September 12, 2022

Dr. Martin Moore PhD.
City of Rio Communities
360 Rio Communities Blvd.
Rio Communities, NM 87002

Re: City of Rio Communities – Horner St./Hillandale Ave. Reconstruction

Dear Mr. Moore,

HDR Engineering, Inc. (HDR) appreciates the opportunity to submit this proposal for engineering services to assist the City of Rio Communities (City) with design for the Horner St./Hillandale Ave. Reconstruction project. The proposal is based on in-person, email, and phone discussions with City staff.

SCOPE OF SERVICES:

HDR understands that Rio Communities has received Municipal Arterial Program Funds for the Reconstruction of Horner St. from Highway 47 to Hillandale Ave. and a portion of Hillandale Ave. from Hornet St. to Manzano Expwy. The project will be divided into three phases (Phase I, Phase II, Phase III) and HDR will provide engineering services to develop three separate construction plans. A summary of the scope of services and associated tasks is described below.

Project Limits

Task 1 – Project Management **$18,201.00**

Task 1.1 Project Administration

Preparation of a project schedule

- HDR will prepare a project schedule outlining key project activities including meetings/site visits, major milestones, comment review periods, comment resolution periods, and associated deliverable dates

Preparation of monthly invoices

- HDR will submit a monthly invoice with summary of project activities completed for the invoice period. The invoices will be based on percent complete for each lump sum task

Task 1.2 Project Coordination

Coordination with the City and internal staff

- HDR will coordinate with the City on a weekly basis regarding the progress of the project. For budgeting purposes, we have assumed all meetings will be virtual or over the phone.

Task 1.3 Design Review Meetings

HDR will attend three (3) Design Review Meetings in person with City Staff to review each plan submittal for all three phases at the same time and three (3) Council meetings. HDR will prepare the meeting minutes for each design review meeting and distribute to attendees within two weeks after the meeting. HDR will also prepare a slideshow presentation at the council meetings.

Deliverables:

- Design review meeting minutes and slideshow presentation for council meeting.

Task 1.4 Contract Administration

Regular management and business reviews will also be conducted throughout the duration of the project as part of the HDR Quality Assurance/Quality Control (QA/QC) process.

Task 2 – Scoping Report **$25,387.00**

As mentioned before, the project will be broken into three (3) different phases. Each phase will include up to two (2) design alternatives. The phases will be broken in the following way:

- Phase I – Highway 47 to Brugg Drive
- Phase II – Brugg Drive to Hillandale Avenue
- Phase III – Horner Street to Manzano Expressway

The intent of this task order is to prepare a scoping report that will include the following efforts:

- Existing conditions inventory including drainage structures, typical section and any other features discovered during field visit. Any as-built information provided by the City or any public agency will be reviewed as part of evaluating existing conditions.
- Evaluation of existing conditions for geometry deficiencies, safety and drainage issues and pavement failures.
- Determination of project impacts to local roads access, right-of-way (ROW), Intelligent Transportation System (ITS) and/or utility impacts.

The scoping report will document assumptions and summarize analyses performed for each phase along with an Opinion of Probable Construction Cost (OPCC) for all alternatives provided

in each of the three phases. The preferred alternative for each phase will be selected by the City, and therefore, be the basis of preliminary and final design. Any significant change to the selected alternative after the scoping report delivery will be considered out of scope of work.

Deliverables:

- Final scoping report, including alternatives and recommendations for roadway and/or drainage improvements for each project phase.
- One (1) in-person meeting at City Town Hall or virtual design review meeting after submittal to select design alternatives in each phase. Two HDR personnel will attend the meeting.

Task 2.1 Roadway

Phase I - Based on in-person and phone conversations with the City, HDR will analyze the possibility of adding a roundabout at the Horner St. / Kaghan Loop Dr. intersection, as one of the alternatives in Phase I. This alternative may include a need for a Right-of-Way take.

Phase II - HDR will evaluate the addition of a pedestrian path adjacent to the road as one of the alternatives. This alternative will be dependent on Right-of-Way and drainage patterns.

Phase III – HDR will analyze and evaluate the realignment of Hillandale Avenue as one of the alternatives. City understands this will require a need for a Right-of-Way take.

