Project Manual for
Construction Of
Navajo Gallup Water Supply Project
Reaches 26.1 & 26.2

The Navajo Nation

VOLUME 1

September 2017

Volume 1
Contract Documents, Appendices, and Exhibits

Table of Contents to Contract Documents

C-100 Engineer Certification Sheets .....3 pages

C-410 Bid Form .....11 pages

C-440 List of Proposed Subcontractors .....2 pages

C-442 List of Proposed Equipment Manufacturers .....1 pages

C-510 Notice of Award.....1 page

C-520 Agreement between Owner and Contractor.....9 pages

C-550 Notice to Proceed.....1 page

C-610 Performance Bond .....3 pages

C-615 Payment Bond.....3 pages

C-618 Certificate of Insurance.....1 page

C-620 Application for Payment.....3 pages

C-625 Certificate of Substantial Completion.....1 page

C-700 NN Standard General Conditions and Navajo Nation Supplemental Conditions .....69 pages

C-940 Work Change Directive .....1 page

C-941 Contract Change Order .....1 page

C-942 Field Order .....1 page

Index to Appendices

Appendix A - Navajo Nation Forms

- Navajo Nation Certification Regarding Debarment and Suspension
- Affidavit of Responsibility for Subcontractors
- Affidavit of Non-Collusion

Appendix B - Office of Navajo Labor Relations Minimum Wage Rate Determinations and Requirements

Appendix C - Environmental Requirements

- BLM Pipeline Right-of-Way Stipulations
- BLM Tank Site Right-of-Way Stipulations
- Navajo Department of Agriculture Re-seeding Requirements
- BLM Re-vegetation Plan

Appendix D - Utility Companies Encroachment Agreements and Requirements

- Design One-Call Information
- Kinder Morgan
- NM Gas Company
- PNM
- Jemez Mountain Electric Cooperative, Inc.

Appendix E - BIA Road Crossing Permits

Appendix F - Survey Authorization Forms

- Owner-Provided Survey Request Form
- Authorization Form for Contractor Reimbursed Work
- Acknowledgement of Contractor Reimbursed Standby Time

Appendix G - Hydrostatic Test Pressure Requirements

Appendix H - NTUA Application for Permission to Tap an Existing NTUA Waterline

Index to Exhibits

Exhibit A - Geotechnical Investigation Report
Revised Geotechnical Investigation for Navajo Gallup Water Supply Project (NGWSP) Reaches 26.1 & 26.2, Project No. 15-1-057, X^8eVinyard, June 9, 2016.

Exhibit B - Soil and Rock Potholing Information

Exhibit C - Soil Chemical Analysis

Exhibit D – Submittal Cover Sheet (Blank) and Submittals Checklist

**** See Volume 2 for Technical Specifications and Drawing Index***

ENGINEER CERTIFICATION

These Plans, Contract Documents and Technical Specifications (except structural and electrical plans and specifications) for the **Navajo Gallup Water Supply Project Reaches 26.1 & 26.2** were prepared by:

Souder, Miller & Associates
5454 Venice Avenue NE, Suite D
Albuquerque, NM 87113
(505) 299-0942 or Fax (505) 293-3430

The technical material and data contained in the specifications were prepared under the supervision and direction of Andrew Robertson, P.E., whose seal as a Professional Engineer licensed to practice in the state of New Mexico is affixed below.



10/12/17

Andrew Robertson, P.E. Date
New Mexico PE License #15805

All questions about the meaning of intent of these documents shall be submitted only to the Engineer of Record stated above, IN WRITING for interpretations.

ENGINEER CERTIFICATION

These Plans, Contract Documents and Technical Specifications (Structural plans and specifications only) for the **Navajo Gallup Water Supply Project Reaches 26.1 & 26.2** were prepared by:

Souder, Miller & Associates
401 W.Broadway
Farmington, NM 87401
Tel: (505) 325-7535

The technical material and data contained in the specifications were prepared under the supervision and direction of Greta Quintana, P.E., whose seal as a Professional Engineer licensed to practice in the state of New Mexico is affixed below.



10/13/17

Greta Quintana, P.E. Date
New Mexico PE License #13561

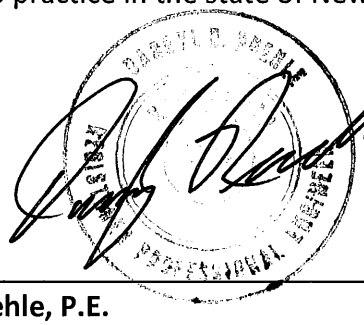
All questions about the meaning of intent of these documents shall be submitted only to the Engineer of Record stated above, IN WRITING for interpretations.

ENGINEER CERTIFICATION

These Plans, Contract Documents and Technical Specifications (electrical plans and specifications only) for the **Navajo Gallup Water Supply Project Reaches 26.1 & 26.2** were prepared by:

The Response Group
11930 Menaul Blvd., N.E., Suite 214
Albuquerque, NM 871112-0002
Tel: (505) 323-7629

The technical material and data contained in the specifications were prepared under the supervision and direction of Darryl Ruehle, P.E., whose seal as a Professional Engineer licensed to practice in the state of New Mexico is affixed below.



10/18/17

Darryl Ruehle, P.E. **Date**
New Mexico PE License #6729

All questions about the meaning of intent of these documents shall be submitted only to the Engineer of Record stated above, IN WRITING for interpretations.

BID FORM

Navajo Gallup Water Supply Project
Reaches 26.1 & 26.2

TABLE OF CONTENTS

Page

ARTICLE 1 – Bid Recipient 1

ARTICLE 2 – Bidder's Acknowledgements 1

ARTICLE 3 – Bidder's Representations 2

ARTICLE 4 – Bidder's Certification 3

ARTICLE 5 – Basis of Bid 3

ARTICLE 6 – Time of Completion 10

ARTICLE 7 – Attachments to this Bid 10

ARTICLE 8 – Defined Terms 10

ARTICLE 9 – Bid Submittal 10

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Navajo Nation – Water Management Branch
C/O Souder, Miller & Associates
Attention: Andrew Robertson, P.E.
5454 Venice Avenue. NE, Suite D
Albuquerque, New Mexico 87113

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum, Date

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Technical Specifications, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

REACHES 26.1 & 26.2

Note: Tax not included.

ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	TOTAL PRICE
General and Miscellaneous					
1	Mobilization (75%) / demobilization (25%).	LS	1		
2	Testing allowance, (reimbursable lab fees only, incl. compaction, concrete, materials, water quality. Excludes bacteriological lab test fees).	Allow.	1	$500,000.00	$500,000.00
3	Traffic control, per County and BIA requirements.	LS	1		
Erosion and Storm Water Controls					
4	Wire-caged riprap (item includes rock, wire cage, geotextile, and staking) or cable concrete. Final quantities, dimensions and locations TBD in field, CIP.	SY	416		
5	Uncaged riprap and rock check dams, final quantities, dimensions and locations TBD in field, CIP	CY	242		
6	Re-seeding of waterline ROW and TCE, CIP.	LF	97,009		
7	Re-seeding of sites, CIP	LS	1		
8	SWPPP pursuant to NPDES stormwater program and consistent with USEPA's general construction permit. Includes preparation of document, implementation of all BMPs required by SWPPP, filing of all notices and inspections required by EPA, etc.	LS	1		
Water Mainline					
9	12-inch PVC DR 18 C900 Pipeline, with appurtenances, CIP. Includes fusible or bell and spigot joint as indicated on plans and specifications.	LF	14,072		
10	10-inch PVC DR 18 C900 Pipeline, with appurtenances, CIP. Includes fusible or bell and spigot joint as indicated on plans and specifications.	LF	38,171		

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	TOTAL PRICE
11	10-inch PVC DR 14 C900 Pipeline, with appurtenances, CIP. Includes fusible or bell and spigot joint as indicated on plans and specifications.	LF	44,133		
12	Flushing, disinfection and bacteriological testing, CIP.	LF	97,009		
13	Hydrostatic testing of main pipeline, CIP	LF	97,009		
14	Rock removal and processed / imported backfill material (excludes placement and compaction of backfill, embedment, or soil cement, which are incidental to pipe bid items), CIP.	VLF	35,290		
Water Valve Assemblies					
15	12-inch gate valve assembly, CIP.	EA	5		
16	10-inch gate valve assembly, CIP.	EA	13		
17	8-inch gate valve assembly, CIP.	EA	12		
18	10-inch ball valve assembly with 4" by-pass, CIP.	EA	10		
19	4-inch flush valve assembly with wash outfall, CIP. Excludes 4-inch PVC drain line listed separately.	EA	4		
20	4-inch flush valve PVC drain line, CIP.	LF	540		
21	2-inch flush valve assembly with above-grade discharge, CIP.	EA	5		
22	2-inch vacuum breaker with 1-inch air release valve assembly with vault, CIP	EA	71		
23	Future Reach 26.3 stub out including tee, 10-inch PVC pipe with appurtenances, CIP. Excludes gate valve.	LS	1		
Cathodic Protection					
24	Cathodic protection of flush valve assemblies, CIP.	EA	4		
25	Cathodic protection of main line gate and ball valve assemblies, CIP.	EA	2		
26	Cathodic protection of 18-inch steel road casing, CIP.	EA	2		

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	TOTAL PRICE
Road, Wash & Utility Crossings					
27	24-inch open cut cased road crossings, incl. steel casing and end seals, CIP. Excludes carrier pipe.	LF	260		
28	24-inch jack and bore road crossing, incl. steel casing and end seals, CIP. Excludes carrier pipe.	LF	150		
29	18-inch open cut cased road crossings, incl. steel casing and end seals, CIP. Excludes carrier pipe.	LF	290		
30	18-inch jack and bore road crossing, incl. steel casing and end seals, CIP. Excludes carrier pipe.	LF	150		
31	12-inch open cut cased road crossing for Control Valve vault relief drainage, incl. steel casing and end seals, CIP. Excludes carrier pipe.	LF	30		
32	Gas/petroleum line crossing location and exposure of gas lines per gas company requirements, CIP.	EA	17		
33	Gas/petroleum line crossing, incl. 18-inch PVC DR 18 casing, with petroleum-resistant gaskets and end seals, CIP. Covers all co-located petroleum lines. Excludes carrier pipe.	LF	450		
34	Horizontal Directional Drilling at wash crossing, including 10-inch PVC DR 14 carrier pipe, CIP.	LF	633		
Surge Tank and Site Work					
35	Pre-fabricated surge tank building structure, CIP.	LS	1		
36	198 gallon surge tank incl. all piping, fittings, and appurtenances not separately listed, CIP.	LS	1		
37	Surge tank building piping, CIP.	LS	1		
38	Surge tank site piping, CIP. Excludes gate valves, and 12-inch main line beyond the tee.	LS	1		
39	Concrete walkways, and all other site concrete work not separately listed, CIP.	LS	1		

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	TOTAL PRICE
40	Site earthwork and grading for sub-foundations and driveways, CIP. Excludes surfacing material and riprap.	LS	1		
Control Valve Vault and Site Work					
41	Prefabricated Control Valve Vault (incl. all structural elements, wetted components, and factory-installed electrical components), CIP.	LS	1		
42	Control Valve Vault site piping (incl. drain facilities within and beyond vault site, and fittings within site not separately listed), CIP. Excludes 10-inch main line within site.	LS	1		
43	Site earthwork and grading for sub-foundations and driveways, CIP. Excludes surfacing material and riprap.	LS	1		
44	Solar Panel Concrete Pad Foundation, CIP.	LS	1		
Pueblo Pintado Tank and Site Work					
45	175,000 gallon glass-fused bolted steel water storage tank with passive anode cathodic protection system per Section 33 16 21, including installation, energizing, adjusting, and testing, CIP.	EA	2		
46	Tank foundation for 175,000 gallon glass-fused bolted steel tank, CIP.	EA	2		
47	Filling, disinfection, and bacteriological testing of new 175,000 gallon tank, CIP.	EA	2		
48	Demolition and removal of existing Pueblo Pintado tank and site facilities and appurtenances, incl. existing foundation, piping, valving, and appurtenances, CIP.	LS	1		
49	Site earthwork and grading for sub-foundation, pads and driveways, site cable barriers, boulders, berms, CIP. Excludes surfacing material and riprap.	LS	1		
50	Pueblo Pintado site piping, (incl. all new plumbing components within the Pueblo Pintado site and drain line ROWs not separately listed), CIP. Excludes gate valves, air valves, and 10-inch main line.	LS	1		

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	TOTAL PRICE
51	Pressure Transducer vault, (incl. structure and wetted components), CIP. Excludes electrical.	LS	1		
Chlorination Facilities at Pueblo Pintado Tank Site					
52	Chlorinator building, (incl. all structural elements), CIP.	LS	1		
53	Chlorinator building plumbing, CIP.	LS	1		
54	Gas chlorination equipment, CIP.	LS	1		
General Site Work					
55	Site surfacing with 2-inch gravel and 3-inch base course, CIP.	SY	2,370		
56	Fencing (8 ft. with 3-strand barbed wire), incl. 20' double swinging gates and removal of existing fence and gates, CIP.	LF	949		
57	24-inch corrugated metal culvert, incl. end sections and markers, CIP.	LF	25		
Electrical					
58	Surge tank site and building electrical/ HVAC, CIP. Includes meter pole and socket. Excludes SCADA equipment listed separately and primary pole, primary conductor, transformer and meter provided by utility.	LS	1		
59	SCADA equipment for Surge Tank site, CIP.	LS	1		
60	Control Valve Vault and site electrical, incl. all electrical components with site and inside vault not separately listed, CIP.	LS	1		
61	Solar Power System for Control Valve Vault, CIP.	LS	1		
62	SCADA equipment for Control Valve Vault site, CIP.	LS	1		
63	Pueblo Pintado tank site electrical, CIP. Includes meter pole and socket. Excludes SCADA equipment listed separately and primary pole, primary conductor, transformer and meter provided by utility.	LS	1		

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	TOTAL PRICE
64	Chlorination building electrical/ HVAC, CIP.	LS	1		
65	Pressure Transducer vault electrical, CIP.	EA	1		
66	SCADA equipment for Pueblo Pintado tank site, CIP	LS	1		
67	SCADA programming allowance, programming sub-contractor to be selected by Owner, CIP	Allow	1	$15,000.00	$15,000.00

TOTAL BASE BID: $_____

Tax not included

(Including both Reaches 26.1 and 26.2)

IN WORDS: _____

_____

BID ALTERNATES

Note: Tax not included.

ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	TOTAL PRICE
45A	175,000 gallon welded steel water storage tank, painting of tank with impressed current cathodic protection system per Sections 33 16 19, 09 97 14 and 26 42 10, including installation, energizing, adjusting, and testing, CIP.	EA	2		
46A	Tank foundation for 175,000 gallon welded steel tank, CIP.	EA	2		

TOTAL OF BID WITH BID ALTERNATES: $_____

Tax not included

(Including Base Bid total, substituting Bid Alternate items 45A & 46A for Base Bid items 45 & 46)

IN WORDS: _____

_____

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Bidder's Qualifications Statement with Supporting Data;

B. List of Proposed Subcontractors;

C. List of Proposed Equipment Manufacturers;

D. Navajo Nation Certification Regarding Debarment and Suspension;

E. Affidavit of Responsibility for Subcontractors;

F. Affidavit of Non-Collusion;

G. New Mexico Contractor's License No.: _____; and

H. Documentation of eligibility for Indian preference status (if applicable).

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

Bidder acknowledges that the document known as EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee® has been substantially modified by the Owner and such modified document has been given the label of "C-700 NN" and forms part of the present Agreement.	Yes _____ No _____
Bidder hereby attests that Bidder is in good standing with the State of New Mexico and the Navajo Nation, and will provide such certification if selected for Contract award following the bidding process and prior to execution of the Contract.	Yes _____ No _____

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

BIDDER: *[Indicate correct name of bidding entity]*

_____

By:
[Signature] _____

[Printed name] _____
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

_____

_____

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

_____

Is Bidder eligible for Indian Preference as defined in the Instructions to Bidders? Yes _____

No _____

If yes, attach documentation of Indian Preference eligibility.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

LIST OF PROPOSED SUBCONTRACTORS

The following listing must be completed and signed by the Bidder and submitted with the Bid Proposal. Bids submitted without this completed and signed listing or with more than one listed for each item may be considered non-responsive. The subcontractor listing threshold shall be as indicated in the Instructions to Bidders. If none of the work will be subcontracted, Bidder shall write "NONE", sign the sheet, and include with Bid to avoid being found non-responsive.

The General Contractor will determine categories of work that will be performed by the General Contractor, Subcontractors, and Tiers of Subcontractors. The following will be employed to perform the designated categories of work under this Contract.

Prior to award of the contract to the lowest qualified Bidder, the Contractor may be required to supply additional information regarding the Subcontractors listed below, as called for in the Instructions to Bidders, Bidder's Qualifications Statement, and in the technical specifications.

Contractor shall not substitute any person as Subcontractor in place of those identified on this form without prior approval from Owner.

* Category of Work	Firm Name and Business Address, Phone # and License Number of Subcontractors	** Range

List of Proposed Subcontractors - Continued

* Category of Work	Firm Name and Business Address, Phone # and License Number of Subcontractors	** Range

Use additional sheets if necessary.

Attest: _____ _____

Authorized Officer Date

_____

Name and Title

_____

Name of Firm

* Place title of subcontractor specialty.

** Subcontractor's contract range: In the column marked "Range", enter the letter corresponding to the subcontract amount.

A = Equal to or greater than $25,000 but less than $100,000

B = Equal to or greater than $100,000 but less than $250,000

C = Equal to or greater than $250,000

LIST OF PROPOSED EQUIPMENT MANUFACTURERS

The following listing of material and/or equipment manufacturers must be completed and signed by the Contractor and submitted with the Bid Proposal. Bids submitted without this completed and signed listing or with more than one manufacturer listed for the same equipment may be considered non-responsive.

MATERIAL/EQUIPMENT	MANUFACTURER
Surge Tank	
Fusible PVC Pipe and Sweeps	
Ball Valves	
Gate Valves	
Air and Vacuum Breaker Assembly Valves	
Pre-fabricated Control Valve Vault	
Cathodic Protection	
8-in. Magnetic Flow Meter	
SCADA Equipment	
Gas Chlorination Equipment	
Pre-cast Concrete Buildings	
Solar Power Supply	
Storage Tanks	

Bidder's Name: _____

By (Signature): _____

Print or Type Name and Title: _____

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

NOTICE OF AWARD

Date of Issuance:

Owner:	Navajo Nation	Owner's Contract No.:	
Engineer:	Souder, Miller & Associates	Engineer's Project No.:	6921307
Project:	Navajo Gallup Water Supply Project Reaches 26.1 & 26.2	Contract Name:	Navajo Gallup Water Supply Project Reaches 26.1 & 26.2

Bidder:

Bidder's Address:

TO BIDDER:

You are notified that Owner has accepted your Bid dated [_____] for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

_____ .

[describe Work, alternates, or sections of Work awarded]

The Contract Price of the awarded Contract is: $_____*[note if subject to unit prices, or cost-plus]*

[ ] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically. *[revise if multiple copies accompany the Notice of Award]*

[ ] sets of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 10 days of the date of receipt of this Notice of Award:

1. Deliver to Owner [____] counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security *[e.g., performance and payment bonds]* and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Owner**:**

Authorized Signature

By:

Title:

Copy: Engineer

AGREEMENT
BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

Prepared by



Issued and Published Jointly by







EJCDC® C-520 "Agreement Between Owner and Contractor for Construction Contract (Stipulated Price)."
Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies,
and American Society of Civil Engineers. All rights reserved. This document is to be used with the C-700 NN "Standard General Conditions and Navajo Nation Supplemental Conditions of the Construction Contract."

