

Assessor's Parcel Number:  N/A

Date:  MAY 9, 2017

Recording Requested By:

Name:  ERIK NILSSEN, ENGINEERING

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Real Property Transfer Tax: \$  N/A



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KAREN ELLISON, RECORDER

CONTRACT #2017.055

(Title of Document)

# CONTRACT FOR SERVICES BY AN INDEPENDENT CONTRACTOR

A CONTRACT BETWEEN

**DOUGLAS COUNTY**

AND

**HDR ENGINEERING, INC.  
9805 DOUBLE R BOULEVARD SUITE 101  
RENO NV 89521-5917**

BY *[Signature]*  
DOUGLAS COUNTY  
CLERK  
2017 MAY -8 PM 4:09  
NO. 2017.055  
FILED

This Contract for Services by an Independent Contractor (the "Contract") is entered into by and between Douglas County, a political subdivision of the State of Nevada, through the Board of County Commissioners (the "County"), and HDR Engineering, Inc. a Nevada Corporation ("Contractor"). The County and Contractor are at times collectively referred to hereinafter as the "Parties" or individually as the "Party."

**WHEREAS**, Douglas County, a political subdivision of the State of Nevada, from time to time requires the services of independent contractors; and

**WHEREAS**, it is deemed that the personal services of Contractor herein specified are both necessary and desirable and in the best interests of Douglas County; and

**WHEREAS**, Contractor represents that Contractor is duly qualified, equipped, staffed, ready, willing and able to perform and render the services hereinafter described.

**NOW, THEREFORE**, in consideration of the mutual promises and covenants herein made, the County and Contractor mutually agree as follows:

**1. TERM AND EFFECTIVE DATE OF CONTRACT.** The Contract will become effective on the date it is approved and signed by representatives of both Parties. All tasks must be completed within Four Years (May 2021) of the effective date of the Contract. The contract length is due to the anticipated 18-month easement acquisition process which must be completed by the Nevada Department of Transportation and is not within the County or Contractors purview.

**2. INDEPENDENT CONTRACTOR STATUS.** The Parties agree Contractor will have the status of an independent contractor and that the Contract, by explicit agreement of the Parties, incorporates and applies the provisions of NRS 333.700, as necessarily adapted to the Parties, including the express understanding that Contractor is not an employee of the County and that:

There shall be no:

- (1) Withholding of income taxes by the County;
- (2) Industrial insurance coverage provided by the County;
- (3) Participation in group insurance plans which may be available to employees of the County;
- (4) Participation or contributions by either the Contractor or the County to the public employee's retirement system;
- (5) Accumulation of vacation leave or sick leave; and
- (6) Unemployment compensation coverage provided by the County if the requirements of NRS 612.085 for independent contractors are met.

### 3. INDUSTRIAL INSURANCE.

Contractor further agrees that, prior to the commencement of any work and as a precondition to any obligation of the County to make any payment under the Contract, Contractor will provide the County with a work certificate and/or a certificate issued by a qualified insurer in accordance with NRS 616B.627. Contractor also agrees that, prior to commencing any work under the Contract, Contractor will complete and provide evidence to the County that Contractor has made the following written request to Contractor's insurer:

HDR Engineering, Inc. has entered into a contract with Douglas County to perform work from May 4, 2017 to May 4, 2021 and requests that the authorized insurer provide to Douglas County: (1) A certificate of coverage issued pursuant to NRS 616B.627 and (2) Notice of any lapse in coverage or nonpayment of coverage that the Contractor is required to maintain.

The certificate and notice should be mailed to:

Douglas County  
Post Office Box 218  
Minden, Nevada 89423

Contractor agrees to maintain all required workers' compensation coverage throughout the entire term of the Contract. If Contractor does not maintain the required coverage throughout the entire term of the Contract, Contractor agrees that the County may, at any time the coverage is not maintained by Contractor, order the Contractor to stop work, suspend the Contract, or terminate the Contract at the sole discretion of the County. For each six-month period this Contract is in effect, Contractor agrees, prior to the expiration of the six-month period, to provide another written request to the insurer for the provision of a certificate and notice of lapse in, or nonpayment of, insurance coverage. If Contractor does not make the request or does not provide the certificate before the expiration of the six-month period, Contractor agrees that the County may order the Contractor to stop work, suspend the Contract, or terminate the Contract at the sole discretion of the County.

**4. SERVICES TO BE PERFORMED.** The Parties agree that the personal services to be performed are as follows:

General design of box culverts under State Route 88 between the East Fork of the Carson River and the Cottonwood Slough. The preliminary design anticipates three – 14-foot by 6-foot box culverts will be required. The consultant will handle all the floodplain modeling required by the Federal Emergency Management Agency (FEMA) including the submittal of a CLOMR and LOMR. The consultant will also acquire certain permits required for the project. A more detailed scope, schedule, and fee may be found in Exhibit A attached.

**5. PAYMENT FOR SERVICES.** Contractor agrees to provide the services set forth in Paragraph 4 at a cost not to exceed Two Hundred Forty Eight Thousand Three Hundred and Sixty Four Dollars (\$248,364) (the “Contract Price”). In addition, the County does not agree to reimburse Contractor for travel expenses and per diem allowances. Unless Contractor has received a written exemption from the County, Contractor shall submit monthly requests for payment for services performed under this Contract. Requests for payment by Contractor may only be made for reimbursement of actual cash disbursed by Contractor. Requests for payment shall be submitted no later than fifteen (15) days after the end of a month and must include a detailed summary of the expenditures reported in a form that supports the approved budget. Specifically, Contractor agrees to provide with each request for payment a schedule of actual expenditures for the period, cumulative total expenditures for the entire contract, and a comparison of cumulative total expenditures to the approved budget.

**6. TERMINATION OF CONTRACT.** Either Party may terminate the Contract if either Party fails to correct any breach of the terms of the Contract within 30 days after receiving notice of such breach and having been given an opportunity to cure the breach.

**7. NONAPPROPRIATION.** All payments required pursuant to the Contract are contingent upon the availability of County funds. In accordance with NRS 354.626 and any other applicable provision of law, the financial obligations between the Parties will not exceed those monies appropriated and approved by the County for the Contract for the then current fiscal year under the Local Government Budget Act. The Contract will terminate and the County’s obligations will be extinguished if the County fails to appropriate the necessary funding.

Nothing in the Contract will be construed to provide Contractor with a right of payment from any entity other than the County. Any funds budgeted by the County pursuant to the terms of the Contract that are not paid to Contractor will automatically revert to the County’s discretionary control upon the completion, termination, or cancellation of the Contract. The County will not have any obligation to re-award or to provide, in any manner, the unexpended funds to Contractor. Contractor will have no claim of any sort to the unexpended funds.