Task 2.2 Drainage

Drainage analysis in the scoping report for the Horner Street study area will include site data collection, hydrologic & hydraulic (H&H) analysis, and recommended drainage improvements for each of the three phases planned for the project corridor. Analysis and design recommendations will be based on NMDOT criteria as listed in Table 203-1 of the NMDOT Drainage Design Manual (2018).

2.2.1 Hydrology:

HDR will conduct a site-specific analysis of the contributing watershed(s) characteristics directly contributing to the drainage on Horner Street. Review includes both onsite and offsite watersheds. Peak discharge rates for rural check and design flood events will be determined utilizing the 2018 New Mexico Department of Transportation (NMDOT) Drainage Design Manual (DDM) best practices and recommended input parameters for watershed analysis utilizing rational methodologies.

2.2.3 Assumptions:

- 11X17 exhibits for off- and on-site watersheds will be developed for inclusion in the scoping report.

2.2.2 Hydraulics:

HDR will provide existing and proposed conditions hydraulics assessment in support of recommended improvements to meet design criteria. Pipe culvert will be assessed using FHWA's HY-8 (Ver 7.50). Storm drain infrastructure will be evaluated using the Bentley StormCAD software program. Existing structures and detention/retention facilities located in private property will not be evaluated as the City does not currently have the right of entry to maintain the facilities.

Proposed hydraulic analysis will be performed to assess potential capacities for recommended roadway culverts, new roadway conveyance capacities and recommended storm drain facilities. Roadside ditch recommendations will be completed using normal depth calculations with the Bentley Flowmaster software program.

2.2.3 Assumptions:

- Analysis of alternatives will be preliminary in nature. Final layout of inlet spacing, ditch grading, and culvert profiles will be developed for the preferred alternative only.
- 11X17 exhibit of each alternative will be submitted as part of the scoping report document.

Task 3 – Preliminary and Final Design **$186,883.00**

This task consists of developing construction drawings/plans required for construction of the final roadway improvements. HDR will produce conceptual design roll plot, Pre-Final (60%) and PS&E (95%) design plans. Each submittal will include further development of the items and design disciplines in the previous submittal.

Construction drawings/plans required will follow the 2019 New Mexico Department of Transportation (NMDOT) standard drawings, standard specifications, and CAD standards. The preliminary and final design for all phases of the project will be provided on half size (11" x 17") construction drawings/plans. This task will be divided into three separate plans sets with the following limits:

- Task 1 (Phase I: Highway 47 to Brugg Drive)
- Task 2 (Phase II: Brugg Drive to Hillandale Avenue)
- Task 3 (Phase III: Horner Street to Manzano Expressway)

HDR will also develop an opinion of probable construction cost estimate for the proposed project phase. The opinion of probable cost (OPCC) is intended as a budget level estimate based on industry standards and will include a contingency to account for unknowns including variability of the labor, material, and equipment market in the current high-inflation market.

Assumptions:

The scope of work does not include Construction Related Services (CRS) and/or Construction Observation. All CRS and Construction Observation will be deemed as out of scope items. HDR can provide services as a separate task order. If approved by City, the scope of work for construction phase services will be determined and negotiated in coordination with the City in the future following completion of final design.

Task 3.1 Roadway

HDR will provide roadway design and plans sets for each phase as discussed above. These improvements will be based on the scoping report recommendations. The construction plan sets for all three phases will follow the NMDOT plan set format in series and will include the following:

1-Series (General Sheets)

- The HDR team will provide the following sheets as the 1 series:
    - Cover Sheet
    - Vicinity Map Sheet
    - Index of Sheets
    - Summary of Quantities
    - General Notes

- Deliverables:
    - 1 Series Sheets

2-Series (Typical Sections and Quantity Schedules)

- The following sheets will be provided by the HDR team for the 2 series sheets:
    - Existing Typical Section Sheets
    - Proposed Typical Section Sheets
    - Surfacing Schedule Sheet
    - Schedules for Miscellaneous Quantities
    - Signing and Striping quantities tables
    - Temporary Erosion and Sediment Control Plans
    - Curb ramp design details
    - Driveway design details
    - Miscellaneous details
    - Sign summary sheets
- Deliverables:
    - 2 series Sheets
- Assumptions:
    - Curb ramp and driveway design is based on closing of accesses per the Access Management Plan

3-Series (Plan and Profiles)

- The roadway design will include the following information:
  - Vertical alignment information
  - Horizontal and vertical alignments for the mainline
  - Permanent Signing and Striping
- Deliverables:
  - 3 series Sheets
- Assumptions:
  - Roadway PNPs will be 100 scale (11”x17”)
  - Signing and Striping design will be developed to the latest Manual on Uniformed Traffic Control Devices, NMDOT signing and marking standards and specifications, and per the direction of the City of Rio Communities.

