

## SECOND AMENDATORY AGREEMENT

This **SECOND AMENDATORY AGREEMENT** is made between the **CITY AND COUNTY OF DENVER**, a municipal corporation of the State of Colorado (the “City”) and **MONTROSE AIR QUALITY SERVICES, LLC**, a Delaware limited liability company doing business at 990 West 43<sup>rd</sup> Avenue, Denver, Colorado 80211 (the “Contractor”), jointly (“the Parties”).

### RECITALS:

**A.** The Parties entered into Agreement dated December 16, 2016 and an Amendatory Agreement dated February 12, 2018 (the “Agreement”) to perform air monitoring services; and

**B.** The Parties wish to amend the Agreement to extend the term, increase the contract amount, and amend the Scope of Work.

**NOW THEREFORE**, in consideration of the premises and the Parties’ mutual covenants and obligations, the Parties agree as follows:

1. Section 3 of the Agreement, entitled “**TERM**,” is hereby deleted in its entirety and replaced with:

“**3. TERM:** The term of this Agreement shall commence upon final execution by all parties and shall terminate on December 31, 2021, unless extended in accordance with the terms of the Agreement (the “Term”). Subject to the Executive Director’s prior written authorization, the Consultant shall complete any work in progress as of the expiration date and the Term of the Agreement will extend until the work is completed or earlier terminated by the Executive Director.”

2. Section 4 (d)(1) of the Agreement, entitled “**COMPENSATION AND PAYMENT**,” is hereby deleted in its entirety and replaced with:

“**4. COMPENSATION AND PAYMENT:**

**(d) Maximum Contract Amount:**

**(1)** Notwithstanding any other provision of this Agreement, the City’s maximum payment obligation will not exceed **ONE MILLION DOLLARS AND NO CENTS (\$1,000,000.00)** (the “Maximum Contract Amount”). The City is not obligated to execute an agreement or any amendments for any further services, including any services performed by Consultant beyond that specifically described in **Exhibit A**. Any services performed beyond those in Exhibit A are performed at Consultant’s own risk and without authorization under the Agreement.”

3. **Exhibit A and A-1** are hereby deleted in its entirety and replaced with **Exhibit A-2**, Scope of Work, attached and incorporated by reference herein. All references in the original Agreement to **Exhibit A and A-1** are changed to **Exhibit A-2**.

4. **Exhibit B** is hereby deleted in its entirety and replaced with **Exhibit B-1**, Budget, attached and incorporated by reference herein. All references in the original Agreement to **Exhibit B** are changed to **Exhibit B-1**.

5. As herein amended, the Agreement is affirmed and ratified in each and every particular.

6. This Amendatory Agreement will not be effective or binding on the City until it has been fully executed by all required signatories of the City and County of Denver, and if required by Charter, approved by the City Council.

**[THE BALANCE OF THIS PAGE IS INTENTIONALLY LEFT BLANK.]**

**Contract Control Number:**

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of

SEAL

**CITY AND COUNTY OF DENVER**

ATTEST:

By \_\_\_\_\_

\_\_\_\_\_

APPROVED AS TO FORM:

REGISTERED AND COUNTERSIGNED:

By \_\_\_\_\_

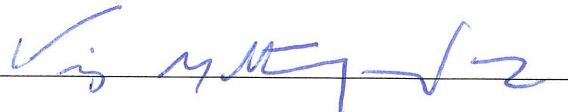
By \_\_\_\_\_

By \_\_\_\_\_



**Contract Control Number:** ENVHL-201631526-02

**Contractor Name:** MONTROSE AIR QUALITY SERVICES, LLC

By: 

Name: VIJAY MANTHRIPRAGADA  
(please print)

Title: PRESIDENT & CEO  
(please print)

**ATTEST: [if required]**

By: \_\_\_\_\_

Name: \_\_\_\_\_  
(please print)

Title: \_\_\_\_\_  
(please print)



# EXHIBIT A-2

## SCOPE OF WORK

### GLOBEVILLE LANDFILL OUTFALL – AIR MONITORING SCOPE OF WORK (SOW):

Sampling, analysis, and reporting of particulate matter of 10 microns or less (PM<sub>10</sub>), discretionary analysis of Lead (Pb) and Arsenic (As), at the Globeville Landing Outfall (GLO) site to include additional sampling as needed at other sites located in Denver, CO.