**8. CONSTRUCTION OF CONTRACT.** The Contract will be construed and interpreted according to the laws of the State of Nevada. There will be no presumption for or against the drafter in interpreting or enforcing the Contract. In the event a dispute arises between the Parties, the Parties promise and agree to first meet and confer to resolve any dispute. If such meeting does not resolve the dispute, then the Parties agree to mediate any dispute arising from or relating to the Contract before an independent mediator. The fee, rate or charge of the mediator will be shared equally by the Parties, who will otherwise be responsible for their own attorney’s fees and costs. If mediation is unsuccessful, litigation may only proceed before a

department of the Ninth Judicial Court of the State of Nevada in and for the County of Douglas that was not involved in the mediation process and attorney's fees and costs will be awarded to the prevailing party at the discretion of the court. The mediator and court will recognize any offers of judgment made by a Party pursuant to Nevada law.

**9. COMPLIANCE WITH APPLICABLE LAWS.** Contractor promises and agrees to fully and completely comply with all applicable local, state and federal laws, regulations, orders, or requirements of any sort in carrying out the obligations of the Contract, including, but not limited to, all federal, state, and local accounting procedures and requirements, all hazardous materials regulations, and all immigration and naturalization laws.

**10. ASSIGNMENT.** Contractor will neither assign, transfer nor delegate any rights, obligations or duties under the Contract without the prior written consent of the County.

**11. COUNTY INSPECTION.** The books, records, documents and accounting procedures and practices of Contractor related to the Contract will be subject to inspection, examination and audit by the County, including, but not limited to, the contracting agency, the County Manager, the District Attorney, and, if applicable, the Comptroller General of the United States, or any authorized representative of those entities.

**12. DISPOSITION OF CONTRACT MATERIALS.** Any books, reports, studies, photographs, negatives or other documents, data, drawings or other materials prepared by or supplied to Contractor in the performance of its obligations under the Contract (the "Materials") will be the exclusive property of the County and all such materials will be remitted and delivered, at Contractor's expense, to the County by Contractor upon the completion, termination or cancellation of the contract. Alternatively, if the County provides its written approval to Contractor, the Materials must be retained by Contractor for a minimum of six years after Contractor's receipt of the final payment from County and all other pending matters are closed. If, at any time during the retention period, the County, in writing, requests any or all of the Materials, then Contractor will promptly remit and deliver the materials, at Contractor's expense, to the County. Unless the County has requested the remittance and delivery by Contractor of the Materials, Contractor will not use, willingly allow or cause to have such Materials used for any purpose other than the performance of Contractor's obligations under the terms of the Contract without the prior written consent of the County.

**13. PUBLIC RECORDS LAW.** Contractor expressly understands and agrees that all documents submitted, filed, or deposited with the County by Contractor, unless designated as confidential by a specific statute of the State of Nevada, will be treated as public records pursuant to NRS chapter 239 and shall be available for inspection and copying by any person, as defined in NRS 0.039, or any governmental entity. Contractor expressly and indefinitely waives all of its rights to bring, including but not limited to, by way complaint, interpleader, intervention, or any third party practice, any claims, demands, suits, actions, judgments, or executions, for damages or any other relief, in any administrative or judicial forum, against the County or any of its officers or employees, in either their official or individual capacity, for violations of or infringement of the copyright laws of the United States or of any other nation.



**14. INDEMNIFICATION.** Contractor agrees to indemnify and save and hold the County, its agents and employees harmless from any and all claims, causes of action or liability to the extent arising from the willful misconduct or negligent performance of this contract by Contractor or Contractor's agents or employees.

**15. MODIFICATION OF CONTRACT.** The Contract and the attached exhibits constitute the entire agreement and understanding between the Parties and may only be modified by a written amendment signed by both of the Parties.

**16. AUTHORITY.** The Parties represent and warrant that they have the authority to enter into this agreement.

**17. STANDARD OF CARE.** Contractor will perform all services in a manner consistent with that level of care and skill ordinarily exercised by other members of Contractor's profession currently practicing in the same locality under similar conditions.

**18. WAIVER OF LIEN.** Contractor understands and agrees that the services it will render to the County are not intended for the improvement of real property or to otherwise grant any rights to Contractor pursuant to NRS chapter 108.

**19. THIRD PARTY BENEFICIARY.** Nothing contained in this Agreement is intended to convey any rights or to create a contractual relationship with any third party or to otherwise allow a third party to assert a cause of action against either Contractor or County.

**20. NOTICES.** All notices, requests, demands and other communications hereunder must be in writing and will be deemed delivered when sent via certified mail, return receipt requested or by commercial courier, provided the courier's regular business is delivery service and provided further that it guarantees delivery to the addressee by the end of the next business day following the courier's receipt from the sender, addressed as follows (or any other address that the Party to be notified may have designated to the sender by like notice):

**To County:** Douglas County  
Attn: County Engineer  
1594 Esmeralda Ave.  
Post Office Box 218  
Minden, Nevada 89423  
Telephone: (775) 782-9063

**To Contractor:** Ruedy Edgington, Vice President  
HDR Engineering Inc.  
9805 Double R Boulevard Suite 101  
Reno, NV 89521-5917

**21. CONFLICT OF INTEREST.** By signing the Contract, Contractor agrees that any information obtained from Douglas County, in whatever form, will not be divulged to other competing interests without the permission of the County Manager. In the event of a breach of this provision, Douglas County may immediately withdraw, without penalty or any payment,

from the Contract. Contractor must notify Douglas County of any other contracts or projects Contractor is working on that may impact Douglas County.

**IN WITNESS WHEREOF**, the Parties hereto have caused the Contract to be signed and intend to be legally bound thereby.

HDR Engineering, Inc.

By: Ruedy Edgington 4/18/17  
Ruedy Edgington, Vice President (Date)

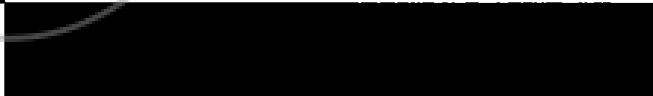
**Douglas County**

By: William B. Penzel (Date)  
William B. Penzel  
Chairman, Douglas County Board of Commissioners

