SCOPE OF WORK
EXPLORATORY 2025 PROJECT
Multiple Orphan Well Sites
Multiple Locations and API

PROJECT DESCRIPTION

PROJECT SCOPE OF WORK:

This project shall utilize contractors to complete exploratory work in order to better evaluate the equipment, materials, and conditions of orphan wells. The intent of this contract is to provide information that will lead to a formal and separate plugging contract, not to plug the well during this phase of the project. However, the contractor will be required to have certain equipment available in the event that these explorations aggravate the wells current condition. The Division will determine the wells that will be included in the project on as needed basis. The contract will remain in effect until either a set timeframe or expenditure amount is reached. Work Orders will be given to describe and authorize this work. An Ohio Buys offer shall be submitted to establish prices. The Division intends to award three (3) contracts for this work that will be based on a regional map of the State of Ohio as found in Appendix II. A separate Ohio Buys submittal will be required for each of the three (3) regions. **No contractor will be awarded more than one (1) region.**

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GENERAL SCOPE OF WORK

The Contractor, the Contractor's agents, representatives and subcontractors shall perform this Contract Work in accordance with Ohio Revised Code 1509, Ohio Administrative Code Chap. 1501:9-11 and 1501:9-12, the Agreement, and in accordance with the following documents that are attached hereto and made a part hereof:

1. Project Description;
2. General Scope of Work;
3. General Conditions;
4. General Specifications;
5. Detailed Specifications;
6. Appendix I - Ohio One-Call;
7. Appendix II – OWP UPC Map;
8. Quantity Sheet;

Subject to the Contractor's compliance with this Scope of Work, Contractor is solely responsible for and has control over all required work and reclamation construction means, methods, manners, techniques, sequences, and procedures, for safety precautions and programs in connection with this Contract.

SCOPE OF WORK
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GENERAL CONDITIONS

PART 1: OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS

This Exploratory 2025 Project (Project) references the Ohio Department of Transportation (ODOT) Construction and Material Specifications (ODOT CMS). Any reference to these specifications is to ODOT's most current version of the specifications. The ODOT CMS can be found at https://www.dot.state.oh.us/Divisions/ConstructionMgt/OnlineDocs/Pages/2023-Online-Spec-Book.aspx

PART 2: PRE-SITE MEETING

This project will not have pre-site meeting. Contractors are welcome to submit questions in writing. The Ohio Department of Natural Resources, Division of Oil & Gas Resources Management (Division) will respond via email and circulate the response to all pre-qualified contractors.

PART 3: MODIFICATIONS TO THE SCOPE OF WORK PRIOR TO AWARD

The Scope of Work may only be altered by written modification. The Division may issue an Amendment to the Scope of Work and will provide a notification of the Amendment by email to all Department of Administrative Services (DAS) pre-qualified contractors. Each contractor is responsible for logging into Ohio Buys and submitting an offer that is responsive to all Amendments issued. All offers submitted prior to an amendment being issued shall become null/void and not consider in the opening. All Amendments shall become part of the Scope of Work.

Any interpretation or clarification of the Scope of Work made by any person other than the Division, or in any manner other than a written Amendment, is not binding and the Contractor cannot rely upon any such interpretation or clarification.

The Contractor cannot, at any time after the award of the Scope of Work be compensated for any issue with the Scope of Work, including alleging insufficient data, incomplete, ambiguous, conflicting, or erroneous language, or incorrectly assumed conditions regarding the nature or character of the work.

PART 4: PERMIT AND INSPECTION REQUIREMENTS

The Division will obtain and pay for all building and U.S. Army Corps of Engineers permits unless otherwise specified in the Detailed Specifications. However, the Contractor shall determine and include in his or her Offer Sheet the costs required to obtain and pay for all other requirements by the applicable governmental agencies; including but not limited to, all certificates of inspection/operation, guarantees, licenses, etc. required to complete the work as described within this document. The contractor shall follow all applicable laws and permit requirements and the Division will not be held responsible for damages that result from violation of laws or permits.

PART 5: INSTRUCTIONS FOR PREPARING AN OFFER

A Contractor's offer must be submitted online through **OhioBuys**. (https://procure.ohio.gov/bidders-and-suppliers). **All offers submitted prior to an Amendment being issued shall automatically become null/void and not considered in the opening.**

Offers shall include labor, equipment, and material cost plus a proportionate share of the Contractor's overhead costs, other indirect costs, and anticipated profit. An offer must be mathematically and materially balanced. A "mathematically unbalanced offer" is an offer containing lump sum or unit price items that do not include reasonable labor, equipment, and material costs plus a reasonable proportionate share of the Contractor's overhead costs, other indirect costs, and anticipated profit. A mathematically unbalanced offer typically contains token prices (i.e. $1 prices), front loadings, or prices with large variations from the engineer's estimate. A "materially unbalanced offer" is a mathematically unbalanced offer that will not result in the lowest ultimate cost to the Division.

During the Division's initial review of offers, if the Division finds an offer may be mathematically unbalanced, the Contractor may be required to submit proof of the mathematically unbalanced line items' proposed cost within 24 hours after notification from the Division. At a minimum, a Contractor may be required to submit copies of all material/rental quotes, intended labor costs (hours/rates), and contract agreements with subcontractors to support their offer. If the Contractor fails to submit the required proof, the Contractor's offer shall be deemed withdrawn from consideration. The Division shall evaluate the documentation and may verify quotes with vendors. After a review of the documentation, the Division will reject any offer it determines is mathematically and materially unbalanced.

No contractor will be awarded more than one (1) region. All contractors are permitted to submit offers for each region; however, the lowest most responsive offer will be awarded for each. If in any case one (1) contractor is the low offer on multiple regions, then that contractor will be able to choose the region of his/her choice and the remaining region(s) will be awarded to the next lowest/responsive offer received.

For circumstances where one (1) contractor is the only contractor to have submitted offers on specific region(s), the contractor will have choice of one (1) region and the remaining region(s) will be reoffered at a later date/time, so as to only maintain one (1) contractor per region.

A Contractor shall maintain an up-to-date schedule on file with the Division that sets forth dates by which the Contractor will plug each well that the Division previously awarded to the Contractor. A Contractor shall update their work schedule as often as necessary to maintain a current schedule with the Division. To be awarded new contracts, the Contractor must be able to complete all previously awarded work within the due dates set in each contract with the Division. Upon request, a Contractor shall provide an up-to-date schedule to the Division that reflects when all awarded work will be completed.

Please note that a Contractor's offer must be submitted online through OhioBuys.

1. Refer to the Scope of Work posted in OhioBuys with this solicitation.
2. **Only Contractors who are pre-qualified to offer this service on an existing State Contract beginning with CSP900-922 (DAS Index No. MAC110) may respond to this solicitation.** All CSP900922 Contract Terms & Conditions apply to this solicitation. No additional terms and conditions will be accepted. The Division will reject Offers from any Contractor that is not pre-qualified.
3. Completion of the grid is required and will be considered the response for evaluation. No outside or additional documentation will be considered.

4. Fixed prices will be automatically added to Contractor's proposals when shown. Contractors are not to enter pricing for fixed price items.
5. Confirm that your bid has been successfully imported into OhioBuys for all items before submitting. Incomplete bids and/or attachments will not be evaluated.
6. The most recent bid submitted in OhioBuys will be the bid that is evaluated, all prior bids submitted in the same solicitation will not be evaluated.

Actual units used for this contract are undetermined at this time. The Division will authorize use of units by issuing a Work Order at the onset of each individual well's work. Field Orders and Changes Orders will also be used after a Work Order is issued to authorize additional work. Units included in the Quantity Sheet have been established by the Division to reflect a balanced amount of work required on each well in order to fairly evaluate all Offers received. This contract will be awarded for $250,000.00. The total of the contractor's Ohio Buys submittal will not be the awarded amount but will be used to evaluate the responsiveness of the Offers. However, the unit prices received on the Ohio Buys submittal will be used for the duration of the contract to establish invoicing amounts. Quantities for the project will be established in each Work Order issued based on the need to complete the work.

PART 6: DIVISION'S OFFER SELECTION

Except when the Division rejects an offer, the Division will select the lowest offer submitted to the Division. The Division may reject an offer if any one of the following applies to the Contractor's offer:

- Is not submitted online through **OhioBuys**;
- Fixed reference prices and/or any other imported information is incorrectly and/or not imported into **OhioBuys**;
- Is conditional;
- Is a mathematically unbalanced offer and a materially unbalanced offer;
- Is behind schedule on other projects with the Division; or
- Is not able to schedule this project within the contract due dates.

PART 7: WITHDRAWAL OF OFFERS

At any time prior to the opening of Offers, a Contractor may submit a written request to the Division, at the location where the Offers are received, to withdraw its Offer. The request to withdraw the Offer must be signed by the person who executed the Offer.

PART 8: EFFECTIVE DATE AND TERM

The effective date of this Project is the date of the Letter to Proceed that is sent to the Contractor. The Project must be completed one (1) year after the effective date or by June 30, 2025, whichever is sooner. If the Project terminates on June 30, 2025 and the Project is not completed, the Scope of Work may be renewed on the same terms if the Division sends written notice to the Contractor.

PART 9: TERMINATION AT WILL

The Division may terminate this Scope of Work without cause. Any payment due to the Contractor at the time of termination by the Division shall be paid to the Contractor on a pro rata basis.

PART 10: RELATIONSHIP BETWEEN COMPONENTS OF THE SCOPE OF WORK

This Scope of Work includes documents that are duplicates of documents on file with the Division. The Scope of Work documents are complementary. All sections of the Scope of Work are binding. The titles and headings in the Scope of Work are for reference and in no way affect the interpretation of the provisions of the Scope of Work. Further, if any part of this Scope of Work is found to be unenforceable, no such event will affect the enforceability or applicability of any other part of the Scope of Work.

If a conflict between the documents arises, the Contractor must notify the Division. In the event of a conflict of any provision in the Scope of Work the order of priority within the Scope of Work is as follows: Detailed Specifications, General Specifications, Plugging Plan, and Sequence of Work.

PART 11: CONTRACTOR'S RESPONSIBILITY FOR SUBCONTRACTORS

The Contractor is responsible for the conduct of its subcontractors and for persons its subcontractors directly or indirectly employ.

PART 12: STANDARDS

If the Division identifies a "standard" by reference to manufacturer and/or model number, all Offers will be evaluated to ensure that the identified standard is used. The Division will not consider an Offer in which a substitution for the standard is offered. After the Letter to Proceed is issued, the Contractor may submit a written proposal for a substitution of a standard.

PART 13: SUBSTITUTIONS DURING THE PROJECT

After the Letter to Proceed is issued, the Contractor may offer substitutions for the standards set forth in the Scope of Work. The decision to allow substitution is solely within the discretion of the Division, which will consider, among other factors, availability, time of delivery, the aesthetic value of the proposed substitution, general differences in the knowledge of the product, service history, quality, efficiency, performance, and architectural, engineering, inspection, testing and administrative expenses. Any changes to the Offer price and/or Scope or Work must be memorialized by a Field Order or Change Order, as applicable. The savings in cost in allowing any substitutions during the Project will be solely to the benefit of the Division.

PART 14: QUANTITIES OF WORK

14.1 Unit Price Items

For items in the Offer that require a unit price, the quantities listed on the Quantity Sheet are an approximation and are to be used only for the comparison of Offers. The scheduled quantities may be increased or decreased without invalidating or altering the Offer and will be considered within the Scope of Work.

Payments for unit price items will be made to the Contractor for actual quantities of work performed and materials furnished in accordance with the Scope of Work; however, the Contractor may not exceed the unit quantities shown on the Quantity Sheet without prior written approval of the Division through a Field Order. Even if the Contractor determines that additional unit priced quantities (above and beyond the original Quantity Sheet quantity) are required to meet plan and/or specification dimensions, the Contractor must not exceed the Quantity Sheet quantities without prior written approval of the Division. The Division will not pay for quantities above and beyond the Quantity

Sheet quantity without prior written approval of the Division.

14.2 Lump Sum Items

For items in the Quantity Sheet that require a lump sum price, the Division will not pay for work, materials, or equipment that exceeds the amount provided by the Contractor on the Quantity Sheet. The lump sum price on the Quantity Sheet must include all work, materials and equipment necessary to properly complete the Project.

14.3 Additional/Contingency Items

The contingency items set forth in the Quantity Sheet are not projected as necessary to complete the Project. Rather, the contingency items will first be used when unforeseen work arises, and the Division determines the contingency item is applicable. To be compensated for contingency items, the Contractor must have a written Field Order from the Division authorizing the contingency item in a specified quantity. Use of contingency items will not require the execution of a Change Order. The Contractor must be prepared to supply all items identified in the contingency specifications for use on this Project.

PART 15: OMISSIONS IN THE SCOPE OF WORK

If the Contractor notices an error or omission in the Scope of Work during performance of the Project, the Contractor shall immediately notify the Division of such omission or error and shall not proceed with the Project until directed by the Division. Any work performed by the Contractor prior to clarification by the Division may not be entitled to compensation.

PART 16: INTERPRETATIONS CONCERNING THE SCOPE OF WORK

During the Project, if a question arises on the Scope of Work, the labor or materials to be supplied, or costs potentially exceeding the Contractor's Offer, such questions must, prior to the work being performed, be submitted to the Division for a determination. A Division determination will be issued in writing and any work performed prior to such a determination will be performed at no cost to the Division. The Division will also begin executing a Change Order, when appropriate.

If the Division receives a written question concerning the Project, the Division will determine if the work must be performed by the Contractor at no increase in price to the Scope of Work. If so, the Division will issue a Field Order setting forth the Division's determination. Each Field Order issued must be signed by the Contractor acknowledging receipt. If the Contractor disagrees with the Division's interpretation in a Field Order, the Contractor may submit a protest by certified mail to the Chief within ten (10) days following the date of issuance of the protested Field Order. However, the Contractor must immediately proceed with the instructions given in the issued Field Order.

If, upon receipt of a written protest of a Field Order, the Division determines that the work referred to in the protest is outside the Scope of Work, the Division will not issue a Field Order and instead will issue a Change Order.

Field Orders, which are interpretations of the requirements of the Scope of Work, may be issued by the Division at any time during the performance of the work. The Contractor, at all times, is required to immediately execute the instructions of all issued Field Orders.

PART 17: CHANGES IN THE SCOPE OF WORK

17.1 The Division's Right to Require Change Orders

The Division may issue a Change Order directing the Contractor to immediately perform extra work that differs from the Scope of Work. The Contractor shall perform the work as directed. The changes in the work will consist of additions, deletions, or other revisions. When the Contractor performs the work, the Offer amount will be adjusted as described within this Scope of Work.

If the Contractor protests the issuance of the Change Order, any such protest has no bearing on any work requirements arising out of the Change Order in that the Contractor must immediately perform the work required in the Change Order so as not to delay the progress of the work at the Project.

17.2 Unauthorized Work

Only work performed under the Scope of Work or work authorized by a Field Order or a Change Order is eligible for compensation. If the Contractor performs any work or purchases any materials without an approved, applicable Field Order or Change Order, such work performed and purchases made are within the Scope of Work at no additional cost to the Division.

17.3 Contractor's May Request Change Orders

If the Contractor determines that the Scope of Work does not address conditions at the Project, the Contractor may provide written notice to the Division of the conditions and request a Change Order. No oral communications will be acceptable as justification for a Change Order.