### SCHEDULE

Start Date: November 15-30, 2016 (Approx.)  
End Date: 12 months post start of construction (Approx.)

### SCHEDULE

Start Date: November 15-30, 2016 (Approx.)  
End Date: 12 months post start of construction (Approx.)  
Pollutants: PM<sub>10</sub> for project duration; Metals (Arsenic & Lead) analysis of PM<sub>10</sub> filter (likely 33% of samples from Nov-Feb, will adjust after initial results are reviewed)  
Sample Sites: 4 (see "Site Overview"); Changes to specific sampling site as directed by DEH Project Manager  
Sample Schedule: Every 6<sup>th</sup> day; 24-hour averaging period; Potential multiple baseline samples during first weeks of sampling to be able to provide adequate sample points comparison.

### TASKS

- Task 1. Installation of four (4) PQ100 Ambient Air Particulate Samplers located upwind, downwind, and other critical areas. (see "Site Overview")
- Task 2. Supply and prepare sampling filter media.
- Task 3. Collect 24 hour samples at 4 sites every 6 days.
- Task 4. Transport of samples from site to lab.
  - a) Shipping of metals samples for analysis as needed.

### DELIVERABLES

Once the sampling has commenced the following deliverables will be required:

Deliverable #1 Pollutant report on all four sites. The report will include (but is not limited to):

Frequency: Weekly

- i) Summary (narrative and/or graphic) of pollutant data collected,
- ii) Instrument calibration schedules & results
- iii) Maintenance issues
- iv) Weather events
- v) List of operation staff and contacts

Deliverable #2 Quarterly summary report on three months of monitoring at the Globeville Landfill Outfall site. Quarterly summary report would include (but is not limited to):

- i) Summary (narrative and/or graphic) of pollutant data collected, calibration schedules & results, maintenance issues, and weather events
- ii) Professional judgment commentary on any notable data and/or event(s)
- iii) Conclude an average baseline concentration for each pollutant prior to construction as practicable.
- iv) List of operation staff and contacts

## EXHIBIT A-2

### SCOPE OF WORK

- Deliverable #3 Final report on thirteen months of monitoring at the Globeville Landfill Outfall site. To be submitted within 30 days following final sampling day. The final report would include (but is not limited to):
- Summary (narrative and/or graphic) of pollutant data collected, calibration schedules & results, maintenance issues, and weather events
  - Professional judgment correlation of unusual pollutant concentration to identifiable sources.
  - Professional judgment commentary on any notable data and/or event(s)
  - Conclude an average baseline concentration for each pollutant prior to construction as practicable.
  - List of operation staff and contacts

#### INSTRUMENTATION

The sampling of will be done using a PQ100 Ambient Air Particulate Sampler and collected on a 47mm filter of suitable quality to be able to test for metals after PM<sub>10</sub> analysis is complete.

##### PQ100 Ambient Air Particulate Sampler

- EPA Federal Reference Method for PM<sub>10</sub>
- Capable of a 24 hour run on internal built-in 12 volt battery.
- Volumetric Flow Control, using ambient temperature and barometric pressure compensated mass flow sensor
- Can be configured for PM<sub>10</sub>, PM<sub>4</sub>, PM<sub>2.5</sub>, PM<sub>1</sub> and TSP for low or



#### METHODOLOGY

The sampling of PM<sub>10</sub> will be performed using BGI PQ100 air samplers and collected on a tared filter of suitable quality to be able to test for metals after the PM<sub>10</sub> analysis is complete. In the sampler, air is drawn by a sample pump through a size selective inlet device. The air is then passes inside the instrument housing to a Mass Flow Sensor. The signal generated by the sensor is then routed to a microprocessor which determines if the flow is at the set value and adjusts the pump speed to maintain the correct flow rate. The microprocessor turns the instrument on and off at a predetermined times and maintains the flow to a designated pressure and temperature value. The microprocessor stores all parametric information generated during the run period and configures it for presentation on the visual display and downloading to the software provided with the sampler. The sampler includes a 12 volt battery which allows sampling for 24 hours without having to connect the sampler to external power. After the sampling is complete and the filters are weighed, some of the collected filters may be submitted for metals analysis.