6-series (Maintenance of Traffic)

- The following sheets will be provided by HDR as the 6 series sheets:
  - Sequence of Construction
  - Construction Phasing General Notes, Legend, and Abbreviations and Detail Sheets
  - Construction Phasing Quantities
  - Construction Phasing Schedule
  - Construction Phasing Key Map
  - Construction Phasing Plans
- Deliverables:
  - 6 Series Sheets

Task 3.2 Drainage

All drainage design and detailing will follow criteria in the 2018 NMDOT DDM and most current NMDOT standard drawings at the time of NTP. The selected drainage alternative(s) from the scoping report will be the basis of drainage design for this phase.

Task 4 - Sub Cobb Fendley	**$43,440.00**

See attachment for scope and fee.

Task 5 – Sub Terracon	**$12,800.00**

See attachment for scope and fee.

Subconsultant Markup	**$5,623.95**
Expenses General	**$1,446.00**

The following reimbursable expenses are anticipated for the project

- Printing
- Travel related costs (HDR Car, Fuel, and Meals)

ASSUMPTIONS/EXCEPTIONS/EXCLUSIONS:

The following is the basis for which the scope, fee and schedule proposed in this work assignment proposal is developed, in addition to assumptions already described in the body of the scope of work:

- No additional coordination with any related agencies will be required from HDR and is not included in the scope of services.
- If additional revisions are required, then HDR can assist the City through a supplemental fee and scope modification to include revisions.
- The scope of services does not include additional documentation on Right of Way certification.
- There will be no impacts to railroad property with the proposed roadway improvements.
- There will be no impacts or improvements to Intelligent Transportation System infrastructure with the proposed roadway improvements.
- NMDOT or NMPWA technical specifications will be referenced in the technical plans.
- The scope of services does not include bidding services. An additional proposal may be provided if requested by the City.
- The scope of service does not include any drawings for water or sewer conflicts. An additional proposal may be provided if requested by the City.
- The scope of services does not include utility, right of way, environmental, railroad and ITS certification services. An additional proposal may be provided if requested by the City.
- The scope of services does not include any environmental or regulatory permitting required for the pavement repairs.
- The scope of services does not include engineering services during construction nor construction observation services. An additional proposal may be provided if requested by the City.
- The scope of services does not include the development of any Temporary Construction Permits (TCP) or any Temporary Work Permits (TWP).
- The scope of work does not include environmental investigations, clearances, permitting or related reports.
- No submittal of drawings to NM Environment Department or other regulatory agencies will be required.
- Permitting services are not included in the scope of work. All required permits will be obtained by the Contractor or the City.
- HDR assumes no floodplain mapping or delineation as part of this scope of services.

PERSONNEL TO BE ASSIGNED:

1. Antonio Nunez Tovar, PE
2. Amanda Gutierrez, PE
3. Dan Pfeifer, PE
4. Jordan Chavez, PE

ESTIMATED FEE:

The proposed services for the pavement repairs project will be performed for a lump sum fee of **$293,780.45**, exclusive of New Mexico Gross Receipts Tax. The work will be completed in accordance with our On-Call Engineering Services contract with the City.

The final project schedule will be determined with the City staff after award and additional coordination discussions with the City.

The primary point of contact regarding project status, technical matters and production schedules is our Project Manager, Antonio Nunez. Our Project Principal, Chris Rodriguez, can be contacted for contractual matters and is the secondary contact for this project.

Sincerely,
HDR Engineering, Inc.

Aaron M. Meilleur, P.E.
Sr. Vice President / Area Manager
Telephone: (808) 228-6781
E-mail: Aaron.Meilleur@hdrinc.com

Antonio Nunez Tovar, P.E.
Project Manager
Telephone: (505) 659-0737
E-mail: Antonio.NnuezTovar@hdrinc.com

CobbFendley

April 7, 2020
Antonio Nunez-Tovar, PE
HDR
2155 Louisiana Blvd., STE 9500
Albuquerque, NM 87110-5483

VIA E-MAIL

Re: Surveying & SUE Services
Rio Communities, Horner/Hillandale Reconstruction Project

Dear Mr. Nunez-Tovar:

Cobb, Fendley & Associates, Inc. (Cobb Fendley) is pleased to provide this scope and fee for the Surveying services associated with the project referenced above. The proposed Scope of Services, Basis of Compensation are outlined below.

