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Design It Before You Build It: A Fixed-Fee Design Definition Package for One Federal Service

UI/UX Design: named flows, a clickable prototype, a USWDS theme and accessibility annotations the build team can work from, priced to the work

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Executive Summary

Most federal systems that frustrate their users were never designed. They were specified, and the specification was turned into screens by the developers who built the database. The result is familiar: a form that rejects an entry without saying why, a page that works with a mouse but not a keyboard, a step that sends every third person to the help desk. When the agency finally rebuilds that system, the same thing can happen again, because the build contract buys code, not decisions about how people will finish their tasks.

The cheapest moment to fix an interface is before the build starts. Section 508 of the Rehabilitation Act, the 21st Century Integrated Digital Experience Act (IDEA) and the U.S. Web Design System (USWDS) all set expectations that cost far less to meet in a design file than in shipped code. By the time a built system reaches Section 508 testing, the expensive decisions about structure, focus order and error handling were made months earlier.

This paper is for the program manager or product owner of a service about to be rebuilt, the CIO's digital experience lead, the Section 508 program manager, the ISSO who approves design tools, and the COR who buys the work. It describes Avalon Technology Services' UI/UX Design service, which starts with one engagement:

- **A fixed-fee design definition package for one named service.** One unclassified service, a set of user flows named in the statement of work, about eight weeks. Discovery and task definition, annotated wireframes and a clickable prototype, a USWDS theme, an accessibility annotation layer mapped to WCAG success criteria, plain-language interface copy and a build-ready handoff package. For three named flows the work prices at about \$39.3K to \$63.8K, with an illustrative fixed fee of \$52K.
- **Added flows at a unit price.** Each flow beyond those named adds about \$8.4K to \$13.3K, written into the statement of work as a fixed unit price.

Avalon prices the package from the hours the named flows take, not from the market range. The \$52K figure sits below the typical \$70K to \$130K range quoted for larger eight-week design packages, because this package carries three flows, no primary research and one approver. It is well under the \$350,000 simplified acquisition threshold.

Avalon designs and documents. It does not write the production code, test the built system for Section 508 conformance, or certify compliance with any law or standard.

Conformance is established by testing the implemented system, and that remains the agency's process.

Why Federal Interfaces Fail Their Users

Program teams rarely ask for a designer. They describe symptoms. Any of these phrases in a kickoff meeting usually means the problem sits in the interface.

What the program says	What it usually means
"People can't figure out how to finish the application."	The flow was never designed; error and edge states were left to the developer
"The help desk is drowning in the same three questions."	Three screens are generating avoidable contacts
"It has to be 508 compliant this time."	Accessibility was tested at the end last time, after the structure was fixed
"We adopted USWDS, so design is done."	USWDS is the parts bin, not the product
"We bought the platform, now we need it to be usable."	Configuration happened without task design

One routing question separates this service from its neighbors. If people cannot **find** things, the work is information architecture. If a built system is **failing accessibility testing**, the work is Accessibility Modernization. If the agency needs to understand the experience **across channels**, that is CX strategy. If people cannot **finish a task** on a system that is about to be rebuilt, this package fits.

Why Design Gets Skipped

- **Build budgets reward visible work.** Development is easy to justify; the design that decides whether development succeeds is absorbed or dropped.
- **Requirements become screens directly.** Without a design step, the interface mirrors the database schema.
- **Error states are nobody's job.** Happy paths get specified; rejected entries, timeouts and empty results do not.

- **Accessibility arrives late.** Testing a built product finds problems that were cheap in the design file and expensive in code.
- **Review has no owner.** A committee without one approver with decision authority turns two review cycles into six.