17. 4 Determining Price of a Proposed Change Order

The following methods will be used to determine the price of a proposed Change Order:

a. If a Change Order involves items not listed on the Quantity Sheet, the Contractor must present the Division with labor and/or material price quotes for the proposed Change Order item(s). The Division may request these quotes either in unit prices or as lump sums; or

b. If the work involved in the Change Order is not definable, the Division may request the work be performed on a time and material basis and include a maximum amount to be paid for the work. The method will be based on unit prices for both labor and materials agreed to by the Division prior to the Contractor commencing the work.

17.5 Disputes Regarding Change Order Prices

If the Contractor and the Division cannot agree on the cost of the work for a Change Order, using site-specific information including, but not limited to, Division historic public offer information, the Division will determine and set a fair price for the work and materials that are the subject of the Change Order.

PART 18: PAY ESTIMATES

18.1 General Information

Payments issued to the Contractor as the work progresses are not acceptance of any portion of the work not completed in accordance with the Scope of Work nor do such payments relieve the

Contactor of liability with respect to any obligation or any expressed or implied warranties or responsibilities for faulty materials or workmanship.

18.2 Required Review by the Division

Prior to the submittal of each payment request, the Contractor and the Division must meet at the Project site to review the Project progress. The Contractor and the Division's Project Representative must mutually agree on quantity and percent of work completed for all offer items prior to submittal of each payment request. No payment request will be approved for work that has not been approved by the Division's Project Representative. Field verification of all lump sum quantities and weight slips for all unit price quantities invoiced must be submitted to the Division's Project Representative for review during the meeting.

The Contractor's payment request must be submitted to the Division via the Orphan Well Program email at OrphanWellProgram@dnr.ohio.gov. The payment request must include a form furnished by the Division along with all backup documentation. The Division will confirm in writing that the payment request is accurate.

Payment requests received by the Division containing errors or requesting amounts that cannot be approved will be returned to the Contractor. The Contractor may resubmit a payment request after correcting errors.

18.3 Documents to be Submitted for Payment

Once the Division confirms the payment request is accurate, the contractor may submit an invoice on company letterhead to Ohio Shared Services at invoices@ohio.gov. Refer to the instruction on the payment request form furnished by the Division for additional submittal details.

With each request for payment the Contractor certifies that:

a. The request for payment is accurate as to materials and the work completed under the terms and conditions of the Scope of Work and any Change Order, as applicable, including full compliance with all labor provisions; and

b. All subcontractors and material suppliers have been paid for the work or materials that are applicable to all previous payment requests. As certification, each request for payment, at the Division's request, may need to be accompanied with a properly executed "Waiver of Liens" from all subcontractors and material suppliers to show that all previous payments made by the Division to the Contractor have been applied to fulfill, in full, all of the Contractor's obligations reflected in prior requests for payment.

18.4 Effect of Liens on Payment Requests

All work, materials, and equipment covered by any request for payment, whether incorporated in the Project or not, will pass to the Division at the time of payment free and clear of all liens, claims, security interests and encumbrances.

If there is evidence of any lien or claim that is chargeable to the Contractor, the Division will withhold all payments due to the Contractor to secure such lien or claim. If there are any previous liens or claims after payments are made to the Contractor, the Contractor may be required to refund to the Division a sum of money equal to the sum of all monies that the Division may be compelled to pay in discharging any lien or claim as a result of the Contractor's default.

GENERAL SPECIFICATIONS

Unless there is a specific pay item in the Detailed Specifications, the work defined in the General Specification shall be incorporated into other items of work.

PART 1: HOURS OF WORK

The Contractor, the Contractor's agents, representatives and subcontractors shall perform projects during the days of Monday through Friday. Work will not be conducted on weekends or state/national holidays except with Division approval or during emergency situations. A workday is defined as eight (8) hours. However, additional hours may be worked with Division approval or during emergency situations.

PART 2: EQUIPMENT

The Contractor equipment shall pass all safety requirements of local, state, and federal agencies. The Ohio Department of Natural Resources, Division of Oil and Gas Resources Management reserves the right to inspect the equipment prior to the Recommendation of Award.

Unless otherwise noted, all equipment and materials required to complete the work described shall be provided by the Contractor.

PART 3: NOTIFICATIONS

3.1 Seven Working Day Notice

The Contractor, the Contractor's agents, representatives, subcontractors, or independent contractors shall contact the responsible Division Orphan Well Inspector (the "Inspector") no less than seven (7) working days prior to commencement of work. Notice may be written or oral. This notice will allow the appropriate Division staff time to mark the approved access route and any sensitive areas that need to be left undisturbed.

The Contractor, the Contractor's agents, representatives and sub-contractors shall contact each utility company that has utilities that directly affect activities at the well location(s).

3.2 Public 48 Hour Notice

Prior to initiating well exploration operations, the Contractor shall give a minimum of 48-hour notice to the local fire department. Confirmation of this notification shall also be made to the Inspector or the Division Regional Office.

3.3 Emergency Notification

When emergency conditions are encountered, such as a release of hydrogen sulfide gas (H_2S), natural gas, crude oil, condensate or brine that threatens human health, safety or the environment, as described in Ohio Administrative Code 1501:9-08-02, the Contractor shall notify the local fire

department, the Local Emergency Planning Committee (LEPC) and call the 24/7 incident notification number: 1-844-OH-Call1 (1-844-642-2551) within 30 minutes of the occurrence.

PART 4: ACCESS AND PRESERVATION OF SITE

All costs for the adequate access to the well site for the equipment are to be included in the Offer. Unless waived, placement of all tanks and equipment shall be subject to Division's approval. If requested by the Division, access roads will be chained or cabled to prevent unauthorized use.

Special attention shall be given to maintaining trees and other vegetation that have scenic value, provide shade, reduce erosion and runoff, or add to the aesthetics of the area. No trees three (3) inches or larger in diameter shall be removed without the Division's permission. Any alterations to the natural topography required to provide ingress and egress to the well site must be approved by the Division before work begins.

PART 5: DAMAGE CAUSED BY CONTRACTOR

All damage caused by the Contractor's negligence in carrying out of this scope of work to any public or private property of any nature whatsoever, including trees, shrubs, and crops, shall be corrected to Division's satisfaction at the expense of the Contractor. If crops are damaged and the Contractor, landowner, or tenant cannot reach a settlement, the County Cooperative Extension Service shall set a fair price for crop damages and the decision shall be final and binding upon all parties. All subsequent payments due the Contractor shall be withheld until the Contractor provides proof of payment of any such claim.

The Contractor shall be responsible for all costs of repairing or replacing any survey monument that is disturbed or destroyed by the Contractor. The Contractor shall utilize a professional surveyor who is licensed and registered by the State of Ohio to perform the re-establishment of said monuments according to the standards set forth by the governing body or law of said monument. For the purpose of this scope of work, the term survey monument shall apply to any property boundary marker, federal, state or county geodetic benchmark, state or county right of way monument, FEMA benchmarks or flood elevation markers.

PART 6: SAFETY

6.1 Public Safety Coordination Meeting

The Contractor shall hold a safety meeting with the local fire department, Division Emergency Operations staff and Inspector, and other applicable contracting staff prior to commencement of work. The meeting shall review 1) the safety of the public during operations, 2) the safety of workers during operations, 3) emergency notifications of events, 4) site set up and layout, 5) general overview of operations, 6) nearest hospital's address and directions.

6.2 Daily Safety Meetings

The Contractor shall hold a daily safety meeting for all personnel on-site prior to the commencement of work. The Contractor will also provide and maintain a sign in/out sheet for all people on location. The Contractor will immediately report any accidents and/or safety concerns to the Inspector.

6.3 Operational Standards

The Contractor shall follow the rules established by Occupational Safety and Health Administration (OSHA) Basic Construction Safety 29 CFR 1926 on all onsite project operations.

6.4 Excavation and Trenching Requirements

The Contractor shall follow the notification protocol as specified in Part 3 of the General Specifications before the start of any excavating activities. The Contractor will comply with OSHA Construction Standards for excavation and trenching under 29CFR 1926 Subpart P.

6.5 Hazardous Communications Requirements

The Contractor shall maintain Safety Data Sheets (SDS) for all chemicals stored and/or used on-site. A copy of all SDS will be supplied to the local Fire Department and to the Division.

6.6 Site Security

The Contractor shall provide and install protective barriers/fencing around the work area to prevent unauthorized access. Ingress and Egress access must be maintained at all times.

6.7 Wind Direction Indicator

The Contractor shall install a windsock in an open area of the well location where it is visible to all onsite personnel. It shall be constructed of high visibility material and deployed no less than six (6) feet above grade during the operations.

6.8 Muster and Smoking Areas

The Contractor shall mark and assign a primary and a secondary muster area daily upwind of the well location. These are to be determined based on prevailing wind direction, as indicated by the windsock. The Contractor will post an emergency contact information sheet at each muster site. The Contractor will establish a safe location for a designated smoking area.

6.9 Ignition Sources and Parking Areas

The Contractor shall identify and mark all potential ignition sources within a 50-foot radius of the well. The designated parking area will be outside the 50-foot radius from the well.

6.10 Air Monitoring and Worker Safety

The Contractor shall supply and place a 4-gas monitor at the wellhead. The gas monitor must be calibrated and maintained to monitor Methane (CH_4), Oxygen (O_2), Carbon Monoxide (CO) and Hydrogen Sulfide (H_2S).

Stop work must be followed when any of the levels listed below occur:

- Methane - 1000 parts per million (PPM)/5% Lower Explosive Limit (LEL),
- Oxygen - saturation below 19.5% or above 23%,
- Carbon Monoxide – 50 PPM,
- Hydrogen Sulfide - 10 PPM.

The levels stated above are directly from the Occupational Safety and Health Administration (OSHA) and The National Institute for Occupational Safety and Health (NIOSH) and are standard for air monitoring procedures for safety and work environments. If any of the above levels are alarmed, all personnel will shut down ignition sources and report to the muster area. From the muster area, the Contractor will call 911 for assistance from the local Fire Department.

Division Emergency Operations personnel or the Inspector has the right to stop work if the actions are unsafe or the actions cause or are likely to cause danger to the workers, public, or the environment.

PART 7: MAINTENANCE OF TRAFFIC

The Contractor shall at all times install, maintain, and operate all traffic and traffic control devices in conformance with the requirements of the "Ohio Manual of Uniform Traffic Control Devices for Streets and Highways," hereinafter called The Ohio Manual.

The Contractor shall notify the appropriate public officials and the Division and shall obtain all required permits prior to any lane closure of a public road.

The Contractor shall maintain ingress/egress to all properties associated with the project at all times during the project unless agreed upon in writing by the Division and the landowner.

7.1 STREET CLEANING

The Contractor shall be required to provided street cleaning services in order to remove sediment/debris tracked from the construction site/access drive onto private or public roadways during all phases of the Project.

The Contractor shall work diligently to minimize the amount of sediment tracked onto roadway. The Contractor will conduct all construction and ingress/egress operations in conformance with Part 9: Erosion and Sediment Control of the General Specifications. Use of other erosion and sediment control measures to prevent sediment runoff during period of rains and non-working hours.

The Contractor will provide street cleaning, such as sweeping or vacuuming, at locations around the project ingress/egress where plugging operations has caused tracking of sediments onto roadways. Mechanical sweepers shall be vacuum-type or regenerative sweepers. Sweeping speed will not exceed 6 mph. A minimum of two passes shall be made. Streets must be cleaned daily before the end of the workday. If excess sediments have been tracked onto the streets or if rain is expected, the Division may direct the Contractor to clean the street as often as necessary to keep the street clean at all times.

The Contractor shall be required to remove and dispose of sediments properly. Removal of collected sediment deposits will be disposed on the project site. If sediment deposits cannot be disposed of on-site, an alternative location will be approved by the Division. No offsite disposal will be in or adjacent to a stream and/or floodplain. Sediments to be placed at the project site will be in conjunction with site restoration and should be spread, compacted, covered, and stabilized in accordance with the site restoration line item. **Sediment will not be allowed to flush into stream or drainage way and washing or flushing of sediments into adjacent drainage systems is prohibited.** If sediment has been contaminated, it will be disposed of in accordance with the contaminated material disposal line item.

The cost of this work shall be included in Contract bid prices for items of which this work is a component.

PART 8: PROTECTION OF EXISTING UTILITIES

Before construction begins, the Contractor, acting as an agent for the Division, shall locate all utilities in

the vicinity of the work. The Contractor shall be responsible for complying with the regulations pertaining to utilities in the State of Ohio. The Contractor shall assume all risk for all utilities located in the vicinity of the work, whether above or below the surface of the ground. The Contractor shall also be responsible for all damages and assume all expense for direct or indirect injury, caused by his work, to any of the utilities, or any person or property by reason of injury to them, whether such utilities are or are not shown on the drawings, once they have been uncovered by the work. **In compliance with Ohio Revised Code 3781, two working days before digging the Contractor shall contact the Ohio Utility Protection Service (OUPS) and Oil and Gas Producers Underground Protection Service (OGPUPS) using the Ohio811 one call service by calling 811 or by using the i-dig login found on the internet at OHIO811.org. The Contractor shall maintain a current OUPS/OGPUPS call ticket during the entire project.**

PART 9: EROSION AND SEDIMENT CONTROL

Temporary erosion control measures are required during the course of this project. These measures may consist of the installation of straw bale dikes, silt fence, filter socks, inlet protection structures, erosion control blankets, energy dissipation, and temporary seeding and mulching.

Once construction begins, the Contractor shall be solely responsible for all construction related to the control of off-site sedimentation. This sediment shall be removed by the Contractor at the Division's direction.

9.1 Temporary Measures

Temporary erosion control structures, identified with these specifications, or as directed by the Division shall be placed as soon as construction starts and must be maintained during the course of the project. At the direction of the Division, the Contractor shall remove the temporary controls when they are no longer needed or when required permanent control measures have been completed.

If sediment escapes the site, accumulations must be removed at a frequency to minimize further negative effects, and whenever feasible, prior to the next rain event.

The contractor shall be responsible for revegetation of all areas in which sediment escapes the site. These areas shall be included in the final stabilization of the project and shall be at the cost of the contractor.

9.2 Maximum Exposed Areas

Stabilization measures must be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and except as provided below, must be initiated no more than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased.

Where the initiation of stabilization measures by the seventh day after construction activity temporarily or permanently ceased is precluded by snow cover, or frozen ground conditions, stabilization measures must be initiated as soon as practicable.

Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within fourteen (14) days, temporary stabilization measures do not have to be initiated on that portion of site.

The Division shall limit the area of excavation, borrow and embankment operations in progress commensurate with the Contractor's capability and progress in keeping the finished grading, re-soiling, mulching, seeding and other such permanent control measures current in accordance with the acceptable schedule.

9.3 Winterization

When an incomplete project will be left exposed throughout the winter season, the Contractor shall furnish the Division a plan indicating the control measures to be installed and maintained until the next construction season.

If the winter period falls within the anticipated construction period of the Scope of Work and as indicated in the original approved construction schedule, control structures will be paid for by the Division at the unit prices in the Offer.

If the project is not substantially completed prior to the winter season due to the failure of the Contractor to meet the completion date, these necessary control structures will be installed and maintained by the Contractor at his expense and these items will not be paid for under the terms of the Scope of Work, except those that are permanent facilities to be left in place in accordance with the Specifications.

9.4 Other Controls

Off-site vehicle tracking of sediments and the generation of dust must be minimized, and any waste must be properly disposed.