AGREEMENT

BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

Contract No. _____
Business Unit No. _____

THIS AGREEMENT is by and between the Navajo Nation through its Water Management Branch ("Owner") and Navajo Engineering and Construction Authority ("Contractor") (collectively "the parties"). The Owner and Contractor agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified on the Bid Form and elsewhere in the Contract Documents.

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Navajo Gallup Water Supply Project Reaches 26.1 & 26.2.

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Souder, Miller & Associates.

3.02 The Owner has retained Souder, Miller & Associates ("Engineer") to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACTOR ENTITIES AND PERSONS

The following named single business entity, or two or more business entities has/have submitted a single bid for consideration for a contract award for the project, and shall execute this contract:

A. _____ _____
Name of Business Entity Address of Business Entity

_____ _____
Individual with Business Entity Individual's Title

_____
Individual's/Business Entity's Role in Project

This individual has signature authority to legally bind the business entity: yes / no

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved. This document is to be used with the C-700 NN "Standard General Conditions and Navajo Nation Supplemental Conditions of the Construction Contract."

B. _____ _____
Name of Business Entity Address of Business Entity

_____ _____
Individual with Business Entity Individual's Title

_____
Individual's/Business Entity's Role in Project

This individual has signature authority to legally bind the business entity: yes / no

C. _____ _____
Name of Business Entity Address of Business Entity

_____ _____
Individual with Business Entity Individual's Title

_____
Individual's/Business Entity's Role in Project

This individual has signature authority to legally bind the business entity: yes / no

ARTICLE 5 – CONTRACT TIMES

5.01 *Commencement of the Work*

A. The Contractor shall not commence performance of any work or the provision of any services under this Contract until (A) Owner issues a formal "Notice to Proceed" for the Project; (B) All insurance and bonding required by this Contract are in full force and effect; and (C) Owner has received copies of all insurance policies and bonds.

5.02 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

5.03 *Contract Times*

1. The Work will be substantially completed within 330 calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of EJCDC C-700 NN and ready for final payment in accordance with Paragraph 15.06 of EJCDC C-700 NN within 360 calendar days after the date when the Contract Times commence to run.

5.04 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 5.02 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 5.03 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving a legal or arbitration proceeding and the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner $1,000.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 5.03.A above for Substantial Completion until the Work is substantially complete.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved. This document is to be used with the C-700 NN "Standard General Conditions and Navajo Nation Supplemental Conditions of the Construction Contract."

2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $1,000.00 for each day that expires after such time until the Work is completed and ready for final payment.

3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

ARTICLE 6 – CONTRACT PRICE

6.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to the availability of funds, as described below: *For all Work in accordance with* the prices stated in the Contractor's Bid, attached hereto as an exhibit., with an estimated total of all unit price work equivalent to _____, plus 5% Navajo Nation Sales Tax equivalent to _____, resulting in a Total Net Contract Value of _____.

6.02 Availability of Funds

A. Appropriations required: Pursuant to 2 N.N.C. § 223(A), the obligation of the Navajo Nation to pay Contractor the entire Contract Amount, or any portion thereof as invoiced, or any amounts under any and all Change Orders, amendments, or modifications to this Contract, shall be contingent upon the availability of funds, from whatever source, at the time payment to the Contractor is due. Any available funds must be appropriated or allocated specifically for the Project which is the subject of this Contract.

B. Subsequent fiscal periods: Pursuant to 12 N.N.C. § 350(D), if funds adequate to support continuation of performance under this Contract are not appropriated or otherwise become unavailable during any fiscal period(s) subsequent to that period in which this Contract is entered into, then this Contract may be cancelled at the sole discretion of the Navajo Nation, but no sooner than fourteen (14) business days following the Navajo Nation's notification to Contractor of cancellation.

C. Payment upon cancellation: In the event of such cancellation, Contractor shall be reimbursed only for the reasonable value of any non-recurring costs incurred on account of work performed or services provided under this Contract up to the date of notification of cancellation, whether or not invoice(s), billing(s), or payment application(s) have been received by the Navajo Nation for such work or services prior to the date of cancellation, except for costs amortized in the price of such work or services.

ARTICLE 7 – PAYMENT PROCEDURES

7.01 *Submittal and Processing of Payments*

A. Contractor shall submit the EJCDC C-620 "Application for Payment" form in accordance with Article 15 of the EJCDC C-700 NN. Applications for Payment will be processed by Engineer as provided in the EJCDC C-700 NN.

B. Contract Number: This Contractor shall be assigned a Contract Number by the Navajo Nation Division of Finance, which number shall be shown on the front page of this Contract. Reference to the Contract Number shall be indicated on all invoices submitted to the Navajo

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved. This document is to be used with the C-700 NN "Standard General Conditions and Navajo Nation Supplemental Conditions of the Construction Contract."

Nation for payment, and reference to the Project and Business Unit Number for each payment shall be on all invoices submitted by the Contractor to the Navajo Nation.

C. A total of forty-five (45) days is required to process any payment related to the Work. Therefore any provision in EJCDC C-700 NN which references a ten (10) day and/or thirty (30) day allowable period for Owner to effect payment shall hereby be changed to a forty-five (45) day payment terms.

7.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the _____ day of each month during performance of the Work as provided in Paragraph 7.02A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the EJCDC C-700 NN (and in the case of Unit Price Work based on the number of units completed) or as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

a. Navajo Nation Funded Construction

1) 90 percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

2) 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

3) Retainage of 10 percent will only be held on portions of the Work financed by the Navajo Nation funds. The Contractor agrees that the Navajo Nation shall withhold ten percent of the payment due under each invoice submitted to the Navajo Nation, as a Retainage amount. Such Retainage shall be held by the Navajo Nation until Contractor has satisfied its obligations pursuant to this Contract, at which time the Retainage shall be paid. For purposes of a Retainage release, the Owner's Representative shall make a written determination that the Contractor has fully and satisfactorily completed all duties under this Contract.

b. Federal Funded Construction

1) 95 percent of Work completed (with the balance being retainage); and

2) 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

3) Retainage of 5 percent will only be held on portions of the Work financed with Federal funds. Withholding and release of said Retainage will occur as described in Paragraph 7.02.A.1.a.3 above.

c. State Funded Construction

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved. This document is to be used with the C-700 NN "Standard General Conditions and Navajo Nation Supplemental Conditions of the Construction Contract."

1) 100 percent of Work completed; and

2) 100 percent of cost of materials and equipment not incorporated in the Work.

3) No retainage will be held on portions of the Work paid for with State funds.

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the EJCDC C-700 NN, and less 100 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

7.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the EJCDC C-700 NN, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 8 – INTEREST

8.01 All amounts not paid when due shall bear no interest.

ARTICLE 9 – CONTRACTOR'S REPRESENTATIONS

9.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.

B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Technical Specifications, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Contract Documents, especially with respect to Technical Data in such reports and drawings.

E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies,

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved. This document is to be used with the C-700 NN "Standard General Conditions and Navajo Nation Supplemental Conditions of the Construction Contract."

or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Contract are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 10 – CONTRACT DOCUMENTS

10.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 9, inclusive).
2. Performance bond (pages 1 to 3, inclusive).
3. Payment bond (pages 1 to 3, inclusive).
4. Contractor's Bid Form [EJCDC C-410] (pages 1 to 11, inclusive), plus required attachments to the Bid as stipulated in Article 7 of the Bid Form.
5. Standard General Conditions and Navajo Nation Supplemental Conditions of the Construction Contract [EJCDC C-700 NN].
6. Appendices as listed in the Index to Appendices of the Project Manual.
7. Technical Specifications as listed in the table of contents of the Project Manual.
8. Drawings (not attached but incorporated by reference) as listed in the Index to Design Drawings of the Project Manual.
9. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Notice to Proceed.
    b. Work Change Directives.
    c. Change Orders.
    d. Field Orders.
10. Addenda (numbers ____ to ____, inclusive)

B. The Contract Documents may only be amended, modified, or supplemented as provided in the EJCDC C-700 NN.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved. This document is to be used with the C-700 NN "Standard General Conditions and Navajo Nation Supplemental Conditions of the Construction Contract."

ARTICLE 11 – MISCELLANEOUS

11.01 *Terms*

Terms used in EJCDC C-520 will have the meanings stated in EJCDC C-700 NN.

11.02 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

11.03 *Other Provisions*

A. Owner and all interested parties acknowledge that the document known as EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee® has been substantially modified by the Owner and such modified document has been given the label of "C-700 NN" and forms part of the present Contract.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved. This document is to be used with the C-700 NN "Standard General Conditions and Navajo Nation Supplemental Conditions of the Construction Contract."

IN WITNESS WHEREOF, Owner and Contractor have signed this Contract.

This Contract will be effective on _____ (which is the Effective Date of the Contract).

OWNER:	CONTRACTOR:
By: Russell Begaye	By:
Title: President, the Navajo Nation	Title:
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Address for giving notices:	Address for giving notices:
Navajo Nation Department of Water Resources	
P.O. Drawer 678	
Fort Defiance, Arizona 86504	
	License No.: _____ *(where applicable)*

Pursuant to 1 N.N.C. §554(J)(2) and (K)(2), Navajo Nation Department of Justice approval is required for all agreements that include a limited waiver of sovereign immunity to compel or enforce arbitration under the Navajo Nation Arbitration Act, as amended, 7 N.N.C. §1101 et seq.

_____

Navajo Nation Department of Justice

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved. This document is to be used with the C-700 NN "Standard General Conditions and Navajo Nation Supplemental Conditions of the Construction Contract."

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

NOTICE TO PROCEED

Owner:	**Navajo Nation**	Owner's Contract No.:	
Contractor:		Contractor's Project No.:	
Engineer:	**Souder, Miller & Associates**	Engineer's Project No.:	**6921307**
Project:	**Navajo Gallup Water Supply Project Reaches 26.1 & 26.2**	Contract Name:	**Navajo Gallup Water Supply Project Reaches 26.1 & 26.2**
		Effective Date of Contract:	

TO CONTRACTOR:

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on [_____, 20__]. *[see Paragraph 4.01 of the General Conditions]*

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, [the date of Substantial Completion is _____, and the date of readiness for final payment is_____] ***or*** [the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

Before starting any Work at the Site, Contractor must comply with the following:
[Note any access limitations, security procedures, or other restrictions]

Owner**:**

Authorized Signature

By:

Title:

Date Issued:

Copy: Engineer

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

PERFORMANCE BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

CONSTRUCTION CONTRACT
Effective Date of the Agreement:
Amount:
Description *(name and location)*:

BOND
Bond Number:
Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:
Amount:
Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

_____ *(seal)*
Contractor's Name and Corporate Seal

By: _____
Signature

_____
Print Name

_____
Title

Attest: _____
Signature

_____
Title

SURETY

_____ *(seal)*
Surety's Name and Corporate Seal

By: _____
Signature *(attach power of attorney)*

_____
Print Name

_____
Title

Attest: _____
Signature

_____
Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

PAYMENT BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

CONSTRUCTION CONTRACT

Effective Date of the Agreement:
Amount:
Description *(name and location)*:

BOND

Bond Number:
Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:
Amount:
Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

_____ *(seal)*
Contractor's Name and Corporate Seal

By: _____
Signature

_____
Print Name

_____
Title

Attest: _____
Signature

_____
Title

SURETY

_____ *(seal)*
Surety's Name and Corporate Seal

By: _____
Signature *(attach power of attorney)*

_____
Print Name

_____
Title

Attest: _____
Signature

_____
Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety's obligations to a Claimant under this Bond shall arise after the following:

   5.1 Claimants who do not have a direct contract with the Contractor,

      5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

      5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).

   5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

   7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

   7.2 Pay or arrange for payment of any undisputed amounts.

   7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. **Definitions**

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default**: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

CERTIFICATE OF INSURANCE

Certificate of Insurance to be inserted here. All coverage to be in accordance with and per the limits established in the Standard General Conditions (C-700 NN).

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

Contractor's Application for Payment No. _____

	Application Period:	Application Date:
To (Owner):	From (Contractor):	Via (Engineer):
Project: **Navajo Gallup Water Supply Project Reaches 26.1 & 26.2**	Contract: **Navajo Gallup Water Supply Project Reaches 26.1 & 26.2**	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.: **6921307**

Application For Payment Change and Field Order Summary

Approved Change and Field Orders

Number	Additions (w/ tax)	Deductions (w/ tax)
TOTALS (w/ tax)		
NET CHANGE BY CHANGE ORDERS		

1. ORIGINAL CONTRACT PRICE (w/ tax)	**$**
2. Net change by Change Orders (w/ tax)	**$**
3. Current Contract Price (Line 1 ± 2) (w/ tax)	**$**
4. TOTAL COMPLETED AND STORED TO DATE (w/ tax) (Column F total on Progress Estimates)	**$**
5. RETAINAGE (w/ tax):	
a. 5% X Total Completed and Stored (line 4)	**$**
b. ___% X _____	**$**
c. Total Retainage (Line 5.a + Line 5.b)	**$**
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c) (w/ tax)	**$**
7. LESS PREVIOUS PAYMENTS (Line 6 from prior App) (w/ tax)	**$**
8. AMOUNT DUE THIS APPLICATION (w/ tax)	**$**
9. NN SALES TAX @ 5%	**$**
10. TOTAL AMOUNT DUE (w/o tax)	**$**
11. BALANCE TO FINISH, PLUS RETAINAGE (w/ tax) (Column G total on Progress Estimates + Line 5.c above)	**$**

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:
(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;
(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and
(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor Signature

By:	Date:

Payment of: $ _____
Line 8 - includes amount to be paid Contractor (line 10) plus amount to be paid NN Tax Commission (line 9)

is recommended by: _____ _____
(Engineer) (Date)

Payment of: $ _____
Line 8 - includes amount to be paid Contractor (line 10) plus amount to be paid NN Tax Commission (line 9)

is approved by: _____ _____
(Owner) (Date)

Approved by: _____ _____
Funding or Financing Entity (if applicable) (Date)

© 2013 National Society of Professional Engineers for EJCDC. All rights reserved.

Progress Estimate - Unit Price Work

Contractor's Application

For (Contract):									Application Number:					
Application Period:									Application Date:					
A						B	C	D	E	F		NN Use Only		G
Bid Item	Description	Item Quantity	Unit Price (w/o tax)	Tax @ 5%	Unit Price (w/tax)	Total Value of Item (w/tax)	Estimated Quantity Installed	Value of Work Installed to Date (w/ tax)	Materials Presently Stored [not in C] (w/ tax)	Total Completed & Stored to Date [D + E] (w/ tax)	Percent Complete (F / B)	Previous Total Completed & Stored (w/ tax)	This Month Only Total Completed & Stored (w/ tax)	Balance to Finish [B - F] (w/ tax)
	Totals													

© 2013 National Society of Professional Engineers for EJCDC. All rights reserved.

Stored Material Summary

Contractor's Application

For (Contract):					Application Number:				
Application Period:					Application Date:				
A	B		D		E		F		G
Invoice No.	Shop Drawing Transmittal No.	Materials Description	Stored Previously		Stored this Month		Incorporated in Work		Materials Remaining in Storage ($) [D+E-F] (w/ tax)
			Date Placed into Storage (Month/Year)	Amount ($) (w/ tax)	Amount ($) (w/ tax)	Subtotal (w/ tax)	Date (Month/ Year)	Amount ($) (w/ tax)	
		Totals							

© 2013 National Society of Professional Engineers for EJCDC. All rights reserved.

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	**Navajo Nation**	Owner's Contract No.:	
Contractor:		Contractor's Project No.:	
Engineer:	**Souder, Miller & Associates**	Engineer's Project No.:	**6921307**
Project:	**Navajo Gallup Water Supply Project Reaches 26.1 & 26.2**	Contract Name:	**Navajo Gallup Water Supply Project Reaches 26.1 & 26.2**

This [preliminary] [final] Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract. Applicable warranties required by the Contract will commence as of the date of the Affidavit of Punch List Completion issued by the Navajo Tribal Utility Authority.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: *[Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]*

Amendments to Owner's responsibilities: ☐ None ☐ As follows

Amendments to Contractor's responsibilities: ☐ None ☐ As follows:

The following documents are attached to and made a part of this Certificate: *[punch list; others]*

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract.

EXECUTED BY ENGINEER:	RECEIVED:	RECEIVED:
By: _____ (Authorized signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

STANDARD GENERAL CONDITIONS AND NAVAJO NATION SUPPLEMENTAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by







EJCDC® C-700-NN, Standard General Conditions and Navajo Nation Supplemental Conditions of the Construction Contract.
Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

STANDARD GENERAL CONDITIONS AND NAVAJO NATION SUPPLEMENTAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

Page

ARTICLE 1 – Definitions and Terminology 5

1.01 Defined Terms 5

1.02 Terminology 9

ARTICLE 2 – Preliminary Matters 10

2.01 Licensing and Registration Requirements 10

2.02 Debts Owed; Right to Offset 11

2.03 Delivery of Bonds and Evidence of Insurance 11

2.04 Copies of Documents 11

2.05 Before Starting Construction 11

2.06 Preconstruction Conference; Designation of Authorized Representatives 11

2.07 Initial Acceptance of Schedules 12

2.08 Electronic Transmittals 12

ARTICLE 3 – Documents: Intent, Requirements, Reuse 12

3.01 Intent 12

3.02 Reference Standards 13

3.03 Reporting and Resolving Discrepancies 13

3.04 Requirements of the Contract Documents 14

3.05 Reuse of Documents 14

ARTICLE 4 – Commencement and Progress of the Work 15

4.01 Commencement of Contract Times; Notice to Proceed; Starting the Work 15

4.02 Reference Points 15

4.03 Progress Schedule 15

4.04 Delays in Contractor's Progress 15

ARTICLE 5 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions 16

5.01 Availability of Lands 16

5.02 Use of Site and Other Areas 16

5.03 Subsurface and Physical Conditions 17

5.04 Differing Subsurface or Physical Conditions 18

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

5.05 Underground Facilities 19
5.06 Hazardous Environmental Conditions at Site 21
ARTICLE 6 – Bonds and Insurance 23
6.01 Performance, Payment, and Other Bonds 23
6.02 Insurance 23
ARTICLE 7 – Contractor's Responsibilities 27
7.01 Supervision and Superintendence 27
7.02 Labor 27
7.03 Goods, Supplies, Services, Materials, and Equipment 27
7.04 "Or Equals" 28
7.05 Substitutes 28
7.06 Concerning Subcontractors, Suppliers, and Others 29
7.07 Patent Fees and Royalties 31
7.08 Permits 31
7.09 Taxes 31
7.10 Compliance with Navajo Nation Laws and Regulations 32
7.11 Record Documents 32
7.12 Safety and Protection 32
7.13 Safety Representative 34
7.14 Hazard Communication Programs 34
7.15 Emergencies 34
7.16 Shop Drawings, Samples, and Other Submittals 34
7.17 Contractor's General Warranty and Guarantee 36
7.18 Indemnification 38
7.19 Delegation of Professional Design Services 38
ARTICLE 8 – Other Work at the Site 39
8.01 Other Work 39
8.02 Coordination 39
8.03 Legal Relationships 40
ARTICLE 9 – Owner's Rights and Responsibilities 41
9.01 Right to Assurance 41
9.02 Communications to Contractor 41
9.03 Replacement of Engineer 41
9.04 Furnish Data 41

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

9.05 Pay When Due 41
9.06 Lands and Easements; Reports, Tests, and Drawings 41
9.07 Change Orders 41
9.08 Inspections, Tests, and Approvals 41
9.09 Limitations on Owner's Responsibilities 41
9.10 Undisclosed Hazardous Environmental Condition 42
9.11 Safety Programs 42
ARTICLE 10 – Engineer's Status During Construction 42
10.01 Owner's Representative 42
10.02 Visits to Site 42
10.03 Project Representative 43
10.04 Rejecting Defective Work 43
10.05 Shop Drawings, Change Orders and Payments 43
10.06 Determinations for Unit Price Work 43
10.07 Decisions on Requirements of Contract Documents and Acceptability of Work 43
10.08 Limitations on Engineer's Authority and Responsibilities 43
10.09 Compliance with Safety Program 44
ARTICLE 11 – Amending the Contract Documents; Changes in the Work 44
11.01 Amending and Supplementing Contract Documents 44
11.02 Unilateral Changes in the Work by Owner 45
11.03 Unauthorized Changes in the Work 45
11.04 Change of Contract Price 45
11.05 Change of Contract Times 46
11.06 Change Proposals 46
11.07 Execution of Change Orders 47
11.08 Notification to Surety 47
ARTICLE 12 – Jurisdiction, Sovereign Immunity, Claims; Dispute Resolution 47
12.01 Navajo Nation Jurisdiction 47
12.02 Sovereign Immunity 48
12.03 Claims; Dispute Resolution 48
12.04 Navajo Nation Department of Justice Approval 49
ARTICLE 13 – Cost of the Work; Allowances; Unit Price Work 49
13.01 Cost of the Work 49
13.02 Unit Price Work 50

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 14 – Tests and Inspections; Correction, Removal or Acceptance of Defective Work 51
14.01 Access to Work 51
14.02 Tests, Inspections, and Approvals 51
14.03 Defective Work 52
14.04 Acceptance of Defective Work 52
14.05 Uncovering Work 53
14.06 Owner May Stop the Work 53
14.07 Owner May Correct Defective Work 53
ARTICLE 15 – Payments to Contractor; Set-Offs; Completion; Correction Period 54
15.01 Progress Payments 54
15.02 Contractor's Warranty of Title 57
15.03 Substantial Completion 57
15.04 Partial Use or Occupancy 58
15.05 Final Inspection 58
15.06 Final Payment 59
15.07 Correction Period 60
ARTICLE 16 – Suspension of Work and Termination 61
16.01 Owner May Suspend Work 61
16.02 Owner May Terminate for Cause 61
16.03 Owner May Terminate For Convenience 62
16.04 Contractor May Stop Work or Terminate 62
16.05 Additional Rights of Navajo Nation to Suspend or Terminate 63
ARTICLE 17 – Miscellaneous 64
17.01 Miscellaneous Provisions 64
17.02 No Waiver 67
17.03 Headings 67

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies,
and American Society of Civil Engineers. All rights reserved.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—Shall have the same meaning as Contract.