The Mandates Behind the Work

Driver	What it says	What it means for this engagement
Section 508 of the Rehabilitation Act (36 CFR Part 1194)	Federal ICT must be accessible to people with disabilities; the 2017 refresh incorporates WCAG 2.0 Level AA	Designs are built to applicable success criteria from the start, and annotations carry that intent into the build
WCAG 2.1 and 2.2	Current W3C accessibility guidance	Used as design acceptance criteria and good practice, not as the federal legal standard
21st Century IDEA Act (2018)	Modern, accessible, mobile-friendly, user-centered public websites and digital services	USWDS-based, mobile-first screens at the design layer; it does not certify IDEA compliance
U.S. Web Design System	The federal design system of components, tokens and patterns	The default design vocabulary; custom components only where justified
Plain Writing Act of 2010	Clear government communication the public can use	Plain-language labels, instructions and error messages
Paperwork Reduction Act	OMB clearance before collecting information from 10 or more members of the public	Any user contact is scoped to fit the agency's clearance path; formal studies are a separate service
Section 508 program (section508.gov)	GSA's program hub and annual governmentwide Section 508 assessment	Shows where agencies report testing late; design-stage annotation addresses the cause

Two notes on scope. OMB M-24-08, issued in December 2023, addressed Section 508 programs; agencies should confirm its current status with their 508 program manager. And NIST SP 800-53 touches this work only lightly: designs respect session timeout behavior, system use notifications and authentication flows that work with the agency's identity service. The design does not implement or assess any control.

What the Package Does

The package covers one named service and the flows listed by name in the statement of work, for example "submit an application", "upload supporting documents" and "check status". Avalon works in the agency's own design-tool tenant and repositories.

Workstream	Activities
Design discovery	Heuristic review of the current interface; Digital Analytics Program or application telemetry; help-desk call drivers; stakeholder interviews; hard constraints such as backend behavior and authentication
Task and flow definition	Top tasks and a flow for each named task, including error, empty and edge states
Wireframes and prototype	Annotated wireframes reviewed with the product owner, then a clickable prototype for stakeholder walkthroughs
Visual design and USWDS theme	Design tokens, type and color inside USWDS patterns and contrast requirements
Component and pattern inventory	Every element mapped to a USWDS component, with all states: default, hover, focus, error, disabled, loading
Accessibility annotation	Focus order, heading structure, ARIA intent for custom components, target sizes, error recovery and color independence, mapped to WCAG success criteria
Interface content and handoff	Plain-language microcopy, a developer specification package and a design decision log

Deliverables

Deliverable	Format
Design discovery brief: findings, constraints, top tasks	PDF or Markdown, 8 to 15 pages
Annotated wireframes for each named flow	Design file in the agency's tool, plus PDF export
Interactive prototype	Prototype link in the agency's tool
USWDS theme	Design library plus token export (JSON or CSS variables)
Component and pattern inventory	Design library plus a spreadsheet mapped to USWDS components
Accessibility annotation layer	Annotations in the design file plus a summary matrix mapped to WCAG success criteria
Developer handoff package	Specifications plus a design decision log

Where the Package Stops

The package stops at the handoff. Front-end code belongs to the build team, whether that is the agency's developer, a prime, or Avalon's separate Cloud Native Development or Web Services & Microservices services. A formal usability study is Avalon's User Testing & Feedback Analysis service. Testing or remediating a built system for Section 508 is Accessibility Modernization. Sitewide navigation and taxonomy (Information Architecture) and cross-channel journey work (CX Strategy Development) are separate Avalon services. Brand identity, print design, training and change management are out of scope.

What the 508 Program Manager Can Rely On

The accurate statement is narrow: designs are developed against applicable WCAG 2.1 AA success criteria and delivered with design-stage accessibility annotations, which

reduce conformance findings and remediation cost during Section 508 testing of the implemented system. Conformance of the deployed system is determined by testing the built product, through the agency's own testing process or a separately scoped effort.

Accurate	Not accurate
Designs built to applicable WCAG success criteria	"The delivered system will be 508 compliant"
Annotations that tell developers and testers the intended focus order, semantics and error behavior	An Accessibility Conformance Report for a system not yet built
USWDS-based screens that support the agency's IDEA work	Certification of IDEA compliance
Design artifacts the ISSO can review for tool and data handling	Any bearing on an ATO

The annotation layer is written so that a DHS Trusted Tester or the agency's own tester can compare the built screens against stated intent, instead of reverse-engineering it. That is the point of doing accessibility work in design: the tester finds fewer surprises, and the developer has fewer guesses to make.