9.5 Inspections

The Division Inspector shall conduct inspections to ensure that the control practices are functional and to evaluate whether the erosion and sediment control measures are adequate and properly implemented.

9.6 Enforcement

The Division shall take appropriate steps to ensure that sedimentation does not leave the project site. The Division shall require the removal of off-site sediment by the Contractor if such sediment resulted from the Contractor's negligence to place and maintain sediment control structures in accordance with the Specifications.

PART 10: SPILL PREVENTION AND REMEDIATION

The Contractor is expected to prevent and, if necessary, contain and remediate any spills that may occur at the site due to exploration activities. All stationary equipment on well locations that are in tiled farm fields, residential neighborhoods, parks, or in/adjacent to areas determined by the Division to be environmentally sensitive, will be staged on an impermeable liner and berm. **The Contractor will have oil absorbent pads and booms available onsite during the exploration operations.**

PART 11: HYDROGEN SULFIDE

If the well that is being explored is known to produce hydrogen sulfide (H_2S), the following considerations must be observed:

A. The Contractor must provide the appropriate equipment, on-site, to properly detect and abate any H_2S emitted from the well. If the Contractor does not have the appropriate equipment to properly detect and abate any H_2S emitted from the well, they will utilize an appropriate party to provide these services.

B. The Contractor will shut-in the well each night after the exploratory operations have ceased, unless otherwise instructed by the Division. The Contractor will continue this process until the plugging operations are complete and there are no further signs of a gas release.

11.1 Cement

A. The Contractor will use Class A cement to plug wells known to produce hydrogen sulfide.

DETAILED SPECIFICATIONS

The Contractor is reminded to review the Scope of Work documents carefully. Coordination, permission or direction of the Division may be required for use of individual Detailed Specification line items. The Division shall only pay for quantities of items that are correctly installed and completed in accordance to the Detailed Specifications. The Division shall not guarantee payment of any work completed without or prior to following the conditions described herein of each line item.

PERSONNEL

A. Description: This work shall consist of the personnel required at each specific well site to complete the work defined in the specific Work Order.

B. Execution:

Contractor Site Supervisor: At each site the Contractor shall provide a qualified supervisor to oversee the crew's work, schedule work, troubleshoot, and coordinate with the Division.

Crew: At each site the Contractor shall provide a crew in the number defined in the Work Order that shall be comprised of qualified personnel to complete the work that is defined in the Work Order. This shall include but not be limited laborers, rig hands, and landscapers.

Contractor Site Supervisor or Crew Travel Mileage: **Any mileage within the contract's defined work zone as is shown in Appendix II required by the Site Supervisor or Crew Travel to complete the work required shall be paid by this item.** Crew Travel shall be one unit that covers all crew members traveling to a site. Crew travel will not be paid per crew member individually. Only one trip per day shall be counted to report to work from the lodging site.

Per Person Per Diem: This shall be a daily cost that will be measured based on the number of personnel required to be working on a site on a given day. This shall cover all meals and lodging required to complete the defined Work Order. Per Diem (meals and lodging) shall be measured as full days. If personnel are not available for a full day of work, Per Diems will not be considered or paid in fractions for that day. Per Person Per Diem will only be paid when work requires overnight travel by the crew or site supervisor.

C. Measurement: Measurement for payment will be considered and measured as a unit satisfactorily completed and accepted by the Division. Measurement of personnel time shall only be counted when the personnel are onsite working diligently to complete the work required. **Personnel travel mileage shall only be paid within the contract's defined work zone as is shown in Appendix II.** Per Diem (meals and lodging) shall be measured as full days. If personnel are not available for a full day of work, Per Diems will not be considered or paid in fractions for that day. Per Diem shall be paid on a per person basis. Per Person Per Diem will only be paid when work requires overnight travel by the crew or site supervisor. All equipment requires a qualified operator be provided with that equipment. A crew member or the Contractor Site Supervisor will not be counted as a such while also operating a listed piece of equipment.

D. Payment: Payment for this work shall be made at the unit price and unit as defined on the Quantity Sheet in the quantity satisfactorily completed and accepted by the Division.

EQUIPMENT ON TIME RATE

A. Description: This work shall consist of the equipment required at each specific well site to complete the work defined in the specific Work Order.

B. Execution:

Equipment Mobilization and/or Demobilization Mileage: **Any mileage within the contract's defined work zone as is shown in Appendix II required to deliver equipment to the well site shall be paid by this line item.** The Contractor shall bring equipment to the site in an efficient manner as to bring multiple pieces of equipment to the site when feasible with one trip. The Division will pay mileage both to and from the site for the delivery truck/trailer if the truck/trailer leaves the site. If the Contractor removes the equipment from the site prior to completion of the work, the Contractor will be responsible to remobilizing the equipment without additional payment.

Equipment: The Contractor shall provide, as a minimum at each worksite, the following:

- Generator
- Rigid pipe vise
- Pipe threader
- Pipe fittings for 1-inch through 2.38-inch
  - couplings, nipples, elbows, unions, caps, plugs, etc.
- Pipe chisel
- Pressure gauges – high and low with ability to tie into 1-inch through 2.38-inch pipe
- Pipe tape/dope/anti-seize
- Gasket seal
- Handheld cutting torches
- Cut off wheel with sufficient power source to cut multiple casings/tubings
- Two- and four-inch pipe cutters
- Sawzall
- Penetrating oil
- Pipe wrenches (various sizes)
- Cheater bar (for pipe wrenches)
- Shovels, rakes, broom, small ditch shovel
- Sledge hammer(s)
- Spud bar
- Pry bars (various sizes)
- Impact, large and small socket sets
- Drill with metal bit sets
- EZ Outs
- Cresent wrenches (various sizes)
- Pipe calipers
- Flange wrench
- Logging chains, Grade 70, 10', 16', 20' and 25' lengths
- 1 Bag of oil diapers, booms, bag of peatsorb
- 6 Traffic Cones conforming to "Ohio Manual of Uniform Traffic Control Devices for Streets and Highways," (MUTCD)

- Portable mounted traffic signs conforming to MUTCD W21-1 & W20-7.

and any additional equipment as defined in the Work Order and as documented on the Offer Sheet. All equipment shall be in good working order. Any mechanical issues with equipment shall not be time paid for by the Division. Any time or mileage required to repair equipment shall be the responsibility of the Contractor. The Division shall pay for equipment when a piece of equipment is diligently working to compete the work defined in the Work Order. The Contractor shall provide a qualified person to operate each piece of equipment. **The operator's rate shall be included in the equipment's hourly rate.**

C. Measurement: Measurement for payment will be considered and measured as a unit satisfactorily completed and accepted by the Division. Measurement of equipment time shall only be counted when the equipment is onsite working diligently to complete the work required. **Equipment mobilization and demobilization mileage shall only be paid within the contract's defined work zone as is shown in Appendix II.** The Contractor shall provide a qualified person to operate each piece of equipment. **A crew member or the Contractor Site Supervisor will not be counted as a such while also operating a listed piece of equipment.**

D. Payment: Payment for this work shall be made at the unit price and unit as defined on the Quantity Sheet in the quantity satisfactorily completed and accepted by the Division.

EQUIPMENT & MATERIALS AT UNIT COSTS

Personnel, mileage, and equipment needed to deliver the following line items to the project site shall be included in the applicable line item below. Once delivered to the site, personnel and equipment rates in the above line items will be paid toward the installation of these materials.

SITE SAFETY

A. Description: The work will include the installation and implementation of safety procedures for the exploratory and emergency mitigation of the orphan wells as described herein.

B. Definitions & Installation: It is the Contractor's responsibility to properly maintain all of the latter mentioned throughout the duration of the project. Any damages shall be repaired or replaced at no additional cost to the Division. Site safety measures shall be removed prior to the demobilization of the Contractor's workforces.

Any release of materials into or onto the ground or surface waters outside of the primary and/or secondary containment shall follow the Ohio One-Call System as described in Appendix I, "One Call". The Ohio One-Call System shall be contacted at 1-844-OHCALL1 within 30-minutes of becoming aware of the occurrence.

1. Emergency Response Plan: The Contractor will assemble an Emergency Response Plan (ERP) with all contact information, emergency preventative measures, and contingency plans for any well-related issues that may occur. The Contractor will be responsible for maintaining this ERP on site during the projects. Ingress/Egress for evacuation and/or public safety will be discussed in the pre-safety meeting to be held on location by the Contractor with local responders and Division personnel. These routes will be listed in the ERP. The Division will review the plan

with the Contractor prior to starting the project.

2. Identifications, Markings & Plugs: All conduits capable of allowing methane migration (i.e. ventilation pipes, storm/water drains) into the lower level of the inhabited dwelling shall be identified and capped by the Contractor.

   Any potential ignition sources within a fifty (50) foot radius shall be identified and marked by the Contractor.

   All identifications, marking and plugs shall be inspected and approved by the Division prior to beginning the project.

3. Air Movers (Industrial Fans): The Contractor shall also be required to have onsite industrial fans or air movers **onsite** in the event natural gas is detected and found to be settling at ground level and not properly dissipating from the site. Air movers will be **required** to be onsite for all trenching and excavation where workers are required to enter the trench/excavation.

4. Safety Fence: Where determined necessary by the Division the Contractor shall erect a safety fence were directed by the Division.

C. Measurement: Measurement for payment will be considered and measured as a unit satisfactorily completed and accepted by the Division.

D. Payment: Payment for this work, including labor, installation, materials and removal shall be included at the unit price per each well site for **"Site Safety."**

TRAFFIC MAINTENANCE

A. Description: This work shall consist of all labor and materials needed to temporarily close a local roadway to traffic at the project well site. This work shall also include, but not be limited to, warning signs, barricades, and cleaning mud & dirt associated with the construction from all public roadway surfaces.

The Contractor shall notify the Division and the local municipalities a minimum of 7 calendar days prior to closing the project's roadways. The contractor shall be responsible for obtaining all permits as required by the local road authority.

B. Traffic Control

General: The installation, maintenance, and operation of all traffic controls and traffic control devices shall conform to the requirements of the "Ohio Manual of Uniform Traffic Control Devices for Streets and Highways," hereinafter called (MUTCD). Traffic control devices shall be provided with suitable supports of sufficient strength and stability.

1. Traffic Signage: The faces of construction signs, barricades, vertical panels, and drum bands shall be reflectorized with Type G sheeting. The signs shall be placed at adequate distances from the construction road crossing area to sufficiently warn motorists and provide ample stopping distances. Traffic cones shall be a highly visible orange color.

   Channelizing devices such as barricades, drums, vertical panels, and cones shall be protected

by adequate advance warning construction signs.

If equipment, vehicles, and material are stored or parked on highway rights of way, they shall be located behind existing guardrail or not less than thirty (30) feet beyond the traveled way unless otherwise permitted by the Division. This shall not include equipment, vehicles, and materials within the closed portion of the roadway. At night, any such material or equipment stored between the side ditches, or between lines five (5) feet behind any raised curbs, shall be clearly outlined with dependable lighted devices that are approved by the Division. In addition, the Contractor shall provide any other lights, barricades, etc., that may be needed for the protection of pedestrian traffic.

2. Road/Lane Closure: The temporary road closures shall include the following:
    a. Any work in the roadway that is requiring more than 20 minutes shall be completed following this specification and with the proper permits from the local road authorities and approval from the Division. **A Traffic Control Plan must be submitted by the contractor prior to the start of work and approved by the local road authority and the Division.**
    b. This item shall include temporarily closing one lane of traffic for the duration of the project. This shall include minimum three (3) feet tall channelizing devises and a temporary traffic light system approved by the Division.
    c. This item shall also include all the necessary signage and barricades for a complete closure of both directions of travel if it is determined by the Division that it is required for the safety of the public.

    As required, the Contractor shall provide, erect, maintain and subsequently remove approved traffic control devices, barricades, and suitable and sufficient signage at the following locations: (1) work limits of the project, (2) prior intersecting roads, or (3) any other points designated in the Work Order.

    Subject to the Division's approval, the Contractor may use traffic control devices in used but good condition. Used equipment shall be reconditioned as necessary to assure a proper operation. Temporary traffic signal operation shall be subject to the approval of the Division and shall meet the requirements of the Ohio Manual.

    Upon a shutdown or completion of the project, the Contractor shall re-open the roadway. The roadway shall be in a condition that is equal to or better than the roadway condition prior to the road closure. The Contractor shall remove traffic controls for the period the project is shutdown. All re-opening and road closing shall be considered incidental to **"Traffic Maintenance."**

C. Performance: If, in the opinion of the Division, proper maintenance of traffic facilities and proper provisions for traffic control are not being provided by the Contractor, the Division may take the necessary steps to place them in proper condition, and the cost of such services shall be deducted from any money which may be due or become due the Contractor.

D. Basis of Payment: Payment for maintaining traffic as detailed above including: the road closure to include but not be limited to, the furnishing, installation, maintenance, and removal of temporary signage, barricades, cones, and the furnishing and installation of permanent traffic signage, shall be made at the unit price per each well site for **"Traffic Maintenance."**

TEMPORARY VAULT & VENT

A. Description: This work shall include all material, labor, and equipment necessary for the excavation and installation of a temporary vault & vent line system to channel gases to a safe location until a permanent plugging or venting can be completed.

B. Materials:

1. Temporary Vault: The temporary vault shall be a 55-gallon ASTM carbon steel drum with a steel plate and two (2) inch diameter vent nipple welded to the top. Temporary Vault anchoring shall be per the detail found at the end of this section.

2. Temporary Vent Pipe: The temporary vent pipe, associated fittings and vent support shall be two (2) inch diameter schedule 40 galvanized steel or approved equal. A minimum of 15 linear feet will be included in this item. **The contractor must bring all the tools and equipment necessary to cut and thread the vent line in the field.**

   Note: Temporary vent pipe longer the 15 linear feet will be made at the unit price per linear foot per item " **Temporary Vent Pipe**."

3. Insect and Rodent Vent Screen: The screen shall be made of either stainless steel or galvanized steel.

C. Installation: **The Contractor shall excavate and maintain the sides of the trench as required by OSHA**. **No person shall be permitted to enter a trench that does not meet OSHA requirements.**

Any dewatering required to keep the trench dry during construction shall be performed by the Contractor.

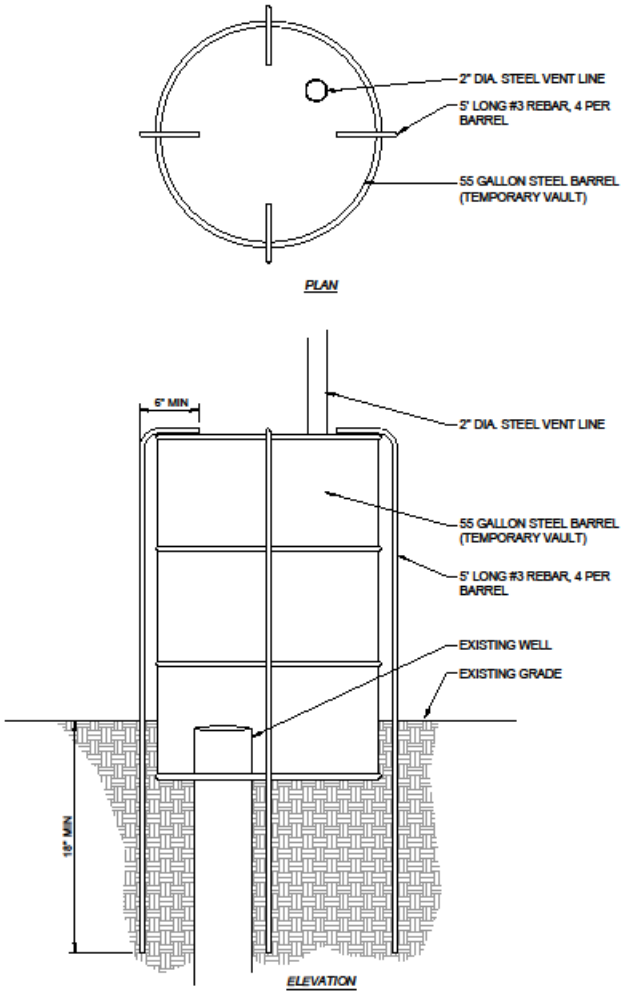
No backfilling shall be permitted without visual inspection and approval of the Division. The earth backfill for the vault & vent pipe shall be placed and compacted in lifts, using onsite equipment, that shall not exceed six (6) inches. The loose lifts shall be compacted to the satisfaction of the Division. 2016 ODOT CMS Item 304 aggregate base shall be installed per line item **"No. 304 Aggregate Base"** when determined to be needed by the Division.