# Scope of Services

Douglas County State Route 88 Design

April 4, 2017





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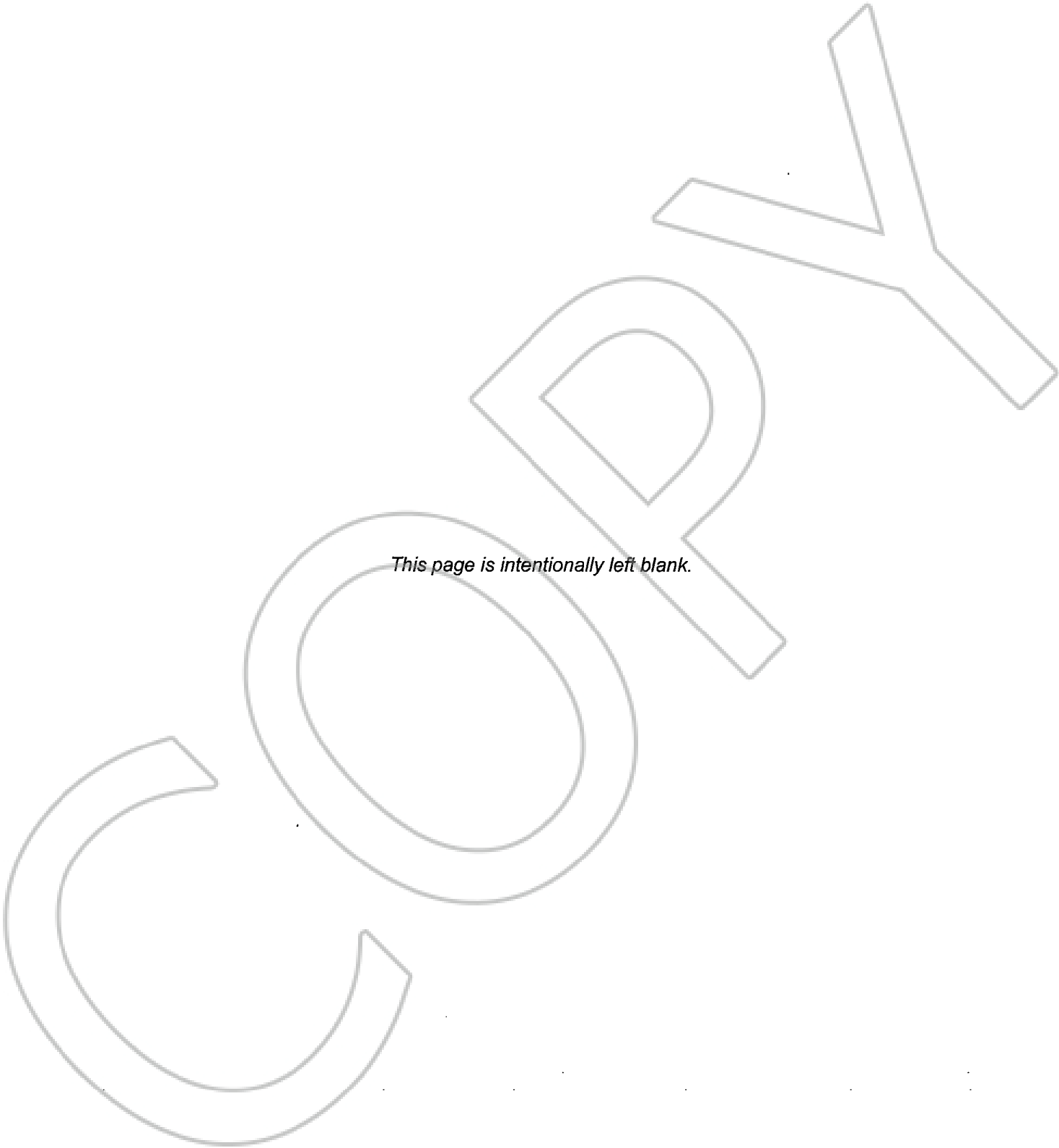
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## Project Understanding

The Carson Valley is a wide, flat valley situated between the eastern slope of the Carson Range of the Sierra Nevada to the west and the Pinenut Range to the east. The Carson Valley, containing the East Fork, West Fork, and Main Stem of the Carson River, experiences extremely complex hydrodynamics during high-flow events. Due to shallow, dispersed flow, man-made features within the floodplain can have a profound impact on flow patterns and water surface elevations during over-bank storm events. State Route 88 (SR 88) is one such man-made feature.

The elevated roadway prism of SR 88 exacerbates the issue of overbank flood flows from the East Fork of the Carson River and Cottonwood Slough to pond on the east side of SR 88 (Figure 1). The existing bridges on Cottonwood Slough and the East Fork of the Carson River lack adequate capacity to freely convey major flows on the water courses causing flooding of existing residential areas immediately north of Cottonwood Slough. The intent of this project is to analyze, design, and construct a relief culvert on SR 88 south of the Cottonwood Slough in order to lessen the severity of flooding upstream of SR 88. Previous analyses have indicated that a series of four 14' x 6' Reinforced Concrete Box (RCB) culverts could be installed south of the current Cottonwood Slough crossing to relieve hydrodynamic pressure and potentially lower water surface elevations. It is anticipated that the HEC-RAS combined 1D/2D model being developed by CONSULTANT will be used for alternatives development hydraulic impact analyses. This model is based on the most recent LiDAR topography obtained in September 2012 under contract by the Carson Water Subconservancy District (CWSD) and revised hydrology for this region. This model is also being prepared under strict FEMA Guidelines and Specifications as required for CLOMR submittals.

Presently, the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) for the study area show a detailed Zone AE with Base Flood Elevations (BFE) and without a regulatory floodway on the east or upstream side of SR88 and an Approximate Zone A on the west or downstream side. Because the proposed set RCBs fall within a Special Flood Hazard Area (SFHA), an application for a Conditional Letter of Map Revision (CLOMR) may be required only if increases to the BFEs occur or changes to the floodplain boundaries are proposed as a result of the project. According to 44 CFR 65.12 and 60.3 a CLOMR is only required if the project has excessive negative impacts to the floodplain. Given the outcome of the hydraulic modeling and culvert optimization, CONSULTANT will determine water surface impacts of the project and applicability of a CLOMR. However, it is anticipated that the proposed project would maintain or decrease the BFEs in this reach and not require a CLOMR.

The CONSULTANT will provide bidding and construction support. Bidding support shall include responding to contractor question during the bidding phase, and issuing up to two (2) addenda to clarify the construction documents.

Douglas County desires to document the changes in the FEMA floodplain due to the construction of the relief culvert through a FEMA Letter of Map Revision (LOMR) based on the constructed conditions. The Nevada Department of Transportation (NDOT) will collect as-built information from the contractor and survey the final constructed condition

of the relief culvert following construction by subcontractor. NDOT will provide the as-built information to the CONSULTANT. The CONSULTANT will prepare an application for a LOMR and submit to FEMA for approval and revision to the Flood Insurance Rate Maps for the area affected by the construction of the relief culvert.

COOPER

Figure 1: Study Area.



# 1 Project Management

HDR Engineering, Inc. (CONSULTANT) personnel will provide project management activities in support of the State Route 88 Culvert Design project. CONSULTANT project management activities include project initiation, invoices, project tracking, internal resources review, client coordination, and project coordination. These activities will be conducted to consistently monitor project progress, anticipate project needs, and implement action plans to maintain scope, fee, and schedule to the extent possible.

## 1.1 Project Initiation

Upon approval of the agreement, CONSULTANT personnel will conduct management activities related to the initiation of the project. These will include contract initiation, preliminary project review, and electronic project setup.

## 1.2 Invoicing and Progress Tracking

Schedule and budget progress will be reported through submission of monthly invoices. Monthly invoices will include summary of tasks worked on in that period, cost to date, and funds remaining for the project to assist the Douglas County project manager in tracking progress and project spending. Invoices will be accompanied by a brief progress report.

## 1.3 Client Coordination

Progress, issue tracking, and action item review will be accomplished at review meetings that will be held after the Concept Development, 60%, 90%, and 100% design submittals to review comments from NDOT and Douglas County. Each meeting will be approximately 1-hour in length and will be held in NDOT's office.

