

# Request for Proposal Autodesk CAD Support

## Introduction

Denver Water is inviting your firm to submit a proposal to provide Autodesk product-based services and support to meet the requirements of Denver Water's Engineering Department interface needs. These may include installation, configuration, customization, licensing, annual processing, product and deployment changes reviews as part of this comprehensive package.

The OWNER will evaluate the proposals based on the evaluation criteria included in this RFP.

## Background

**Engineering has 50 Drafters** that are broken down into different disciplines that use Various Autodesk applications and EaglePoint LandCADD.

**Survey has 13 Drafters** that are responsible for providing land surveying, aerial photography control, and mapping services related to new and existing Denver Water facilities, properties, rights of-way, and easements. These services include, but are not limited to, predesign, preconstruction, construction and post-construction field surveying; property boundary determination and definition; bathymetric surveys of reservoirs, survey grade acquisition for G.I.S. (geographic information system); oversight of Global Positioning System (GPS) program to include Point Cloud data and LIDAR data; and ground based horizontal and vertical monitoring of Denver Water dams.

**Programs and Projects has 15 Design Drafters** that are currently broken down into three groups; two Civil sections and one Electrical section that are responsible for providing engineering services related to new and existing Denver Water facilities. These services are provided through a number of engineering disciplines and related functions including civil, process, architectural, corrosion, structural, electrical, mechanical, hydraulic, and dam safety. Also, **Landscape/Irrigation Design has one Drafter** that provides landscaping services. Personnel within each group are responsible for managing projects from conception through design and construction support including scheduling, budgeting, control of assigned projects and the necessary coordination with other department divisions and sections as well as outside agencies.

### Distribution Engineering & Property Management

**Distribution Drafting has nine Drafters** that are responsible for the design, scheduling, inspection of, and as-built drawing preparation for all main installations by Board forces. Main extensions proposed by others are reviewed and inspected. Distribution mains are defined as pipes under 24-inches. Other responsibilities include the Department's program material approval, and Engineering Standards.

**Property Management has five Drafters** that are responsible for easement acquisitions, plan reviews, land sales and exchanges and license agreements on Denver Water's operating properties and non-operating properties. Additionally, this section maintains historic and current distributor boundaries, plots, interprets and generates legal descriptions for sections in Sales Administration and Planning.

**Technical Support Solutions (TSS)/CAD Management Team has four Drafters** that determine and monitor CAD Standards, transition and support of computer applications and hardware support for Engineering. TSS staff schedules CAD training, CAD software upgrades and audits on drafters.

**Asset Recording Group has four Drafters** that are responsible for all activities related to the GIS database, AutoCAD to GIS, (ArcGIS) including addition, deletion, updates and improvements to the database, analysis using GIS datasets to achieve results for decision support, production of customized analysis interfaces for other Divisions and sections to assist them in completing sophisticated analysis using spatial data and cartographic output using all data that is spatial in nature. Personnel within this section are responsible for the creation of all new datasets needed to maintain a Geospatial system that encompasses the collection system areas as well as the treatment and distribution areas.

**Treated Water Planning has one Drafter** who performs, analysis related to the operation of the treated water system including modeling, distribution operations, fire flow, surge and other hydraulic studies; performs system measurements related to system operation; determines new conduits, pumping and treated water storage facilities needed to meet new demand; develops participation costs and responsibilities; reviews plans and service studies for new developments; performs technical research and special studies. Also responsible for certain activities related to posting “proposed plans” to GIS database using AutoCAD and ArcGIS tools.

This count shall be used in estimating the work effort required for the tasks below “earmarked by assume number of hours”.

### **Pre-Proposal Meeting**

Questions will be answered at the pre-proposal meeting will be held in Denver Water’s Board Room, 9:00 a.m. to 10:00 a.m. local time, Monday, March 14, 2016.

### **Contract Schedule**

The contract with the Owner’s Consultant is expected to be in effect starting in April 2016 with an estimated completion by March 2019. The anticipated contract schedule is as follows.

Please provide cost for a 3 year renewable contract.