# EXHIBIT A-2

## SCOPE OF WORK

### GLO SITE OVERVIEW

Location: Globeville Landfill Outfall  
Address: 4655 Humboldt St, Denver, CO 80216



# EXHIBIT A-2

## SCOPE OF WORK

### 39<sup>TH</sup> AVENUE OPEN CHANNEL CONSTRUCTION – AIR MONITORING SCOPE OF WORK (SOW):

Sampling, analysis, and reporting of particulate matter of 10 microns or less (PM<sub>10</sub>), lead, and arsenic at the 39<sup>th</sup> Avenue Open Channel Construction site.

#### SCHEDULE

Start Date:	May 1-15, 2018 (Approx.)
End Date:	12 months post start of construction (Approx.)
Pollutants:	PM <sub>10</sub> for project duration; Metals (Arsenic & Lead) analysis of PM <sub>10</sub> filter
Sample Sites:	3 (see "Site Overview")
Sample Schedule:	every 6 <sup>th</sup> day; 24-hour averaging period

#### TASKS

- Task 1. Installation of three PM<sub>10</sub> High Volume Air Samplers located upwind, and downwind near residences.  
(see "Site Overview")
  - a) Possible alteration of samplers as needed to run on battery power.
- Task 2. Supply and prepare sampling filter media.
- Task 3. Collect 24 hour samples at three (3) sites every six (6) days.
- Task 4. Transport of samples from site to lab.
  - a) Shipping of metals samples for analysis as needed.

#### DELIVERABLES

Once the sampling has commenced, proposed start date of May, 2018, the following deliverables will be required:

Deliverable #1 PM<sub>10</sub> Analysis Report on all three sites. The report will include (but is not limited to):

- i) Summary (narrative and/or graphic) of pollutant data collected,
- ii) Instrument calibration schedules & results
- iii) Maintenance issues
- iv) Weather events
- v) List of operation staff and contacts

Deliverable #2 Final report on ten months of monitoring at the 39<sup>th</sup> Avenue Open Channel site. To be submitted within 30 days following final sampling day. The final report would include (but is not limited to):

- i) Summary (narrative and/or graphic) of pollutant data collected, calibration schedules & results, maintenance issues, and weather events
- ii) Professional judgment correlation of unusual pollutant concentration to identifiable mobile/area/stationary sources with proofs.
- iii) Professional judgment commentary on any notable data and/or event(s)
- iv) Conclude an average baseline concentration for each pollutant prior to construction as practicable.
- v) List of operation staff and contacts



# EXHIBIT A-2

## SCOPE OF WORK

### INSTRUMENTATION

The sampling of PM<sub>10</sub> will be done using a PQ100 Ambient Air Particulate Sampler and collected on a 47mm filter of suitable quality to be able to test for metals after PM<sub>10</sub> analysis is complete.

#### PQ100 Ambient Air Particulate Sampler

- EPA Federal Reference Method for PM<sub>10</sub>
- Capable of a 24 hour run on internal built-in 12 volt battery.
- Volumetric Flow Control, using ambient temperature and barometric pressure compensated mass flow sensor
- Can be configured for PM<sub>10</sub>, PM<sub>4</sub>, PM<sub>2.5</sub>, PM<sub>1</sub> and TSP for low or high altitude