How an Engagement Runs

Phase	Timing	What happens
0: Kickoff and access	Award, in parallel	Design-tool tenant confirmed with the ISSO, product owner named, analytics and help-desk data requested, flows confirmed by name
1: Discovery and task definition	Weeks 1 and 2	Heuristic review, data review, interviews, constraints, top tasks and flows with error and empty states
2: Wireframes and prototype	Weeks 3 to 5	Annotated wireframes, one structured review cycle, clickable prototype and moderated walkthroughs with staff
3: Visual, theme, annotation and handoff	Weeks 6 to 8	USWDS theme, component inventory, accessibility annotation, plain-language copy, handoff package and readout

Each artifact gets two structured review cycles with one approver who has decision authority. When a build follows, design can continue one to two sprints ahead of development, with design review of implemented screens, as a separate task.

What the Agency Provides

- One product owner with decision authority, available two to four hours a week. A review committee without a decision-maker is the largest schedule risk in this work.
- Access to subject-matter experts and to the staff who handle the service today.
- Existing analytics, help-desk ticket data, brand assets and any prior research.
- A decision on the design-tool tenant before kickoff, confirmed by the ISSO. A FedRAMP Certified tool covers the provider's offering only; the agency decides its own use.
- If research with members of the public is bundled, a Paperwork Reduction Act path agreed before sessions are scheduled.

Each item is written into the statement of work as a government-furnished item with schedule relief, so a delay is attributed where it occurs.

What Is Not Included

Included	Separate work
Flows named in the statement of work	The rest of the portal; added flows by priced modification
Moderated prototype walkthroughs with staff	Formal usability studies and surveys
Interface-level microcopy	Rewriting the agency's content
Handoff package and decision log	Front-end code
Unclassified services	Classified or cleared environments

How Avalon Staffs It

Avalon takes one engagement at a time, works business hours and works on unclassified systems only. Avalon's founder leads the engagement and reviews buildability against the target environment. The senior product designer and accessibility reviewer are named personnel, hired or subcontracted for the engagement and listed in the proposal with their portfolios. Avalon does not propose this package until a designer with a federal-style USWDS and Section 508 portfolio is under agreement. Avalon has no past federal engagements under this service. FAR 15.305 says an offeror without a record of past performance may not be evaluated favorably or unfavorably on that factor; what protects the program is a named team, a fixed price, flows named in writing and a short schedule.

Requirement	How it is handled
Senior product designer	Named personnel with a federal-style USWDS and Section 508 portfolio, listed in the proposal, at 0.75 to 1.0 of full time
Accessibility reviewer	Named personnel whose certifications match the agency's requirements, listed in the proposal
Civilian access	Public Trust investigation at the tier the agency requires
Design tools	The agency's own tenant, with access the agency provisions; Avalon holds no tool licenses for this work and hosts nothing
Insurance and contract vehicles	Any coverage the solicitation requires is a condition of award; Avalon does not hold a GSA Schedule or a governmentwide contract today

Key personnel substitution requires CO approval. Design files, tokens and documents are delivered to the agency, with data rights under FAR 52.227-14 as the contract specifies. If Avalon might later bid the build, the contracting officer decides whether organizational conflict of interest rules apply, and Avalon raises the question at award.

Pricing and How to Buy

Engagement	Typical market range	Avalon
Focused package: one to three flows, about 4 weeks, no primary research	\$35K–\$60K	Priced to the work; one flow illustrative \$27K
Full package: several flows, prototype, USWDS theme, annotation, handoff, about 8 weeks	\$70K–\$130K	Priced to the work; three named flows illustrative \$52K, below this range
Added flow	Not separately quoted	Fixed unit price in the statement of work, about \$8.4K–\$13.3K
Design inside a build task order	About 8–15% of build labor	Through the prime, at the same rate card

Avalon fixes the price against the named flows, two review cycles per artifact and a dated dependency schedule. It does not raise a small scope to meet a market range, and it does not discount design to win a later build. The difference from the \$70K to \$130K range is scope, not quality: larger packages usually carry more flows, primary research or layered review, which this package excludes or prices per flow.