3. *Application for Payment*—The document acceptable to Engineer which is to be used by Contractor during the course of the Work, to request progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents or by the Owner.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the Bidder's firm proposed price for the Work to be performed.

5. *Bidder*—An individual or business entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or Navajo Nation statute, law, rule, regulation, ordinance, resolution, code, order, policy, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

11. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.

12. *Contract Documents*—All documents listed in EJCDC Document C-520 "Agreement Between Owner and Contractor for Construction Contract (Stipulated Price)" Article 10.

13. *Contract Price*—The money that Owner has agreed to pay Contractor for satisfactory completion of the Work in accordance with the Contract Documents, including all Change Orders, if any.

14. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

15. *Contractor*—The individual or business entity that has entered into the Contract with the Owner for performance of the Work.

16. *Contractor's Claim - A written document issued by the Contractor, duly submitted to the Owner and Engineer in compliance with the procedural requirements set forth herein, submitted for purposes of: (1) contesting the Engineer's decision regarding a Change Proposal; or (2) seeking resolution of a contractual issue that the Engineer has declined to address; or (3) seeking other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Contractor's Claim.*

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*— The part of the Contract Documents that have been prepared and stamped by the Engineer, graphically showing the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date indicated in the Contract on which the Contract becomes effective.

20. *Engineer*—The individual or entity named as such in the Contract.

21. *Field Order*— A written order issued to the Contractor by the Engineer which requires the Contractor to perform changes in the Work for the Project, but does not change the Contract Price or the Contract Times, and therefore does not require a Change Order.

22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.

23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction over the Project.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.

26. *Notice of Award*— A written notice issued by the Owner to a selected Bidder, notifying the Bidder that its Bid has been accepted by the Owner. A Notice of Award does not constitute a promise of Contract Award by the Owner, and the Contractor is not guaranteed a Contract Award until a Contract is duly executed by the Navajo Nation.

27. *Notice to Proceed*— A written notice by Owner to the Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall commence its performance of the Work.

28. *Owner*—The Navajo Nation.

29. *Owner's Claim* - A written document issued by the Owner, duly submitted to the Contractor and Engineer in compliance with the procedural requirements set forth herein, submitted for purposes of: (1) contesting an initial decision by the Engineer concerning the requirements of the Contract Documents or the acceptability of the Contractor's Work under the Contract Documents; or (2) contesting the Engineer's decision regarding a Change Proposal; or (3) seeking resolution of a contractual issue that the Engineer has declined to address; or (4) seeking other relief with respect to the terms of the Contract.

30. *Progress Schedule*—A time schedule, prepared and maintained by the Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to complete the Work within the Contract Times, including descriptions and dates of Milestones.

31. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, which includes activities such as planning, study, design, construction, testing, commissioning, mobilization and start-up, among others, and which is the subject of the Contract Documents and the Work under this Contract.

32. *Project Manual*—The Package containing all information, terms, and conditions governing the Invitation to Bid, including, but not limited to, Instructions to Bidders, Bid Bond Form, Bid Form, and the Contract Documents.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals and the performance of related construction activities.

36. *Schedule of Values*—A breakdown or detailed listing of specific fees, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—The land upon which the Work is to be performed, and the Project is to be located, including rights-of-way and easements, if any, necessary appurtenant lands. The Site includes any appurtenant premises that the Owner permits the Contractor to use or occupy for a temporary period of time, only as necessary for performance of the Work and completion of the Project.

39. *Specifications*—The part of the Contract that consists of written requirements for goods, materials, equipment, systems, supplies, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

41. *Substantial Completion*—The time at which the Work (or a specified part thereof as determined by the Engineer and approved by the Owner) has progressed to the point where, in the opinion of the Owner, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

42. *Selected Contractor*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract.

43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish goods, supplies, materials or equipment to be incorporated in the Work.

44. *Technical Data*—Those items expressly identified as Technical Data in the Project Manual, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.

45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

46. *Unit Price Work*— Specific incremental portions of the Work for the Project that are assigned a specific price by the Contractor and that the Contractor requests the Owner to pay in separate increments.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

47. *Work*—The entire construction of the Project, or the various separately identifiable parts thereof, that are required to be provided under the Contract Documents, and documentation necessary to complete construction of the Project; furnishing, installing, and incorporating all goods, supplies, materials and equipment into such construction; and may include related services such as testing, start-up, mobilization and commissioning, as necessary for complete and satisfactory performance of the Work.

48. *Work Change Directive*—A written directive to Contractor issued by the Engineer on or after the Effective Date of the Contract, authorized by the Owner, ordering an addition, deletion, or revision in the Work, which will be incorporated in a subsequently issued Change Order.

1.02 *Terminology*

A. The words and terms discussed in the following paragraphs are not defined but, when used in the Project Manual or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*:

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory" or similar adjectives, are used herein to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents, except as specifically provided in the Contract between the Owner and the Engineer.

C. *Day*:

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*:

1. The word "defective," when modifying the word "Work," refers to Work that is determined, in the judgment of the Engineer, to be unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents; or

b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

E. *Furnish, Install, Perform, Provide*:

1. The word "furnish," when used in connection with goods, supplies, services, materials, or equipment, shall mean to supply and deliver said goods, supplies, services, materials, or equipment to the Site ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with goods, supplies, services, materials, or equipment, shall mean to put into use or place in final position said goods, supplies, services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with goods, supplies, services, materials, or equipment, shall mean to furnish and install said goods, supplies, services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific goods, supplies, services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then the Contractor shall furnish and install said goods, supplies, services, materials, or equipment complete and ready for intended use.

F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Licensing and Registration Requirements*

A. *State license required*: As an express condition of the award of this Contract, at least one of the Contractor's individual owners, co-owners, principals, partners, managers, team members, officers, employees, or subcontractors, as identified in EJCDC C-520 "Agreement Between Owner and Contractor" (herein "EJCDC C-520") Article 4, shall provide a current and valid license from an appropriate state licensing board or agency for the type of work to be performed and services to be provided by the Contractor, which license is customarily maintained in the Contractor's industry (a valid license held by an individual with an ancillary firm shall be acceptable, so long as the provisions of Article 6 herein are satisfied). Each entity or individual listed in EJCDC C-520 Article 4 shall indicate its business name, business address, and state license number. Said license must be issued by the state which is the geographical location of the primary location of the Work. For the entire duration of performance under this Contract, said license must be maintained as active and current and must remain directly associated with a signatory party to this Contract, and failure of such shall be deemed a material breach for which the Navajo Nation may terminate this Contract.

B. *Business registration required*: Each entity or individual identified in EJCDC C-520 Article 4 shall be registered to do business with an appropriate state agency, as either a domestic or foreign business entity within such state, and each shall indicate its business name, business address, and state business registration number in EJCDC C-520 Article 4. Said registration must be issued by the state which is the primary location of the Work. For the entire duration of performance under this Contract, said registration must be maintained as active and current and must remain directly associated with a signatory party to this Contract, and failure of such shall be deemed a material breach for which the Navajo Nation may terminate this Contract. Each must also comply with the registered agent and

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

business registration requirements of the Navajo Nation Business Registration Department and be duly approved to engage in business activity within the Navajo (see 5 N.N.C. § 3166, § 3170, § 3171).

2.02 *Debts Owed; Right to Offset*

A. By execution of this Contract, the Contractor expressly represents to the Owner that the Contractor in its present form or any other identifiable capacity as an individual, business, corporation, partnership, or other entity, has no outstanding money judgment against it in favor of the Owner as defined in 12 N.N.C. § 1503(A), and further represents that there exists no delinquent accounts receivable debt which is due and owing to the Owner as defined in 12 N.N.C. § 1503(A), from the Contractor or other such related individual or entity. The Contractor expressly agrees that, pursuant to 12 N.N.C. § 1507, if the Contractor or other entity owes such debt to the Owner, the Owner may, upon thirty (30) calendar days prior notice to the Contractor, offset its financial claim against any amount owed to the Contractor for work performed or services provided under this Contract.

2.03 *Delivery of Bonds and Evidence of Insurance*

When Contractor delivers the executed counterparts of the Contract to Owner, Contractor shall also deliver to Owner bonds and evidence of insurance as required by Article 6 below.

2.04 *Copies of Documents*

A. Owner shall furnish to Contractor one executed copy of the Contract. Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of all Contract Documents, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract Documents available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.05 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes Unit Price Work and which divides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss (1) the schedules referred to in Paragraph 2.05.A, (2) procedures for handling Shop Drawings, Samples, and other submittals, (3) processing Applications for Payment, (4) electronic or digital transmittals, and (5) maintaining required records.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. In the Contract, Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below, the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until the Engineer approves all submitted schedules.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.08 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.

B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.

D. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

A. Standards Specifications, Codes, Laws and Regulations

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*:

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or a supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or a supplement to the Contract Documents issued pursuant to Paragraph 11.01.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*:

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and shall determine the acceptability of the Work thereunder.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents via a Change Order. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor and the Owner, unless the Contactor appeals by submitting a Change Proposal or unless the Owner appeals by filing an Owner's Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors, Suppliers, Laborers, or Employees shall not:

1. have or acquire any title to or ownership rights in any of the Contract Documents prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, and shall not reuse any of the Contract Documents without written consent of Owner and Engineer and without specific written verification of adaptation by Engineer; or

2. violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for recordkeeping purposes.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed; Starting the Work*

A. The Contract Times will commence to run on the date identified by the Owner in the Notice to Proceed.

B. Notwithstanding the Notice to Proceed, Contractor shall not commence any work under this Contract until the effective date of all insurance required by this Contract.

4.02 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.03 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in any change to the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work uninterrupted, and adhere to the Progress Schedule during all disputes or disagreements with the Owner or Engineer. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.04 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times or Contract Price, if such adjustment is necessary to Contractor's ability to complete the Work within the Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of any of the Contractor's Subcontractors, Suppliers, Laborers, or Employees shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is necessary to Contractor's ability to

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

complete the Work within the Contract Times. Adjustment of the Contract Times shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
2. abnormal weather conditions;
3. impeded access to the Project site not caused by either party;
4. acts or failure to act of utility providers; and
5. acts of war or terrorism.

D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.

E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.

G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*:

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of goods, supplies, materials and equipment, and the operations of workers to the Project Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other goods, supplies, materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. Contractor shall limit its use and occupation of all lands and access roads and areas to what is minimally necessary to perform the Work, so as to keep new land disturbances to a minimum.

3. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and those identified in Paragraph 7.18.A against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner and those identified in Paragraph 7.18.A to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work, Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus goods, supplies, and materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any existing structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Project Manual identifies:

1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;

2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Project Manual with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of, or conclusion drawn, from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or

2. is of such a nature as to require a change in the Drawings or Specifications; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Possible Price and Times Adjustments*:

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

    a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

    b. with respect to any Unit Price Work, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.02; and,

    c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

    a. Contractor knew of the existence of such condition at the time Contractor submitted its Bid or executed this Contract; or

    b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Project Manual or Contract Documents to be conducted by or for Contractor prior to Contractor submitting its Bid or executing this Contract; or

    c. Contractor failed to give the written notice as required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Project Manual:

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

    a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

    b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;

    c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

    d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

C. *Engineer's Review*: Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Possible Price and Times Adjustments*:

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;

b. With respect to any Unit Price, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.02;

c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and

d. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Project Manual shall identify:

1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

2. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Project Manual with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the Scope of Work for the Project.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the Scope of Work for the Project, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner may take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.

H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. Contractor shall indemnify and hold harmless Owner and those identified in Paragraph 7.18.A against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

J. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond as provided herein.

1. Performance Bond: The Contractor shall provide to Owner a Performance Bond underwritten and executed by a surety company that guarantees the Contractor's complete and satisfactory performance under the Contract. The Performance Bond shall be equal to one hundred percent (100%) of the Original Contract Amount.

2. Payment Bond: The Contractor shall provide to the Owner a Payment Bond underwritten and executed by a surety company that will protect all persons, subcontractors, or other entities supplying labor and material to the Contractor of its subcontractors for the performance under this Contract. The Payment Bond shall be in an amount equal to one-hundred percent (100%) of the Original Contract Amount. The Payment Bond must be provided in addition to the Performance Bond required in Paragraph 2.03.A herein.

B. Bond documentation required: The Owner's Representative must receive written documentation of all required bonds prior to the issuance of a Notice to Proceed for the Project, and the Contractor shall not commence any work to be performed or services to be provided under this Contract unless and until such documentation has been submitted to the Owner. If the Contractor is able to furnish such documentation prior to the Owner's execution of this Contract, such documentation shall be made an attachment to the Contract. The Contractor expressly acknowledges that the Owner may terminate this Contract for breach if, subsequent to the final execution of the Contract, any statement or documentation regarding bonding is determined to be false, any bond has expired or been suspended or revoked, or the Contractor has failed to submit in a timely manner any requested documentation pertaining to bonding and that the Owner is unable to issue a Notice to Proceed in a timely manner.

C. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.

D. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

E. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance*

A. Contractor shall obtain and maintain insurance as provided herein.

1. Builder's Risk Insurance: Contractor shall obtain, on behalf of the Owner, a "builder's risk" insurance policy for all aspects of the Project; such insurance coverage shall be in amount adequate to cover any potential loss, relating to the Project or any portion

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

thereof, that may occur prior to the effective date and time of the Owner's property insurance coverage for the Project. The Contract Price may be increased to accommodate the cost of builder's risk insurance if such cost was not included.

2. Liability Insurance: The Contractor shall, at its sole expense, procure and maintain adequate and sufficient insurance for all of Contractor's potential liabilities, in accordance with this Paragraph 6.02, relating to any claims by any party for any injury to persons or damage to property arising out of or connected with any work performed or services provided under this Contract by the Contractor; such insurance shall remain in effect for the duration of performance under this Contract up to and including the date and time of issuance of a Certificate of Occupancy for the Project or the until effective date and time of the Contractor's warranty for the Project, whichever occurs last.

3. Minimum Insurance Coverages: Contractor shall obtain and maintain minimum coverages shown as follows:

   a. Commercial General Liability – ISO CG 0001 Form or equivalent. Coverages shall include:

      - *Premises and Operations*
      - *Personal/Advertising Injury*
      - *Products/Completed Operations*
      - *Liability assumed under an Insured Contract (including defense costs assumed under contract)*
      - *Broad Form Property Damage*
      - *Independent Contractors/Consultants*

   b. Automobile Liability including all:

      - *Contractor-Owned Vehicles*
      - *Non-owned Vehicles*
      - *Rented/Hired Vehicles*
      - *Personal Injury Protection (where applicable)*

   c. Worker's Compensation:

      - *Statutory Benefits (Coverage A)*
      - *Employers Liability (Coverage B)*

4. Limits required: Contractor shall carry the limits of liability shown below ("state Law" means limits shall be in accordance with laws and regulations of the state wherein this Contract shall be primarily performed):

COMMERCIAL GENERAL LIABILITY		
GENERAL AGGREGATE	$	2,000,000
PRODUCTS/COMPLETED OPERATIONS AGGREGATE	$	2,000,000
OCCURRENCE BASIS/ PER EACH OCCURRENCE LIMIT	$	1,000,000
PERSONAL/ADVERTISING INJURY	$	1,000,000

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

FIRE DAMAGE (ANY ONE FIRE)	$	50,000
MEDICAL PAYMENTS (ANY ONE PERSON)	$	5,000
AUTOMOBILE LIABILITY		
BODILY INJURY/PROPERTY DAMAGE (EACH ACCIDENT)	$	1,000,000
PERSONAL INJURY PROTECTION (IF APPLICABLE)	BY STATE LAW	
WORKERS' COMPENSATION		
COVERAGE A (WORKERS' COMPENSATION)	BY STATE LAW	
COVERAGE B (EMPLOYERS LIABILITY)	$	500,000
AGGREGATE MINIMUM	$	2,000,000

5. Claims-made basis: In the event Contractor's liability insurance required by this Contract is written on a claims-made basis, the Contractor shall warrant that any retroactive date under the policy shall precede the effective date of this Contract, and either continuous coverage will be maintained by or an extended discovery period will be exercised for a period of two (2) calendar years beginning as of the date performance is completed.

6. Primary coverage basis: For payment of any claims, Contractor's insurance coverage shall be on a primary, non-contributory basis with other coverages and/or self-insurance carried by the Owner or other sources.

7. Required language: The Contractor's General Liability and Umbrella Liability policy shall be endorsed to include the following language: "THE NAVAJO NATION, ITS ELECTED OFFICIALS, EMPLOYEES, AGENTS, AND VOLUNTEERS ARE NAMED AS AN ADDITIONAL INSURED WITH RESPECT TO LIABILITY ARISING OUT OF THE ACTIVITIES PERFORMED BY THE INSURED [THE CONTRACTOR] PURSUANT TO A CONTRACT WITH THE NAVAJO NATION." (ISO Forms CG 2010 and CG 20 37 "Additional Insured-Owners, Lessees or Contractors-Completed Operations" 2004 Editions or equivalent).

8. Waiver of subrogation: All Contractor's policies shall contain a waiver of subrogation in favor of the Owner, its divisions, departments, offices, agencies, boards, commissions, committees, enterprises and its employees, officers, officials, and agents for losses arising from work performed or services provided by the Contractor pursuant to a Contract with the Owner.