### 39<sup>TH</sup> AVENUE OPEN CHANNEL SITE OVERVIEW

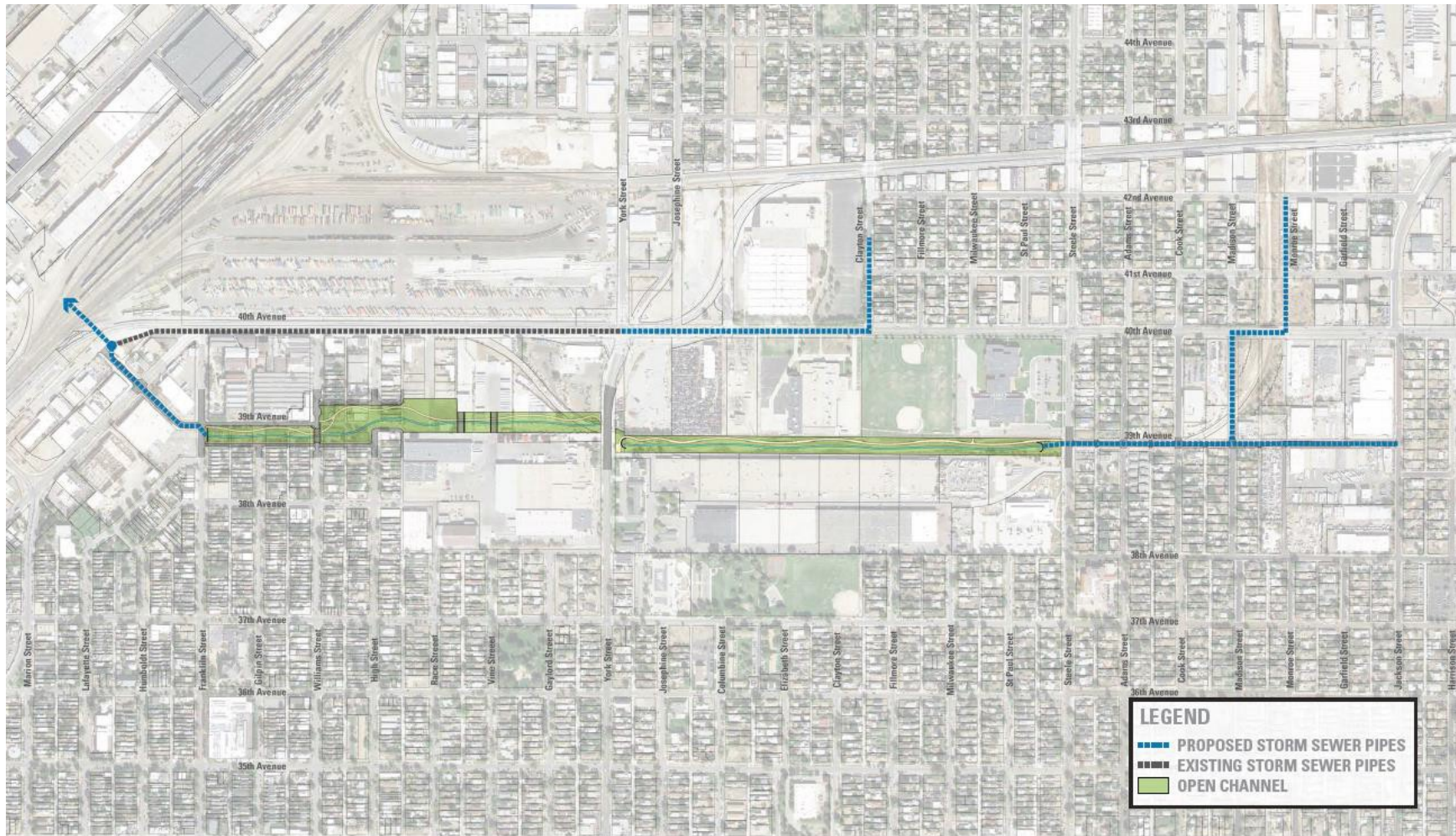
Location: 39th Avenue Open Channel

Address: 39<sup>th</sup> Avenue from Franklin Street to High Street.

Overview: The 39th Avenue Open Channel Project will be an open stormwater conveyance channel that will include a new 12-acre recreational greenway with a multi-use trail between Franklin and Steele streets. The air monitoring will move with the construction of the open channel, which is expected to start at Franklin Street and move east to Steele Street. Attached is the proposed alignment of the 39th Avenue Open Channel.