Proposed changes in or departures from this scope of services identified or initiated by CONSULTANT will be provided to Douglas County in writing. Proposed changes in or departures from this scope of services identified or initiated by Douglas County will be reviewed by CONSULTANT and any resulting changes to the schedule/budget will be submitted to Douglas County in writing.

## 1.4 General Project Coordination

CONSULTANT's Project Manager will work with Douglas County personnel to facilitate regular team communication and transfer of information with the project team. Internal project meetings will be held as necessary via conference call or in-office meetings at the Douglas County offices. Internal coordination meetings are anticipated to be one-half hour.

### Assumptions:



- Project management tasks are estimated based upon anticipated project duration of 32 months including approximately 18 months for NDOT to acquire needed construction and permanent easements.
- Douglas County personnel will be responsible for assembling non-CONSULTANT members for meetings and for developing meeting notes.

#### Deliverables:

- Status reports to accompany monthly invoices.

## 2 Data Collection

### 2.1 FEMA Data

CONSULTANT personnel will review the current Flood Insurance Study (FIS) for Douglas County, NV for reference since it is the basis of the current effective maps that must be used for regulatory compliance. CONSULTANT personnel will also collect Letters of Map Change available for the project area from FEMA. Data will be acquired electronically through FEMA's web site. Up to date Digital Flood Insurance Rate Maps (DFIRM) data will also be collected to assess impacts to the effective regulatory Base Flood Elevations.

### 2.2 Base Map Data

CONSULTANT staff will collect any relevant GIS compatible base data needed for the project. It is anticipated that these data will be obtained from the Douglas County GIS department. These data will be reviewed and processed for the project area. These may include: Aerial Imagery, Utility Information, Parcel Information, Soils Data, Land Use and FEMA Flood Hazard Data.

### 2.3 Utilities Data

Utility coordination and relocation is always critically important to the success of drainage projects. Subsurface infrastructure, such as culverts and bridges, competes with other utilities for space (usually in roadways). CONSULTANT staff will collect relevant utility information for the project area from NDOT, and from local utility purveyors.

#### As-built Data

CONSULTANT personnel will collect available As-built data for hydraulically significant structures including bridges, roadways and inline structures for the study area. It is anticipated that these will be obtained from NDOT and Douglas County as appropriate. These data will be used to validate and supplement field survey data and aid in model development and design.

## Assumptions:

- CONSULTANT has a right to rely on information provided by Douglas County and third parties.

## 3 Field Reconnaissance

### 3.1 Survey

As part of the field reconnaissance effort, Lumos surveyors will detail the hydraulic structures, roadway prism, and Cottonwood Slough in the study area using survey-grade GPS technology, conventional surveying methods, and supplemental measurements as required by specific circumstances. These will be surveyed in detail such that they can be properly represented in the hydraulic model for the study area and for development of design drawings. Photographs will be made by Lumos surveyors when the survey data are collected. Hydraulic structure elements to be measured include structure opening inverts, highest deck profile, guard railings, low-chord, and abutment geometry. Survey data will be certified by a RLS and will be compliant with vertical and horizontal accuracy defined by CONSULTANT. Survey point locations and naming conventions will also be defined by CONSULTANT prior to data collection. CONSULTANT will produce a survey guidance memo for the purposes of consistency and accuracy in survey data.

Lumos will collect the existing LiDAR mapping obtained by the Carson Water Subconservancy District to prepare a basemap. Lumos will supplement this basemap by collecting ground shots, locating existing Right of Way, and retracing the most current N.D.O.T. alignment. Lumos will send a survey field crew to the site to collect cross sections of existing Highway 88 on 50' intervals approximately 400' to the north and 300' to the south of the proposed culvert. In addition ground shots will be measured to the east of the proposed structure approximately 100' and west to the intersection of the Cottonwood Slough. If conditions allow, several cross sections of the Cottonwood Slough will be measured. Right of Way information will be shown from record mapping, permanent property markers will not be set as part of this scope. Project datum will be referenced to Nevada State Plane Coordinates NAD 83/94 and NAVD88. Deliverables will be an AutoCAD file containing field location points, existing surface evidence of utilities, Right of Way lines, and centerline alignment. No planimetrics will be drawn or digital terrain models created.

#### B. Easement Exhibits

Lumos will prepare one (1) Exhibit "A" defining the metes and bounds and one (1) Exhibit "B" graphically depicting the desired easement locations. A total of four (4) sets of exhibits will be provided for two (2) temporary construction easements and two (2) permanent drainage easements. It will be the client's responsibility to work with their attorney or title company to create and execute the easement deeds that the proposed exhibits will be attached to. The NDOT Right-of-Way Division will be responsible for securing the easements.

Survey work can be completed within 3-4 weeks of notice to proceed, weather depending.

## 3.2 Utility Location

Underground utilities may present a conflict with the construction of the proposed culvert. CONSULTANT will contact local utility purveyors in order to collect location data on overhead and underground utilities will be potholed at a maximum of two locations by a qualified subconsultant. Data collected from the potholing effort will be used inform the design team in order to avoid any potential conflict or to coordinate a relocation of the utility for the construction of the culvert. During an initial site visit, the only underground utility noted is underground telephone along the west side of SR 88.

## 3.3 Geotechnical Investigation

For the Geotechnical scope of work, Lumos will complete a field investigation that will consist of two (2) subsurface borings at the proposed site. Exploration depths will be from 20 to 25 feet below ground surface, or practical refusal, whichever comes first. Samples will be collected from the surface and at intervals of five (5) feet below ground surface. One boring will be located in the shoulder of SR 88 at the proposed center of culvert. The other will be located in the proposed outlet channel. Locations to be finalized by CONSULTANT. Lumos & Associates, Inc. will provide the drilling, traffic control (shoulder closure), and the USA dig clearance.

Lumos & Associates, Inc. herein proposes to provide sampling of each exploration, classify the encountered soils in accordance with the Unified Soil Classification System (USCS), and conduct laboratory testing analyses and calculations and develop a Geotechnical Investigation report that will discuss the geologic setting, seismic considerations, exploration and site condition, field and laboratory test data, and Lumos & Associate's conclusions and recommendations from a geotechnical perspective. The Geotechnical Investigation will be prepared by a Registered Nevada Civil Engineer and will specifically include the following services:

Field Investigation will include:

- USA Dig Clearance
- Location of Exploration Borings
- Logging of all Soil Profiles Based on USCS
- Water Table Measurement, if Encountered

Laboratory analysis may include:

- Atterberg Limits (ASTM D-4318)
- Grain Size Analysis (including fines content) (ASTM C-136)
- Moisture Density Curve (ASTM D-1557)
- Consolidation (ASTM D-2435)
- Direct Shear (ASTM D-3080)

- Moisture Content and Unit Density (ASTM D-2937)
- Expansion Index (ASTM D-4829)
- pH/Resistivity/Soluble Sulfates

**Report, Recommendations, and Conclusions:**

- Exploration Logs
- Soil Types and Classification
- Laboratory Test Results
- Seismic Considerations
- Geotechnical Discussion
- Bearing Capacity and Settlement
- Modulus of Subgrade Reaction (K-Value)
- Shear Strength Parameters of Site Soils
- Coefficient of Friction of Site Soils
- Lateral Earth Pressures (active, passive, and at rest)
- Foundation Recommendations
- Portland Cement Concrete Recommendations
- Groundwater Level, if encountered

Geotechnical services will be completed within 5 weeks of notice to start. Verbal results may be provided sooner if needed.