9. Separation of Insureds: Contractor's policy shall include a "Separation of Insureds" clause (Cross Liability).

10. Insurer rating: The Contractor's insurance policy shall be issued by a licensed or approved insurer with an "A.M. Best" rating of not less than A- VII. The Owner in no way warrants that the above-required minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

11. Certificates of insurance: The Contractor shall provide to the Owner certificates of insurance as required by this Contract. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. Each insurance policy required by this Contract must be in effect upon, or prior to, commencement of performance under this Contract and shall remain in effect until such time as all of its obligations under this Contract or any subsequent modifications have been fully and satisfactorily completed. Insurance certificates shall be sent to the

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Navajo Nation Department of Risk Management, P.O. Box 1690, Window Rock, Arizona, 26515. The Contract Number and a description of the work performed or services provided thereunder shall be indicated on such certificates.

12. Subcontractors: Contractor's subcontractors shall be included as insureds under Contractor's policy, or Contractor shall provide separate certificates and endorsements for each of its subcontractors holding separate policies, which policies shall meet the minimum policy amounts shown herein.

13. Notification of change required: The insurance policy required herein shall provide the required coverage and shall not be suspended, voided, canceled, or reduced in coverage or in limits except after thirty (30) calendar days prior written notice has been given to the Owner. Such notice shall be sent directly to the address shown in 6.02.A.11 and shall be sent by certified mail, return receipt requested.

14. Approval of modifications: Any modifications of the insurance requirements set forth herein shall be approved by the Navajo Nation Risk Management Program, whose decision shall be final. Such modification shall not require a formal Contract modification, but may be approved by administrative action of the Risk Management Program. Contractor may request, for itself or its subcontractors, that the insurance requirements shown herein be modified, provided that such request include a justification for the modification with supporting documentation and be delivered in writing to the Risk Management Program prior to contract execution or modification. Any modifications approved shall be on a case-by-case basis and shall not affect the insurance requirements of other subcontractors for whom modifications have not been approved. ALL MODIFICATIONS SHALL BE APPROVED BY THE NAVAJO NATION RISK MANAGEMENT PROGRAM PRIOR TO COMMENCEMENT OF ANY PERFORMANCE UNDER THIS CONTRACT.

15. Owner's disclaimers: The insurance requirements and coverages set forth herein are minimum requirements only and in no way limit the indemnity covenants contained in this Contract. The Owner in no way warrants that the minimum limits herein are sufficient to protect Contractor or its subcontractors from any liabilities arising from any work performed or services provided under this Contract, and Contractor and its subcontractors are free to purchase additional insurance. By requiring such minimum insurance, the Owner shall not be deemed to have assessed any risks that may be applicable to Contractor under the Contract. Contractor shall assess all risks and may maintain higher limits and/or broader coverages. Contractor is not relieved of any liability or other obligations assumed or pursuant to this Contract due to failure to obtain or maintain insurance in sufficient amounts, duration, or types.

16. No sovereign immunity waiver: The Parties acknowledge and agree that the Owner is relying on, and does not waive or intend to waive by any provision of this Contract, the monetary limitations and other rights, immunities, and protections provided under 1 N.N.C. §§551 et. seq., as from time to time amended, or otherwise available to the Owner or its elected officials, employees, agents, and volunteers.

17. Mutual cooperation: The Owner and Contractor shall cooperate in good faith in the collection of any insurance proceeds which may be payable in the event of any loss, including the execution and delivery of any proof of loss or other actions required to effect recovery.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

18. Contractor's Insurance: The Contractor, and each entity of a team, shall maintain insurance as required herein, for the specific type of work to be performed and services to be provided by such entity or individual.

19. Insurance Documentation Required: The Owner's Representative must receive written documentation of all required insurance prior to issuance of a Notice to Proceed for the Project, and Contractor shall not commence any work or services under this Contract unless and until such documentation has been submitted to the Owner.

B. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

7.03 *Goods, Supplies, Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all goods, supplies, services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All goods, supplies, materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by the Owner, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All goods, supplies, materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier or Manufacturer, except as otherwise may be provided in the Contract Documents.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.04 *"Or Equals"*

A. Whenever an item of goods, supplies, material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier or Manufacturer, such specification or description is intended to establish the type, function, appearance, and quality required, however, the Owner may, at its discretion, authorize the use of other items of goods, supplies, material or equipment.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

7.05 *Substitutes*

A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

a. shall certify that the proposed substitute item will:

1) perform adequately the functions and achieve the results called for by the general design,

2) be similar in substance to that specified, and

3) be suited to the same use as that specified.

b. will state:

1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,

2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

c. will identify:

1) all variations of the proposed substitute item from that specified, and

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

2) available engineering, sales, maintenance, repair, and replacement services.

d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.

B. Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.

C. Prior to the Owner's execution of this Contract, at the time of Bid (if applicable), Contractor shall submit to Owner the identity of all proposed Subcontractors or Suppliers.

D. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.

E. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor may submit a Change Proposal for an adjustment of the Contract Price or Contract Times, within 30 days of Owner's requirement of replacement.

F. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the Owner's right to the completion of the Work in accordance with the Contract Documents.

G. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

H. Contractor shall be fully responsible to Owner for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.

J. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.

K. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade, except that any specialized Work shall be performed by Subcontractors or Suppliers who are specifically licensed and qualified to perform such specialized Work.

L. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.

M. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

N. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor

2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer at the time of execution of this Contract by the Owner, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. Contractor shall indemnify and hold harmless Owner and those identified in Paragraph 7.18.A against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.08 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the Contractor's execution of this Contract. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.09 *Taxes*

A. Contractor acknowledges and agrees that all work performed and services provided within the territorial jurisdiction of the Navajo Nation is subject to the five percent (5%) Navajo Sales Tax (24 N.N.C. §601 et seq.).

B. *Identification of taxable activity*: The Contractor shall separately indicate, on each invoice or payment application submitted to the Owner, any and all of its work performed or services provided within the Navajo Nation pursuant to this Contract, and shall itemize the Navajo Sales Tax.

C. *Withholding*: The Owner shall withhold from each payment five percent (5%) of each invoice amount for work performed and services provided within the Navajo Nation under this Contract, and shall transfer such five percent (5%) amount to the Office of the Navajo Tax Commission (ONTC) on behalf of the Contractor. The Contractor shall indicate on its quarterly tax return filed with the ONTC that the Navajo Sales Tax has been withheld and paid. It is the Contractor's sole responsibility to make certain that all withholding applies only to that work performed and services provided under this contract, or portion thereof, that is subject to the Navajo Sales Tax.

D. *Filing and other payments*: The Contractor acknowledges that the Owner's withholding of tax in no way removes Contractor's responsibility for timely filing of tax returns and payment of interest, penalties, or any other amounts relating to Contractor's tax obligations under the Navajo Nation's or any other jurisdiction.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.10 *Compliance with Navajo Nation Laws and Regulations*

A. *Financial responsibility*: At all times for the effective duration of this Contract, the Contractor shall be in compliance with all provisions of the Navajo Business and Procurement Act, at 12 N.N.C. §1501 et seq.

B. *Navajo Preference in hiring*: In the hiring of any employees (under an employer-employee relationship) who will perform primarily at the Project site, the Contractor shall comply with all provisions of the Navajo Preference in Employment Act, at 15 N.N.C. §601 et seq.

C. *Navajo Preference in subcontracting*: Contractor expressly acknowledges and agrees that it is deemed a "Prime Contractor" under 5 N.N.C. §202 K, and as such must comply with all applicable provisions of the Navajo Business Opportunity Act, at 5 N.N.C. §201 et seq., and with all rules and regulations promulgated thereto. In accordance with 5 N.N.C. §205 F, the NNBRD shall have the authority to require the Contractor to comply with current minimum percentages for procurement and subcontract awards to Navajo-owned and controlled entities, firms and organizations, based upon availability and upon the qualifications of such entities to provide specific products and services necessary or appropriate for the Project.

D. *Other laws*: The Contractor shall comply with all other Navajo Nation laws and regulations and of the United States, now in force and effect or as hereafter may come into force and effect that pertain to the work to be performed or services to be provided under this Contract.

E. *Funding grants*: The Contractor shall comply with any and all applicable laws, regulations, policies, or guidance governing the procurement, administration, contract performance, payment procedures, reporting, or other matters relating to the Project or to Contractor's performance under this Contract.

F. *Non-compliance constitutes breach*: The terms and provisions of said laws and regulations are fully incorporated herein by reference, and any violation thereof shall constitute a breach of this Contract and provide just cause for the Owner's unilateral termination of this Contract.

G. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and those identified in Paragraph 7.18.A against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action.

7.11 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Contract Documents. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be made readily available to Engineer and Owner for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer or to the Owner if directed by the Owner.

7.12 *Safety and Protection*

A. Contractor is wholly responsible for safety at the Site. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site;
3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction; and
4. any discovered historical, archeological, or cultural remains or property.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may potentially affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

C. Contractor shall comply with the applicable requirements of Owner's safety programs or procedures as contained in the Project Manual.

D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 through 7.12.A.4 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.13 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent imminent or potential damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, the Engineer may submit a Work Change Directive or Change Order.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements*:

1. Before submitting a Shop Drawing or Sample, Contractor shall have:

a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

c. determined and verified the suitability of all goods, supplies, materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require:

1. *Shop Drawings*:

    a. Contractor shall submit the number of copies required in the Specifications.

    b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, goods, supplies, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.

2. *Samples*:

    a. Contractor shall submit the number of Samples required in the Specifications.

    b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Other Submittals*: Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.

D. *Engineer's Review*:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. *Resubmittal Procedures*:

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee. Contractor warrants to the Owner that all labor, materials, equipment and furnishings used in, or incorporated into, the Project will be of good quality, new, that the Work will be free from defects in design, materials and workmanship, and that all Work will conform with the requirements of the Contract. If required by the Owner's Representative, the Contractor shall furnish satisfactory evidence of compliance with this warranty. The type, quality and quantum of such evidence, and whether such evidence is satisfactory, shall be within the sole discretion of the Owner's Representative. Any portion of the Work not conforming to these requirements, including substitutions not properly approved and authorized by the Owner, and including non-conformance relating to any materials, equipment, furnishings, labor, installation, or workmanship, may be considered defective.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer or Owner;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal;

6. the issuance of a notice of acceptability by Engineer;

7. any inspection, test, or approval by others; or

8. any correction of defective Work by Owner or others under the control of Owner.

D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

E. *Repair or replacement*: Contractor agrees to repair, replace, or re-perform, or pay the Owner the reasonable cost of such repair, replacement, or re-performance, any portion of the Work that the Owner deems in its sole discretion to be defective, so long as the Owner submits to the Contractor a written notice of any defect within 1 calendar year following the issuance of a Certificate of Substantial Completion for the Project or as otherwise required in the Technical Specifications, whichever is later. The choice among repair, replacement, re-performance, or payment shall be the Contractor's. Any steps taken by the Contractor to correct defects shall not act to extend the term of this warranty. All costs for work or services, including third party fees or costs, for all repairs, replacement, or re-performance by the Contractor shall be at no charge to the Owner and shall be performed within 60 calendar days of the Contractor's receipt of notification of the defect, which period may be extended for delays outside the Contractor's control.

F. *Maintenance*: Failure of the Owner to perform reasonable regular maintenance and proper care of the finished Project shall NOT void this warranty as it covers defects that are inherent in the goods or services provided as part of the Project.

G. *Access to the Project*: Owner must provide access to the Contractor during its normal business hours, Monday through Friday, 8 a.m. to 5 p.m., to inspect the defect reported and, if necessary, to take corrective action.

H. *No liens*: Contractor guarantees that, as of the conclusion of this Contract, all work will be free of liens, claims and security interests of any third parties.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.18 *Indemnification*

A. Contractor shall indemnify and hold harmless Owner and its officers, directors, members, partners, agencies, boards, commissions, committees, enterprises, employees, agents, consultants, subcontractors and Engineer from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or those identified in Paragraph 7.18.A by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.

B. If professional design services or certifications by a design professional related to systems, goods, supplies, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Project Manual or provided to Contractor prior to the start of any such other work:

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. an itemization of the specific matters to be covered by such authority and responsibility; and

3. the extent of such authority and responsibilities.

B. Unless otherwise provided in the Project Manual, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the Owner's execution of this Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment and such adjustment must be necessary for Contractor's ability to complete the Work within the Contract Times.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.

C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.

D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and those identified in Paragraph 7.18.A.

ARTICLE 9 – OWNER'S RIGHTS AND RESPONSIBILITIES

9.01 *Right to Assurance*

A. If at any time prior to completion of performance under this Contract, the Owner has reason to believe that Contractor does not intend or is unable to fully perform under this Contract, the Owner may demand in writing that Contractor submit written assurance of its intent to complete performance. Failure to provide assurance within fourteen (14) business days of issuance of such demand shall constitute a material breach.

9.02 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.03 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

9.04 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.05 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Contract.

9.06 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.02.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in this Contract.

B. No payment shall be authorized or remitted to the Contractor unless and until the Owner's Representative, or his/her successor or designee, approves in writing in advance the work performed or services provided under this Contract, and has given prior written approval of invoice(s), billing(s), or payment application(s) submitted to the Owner. All invoices must be supported by adequate verification, documentation, and itemization of all required Project deliverables received by the Owner.

C. Any cooperative or joint supervision, or joint approval authority involving person(s) other than the Owner's Representative, whether Owner's staff or other person(s), shall be conducted through a duly approved and executed cooperative agreement that sets forth the extent of decision-making, supervision, and approval authority of the Owner's Representative and such other person(s).

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

10.03 *Project Representative*

A. The Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work. The authority and responsibilities of the Resident Project Representative will be as provided in Paragraph 10.08 and further detailed in the Technical Specifications. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Project Manual.

10.04 *Rejecting Defective Work*

A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.

B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.

C. Engineer's authority as to Change Orders is set forth in Article 11.

D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.02.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, and other documentation required to be delivered by Paragraph 15.06.A shall be to determine compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs and procedures (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

1. *Change Order*

a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.

b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.

2. *Work Change Directives*: A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit an Owner's Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. *Field Orders*: Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

B. *Approval required for any modification, Change Order, or Contract Price over 10%*: Every modification, Change Order, or Contract Price that exceeds ten percent (10%) of the Original Contract Amount shall be approved in advance by the Owner's Representative, in accordance with 12 N.N.C. § 345.

11.02 *Unilateral Changes in the Work by Owner*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. The Owner shall give timely written notice as defined in the Contract, or if not therein defined, upon thirty (30) calendar days' prior written notice for such unilateral changes. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

B. The Contractor agrees that payment for additional work/goods/services provided in accordance with such changes described in this paragraph shall be determined in the same manner as all costs for such work/goods/services included in the Contract Amount, unless the Contractor provides written justification for any cost increase and the Owner's Representative, in his/her sole discretion, approves such increase. Such additional payments must be approved via a Change Order.

11.03 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, if such work is not approved prior to commencement in a Change Order in accordance with Article 11, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

A. The Contract Price may only be changed by a duly approved Change Order in accordance with this Article 11.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. An adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.02); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum; or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01).

C. Contractor's Fee under a change in Contract Price shall be determined as follows:

1. a mutually acceptable fixed fee or if a fixed fee is not agreed upon, then a fee based on the Unit Price Work.

2. no fee shall be payable on the basis of costs itemized under Paragraph 13.01.B.4, 13.01.B.5, and 13.01.C.

11.05 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order.

B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.04, concerning delays in Contractor's progress.

11.06 *Change Proposals*

A. Contractor shall submit a Change Proposal to Engineer to (1) request an adjustment in the Contract Times or Contract Price; (2) appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; (3) contest a set-off against payment due; or (4) seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures*: Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, information, and materials regarding the proposed change, to the Engineer and Owner within 15 days after the submittal of the Change Proposal. Engineer shall advise Owner regarding the Change Proposal.

2. *Engineer's Action*: Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

3. *Binding Decision*: Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing an Owner's Claim or Contractor's Claim under Article 12.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

4. *Owner's Approval*: For a Change Proposal to take effect, the Owner must give written approval of any Change Proposal in accordance with Article 11.

B. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

A. The Engineer may issue appropriate Change Orders covering:

1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. changes in the Scope of Work for the Project which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.03 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and

4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

11.08 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the Scope of the Work for the Project or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – JURISDICTION, SOVEREIGN IMMUNITY, CLAIMS; DISPUTE RESOLUTION

12.01 *Navajo Nation Jurisdiction*

A. By voluntarily entering into and executing this Contract, the Contractor expressly consents to the full territorial, administrative, legislative, executive and judicial jurisdiction of the Navajo Nation, including but not limited to, the jurisdiction to regulate, adjudicate disputes, and to levy fines or enter judgments for injunctive relief and/or compensatory and punitive damages, in connection with all activities conducted by the Contractor within the Navajo Nation or which have a proximate (legal) effect on persons or property within the Navajo Nation. The Contractor hereby acknowledges and agrees that this Contract constitutes a voluntary consensual relationship between the Contractor and the government of the Navajo Nation.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

12.02 *Sovereign Immunity*

A. Nothing in this Contract shall be considered a waiver, express or implied, of the sovereign immunity of the Navajo Nation, except to the limited extent provided for in the Navajo Sovereign Immunity Act, as amended, at 1 N.N.C. §§551 et seq.

12.03 *Claims; Dispute Resolution*

A. Any claim (including an Owner's Claim and Contractor's Claim), dispute, or other matter in question arising out of or relating to this Contract shall be resolved by the negotiation and arbitration proceedings set forth in this Article.

B. *Negotiation*: The parties shall endeavor to resolve claims, disputes or other matters between them by informal good faith negotiation, which negotiation period shall not exceed thirty (30) calendar days, commencing as of the receipt by either party of the other party's written "Notice to Invoke Dispute Resolution Procedures."

C. *Arbitration*: If the negotiation provided for in Paragraph 12.03.B herein does not result in resolution of the parties' dispute within thirty (30) calendar days of commencement of negotiation, then, unless the parties agree in writing to extend the time for negotiation, either party may invoke arbitration according to the procedures referenced in the Navajo Sovereign Immunity Act, as amended, at 1 N.N.C. §554(J) and §554(K), and in the Navajo Nation Arbitration Act, as amended, at 7 N.N.C. §§1101 et seq. Arbitration shall be conducted under the Commercial Arbitration Rules of the American Arbitration Association, except as such rules are modified by the following:

1. unless otherwise agreed to in writing by the parties, all arbitration proceedings shall be held in Window Rock, Arizona; and

2. the arbitration shall be conducted by a single arbitrator selected by the Owner, unless one of the parties' claims exceeds $1,000,000.00, exclusive of interest, costs, and fees; in such case the arbitration shall be conducted by a panel consisting of three (3) arbitrators, one of which shall be chosen by each party, with the two arbitrators choosing the third; at least one arbitrator shall possess at least ten (10) years of experience in Indian Law; and

3. a Notice of Intent to Invoke Arbitration shall be filed in strict compliance with the notice requirements of the Navajo Sovereign Immunity Act, at 1 N.N.C. §555; and

4. whether as a result of an arbitration provided for herein or of any judicial action to enforce an arbitration award resulting from such arbitration, any award against the Owner shall be in strict conformance with the provisions of 1 N.N.C. §554(K) 1-6; and

5. whether in the context of an arbitration provided for herein or any judicial action to enforce an arbitration award resulting from arbitration, Navajo Nation laws and regulations shall exclusively govern the interpretation of this Contract, the arbitration provisions herein, the arbitration procedures conducted pursuant thereto, and the application of all provisions of the Contract to the Contractor, except if no Navajo Nation law or regulation governs a particular issue in dispute the applicable laws of the state of primary performance under the Contract shall govern that particular issue only; and

6. pursuant to 1 N.N.C. § 554(J)-(K) and 7 N.N.C. §1102, the appropriate Navajo Nation district court shall have exclusive jurisdiction to compel the Owner's participation in an arbitration, and shall have exclusive jurisdiction to enforce, modify, or vacate an

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

arbitration award resulting from such arbitration; neither party may recover from the other any attorney fees or costs.