# EXHIBIT A-2

## SCOPE OF WORK

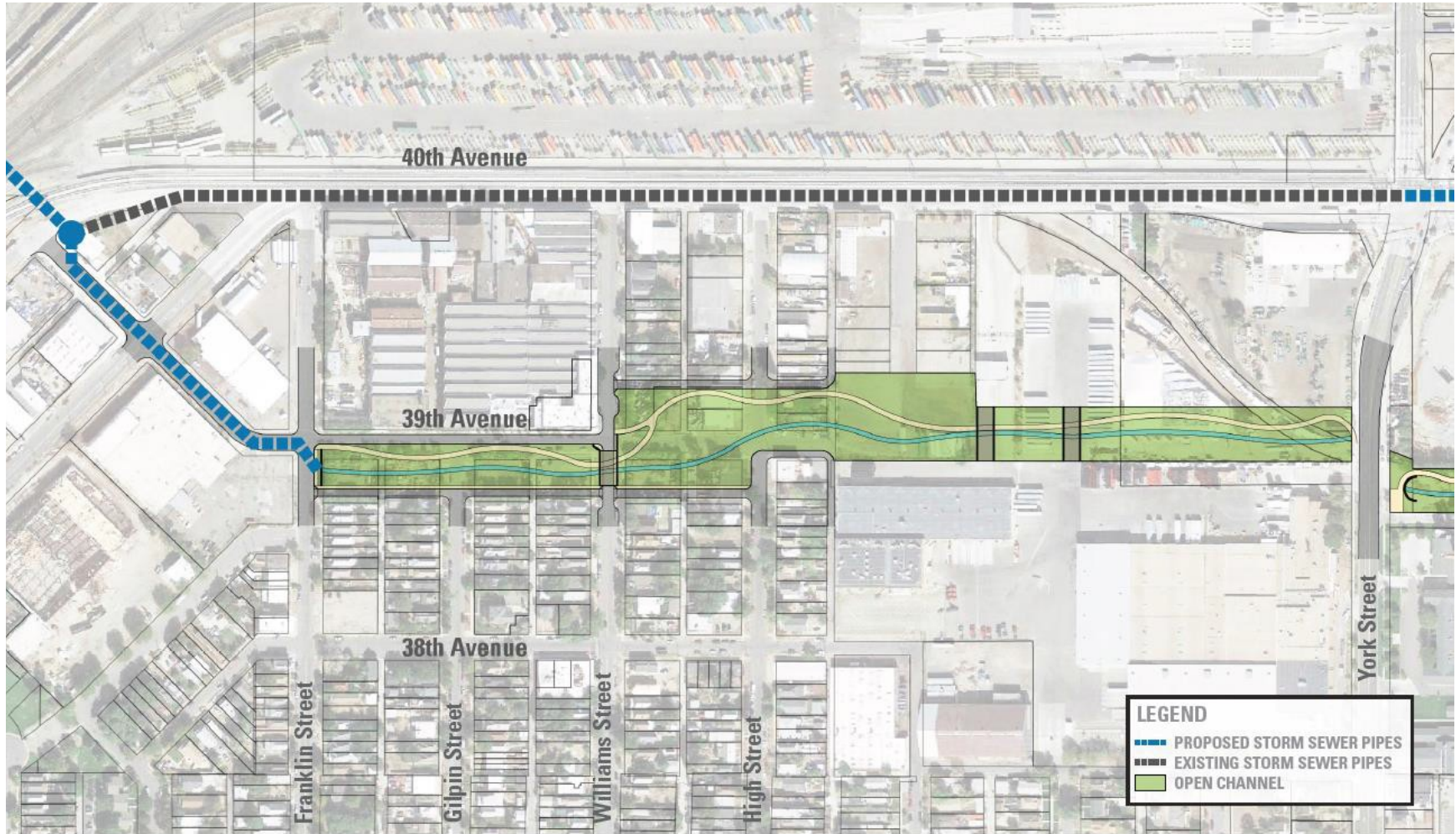


**TWO BASINS DRAINAGE PROJECT**  
 DENVER, COLORADO | CITY AND COUNTY OF DENVER

DESIGNWORKSHOP  
 AUGUST, 2016



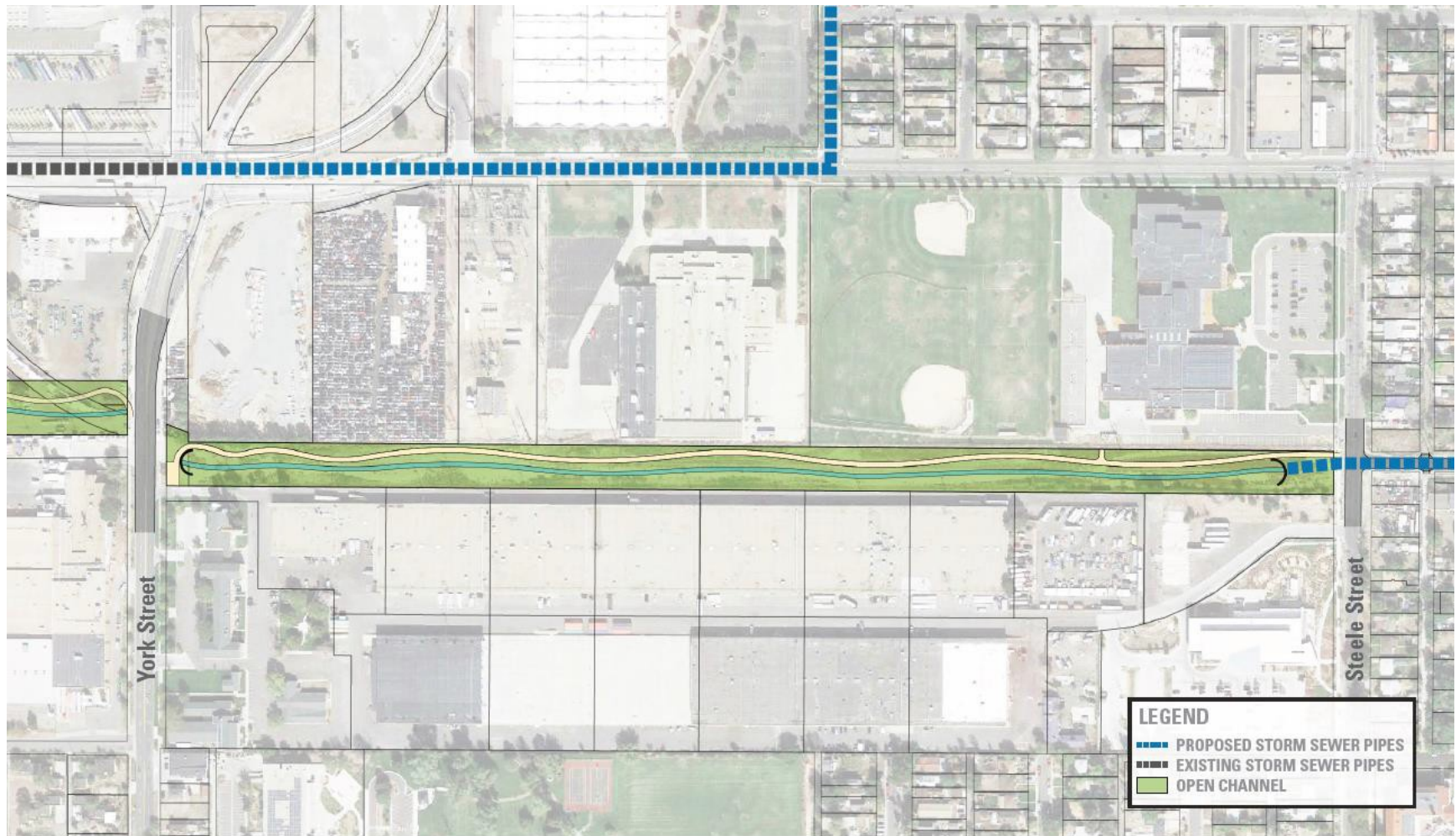
# EXHIBIT A-2 SCOPE OF WORK



**TWO BASINS DRAINAGE PROJECT**  
DENVER, COLORADO | CITY AND COUNTY OF DENVER

DESIGNWORKSHOP  
AUGUST, 2016

# EXHIBIT A-2 SCOPE OF WORK



**TWO BASINS DRAINAGE PROJECT**  
DENVER, COLORADO | CITY AND COUNTY OF DENVER

DESIGNWORKSHOP  
AUGUST. 2016



## **EXHIBIT A-2**

### **SCOPE OF WORK**

#### **OTHER SITES – AIR MONITORING AND SAMPLING ON A PROJECT-BY-PROJECT BASIS PER CITY’S REQUEST.**

The Consultant shall furnish environmental, engineering, scientific or necessary services, including furnishing all labor and tools, supplies, equipment, oversight, superintendence, materials and everything necessary for and required to do, perform and complete the services authorized by a notice to proceed, including any changes thereto, as requested to supplement City and County of Denver (CCoD) work efforts in the monitoring or sampling of ambient air quality.

The schedule, tasks, and deliverables will be determined in consultation with CCoD staff, on a project specific basis.

Examples of air quality monitoring or sampling tasks may include, but may not be limited to, the following:

- Design of sampling and analysis plans;
- Procuring, installing, and maintaining of test equipment in the field;
- Monitoring contractors for compliance with regulations pertaining to fugitive dust or other air contaminants;