SCOPE OF SERVICES - SURVEY

CobbFendley will establish project control based on "Trimble VRS Now" referred to the New Mexico State Plane Coordinate System (NAD 83 – Central Zone) and NAVD 88 vertical datum. Following field verification of the control network, field location surveys will be conducted throughout the project limits as specified by HDR

All work will be completed in accordance with the Minimum Standards for Surveying in New Mexico and under the direction of a New Mexico Professional Surveyor. All above-mentioned survey/mapping activities shall be performed to meet HDR's. survey and CAD standards.

SURVEY SERVICES TO BE PROVIDED BY COBBFENDLEY:

Location/Topographic Surveys:

- CobbFendley will collect survey information identified by HDR and depicted in "Exhibit A". Location/Topographic surveys will include:
    - Roadway Planimetrics: centerline, edge of pavement
    - Driveways to right-of-way
    - Culvert information: Will include inlet and outlet invert elevation, culvert size and material, a cross section along the center of the culvert.
    - Fences/walls
    - Visible Utilities
    - Topographic features, breaklines to right-of-way

- Deliveries will include:
    - Ascii point files in Local Project Surface Coordinates (NAD 83/NAVD 88)
    - Copies of all field sketches and digital photographs;
    - AutoCAD Civil 3D 2018topographic drawing.

Fee for location survey = $13,870.50 plus applicable taxes

- Ortho Image
    - CobbFendley will fly the park area depicted in exhibit A utilizing a UAV. Once imagery is collected a geo-referenced ortho-image will developed and included as part of the deliverable.

Fee for Fixed Ortho-image = $2,922.00 plus applicable taxes

- Fixed Right-of-Way
  CobbFendley will provide Research and Right-of-way Mapping for the corridor with this task.

    - Existing right-of-way will be developed utilizing current vesting documents researched at the Valencia County Assessors and Clerks office. Field crews will then search for monumentation and lines of occupancy. Right-of-way will then be set based on collected field evidence.

    - Fixed right-of-way drawing will be produced for this project within the project limits provided by HDR.

Fee for Fixed Right-of-Way = $13,015.00 plus applicable taxes

Deliverable:

- An AutoCAD Civil 3D drawing of the fixed Right of Way will be provided as part of the final deliverable

Total Fee for Surveying Services = $29,807.50

Assumptions

- Project Limits shown in Exhibit A. Two scopes of SUE Services are included in this proposal.
    - SUE Level D/C Services along Horner Street from Rio Communities Blvd. to Hillandale Ave. (red area)
    - SUE Level D/C/B Services along Hillandale Ave., Manzano Expy. and Horner St. as shown in the Exhibit (blue area)
- Survey of SUE work is included in scope & fee of this proposal.
- AutoCAD C3D deliverable
- Subsurface Utility Engineering / Utility Coordination services associated with this project will be completed in conformance with ASCE 38 and local jurisdictional guidelines.

SCOPE OF SERVICES

SUE Level D/C Services (completed throughout all identified project limits)
As early as possible, CobbFendley will identify utility owners affected by the project and perform record research with each to obtain the most up to date as built information available. Upon receipt of all requested information, CobbFendley's SUE Technicians will perform field investigations to identify above ground visible features and collect inverts on all storm and sanitary manholes**.** Information obtained from the utility owners include jurisdictional utility permits as available, one-call information, utility as-builts, construction drawings, verbal recollections, conduit maps etc.

CobbFendley

CobbFendley will utilize the initial contact with utility owners to informally notify them of the project and begin building a utility coordination contact list.

All necessary surveying associated with SUE C/D services (survey of above ground/visible utility features) will be completed by CobbFendley; with close attention to topographic survey data (collected by others) to limit duplication of effort. Manhole inverts, as mentioned above, will be completed by CobbFendley's field technicians as part of this SUE investigation.