D. *Waiver of Suit*: The negotiation and arbitration provisions herein shall constitute the sole and exclusive procedural remedy to any dispute or controversy arising from this Contract. Commencement of negotiation or arbitration shall be a complete defense to any suit, claim, action or proceeding in any federal, state, or tribal judicial or administrative tribunal, with respect to any dispute or controversy arising out of this Contract.

E. *Post-termination; Post-expiration*: Regarding any dispute arising from this Contract, the dispute resolution procedures set forth herein shall survive the termination or expiration of this Contract.

F. *Challenges limited*: By entering into this Contract, the Contractor expressly covenants and agrees that it shall not contest or challenge the territorial, administrative, legislative, executive or judicial jurisdiction of the Navajo Nation on the basis that such jurisdiction is inconsistent with the status of the Navajo Nation as an Indian tribal Nation, or that the Navajo Nation government is not a government of general jurisdiction, or that the Navajo Nation government does not possess full police power (i.e., the power to legislate and regulate for the public's general health and welfare) over all lands, persons, activities, transactions, or occurrences within its territorial boundaries, or on any other basis not generally applicable in a similar challenge to the jurisdiction of a state government.

G. *Partial Approval*: If the party receiving a claim approves the claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 12.

12.04 *Navajo Nation Department of Justice Approval*

A. Pursuant to 1 N.N.C. §554(J)(2) and (K)(2), Navajo Nation Department of Justice approval is required for all agreements that include a limited waiver of sovereign immunity to compel or enforce arbitration under the Navajo Nation Arbitration Act, as amended, 7 N.N.C. §1101 *et seq*. The previous sentence and the Navajo Nation Department of Justice's signature are required on the signature page of C-520.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue.

B. *Costs Excluded*: The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

C. *Contractor's Fee*: When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Contract. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

D. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

E. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.02 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Contract.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following subsection.

E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Contract;

2. there is no corresponding adjustment with respect to any other item of Work; and

3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

14.05 *Uncovering Work*

A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.02. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*:

1. At least 20 days before the date established in the Contract for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Contract.

C. *Review of Applications*:

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.02, and any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

a. the Work is defective, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*:

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*:

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. the Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. the Contract Price has been reduced by Change Orders;

i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;

j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

l. there are other items entitling Owner to a set off against the amount recommended.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Contract.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases, Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.

2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.02 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

15.06 *Final Payment*

A. *Application for Payment*:

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents;

   b. consent of the surety, if any, to final payment;

   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

   d. a list of all disputes that Contractor believes are unsettled; and

   e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Application and Acceptance*:

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.06.F. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

C. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.

D. *Payment Becomes Due*: Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

E. *Submittal of Invoices & Work Product*: Copies of all work product documents, reports, photographs, drawings, schematics, related correspondence, invoices, and other information or documents regarding the Project shall be provided to the Owner's Representative no later than thirty (30) calendar days following the expiration or termination of this Contract. Final invoice(s) shall be due no later than thirty (30) calendar days following the expiration or termination of this Contract.

F. Waiver of Claims

1. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.

2. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 12.03.

15.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such other adjacent areas;

2. correct such defective Work;

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

16.05 *Additional Rights of Navajo Nation to Suspend or Terminate*

A. Generally: The rights of the Parties to suspend or terminate this Contract shall be as provided for in this Section. In addition, upon prior written notice to the Contractor of not less than thirty (30) calendar days, the Navajo Nation may unilaterally order a temporary stoppage of work on the Contract. Additional payment to the Contractor for such change, if any, shall be in accordance with Article 11 herein.

B. Non-compliance or violation of laws: In addition to the Navajo Nation's right of suspension and termination provided for in this Section, the Navajo Nation may terminate this Contract for breach if the Nation's Representative determines in writing that the Contractor or any of its subcontractors has violated any applicable law or regulation. For purposes of this Article, "violated" means an intentional or negligent failure to comply with any said law or regulation, or an intentional or negligent act that is inconsistent with any said law or regulation; "applicable law or regulation" means any Navajo Nation law or regulation, any federal law or regulation, or any state law or regulation that is applicable to this Contract, to its award or procurement, or to Contractor's performance under this Contract.

C. Falsification, Lack of Documentation: The Navajo Nation may terminate this Contract for breach if:

1. any statement or documentation regarding any licensing, business registration, insurance coverage, or debts owed, as described in Paragraphs 2.01, 2.02 and 6.0, herein is determined to be false; or

2. Contractor has failed to submit in a timely manner any requested documentation pertaining to any licensing, business registration, insurance coverage, or debts owed, as described in Paragraphs 2.01, 2.02 and 6.0 herein, and the Nation's Representative determines that the Navajo Nation is unable to issue a Notice to Proceed, or to otherwise proceed with the Project, in a timely manner.

3. Financial Responsibility, Solvency: The Navajo Nation may terminate this Contract for breach if:

a. any debt as described in Paragraph 2.02 is discovered or arises subsequent to the execution of this Contract; or the required licensing, business registration, or insurance coverage has expired or has been suspended or revoked at any time during the performance of this Contract; or

b. the Contractor becomes insolvent or its insolvency is imminent, or the Contractor files for bankruptcy under any chapter of federal law; or

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

c. the provider of the Contractor's insurance is not solvent or its insolvency is imminent; or

d. the Nation receives notice that the Contractor has failed to pay its subcontractors, employees, suppliers or other ancillary firm(s) for any work on this Project.

D. Debarment; Suspension: The Navajo Nation may terminate this Contract if the Nation or any of its political subdivisions, enterprises, or other related entities, or if any federal or state governmental entity, has for any reason debarred or suspended the Contractor or any of its subcontractors, or other entity owned or co-owned by any related individual. Such debarment or suspension shall be considered effective notwithstanding any appeal, and shall be effective unless and until conclusively resolved in favor of the Contractor or subcontractor.

E. Payment upon termination: In the event of termination under this Paragraph 16.05, the Contractor shall be reimbursed only for the reasonable value of any non-recurring costs incurred on account of work performed or services provided under this Contract up to the date of notification of termination, whether or not invoice(s), billing(s), or payment application(s) have been received by the Navajo Nation for such work or services prior to the date of cancellation, except for costs amortized in the price of such work or services.

ARTICLE 17 – MISCELLANEOUS

17.01 *Miscellaneous Provisions*

A. Requests for Information: When requested by the Owner, Contractor shall submit, within fourteen (14) calendar days of the Owner's notice to Contractor of such request, proper verification of invoices, pay applications, reports, documents or any other information related to the Project or any provision of this Contract, or related to the Contractor's duties under this Contract, including requested information related to any entity which may owe the Nation money as provided in 12 N.N.C. § 1503 A.

B. Owner’s Ownership of Work Product: All raw or manufactured materials, supplies, or equipment purchased specifically for the purpose of incorporation into or use with the Project or any portion thereof, shall be considered the property of the Owner as of the date of purchase. Notwithstanding, the Contractor assumes all risks and liabilities associated with the acquisition, transportation, delivery, storage, use, disposal, or destruction of such materials, supplies, or equipment, whether occurring at the Project site or at any other location; and such risks and liabilities are assumed by the Contractor up to the effective date and time of the Owner's property insurance coverage for the Project.

C. Records; Audits

1. Retention and audit period: Pursuant to 12 N.N.C. §352, Contractor shall maintain books, records, documents or other materials related to performance under this Contract for a period of six (6) calendar years from the date of issuance of final payment under this Contract. Upon issuance of a Notice of Audit to Contractor, the Owner may audit such documents and records any time during the effective period of this Contract, up to the five (5) calendar year period following final payment.

2. Permission for release: Contractor agrees to have an authorized individual execute and have notarized a release authorizing the Owner to release the Contractor’s ledgers, books, records, documents or other materials related to performance under this Contract, as such information may be required by a governmental agency under

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

an agreement with the Owner for purposes of an audit by such agency of such documents and records. Contractor agrees that said executed release shall constitute permission for disclosure of information pursuant to 2 N.N.C. §85 A.5.d. and 2 N.N.C. §86 C.

D. Issuance of Notices; Mailings: Any notices or correspondence relating to this Contract sent by either party to the other shall be deemed to have been validly given if:

1. Mailed to the appropriate address as shown on the signature page of EJCDC C-520, via certified U.S.P.O. mailing with return receipt requested, and shall be deemed issued or submitted to the receiving party as of the date of such certified mailing; or

2. Delivered in person, by a commercial courier service or otherwise, to the appropriate individual as listed in the Contract Documents or their authorized representative.

E. Private Contractor: The Contractor shall perform and conduct all activities under this Contract as a private independent contractor and shall not be considered an employee of the Owner or receive any benefits to which the Owner's employees are entitled.

F. No Third Party Beneficiaries: Notwithstanding any provision of Navajo Nation law, codified or uncodified, or any Navajo Nation common or fundamental law, no provision of this Contract shall be construed as conferring any rights to, and may not be invoked by or for the benefit of, any other person or entity that is not one of the signatory Parties hereto.

G. Assignment Restricted: The Contractor shall not in any manner whatsoever assign, convey, transfer, or sublet any rights to this Contract or any interest therein including any amendments or modifications thereto, any work product resulting from the work performed or services provided under this Contract including any amendments or modifications thereto, or any monetary claims against the Owner relating to this Contract or any amendments or modifications thereto, without the prior written consent of the Owner. Any attempted assignment without such prior consent shall be void; said consent may be granted, granted upon conditions, or withheld, at the Owner's sole discretion.

H. Severability: If any provision of this Contract is determined by a court of competent jurisdiction, or by a ruling resulting from arbitration procedures provided for in Article 12, to be invalid, illegal or incapable of being enforced under any rule of law, all other conditions and provisions of this Contract shall nevertheless remain in full force and effect. If any such a ruling affects the rights of either party under this Contract in a materially adverse manner, the Parties may agree in writing to execute a Change Order in accordance with Article 11 herein.

I. Partners, Successors, Subcontractors: All provisions, conditions and covenants contained herein shall extend to and be binding upon each of the Contractor's owners, partners, team members, successors, heirs, assigns, executors, administrators, employees, officials and agents, including all of the Contractor's subcontractors, and the Contractor expressly agrees that the term "Contractor" whenever used herein, or in any other Contract document, shall be deemed to include all such owners, partners, team members, successors, heirs, assigns, executors, administrators, employees, designees, consultants, officials, agents, and subcontractors. All provisions, conditions and covenants contained herein shall extend to and be binding upon each of the Contractor's owners, partners, team members, successors, heirs, assigns, executors, administrators, employees, officials and agents, including all of the Contractor's subcontractors, and the Contractor expressly agrees that the term "Contractor" whenever used herein, or in any other Contract document, shall be deemed to include all such owners, partners, team members,

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

successors, heirs, assigns, executors, administrators, employees, designees, consultants, officials, agents, and subcontractors.

J. Right to Refuse Contract: The Owner reserves its right to refuse to execute this Contract if the Navajo Nation issues a written determination that any of the following has occurred prior to the Owner's execution of this Contract:

1. faulty procurement; a document, procedure, decision, action, or other event pertaining to the procurement of this Contract, or to any related pre-procurement activities, is in violation of any applicable Navajo Nation, federal, or state laws or regulations governing said procurement; or

2. ancillary firm(s); an ancillary firm is ineligible for the award of this Contract or is unavailable to perform on the Project, for any reason; in such case, the Navajo Nation may, in its discretion, either (1) reject the selected Proposal containing the ancillary firm's qualifications and refuse to execute this Contract; or (2) decide not to reject the Proposal and consider only the license and relevant qualifications of the Contractor standing alone; or (3) decide not to reject the Proposal and permit another equally/more qualified firm to perform those Contract services that would have been performed by the ineligible or unavailable firm; or

3. lack of funding availability; funding for the Scope of Work, as specifically described in the Project Manual or any addenda, has become wholly or partially unavailable; in which case the Project Manual for this Project shall be cancelled in accordance with Section XIII(B) of the Navajo Nation Procurement Rules and Regulations, and this Contract shall not be executed until completion of a new procurement process for this Project; or

4. change to Scope of Work or other requirements; there has been a change to the Scope of Work or any other mandatory requirement, as specifically described in the Project Manual or any addenda; in which case additional procedures under Section XIII(A) of the Navajo Nation Procurement Rules and Regulations shall be required and this Contract shall not be executed until the completion of such procedures; or

5. change to Budget/Maximum Feasible Price; there has been a revision (whether increase or decrease) of the Maximum Feasible Price that was originally established by the Navajo Nation prior to the initiation of the procurement process for this Contract; in which case additional procedures under Section XIII(A) of the Navajo Nation Procurement Rules and Regulations shall be required and this Contract shall not be executed until the completion of such procedures; or

6. protest filed; a protest has been timely filed in accordance with 12 N.N.C. §360(A), unless a determination has been made to proceed with a Contract award pursuant to 12 N.N.C. §360(F); or

7. other reasons cited in Regulations; any of the following pertains to this procurement:

   a. inadequate or ambiguous specifications were cited in the Project Manual;

   b. the services contemplated under this Contract are no longer required;

   c. the Project Manual did not provide for consideration of all factors of cost to the Navajo Nation

   d. all Bids received indicate that the needs of the Navajo Nation can be satisfied by a less expensive service differing from that described in the Project Manual;

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

e. all Bids received exceed the Maximum Feasible Price after opportunity for negotiation pursuant to 12 N.N.C. §346(D);

f. the selected Bidder was collusive, contained fraudulent statements or information, contained any material misrepresentation, or was submitted in bad faith;

g. cancellation of the Bid process and refusal to enter into this Contract is in the best interest of the Navajo Nation.

17.02 *No Waiver*

A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

17.03 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions and Navajo Nation Supplemental Conditions.

Copyright © 2013 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

WORK CHANGE DIRECTIVE NO. ____

Date of Issuance:	Effective Date:
Owner: **Navajo Nation**	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer: **Souder, Miller & Associates**	Engineer's Project No.: **6921307**
Project: **Navajo Gallup Water Supply Project Reaches 26.1 & 26.2**	Contract Name: **Navajo Gallup Water Supply Project Reaches 26.1 & 26.2**

Contractor is directed to proceed promptly with the following change(s):

Description:

Attachments: *[List documents supporting change]*

Purpose for Work Change Directive:

Directive to proceed promptly with the Work described herein, prior to agreeing to changes on Contract Price and Contract Time, is issued due to: *[check one or both of the following]*

☐ Non-agreement on pricing of proposed change.

☐ Necessity to proceed for schedule or other Project reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price $ _____ [increase] [decrease].

Contract Time _____ days [increase] [decrease].

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price

☐ Cost of the Work ☐ Other

RECOMMENDED:	AUTHORIZED BY:	RECEIVED:
By: _____	By: _____	By: _____
Engineer (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: _____ Date: _____

Title: _____

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

CHANGE ORDER NO. ____

Date of Issuance:	Effective Date:
Owner: **Navajo Nation**	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer: **Souder, Miller & Associates**	Engineer's Project No.: **6921307**
Project: **Navajo Gallup Water Supply Project Reaches 26.1 & 26.2**	Contract Name: **Navajo Gallup Water Supply Project Reaches 26.1 &26.2**

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments: *[List documents supporting change]*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES *[note changes in Milestones if applicable]*
Original Contract Price: $_____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: $_____	[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: $_____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: $_____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: $_____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____	By: _____	By: _____
Engineer (if required)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Title: _____	Title _____	Title _____
Date: _____	Date _____	Date _____

Approved by Funding Agency (if applicable)

By: _____ Date: _____

Title: _____

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

FIELD ORDER NO. ____

Date of Issuance:	Effective Date:
Owner: **Navajo Nation**	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer: **Souder, Miller & Associates**	Engineer's Project No.: **6921307**
Project: **Navajo Gallup Water Supply Project Reaches 26.1 & 26.2**	Contract Name: **Navajo Gallup Water Supply Project Reaches 26.1 & 26.2**

Contractor is hereby directed to promptly execute this Field Order, issued in accordance with General Conditions Paragraph 11.01, without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference: _____ (Specification(s)) _____ (Drawing(s) / Detail(s))

Description:

Attachments:

ISSUED:	RECEIVED:
By: _____	By: _____
Engineer (Authorized Signature)	Contractor (Authorized Signature)
Title: _____	Title: _____
Date: _____	Date: _____

Copy to: Owner

APPENDIX A

Navajo Nation Forms

- Navajo Nation Certification Regarding Debarment and Suspension
- Affidavit of Responsibility for Subcontractors
- Affidavit of Non-Collusion

NAVAJO NATION CERTIFICATION
Regarding Debarment and
Suspension

Consultant acknowledges that to the best of his knowledge that his company and principal participants on this contract:

1. **Are not debarred, suspended, or otherwise slated for debarment, ineligible and/or excluded from participation on Federal, State and Tribal Government contracts etc.**

2. **Are not presently nor have been under criminal indictment or civilly charged by a governmental entity (Federal, State, and Tribal Government) for fraud, forgery, falsification, theft, bribery, destruction of records, receiving stolen property and other criminal offenses in the administration of a government contract.**

3. **Have not been terminated for cause or convenience by a governmental entity in the administration of a government contract (Federal, State, and Tribal Government).**

4. **If the Navajo Nation determines that the Certificate provided herein is not true, it will be grounds to terminate the contract and pursue other legal remedies.**

Applicant's Company and Address:

_____

_____

_____

Name & Signature of Signatory

Name:_____

_____

Signature Date

AFFIDAVIT OF RESPONSIBILITY FOR SUBCONTRACTORS

for _____ services for the _____ Project
architectural, engineering, design-build, construction, etc. description of project

located in the _____ Chapter of the Navajo Nation

State of _____) ss.

County of _____)

Affiant: _____, being first duly sworn, hereby deposes and says:

1. that he/she is the _____ of _____, the Business Entity
   owner, partner, officer, representative, agent company, firm, partnership, etc.
   that has submitted/is submitting to the Navajo Nation a Proposal or Statement of Qualifications (SOQ) or Bid for the above-named Project;
2. that he/she is authorized to represent said Business Entity for purposes of the declarations set forth herein, and that all such declarations are made on behalf of said Entity and all of its owners, partners, officers, members, employees, officials, agents, or parties-in-interest;
3. that, as of the date of signature below, said Entity intends to use the subcontractors listed on "Exhibit A" attached hereto, for the above-named Project;
4. that none of the subcontractors so listed are debarred, suspended, or otherwise ineligible to receive a contract from the Federal Government, any State Government, the Navajo Nation, or from any other Tribal Government in the United States;
5. that none of the subcontractors listed are the subject of any imminent debarment, suspension, or other determination of ineligibility from the Federal, any State, Navajo Nation, or other Tribal Government;
6. no subcontractors are currently, or have been within the past ten (10) years, under any criminal indictment or under any civil complaint or charge by the Federal, any State, Navajo Nation, or other Tribal Government, for fraudulent activities, forgery, falsification, theft, bribery, destruction of records, obstruction of justice, receiving stolen property, or other offense related to the receipt or administration of a government contract;
7. no subcontractors have had a contract with such Government terminated, either for cause or convenience;
8. that the Entity named in Line 1 herein shall assume all legal responsibility for the work of all such subcontractors on the Project, and shall perform all subcontractors' duties as necessary, or shall replace any subcontractor as necessary, in order to guarantee successful completion of all Contract duties for the Project;
9. that all statements set forth herein, and in said Proposal/SOQ/Bid submitted to the Navajo Nation, are true.

Affiant acknowledges and agrees that, if any statement herein is determined to be false or misleading, such will be grounds for immediate termination of the subject Contract or Agreement with the Navajo Nation, and that the Navajo Nation may pursue appropriate legal remedies related to such termination and any false or misleading statements.