**Assumptions:**

- Survey will comply with standards dictated by CONSULTANT's survey memo.
- Survey will be conducted and delivered in NAD 83 State Plane Foot projection and NAVD 88 vertical datum.
- Survey will be delivered in a delimited text file format with X,Y,Z and Descriptions.
- Accuracy for survey will be certified by an RLS.

**Deliverables:**

- Survey data in ASCII format.
- Legal description and exhibits for two temporary construction easement and two permanent drainage easements.
- Utility Pothole Data Sheets

- Geotechnical Investigation and Recommendation Report.

## 4 Hydraulic Analyses

### 4.1 Hydraulic Modeling

CONSULTANT developed the regional HEC-RAS 5.0.3 (or the most recent version release) hydraulic model being used for a FEMA Physical Map Revision that is still considered preliminary. This model includes the both the 1%- and 0.2%-annual-chance (100-year and 500-year) flood events. While this model is preliminary, it is considered the best available information for use in project impact assessment. However, the effective model will also need to be used to assess hydraulic impacts per FEMA regulations. These models and associated terrain will be updated and refined using the results of the survey data obtained in Section 2.4 described above. The model will then be used to evaluate various culvert configurations to minimize water surface elevation impacts. Particular attention will be paid to optimizing the culvert geometry, including the profile of the culvert and the downstream channel in relation to the existing ground in order to prevent unwanted sediment aggradation in the culvert or degradation downstream from the culvert. The impacts of the culvert will also be assessed with the current Effective FEMA model per federal regulation.

### 4.2 Draft Technical Drainage Analysis

Division 6 Storm Drainage of Douglas County's Design Criteria and Improvement Standards (Standards) outlines the requirements for both Conceptual (Sections 6.3) and Technical (section 6.4) Drainage Studies. It is anticipated that this project will require a Technical Drainage Study based on Table 6.1 in the Standards document.

CONSULTANT staff will prepare a Technical Drainage Study following the guidelines in Section 6.4.

#### Assumptions:

- Hydraulic analyses will be done using HEC-RAS 5.0.3 or later versions.
- Analyses will be limited to the 10%-, 4%, 2%-, 1%, 0.2%-annual-chance events for analytical purposes and 1% and 0.2% return period for regulatory purposes.
- The HEC-RAS model used for this study will be the one developed for the CWSD by HDR Engineering, Inc.
- Model modification will be limited to the project area.
- Culvert crossing alternatives will be limited to 5 different configurations.
- Debugging of the model after changes have been made will be limited to 32 hours staff time.
- A Technical Drainage Study will be submitted at each design interval and will follow Douglas County's Standards.

## Deliverables:

- Revised HEC-RAS model with all alternatives.
- One (1) Electronic PDF versions of the Drainage Report and two (2) bound hard copies of the Technical Drainage Study at each progress submittal.

## 5 Project Design

CONSULTANT will prepare design submittals as described in the following paragraphs. Each design submittal includes technical drainage report, design drawings, technical specifications, and an Engineer's Opinion of Probable Construction Costs (OPCC).

**Design Drawings:** CONSULTANT will prepare design drawings on full size sheets using CONSULTANT's CADD standards. CONSULTANT has anticipated the level of effort based upon the preparation of the following list of drawings

**Table 1: Anticipated list of sheets.**

Sheet Title	Sheets
Title Sheet	1
Construction Notes Sheet	1
Horizontal Control Information	1
Demolition	1
Traffic Control Plan	2
Site and Grading Plan	1
Plan and Profile	1
Typical Sections	1
Details	5
Erosion Control Plans	1
<b>Total</b>	<b>15</b>

**Technical Specifications:** CONSULTANT will prepare technical specifications in raw Microsoft Word text files for incorporation by the County into the final construction bid package.

**Opinion of Probable Cost of Construction:** CONSULTANT will prepare an Opinion of Probable Cost of Construction (OPCC) for the Project at each design submittal described below.

### 5.1 Concept Development

CONSULTANT Staff will meet with Douglas County staff, NDOT, CWSD, and any appropriate local stakeholders (Design Team) to discuss the Preliminary Concept Design. This meeting will also serve as a Kickoff Meeting for the project.

The purpose of this meeting is to get input from the design group at the initiation of the process and to develop an overall process and schedule. The meeting will cover the following:

- A brief description of the current concept design outlined in the RFP.

- Discussion of potential changes to the original concept.
- Collect feedback on merits/drawbacks of various new concepts.
- Summary of permitting process.
- Discuss scheduling for design and construction
- Potential traffic control challenges

Using input from the meeting CONSULTANT Staff will work with the HEC-RAS model to develop up to 5 crossing configurations. These will be modeled to assess the following: changes in water surface elevations relative to the baseline condition; velocity profiles through the culvert and feeder channels; potential for scour and/or aggradation; impacts to local infrastructure; and changes to flow regime. Preliminary opinions of probable costs (with a 30% contingency) will be developed for each alternative investigated.

A brief technical memorandum will be developed summarizing the results of the alternatives analysis and distributed to the group.

The Design Team will have two (2) weeks to review and provide input. A second design meeting will be held to select a preferred alternative.

## 5.2 60% Design

Based on the comments received and the alternative selected, CONSULTANT will prepare and submit a design submittal at approximately a 60% level of completion. The design submittal will include design drawings of the proposed culvert, the demolition of the existing roadway embankment, a rough draft of technical specifications, preliminary traffic control plan, a draft technical drainage report, draft Erosion Control Plans, a draft OPCC, and temporary and permanent easement legal descriptions and exhibits prepared by Lumos and Associates. The easement documents will be submitted to NDOT at the 60% design level.

The traffic control plan will explore options to keep two lanes of traffic open at all times during construction. If this is not feasible, CONSULTANT will coordinate with NDOT for potential lane closures.

CONSULTANT will prepare an annotated outline of the Technical Specifications. Douglas County will provide all front end documents needed to complete the bit package. The OPCC will be organized using specification divisions and will use a 20% cost contingency to account for undefined design and construction related uncertainty.

An electronic copy of the design submittal will be submitted to Douglas County for dispersal to the Working Group and review. It is anticipated that the review period will last no longer than two (2) weeks. Upon completion of the review period, Douglas County will submit a single, consolidated set of comments to the CONSULTANT for incorporation. CONSULTANT will incorporate comments into the draft final (90%) construction documents.

### ASSUMPTIONS

It is anticipated that the NDOT easement acquisition could take up to 18 months. The CONSULTANTS work effort will be halted after the receipt of the comments from the



60% progress submittal. The CONSULTANTS hourly rates will be escalated at 3% to account for increases to costs of business while the project is on hold. The hourly rates presented as part of this scope of services have been adjusted to account for the escalation.