Any trench settling that occurs post construction shall be corrected by the Contractor at no additional cost to the Division.

All topsoil shall be removed and stockpiled during construction. Topsoil shall be utilized at trench backfill completion and shall not be compacted. Trench settlement shall be corrected by the Contractor to maintain existing grade outside the trench.

D. Measurement: Measurement for payment shall be made by field inspection of quantities satisfactorily installed.

E. Payment: Payment for this work shall be made at the unit price per each for **"Temporary Vault & Vent/Temporary Vent Pipe**."



TEMPORARY VAULT ANCHORING
NOT TO SCALE

WELL CASING TAP

A. Description: This work consists of all labor, equipment, and material necessary to establish pressure relief control of the well. This item shall include the installation of a tap and valve onto the existing well casing.

B. Execution: The contractor is responsible for tapping the well casing, installing a new valve and "relieving" the well of any pressure according to best management practices.

All components associated with the tapping process shall be of size to properly fit the steel casing of interest and be able to withstand a minimum gas pressure of 1000 psi.

The Division shall make the determination for the overall exposed depth of casing. The casing shall be free from any damages or defects. If required, the casing shall be cleaned of any dirt, oils and debris prior to the installation of the saddle.

After the well casing is cleaned and the saddle is installed, the Contractor will then install the valve and all associated appurtenances. Upon approval from the Division, the Contractor may tap the casing. After tapping, the Contractor shall remove the tap along with the generated "coupon" and close the installed valve.

Once the valve is operational, the Contractor shall attach a 2-inch diameter (minimum) line to the valve which will be placed into a tank. This tank will be set a minimum of twenty (20) feet from the well. The Contractor will then slowly open the valve to relieve the pressure in the well. All fluids, gases and solids generated during this process will be diverted into the tank.

No further operations shall begin until the well pressure has ceased and a satisfactory inspection of the well has been completed by the Division.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above described work, which includes all labor, materials, equipment necessary for the well tap, valve and "relieving" process shall be made at the unit price per each for **"Well Casing Tap"**.

CASING COLLAR EXTENSION (THREE FEET OR LESS)

A. Description: This work consists of all labor, equipment, and material necessary to extend casing to a working elevation as determined by the Division.

B. Execution: The contractor is responsible to extend an existing well casing by welding an in kind well casing to the existing casing to an elevation determined by the Division. Casing weld strengths shall be equal to or greater than the existing, in place casing strength. **Casings that shall be extended greater than three (3) feet shall be paid per line item "Casing Collar Extension (Greater Than Three Feet)" for the footage greater than three (3) feet.**

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above described work, which includes all labor, materials, equipment necessary for the casing collar extension (three feet or less) shall be made at the unit price per each for **"Casing Collar Extension (Three Feet or Less)"**.

CASING COLLAR EXTENSION (GREATER THAN THREE FEET)

A. Description: This work consists of all labor, equipment, and material necessary to extend casing to a working elevation as determined by the Division.

B. Execution: As per line item **"Casing Collar Extension (Three Feet or Less)"** the contractor is responsible to extend an existing well casing by welding an in kind well casing to the existing

casing to an elevation determined by the Division. Casing weld strengths shall be equal to or greater than the existing, in place casing strength. **Casings that shall be extended greater than three (3) feet shall be paid per line item "Casing Collar Extension (Greater Than Three Feet)" for the footage greater than three (3) feet.**

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above described work, which includes all labor, materials, equipment necessary for the casing collar extension (greater than three feet) shall be made at the unit price per linear foot of **"Casing Collar Extension (Greater Than Three Feet)"**.

RISER PIPE

A. Description: This work consists of all labor, equipment, and material necessary to install a riser pipe around an existing well bore. Riser Pipes shall be extended to an elevation determined by the Division.

B. Execution: The contractor shall excavate to a depth determined by the Division and install a section of riser pipe to an elevation determined by the Division. Fill shall be placed around the riser pipe to match existing grade and allow for positive drainage away from the wellbore.

This riser pipe shall be made of steel, concrete, or polyethylene pipe. **The cellar shall be a minimum of 24 inches in diameter. This work shall include six (6) inch minimum Portland Cement in the cellar base. Portland Cement shall be paid per line item "Portland Cement, Type I-II."**

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above described work, which includes all labor, materials, equipment necessary for the riser pipe shall be made at the unit price per linear foot of **"Riser Pipe"**.

CORRUGATED HDPE CELLAR (Four-foot diameter)

A. Description: This work consists of all labor, equipment, and material necessary to construct a cellar around the well head.

B. Execution: The culvert pipe shall be 48" corrugated HDPE smooth interior pipe or approved equal, twenty (20) foot in length and shall meet the AASHTO M294 specification, except the average elongation shall not exceed 7.5 percent when tested as described in that specification. Manufacturer's certification shall be furnished to the Division.

The cellar shall be set around the well and extended up to working elevation. This work shall include a six (6) inch minimum of Class "A" or Portland Cement in the cellar base with a three (3) inch minimum port near the well. The port shall extend up to within three (3) inches of the well at working height and be used to monitor and contain any gas/oil escaping around the back side of the casing. The depth of the cellar will be specified in the Contractor's work order.

After installation of the cellar, the Contractor shall be responsible for installing a protective barrier

(exterior grade plywood, 3/4" thick or approved equal) around and overtop of the installed cellar so as to prevent unintended access. This work shall be considered incidental to this line item.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary for the well head control shall be made at the unit price per each for **"Corrugated HDPE Cellar (Four-foot diameter)."**

CORRUGATED METAL CELLAR (Six-foot diameter)

A. Description: This work consists of all labor, equipment, and material necessary to construct a cellar around the well head.

B. Execution: The cellar shall be a six (6) foot diameter aluminum corrugate metal pipe, ten (10) foot in length. All pipe material shall have an aluminized type 2 coating.

The cellar shall be set around the well and extended up to working elevation. This work shall include a six (6) inch minimum of Class "A" or Portland Cement in the cellar base with a three (3) inch minimum port near the well. The port shall extend up to within three (3) inches of the well at working height and be used to monitor and contain any gas/oil escaping around the back side of the casing. The depth of the cellar will be specified in the Contractor's work order.

After installation of the cellar, the Contractor shall be responsible for installing a protective barrier (exterior grade plywood, 1" thick. or approved equal) around and overtop of the installed cellar so as to prevent unintended access. This work shall be considered incidental to this line item.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary for the well head control shall be made at the unit price per each for **"Corrugated Metal Cellar (Six-foot diameter)."**

POLYMER TANK (35 BBL)

A. Description: This work consists of all labor, equipment, and material necessary to provide a 35 bbl minimum capacity polymer tank in order to capture fluids generated from the well.

B. Execution: The location and placement of the tank shall be at the discretion of the Division.

Tanks shall be made of polyethylene and capable of providing a minimum storage of 35 barrels (1,470 gallons).

In addition to this line item, the Contractor shall be responsible for providing a minimum of 50 feet of one (1) inch black poly pipe with a 100-psi minimum pressure rating. This line will be used to convey fluid from the well to the tank. All fittings shall provide a tight seal at the well and the tank and shall be the responsibility of the Contractor.

All tanks/piping used shall be in new condition and free from any dirt, contamination and/or debris.

All material used as part of this work shall become property of the Division.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary for the well head control shall be made at the cost proposal price per each for **"Polymer Tank (35 BBL)."**

WELL HEAD CONTROL

A. Description: This work consists of all material necessary to establish control of the well by installing a manufactured swage. This item shall include the installation of a swage on the most appropriate well casing as determined by the Division.

B. Execution: The Contractor is responsible for installing, according to best management practices, a swage on the well casing.

Prior to beginning work, the casing shall be inspected and free from any damages or defects. If required, the casing shall be cut and cleaned of any dirt, oils and debris prior to welding extensions and/or installation of the swage.

The size of the swage required will be listed on the work order, size ranges shall be based on the following:

- Less than 4" casing diameter
- 4" to 6.625" casing diameter
- 7" to 10" casing diameter
- Greater than 10" casing diameter

Swages shall be constructed to reduce the above-mentioned casing sizes to two (2) inches. Each swage shall be equipped with a two (2) inch ball valve, plug with gauge fitting and pressure gauge.

In the event a swage is not needed, contingency line item 61 "**2" Ball Valve**" may be utilized if necessary. This line item shall include the valve, plug with gauge fitting, and pressure gauge.

All swages, valves and plugs utilized as part of this work shall be machine made single piece construction and accompanied by the manufacturer's specification sheet(s). Contractor fabricated swages will not be considered as part of this work.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

All labor and equipment shall be paid for under the appropriate personnel and equipment on time rates as listed on the Contractor's offer sheet.

D. Payment: Payment for the above-described work, which includes all materials necessary for the well head control shall be made at the cost proposal price for **"Well Head Control."**

WELL HEAD EXPLORATION

A. Description: This work consists of all labor, equipment, and material necessary to remove any swages, hangers, well heads, or other associated equipment at the surface in order to determine the casings, tubing, ands rods that are present in the well bore at the surface.

B. Execution: The Contractor shall be required to remove all equipment located on the well at the surface to determine the casings, tubing, and rods present in the wellbore at the surface. Once all equipment has been removed the Contractor shall take photos of the wellbore and associated equipment. The Contractor shall supply electronically to the Division a photo of all equipment and casing, tubing, and rods found in the wellbore. Along with each photo the contractor shall supply electronically to the Division a brief description that will include the diameters of all casings, tubing, and rods. Once completed the Contractor shall return the equipment removed from the well to its original location unless otherwise directed by the Division.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above described work, which includes all labor, materials, equipment necessary for the well head exploration shall be made at the unit price per each wellbore for **"Well Head Exploration."**

APPROVED CEMENT

A. Description: This item shall cover all labor, materials, and equipment necessary for cementing.

B. Materials: Cement materials shall be approved prior to placement. The cement must conform to the following options:

a. API Class “A”
b. API Class “L”
c. ASTM C150 Type 1
d. ASTM C595 Type 1L
(Note: These are the only material options that will be approved, any other materials may be submitted to the Division for review but will **not** be approved for this project)

The cement shall contain 2% Calcium Chloride, properly blended, **only if directed** by the Division in advance of placing the cement. **Coordinate with the Division prior to ordering cement.**

The cement shall not contain bentonite or extenders which delay set time or decrease the overall compressive strength unless otherwise noted.

Water used for cementing shall be free of any impurities that will adversely affect set time and compressive strength.

C. Installation: The Contractor shall supply all equipment needed to mix and place the cement at weight approved by the Division. All waters needed to mix the cement and clean up shall be considered incidental to this line item.

When using API Class “L” cement or ASTM C595 Type 1L cement, all the following conditions apply:

• Mill test information must be provided to the applicable Division inspector prior to utilization of API Class L cement or ASTM C595 Type 1L cement. The mill test information must be of a representative sample of the mixture of cement proposed to be used to plug the well. A person is not required to provide the mill test information if the Division already has the mill test information of the mixture of cement for a batch.

• Performance data shall be provided in compliance with Ohio Administrative Code 1501:9-11-07 prior to usage. To determine if Ohio Administrative Code 1501:9-11-07 is met, test results shall include at a minimum slurry density, composition, compressive strength, free fluids, thickening time, curing pressure, and curing temperature. The data also shall include percent limestone and percent pozzolan material.

• For blended cement containing limestone and pozzolanic material, the combination of the materials shall not exceed fifty per cent by volume.

• A sample of at least 20lbs representative of the of cement mixture proposed to be used in a well must be provided to the Division at the request of the Division.

D. Measurement: Measurement for payment shall be based on the actual quantity of sacks of cement acceptably placed and shall be verified with delivery tickets. A sack shall be considered to be 94 pounds prior to mixing.

E. Payment: The above-described work shall be paid for at the unit price per sack for **"Approved Cement."**

DEPTH METER

A. Description: This work consists of all labor, equipment, and material necessary to establish determine the depth to the first obstruction in the well bore or total depth.

B. Execution: The Contractor shall be required to supply a depth meter that has the ability to measure to total depth of the well bore. The meter shall be run to the deepest depth possible in the hole. The contractor shall provide in writing the depth that was obtained with the meter and any additional information obtained by running the depth meter in the well bore.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above described work, which includes all labor, materials, equipment necessary for depth meter shall be made at the unit price per each well site for **"Depth Meter"**.

TRENCH BOX

A. Description: This item shall cover all labor, materials, and equipment necessary for providing a trench box in order to safely access a wellbore.

B. Execution: Sequence all excavation and earthwork operations to maintain stability of the site during construction. All excavations shall be adequately sloped, benched, and/or shored/braced in accordance with OSHA 29CFR 1926 Subpart P to provide stable sides and safe working conditions for everyone involved.

The Contractor shall supply all labor, materials, and equipment necessary to utilize a trench box that has been designed by a professional engineer that will adequately allow for a safe excavation around a well bore up to **ten (10) feet** below existing grade. All work and equipment shall be in compliance with OSHA 29CFR 1926 Subpart P.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above described work, which includes all labor, materials, equipment necessary for the trench box shall be made at the unit price per each of **"Trench Box"**.

SILT FENCE

A. General: This item covers construction of the silt fences and/or straw bale dikes. The Division shall designate utilization of silt fence, straw bale dikes or a combination of both at locations selected for placement.

The placement of silt fence and straw bale dikes within the limits of construction shall be at the discretion of the Division.

During the life of the project, the Contractor shall maintain these silt and erosion-control structures. Accumulated silt shall be removed when it, in the Division's opinion, may damage or reduce the effectiveness of the structure.

B. Straw Bale Dikes

1. Materials: Straw bale dikes shall be constructed with twine-bound square straw or hay bales, staked to remain in place.

2. Installation and Execution: The location of the dikes shall be as directed by the Division, at the time of construction. When the usefulness of the dikes has ended, they shall be removed and disposed. Dikes may remain in place upon completion of the project only when permitted by the Division.

C. Silt Fence

1. Materials
    a. The silt fence fabric shall conform to the 2019 ODOT Item 712.09, Type C. The silt fence shall be installed in accordance with all manufacturers' instructions.

    The fabric shall be free of any treatment that might significantly alter its physical

properties. During shipment and storage, the fabric shall be wrapped in a heavy-duty protective covering to protect it from direct sunlight, dirt, and other debris.

The manufacturer shall submit certified test data to cover each shipment of material.

b. The silt fence used shall be a prefabricated silt fence with fabric already attached to posts or shall be assembled in the field according to the following installation guidelines.