Fee for SUE Level D/C Services: $13,632.00

~~**SUE Level B Services (to be completed only in the blue area identified in Exhibit B)**~~

~~Using the collected record information and identified utility surface features, CobbFendley's SUE Technicians will perform field investigations to mark the horizontal location of toneable subsurface utilities. Once marked, CobbFendley will survey in all utilities and combine this data with collected record info. This process is known as Utility Designation.~~

~~Most utilities are field verified during the designation process; however, some utilities are not identifiable using traditional electronic or electromagnetic equipment. Ground Penetrating Radar (GPR) will be utilized to attempt to accurately identify these non-traceable utilities. To limit impacts to traffic, GPR will not be utilized in the main travel lanes, but instead focus on specific areas of the right of way where record information and field investigations indicate the presence of a non-toneable utility.~~

~~CobbFendley understands right of entry will be obtained by others should utilities outside of the current right of way exist and require mapping services. Utilities within private easements impacted by the project limits are included in this scope of work.~~

~~'Designate' means to record and mark the horizontal location of the existing toneable utility facilities and their service laterals to existing buildings using non-destructive surface geophysical techniques. A non-water base paint, utilizing the APWA color code scheme, will be used on all surface markings of underground utilities. Designated utilities will be surveyed and tied to horizontal project control.~~

~~CobbFendley will correlate utility owner records with designating data and resolve discrepancies using professional judgment. CobbFendley will create an existing utility drawing (or update the existing utility plan, as applicable) using the designated utilities, utility owner names, quality levels, line sizes and subsurface utility locate (test hole) locations if applicable. It is understood by both CobbFendley and the Client that the line sizes of designated utility facilities detailed on the deliverable are from the best available records and that an actual line size is normally determined from a test hole through vacuum excavation. A note will be placed on the designate deliverable that states "lines sizes are from best available records". This information will be provided in AutoCAD format. All surveying associated with SUE Level B services will be completed by CobbFendley.~~

~~**Fee for SUE Level B Services: $25,304.00**~~

CobbFendley

$43,439.50

The above scope of services associated with this project can be provided for a fee of ~~**$68,743.50**~~ **plus applicable taxes**.

If this summary is acceptable please forward an authorization to proceed. If you have any questions or comments, please do not hesitate to contact us.

Sincerely,

COBB, FENDLEY & ASSOCIATES, INC.