### 5.3 90% Design

Based on the comments received and the alternative selected, CONSULTANT will prepare and submit a design submittal at approximately a 90% level of completion. The design submittal will include design drawings, draft technical drainage report, draft Erosion Control Plans, technical specifications, a traffic control plan, and a 90% OPCC.

CONSULTANT will provide a substantially complete set of the Technical Specifications. Douglas County will provide all front end documents needed to complete the bit package. The OPCC will be organized using specification divisions and will use a 20% cost contingency to account for undefined design and construction related uncertainty.

CONSULTANT shall prepare and submit an encroachment permit to NDOT for the construction of the culvert.

An electronic copy of the design submittal will be submitted to Douglas County for dispersal to the Working Group and review. It is anticipated that the review period will last no longer than two (2) weeks. Upon completion of the review period, Douglas County will submit a single, consolidated set of comments to the CONSULTANT for incorporation. CONSULTANT will incorporate comments into the draft final (100%) construction documents

### 5.4 100% Design

CONSULTANT will prepare and submit a draft design submittal at 100% level of completion after NDOT has completed the easement acquisition process. The design submittal will include:

- Final Design Drawings and Erosion Control Plans
- Final Technical Drainage Study
- Final Technical Specifications
- Final OPCC

The OPCC will be revised to reflect the 100% level of design and will include a cost contingency of 10% to account for construction related uncertainty.

An electronic copy of the design submittal will be submitted to Douglas County and NDOT for dispersal and review. It is anticipated that the review period will last no longer than three (3) weeks. Upon completion of the review period, Douglas County will submit a single consolidated set of comments to CONSULTANT for incorporation.

CONSULTANT will incorporate comments into the Final PS&E package.

#### Assumptions:

- CONSULTANT will take notes at the Concept Design Meeting and provide meeting minutes to Douglas County.

- Douglas County will provide front end specifications to CONSULTANT after the 60% submittal.
- All CAD work will be done in AutoCAD using CONSULTANT standard sheet layout and colors.
- Design Work and drawings will be done in NAD 83 State Plane Feet coordinate system with NAVD 88 vertical datum.
- The culvert and headwalls will be designed using NDOT standards (AASHTO LRFD Bridge Design Specifications).
- All units will be English Units.
- Technical specifications and details will be NDOT standards as appropriate.
- NDOT and/or Douglas County will provide CONSULTANT with the most current bid tabs.
- OPCC will be based on the most current NDOT Bid Tabs.
- CONSULTANT will collect and distill all design comments from the Design Review Team.
- Post design services, bid assistance and construction management services are not included in this contract.

#### **Deliverables:**

- One (1) electronic copy of the Conceptual Design Memorandum.
- One (1) electronic copy of the 60% Design Submittal (including plans, technical provisions, draft drainage report, and draft OPCC).
- Four (4) full size hardcopies of the 60% plan set (24" x 36"), technical provisions, and drainage study
- One (1) electronic copy of the Draft 90% Design submittal (including plans, technical provisions, draft drainage report, and draft OPCC)..
- Four (4) full size hardcopies of the 90% plan set (24" x 36"), and technical provisions
- One (1) electronic copy of the Draft 100% Design submittal.
- Four (4) full size hardcopies of the 100% plan set (24" x 36"), and technical provisions (including plans, technical provisions, final drainage report, and final OPCC).
- One (1) unbound hardcopy of final OPCC.
- One (1) unbound hardcopy of the final drainage study.
- One (1) unbound hardcopy of the sealed technical specifications.
- One (1) unbound full-size hardcopy (24" x 36") of the sealed design plans.

## **5.5 Record Drawings**

Following construction, NDOT will prepare Record Drawings of the elements of the culvert construction. The Contractor will provide Douglas County and NDOT with redlined as-built drawings noting any deviations from the design plans. The Record

Drawings will be provided to Douglas County two (2) weeks following the receipt of the Contractor's redlines.

**Deliverables:**

- One (1) electronic copy of the Record drawings (pdf and .dwg).
- Two (2) full size hardcopies of the Record plan set.

## 6 Permitting

A number of local, state, and federal permits will be required for the proposed project. Some of these permits can be completed and submitted by the Douglas County via CONSULTANT, and others will have to be submitted by the Contractor selected to construct the project. TABLE 2 provides a list of the permits identified as being required for this project and whether the County or the Contractor is responsible for obtaining the permit. For those permits that are the responsibility of the County, CONSULTANT will provide support for obtaining the permits as described below. In addition, if requested by the County, CONSULTANT can support permit efforts that are the Contractor's responsibility under a separate or amended scope of work.

**Table 2: List of potential permits**

Permit Description	Responsibility County/Contract or	Agency
Placement of fill material into waters of the US CWA Section §404 Permit	Douglas County	US Army Corps of Engineers
Section §401 Water Quality Permit	Douglas County	U.S. EPA/Nevada Division of Environmental Protection (NDEP)
Cultural Resource Consultation	Douglas County	State Historic Preservation Office (SHPO)
Threatened and Endangered Species and Migratory Bird Consultation	Douglas County	United States Fish and Wildlife Service (USFWS) – Nevada Field Office
NDOT Encroachment Permit	Douglas County	NDOT
Temporary Permit Application for Working in Waterways	Douglas County	NDEP
Application for Authorization to use State-Owned Submerged Lands	Douglas County	Nevada Division of State Lands
NPDES Construction Stormwater Pollution Prevention Permit	Contractor	NDEP

## 6.1 Cultural Resources Consultation

CONSULTANT will consult with the State Historic Preservation Office (SHPO) to determine if any Cultural Resources exist on the project site and whether these have been documented. If there have been no studies done in this area CONSULTANT will determine the level of effort involved and will ask for a scope amendment to conduct a cultural resource survey.

## 6.2 Section 404 Wetlands Permit

CONSULTANT will conduct a wetland delineation and Jurisdictional Determination following US Army Corps of Engineers' guidelines and submit an application for a 404 Permit.

CONSULTANT will coordinate with the US Army Corps of Engineers (USACE) and Douglas County to setup a pre-application consultation meeting to summarize the project to the Corps and define a path forward for 404 permitting.

### 6.2.1 Wetland Delineation

CONSULTANT will conduct a Wetland Delineation in accordance with the 1987 "Corps of Engineers Wetland Delineation Manual," as well as the subsequent guidance documents and standards required by the USACE Sacramento Regulatory Branch. The data from the delineation will be compiled in the wetland delineation report.

In addition, CONSULTANT will coordinate and consult with the USACE to obtain verification of the wetland delineation, and make any necessary changes to the report as requested by the USACE.

### 6.2.2 Draft and Final Delineation Report

CONSULTANT will prepare a draft Wetland Delineation Report, and forward it to the County for review and comments. CONSULTANT will incorporate comments received and prepare a final report for submittal to the USACE.

In addition, CONSULTANT will coordinate and consult with the USACE to obtain verification of the wetland delineation, and make any necessary changes to the report as requested by the USACE.