The package sits under the \$350,000 simplified acquisition threshold and can be bought as an open-market purchase. When design is part of a build, a prime can subcontract the design line to Avalon. Avalon does not hold a GSA Schedule or a governmentwide contract today, and it does not resell design tools, software or licenses.

Design packages are often funded from single-year operations and maintenance money, and an eight-week fixed-price task fits a late-fiscal-year award. The best time to buy is when the build is funded but not yet awarded, so the handoff package can go into the build solicitation.

Illustration: Three Flows, Eight Weeks

The figures below are a planning illustration for one representative unclassified public-facing service with three named flows. They are not a quote and not a result from any engagement.

Labor Loading

The designer spends a fixed 80 hours on discovery, the USWDS theme and the handoff package, plus 62 hours per flow for states, wireframes, prototype, visual design, annotation and specification. The accessibility reviewer spends 12 fixed hours and 8 per flow. Project management runs 4 hours a week.

Role	Rate band	Base hours
Senior product designer	\$120–\$190/hr	266
Accessibility reviewer	\$120–\$190/hr	36
Project manager	\$95–\$200/hr	32
Total		334

The designer's 266 hours over eight weeks are about 0.83 of full time, inside the 0.75 to 1.0 loading one designer can carry.

What the Package Costs

Scope	Hours	Rate-band range	Fixed fee	Designer load
Focused (1 flow, 4 weeks)	178	\$21.0K–\$34.0K	\$27K	0.89 FTE
Base (3 flows, 8 weeks)	334	\$39.3K–\$63.8K	\$52K	0.83 FTE
Large (5 flows, 10 weeks)	482	\$56.8K–\$92.0K	\$74K	0.97 FTE

The base case is 334 hours, or \$39.3K to \$63.8K, with a \$52K fixed fee at the midpoint. That is below the typical \$70K to \$130K range for larger design packages, and it is the price because it is what three flows take. A single flow over four weeks runs \$21.0K to \$34.0K, below the typical \$35K to \$60K focused range for the same reason. Five flows need about 1.22 of a designer's time over eight weeks, more than one person carries, so that scope runs ten weeks at \$56.8K to \$92.0K or is split.

What the Agency Brings to the Readout

The model prices the package; it claims no saving. The cost of the status quo comes from the agency's own numbers: monthly transactions, times the share that fail or are abandoned, times the help-desk contacts each failure creates, times the cost of a contact, times twelve. At an illustrative 20,000 transactions a month, a 10% failure rate, one contact each and \$12 a contact, that is \$288K a year, and the \$52K fee equals about 4,333 contacts, or 2.2 months of that failure demand.

Inputs (agency-supplied; illustrative)	Annual failure cost	Months equal to the fee
20,000 a month, 10% fail, \$12 a contact	\$288K	2.2
20,000 a month, 5% fail, \$8 a contact	\$96K	6.5
5,000 a month, 10% fail, \$8 a contact	\$48K	13.0

These figures describe the size of the problem. They are not a forecast of what redesign will remove, and the agency's own data, not a vendor estimate, goes to the budget office.

Common Pitfalls

Pitfall	How to avoid it
The expanding portal: two flows become "the rest of the site"	Flows named in the statement of work; a fixed unit price for each added flow
Microcopy becomes a content rewrite; handoff becomes front-end code	The boundary table copied into the statement of work
Endless review by committee	Two review cycles per artifact and one named approver
Compliance oversell	No claim that design makes a system 508 compliant or satisfies IDEA
Tool tenant, product owner or data not ready	Government-furnished items with schedule relief, dated at award
Research that outruns the PRA path	Staff walkthroughs only, unless a clearance path is agreed in writing

Conclusion and Next Step

Most federal interfaces that fail their users were not badly built. They were never designed, and every later fix pays for that in code, in testing findings and in help-desk contacts.