March 2016	RFP Issued
March 14, 2016	Pre-Proposal Meeting
March 29, 2016	Proposals Due
April 4, 2016	Consultant Selection
April 27, 2016	Board Meeting and Notice of Award
May 6, 2016	Contract Begin
May 6, 2019	Contract Complete

## Scope of Services

The Consultant shall assist Denver Water's CAD Management Team in:

### 1 Training

- 1.1 Autodesk and related software products training and training on established Denver Water workflow and standards in various Autodesk Infrastructure Design Suite **Premium** and **Ultimate** platforms e.g. AutoCAD Civil 3D, Navisworks, Revit, CAD to GIS, CAD to BIM, BIM (both vertical and horizontal)

Products	ULTIMATE	PREMIUM	STANDARD
Autodesk® AutoCAD®	✓	✓	✓
Autodesk® AutoCAD® Map 3D	✓	✓	✓
Autodesk® AutoCAD® Raster Design	✓	✓	✓
Autodesk® ReCap™	✓	✓	✓
Autodesk® Storm and Sanitary Analysis	✓	✓	✓
Autodesk® AutoCAD® Utility Design	✓	✓	
Autodesk® AutoCAD® Civil 3D®	✓	✓	
Autodesk® 3ds Max®	✓	✓	
Autodesk® Navisworks® Manage	✓		
Autodesk® Navisworks® Simulate		✓	✓
Autodesk® Robot™ Structural Analysis Professional	✓		
Autodesk® Revit®	✓		
Autodesk® Revit® Structure		✓	
<b>Products and services available with Subscription</b>			
InfraWorks® 360 LT	✓	✓	
Bridge Module*	✓	✓	
Geotechnical Module*	✓	✓	
Rail Layout Module*	✓	✓	
River and Flood Analysis Module*	✓		
Structural Analysis for Revit	✓	✓	
Green Building Studio®	✓	✓	

1.2 Other essential Denver Water CAD operation processes such as new employee hires, changeovers, CAD technical support team or professional staff enhancements. Training may consist of various levels of instructions such as: Fundamentals, Advance, Refresher and Upgrades. It is desirable that training be provided by an Autodesk Authorized Training Center (ATC) and ATC certified instructors. It is further desirable that the instructors are State of Colorado Department of Higher Education Department approved.

- Assume that the following CAD users are to attend training on the above items as needed, using the number of drafters listed under the background.
- Assume that Denver Water will review course content and add or delete (customize) training items that don't pertain to the current drafting functions or CAD platform.
- Assume Off-the-Job-Training (Off-JT) will be conducted at contractor's location or training center.
  - New Employees Hires = 2 drafters per/yr.
  - Changeovers Hires = 2 drafters per/yr.
  - CAD Technical Support Team = 3-7 drafters per/yr.

**Note:** the following tables below are shown for as training examples by drafting sections. These table are for information only – no price need for these tables. Also training may be on “A la carte” order based on the training requirements for the employee.

**Breakdowns by Sections:**

Survey Drafting					
Trainee	Category	Content	Member	Class Level	
New & Present Employees	Autodesk Infrastructure Design Suite Premium and Ultimate	Civil 3D Fundamentals	Survey	Fundamental, Advance, Refresher and Upgrades.	
	GPS Surveying Tools For Faster Porcessing	Point Clouds, Surface Creation for Point Cloud Data, Exclusionary Catchments,Surface Modeling, Base Map Creation	Survey, Civil	Fundamental, Advance, Refresher and Upgrades.	
	On-job training (OJT) or Off the job training (Off-JT)	Provide training based on current working requirements		ALL	
		External Training	<ul style="list-style-type: none"> <li>• Civil 3D</li> <li>• Civil 3D Grading</li> <li>• Create-Edit-View-&amp; analyze Surfaces</li> <li>• DW CAD Standards</li> <li>• Lidar Data</li> <li>• Line-of -Sight-Analysis</li> <li>• Point Clouds</li> <li>• Product(s)Release Updates</li> <li>• Quantity Takeoffs, Volumes</li> <li>• Training as needed</li> </ul>		
Internal Training					