The fabric shall be a pervious sheet composed of a strong, rot-proof polymeric yard or fiber oriented into a stable network, which retains its relative structure during handling, placement, and long-term service. It shall have excellent resistance to deterioration from ambient temperatures, acid, and alkaline conditions, and shall be indestructible to microorganisms and insects. The material shall be resistant to deterioration by ultraviolet light and protected until placement as recommended by the manufacturer such that no deterioration occurs. During shipment and storage, the rolls of fabric shall be protected against deterioration from the sun, mud, dirt, dust and other harmful conditions at all times until their use.

2. Installation Guidelines for Silt Fence: Silt fence shall be installed in the following manner.

a. First, a small toe-in trench shall be dug along the line where the silt fence is to be placed. The trench shall be a minimum of 6-inch deep and 6-inch wide. The excavated material shall be placed on the front or uphill side of the trench to facilitate backfilling later.

b. Next, fence posts shall be driven into the back or downstream side of the trench. The posts shall be driven so that at least one-third (1/3) of the height of the post is in the ground. When installing a prefabricated silt fence with fabric attached to the posts, the posts shall be driven so that at least 6-inch of fabric shall be buried in the ground. Most prefabricated silt fences have posts spaced approximately 6 feet – 8 feet apart, which is usually adequate. If there is a low spot where most sediment tends to collect, the prefabricated silt fences can be backed up with bale backup. Posts shall be hardwood with sufficient strength to support a full load of deposited sediment.

c. Finally the trench shall be backfilled with the excavated material and tamped so that at least 6-inch of the fabric is securely toed into the ground to prevent under-mining.

d. The silt fences shall be maintained throughout construction. The Contractor shall conduct regular inspections and after all heavy rains. Damaged fences must be repaired immediately.

e. At the completion of construction and upon establishment of suitable vegetation as determined by the Division, all silt fence structures shall be removed. Areas disturbed by the removal operation including temporary access roads shall be revegetated. In general, this operation shall consist of regrading, re-fertilizing, reseeding and mulching.

D. Measurement: Measurement for payment for the above-described work shall be made by actual field measurements of quantities satisfactorily installed and completed. When using silt fence with bale backup the measurement shall be the length of the silt fence installed, plus the length of the straw bale dike installed.

E. Payment for Silt Fence and Straw Bale Dikes: Payment for this item shall be made at the unit price per linear foot of **"Silt Fence."** The Division shall only pay for quantities of items that are completed.

LIGHT DUTY ROAD MATS

A. Description: This item shall consist of the transportation, delivery, installation, and removal of road mats as described. The placement of road mats within the limits of construction shall be at the discretion of the Division. This item shall be utilized to protect the existing utilities, driveways, roadway, curbs, sidewalks and lawn space that will be traversed within the construction work limits.

B. Material: Light duty road matting shall be non-permeable, composite mats. Non-permeable, composite mats shall be a minimum of one-half (1/2) inches thick with a minimum surface dimension of four (4) feet wide and eight (8) feet long. Non-permeable, composite mats and associated components (i.e. ramps, berms, and fittings) shall be installed per the manufacturer's recommendations.

All materials delivered to the site must be in a shape to be able to cover the area properly and still have the strength and integrity to complete the required work. The Division may reject any mats determined to be damaged beyond useful life or remove square footage as measured from each individual mat.

C. Execution: Mats shall be kept clean throughout the project. If it is determined by the Division the mats do not meet this requirement the Contractor shall have any sediment or mud removed immediately.

D. Measurement: Measurement for payment for the road mats shall be made by actual field measurements of quantities satisfactorily installed at the site. Each road mat shall be measured for a square foot installed.

E. Payment: The cost of this work shall be included in the unit price per square foot for **"Light Duty Road Mats."**

HEAVY DUTY ROAD MATS

A. Description: This item shall consist of the transportation, delivery, installation, and removal of road mats as described. The placement of road mats within the limits of construction shall be at the discretion of the Division. This item shall be utilized to protect the existing utilities, driveways, roadway, curbs, sidewalks and lawn space that will be traversed within the construction work limits.

B. Material: Heavy duty road matting shall be non-permeable, composite mats. Non-permeable, composite mats shall be a minimum of four (4) inches thick with a minimum surface dimension of seven (7) feet wide and thirteen (13) feet long. Non-permeable, composite mats and associated components (i.e. ramps, berms, and fittings) shall be installed per the manufacturer's recommendations.

All materials delivered to the site must be in a shape to be able to cover the area properly and still have the strength and integrity to complete the required work. The Division may reject any mats determined to be damaged beyond useful life or remove square footage as measured

from each individual mat.

C. Execution: Mats shall be kept clean throughout the project. If it is determined by the Division the mats do not meet this requirement the Contractor shall have any sediment or mud removed immediately.

D. Measurement: Measurement for payment for the road mats shall be made by actual field measurements of quantities satisfactorily installed at the site. Each road mat shall be measured for a square foot installed.

E. Payment: The cost of this work shall be included in the unit price per square foot for **"Heavy Duty Road Mats."**

TIMBER MATS

A. Description: This item shall consist of the transportation, delivery, installation, and removal of road mats as described. The placement of road mats within the limits of construction shall be at the discretion of the Division and/or as shown on the Drawing Plan Set in order to enhance the subgrade conditions and/or for overtop utility crossings.

B. Material: Timber matting shall be composed of dense hardwood, shall be a minimum of six (6) inches thick, four (4) feet wide, and sixteen (16) feet long, and shall have a minimum of 1-1/4 inch diameter lift bolts installed at each end and through the width of the mat. The size required will vary depending on the use, see details on the drawing plan sets for variations on these sizes.

All materials delivered to the site must be in a shape to be able to cover the area properly and still have the strength and integrity to complete the required work. The Division may reject any mats determined to be damaged beyond useful life. The following grade descriptions for used mats shall be used by the Division to determine if the materials are acceptable.

1. **GRADE A** - Visually, Grade A mats look like new mats. The timbers are still square and in excellent condition and all the mat bolts are in place and fully intact. Mats must have all bolts and timbers fully intact. Mats are less than 9 months old. Very minimal wear, no chunks out of timbers missing.

2. **GRADE B** - Essentially, Grade B mats are less pretty versions of Grade A mats. They have no structural faults; they just look a bit worn. Edges of timbers are still square, and timbers are also sound and free of rot. If one or two of the bolts are bent, they qualify as Grade B mats. These mats might also be stained, but the discoloration is not enough to affect the durability of the mat. Typically, 10-18 months of age/usage makes the mat fall into a B grade. **(All mats used to bridge over anything shall be Grade B or better.**

3. **GRADE C** - Grade C mats are not quite up to the challenges that Grade A and B mats can handle, but they still have life left in them. Grade C Mats can have a missing or pulled rod on one end of the mat. The mat still has structural integrity inside 2' from each end though. Timbers mat be broken within 2' of either end but no timbers are broken inside of the 2' of each end. No hanging timbers allowed in C grade mats. As you can imagine, these are not going to be the picture-perfect image of timber mats. They might be missing numerous bolts, incurred excessive repairs, or be slightly varied in shape. Grade C mats are less expensive, but they also have a shorter life expectancy. **Any mat meeting the Grade C rating shall be measured for square footage of acceptable usable area.**

D. Execution: Mats shall be kept clean throughout the project. If it is determined by the Division, the mats do not meet this requirement the Contractor shall have any sediment or mud removed immediately.

D. Measurement: Measurement for payment for the road mats shall be made by actual field measurements of quantities satisfactorily installed at the site. Each road mat shall be measured for a square foot installed.

E. Payment: The cost of this work shall be included in the unit price per square foot for **"Timber Mats."**

ABSORBENT PADS

A. Description: This work shall consist of furnishing all labor, material, and equipment necessary for the use of absorbent pads at a well site. Any use of absorbent pads that are required due to negligence of the Contractor shall not be paid as part of this line item and will be the Contractor's responsibility to provide.

B. Material: The absorbent pad shall be a heavyweight absorbent pad/mat that is specifically manufactured for the purpose of absorbing oilfield waste and contaminants.

C. Installation: The contractor shall apply the absorbent pads in areas where oilfield waste and contaminants are known to have reached the ground or visible impacts of oilfield contaminants can be seen on the ground.

D. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

E. Payment: Payment for this work shall be made at the unit price per square foot for **"Absorbent Pads."**

ABSORBENT BOOMS

A. Description: This work shall consist of furnishing all labor, material, and equipment necessary for the use of absorbent booms at a well site. Any use of absorbent booms that are required due to negligence of the Contractor shall not be paid as part of this line item and will be the Contractor's responsibility to provide.

B. Material: The absorbent boom shall be specifically manufactured for the purpose of absorbing oilfield waste and contaminants. Booms shall be a minimum of five (5) inches in diameter.

C. Installation: The contractor shall apply the absorbent booms in areas where oilfield waste and contaminants are known to have reached the ground or surface waters or visible impacts of oilfield contaminants can be seen on the ground or in surface waters.

D. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

E. Payment: Payment for this work shall be made at the unit price per linear foot for **"Absorbent**

Booms."

No. 57 STONE

A. Description: This work covers the quality, material placement and requirements as a top course stone.

B. Materials: The materials shall consist of sound and durable rock, gravel or stone of the proper gradation meeting ODOT specifications. The material shall be free from cracks, seams, and other defects, which tend to increase deterioration from natural causes. It shall be highly resistant to weathering and disintegration under freezing and thawing and wetting and drying as evidenced by laboratory tests and/or service records. The Division at any time during the project may reject any materials, at the source or job site, not meeting the requirements of these specifications.

Acceptability of material will be determined by laboratory tests, visual inspection and/or service records as required by the Division. Service records will include documentation to show the material has performed satisfactory on similar structures.

C. Installation: Upon delivery of the material to the site the Contractor shall install the material in place as directed by the Division.

D. Measurement: The material shall be measured for payment by the ton (2,000 pounds) for material acceptably placed in the work as determined by certified scale weight tickets.

All material wasted or used by the Contractor for other purposes and any material not placed in the work in accordance with the requirements of the work order and these specifications shall be measured and not included for payment by weight. A conversion factor of 1.5 ton per cubic yard of No. 57 Stone shall be used if necessary.

E. Payment: Payment for this work as specified above shall be made based on the unit price per ton for **"No. 57 Stone."**

No. 4 STONE

A. Description: This work covers the quality, material placement and requirements as a base course stone.

B. Materials: The materials shall consist of sound and durable rock, gravel or stone of the proper gradation meeting ODOT specifications. The material shall be free from cracks, seams, and other defects, which tend to increase deterioration from natural causes. It shall be highly resistant to weathering and disintegration under freezing and thawing and wetting and drying as evidenced by laboratory tests and/or service records. The Division at any time during the project may reject any materials, at the source or job site, not meeting the requirements of these specifications.

Acceptability of material will be determined by laboratory tests, visual inspection and/or service records as required by the Division. Service records will include documentation to show the material has performed satisfactory on similar structures.

C. Installation: Upon delivery of the material to the site the Contractor shall install the material in place as directed by the Division.

D. Measurement: The material shall be measured for payment by the ton (2,000 pounds) for material acceptably placed in the work as determined by certified scale weight tickets.

All material wasted or used by the Contractor for other purposes and any material not placed in the work in accordance with the requirements of the work order and these specifications shall be measured and not included for payment by weight. A conversion factor of 1.5 ton per cubic yard of No. 4 Stone shall be used if necessary.

E. Payment: Payment for this work as specified above shall be made based on the unit price per ton for **"No. 4 Stone."**

No. 2 STONE

A. Description: This work covers the quality, material placement and requirements as a base course stone.

B. Materials: The materials shall consist of sound and durable rock, gravel or stone of the proper gradation meeting ODOT specifications. The material shall be free from cracks, seams, and other defects, which tend to increase deterioration from natural causes. It shall be highly resistant to weathering and disintegration under freezing and thawing and wetting and drying as evidenced by laboratory tests and/or service records. The Division at any time during the project may reject any materials, at the source or job site, not meeting the requirements of these specifications.

Acceptability of material will be determined by laboratory tests, visual inspection and/or service records as required by the Division. Service records will include documentation to show the material has performed satisfactory on similar structures.

C. Installation: Upon delivery of the material to the site the Contractor shall install the material in place as directed by the Division.

D. Measurement: The material shall be measured for payment by the ton (2,000 pounds) for material acceptably placed in the work as determined by certified scale weight tickets.

All material wasted or used by the Contractor for other purposes and any material not placed in the work in accordance with the requirements of the work order and these specifications shall be measured and not included for payment by weight. A conversion factor of 1.5 ton per cubic yard of No. 2 Stone shall be used if necessary.

E. Payment: Payment for this work as specified above shall be made based on the unit price per ton for **"No. 2 Stone."**

No. 304 AGGREGATE BASE

A. Description: This work covers the quality, material placement and requirements as trench backfill or road base.

B. Materials: The materials shall consist of sound and durable rock, gravel or stone of the proper gradation meeting ODOT specifications. The material shall be free from cracks, seams, and other defects, which tend to increase deterioration from natural causes. It shall be highly resistant to

weathering and disintegration under freezing and thawing and wetting and drying as evidenced by laboratory tests and/or service records. The Division at any time during the project may reject any materials, at the source or job site, not meeting the requirements of these specifications.

Acceptability of material will be determined by laboratory tests, visual inspection and/or service records as required by the Division. Service records will include documentation to show the material has performed satisfactory on similar structures.

C. Installation: Upon delivery of the material to the site the Contractor shall install the material in place as directed by the Division.

When placed as trench backfill No. 304 Aggregate Base shall be placed in six (6) inch maximum lifts and compacted by a minimum of three (3) passes of a vibratory plate compactor capable exerting a minimum of 2,000 lbs. of centrifugal force.

D. Measurement: The material shall be measured for payment by the ton (2,000 pounds) for material acceptably placed in the work as determined by certified scale weight tickets.

All material wasted or used by the Contractor for other purposes and any material not placed in the work in accordance with the requirements of the work order and these specifications shall be measured and not included for payment by weight. A conversion factor of 1.5 ton per cubic yard of No. 304 Aggregate Base shall be used if necessary.

E. Payment: Payment for this work as specified above shall be made based on the unit price per ton for **"No. 304 Aggregate Base."**

CONCRETE WALK

A. Description: This work shall include furnishing all labor, materials, equipment, and supplies necessary construct, pour and cure the proposed walk as required per division inspection once all equipment has been removed from the site during the final site restoration. This work shall also include furnishing all labor, materials, equipment, and supplies necessary to remove the existing concrete walk and unsuitable base material. All removed material shall be properly disposed of offsite. **All removal and disposal shall be considered incidental to this line item.**

This work shall only include walk that is in the limits approved by the Division to complete the project as shown on the Drawing Plan Set. Any damage caused by the Contractor by working outside of the limits set shall be repaired at the Contractor's expense and conform to this line item.

B. Materials:

1. Concrete: Concrete materials shall conform to ODOT Class "C" Concrete and shall be a minimum of four (4) inches thick.

2. Base: Dependent upon the condition of the encountered subgrade, a minimum of two (2) inches thick No. 304 of Aggregate Base shall be installed prior to the placement of concrete at the discretion of the Division. All No. 304 Aggregate base placed shall be compacted by a minimum of three (3) passes of a vibratory plate compactor capable of exerting a minimum of 2,000 pounds of centrifugal force. **This work and material shall be considered incidental to this line item.**

3. False Work / Forms: False work and forms shall be in accordance with the details shown on the Construction Plan Set and/or per ODOT Item 508.

