol (IP).
AWS	Amazon Web Services
CI/CD	Continuous Integration / Continuous Deployment

Application Architecture

Below diagram gives a high-level overview of application architecture



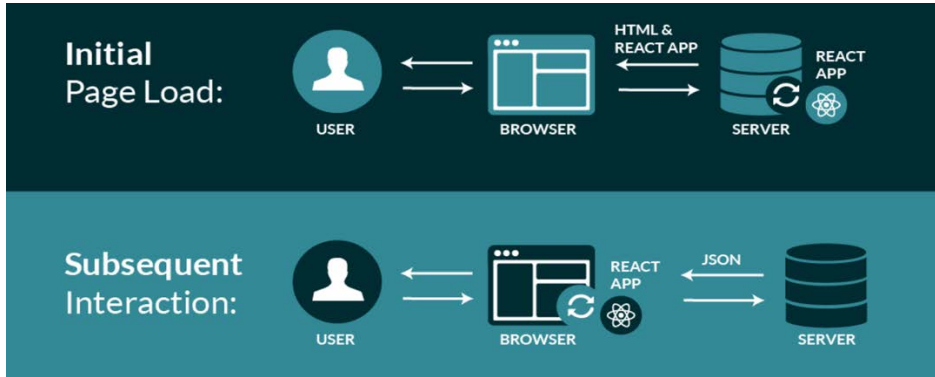
- Portability and reusability of code across channels
- Versatility of changing the theme and look and feel of the application with minimal changes to the backend/architecture
- Clean separation between front end and backend technologies

- Faster response time by maximizing the use of cache and minimizing the amount of the data transferred through the network
- Ease of replacement for each layer in the architecture as the technology changes

Client – Server Architecture

- All API to the frontend will be served from the Rest API Web Service.
- ReactJs and Material UI is responsible for rendering the template/pages in the frontend.
- The pages will contain a dynamic transactional data (remote read) and static information that could be rendered on the local.
- Services acts as a client-side API responsible for accessing the API and feeding it to the store and in turns to the store again.
- Store refresh the view for update the data while receiving data from the server.
- Each component contains specific events and variables matched with the context of the component
- CSS is used to theme the UI Component. At the very high level a generic style guide is applied across the components, however each individual component can have its own stylesheet

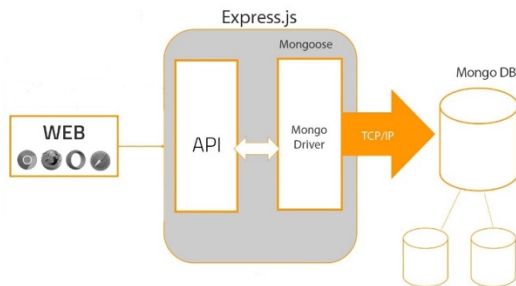
- All CSS, UI Components and Service Module will be cached in the browser cache for further optimization.



API Layer - NodeJS + Restify

As an asynchronous event driven JavaScript runtime, Node is designed to build scalable network applications. Upon each connection the call-back is fired, but if there is no work to be done, Node will sleep. We choose **Restify.js** Framework development because of its flexibility, simplicity, extensibility and performance. Developers can build software using JavaScript on the server side. Restify.js together with Node.js can be used for building APIs for single-page, multi-page, hybrid mobile and web apps.

Mongoose shall be used as a Mongo Driver with Restify.js



Reverse Proxy & Load Balancing - Nginx

Nginx is a web server which can also be used as a reverse proxy, load balancer and HTTP cache. Nginx uses an asynchronous event-driven approach to handling requests. Nginx's modular event-driven architecture can provide more predictable performance under high loads.

Node.js is designed for scalability, and its web server side can handle a lot of Internet traffic reasonably well. But web serving is not the only reason for Node.js – not what it was really built to do.

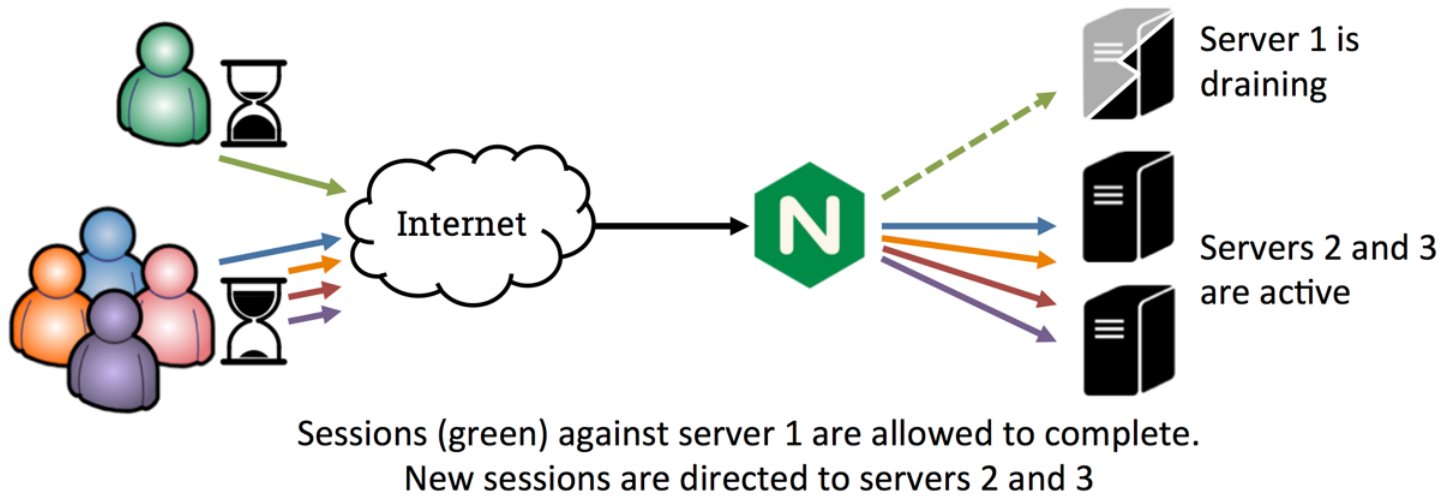
If you have a high-traffic site, the first step in increasing application performance is to put a reverse proxy server in front of your Node.js server. This protects the Node.js server from direct exposure to Internet traffic and allows you a great deal of flexibility in using multiple application servers, in load balancing across the servers, and in caching content.