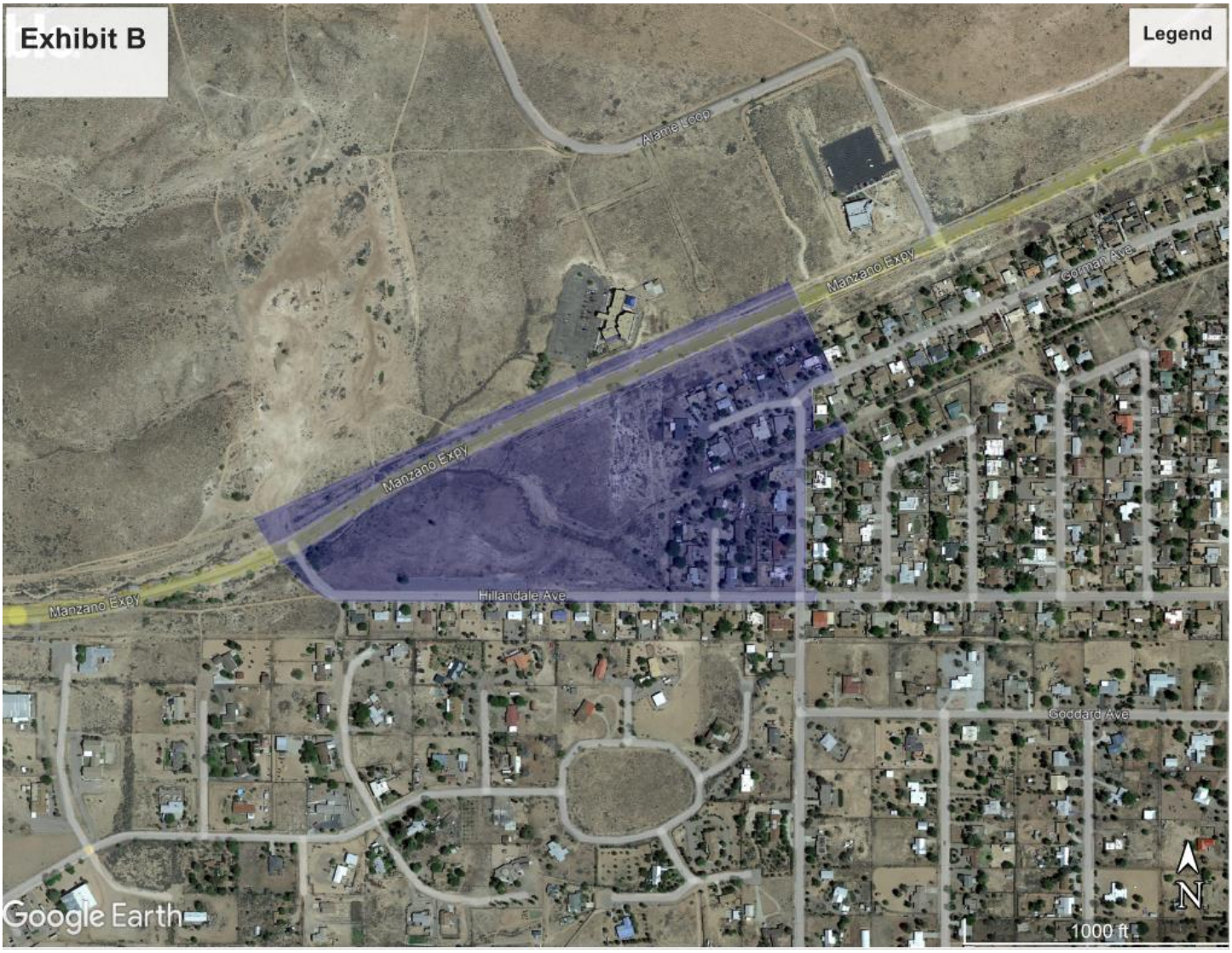
Survey Department Manager
Principal

Exhibit A
Topographic Survey, Right-of-Way,

CobbFendley

Exhibit B.

Ortho-Image and SUE Level B area



August 19, 2022

HDR Engineering, Inc.
2155 Louisiana Boulevard NE, Suite 9500
Albuquerque, New Mexico 87110

Attn: Mr. Antonio Nunez, P.E.
P: (505) 830-5473
E: Antonio.NunezTovar@hdrinc.com

Re: Proposal for Geotechnical Engineering Services
Pavement Design Report
Horner Street and Hillandale Avenue Improvements
Rio Communities, New Mexico
Terracon Proposal No. P66225184

Dear Mr. Nunez:

At your request, Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal to provide geotechnical engineering services for the above referenced project. The purpose of these studies will be to evaluate the pertinent available information and geotechnical conditions at the site and to assist in the design of the roadway improvements and other site development elements. This proposal outlines our understanding of the project and scope of services and provides a lump sum fee for our services.

A. PROJECT INFORMATION

Site Location

ITEM	DESCRIPTION
Location	Along a segment of Horner Street and Hillandale Avenue in Rio Communities, New Mexico.
Length of improvements (approximate)	▪ Phase 1: Horner St. from NM 47 to Brugg Dr. – 1,900 lineal feet ▪ Phase 2: Horner St. from Brugg Dr. to Hillandale Ave. – 3,800 lineal feet ▪ Phase 3: Hillandale Ave. to Manzano Expressway – 2,000 lineal feet
Existing improvements	Existing two-lane asphalt paved roadway with some paved and unpaved shoulders. Limited curb and gutter located near Hillandale Ave.

ITEM	DESCRIPTION
Pavement condition	Not Provided. Based upon review of aerial photos, the pavement condition appears to be poor to fair and consists of: ■ Longitudinal cracking ■ Transverse cracking ■ Alligator Cracking ■ Block cracking ■ Patching ■ Potholes ■ Weathering and oxidation
Maintenance	■ Chip seal ■ patching
Highway classification	Rural Collector (assumed)
Current ground cover	Paved roadway and exposed earth with vegetation common to the area located adjacent to the road.
Existing topography	Road constructed on relatively level terrain.

Project Description

ITEM	DESCRIPTION
Proposed Improvements	The project will include improvements to these three (3) sections of roadway. The improvements addressed as part of this phase of the project include pavement reconstruction/rehabilitation and drainage.
Cut and Fill Slopes	At or near existing alignment grade along majority of alignment.
Slope configuration	Not Applicable
Proposed pavement wearing surface	Hot mix asphalt (HMA) over base course (BC)
Geotechnical Issues	Poor quality and potentially expansive subgrade soils
Specifications	2020 New Mexico Department of Transportation (NMDOT) Design Manual 2019 NMDOT Standard Specifications for Highway and Bridge Construction

Should any of the above information or assumptions be inconsistent with the planned construction, please let us know so that we may make any necessary modifications to this proposal.