4. Reinforcement: Concrete mix fill shall be reinforced with 6"x6" W1.4xW1.4 wire mesh and shall be 2" above the aggregate base or with approved fiber reinforced concrete.

C. Installation: The Division shall be notified at least 24 hours in advance of placing concrete.

1. Excavation: Upon removal of the existing walk, the Division will inspect the existing subgrade. If unsatisfactory, the Contractor shall excavate a minimum of 2" below the existing grade of the walk designated by the Division for removal. Protect the sides of all excavations from caving by providing suitable sheeting, shoring and/or bracing. **All existing concrete shall be removed by means of saw cutting and/or to the nearest joint of undisturbed sidewalk, based on Division inspection.**

2. Stone Base: The No. 304 Aggregate Base shall be placed within the limits of the excavation and compacted at the discretion on the division.

3. Form Work: Construct substantial, unyielding, and mortar tight forms, designed to produce a finished concrete conforming to the proper dimensions and contours. The planned formwork design shall meet the dimensions and elevations of the existing sidewalk at the edges of what has been removed.

4. Reinforcement:

   a. Wire Mesh: If wire mesh is used it shall be placed in the lower third (2" above gravel base) of the concrete mix and wire tied to chairs. Chairs shall be set level on the gravel base with a maximum of 24 inches of spacing between chairs.

   b. Fiber Reinforcement: If fiber reinforced concrete is used the mix shall be approved by the Division. The fiber reinforcement shall be residential grade.

5. Concrete: The formwork and sub-base shall be inspected and approved by the Division prior to commencing with the formed concrete.

   Before placing the concrete, all forms and surfaces which will be in contact with the concrete shall be thoroughly cleaned and the space occupied by the concrete shall be free from all silt, dirt, shavings, rust, and other debris.

   Concrete shall not be deposited in water. Concrete shall not be dropped a distance of more than five (5) feet. Drop chutes shall be used to limit free fall to under five (5) feet.

   Concrete shall be placed within 1 1/2 hours of batching as indicated on the delivery ticket. Any concrete batched over 1 1/2 hours will be rejected.

   Upon completion of the pour, the contractor shall **"broom finish"** the surface of the concrete.

   The Division reserves the right to require relief cuts on the concrete. The concrete shall cure a minimum of 18 hours prior to relief cutting. All relief cuts shall match relief cuts in the existing concrete to remain.

   Concrete shall be formed and placed in a manner to allow for positive drainage off the proposed

concrete away from structures.

5. Curing:

As necessary, spade along surfaces and in corners to ensure smooth surfaces and dense concrete.

The concrete shall be cured by maintaining the surface temperature between 50°F AND 100°F for a period of five (5) days.

All concrete shall be cured by Method (a) Water Curing or by Method (b) Membrane curing. Concrete shall be cured continuously until the concrete has attained the required 28-day strength as determined by compressive strength test, but in no case shall the elapsed time between placing the concrete and working or loading the concrete be less than 72 hours.

Method (a) Water Curing: All surfaces not covered by forms shall be protected with two (2) thicknesses of wet burlap, as soon after placing the concrete as it can be done without marring the surface. The wet burlap shall be covered with white polyethylene sheeting or plastic-coated burlap blankets conforming to AASHTO M 171. They shall be placed wet with the burlap side against the concrete. Adjoining plastic-coated blankets or polyethylene sheets used to cover wet burlap shall be lapped sufficiently and held securely in place at laps and edges so that positive moisture seal is provided. White polyethylene sheeting or plastic-coated blankets containing holes or tears shall be covered with an additional covering of sheeting or blankets as directed by the Division.

Method (b) Membrane Curing: Immediately after the free water has disappeared on surfaces not protected by forms and immediately after the removal of forms, if such are removed before the end of the curing period, the concrete shall be sealed by spraying as a fine mist to provide a uniform application of curing material that conforms to ASTM C 309, in such manner as to provide continuous, uniform, water impermeable film without marring the surface of the concrete. Acrylic Concrete Cure & Seal, as manufactured by Quikrete or approved equal shall be used. In conjunction with these requirements, materials shall be installed per the manufacturer's requirements.

The membrane curing shall be applied in one or more separate coats at the rate of at least one (1) gallon per 200 square feet of surface. To assure that the proper amount of the curing material is applied, the number of gallons of curing material in the spray container shall be noted, and the correct area for that volume laid off so that the area of concrete surface to be covered will be such that the approved application rate will be secured. Curing material shall be thoroughly agitated immediately prior to use. If the film is broken or damaged at any time during the specified curing period, the area or areas affected shall be given a complete duplicate treatment of the curing material applied at the same rate as the first treatment.

Unless adequate precautions are taken to protect the surface of the membrane; workers, materials, and equipment shall be kept off the membrane for the duration of the curing period.

Chemical admixtures may be used for curing with prior approval from the Division.

D Measurement: Measurement for payment for the concrete walk shall be made by actual field measurements of quantities satisfactorily installed at the site. The walk shall be measured for a square foot installed.

E Payment: Payment for all the above-described work shall be made at the contract unit price bid per

square foot for **"Concrete Walk"**.

FORMED CONCRETE

A. Description: This work shall include furnishing all labor, materials, equipment, and supplies necessary to construct, pour and cure the driveway area as directed by the Division. This work shall include furnishing all labor, materials, equipment, and supplies necessary to remove the existing concrete and properly dispose of the material offsite.

B. Materials:

1. Concrete: Concrete materials shall conform to ODOT Class "C" concrete, which will be 6" thick**.**

2. Aggregate Base: The excavated area shall include an addition 6" for a compacted No. 304 Aggregate base.

3. Reinforcement: Concrete mix fill shall be reinforced with 6"x6" wire mesh 6/6 gauge and shall be 3" above the aggregate base or with approved fiber reinforced concrete.

4. False Work / Forms: False work and forms shall be in accordance to the details shown on the Construction Plan Set or with ODOT 508.

C. Installation: The Division shall be notified at least 24 hours in advance of placing concrete.

1. Excavation: The Contractor shall excavate the areas as determined by the Division to the 12" depth and prepare the subgrade to the satisfaction of the Division. Protect the sides of all excavations from caving by providing suitable sheeting, shoring and/or bracing. **All existing concrete shall be removed with a saw cut that shall be completed as determined in the field by the Division.**

2. Form Work: Construct substantial, unyielding, and mortar tight forms, designed to produce a finished concrete conforming to the proper dimensions and contours. The planned formwork design shall meet the dimensions determined in the field.

3. Reinforcement:

   a. Wire Mesh: If wire mesh is used it shall be placed in the lower third (3" above gravel base) of the concrete mix and wire tied to chairs. Chairs shall be set level on the gravel base with a maximum of 24 inches of spacing between chairs.

   b. Fiber Reinforcement: If fiber reinforced concrete is used the mix shall be approved by the Division.

4. Concrete: The formwork and reinforcement shall be inspected and approved by the Division prior to commencing with the formed concrete.

   Before placing the concrete, all forms and surfaces which will be in contact with the concrete shall be thoroughly cleaned and the space occupied by the concrete shall be free from all silt, dirt, shavings, rust, and other debris.

Concrete shall not be deposited in water. Concrete shall not be dropped a distance of more than five feet. Drop chutes shall be used to limit free fall to under five feet.

Concrete shall be placed within 1 1/2 hours of batching as indicated on the delivery ticket. Any concrete batched over 1 1/2 hours will be rejected.

Upon completion of the pour, the contractor shall "broom finish" the surface of the concrete apron.

The Division reserves the right to require relief cuts on the concrete apron. The concrete shall cure a minimum of 18 hours prior to relief cutting. All relief cuts shall match relief cuts in the existing concrete to remain.

Concrete shall be formed and placed in a manner to allow for positive drainage off the proposed concrete away from structures.

5. Curing:

As necessary, spade along surfaces and in corners to ensure smooth surfaces and dense concrete.

The concrete shall be cured by maintaining the surface temperature between 50°F AND 100°F for a period of 5 days.

All concrete shall be cured by Method (a) Water Curing or by Method (b) Membrane curing. Concrete shall be cured continuously till the concrete has attained the required 28 day strength as determined by compressive strength test, but in no case shall the elapsed time between placing the concrete and working or loading the concrete be less than 72 hours.

Method (a) Water Curing: All surfaces not covered by forms shall be protected with two thicknesses of wet burlap, as soon after placing the concrete as it can be done without marring the surface. The wet burlap shall be covered with white polyethylene sheeting or plastic coated burlap blankets conforming to AASHTO M 171. They shall be placed wet with the burlap side against the concrete. Adjoining plastic coated blankets or polyethylene sheets used to cover wet burlap shall be lapped sufficiently and held securely in place at laps and edges so that positive moisture seal is provided. White polyethylene sheeting or plastic coated blankets containing holes or tears shall be covered with an additional covering of sheeting or blankets as directed by the Division's representative.

Method (b) Membrane Curing: Immediately after the free water has disappeared on surfaces not protected by forms and immediately after the removal of forms, if such are removed before the end of the curing period, the concrete shall be sealed by spraying as a fine mist to provide a uniform application of curing material that conforms to ASTM C 309, in such manner as to provide continuous, uniform, water impermeable film without marring the surface of the concrete.

The membrane curing shall be applied in one or more separate coats at the rate of at least 1 gallon per 200 square feet of surface. To assure that the proper amount of the curing material is applied, the number of gallons of curing material in the spray container shall be noted, and the correct area for that volume laid off so that the area of concrete surface to be covered will be such that the approved application rate will be secured. Curing material shall be thoroughly agitated immediately prior to use. If the film is broken or damaged at any time during the specified curing period, the area or areas affected shall be given a complete duplicate treatment of the curing material applied at the same rate as the first treatment.

Unless adequate precautions are taken to protect the surface of the membrane, workers, materials, and equipment shall be kept off the membrane for the duration of the curing period.

Chemical admixtures may be used for curing with prior approval of the Division.

D Measurement: The quantity to be paid under this item shall be as calculated in the field by the Division. This quantity shall be verified by delivery tickets furnished to the Division.

E Payment: Payment for all the above-described work shall be made at the contract unit price bid per cubic yard for **"Formed Concrete"**.

FLUID DISPOSAL

A. Description: This item shall consist of removing and disposing of the fluid generated from the well. Fluids to be removed shall be at the discretion of the Division and shall be injected at an approved Class II disposal well as listed on the Contractor's Offer Sheet.

B. Material: Materials will be defined below as described for the purposes of this scope of work.

Contaminated Fluids: Contaminated fluid will be considered as all fluids used in the circulation of the well bore, fluids utilized as a "kill" substance and/or fluids generated from the well. The Division reserves the right to deem a fluid "contaminated" at its discretion.

Contaminated fluids are further defined as water that contains quantifiable concentrations of oil, natural gas(es), condensate, brine, plugging products, or other oil field waste substances.

Freshwaters: Water that has not been classified as a contaminated fluid and has been stored in an uncontaminated container shall be visually inspected for oil sheen, and field tested for pH and chlorides. The chloride concentration shall be less than 250 mg/L and the pH shall be within a range of 6.5-8.5 standard units (SU). If a water is deemed as freshwater based on these inspections and tests, the Contractor may discharge freshwater into or onto the land in an appropriate manner. Freshwater disposal shall not be paid for under this line item **"Fluid Disposal."**

C. Off-Site Disposal: Fluids designated as "contaminated" shall be hauled to an appropriate Class II disposal well. Proof of disposal from the disposal well shall be furnished within three (3) days of acceptance to the Division.

No additional compensation shall be made for onsite fluid storage. If contaminated fluids remain onsite, proper secondary containment shall be established. Materials shall consist of impermeable containers or liners made of a material that is compatible with the waste stored or used within the containment. Containment materials shall be impervious and have supporting documentation of the permeability, chemical compatibility, and other applicable QA/QC standards, is acceptable. **Use of a liner shall at a minimum be a 20-mil thickness**. Onsite storage time shall not exceed 72 hours after work activities have been completed.

D. Measurement: Measurement for payment shall be verified based on documentation proof of a quantity of disposal from the disposal well utilized.

E. Payment: Payment shall be made at the unit price barrel for **"Fluid Disposal."**

CONTAMINATED MATERIAL DISPOSAL

A. Description: This item shall consist of removing contaminated soils and cuttings from the site for off-site disposal. Soils and cuttings to be removed shall be at the discretion of the Division and shall be disposed of at an approved EPA licensed landfill as provided by the Contractor prior to removal from the site.

B. Material:

Contaminated Soils/Cuttings: Contaminated soils and cuttings are defined as soils or cuttings in which oil, gas, condensate, brine, plugging products, or oil field waste substances have been released in or on the land.

The Contractor will excavate and properly dispose of all soils from the location that are visibly impacted with oilfield contaminants. The Contractor shall solidify any residual fluid associated with these soils with Portland Cement, prior to removal as a part of this line item. Prior to solidification of contaminated materials, the Contractor shall use due diligence to remove fluids from the contaminated materials. Fluids removed from the contaminated materials shall be disposed of per line item **"Fluid Disposal."**

Soils deemed "contaminated" as a result of Contractor negligence during the project will be removed and disposed of at the Contractor's expense. Disposal procedures will conform to all requirements stated within this line item.

C. Off-Site Disposal: Soils designated as "contaminated" shall be hauled to an appropriate licensed landfill. Copies of truck weight tickets from the landfills shall be furnished within 3 days of acceptance to the Division.

Contaminated soils shall be loaded and hauled away as they are excavated.

No additional compensation shall be made for onsite contaminated soil storage. If excavated soils remain onsite, proper secondary containment shall be established. Materials shall consist of impermeable containers or liners made of a material that is compatible with the waste stored or used within the containment. Containment materials shall be impervious and have supporting documentation of the permeability, chemical compatibility, and other applicable QA/QC standards, is acceptable. **Use of a liner shall at a minimum be a 20-mil thickness**. Onsite storage time shall not exceed 72 hours after work activities have been completed.

D. Measurement: Measurement for payment shall be verified based on weight tickets of quantities disposed at the approved EPA licensed landfill. ***The Division shall at a minimum make payment for no less than four (4) tons of disposal if any disposal is required due to minimum disposal fees.***

E. Payment: Payment shall be made at the unit price per ton for **"Contaminated Material Disposal."**

CONTAMINATED MATERIAL DISPOSAL TESTING

A. Description: This item shall consist of any testing required to properly dispose of materials from the line item **"Contaminated Material Disposal"** at an approved EPA licensed landfill as listed on the Contractor's Offer Sheet.

B. Execution: The contractor shall determine and execute any testing required by law or required by the EPA licensed landfill intended for disposal of materials from the line item **"Contaminated Material Disposal."** The contractor shall supply the Division with proof of completion and the test result upon request from the Division.

C. Measurement: Measurement for payment shall be made by inspection of receipts and test results of units satisfactorily completed and accepted by the Division. No more than one payment shall be made per load of materials disposed.

D. Payment: Payment shall be made at the unit price per each for **"Contaminated Material Disposal Testing."**

DEBRIS REMOVAL AND DISPOSAL

A. Description: This item shall consist of removing debris and trash from the site for off-site disposal and shall include all items that cannot be disposed of on-site. Items to be removed shall be at the discretion of the Chief and shall be disposed of at an approved EPA licensed landfill.

B. Off-Site Disposal: Debris and trash shall be hauled to an appropriate licensed landfill. Copies of truck weight tickets from the landfills shall be furnished daily to the Chief.