Signature of Affiant: _____
printed Name of Affiant: _____
Title of Affiant: _____
Name of Business Entity: _____
_____
Type of Entity (LLC, Partnership, etc.):_____
Address of Business Entity: _____
_____
Business Entity's EIN: _____

NOTARY:

Subscribed and sworn to before me this _____ day of _____, 20____.

Notary Signature _____

My commission expires _____, 20____.

AFFIDAVIT OF NON-COLLUSION

for _____ services for the _____ Project
(architectural, engineering, design-build, construction, etc.) (description of project)

located in the _____ Chapter of the Navajo Nation

State of _____) ss.

County of _____) Ramah Navajo Mountain View Water Improvements

Affiant: _____, being first duly sworn, hereby deposes and says:

1. that he/she is the _____ of _____, the Business Entity
(owner, partner, officer, representative, agent) (company, firm, partnership, etc.)
that has submitted/is submitting to the Navajo Nation a Proposal or Statement of Qualifications (SOQ) or Bid for the above-named Project;
2. that Affiant is fully informed with respect to the preparation and contents of the Proposal/SOQ/Bid submitted by said Business Entity for the above-named Project, and with respect to all pertinent circumstances regarding the submission of said Proposal/SOQ/Bid to the Navajo Nation;
3. that he/she is authorized to represent said Business Entity for purposes of the declarations set forth herein, and that all such declarations are made on behalf of said Entity and all of its owners, partners, officers, members, employees, officials, agents, or parties-in-interest;
4. that said proposal/SOQ/bid is genuine and not collusive or sham;
5. that said Entity has not in any manner colluded, conspired, connived, or agreed, directly or indirectly, with any other entity, bidder, or person, to submit a sham Proposal/SOQ/Bid to the Navajo Nation in connection with the proposed Contract for which said Proposal/SOQ/Bid was submitted, or to refrain from submitting a Proposal/SOQ/Bid to the Navajo Nation in connection with the proposed Contract;
6. that said Entity has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any other entity, bidder, or person, to fix any price or fee relating to any Proposal/SOQ/Bid of Entity or of any other entity, bidder, or person, or to fix any price, overhead, profit, reimbursement, or cost element of said Proposal/SOQ/Bid, or of that of any other entity, bidder, or person;
7. that said Entity has not -through any collusion, conspiracy, connivance, or unlawful written or oral agreement- secured any advantage against the Navajo Nation or against any other entity, bidder or person interested in the proposed Contract for the above-named Project;
8. that all statements set forth herein, and in said Proposal/SOQ/Bid submitted to the Navajo Nation, are true.

signature of Affiant: _____

printed name of Affiant: _____

title of Affiant: _____

name of Business Entity: _____

_____

type of Entity (LLC, Partnership, etc.):_____

address of Business Entity: _____

_____

_____

Business Entity's EIN: _____

NOTARY:

Subscribed and sworn to before me this _____ day of _____, 20____.

Notary Signature _____

My commission expires _____, 20____.

APPENDIX B

Office of Navajo Labor Relations
Minimum Wage Rate
Determinations and Requirements

THE NAVAJO NATION

RUSSELL BEGAYE PRESIDENT
JONATHAN NEZ VICE PRESIDENT

October 19, 2017

AD18-070

Jason John, Branch Director
NAVAJO DEPARTMENT OF WATER RESOURCES
Post Office Box 678
Fort Defiance, Arizona 86504

RE: NAVAJO GALLUP WATER SUPPLY PROJECT REACHES 26.1 & 26.2

Dear Mr. John:

The Office of Navajo Labor Relations (ONLR) received your request for prevailing wage rates for the above reference project. Please find attached the ONLR wage rates which are applicable to the pipeline construction project.

Pursuant to the NPEA Section 607(B)(1) "...In all cases where construction is contemplated for which prevailing wage rates have not been set, the contract letting entity shall submit to ONLR a written request for a project prevailing wage scale. Such request shall be submitted not less than 60 days prior to the scheduled date for bid solicitation and shall include detailed information on the anticipated construction classifications, nature' of the project and completion plans...."

The ONLR respectfully requests that Navajo Department of Water Resources review the requirements of the Navajo Preference in Employment Act (NPEA) before any work begins. If a Pre-Construction Conference is scheduled, the ONLR Office at (928) 871-6800 is to be notified and a representative will explain the applicable laws to the general contractor and subcontractors, where necessary.

Should you have any questions, contact our office at (928) 871-6800. Thank You.

Sincerely,

Michael Armijo

Michael Armijo, CEA
OFFICE OF NAVAJO LABOR RELATIONS

ATTACHMENTS

OFFICE OF NAVAJO LABOR RELATIONS
PREVAILING WAGE

Wage Decision Number: ONLR17-0343P
Date Issued: October 19, 2017

PIPELINE CONSTRUCTION

Pipeline Construction includes the construction, demolition, rehabilitation or repairs of gas, oil and water pipelines, gas and oil pumping stations and compressor stations work.

NAVAJO GALLUP WATER SUPPLY PROJECT REACHES 26.1 & 26.2
NAVAJO DEPARTMENT OF WATER RESOURCES

Effective January 1, 2017

Trade Classifications:	Hourly Rate:
Carpenter	$ 21.96
Electrician	$ 19.71
Grouting Technician	$ 20.15
Insulator	$ 19.31
Ironworker	$ 20.63
Laborer	$ 16.50
Painter	$ 17.03
Plumber/Pipefitter	$ 21.39
Sheet Metal Worker	$ 20.91
Welder	$ 32.15
Rig time will be determined between Employer and Employee(s) at time of need.	
Welder's Helper	$ 21.15
Truck Drivers:	**Hourly Rate:**
Truck/Trailer	$ 18.00
Equipment Operators:	**Hourly Rate:**
Backhoe	$ 19.00
Boom	$ 25.96
Bulldozer	$ 19.59
Crane	$ 21.23
Forklift	$ 18.83
Front End Loader	$ 19.15
Motor Grader	$ 20.00
Track Hoe	$ 21.00

Trencher	$ 20.00

The rates listed above are required minimum ONLR Prevailing Wage Rates. Contractors may pay rates above these rates. The ONLR Director will add wage rates for unlisted classifications needed for work only after review and approval. Overtime is one and one - half time the basic rate for hours worked over forty hours in one week. Foremen will receive an additional $4.00 per hour. **Where Federal Funds are involved, the Davis-Bacon rates apply.** Other exceptions may apply in accordance with the *Navajo Preference in Employment Act (NPEA)*, Section 7(E). Apprentices must be enrolled in a recognized apprenticeship program as required by Section 7(A)(6) of the NPEA. The appropriate apprenticeship program as outlined by the NPEA Section 7(E)(7) will govern wage rates for such apprentices. These wages apply only to the **NAVAJO GALLUP WATER SUPPLY PROJECT REACHES 26.1 & 26.2** construction projects.

APPROVED:

Michael Armijo

Michael Armijo, CEA

10/19/2017

Date

REVISED 1/1/2017 marmijo

Office of Navajo Labor Relations
Pre-construction Conference Presentation

Office of Navajo Labor Relations
Pre-construction Conference Presentation

Many questions do arise when ONLR conducts an orientation, and some presenters will allow participants to ask questions only until the presentation is completed. However, in my presentation, you may pose a question for clarification at any time, which will enable you to comprehend and fully comply with the requirements of the Navajo Preference in Employment Act with respect to this project.

Office of Navajo Labor Relations

- Is mandated to monitor and enforce the Navajo Preference in Employment Act;
- is responsible for implementing and carrying out the labor policies of the Navajo Nation;
- Acts as an administrative agency for matters relating to employment;
- Gathers information relating to employment; and
- Recommends and proposes policies, rules, regulations, and specific Navajo preference plans to the Human Services Committee of the Navajo Nation Council

Office of Navajo Labor Relations

- Administration: 928.871.6800
- Fort Defiance Agency: 928.871.7429
- Eastern Agency: 928.871.7431
- Central Agency: 928.674.2214
- Northern Agency: 505.368.1142
- Tuba City Agency: 928.283.3100
- Kayenta Agency: 928.697.5645

Navajo Preference in Employment Act with respect to jurisdiction

- All employers doing business within the Navajo Nation or having a contract with the Navajo Nation are required to fully abide by the Navajo Preference in Employment Act
- Within the Navajo Nation there are various employers e.g. the Navajo Nation Government; Navajo Nation Entities (NTUA, NHA etc.); and private employers (Mining Companies, Construction Contractors, etc.).
- Employers in communities outside the Navajo Nation that are dependent on the Navajo Nation for services e.g. Fire Dept, Police Dept, etc.

Contractors' Responsibilities

- Comply with each provision of the Navajo Preference in Employment Act
- Give preference in employment to enrolled members of the Navajo Nation
- Compensate its workers in accordance with the project's established wage rates
- Submit information and/or documents to the ONLR
- Note that the Prime Contractor is responsible for all its subcontractors

Give preference in employment to enrolled members of the Navajo Nation

- Utilize Navajo Nation employment sources and job services for recruitment and referrals of enrolled members of the Navajo Nation (Section 4.B)
- Advertise all vacancies in one newspaper covering the Navajo Nation (Section 4.B.);
- Advertise all vacancies in one radio station covering the Navajo Nation (Section 4.B.);
- Specify a Navajo employment preference policy statement in all job announcements and advertisements (Section 4.B.);

Compliance with the Navajo Preference in Employment Act

- Post in a conspicuous place on its premises for its employees and applicants a Navajo preference policy notice (Section 4.B);
- Use non-discriminatory job qualifications and selection criteria in employment (Section 4.B);
- Not penalize, discipline, discharge not take any adverse action against any employee without just cause (Section 4.B);
- Issue a written notification to the employee for any and all actions e.g. employment termination taken against the employee (Section 4.B);

Compliance with the Navajo Preference in Employment Act

- Maintain a safe and clean working environment and provide employment conditions which are free of prejudice, intimidation and/or harassment (Section 4.B)
- Establish written necessary qualifications for each employment position to be utilized on the project; (Section 4.D);
- Provide to applicants and or candidates a copy of the written necessary qualifications at the time they express an interest in such position (Section 4.D);
- Post in a conspicuous place on its premises a copy of the Project Wage Determination (Section 4.B);

Compensate its employees in accordance with the established Project Wage Determination

- Federally Funded Projects – Davis Bacon Wage Determination;
- State Funded Projects – State Wage Determination;
- Privately Funded Projects – Navajo Nation Wage Determination; and
- Navajo Nation Funded Projects – Navajo Nation Wage Determination.

Compliance with the Navajo Preference in Employment Act

- Irrespective of the qualification of any non-Navajo applicant or candidate, any Navajo applicant or candidate who demonstrates the necessary qualifications for an employment position: 1.) shall be selected by the employer in the case of hiring, promotion, transfer, upgrading, recall and other employment opportunities with respect to such position; and 2.) shall be retained by the employer in the case of a reduction-in-force affecting such class of positions until all non-Navajos employed in that class of positions are laid-off
- Among a pool of applicants or candidates who are solely Navajo and meet the necessary qualifications, the Navajo with the best qualifications shall be selected or retained.

Give preference in employment to enrolled members of the Navajo Nation

- 1st preference: enrolled members of the Navajo Nation (census number)
- 2nd preference: non-Navajo spouses (a non-Navajo who is legally married to a Navajo by proof of marriage by a valid marriage certificate and who has resided within the territorial jurisdiction of the Navajo Nation for one continuous year preceding the application for Navajo preference consideration)
- 3rd preference: all others

Submit required information and/or documents to ONLR

(Note: The Prime Contractor shall be responsible for each of their subcontractor's submittals)

- List of Key personnel – Project Manager, Project Superintendent, and/or an individual with signatory authority, including telephone number, e-mail address, etc.
- Manpower Projection Report – must be submitted by each contractor two weeks prior to commencing work on project;
- Weekly Manpower Report – must be submitted on a weekly basis (all subcontractors will forward to prime contractor, who will then forward reports, as a package, for that week to ONLR);
- Certified Payroll Report – shall be attached to the Weekly Manpower Report;
- Project Completion Report – must be submitted two week prior to ending work on the project;

Submit required information and/or documents to ONLR

- Copies of advertisements (radio and newspaper covering the Navajo Nation)*
- Copy of job orders / request for referrals submitted to employment agencies covering the Navajo Nation*
- Job Descriptions – for each position to be utilized on the project, which shall include necessary qualifications and the duties & responsibilities for the position;*
- Employer Interview Report – name of applicant, date of interview, interviewer, hired/not hired (reasons)*
- Subcontractor listing – name and address of contact person, phone number, brief description of work to be performed and duration of subcontract work*;

(* Shall be submitted with 1st WMR/CPR)

Submit required information and/or documents to ONLR

- Navajo Affirmative Action Plan – Employer commences business within the territorial jurisdiction of the Navajo Nation shall file with ONLR a written Navajo Affirmative Action Plan (prior to commencing work). In any case where a labor organization represents employees of the employer, the plan shall be jointly filed by the employer and labor organization. A copy of the NAAP Regulations in provided in assisting each contractor in submitting a NAAP (Note: **the NAAP shall be submitted two weeks prior to commencing work**; however if it has already been submitted, indicate date & for what project)

Other required information and/or documents

- An employer-sponsored cross-cultural program shall be an essential part of the affirmative actions plans - Such program shall primarily focus on the education of management and supervisory personnel regarding the cultural and religious traditions or beliefs of Navajos and their relationship to the development of employment policies which accommodate such traditions and beliefs.
- Training – shall be an integral part of the specific affirmative action plans or activities for Navajo Preference in employment (Note: This information will be part of the NAAP and shall be submitted by each prime contractor/ subcontractor commencing work on the Navajo Nation)

Clarification Time

- If you have any questions to any of the information presented, now is the time to ask, as you, as employers (contractors) commencing business within the territorial jurisdiction of the Navajo Nation, are required to fully comply with all requirements of the Navajo Preference in Employment Act and shall be accountable for full compliance, including all submittals e.g. advertisements, weekly reports, etc.

Thank You!

Remember!

Do not hesitate to contact

any of our offices should a question arise!

……..<<<<<<>>>>>>……..……

OFFICE OF NAVAJO LABOR RELATIONS
Post Office Box 1943
Window Rock, AZ 86515
928.871.6800/6801

THE NAVAJO PREFERENCE IN EMPLOYMENT ACT

(Amended August 1, 1985)
(Amended October 25, 1990)

The Office of Navajo Labor Relations
The Navajo Nation
P.O. Drawer 1943
Window Rock, Arizona 86515
Phone (928) 871-6800/6801

CO-73-90

Class "C" Resolution
No BIA Action Required.
Executive Branch Action
Necessary

RESOLUTION OF THE
NAVAJO NATION COUNCIL

Amending the Navajo Preference in Employment Act,
Title 15, Chapter 7 of the Navajo Tribal Code

WHEREAS:

1. The Navajo Nation Council is the governing body of the Navajo Nation, 2 N.T.C., Section 102; and

2. The ability of members of the Navajo Nation to secure and retain employment within the territorial jurisdiction implicates the health, safety and welfare of the Nation; and

3. Pursuant to an Executive Order, dated February 24, 1986, the Navajo Labor Investigative Task Force was created to assess and investigate labor issues important to the Nation; and

4. By Executive Order dated November 17, 1989, the Navajo Labor Investigative Task Force was reconstituted and its authority to investigative labor matters pursuant to the 1986 Executive Order was reaffirmed; and

5. During the course of its investigation, the Navajo Labor Investigative Task Force received comments in various forms concerning labor matters as well as company and union officials. The Task Force incorporated its findings into a document, entitled Report to the Navajo Nation Council Regarding the Proposed Amendments to the Navajo Preference in Employment Act. Based on these findings and the comments received from the interested public, the Task Force proposed that the Navajo Preference in Employment Act (15 N.T.C., Section 601, et. seq.) be amended; and

6. The Navajo Labor Investigative Task Force presented its report, minutes of public meetings it conducted and proposed amendments to the Navajo Preference Act to the Human Services Committee of the Navajo Nation Council; and

7. Pursuant to its powers to recommend legislation on labor matters (2 N.T.C., Section 604(b)(3)), the Human Services Committee of the Navajo Nation Council by Resolution HSC-0024-91 dated September 26, 1990, adopted the Report to the Navajo Nation Council Regarding the Proposed Amendments to the Navajo Preference in Employment Act and recommended that the Navajo Nation Council enact into law, the Proposed Amendments to the Navajo Preference in Employment Act. (Resolution attached hereto as Exhibit "A")

NOW THEREFORE BE IT RESOLVED THAT:

The Navajo Nation Council hereby repeals in its entirety, Title 15, Chapter 7 of the Navajo Tribal Code and enacts in its place, the amendments to Title 15, Chapter 7 of the Navajo Tribal Code, attached hereto as Exhibit "B", with the exception of Section 6 (B).

CERTIFICATION

I hereby certify that the foregoing resolution was duly considered by the Navajo Nation Council at a duly called meeting at Window Rock, Navajo Nation (Arizona), at which a quorum was present and that same was passed by a vote of 63 in favor, 0 opposed and 9 abstained, this 25th day of October 1990.

Speaker
Navajo Nation Council

October 29, 1990
Date Signed

ACTION BY THE EXECUTIVE BRANCH

1. Pursuant to 2 N.T.C., Section 1005 (c)(1), I hereby sign into law the foregoing legislation this 5th day of November, 1990:

Leonard Haskie, Interim President
Navajo Nation

* * * *

2. Pursuant to 2 N.T.C., Section 1005 (c)(10), I hereby veto the ~~foregoing~~ legislation this _____ day of _____ 1990 for the reason(s) expressed in the attached letter to the Speaker:

Leonard Haskie, Interim President
Navajo Nation

NAVAJO PREFERENCE IN EMPLOYMENT ACT
AMENDED OCTOBER 1990

Section 1. TITLE

A. This Act shall be cited as the Navajo Preference in Employment Act and is hereby codified as Title 15 Chapter 7 of the Navajo Tribal Code.

Section 2. PURPOSE

A. The purposes of the Navajo Preference in Employment Act are:

1. To provide employment opportunities for the Navajo work force;

2. To provide training for the Navajo people;

3. To promote the economic development of the Navajo Nation;

4. To lessen the Navajo Nation's dependence upon off reservation sources of employment, income, goods and services;

5. To foster the economic self-sufficiency of Navajo families; and

6. To protect the health, safety, and welfare of Navajo workers;

7. To foster cooperative efforts with employers to assure expanded employment opportunities for the Navajo work force.

B. It is the intention of the Navajo Nation that the provisions of this Act be construed and applied to accomplish the purposes set forth above.

Section 3. DEFINITIONS

1. The term "Commission" shall mean the Navajo Nation Labor Commission.

2. The term "employment" shall include, but is not limited to, the recruitment, hiring, promotion, transfer, training, upgrading, reduction-in-force, retention, and recall of employees.

3. The term "employer" shall include all persons, firms, associations, corporations, and the Navajo Nation and all of its agencies and instrumentalities, who engage the services of any person for compensation, whether as employee, agent, or servant.

4. The term "Navajo" means any enrolled member of the Navajo Nation.

5. The term "ONLR" means the Office of Navajo Labor Relations.

6. The term "probable cause" shall mean a reasonable ground for belief in the existence of facts warranting the proceedings complained of.

7. The term "territorial jurisdiction" means the territorial jurisdiction of the Navajo Nation as defined in 7 NTC §254.

8. The term "counsel" or "legal counsel" shall mean (a) a person who is an active member in good standing of the Navajo Nation Bar Association and duly authorized to practice law in the courts of the Navajo Nation; and (b) for the sole purpose of co-counselling in association with a person described in clause (a), an attorney duly authorized, currently licensed and in good standing to practice law in any State of the United States who has, pursuant to written request demonstrating the foregoing qualifications and good cause, obtained written approval of the Commission to appear and participate as co-counsel in a particular Commission proceeding.