B. SCOPE OF SERVICES

Based upon on the proposed project, our familiarity with soil conditions within the area of this site, AASHTO guidelines, and NMDOT Policy, we propose to perform the following:

Phase	Number of Borings	Boring Depth (feet)	Planned Location
1	4	5	Horner St. from NM 47 to Brugg Dr.
2	8	5	Horner St. from Brugg Dr. to Hillandale Ave.
3	4	5	Hillandale Ave. to Manzano Expressway

The existing asphalt concrete and aggregate base course (where applicable) thickness will be measured and documented at each boring location. In addition, the pavement condition will be observed and documented at each boring location and along the roadway segments.

Sampling will be in general accordance with NMDOT and AASHTO standard procedures wherein split-barrel samples are obtained. Two (2) soil samples will typically be obtained within each boring. Bulk samples will also be obtained from each boring. In addition, we will observe and record groundwater levels (if applicable) during and immediately after drilling. Once the samples have been collected and visually classified in the field, they will be placed in appropriate sample containers for transport to our laboratory.

Conditions/Items to be provided by Client – Items to be provided by the client include the right-of-entry to conduct the exploration and an awareness and/or location of any private subsurface utilities existing in the area. We will contact New Mexico One Call Service (NMOC) for location of utilities in public easements.

Our fee is based on the project alignment being accessible to our two-wheel drive truck-mounted drilling equipment and Terracon providing layout of the borings; additional costs may result if this is not the case. It does not include services associated with site clearing, wet ground conditions, or location of underground utilities beyond contacting a “one-call” locate service. If such conditions are known to exist on the site, Terracon should be notified so that we may adjust our scope of services and fee, if necessary.

Due to the existing traffic conditions, traffic control will be required to perform the field work. Terracon will retain Highway Supply or Southwest Safety to prepare a traffic control plan and field personnel in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). Terracon will also obtain the necessary Traffic Control/Roadway Work Permit for submission to Rio Communities or Valencia County for approval prior to the initiation of the field work.

Terracon will take reasonable efforts to reduce damage to the roadway, such as rutting of the ground surface or pavement. However, it should also be understood that in the normal course of our work some such disturbance could occur. We have not budgeted to restore the roadway alignment beyond backfilling and patching of our boreholes (where applicable). If there are any restrictions or special requirements regarding this site or exploration, these should be known prior to commencing field work.

For safety purposes, all borings will be backfilled and patched (where applicable) immediately after their completion. Soil cuttings will be used to backfill the borings. Quick Pavement Repair (QPR) material will be used to patch the boring and will consist of asphalt cold patch to match the existing HMA thickness. The backfill materials will be compacted with a mechanical hand tamper. Excess auger cuttings would be disposed of off the site. Because backfill material often settles below the surface after a period of time, we recommend the boreholes be checked periodically and backfilled if necessary. We could provide this service at your request or grout the holes, but this would involve additional cost.

We are committed to the conduct of our work safely. Our field exploration work on this project will be conducted under the guidance of a site-specific safety plan that takes into account the information that we know about this site as it relates to safety and potential safety hazards.

Our field crews will make excavations to sample the soils. Such excavations could encounter subsurface utilities and/or environmental hazards. We will file appropriate notification to the local and/or state mandated excavation permit office(s), as required by state law, and we will not perform excavations without an understanding of the subsurface utilities present based upon markings made by the various responsible parties. However, such utility location services only delineate subsurface utilities in public easements, and the potential to encounter other, unknown underground hazards remains. Also, we are not aware of environmental concerns at this project site that would create health or safety hazards associated with our exploration program. Our scope considers that standard Type D Personal Protection Equipment (PPE) is appropriate.

In order to more completely address the potential for underground utilities or environmental hazards, and in order to more completely understand other potential safety hazards associated with our field exploration program, we will interview you or a representative that you suggest to obtain information about these concerns. The results of our interview will be included in the site-specific safety plan. We are not responsible for damage to private utilities that are not made aware to us.