Putting NGINX in front of an existing server setup as a reverse proxy server, followed by additional uses, is a core use case for NGINX, implemented by tens of millions of websites all over the world.

There are specific advantages to using NGINX as a Node.js reverse proxy server, including:

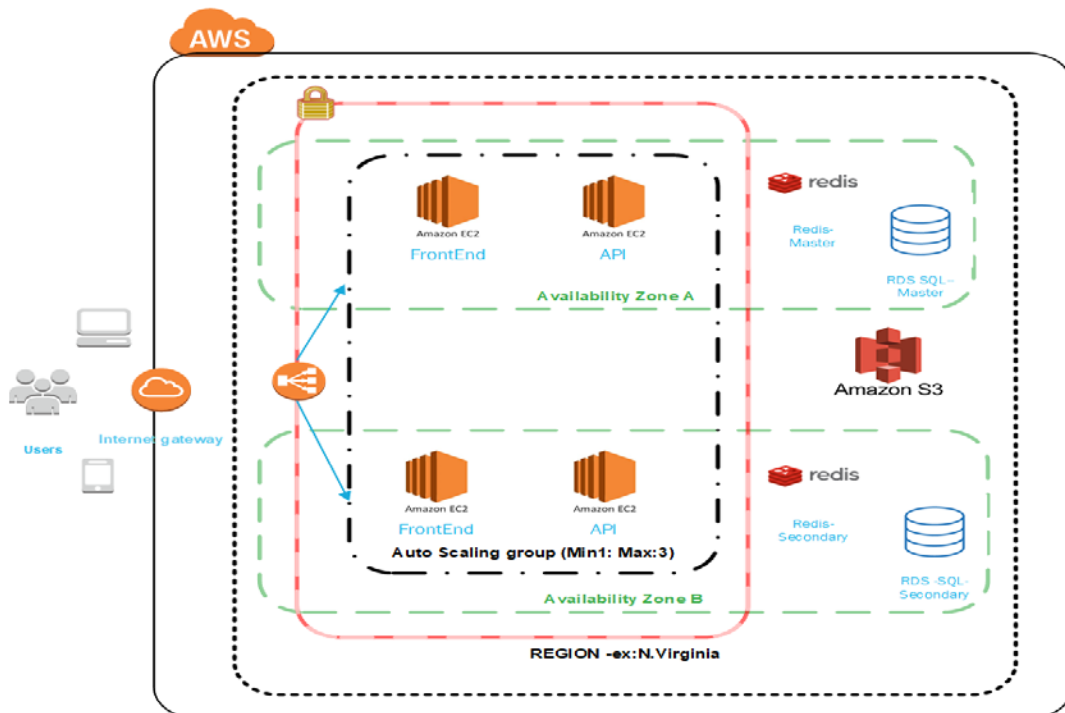
- Simplifying privilege handling and port assignments
- More efficiently serving static images (see next tip)
- Managing Node.js crashes successfully

- Mitigating DoS attack



Infrastructure Architecture

Below diagram is a high level representation of microservices architecture which is highly scalable, fault tolerant and cost effective. The idea behind choosing microservices is to avoid correlated failure in a system where there is a dependency between services.



Components are distributed as micro-services, with frontend and backend API services deployed in more than one instance in different availability zones of a same region in AWS.

Characteristics:

- Elastic load balancer optimizes the load distribution across the instances.
- Instances of same logical group say frontend deployed in two different availability zones, to ensure availability just in case of node failure.
- In-case of increase in traffic beyond threshold, instances would be spun automatically to accommodate the traffic without downtime. Newly created instance will be decommissioned automatically when the traffic is within specified limits. With minimum and maximum number of instances in the auto-scaling group enabled, we only need to pay for what we use, while accommodating unexpected load.
- RDS MySQL cluster with just one master and one secondary against the conventional 3 instances ensures cost effectiveness while serving the purpose of load balancing and availability as the two instances are configured in 2 different availability zones. For more robust database, we shall add additional read replicas.
- By caching frequently accessed data in Redis cluster, load on DB server is minimalized, while ensuring faster access.
- S3 comes handy in case of file storage, reducing load on database while ensuring faster file access. S3 buckets can be configured with purging logic to move historic or less frequently used data to glacier storage which reduces cost.

- Email Notifications through SNS topics (Optional)

MongoDB Advantages

- Schema less – MongoDB is a document database in which one collection holds different documents. Number of fields, content and size of the document can differ from one document to another
- Structure of a single object is clear
- No complex joins.
- Deep query-ability. MongoDB supports dynamic queries on documents using a document-based query language that's nearly as powerful as SQL.
- Tuning.
- Ease of scale-out – MongoDB is easy to scale
- Conversion/mapping of application objects to database objects not needed.
- Uses internal memory for storing the (windowed) working set, enabling faster access to data.