9. The term "necessary qualifications" shall mean those job-related qualifications which are essential to the performance of the basic responsibilities designated for each employment position, including any essential qualifications concerning education, training and job-related experience, but excluding any qualifications relating to ability or aptitude to perform responsibilities in other employment positions. Demonstrated ability to perform essential and basic responsibilities shall be deemed satisfaction of necessary qualifications.

10. The term "qualifications" shall include the ability to speak and/or understand the Navajo language, and familiarity with Navajo culture, customs and traditions.

11. The term "person" shall include individuals; labor organizations; tribal, federal, state and local governments, their agencies, subdivisions, instrumentalities and enterprises; and private and public, profit and non-profit, entities of all kinds having recognized legal capacity or authority to act, whether organized as corporations, partnerships, associations, committees or in any other form.

12. The term "employee" means an individual employed by an employer.

13. The term "employment agency" means a person regularly undertaking, with or without compensation, to procure employees for an employer or to obtain for employees opportunities to work for an employer.

14. The term "labor organization" or "union" means an organization in which employees participate or by which employees are represented and which exists for the purpose, in whole or in part, of dealing with employers concerning grievances, labor disputes, wages, rates of pay, hours or other terms and conditions of employment, including a national or international labor organization and any subordinate conference, general committee, joint or system board, or joint council.

15. The term "petitioner" means a person who files a complaint seeking to initiate a Commission proceeding under the Act.

16. The term "respondent" means the person against whom a complaint is filed by a petitioner.

17. The term "Act" means the Navajo Preference in Employment Act.

Section 4. NAVAJO EMPLOYMENT PREFERENCE

A. All employers doing business within the territorial jurisdiction of the Navajo Nation, or engaged in any contract with the Navajo Nation shall:

1. Give preference in employment to Navajos. Preference in employment shall include specific Navajo affirmative action plans and timetables for all phases of employment to achieve the tribal goal of employing Navajos in all job classifications including supervisory and management positions.

2. Within 90 days after the later of the effective date of this Section 4(A)(2) or the date on which an employer commences business within the territorial jurisdiction of the Navajo Nation, the employer shall file with ONLR a written Navajo affirmative action plan which complies with this Section and other provisions of the Act. In any case where a labor organization represents employees of the employer, the plan shall be jointly filed by the employer and labor organization. Any such associated labor organization shall have obligations under this Section equivalent to those of the employer as to employees represented by such organization. Failure to file such a plan within the prescribed time limit, submission of a plan which does not comply with the requirements of the Act, or failing to implement or comply with the terms of a conforming plan shall constitute a violation of the Act. In the event of a required joint plan by an employer and associated labor organization, only the non-complying party shall be deemed in violation of the Act, as long as the other party has demonstrated a willingness and commitment to comply with the Act.

3. Subject to the availability of adequate resources, ONLR shall provide reasonable guidance and assistance to employers and associated labor organizations in connection with the development and implementation of a Navajo affirmative action plan. Upon request, ONLR shall either approve or disapprove any plan, in whole or in part. In the event of approval thereof by ONLR, no Charge shall be filed hereunder with respect to alleged unlawful provisions or omissions in the plan, except upon 30 days prior written notice to the employer and any associated labor organization to enable voluntary correction of any stated deficiencies in such plan. No Charge shall be filed against an employer and any associated labor organization for submitting a non-conforming plan, except upon 30 days prior notice by ONLR identifying deficiencies in the plan which require correction.

B. Specific Requirements for Navajo Preference

1. All employers shall include and specify a Navajo employment preference policy statement in all job announcements and advertisements and employer policies covered by this Act.

2. All employers shall post in a conspicuous place on its premises for its employees and applicants a Navajo preference policy notice prepared by ONLR.

3. Any seniority system of an employer shall be subject to this Act and all other labor laws of the Navajo Nation. Such a seniority system shall not operate to defeat nor prevent the application of the Act; provided, however, that nothing in this Act shall be interpreted as invalidating an otherwise lawful and bona fide seniority system which is used as a selection or retention criterion with respect to any employment opportunity where the pool of applicants or candidates is exclusively composed of Navajos or non-Navajos.

4. The Navajo Nation when contracting with the federal or state government or one of its entities shall include provisions for Navajo preference in all phases of employment as provided herein. When contracting with any federal agency, the term Indian preference may be substituted for Navajo preference for federal purposes; provided that any such voluntary substitution shall not be construed as an implicit or express waiver of any provision of the Act nor a concession by the Navajo Nation that this Act is not fully applicable to the federal contract as a matter of law.

5. All employers shall utilize Navajo Nation employment sources and job services for employee recruitment and referrals; provided, however, that employers do not have the foregoing obligations in the event a Navajo is selected for the employment opportunity who is a current employee of the employer.

6. All employers shall advertise and announce all job vacancies in at least one newspaper and radio station serving the Navajo Nation; provided, however, that employers do not have the foregoing obligations in the event a Navajo is selected for the employment opportunity who is a current employee of the employer.

7. All employers shall use non-discriminatory job qualifications and selection criteria in employment.

8. All employers shall not penalize, discipline, discharge nor take any adverse action against any Navajo employee without just cause. A written notification to the employee citing such cause for any of the above actions is required in all cases.

9. All employers shall maintain a safe and clean working environment and provide employment conditions which are free of prejudice, intimidation and harassment.

10. Training shall be an integral part of the specific affirmative action plans or activities for Navajo preference in employment.

11. An employer-sponsored cross-cultural program shall be an essential part of the affirmative action plans required under the Act. Such program shall primarily focus on the education of non-Navajo employees, including management and supervisory personnel, regarding the cultural and religious traditions or beliefs of Navajos and their relationship to the development of employment policies which accommodate such traditions and beliefs. The cross-cultural program shall be developed and implemented through a process which involves the substantial and continuing participation of an employer's Navajo employees, or representative Navajo employees.

12. No fringe benefit plan addressing medical or other benefits, sick leave program or any other personnel policy of an employer, including policies jointly maintained by an employer and associated labor organization, shall discriminate against Navajos in terms or coverage as a result of Navajo cultural or religious traditions or beliefs. To the maximum extent feasible, all of the foregoing policies shall accommodate and recognize in coverage such Navajo traditions and beliefs.

C. Irrespective of the qualifications of any non-Navajo applicant or candidate, any Navajo applicant or candidate who demonstrates the necessary qualifications for an employment position:

1. Shall be selected by the employer in the case of hiring, promotion, transfer, upgrading, recall and other employment opportunities with respect to such position; and

2. Shall be retained by the employer in the case of a reduction-in-force affecting such class of positions until all non-Navajos employed in that class of positions are laid-off, provided that any Navajo who is laid-off in compliance with this provision shall have the right to displace a non-Navajo in any other employment position for which the Navajo demonstrates necessary qualifications.

Among a pool of applicants or candidates who are solely Navajo and meet the necessary qualifications, the Navajo with the best qualifications shall be selected or retained, as the case may be.

D. All employers shall establish written necessary qualifications for each employment position in their work force, a copy of which shall be provided to applicants or candidates at the time they express an interest in such position.

SECTION 5. REPORTS

All employers doing business or engaged in any project or enterprise within the territorial jurisdiction of the Navajo Nation or pursuant to a contract with the Nation shall submit employment information and reports as required to ONLR. Such reports, in a form acceptable to ONLR, shall include all information necessary and appropriate to determine compliance with the provisions of this Act. All reports shall be filed with ONLR not later than 10 business days after the end of each calendar quarter, provided that ONLR shall have the right to require filing of reports on a weekly or monthly schedule with respect to part-time or full-time temporary employment.

SECTION 6. UNION AND EMPLOYMENT AGENCY ACTIVITIES/RIGHTS OF NAVAJO WORKERS

A. Subject to lawful provisions of applicable collective bargaining agreements, the basic rights of Navajo workers to organize, bargain collectively, strike, and peaceable picket to secure their legal rights, shall not be abridged in any way by any person. The right to strike and picket does not apply to employees of the Navajo Nation, its agencies, or enterprises.

B. It shall be unlawful for any labor organization, employer or employment agency to take any action, including action by contract, which directly or indirectly causes or attempts to cause the adoption or use of any employment practice, policy or decision which violates the Act.

SECTION 7. NAVAJO PREVAILING WAGE

A. Definitions. For purposes of this Section, the following terms shall have the meanings indicated:

1. The term "prevailing wage" shall mean the wage paid to a majority (more than 50 percent) of the employees in the classification on similar construction projects in the area during a period not to exceed 24 months prior to the effective date of the prevailing wage rate set hereunder; provided that in the event the same wage is not paid to a majority of the employees in the classification, "prevailing wage" shall mean the average of the wages paid, weighted by the total number of employees in the classification.

2. The term "prevailing wage rate" shall mean the rate established by ONLR pursuant to this Section.

3. The term "wage" shall mean the total of:

(A) the basic hourly rate; and

(B) the amount of (i) contributions irrevocably made by a contractor or

subcontractor to a trustee or to a third person pursuant to a bona fide fringe benefit fund, plan or program for the benefit of employees and (ii) costs to the contractor or subcontractor which may be reasonably anticipated in providing bona fide fringe benefits to employees pursuant to an enforceable commitment to carry out a financially responsible plan or program which was communicated in writing to the employees affected. The types of fringe benefits contemplated hereunder include medical or hospital health care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing; unemployment benefits; life insurance, disability insurance, sickness insurance, or accident insurance; vacation or holiday pay; defraying costs of apprenticeship or other similar programs; or other bona fide fringe benefits.

4. The term "area" in determining the prevailing wage means the geographic area within the territorial jurisdiction of the Navajo Nation; provided that in the event of insufficient similar construction projects in the area during the period in question, "area" shall include the geographic boundaries of such contiguous municipal, county or state governments as ONLR may determine necessary to secure sufficient wage information on similar construction projects.

5. The term "classifications" means all job positions in which persons are employed, exclusive of classifications with assigned duties which are primarily administrative, executive or clerical, and subject to satisfaction of the conditions prescribed in Sections (E)(7) and (8), exclusive of "apprentice" and "trainee" classifications as those terms are defined herein.

6. "Apprentice" means (a) a person employed and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with an Apprenticeship Agency administered by a State or Indian Tribe and recognized by the Bureau, or (b) a person in the first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State or Tribal Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

7. "Trainee" means a person registered and receiving on-the-job training in a construction occupation under a program which has been approved in advance by the U.S. Department of Labor, Employment and Training Administration, as meeting its standards for on-the-job training programs and which has been so certified by that Administration, or (b) employed and/or receiving on-the-job training under a public employment or work experience program which is approved and funded by the Navajo Nation.

8. The term "construction" shall mean all activity performed under a contract which relates to (a) the building, development, rehabilitation, repair, alteration or installation of structures and improvements of all types, including without limitation buildings, bridges, dams, plants, highways, sewers, water mains, powerlines and other structures; (b) drilling, blasting, excavating, clearing and landscaping, painting and decorating; (c) transporting materials and supplies to or from the site of any of the activities referred to in (a) or (b) by employees of the contractor or subcontractor; and (d) manufacturing or finishing materials, articles, supplies or equipment at the construction site of any of the foregoing activities by employees of the contractor or subcontractor.

9. The term "contract" shall mean the prime construction contract and all subcontracts of any tier thereunder entered into by parties engaged in commercial, business or governmental activities (whether or not such activities are conducted for profit).

B. Establishment

1. For all construction reasonably anticipated to occur in the area on a regular basis, ONLR shall establish a general prevailing wage rate for each classification within specified types of construction. ONLR shall define classifications and types of construction in accordance with guidelines generally recognized in the construction industry. In all cases where construction is contemplated for which prevailing wage rates have not been set, the contract letting entity shall submit to ONLR a written request for a project prevailing wage scale. Such request shall be submitted not less than 60 days prior to the scheduled date for bid solicitation and shall include detailed information on the anticipated construction classifications, nature of the project and completion plans. ONLR shall use its best efforts to provide a project prevailing wage scale, for each classification involved in the project construction, within 60 days after receipt of a request therefor.

2. In setting prevailing wage rates, ONLR shall conduct such surveys and collect such data as it deems necessary and sufficient to arrive at a wage determination. Wage data may be collected from contractors, contractors' associations, labor organizations, public officials and other sources which reflect wage rates paid in classifications on types of construction in the area, including the names and addresses of contractors and subcontractors; the locations, approximate costs, dates and types of construction; the number of workers employed in each classification on the project; and the wage rates paid such workers. Wage rate data for the area may be provided, and considered in making wage determinations, in various forms including signed statements, collective bargaining agreements and prevailing wage rates established by federal authorities for federally-assisted construction projects.

3. Any classification of workers not listed in a prevailing wage rate and which is to be used under a construction contract shall be classified in conformance

with the prevailing wage determination issued and applicable to the project; provided that an additional classification and prevailing wage rate therefor will be established in the event each of the following criteria are satisfied:

(a) The work performed by the proposed classification is not performed by a classification within the existing prevailing wage scale;

(b) The proposed classification is utilized in the area by the construction industry; and

(c) The wages set for the proposed classification bear a reasonable relationship to the wage rates contained in the existing scale for other classifications.

4. (a) Subject to the prior written approval thereof by the Director of ONLR, a general prevailing wage rate shall be effective on the date notice of such rate is published in a newspaper in general circulation in the Navajo Nation. The notice shall contain the following information:

(i) The fact a prevailing wage rate has been set and approved in writing by the Director of ONLR;

(ii) The type of construction for which the rate was established;

(iii) The effective date, described as the date of publication of the notice or other specified date;

(iv) The address and telephone number of ONLR; and

(v) A statement that ONLR will provide a copy of the full wage determination on request, and respond to any reasonable questions regarding such determination or its application.

General prevailing wage rates shall continue in effect until such time as any modifications are adopted.

(b) A prevailing wage rate for a particular project shall be effective on the date of issuance to the requesting party of a written wage determination approved by the Director of ONLR. The wage determination shall continue in effect for the duration of the project; provided that any such determination may be modified by ONLR in the event the period of time from the effective date of the determination to the date bids are solicited exceeds 180 days and the estimated date of completion of the project is more than one year after the effective date of the determination.

(c) Project and general wage determinations may be modified from time to time, in whole or in part, to adjust rates in conformity with current conditions, subject to the special conditions applicable to project determinations. Such modifications become effective upon the same terms and conditions which are applicable to original determinations.

(d) Fringe Benefits. The fringe benefit amount of wages reflected in a prevailing wage rate shall be paid in cash to the employee, and shall not be deducted from such employee's wages, unless each of the following conditions is satisfied:

(i) The deduction is not contrary to applicable law;

(ii) A voluntary and informed written consent authorizing the deduction is obtained from the employee in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining or continuing employment;

(iii) No profit or other benefit is obtained as a result of a deduction, directly or indirectly, by the contractor, subcontractor or any person affiliated with them in the form of a commission, dividend or other consideration; and

(iv) The deduction serves the convenience and interests of the employee.

D. 1. No contract-letting entity, contractor or subcontractor shall proceed with a construction contract subject to this Section in the absence of a contractual requirement for payment of prevailing wages pursuant to a specified wage determination issued by ONLR. Violation of this obligation shall render the contract-letting entity, and the employer contractor or subcontractor, jointly and severally liable for the difference between wages actually paid and the prevailing wage rate, together with interest thereon (or if no prevailing wage rates have been set, such wage rate as may be issued by ONLR during the course, or after the completion, of the construction project).

2. Failure by any employer, contractor or subcontractor to pay prevailing wages shall render such employer liable for the difference between the amount of wages actually paid and the prevailing rate, together with interest thereon.

3. Any deduction of fringe benefits by an employer contractor or subcontractor in violation of Section 7(C) shall render such employer liable for the amount of such deduction, together with interest thereon.

4. Upon written request of ONLR, a contract-letting entity or contractor, as the case may be, shall withhold from any monies payable on account of work performed by an employer contractor or subcontractor under a construction

contract such sums as may be determined by ONLR as necessary to satisfy any liabilities of such contractor or subcontractor for unpaid prevailing wages or wrongful deduction of fringe benefits.

5. If following a hearing under Section 11 a contract-letting entity (other than the Navajo Nation), contractor or subcontractor is found to have willfully violated this Section the Commission may enter a debarment order disqualifying such party from receiving any contract, or subcontract thereunder, with the Navajo Nation for a period not to exceed three years.

6. The liabilities described in this Section 7(D) shall not foreclose the Commission from awarding such other relief or imposing such other civil penalties as may be appropriate following a hearing conducted under Section 11.

E. Exemptions. This Section shall not apply to:

1. A contract associated with a construction activity which relates to the provision of architect, engineer, legal or consultant services, or, except as provided under Section 7(A)(8)(d), the manufacturing or furnishing of materials or performance of services and maintenance work by persons not employed by a prime contractor or any of its subcontractors.

2. A construction contract relating to a project having a total cost of $2,000 or less.

3. A construction contract which is let by a natural person who is an owner or person legally authorized to let such contract, for such person's personal, family or household purposes.

4. A construction contract to the extent the work thereunder is performed by employees of the owner, or employees of the person or entity legally authorized to let the prime contract.

5. A construction contract for a project receiving federal financial assistance to the extent the prevailing wage is set by federal authorities pursuant to the Davis-Bacon Act, 40 U.S.C. §§ 276a et seq. (as amended), or other federal law applicable to such project.

6. A construction contract to the extent such contract requires payment of wages pursuant to a wage scale established under a collective bargaining agreement between any contractor or subcontractor and a labor organization.

7. With the exception of the provisions of Section 7(C), an apprentice provided that the apprentice is paid not less than (a) the basic hourly rate prescribed in the registered program for the apprentice's level of progress, expressed as a percentage of the applicable journeyman rate specified in the prevailing

wage rate, and (b) the fringe benefit amount prescribed in the registered program or, if not specified, the fringe benefit amount set in the prevailing wage rate for the applicable journeyman classification. An apprentice who is not enrolled in a registered program (within the meaning of Section 7(A)(6)), shall be paid wages in an amount not less than the level prescribed for the applicable journeyman classification specified in the prevailing wage rate.

8. With the exception of the provisions of Section 7(c), a trainee provided that the trainee is paid not less than (a) the basic hourly rate prescribed in the approved program for the trainee's level of progress, expressed as a percentage of the applicable journeyman rate specified in the prevailing wage rate and (2) the fringe benefit amount prescribed in the approved program or, if not specified and as to federally approved programs only, the fringe benefit amount set in the prevailing wage rate for the applicable journeyman classification. A trainee who is not enrolled in an approved program (within the meaning of Section 7(A)(8)), shall be paid wages in an amount not less than the level prescribed for the applicable journeyman classification specified in the prevailing wage rate.

SECTION 8. HEALTH AND SAFETY OF NAVAJO WORKERS

Employers shall, with respect to business conducted within the territorial jurisdiction of the Navajo Nation, adopt and implement work practices which conform to occupational safety and health standards imposed by law.

SECTION 9. CONTRACT COMPLIANCE

A. All transaction documents, including without limitation, leases, subleases, contracts, subcontracts, permits, and collective bargaining agreements between employers and labor organizations (herein collectively "transaction documents") which are entered into by or issued to any employer and which are to be performed within the territorial jurisdiction of the Navajo Nation shall contain a provision pursuant to which the employer and any other contracting party affirmatively agree to strictly abide by all requirements of this Act. With respect to any transaction document which does not contain the foregoing provision, the terms and provisions of this Act are incorporated therein as a matter of law and the requirements of the Act shall constitute affirmative contractual obligations of the contracting parties. In addition to the sanctions prescribed by the Act, violation of the Act shall also provide grounds for the Navajo Nation to invoke such remedies for breach as may be available under the transaction document or applicable law. To the extent of any inconsistency or conflict between a transaction document and the Act, the provision of the transaction document in question shall be legally invalid and unenforceable and the Act shall prevail and govern the subject of the inconsistency or conflict.