In addition, Consultant retains the right to stop work without penalty at any time Consultant believes it is in the best interests of Consultant's employees or subcontractors to do so in order to reduce the risk of exposure to the coronavirus. Client agrees it will respond quickly to all requests for information made by Consultant related to Consultant's pre-task planning and risk

assessment processes. Client acknowledges its responsibility for notifying Consultant of any circumstances that present a risk of exposure to the coronavirus or individuals who have tested positive for COVID-19 or are self-quarantining due to exhibiting symptoms associated with the coronavirus.

Laboratory Testing – Selected representative soil subgrade samples will be tested in our laboratory to determine physical engineering characteristics. Testing will be performed under the direction of a geotechnical engineer and shall meet the applicable AASHTO/ASTM specifications. The anticipated types of tests are outlined below:

- Moisture content
- Dry density
- Atterberg Limits - Liquid Limit/Plasticity Index
- Gradation
- R-value
- Water soluble sulfates
- Resistivity
- pH

Engineering Report – The results of our field and laboratory programs will be evaluated by a professional geotechnical engineer licensed in the State of New Mexico. Based on the results of our evaluation, a Pavement Design Report will be prepared that details the results of the testing performed, provides logs of the borings, and a diagram of the boring layout. The report will include recommendations for each of the 3 phases of the planned construction and will include the following:

- Computer generated boring logs with soil stratification based on visual soil classification.
- Boring location plan.
- Groundwater levels observed during and after completion of drilling.
- Subsurface exploration procedures.
- Encountered soil subgrade conditions.
- Existing pavement materials and thickness.
- Existing pavement conditions
- Graphical laboratory test data.
- Subgrade swell potential
- A discussion of the test results and geotechnical conditions that could affect pavement section design and construction
- Rehabilitation options (if applicable)
- Recommended pavement section thickness and options
- Subgrade stabilization options (if applicable)
- Material specifications
- Earthwork specifications including compaction

- On-site soil suitability
- Concrete and metal corrosion potential

Schedule – We can generally begin the field exploration program within about two (2) to three (3) weeks after Notice-To-Proceed, pending completion and approval of traffic control plan and permit, and weather conditions. We estimate that the field work will take about one (1) day to complete. We estimate the Pavement Design Report can be completed within about four (4) to six (6) weeks after the soil borings are completed. In situations where information is needed prior to submittal of our report, we can provide verbal information or recommendations for specific project requirements after we have completed our field and laboratory programs.

C. COMPENSATION

For the scope of geotechnical services outlined in this proposal, the lump sum total fee would be the following:

ITEM	ESTIMATED LUMP SUM COST*
Pavement Design Report	$12,800

*Excludes any applicable New Mexico Gross Receipts Tax (NMGRT) of about 7.75%

Please note that the above fees do not include NMGRT. NMGRT will be included at the applicable rate for our locale unless we are provided with a Type 5, Non-Taxable Transaction Certificate (NTTC). Unless instructed otherwise, the invoice will be sent to your attention at the above address.

The lump sum cost includes a PDF copy of our written report. Any additional services requested after submittal of our final report, beyond those noted, will be invoiced at our current unit rates. Should it be necessary to expand our services beyond those outlined in this proposal, we will notify you, and send a supplemental proposal stating the additional services and fee. We will not proceed without your authorization, as evidenced by your signature on the Supplement Agreement form.

If additional drilling is required at the time of the drilling operations, these services will be provided for an additional cost of $85.00 per foot (includes all drilling, sampling, general laboratory testing and engineering).

We are available to review earthwork and foundation related portions of project drawings and specifications and to confer with the design team after submittal of our report. Such follow-up services are beyond the scope of this proposal and would be charged at $160.00 per hour for a Senior Project Engineer and $222.00 per hour for a Principal Engineer. We will obtain your specific authorization prior to providing any additional services.

D. AUTHORIZATION

This proposal may be accepted by issuing and executing an HDR Geotech Subconsultant agreement with agreed upon terms and conditions between HDR and Terracon.

The fee is valid for 90 days from the date of this proposal and is based on the assumption that all field services will be performed under safety Level D personal protective procedures and that only two site visits will be made by Terracon personnel. The lump sum fee is based on the assumptions and conditions provided at the time of this proposal.

We appreciate the opportunity to provide this proposal and look forward to the opportunity of working with you.

Sincerely,
Terracon Consultants, Inc.

Michael E. Anderson, P.E.
Principal

Stenson D. Lee
Staff Engineer

cc: Addressee (1-via email)