C. Salvage: Items or materials on the project site the property owner wishes salvaged shall be set-aside in an orderly manner. Salvaged items shall not be placed in an area that prevents adequate completion of the project.

D. Measurement: Measurement for payment shall be verified based on weight tickets of quantities disposed at the approved EPA licensed landfill.

E. Payment: Payment shall be made at the unit price per ton for **"Debris Removal and Disposal"**.

SALVAGE MATERIAL DISPOSAL

A. Description: This item shall consist of preparing, removing, and salvaging all materials from the site that have a salvage value. All items to be salvaged shall include all surface equipment, well casing, and production equipment. Salvage items shall also include any hydrocarbon materials (oil, condensate, etc.) that have a marketable value. Salvage items shall be stored onsite within the construction project limits until removed for salvage.

The Division does not plan to exhaustively salvage all materials during this exploratory contract. However, some instances will require the immediate salvaging of materials disturbed as part of the project. Remaining salvage materials will be salvaged during the separate plugging contract.

B. Off-Site Disposal: Prior to removal from the site the Contractor shall supply in writing to the Division an inventory of all materials to be salvaged. On the behalf of the Division the Contractor shall salvage materials inventoried. Once materials have been salvaged the Contractor shall reimburse the Division for the salvage value per the line item **"Salvage Material Reimbursement."**

Prior to disposal of any salvage materials from the project site, the Division will complete a

radiological assessment of salvage materials that have been provided on an inventory to the Division. The Division shall be given a minimum of two (2) working days notice to complete the assessment. Salvage materials staged on the project site shall be staged on a pipe rack where determined applicable by the Division. Salvage materials shall be on an impervious liner that will collect any residual fluids or scale.

Prior to disposal of any salvage materials the Contractor shall prepare, including cleaning, the salvage materials for lawful salvage.

C. Execution: The Contractor shall include in this line item any expense incurred with the removal and the salvaging.

D. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

E. Payment: Payment shall be made at the unit price for each well site for **"Salvage Material Disposal."**

SALVAGE MATERIAL REIMBURSEMENT

A. Description: This item shall consist of reimbursing the Division for all materials removed from the site for salvage including all surface equipment, well casing, tubing, production equipment, and marketable hydrocarbons.

B. Reimbursement: The Contractor shall supply salvage receipts to the Division for materials inventoried and removed from the site for salvage. The Division shall use these receipts as deduction of payment that will be represented on the Offer Sheet for this line item for this project.

C. Measurement: Measurement shall be made by salvage receipts amounts.

D. Payment: Deduction shall be entered as an amount for **"Salvage Material Reimbursement."**

APPROVED RESOIL

A. Description: This work shall consist of furnishing all labor, material, and equipment necessary for the hauling, spreading, and grading of the resoil material for the replacement of the removed soils. This work shall also include shaping for positive drainage and matching the surrounding contours.

B. Material: Material shall be a good quality resoil and **not** include rocks, stones, and objectionable material over three (3) inches in any one dimension. All resoil that will compose the top eighteen (18) inches of resoil at the ground surface shall be topsoil. Topsoil shall be defined as during excavation having a brown matrix color, less than 50% clay content, and enough organic materials to be generally suitable for vegetative growth.

C. Installation: Placement of fill shall only be made on scarified, moist surfaces. No fill shall be placed on frozen soil, unstable soil, or soil where water is ponded.

Fill material shall be placed in uniform lifts not exceeding eighteen (18) inches in thickness and tracked-in using on-site excavation equipment not less than four (4) passes per lift.

Care shall be taken to keep heavy equipment off the surface material after it has been spread. If the resoiling material becomes compacted, the Contractor shall disc the material to a depth of four (4) inches at the Contractor's expense.

D. Measurement: The approximate amount of resoil has been listed on the Offer Sheet as a total cubic yardage. Measurement for payment for the above-described work shall be based upon material quantities satisfactorily installed as well as delivery tickets furnished to the Division. If due to the source tickets cannot be provided, volume measurements shall be completed and agreed upon prior to installation.

E. Payment: Payment for this work shall be made at the unit price per cubic yard for **"Approved Resoil."**

SITE RESTORATION

A. Description: This work shall cover all operations incidental to the establishment of grasses within the areas disturbed by the Contractor, including the furnishing and sowing of seed; and furnishing and applying of mulch materials, all in accordance with these specifications. Additionally, this work shall include, but not be limited to, repair of grounds and vegetation, including landscaping amenities, ornamental shrubs and trees damaged in any manner during the work operations. All areas shall be properly graded to a smooth final grade with topsoil and blended into adjoining areas at the most moderate slope possible. Seedbed preparation through the use of scarifying equipment is also required. All site restoration work is to be completed within **fourteen (14) days** of the completion of the construction activities. The Contractor may request in writing to the Division an extension for site restoration. Requests shall only be granted based on season or weather conditions.

B. Materials: The materials to be used for restoration shall conform to the applicable requirements of these specifications.

1. Lime: Pelletized lime, if required, shall be applied at a maximum rate of 400 pounds per acre. Rates may be adjusted by the Division at the time of application.

2. Fertilizer: Fertilizer shall be commercial grade (19-19-19) and shall be applied at a rate up to a maximum of 20-lbs/1000 sq. ft. Rates may be adjusted by the Division at the time of application.

3. Seed: The varieties of grass seed to be furnished to the project shall bear a tag on each bag of each species showing the lot number, grower's name, percent of purity, percent of germination, and weed content. Tags shall be provided to the Division.

   All seeds shall be free from noxious weeds and under no condition shall the total weed content of any lot of seed or seed mixture exceed one-half of one percent by weight.

   No seed shall be utilized which has a mix date older than one year. The Division reserves the right to test, reject, or approve all seed after delivery to the project.

   Species Composition:
   Yard seed shall be applied at a rate of 10 lbs/1000 sq. ft. and shall conform to the following seed mixture ratio:

   98/85 Kentucky Bluegrass (Poe pratensis) 50%

Perennial Ryegrass (Lolium perenne)	50%

Shade Seed shall be applied to the project area at a rate of 6 lbs/1000 sq. ft. and shall conform to the following seed mixture ratio:

Annual Rye (Lolium multiflorum)	40%
Kentucky Bluegrass (Poa pratensis)	30%
Red Fescue (Festuca rubra)	30%

All areas not designated as yard, shade seed or farm field shall use the following seed mix, and shall be sown at the indicated rate. This mixture is listed by recommended planting season and for existing site conditions, and/or intended use. Further information may be found in the Agronomy Guide, Bulletin 472, Cooperative Extension Service, The Ohio State University.

GENERAL SEED MIX	lbs/acre
Orchardgrass (Dactylis glomerata)	15.0
98/85 Kentucky Bluegrass	12.0
Timothy (Phleum pratense)	12.0
Birdsfoot Trefoil (Lotus sp.)	9.0
Red Clover (Trifolium pratense)	8.0
White Clover (Trifolium repens)	7.0
Annual Ryegrass (Lolium multiflorum)	8.5
Perennial Ryegrass (Lolium perenne)	3.5
Total lbs/acre	75

Other types of seed may be substituted if requested by the property owner(s). If such substitutions are made, they are to be made at no additional cost to the Division.

4. Mulching Material: All mulch material shall be free from mature seed-bearing stalks or roots or prohibited or noxious weeds. Any type of hay is not acceptable. Mulch shall include baled wheat straw or oat straw. It shall be dry and reasonably free of weeds, stalks, or other foreign material.

5. Temporary Ground Cover: All crop field areas shall be seeded with Cereal Rye at a rate of150 lbs/acre. The seed shall be broadcast over the entire disturbed area as a temporary ground cover until the next growing season. Areas of Temporary Ground Cover shall not include lime, fertilizer or mulching requirements.

   For all required materials listed above, the Division reserves the right to request receipts, material specifications and/or weight tickets for verification.

C. Installation:

1. Start of Work: Site restoration work shall begin as soon as possible after the completion of construction. Final site restoration operations shall be completed within fourteen (14) working days of the final construction activities. The Contractor may request in writing to the Division an extension for site restoration. Requests shall only be granted based on **season or weather conditions.**

2. Area Preparation of Soil: Spread and grade available topsoil uniformly over all disturbed areas. All areas to be seeded shall be loosened by discing, harrowing, or other approved methods immediately prior to seeding. The soil shall be loosened to a depth of approximately three

inches.

Hand raking shall be required in all areas where machines do not obtain the results desired by the Division.

Following tilling of the soil, the seedbed shall be allowed to firm up.

Final prepared surface shall have a smooth final grade and be appropriate for a residential yard, free from rocks, large dirt clumps and any other foreign debris.

Immediately following area preparation for seeding, materials shall be applied in the following order:

- Lime, as applicable
- Fertilizer, as applicable
- Seed, after broadcasting or otherwise applying the seed, the surface of the seedbed shall be loosely disturbed by hand raking, dragging, and/or cultipacking.

Lime, fertilizer and/or seed shall be sown by approved methods that provide for uniform distribution of the mixes as specified above.

3. Mulching: Apply the equivalent of 100 pounds per 1,000 square feet of clean straw mulch. Mulch shall not be applied in areas requiring Temporary Ground Cover.

   Apply mulch to the sown area within 24 hours of seeding at the rate per square feet as specified above and spread to a uniform depth.

   The straw shall be placed in a moist condition or shall be moistened immediately after placement.

4. Maintenance and Repairs: The Contractor shall, during construction and prior to acceptance, properly care for all areas mulched and perform all mulching operations necessary to provide protection and establish growth of the seeded areas. Mulch that becomes displaced shall be reapplied at once, together with any necessary reseeding, all at no expense to the Division.

   No additional payment shall be made for acts of God, i.e. fire, flood, drought, etc.

D. Measurement: Measurement for payment of site restoration, which includes seedbed preparation, lime and fertilizer as applicable, seeding, mulching and replacement of shrubs, trees and landscape amenities shall be considered and measured as a unit satisfactorily completed and accepted by the Division.

E. Payment: Payment for this work, which includes seedbed preparation, liming, fertilizing, seeding, mulching, required replacement of all shrubs, trees and landscaping amenities, etc., and general cleanup shall be made at the price per acre for **"Site Restoration."**

CONTINGENCY SPECIFICATIONS

CONTINGENCY SPECFICATIONS WILL ONLY BE DIRECTED VIA A FIELD ORDER FROM THE DIVISION. THE FIELD ORDER WILL DEFINE THE QUANTITY APPROVED. CONTINGENCY SPECIFICATION USE WILL BE DETERMINED BASED ON SITE CONDITIONS THAT ARE DETERMINED BY THE DIVISION.

WELL CONTROL FLUID

A. Description: The work covered by this section shall consist of furnishing all labor, equipment, and material necessary to provide and use water as a "kill" fluid for the well.

B. Materials: The Contractor shall receive prior approval from the Division before using any onsite waters for the project (i.e. streams, lakes or ponds). If approved, withdrawing waters of the state shall not exceed 100,000 gallons per day from an individual water source.

C. Measurement: Measurement for payment for the above-described work shall be made by the actual quantity of barrels (bbls) of water used in the wellbore. The Division will at a minimum pay for the quantity required to be maintained on site.

D. Payment: Payment for the above work shall be made at the unit price per barrel (bbls) for **"Well Control Fluid."**

ALTERNATIVE WELL CONTROL FLUID

A. Description: The work covered by this section shall consist of furnishing all labor, equipment, and material necessary to provide and use a weighted brine as a "kill" fluid for the well.

B. Materials: Based on the onsite conditions the Contractor shall propose a brine or gel for approval from the Division. Once a material is approved the Division will require a minimum quantity be maintained at the site during the project.

C. Measurement: Measurement for payment for the above-described work shall be made by the actual quantity of barrels (bbls) of kill fluid used in the wellbore. The Division will at a minimum pay for the quantity required to be maintained on site.

D. Payment: Payment for the above work shall be made at the unit price per barrel (bbls) for **"Alternative Well Control Fluid"**.

WATER PUMP

A. Description: The work covered by this section shall consist of furnishing all labor, equipment, and material necessary to provide and use a water pump ("trash pump") for the pumping of fluids at the well site for the duration of the work at the well site.

B. Materials: The Contractor shall supply a water pump ("trash pump") that shall have a minimum 200 gallon per minute pumping capacity and a minimum two (2) inch inlet and outlet lines. This shall also include any hoses to pump fluids on the well site based on operational needs.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above described work, which includes all labor, materials, equipment necessary for the water pump shall be made at the unit price per each well site for **"Water Pump."**

MUD PUMP

A. Description: The work covered by this section shall consist of furnishing all labor, equipment, and material necessary to provide and use a mud pump for the pumping of fluids at the well site for the duration of the work at the well site.

B. Materials: The Contractor shall supply a large reciprocating pump that shall be capable of circulating drilling fluids, well control fluids, and cement into the wellbore. This shall also include any hoses to pump fluids into the wellbore based on operational needs.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above described work, which includes all labor, materials, equipment necessary for the mud pump shall be made at the unit price per each well site for **"Mud Pump."**

HYDROGEN SULFIDE SCAVENGER

A. Description: The work covered by this section shall consist of furnishing all labor, equipment, and material necessary to provide and use a hydrogen sulfide scavenger in the wellbore.

B. Materials: The Contractor shall provide Sulfa-Clear or an approved equal. The Sulfa-Clear shall be applied at a rate to eliminate the presence of Hydrogen Sulfide (H_2S) at the surface and shall not be less than seven (7) percent concentration with the applicable well bore fluid.

C. Execution: The Contractor shall be prepared to apply the hydrogen sulfide scavenger at any time during the operations. When Hydrogen Sulfide (H_2S) is encountered the Contractor shall apply the hydrogen sulfide scavenger. If the hydrogen sulfide scavenger is applied during drilling operations the Contractor shall continue to monitor the presence of H_2S and apply additional hydrogen sulfide scavenger as needed in order to complete the drilling.

D. Measurement: Measurement for payment for the above-described work shall be made by the actual quantity of gallons of hydrogen sulfide scavenger used in the wellbore.

E. Payment: Payment for the above work shall be made at the unit price per gallon for **"Hydrogen Sulfide Scavenger"**.

DRILLING MUD

A. Description: The work covered by this section shall consist of furnishing all labor, equipment, and material necessary to provide and use a water-based drilling mud for conditioning the wellbore.

B. Materials: Based on the onsite conditions the Contractor shall propose a water-based drilling mud for approval from the Division. Once a material is approved the Division will require a minimum quantity be maintained at the site during the project based on circumstances encountered.

C. Measurement: Measurement for payment for the above-described work shall be made by the actual quantity of sacks (50 lbs) of additives for the water-based drilling mud used to condition the orphan well.

D. Payment: Payment for the above work shall be made at the unit price per sack for **"Drilling Mud."**

CHARCOAL FILTER w/ SPARK ARRESTOR

A. Description: The work covered by this section shall consist of furnishing all labor, equipment, and material necessary to provide a charcoal filter along with a spark arrestor for a temporary vault & vent line system until a permanent plugging or venting can be completed.

B. Materials:

1. Charcoal Filter: The charcoal filter shall have a minimum 5-gallon capacity with two (2) inch diameter fittings compatible with the temporary vent line system.