### 6.2.3 USACE Consultation

One site visit and one meeting with the USACE will be required to support verification of and concurrence on the delineation. In addition, CONSULTANT will coordinate and consult with the USACE to obtain wetland delineation report review, and make any necessary changes to the report as requested by the USACE.

## 6.3 Threatened and Endangered Species Consultation

CONSULTANT will consult with USFWS to avoid impacts of threatened and endangered species within the project area. One listed species, the Lahontan Cutthroat Trout, may be present in the East Fork of the Carson River, adjacent to the project area. Through

Section 7 consultation with USFWS, CONSULTANT will develop mitigation measures to avoid impacts to these species. No critical habitats are present within the project area. Migratory birds protected under the Migratory Bird Treaty Act of 1918 (MBTA) are common throughout the Carson Valley, and CONSULTANT will consult with USFWS to implement standard conservation measures during construction. Nesting bird surveys will be completed before and during construction to comply with MBTA.

## 6.4 FEMA CLOMR

Per Douglas County's request, a FEMA Conditional Letter of Map Revision (CLOMR) is to be developed for this project to secure FEMA approval. It should be noted that a Letter of Map Revision (LOMR) will be necessary after project construction is complete as described later in the scope of work.

Following the 60% submittal of the construction documents, the CONSULTANT will coordinate submitting an application to FEMA Headquarters for the CLOMR based on the design of the relief culvert and the hydraulic model. Our water resources team understands the FEMA application process due to our past on ongoing CLOMR/LOMR submittals.

### 6.4.1 Hydraulic Modeling

It is anticipated that the HEC-RAS model developed for the CWSD will be used for this effort. The selected culvert crossing alternative will be entered into the model and used as the foundation of map revisions.

### 6.4.2 Mapping

Once the modeling is completed in HEC-RAS, the 1% and 0.2% chance water surface profiles will be post-processed in GIS or RAS Mapper to develop the digital floodplain boundaries and water surface contours. Floodplain/floodways will then be edited as necessary to correct typical post-processing anomalies. All data will be in NAD 83, State Plane Feet, Nevada West (FIPS 2703) horizontal datum and NAVD 88 vertical datum.

#### **Work Maps**

CONSULTANT will produce a set of work maps to accompany the Technical Data Notebook (TDN) for submission to FEMA. These maps will be at a scale of 1"=500' to be consistent with the current FEMA Flood Insurance Rate Map and include the following information to comply with FEMA's requirements for a CLOMR Work Map.

- Aerial Photo Background
- Two Foot Contours
- River centerline alignment
- Model Cross Sections with cross section number labeling
- Effective Flood Hazard Zones
- Proposed Flood Hazard Zones and Floodway
- Tie-in Locations to existing FEMA mapping

- Base Flood Elevations

### **Annotated FIRM**

Annotated FIRMs will be produced for submission to FEMA per CLOMR requirements. These maps will be reproductions of the effective Flood Insurance Rate with the proposed 1-percent-annual chance flood boundaries overlaid.

## **6.4.3 Public Notification**

In order to comply with federal regulations it is necessary to inform all land owners who will be affected by the proposed map revisions. Those properties that experience a change, or addition of a regulatory floodway and those that experience a change in the base flood elevations must be individually notified by letter. In addition to individual notification, a public notice identifying the intent to change the flood hazard mapping for this reach of the river must also be published in the local newspaper. Documentation of both the individual and public notifications must be included in the CLOMR submittal package. CONSULTANT staff will use GIS capabilities and the parcel data described above to establish a list of impacted parcels. A form letter outlining the changes due to the CLOMR will then be developed and mailed to each of these land owners and documented for inclusion in the TDN.

## **6.4.4 Public Agency Review**

Both the Douglas County Floodplain Administrator and FEMA will conduct a review of the CLOMR package. The review by Douglas County must take place prior to submittal to FEMA and Douglas County will need to sign the MT-2 form that accompanies the submittal package to FEMA. CONSULTANT will coordinate with the appropriate personnel at both Douglas County and FEMA to initiate the review and to answer any request for information. It is assumed that there will be no fees associated with FEMA's review of the CLOMR request given the fact that the study is being conducted based on map changes based on flood hazard information meant to improve upon that shown on the flood map or within the flood study.

## **6.4.5 CLOMR Reporting**

### **Technical Data Notebook**

Upon completion of the modeling and mapping, CONSULTANT will prepare the necessary reporting to satisfy the requirements of 44 CFR 65. This will include a Technical Data Notebook (TDN) summarizing the project work including maps, figures, and tables as appropriate to describe the process. The report will be developed in enough detail to comply with *FEMA Guidelines and Standards for Flood Risk Analysis and Mapping* for CLOMR applications.

### **Digital Data**

All GIS and digital data in support of this project will be processed and submitted to FEMA in the appropriate format. These data will be produced in NAD 83, State Plane Feet, Nevada West (FIPS 2703) horizontal datum and NAVD 88 vertical datum.

### **MT-2 Forms**



CONSULTANT will prepare appropriate MT-2 forms to accompany the CLOMR request and coordinate obtaining the necessary signatures from Douglas County (as the requestor).

### **Flood Profiles**

Flood profiles will be produced for the 100- and 500-yr. water surface elevations and bed elevations. These will be used to tie-in to the existing downstream study.

## **6.5 Local Permitting**

On behalf of the County, CONSULTANT will obtain the necessary information from previous studies or permitting efforts, and complete and file the necessary permit applications with the appropriate agencies. Applicable information from previous efforts will be indexed and stored electronically to facilitate background information as it pertains to regulatory compliance and permitting.

CONSULTANT will complete the permitting applications and forms, and draft cover letters to assist the County in completion and submission of other required environmental and construction related permits (i.e., 401 Water Quality Permit, Working in Waterways, State Lands, and NDOT Encroachment Permit). Permit application fees must be paid directly by the County, therefore CONSULTANT will request checks be drawn by the County for the applications. These requests will be made with sufficient advanced notice to meet submittal schedules.

Each agency will review the application to determine the completeness of the filing. If the application is determined to be incomplete, the agency must specify the deficiencies and ways to correct them. CONSULTANT will respond to such requests for additional information and re-file the application. Typically, the agency has an additional 30 days to review for completeness after re-filing.

## **6.6 Agency Coordination**

CONSULTANT will maintain contact with the appropriate staff at the regulatory agencies to facilitate agencies in completing their review and taking action on the permit applications within the required timeframes. A secondary goal of this coordination is to temper regulatory agency staff imposing infeasible or impracticable mitigation measures in the final permit/approval. CONSULTANT will document all interaction with the regulatory agencies regarding specific direction or negation in obtaining permit and plan approval or concurrence letters.

For the USACE Pre-Construction Notification (PCN), CONSULTANT will coordinate closely with the USACE; the Natural Resources Conservation Service (NRCS); the USFWS; and Douglas County to support the permit process.

To minimize delays in the permit completion phase, CONSULTANT would:

- Keep each agency apprised of the project status.
- Provide any addition information immediately.
- Encourage each regulatory agency to act on its respective permit application within statutory time limits.