The natural first step is a fixed-fee design definition package: one named service, three named flows, about eight weeks and \$52K in the illustration, ending in a prototype, a USWDS theme, an accessibility annotation layer and a handoff package the build team can price and build from. To discuss a service, contact Avalon Technology Services at contact@AvalonTechServices.com.

Appendices

Appendix A: Glossary

Accessibility annotation

Design-stage notes on focus order, headings, semantics, ARIA intent and error behavior that tell developers and testers what was intended.

Design definition package

A fixed-scope set of design artifacts for named flows, delivered before a build starts.

Design tokens

Named values for color, type and spacing that carry a visual theme into code.

Flow

The sequence of screens and states a user moves through to finish one task, including errors and empty results.

USWDS

U.S. Web Design System: the federal design system of components, tokens and patterns.

WCAG

Web Content Accessibility Guidelines, published by the W3C; Section 508 incorporates version 2.0 Level AA.

Appendix B: Illustration Assumptions

All values are planning assumptions for one representative unclassified service. None is drawn from a specific agency, a real system or a completed engagement.

Assumption	Value	Basis
Scope	3 named flows, 8 weeks	Planning assumption
Designer fixed effort	80 hours	Planning assumption
Designer per flow	62 hours	Planning assumption
Accessibility reviewer	12 hours plus 8 per flow	Planning assumption
Project management	4 hours a week	About 0.1 FTE
Rates	Designer and accessibility reviewer \$120–\$190, project manager \$95–\$200 an hour	Market-norm rate bands
Fixed fee	Midpoint of the rate-band range, \$52K	Priced to the work; no floor at the market range
Failure demand	20,000 a month, 10%, \$12 a contact	Illustrative; agency supplies real values

Appendix C: References

1. **U.S. Access Board**, *Information and Communication Technology (ICT) Standards and Guidelines*, 36 CFR Part 1194
<https://www.access-board.gov/ict/>
2. **General Services Administration**, *Section508.gov*, including the annual governmentwide Section 508 assessment
<https://www.section508.gov>
3. **World Wide Web Consortium**, *Web Content Accessibility Guidelines (WCAG) 2.2*
<https://www.w3.org/TR/WCAG22/>
4. **U.S. Congress**, *21st Century Integrated Digital Experience Act (H.R. 5759, 115th Congress)*
<https://www.congress.gov/bill/115th-congress/house-bill/5759>

5. **General Services Administration**, *U.S. Web Design System*
<https://designsystem.digital.gov>
6. **General Services Administration**, *Digital Analytics Program*
<https://digital.gov/guides/dap/>
7. **PlainLanguage.gov**, *Federal plain language guidelines and the Plain Writing Act of 2010*
<https://www.plainlanguage.gov>
8. **General Services Administration**, *PRA for digital teams*
<https://pra.digital.gov>
9. **Department of Homeland Security**, *Trusted Tester program*
<https://www.dhs.gov/trusted-tester>
10. **National Institute of Standards and Technology**, *SP 800-53 Rev. 5, Security and Privacy Controls for Information Systems and Organizations*
<https://csrc.nist.gov/pubs/sp/800/53/r5/upd1/final>
11. **FedRAMP**, *FedRAMP program and 2026 Consolidated Rules*
<https://www.fedramp.gov>
12. **Acquisition.gov**, *FAR 15.305, Proposal evaluation*
<https://www.acquisition.gov/far/15.305>
13. **Acquisition.gov**, *FAR 52.227-14, Rights in Data, General*
<https://www.acquisition.gov/far/52.227-14>
14. **Centre Law & Consulting**, *Inflation Updates to FAR Thresholds: What Changed on October 1, 2025*
<https://centrelawgroup.com/blog/inflation-updates-to-far-thresholds-what-changed-on-october-1-2025/>