2. Spark Arrestor: The spark arrestor shall fit on top of the charcoal filter with a 2" male thread fittings.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above described work, which includes all labor, materials, equipment necessary for the charcoal filter with spark arrestor shall be made at the unit price per each for **"Charcoal Filter w/ Spark Arrestor."**

2" BALL VALVE

A. Description: The work covered by this section shall consist of furnishing all labor, equipment, and material necessary to provide a 2" ball valve for the duration of the work at the well site.

B. Materials: The Contractor shall supply a 2" Balon Series "S" (or approved equal) non-full port, female threaded floating ball valve with a minimum rating of 500 PSI WOG, either carbon streel or ductile iron as determined by the Division and based on operational needs.

C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.

D. Payment: Payment for the above described work, which includes all labor, materials, equipment necessary for the ball valve shall be made at the unit price per each for **"2" Ball Valve."**

CHAIN LINK SAFETY FENCING

A. Description: This work consists of all labor, equipment, and material necessary to install chain link safety fencing around the project's location. The Division shall determine exact location in the field.

B. Materials:

1. The safety fencing shall be chain link fence with a minimum overall height of six (6) feet. Fence shall be constructed in panels. Each panel shall have a horizontal and vertical support. Each panel shall be held upright by a stand at the base of each side of the panel. All panels shall be locked together with saddle clamps, nuts, and bolts. The posts, rails, ties, and other hardware shall be treated for continuous outdoor use. The entrance gate shall be maintained in locked position when the site is unattended. Signage shall be provided with the following verbiage, "Danger, Construction Area. Unauthorized Personnel Keep Out".

C. Payment: Cost for this item, including furnishing, installation and removal after project completion of all posts, rails, ties, hardware, mesh, gates and signage shall be at the contract unit price per linear foot **"Chain Link Safety Fencing"**.

UTILITY TERRAIN VEHICLE (UTV)

A. Description: The work covered by this section shall consist of the use of a Utility Terrain Vehicle (UTV) for the duration of the work at the well site. The UTV shall have a gross vehicle weight rating no more than 4,000 lbs. and a minimum cargo capacity of 350 lbs. These operations include but are not limited to purpose of transporting welding equipment, other miscellaneous equipment and materials to locations with accessibility issues.

This item shall include the cost of operation of the equipment by a qualified operator.

The contractor shall ensure that all safety equipment installed on the UTV is compliant with all Occupational Safety & Health Administration (OSHA) guidelines. These items include but are not limited to all lights, turn signals, backup alarms, guards, mirrors, windshield wipers, seatbelts, rollover protection (ROPS) and emergency shut off switches.

B. General Specifications: The following general specifications shall apply to each detailed equipment specification listed hereafter.

1. Remobilization: No additional compensation shall be made to the Contractor for remobilization after equipment has been removed from the project work area without prior approval from the Division.

2. Equipment Delays: All delays and costs associated with the interruption of work due to equipment malfunction or failure will be the responsibility of the Contractor.

3. Employee Safety: The Contractor shall ensure compliance with all Occupational Safety & Health Administration (OSHA) guidelines concerning Personal Protective Equipment (PPE) necessary for its employees to safely operate all equipment specified hereafter.

C. Measurement: Upon the daily completion of the utilization of the following specified equipment, the Division and Contractor shall agree to and record a daily measurement of units performed.

D. Payment: Payment for this work shall be at the Contract unit price bid **per day** for **"Utility Terrain Vehicle (UTV)"**.

APPENDIX I – OHIO ONE-CALL

THE FOLLOWING ARE REPORTABLE INCIDENTS: *(OAC 1501:9-8-02)*		
TYPE OF INCIDENT (All Incident types associated with production operation or other activity regulated under Chapter 1509)	**QUANTITY** **(GAL, BBL,PPM)** **NOTE: 1 Barrel = 42 US Gallons**	**ADDITIONAL FACTORS**
Release of Gas	Any amount	Resulting from a Blow out; **OR**
		Uncontrolled Pop-off Valve (in Urban Area); **OR**
		Any gas release that is a threat to public safety
Release of Hydrogen Sulfide(H_2S) Gas (within the Working Area)	Exceeding **20 ppm** (Sustained airborne concentration); For duration > 10 min	**OR** any H_2S release resulting in injury or death of person
Fire / Explosion	N/A	In which a reporting person has called an emergency responder (9-1-1 or Fire Dept)
Release of Oil, Condensate, or Materials Saturated with Oil or Condensate	> 210 US gallons in any 24-hr period (Estimated)	**AND** the release is OUTSIDE secondary containment & into the environment
Release of Oil, Condensate, or Materials Saturated with Oil or Condensate	> 25 US gallons in any 24-hr period (Estimated); **AND** the release is outside secondary containment and into the environment	In an urban area;**OR**
		In an Emergency Management Zone of a surface water public drinking supply;**OR**
		In a 5-year time of travel with a groundwater-based public drinking supply; **OR**
		In a 100-year flood hazard area as delineated on the federal emergency management agency's (FEMA) national flood insurance rate map
Release of Refined Oil Products *(**EX:** oil-based drilling fluid, petroleum distillate, spent or unused paraffin solvent, gasoline, fuel oil, diesel fuel, or lubricants)*	> 25 US gallons in any 24-hr period	**AND** the release is OUTSIDE secondary containment & into the environment
Release of Oil, Condensate, or Materials Saturated with Oil or Condensate; OR Refined Oil Products	Any amount	That enters waters of the state in an amount that causes a film or sheen on the surface of the water
Release of Brine or Semi-Solid Waste *(EX: drilling mud, sludge, or tank bottom sediments)*	> 42 US gallons in any 24-hr period	**AND** the release is OUTSIDE secondary containment & into the environment
Release of Brine from a Vehicle, Vessel, Railcar, or Container	> 42 US gallons	**AND** is operated by a person to whom a registration certificate has been issued (ORC 1509.222), or to whom a resolution has been issued (ORC 1509.226)
		AND enters the environment

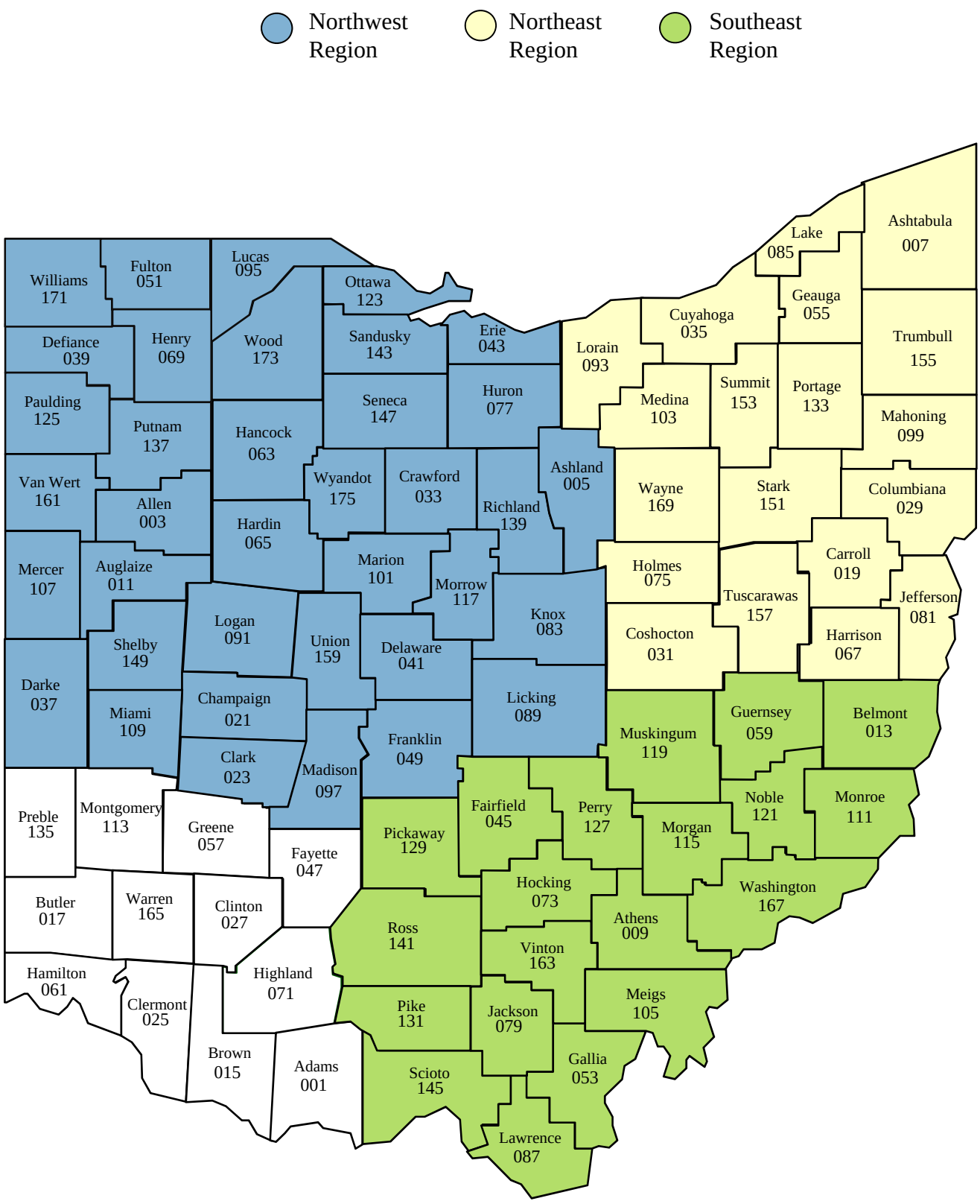
Release of Hazardous Substance (HS)/ Extremely Hazardous Substance (EHS); OR Mixture or Solution including a HS or EHS	An amount Equal to or > than applicable reportable quantities listed in 40CFR tables; in any 24-hr period If the amount of one or more HS or EHS released is in an **unknown** mixture or solution, notify when the total amount of the mixture or solution released is equal to or > than the reportable quantity for the HS or EHS with the **lowest** reportable quantity	**List available at:** http://oilandgas.ohiodnr.gov/portals/oilgas/pdf/emergency/list_of_lists.pdf *Code of Federal Regulations (C.F.R.) References:* HS- *Appendix A 40 CFR Part 302.4* EHS- *Appendix A 40 CFR Part 355*

THE FOLLOWING ARE NOT REPORTABLE INCIDENTS: *(OAC 1501:9-8-02 (A)(7))*

1. Controlled flaring or controlled burns authorized under Chapter 1509. of the Revised Code or under 1501:9 of the Administrative Code or authorized by the terms and conditions of a permit issued under Chapter 1509. of the Revised Code;
2. Properly functioning emission control devices authorized pursuant to Revised Code Section 3704.03;
3. Subsurface detonation of perforation-guns;
4. Seismic shots;
5. Controlled blasting for well site construction

Date Last Edited & Printed: 9/27/2018

Appendix II - Orphan Well Program Unit Price Contract Areas



January 2020

Scope of Work
Quantity Sheet
Exploratory 2025 Project
NORTHEAST REGION

Line Number	Description		Quantity	Unit	
	Personnel:				
1	Contractor Site Supervisor		16	Hour	
2	Contractor Site Supervisor Mileage		100	Mile	
3	1 Man Crew		16	Hour	
4	2 Man Crew		16	Hour	
5	3 Man Crew		16	Hour	
6	Crew Travel		100	Mile	
7	Per Person Per Diem (Meals and Lodging)		10	Day	
	Equipment on Time Rates:				
8	Equipment Mobilization/Demob. Mileage		100	Mile	
9	Dozer w/ Operator (80 hp - 150 hp)		8	Hour	
10	Dozer w/ Operator (150 hp - 200 hp)		8	Hour	
11	Backhoe w/ Operator (< 100 hp)		8	Hour	
12	Backhoe w/ Operator (> 100 hp)		8	Hour	
13	Excavator w/ Operator (<50 hp)		8	Hour	
14	Excavator w/ Operator (50-100 hp)		8	Hour	
15	Excavator w/ Operator (>100 hp)		8	Hour	
16	Skid Steer w Rubber Tracks & Operator		8	Hour	
17	70 bbl Capacity Water Truck		16	Hour	
18	120 bbl Capacity Water Truck		16	Hour	
19	70 bbl Capacity Vac Truck		16	Hour	
20	Welder w/ Operator		4	Hour	
	Equipment & Materials at Unit Cost:				
21	Site Safety		10	Each Well Site	
22	Traffic Maintenance		1	Each	
23	Temporary Vault & Vent		2	Each	
24	Temporary Vent Pipe		20	Linear Ft	
25	Well Casing Tap		2	Each	
26	Casing Collar Extension (Three Feet or Less)		2	Each	
27	Casing Collar Extension (Greater Than Three Feet)		20	Linear Ft	
28	Riser Pipe		20	Linear Ft	
29	Corrugated HDPE Cellar (Four-foot diameter)		1	Each	
30	Corrugated Metal Cellar (Six-foot diameter)		1	Each	
31	Polymer Tank (35 BBL)		2	Each	
32	Well Head Control (less than 4" csg. dia.)		2	Each	
33	Well Head Control (4"- 6.625" csg. dia.)		2	Each	
34	Well Head Control (7"-10" csg. dia.)		2	Each	
35	Well Head Control (greater than 10" csg. dia.)		2	Each	
36	Well Head Exploration		10	Each	
37	Approved Cement		20	Sack	

38	Depth Meter		5	Each Well Site	
39	Trench Box		1	Each	
40	Silt Fence		50	Linear Ft	
41	Light Duty Road Mats		500	Square Ft	
42	Heavy Duty Road Mats		500	Square Ft	
43	Timber Mats		500	Square Ft	
44	Absorbent Pads		200	Square Ft	
45	Absorbent Booms		50	Linear Ft	
46	No. 57 Stone		10	Ton	
47	No. 4 Stone		10	Ton	
48	No. 2 Stone		10	Ton	
49	No. 304 Aggregate Base		10	Ton	
50	Concrete Walk		100	Square Ft	
51	Formed Concrete		25	Cubic Yard	
52	Fluid Disposal		50	BBL	
53	Contaminated Material Disposal		10	Ton	
54	Contaminated Material Disposal Testing		5	Each	
55	Debris Removal & Disposal		10	Ton	
56	Salvage Material Disposal		1	Each Well Site	
57	Salvage Material Reimbursement				N/A
58	Approved Resoil		10	Cubic Yard	
59	Site Restoration		5	Acre	

Additional/Contingency Services

60	Well Control Fluid		150	BBL	
61	Alternative Well Control Fluid		150	BBL	
62	Water Pump		5	Each Well Site	
63	Mud Pump		5	Each Well Site	
64	Hydrogen Sulfide Scavenger		42	Gallon	
65	Drilling Mud		20	Sack	
66	Charcoal Filter w/ Spark Arrestor		2	Each	
67	2" Ball Valve		5	Each	
68	Chain Link Safety Fencing		120	Linear Ft	
69	Utility Terrain Vehicle (UTV)		5	Day	

Note: This quantity sheet is provided for reference only. The Contractor's Offer must be submitted online through Ohio Buys (https://das.ohio.gov/Divisions/General-Services/Procurement-Services/Ohio-Buys). Quantities are only an estimate. Payment shall be based on quantities satisfactorily completed.

Each contractor is responsible for logging into Ohio Buys and submitting an offer that is responsive to all amendments issued. All offers submitted prior to an amendment being issued shall become null/void and not considered in the opening. All amendments shall become part of the Scope of Work.

Offers must be fully submitted online through Ohio Buys (https://das.ohio.gov/Divisions/General-Services/Procurement-Services/Ohio-Buys) not later than,

12:00 PM on August 27, 2024.