### Breakdowns by Sections Cont.

Program and Projects Design Drafting					
Trainee	Category	Content	Member	Class Level	
<b>New &amp; Present Employees</b>	<b>Autodesk Infrastructure Design Suite Premium and Ultimate</b>	Civil 3D Fundamentals, Civil 3D Grading, Civil 3D Pipe Networks & PipeBuilder	Civil	Fundamental, Advance, Refresher and Upgrades.	
	<b>AutoCAD Electrical</b>	AutoCAD Electrical, DW Customized Blocks	Electrical	Fundamental, Advance, Refresher	
	<b>LandCADD</b>	Landscape and Irrigation planning.	LND/IRR	Fundamental, Advance, Refresher	
	<b>On-job training (OJT) or Off the job training (Off-JT)</b>		Provide training based on current working requirements	ALL	
		External Training	<ul style="list-style-type: none"> <li>ACAD Electrical</li> <li>Civil 3D</li> <li>Civil 3D Grading</li> <li>Civil 3D Pipe Networks &amp; Pipebuilder</li> <li>DW CAD Standards</li> <li>LandCADD</li> <li>Product(s)Release Updates</li> <li>Training as needed</li> </ul>		
Internal Training					

Distribution Drafting					
Trainee	Category	Content	Member	Class Level	
<b>New &amp; Present Employees</b>	<b>Autodesk Infrastructure Design Suite Premium and Ultimate</b>	Civil 3D Fundamentals, Civil 3D Pipe Networks & PipeBuilder	Dist	Fundamental, Advance, Refresher and Upgrades.	
	<b>On-job training (OJT) or Off the job training (Off-JT)</b>		Provide training based on current working requirements	ALL	
		External Training	<ul style="list-style-type: none"> <li>Civil 3D</li> <li>Civil 3D Pipe Networks &amp; Pipebuilder</li> <li>DW CAD Standards</li> <li>Product(s)Release Updates</li> <li>Training as needed</li> </ul>		
		Internal Training			

### Breakdowns by Sections Cont.

Property Management Drafting					
Trainee	Category	Content	Member	Class Level	
New & Present Employees	Autodesk Infrastructure Design Suite Premium and Ultimate	Civil 3D Fundamentals	PM	Fundamental, Advance, Refresher and Upgrades.	
	On-job training (OJT) or Off the job training (Off-JT)	Provide training based on current working requirements		ALL	
		External Training	<ul style="list-style-type: none"> <li>Civil 3D</li> <li>DW CAD Standards</li> <li>Training as Needed</li> </ul>		
Internal Training					

CAD Technical Support Team					
Trainee	Category	Content	Member	Class Level	
New & Present Employees	Autodesk Infrastructure Design Suite Premium and Ultimate	Civil 3D Fundamentals, Civil 3D Pipe Networks & PipeBuilder	CAD	Fundamental, Advance, Refresher and Upgrades.	
	Building Design Suite	Revit, MEP, #d Building Design Workflow	CAD	Fundamental, Advance, Refresher and Upgrades.	
	On-job training (OJT) or Off the job training (Off-JT)	Provide training based on current working requirements		ALL	
		External Training	<ul style="list-style-type: none"> <li>AutoCAD Electrical</li> <li>Autodesk Certification</li> <li>Bluebeam</li> <li>Civil 3D</li> <li>Civil 3D Pipe Networks &amp; Pipebuilder</li> <li>DW CAD Standards</li> <li>Navisworks</li> <li>Product(s)Release Updates</li> <li>Revit Productivity</li> <li>Training as needed</li> </ul>		
Internal Training					

**Breakdowns by Sections Cont.**

Asset Recording & Treated Water Planning				
Trainee	Category	Content	Member	
New & Present Employees	Autodesk Infrastructure Design Suite Premium and Ultimate	Civil 3D Fundamentals	ARG/TWP	
	On-job training (OJT)	Provide training based on current working requirements		ALL
		External Training	<ul style="list-style-type: none"> <li>• Civil 3D</li> <li>• DW CAD Standards</li> <li>• Training as needed</li> </ul>	
Internal Training				