- Monitoring or sampling air for total suspended particulates or for a size-specific fraction of particulates (e.g., particulate matter with a nominal diameter of 10 microns or less (PM<sub>10</sub>));
- Sampling air using an EPA reference method for PM<sub>10</sub>;
- Sampling air for specific metals (e.g., lead or arsenic);
- Sampling air for radiological constituents (e.g., radium or gross alpha);
- Monitoring or sampling air for other chemical constituents;
- Monitoring of meteorological conditions;
- Collecting and transferring data;
- Collecting and shipping of sample media;
- Coordinating with laboratories to provide analysis of samples.

Reporting and deliverables may include, but may not be limited to, the following:

- Preparing a periodic ongoing summary report of data collected (narrative and/or graphic);
- Interpretation of data;
- Instrument calibration schedules and results;
- Maintenance issues;
- Weather events;
- Preparing a final report of data collected, as well as a professional judgement commentary on notable data or poor air quality events;
- List of operation staff and contacts.

EXHIBIT B-1  
FEE SCHEDULE

*Effective through December 31, 2021*

**Fee Schedule for Existing Jobs:**

***The following fee schedule shall apply to all jobs authorized prior to the date of execution of this Second Amendatory Agreement***

**TESTING**

Price to perform the PM testing for a period of one (1) year is ..... \$61,900<sup>1</sup>  
*Estimated* price to provide fencing around a sampler ..... \$2,310/sampler<sup>2</sup>  