**Assumptions:**

- CONSULTANT will pay all permit application fees and will be reimbursed by Douglas County.
- Agency review and coordination may affect project schedule

**Deliverables:**

- FEMA CLOMR package
- Wetlands Delineation Report
- Applicable Federal, State, and local permit applications

## 7 Bidding and Construction Support

### 7.1 Bidding Support

CONSULTANT will provide bidding assistance services to the County at the time of bid. These services are anticipated to include coordinating contract document with the County's Purchasing Department, , preparing up to two (2) Addenda prior to bid,.

**Assumptions:**

- Addenda prior to bid will be limited to two (2).

**Deliverables:**

- Addenda.

### 7.2 Construction Support

CONSULTANT will provide construction support assistance services to the County during the duration of construction. These services are anticipated to include shop drawing review, and responding to requests for information from the contractor.

**Assumptions:**

- A maximum of 12 submittals will be reviewed.

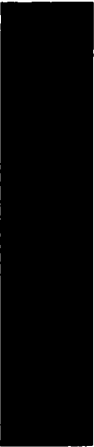
## 8 Letter of Map Revision

Subsequent to the completion of the construction of the relief culvert, NDOT will perform an as- built survey of the culvert and the related improvements. If minor variations are present between the design plans that the CLOMR was based on, the differences in the culvert geometry will be updated in the HEC-RAS model and the results will be included in the application for the final LOMR.

The CONSULTANT will prepare the application for a LOMR and submit the application to FEMA for Review and approval. HDR will respond to up to 2 (two) sets of reasonable review comments from FEMA in order to successfully garner the LOMR.

**Assumptions:**

- CONSULTANT will pay permit application fees and will be reimbursed by Douglas County.



Douglas County  
SR 88 Culvert Design and CLOMR/LORM

Task No.	Task Description	R. Edgington Project Principal Engineer	L. Kubiak Accountant Sr	M. Blum Project Manager General	M. Forest Quality Control Reviewer	K. Weaver Engineer Water Resources	N. Laughlin Engineer Water Resources Sr	G. Burst Engineer Water Resources	P. Oxborough CADD/Technical Civil 4	A. Carmazzi Engineer Bridge	P. Piorce Engineer Traffic Sr	K. Rautenstrauch Biologist 3	Total HDR Labor Hours	Total HDR Labor (\$)	Total HDR Expenses (\$)	Subs (\$)	Total Cost (\$)
Rates		\$ 313.42	\$ 151.38	\$ 177.12	\$ 315.14	\$ 136.75	\$ 258.02	\$ 155.38	\$ 144.00	\$ 133.28	\$ 227.09	\$ 121.78					
<b>Task 1 - Project Management</b>																	
1.1	Project Initiation	2	4	4									10	\$1,942	\$128		\$2,070
1.2	Invoicing and Progress Tracking		40	12									52	\$8,180			\$8,180
1.3	Client Coordination			24			8		8	2	4	4	50	\$9,129			\$9,129
1.4	General Project Coordination			24		24	12	12	12	8	8	8	108	\$18,078			\$18,078
	Subtotal Task 1	2	44	64	0	24	20	12	20	10	12	12	220	\$37,329	\$128	\$0	\$37,457
<b>Task 2 - Data Collection</b>																	
2.1	FEMA Data					2							2	\$274	\$0		\$274
2.2	Base Map Data					2							2	\$274			\$274
2.3	Utilities Data							4	2				6	\$909			\$909
	Subtotal Task 2	0	0	0	0	4	0	4	2	0	0	0	10	\$1,456	\$0	\$0	\$1,456
<b>Task 3 - Field Reconnaissance</b>																	
3.1	Survey and Easements (Lumos & Assoc)			2		2	4	2	8				18	\$3,120	\$0	\$7,140	\$10,260
3.2	Utility Location						2	8	2				12	\$2,047		\$2,000	\$4,047
3.3	Geotechnical Investigation (Lumos & Assoc)						2	8		4			14	\$2,292		\$11,025	\$13,317
	Subtotal Task 3	0	0	2	0	2	8	18	10	4	0	0	44	\$7,462	\$0	\$20,165	\$27,627
<b>Task 4 - Hydraulic Analyses</b>																	
4.1	Hydraulic Modeling			16	8	80							104	\$16,295	\$35		\$16,330
4.2	Draft Drainage Analysis			16	4	48	4		4				76	\$12,267			\$12,267
	Subtotal Task 4	0	0	32	12	128	4	0	4	0	0	0	180	\$28,562	\$35	\$0	\$28,596
<b>Task 5 - Project Design</b>																	
5.1	Concept Development			16	4	24	16	24	56	8	12		160	\$27,059	\$227		\$27,316
5.2	60% Design (plans, specs, drainage study, OPPC)			4	8	8	16	40	80	16	32		204	\$35,584			\$35,584
5.3	90% Design (plans, specs, drainage study, OPPC)			4	8	8	12	24	32	8	24		120	\$22,273			\$22,273
5.4	Final Design (plans, specs, drainage study, OPPC)			2	8	4	8	8	32	8	8		78	\$14,220			\$14,220
	Subtotal Task 5	0	0	26	28	44	52	96	200	40	76	0	562	\$99,134	\$227	\$0	\$99,361
<b>Task 6 - Permitting</b>																	
6.1	Cultural Resources Consultation			2								25	27	\$3,398			\$3,398
6.2	Section 404 Wetlands Permit			2								40	42	\$5,228			\$5,228
6.3	FEMA CLOMR			16	4	40							60	\$9,685	\$6,685	\$16,243	
6.4	NDOT Encroachment Permit						4	16	8				28	\$4,670	\$600	\$5,270	
6.5	Agency Coordination			4								4	8	\$1,196	\$1,050	\$2,246	
	Subtotal Task 6	0	0	24	4	40	4	16	8	0	0	69	189	\$24,053	\$8,335	\$0	\$32,387
<b>Task 7 - Bidding and Construction Support</b>																	
7.1	Bidding Support						4	8					12	\$2,275	\$0		\$2,275
7.2	Construction Support						2	8		8			18	\$2,825	\$0		\$2,825
	Subtotal Task 7	0	0	0	0	0	6	16	0	8	0	0	30	\$5,100	\$0	\$0	\$5,100
<b>Task 8 - O&amp;M</b>																	
8.1	Record Drawings						2		8	4			14	\$2,201		\$0	\$2,201
8.2	FEMA LORM			8	4	24							36	\$5,960	\$8,185		\$14,144
	Subtotal Task 8	0	0	8	4	24	2	0	8	4	0	0	50	\$8,161	\$8,185	\$0	\$16,345
<b>COLUMN TOTALS</b>		<b>2</b>	<b>44</b>	<b>156</b>	<b>48</b>	<b>266</b>	<b>96</b>	<b>162</b>	<b>252</b>	<b>66</b>	<b>88</b>	<b>81</b>	<b>1,261</b>	<b>211,290</b>	<b>\$16,809.00</b>	<b>\$20,165</b>	<b>\$248,364</b>