**Price Index Breakdown by Autodesk Courses:**

Course	Duration	Price	Price break if more than two drafters per class	Course Materials
<u>Example:</u> Bluebeam Course	1 day	\$333	1 @ \$333 3-5 @ \$300 5-7 @ \$295	Free \$20 /per book
AutoCAD Electrical				
Autodesk Certification				
Bluebeam				
Civil 3D				
Civil 3D Fundamentals				
Civil 3D Grading				
Civil 3D Pipe Networks & Pipebuilder				
Civil 3D Styles				
Navisworks				
Product(s) Release Updates				
Revit Productivity				
Revit Fundamentals				
Survey Field to Finish				
Survey -				
Custom Training – Based off Denver Water Platform & Data				

## 2 Audits

2.1 Section Audits (Assessment Tests): In-house testing of new hires and existing employees for training needs on Denver Water's current workflows and standards with the following processes: Civil 3D, CAD to GIS, CAD to BIM and any other essential Denver Water CAD operation processes as it pertains to any of the Autodesk and GIS related software. Desired frequency of audits are listed below.

Type of Audit	Frequency
Initial – <b>Assume 40 hours</b>	Three months after the contract is awarded
Software Upgrades - <b>Assume 16 hours per upgrade</b>	One month after training has been completed on upgraded software/ application
Annually - <b>Assume 24 hours per year</b>	January – March (Starting 2017)
Brief CAD Management Team – <b>Assume 1.5 hours</b>	After audits are completed.

## 3 Licensing Structure

- 3.1 Autodesk Software Licensing Structure: Provide quarterly updated Autodesk related software to include an asset report by contract number, application type, serial number, product key, deployment type, seat count and usage.
- 3.2 On-site installation, configuration, diagnostics, and triaging and troubleshooting of Autodesk and related products, including Network License Manager Tools.
- 3.3 Obtain individual application license files and provide single license manager service license files based off current configurations.
- 3.4 On-site support as needed for Desktop, Cloud, and Maintenance Subscriptions as well as Perpetual Licenses. Provide annual business and budget briefings to ensure that Denver Water is both properly and cost efficiently licensed on Autodesk and related Software. In addition to making sure that Denver Water has available information that may be deemed valuable to planning of the overall business goals looking forward for 2 to possibly 5 years. **Assume 16 hours per year.**

## 4 On-site and off-site assistance

- 4.1 On-site and off-site assistance with Autodesk and related product application customization for Denver Water processes including but not exclusive to: AutoCAD Civil 3D, CAD to GIS, CAD to BIM and any other essential Denver Water CAD operations processes. **Assume 40 hours per year.**

## 5 Technical and Deployment Support

- 5.1 Provide on-site technical and deployment support with the ability to work between various sections or divisions (e.g. CAD Management, Engineering, Treated Water Planning, Asset Recording, GIS, and IT) that may need to interface during certain projects, processes and operations. **Assume 40 hours per year.**

## 6 Symbol Libraries Mentoring

- 6.1 Autodesk Software Symbol Libraries mentoring, development and maintenance on current libraries. **Assume 16 hours per year.**

## 7 CAD to GIS

- 7.1 CAD (Engineering and Survey) to GIS process support with strong knowledge of Autodesk products inter-operations. Along with inter-operations support with ESRI and other potential sources of GIS data. **Assume 20 hours per year.**

## **8 BIM Model Support**

- 8.1 BIM Model support including possible model verification of submittals from contractors, coordination, standards enforcement methods, asset, space, O&M, point cloud and other tasks that may be deemed necessary for proper implementation of Denver Water BIM projects such as Revit, Navisworks Manage, InfraWorks 360, ReCap, Civil 3D including Pressure Pipe Networks and Gravity Systems features, Map 3D, Raster, potentially Plant 3D and Revit MEP, and other programs as needed. **Assume 20 hours per year.**

## **9 CAD Management Team/Virtual Scrum Team**

- 9.1 Work closely with the Denver Water CAD Management team to ensure that they are regularly updated on the latest technologies and processes that will keep Denver Water at the forefront of the CAD/BIM industry. **Assume 40 hours per year.**
- 9.2 Access to online knowledgebase, including tutorials, training videos, and access to Autodesk technical solutions.
- 9.3 Unlimited (Denver Water) Working hours (8:00 a.m. to 5:00 p.m. a day), five days a week priority technical phone support in English. **Assume 50 hours per year**
- 9.4 Remote desktop assistance.
- 9.5 Option to escalate technical support questions directly to Autodesk.
- 9.6 Assigned Support Account Manager who coordinates, expedites, and escalates service and support needs.
- 9.7 Assigned Designated Support Specialist who quickly resolves technical issues, minimizing downtime.