 Additional price for metals analysis of a single filter is ..... \$90/filter  
***Estimated price for one year of sampling is ..... \$76,540<sup>3</sup>***  
 Price for additional one (1) week period of sampling is ..... \$990/week<sup>4</sup>  
 Price for additional days of sampling in a given sampling week is ..... \$450/days<sup>5</sup>

- <sup>1</sup> The price is based upon 60 samples at each of four (4) sites (240 samples total)
- <sup>2</sup> The price assumes the fence posts are being installed in a dirt or gravel parking lot.
- <sup>3</sup> The price assumes analysis of 60 filters for metals and all four samplers require fencing.
- <sup>4</sup> The price is based upon one (1) sample at each of four (4) sites (4 samples total)
- <sup>5</sup> The price is based upon one (1) sample at each of four (4) sites (4 samples total)

**OTHER FEES**

<u>Personnel</u>	<u>Hourly</u>
Project Supervisors and Consulting	
Level I .....	\$155.00
Level II .....	\$125.00
Level III .....	\$101.00
Level IV .....	\$90.00
Test and CEMS Field Service Technicians	
Level I .....	\$76.00
Level II .....	\$65.00
Level III .....	\$55.00

<u>Daily Equipment Rates</u>	<u>Days 1-7</u>	<u>Days 8+</u>
CO2 Analyzer .....	\$62.00	\$43.00
O2 Analyzer .....	\$62.00	\$43.00
Sulfur Dioxide Analyzer .....	\$75.00	\$53.00
Nitrogen Oxides Analyzer .....	\$75.00	\$53.00
Carbon Monoxide Analyzer .....	\$75.00	\$53.00
Total Hydrocarbon Analyzer .....	\$85.00	\$60.00
Portables Analyzer .....	\$74.00	\$52.00
CEMS Sampling System with DAS .....	\$95.00	\$66.00
Heated Sample Lines (per 100 feet) .....	\$32.00	\$23.00