## **10 CAD and BIM Standards**

- 10.1 Work closely to help Denver Water to communicate company CAD and BIM standards and practices to any and all vendors working with, or wishing to work with, Denver Water so that project deliverables are consistent and in line with Denver Water specifications. **Assume 30 hours per year.**

**Note:** Hours may be shifted between tasks, based on hierarchy of final needs.

## **Qualifications**

The Consultant shall have a minimum of ten years of CAD Civil Engineering, GIS and BIM industry project experience as well as five years of Autodesk application knowledge/project management, and support experience. The Consultant shall provide resumes of all employees that may be assigned to assist Denver Water with ongoing project or application support. All employees should be certified industry professionals.

## **Proposal Submittal**

Proposals must be limited to ten pages, at a minimum, the proposal shall include the following items:

1. Cover Letter.
2. Price index breakdown by Autodesk Courses.
3. Price index breakdown for tasks 2 through 10.
4. A narrative of critical issues that the Consultant considers to be of importance for this effort. How does the Consultant plan to integrate with the Denver Water e.g. provide seamless training and support.
5. Experience on efforts of a similar nature and scope; include references. Organizational chart and resumes for each employee that may be involved with supporting Denver Water at an application level. Autodesk Authorized Training Center ATC Program; Authorized Certification Center (ACC) and evidence of liability insurance.
6. Document outlining Consultant's technical support program(s) and policies including: services provided, pricing, hours of operation, response time including on-site costs, policies, and programs.
7. Statement of Minority and Women-Owned Business Enterprises (MWBE) status. MWBE status is not a requirement, but is favorable.
8. Staff Availability: Consultant staff resumes will be provided to Denver Water for all specific tasks. With short notification can you support the on call and training request?

## Selection Criteria

Denver Water will select the Consultant based on a weighted system. A team of Denver Water subject matter experts will review the Proposals and make a selection based on the criteria, weight, and standard presented below.

Each criteria is assigned a score from 1 to 10, with 1 being a poor rating, 5 being an average rating, and 10 being an outstanding rating. All criteria will be multiplied by the associated weight to give a weighted criteria score. The weighted criteria scores will be summed for a cumulative score. The maximum possible cumulative score is 100.

Weight	Criteria	Standard
4	Pricing Tables: Tasks and Activities	<ul style="list-style-type: none"><li>• Do the work hours presented accurately reflect the level of effort to complete each task?</li><li>• How do unit labor and rates compare to other firms?</li><li>• Suitability of the on call services and short notice requests.</li></ul>
2	Consultant Availability, Accessibility and Proposed Technical Support Program.	<ul style="list-style-type: none"><li>• Is the proposed team available for the duration of the contract?</li><li>• How does the Consultant plan to integrate with the OWNER? What value will the Consultant add to the project?</li><li>• Evaluation of Consultant's proposed technical support program.</li></ul>
4	Consultant Qualifications	<ul style="list-style-type: none"><li>• Experience for the proposed firm on efforts of similar nature and scope. Include references.</li><li>• Organizational chart and resumes demonstrating appropriate experience and capabilities for the proposed team.</li></ul>

## Proposal Schedule

Proposals shall be submitted electronically by 2:00 p.m. local time, Wednesday, March 29, 2016 to Patrick O'Malley at [Patrick.Omalley@denverwater.org](mailto:Patrick.Omalley@denverwater.org). Denver Water may choose to interview select candidates prior to the contract award. If so, Denver Water may need to add more time in the schedule prior to Board Meeting and Notice of Award.

The Consultant is expected to enter into Denver Water's standard form of agreement. Please feel free to contact Patrick O'Malley at (303) 628-6638 with any questions.

Sincerely,

Patrick O'Malley  
Technical Support Supervisor\CAD Manager