EPA Protocol Calibration Gases .....	\$18.00.....	\$12.00
Support Gases .....	\$9.00.....	\$6.00
Gas or Ion Chromatograph .....	\$155.00.....	\$108.00
FTIR .....	\$448.00.....	\$314.00
Ohio Lumex Hg Analyzer .....	\$345.00.....	\$242.00
Method 30B Sample Train .....	\$85.00.....	\$60.00
Isokinetic Sample Train .....	\$107.00.....	\$74.00
Analytical Balance/On-Site Analytical .....	\$85.00.....	\$60.00
Flow and Moisture (Non-Iso) Sample Train .....	\$57.00.....	\$39.00
3-D Probe and Console .....	\$43.00.....	\$30.00
PM2.5 or PM10 Head .....	\$37.00.....	\$26.00

**Living and Travel Expenses**

Mileage Auto .....	\$0.65/mile
Mileage Trailer .....	\$0.26/mile
Mileage Van .....	\$1.15/mile
Hotel, Air Fare, Auto Rental, Taxi, and Freight .....	Cost + 10%
Per Diem .....	\$70.00/day
Local Projects Per Diem (for projects with no hotel) .....	\$48.00/day

**Miscellaneous Expenses**

Outside Laboratory .....	Cost + 15%
Outside Equipment Rental .....	Cost + 10%
Expendable Items and Supplies .....	Cost + 10%

**Fee Schedule for New Jobs:**

***The following fee schedule shall apply to all new jobs authorized on or after the date of execution of this Second Amendatory Agreement, with the allowance for proposals to be based on a per task basis (e.g., per sample, per month)***

<u>FIELD TESTING PERSONNEL</u>	<u>HOURLY RATE (\$)</u>
Consultant, District Manager .....	150
Client Project Manager, Senior Chemist .....	130
Field Project Manager .....	100
Senior Technician, Chemist .....	80
Field Technician .....	65

<u>Support Personnel</u>	<u>Hourly Rate (\$)</u>
Senior Office Worker, Safety Officer .....	90
Office Worker (Staff Personnel, Level I).....	55

<u>Overtime Rate for Hourly Employees</u>	<u>Hourly Rate (\$)</u>
Over 8 hours per day or between 40 and 60 hours per week.....	Standard Rate x 1.5
Over 12 hours per day or over 60 hours per week.....	Standard Rate x 2 Weekends

and Holidays will be billed at overtime rates

<u>Overhead Direct Costs</u>	<u>Unit Rate (\$)</u>
Per Diem .....	60/day
Mobile Lab Vehicle Mileage .....	1.50/mile
Other ODC's (i.e. hotels, rentals, purchases, analytical costs, supplies) .....	Cost Plus 15%

<u>Testing Equipment Fees</u>	<u>Daily Rate (\$)</u>
Complete All-Inclusive CEMS (O <sub>2</sub> , CO <sub>2</sub> , NO <sub>x</sub> , CO) – mileage not included.....	1,000
Mobile Sample Recovery Laboratory, no CEMS - mileage not included.....	350
Data Acquisition System or Strip Chart Recorders.....	100
O <sub>2</sub> or CO <sub>2</sub> Analyzer.....	125
CO or NO <sub>x</sub> Analyzer.....	175
SO <sub>2</sub> Analyzer .....	200
THC Analyzer .....	300
FTIR Analyzer (on site).....	750 plus one time 2,000 shipping if applicable Ohio
Lumex RA 915+ mercury instrument.....	500 plus one time 350 shipping if applicable ESC Auto-
Hg sample System .....	200
Heated sample line, 50 or 100 Ft .....	100
Isokinetic Sampling System - Complete.....	250
Non-Isokinetic Pump & Meter.....	175
Low Flow Meter Box or 3D Console .....	225
201A Cyclone / Cascade Impactor.....	125
Impinger Set.....	100
Analytical Scale (on site).....	175