B. Every bid solicitation, request for proposals and associated notices and advertisements which relate to prospective contracts to be performed within the

territorial jurisdiction of the Navajo Nation shall expressly provide that the contract shall be performed in strict compliance with this Act. With respect to any such solicitation, request, notice or advertisement which does not contain the foregoing provision, the terms and provisions of this Act are incorporated therein as a matter of law.

SECTION 10. MONITORING AND ENFORCEMENT

A. Responsible Agency. Compliance with the Act shall be monitored and enforced by ONLR.

B. Charges.

1. Charging Party. Any Navajo may file a charge ("Individual Charge") claiming a violation of his/her rights under the Act. ONLR, on its own initiative, may file a charge ("ONLR Charge") claiming a violation of rights under the Act held by identified Navajos or a class of Navajos, including a claim that respondent is engaging in a pattern of conduct or practice in violation of rights guaranteed by the Act. An Individual Charge and ONLR Charge are collectively referred to herein as a "Charge".

2. Form and Content. A Charge shall be in writing, signed by the charging party (which shall be the Director of ONLR in the case of an ONLR Charge), and contain the following information:

(a) The name, address and any telephone number of the charging party;

(b) The name and address or business location of the respondent against whom the Charge is made;

(c) A clear and concise statement of the facts constituting the alleged violation of the Act, including the dates of each violation and other pertinent events and the names of individuals who committed, participated in or witnessed the acts complained of;

(d) With respect to a Charge alleging a pattern or practice in violation of the Act, the period of time during which such pattern or practice has existed and whether it continues on the date of the Charge;

(e) The specific harm sustained by the charging party in the case of an Individual Charge or the specific harm sustained by specified Navajos or a class of Navajos with respect to an ONLR Charge; and

(f) A statement disclosing whether proceedings involving the alleged violation have been initiated before any court or administrative agency or within any grievance process maintained by the respondent, including the date of commencement, the court, agency or process and the status of the proceeding.

ONLR shall provide assistance to persons who wish to file Individual Charges. Notwithstanding the foregoing provisions, a Charge shall be deemed sufficient if it contains a reasonably precise identification of the charging party and respondent, and the action, pattern or practice which are alleged to violate the Act.

3. Place of Filing. Individual Charges may be filed in any office of ONLR. An ONLR Charge shall be filed in ONLR's administrative office in Window Rock.

4. Date of Filing. Receipt of each Individual Charge shall be acknowledged by the dated signature of an ONLR employee which shall be deemed the date on which the Individual Charge is filed. The date on which an ONLR Charge is signed by the ONLR Director shall be deemed the date of filing for such Charge.

5. Amendment. A Charge may be amended by filing, in the office where the Charge was first submitted, a written instrument which sets forth the amendment and any portions of the original Charge revised thereby. To the extent the information reflected in the amendment arose out of the subject matter of the original Charge, the amendment shall relate back and be deemed filed as of the filing date of such Charge. Any portion of the amendment which does not qualify for relation back treatment shall constitute a new Charge.

6. Time Limitation. A Charge shall be filed within one year after accrual of the claim which constitutes the alleged violation of the Act. The date of accrual of a claim shall be the earlier of

   (a) the date on which the charging party had actual knowledge of the claim, or

   (b) taking into account the circumstances of the charging party, the date on which the charging party should reasonably have been expected to know of the existence of the claim; provided, however, that a Charge relating to a continuing, or pattern or practice, violation of the Act shall be filed within one year after the later of

      (i) the date of termination of such violation, pattern or practice or

      (ii) the date of accrual of the claim to which the Charge relates. Failure to file a Charge within the time limitations prescribed herein shall bar proceedings on the related claim before the Commission or in any Court of the Navajo Nation; provided, however, that nothing herein shall be interpreted as foreclosing proceedings before any Navajo Court or administrative body (other than the Commission) on any claim which also arises

under applicable common, statutory or other law independent of this Act.

7. Notice to Respondent. Within 20 days after a Charge is filed, ONLR shall serve a copy thereof on respondent; provided, however, that if in ONLR's judgment service of a copy of the Charge would impede its enforcement functions under the Act, ONLR may in lieu of a copy serve on respondent a notice of the Charge which contains the date, place and summary of relevant facts relating to the alleged violation, together with the identity of the charging party unless withheld for the reason stated above. Service of any amendment to the Charge shall be accomplished within 20 days after the amendment is filed. Failure of ONLR to serve a copy of a Charge or notice thereof within the prescribed time period shall not be a ground for dismissal of the Charge or any subsequent proceedings thereon.

8. Withdrawal of Charge.

   (a) ONLR may, in its discretion, withdraw any ONLR Charge upon written notice thereof to respondent and each person identified in the Charge whose rights under the Act were alleged to have been violated. Any person receiving notice of withdrawal or any other person who asserts a violation of his/her rights as a result of the violation alleged in the withdrawn ONLR Charge may file an Individual Charge which, if filed within 90 days after the issuance date of ONLR's withdrawal notice, shall relate back to the filing date of the ONLR Charge.

   (b) Any charging party may, in his/her discretion, withdraw an Individual Charge by filing a written notice of withdrawal with the ONLR office where the Charge was submitted, with a copy thereof filed with the ONLR administrative office in Window Rock. ONLR shall, within 20 days after receiving the notice, transmit a copy to the respondent. Within 90 days after receipt of the withdrawal notice, ONLR may file an ONLR Charge relating in whole or part to the violations alleged in the withdrawn Individual Charge. Any filing of an ONLR Charge within the prescribed time period shall relate back to the filing date of the withdrawn Charge.

9. Overlapping Charges. Nothing herein shall be construed as prohibiting the filing of any combination of Individual Charges and an ONLR Charge which, in whole or part, contain common allegations of violations of the Act.

10. Informants. Irrespective of whether a person is otherwise eligible to file an Individual Charge, any such person or an organization may in lieu of filing a Charge submit to ONLR written or verbal information concerning alleged violations of the Act and may further request ONLR to file an ONLR Charge thereon. In addition to other limitations on disclosure provided in Section 10(M) and in the absence of the written consent of the informant, neither the

identity of the informant nor any information provided by such informant shall be disclosed to the respondent, agents or legal counsel for the respondent, or the public, either voluntarily by ONLR or pursuant to any discovery or other request for, or order relating to, such information during the course of any judicial or non-judicial proceeding, including a proceeding before the Commission or any subsequent appeal or challenge to a Commission or appellate decision; provided, however, that in the event the informant is called as a witness by ONLR at a Commission proceeding involving the information provided by the informant,

(a) the informant's name may be disclosed, but his/her status as an informant shall remain privileged and confidential and shall not be disclosable through witness examination or otherwise, and

(b) with the exception of the witness status as an informer, information provided by the informant is disclosable in accordance with the procedures outlined under Section 10(M).

C. Investigation of Charges.

1. General. ONLR shall conduct such investigation of a Charge as it deems necessary to determine whether there is probable cause to believe the Act has been violated.

2. Subpoenas.

(a) The Director of ONLR shall have the authority to sign and issue a subpoena compelling the disclosure by any person evidence relevant to a Charge, including a subpoena ordering, under oath as may be appropriate:

(i) The attendance and testimony of witnesses;

(ii) Responses to written interrogatories;

(iii) The production of evidence, including without limitation books, records, correspondence or other documents (or lists or summaries thereof) in the subpoenaed person's possession, custody or control or which are lawfully obtainable by such person; and

(iv) Access to evidence for the purposes of examination and copying. Neither an individual charging party nor a respondent shall have a right to demand issuance of a subpoena prior to the initiation of any proceedings on the Charge before the Commission, in which event subpoenas are issuable only pursuant to the procedures governing such proceedings.

(b) Service of the subpoena shall be effected by one of the methods prescribed in Section 10(O). A subpoena directed to a natural person shall be served either on the person at his/her residence or office address or, in the case of personal delivery, at such residence or office either on the person subpoenaed or on anyone at least eighteen years of age (and in the case of office service, a person who is also an employee of such office). Service of a subpoena directed to any other person shall be addressed or delivered to either the statutory agent (if any) of such person or any employee occupying a managerial or supervisory position at any office of the person maintained within or outside the territorial jurisdiction of the Navajo Nation. Personal service may be performed by a natural person at least eighteen years of age, including an employee of ONLR.

(c) The subpoena shall set a date, time and place for the attendance of a witness, or production of or access to evidence, as the case may be, provided that the date for compliance shall be not less than 30 days after the date on which service of the subpoena was effected.

(d) Any person served with a subpoena intending not to fully comply therewith shall, within five business days after service, serve on the Director of ONLR a petition requesting the modification or revocation of the subpoena and identifying with particularity each portion of the subpoena which is challenged and the reasons therefor. To the extent any portion of the subpoena is not challenged, the unchallenged parts shall be complied with in accordance with the terms of the subpoena as issued. The ONLR Director shall issue and serve on petitioner a decision and reasons therefor within eight business days following receipt of the petition, and any failure to serve a decision within such period shall be deemed a denial of the petition. In the event the Director's decision reaffirms any part of the subpoena challenged in the petition, the Director may extend the date for compliance with such portion for a period not to exceed 10 business days. Any petitioner dissatisfied with the decision of the ONLR Director shall either

(1) comply with the subpoena (with any modifications thereto reflected in the Director's decision) or

(2) within five business days following receipt of the Director's decision or the date such decision was due, file a petition with the Commission (with a copy concurrently served on the ONLR Director) seeking modification or revocation of the subpoena and stating with particularity therein each portion of the subpoena challenged and the reasons therefor. A copy of the ONLR Director's decision, if any, shall be attached to the petition.

(e) In the event a person fails to comply with a served subpoena, ONLR may petition the Commission for enforcement of the subpoena. For purposes of awarding any relief to petitioner, the Commission may issue any order appropriate and authorized in a case where it is established that a Commission order has been violated. A copy of the petition shall be concurrently served on the non-complying person.

(f) Beginning on the first day of non-compliance with a subpoena served on a respondent, or any employee or agent of respondent, until the date of full compliance therewith, there shall be a tolling of all periods of limitation set forth in this Section 10.

D. Dismissal of Charges.

1. Individual Charges. ONLR shall dismiss an Individual Charge upon reaching any one or more of the following determinations:

(a) The Individual Charge, on its face or following an ONLR investigation, fails to demonstrate that probable cause exists to believe a violation of the Act has occurred;

(b) The Individual Charge was not filed within the time limit prescribed by Section 10(B)(6);

(c) The charging party has failed to reasonably cooperate in the investigation of, or attempts to settle, the Individual Charge;

(d) The charging party has refused, within 30 days of receipt, to accept a settlement offer agreed to by respondent and approved by ONLR, which accords substantially full relief for the harm sustained by such party; or

(e) The Charge has been settled pursuant to Section 10(G).

2. ONLR Charges. ONLR shall dismiss an ONLR Charge upon determining that

(a) no probable cause exists to believe a violation of the Act has occurred,

(b) the Charge was not filed within the time limits prescribed by Section 10(B)(6), or

(c) the Charge has been settled pursuant to Section 10(G).

3. Partial Dismissal. In the event a portion of a Charge is dismissable on one or more of the foregoing grounds, only such portion of the Charge

shall be dismissed and the remainder retained by ONLR for final disposition.

4. Notice. Written notice of dismissal, stating the grounds therefor, shall be served on respondent and the individual charging party in the case of an Individual Charge or, in the case of an ONLR Charge, on the respondent and any person known to ONLR who claims to be aggrieved by the violations alleged in such Charge. Such notice shall be accompanied by a right to sue authorization pursuant to Section 10(H).

E. Probable Cause Determination. Following its investigation of a Charge and in the absence of a settlement or dismissal required under Section 10(D), ONLR shall issue written notice of its determination that probable cause exists to believe a violation of the Act has occurred or is occurring. Such notice shall identify each violation of the Act for which probable cause has been found, and copies thereof shall be promptly sent to the respondent, the charging party in the case of an Individual Charge, and, in the case of an ONLR Charge, each person identified by ONLR whose rights are believed to have been violated. Any probable cause determination shall be based on, and limited to, the evidence obtained by ONLR and shall not be deemed a judgment by ONLR on the merits of allegations not addressed in the determination.

F. Conciliation. If, following its investigation of a Charge, ONLR determines there is probable cause to believe the Act has been or is being violated, ONLR shall make a good faith effort to secure compliance and appropriate relief by informal means through conference, conciliation and persuasion. In the event there is a failure to resolve the matter informally as to any allegations in an Individual Charge for which probable cause has been determined, ONLR shall either issue the notice prescribed in Section 10(H) or initiate a Commission proceeding under Section 10(I) concerning unresolved allegations. A successful resolution of any such allegation shall be committed to writing in the form required under Section 10(G). Nothing herein shall be construed as prohibiting ONLR from initiating or participating in efforts to informally resolve a Charge prior to issuance of a probable cause determination.

G. Settlement.

1. Settlement agreements shall be committed to writing and executed by respondent, the individual charging party if any and, in the case of any Charge, by the Director of ONLR. Refusal of an individual charging party to execute a settlement agreement subjects the Individual Charge to dismissal under the conditions set forth in Section 10(D)(1)(d). Settlement agreements may also be signed by those aggrieved persons identified as having a claim with respect to an ONLR Charge.

2. Settlement agreements hereunder shall be enforceable among the parties thereto in accordance with the terms of the agreement. Any member of a

class of persons affected by the settlement who is not a signatory to the agreement shall have the right to initiate proceedings before the Commission pursuant to the procedure in Section 10(H)(2)(a)(iii).

3. Each settlement agreement shall provide for the dismissal of the Charge to the extent the violations alleged therein are resolved under the agreement.

4. Any breach of a settlement agreement by respondent shall present grounds for filing a Charge under this Section 10. A charging party asserting a claim for breach may either seek

   (a) enforcement of that portion of the settlement agreement alleged to have been breached, or

   (b) in the case of a material breach as to any or all terms, partial or total rescission of the agreement, as the case may be, and such other and further relief as may have been available in the absence of settlement. A Charge asserting a breach of a settlement agreement with respect to any original allegation in the Charge covered by such agreement shall, for purposes of all time limitations in this Section 10, be deemed to arise on the accrual date of the breach.

H. Individual Right to Sue.

1. Individual Charges.

   (a) Prior to the expiration of 180 days following the date an Individual Charge was filed, ONLR, by notice to the individual charging party, shall authorize such individual to initiate a proceeding before the Commission in accordance with the procedures prescribed in Section 10(J), if:

      (i) The Individual Charge has been dismissed by ONLR pursuant to Section 10(D)(1);

      (ii) ONLR has issued a probable cause determination under Section 10(E), there has been a failure of conciliation contemplated by Section 10(F), and ONLR has determined not to initiate a Commission proceeding on behalf of the individual charging party; or

      (iii) Notwithstanding the absence of a probable cause determination or conclusion of conciliation efforts, ONLR certifies it will be unable to complete one or both of these steps within 180 days after the date on which the Individual Charge was filed.

   (b) After the expiration of 180 days following the date an Individual Charge was filed, the individual charging party shall have the right to

initiate a proceeding before the Commission irrespective of whether ONLR has issued a notice of right to sue, made a probable cause determination, or commenced or concluded conciliation efforts.

2. ONLR Charges.

(a) Prior to the expiration of 180 days following the date an ONLR Charge was filed, ONLR, by notice to any person known to it who claims to be aggrieved by the allegations presented in such Charge, shall authorize such person to initiate a proceeding before the Commission in accordance with the procedures prescribed in Section 10(J), if:

(i) The ONLR Charge has been dismissed by ONLR pursuant to Section 10(D)(2);

(ii) ONLR has issued a probable cause determination under Section 10(E), there has been a failure of conciliation contemplated by Section 10(F), and ONLR has determined not to initiate a Commission proceeding on the Charge;

(iii) ONLR has entered into a settlement agreement under Section 10(G) to which such aggrieved person is not a party; or

(iv) Notwithstanding the absence of a probable cause determination or conclusion of conciliation efforts, ONLR certifies it will be unable to complete one or both of these steps within 180 days after the date on which the ONLR Charge was filed.

(b) After the expiration of 180 days following the date an ONLR Charge was filed and prior to the date on which ONLR commences a Commission proceeding, any person claiming to be aggrieved by the allegations presented in such Charge shall have the right to initiate a proceeding before the Commission irrespective of whether ONLR has issued a notice of right to sue, made a probable cause determination or commenced or concluded conciliation efforts.

3. Content of Notice. A notice of right to sue shall include the following information:

(a) Authorization to the individual charging party or aggrieved person to initiate a proceeding before the Commission pursuant to and within the time limits prescribed by Section 10(J);

(b) A summary of the procedures applicable to the institution of such proceeding, or a copy of the Act containing such procedures;

(c) A copy of the Charge; and

(d) A copy of any written determination of ONLR with respect to such Charge.

4. ONLR Assistance. Authorization to commence Commission proceedings hereunder shall not prevent ONLR from assisting any individual charging party or aggrieved person in connection with Commission proceedings or other efforts to remedy the alleged violations of the Act.

I. ONLR Right to Sue.

1. Individual Charges. ONLR shall have the right to initiate proceedings before the Commission based on the allegations of an Individual Charge with respect to which ONLR has issued a probable cause determination under Section 10(E) and there has been a failure of conciliation contemplated by Section 10(F). ONLR shall have such right notwithstanding that the individual charging party has a concurrent right to sue hereunder which has not been exercised. ONLR's right to sue shall continue until such time as the individual charging party commences a Commission proceeding and, in that case, shall be revived in the event the proceeding is dismissed or concluded for reasons unrelated to the merits. Initiation of Commission proceedings by ONLR shall terminate the right to sue of an individual charging party, subject to revival of such right in the event the proceeding is dismissed or concluded for reasons unrelated to the merits. Nothing herein shall be construed as foreclosing ONLR from exercising its right to intervene in a Commission proceeding under Section 10(L).

2. ONLR Charges. ONLR shall have the right to initiate proceedings before the Commission based on the allegations of an ONLR Charge with respect to which ONLR has issued a probable determination under Section 10(E) and there has been a failure of conciliation contemplated by Section 10(F). ONLR shall have such right notwithstanding that a person claiming to be aggrieved as a result of the allegations in the ONLR Charge has a concurrent right to sue hereunder which has not been exercised. In the event an aggrieved person first initiates a Commission proceeding in an authorized manner, ONLR's right to sue shall only expire as to such person and shall revive in the event the aggrieved person's proceeding is dismissed or concluded for reasons unrelated to the merits. Nothing herein shall be construed as foreclosing ONLR from exercising its right to intervene in a Commission proceeding under Section 10(L).

J. Initiation of Commission Proceedings. Proceedings before the Commission shall be initiated upon the filing of a written complaint by a petitioner with the Commission. Complaints shall satisfy each of the following conditions:

1. The petitioner is authorized to file the Complaint under the terms and conditions prescribed by this Section 10;

2. The underlying Charge was filed within the time limits prescribed in Section 10(B)(6); and

3. The complaint was filed within 360 days following the date on which the underlying Charge was filed.

Upon motion of respondent and a showing that any one or more of the foregoing conditions has not been satisfied, the Commission shall dismiss the complaint; provided, however, that no complaint shall be dismissed under (2) above as to any allegation of a pattern of conduct or practice in violation of the Act to the extent such pattern or practice continued to persist during the time limit prescribed in Section 10(B)(6); and provided further that, in the absence of dismissal or conclusion of Commission proceedings on the merits, nothing herein shall be construed as prohibiting the refiling of a Charge alleging the same or comparable pattern or practice violations of the Act which continued to persist during the time limits prescribed in Section 10(B)(6) for refiling such Charge.

K. Preliminary Relief. Prior to the initiation of Commission proceedings on a Charge and notwithstanding the failure to satisfy any precondition to such proceedings, either ONLR, an individual charging party or aggrieved person may, upon notice to respondent, petition the Commission for appropriate temporary or preliminary relief in the form of an injunction or other equitable remedy on the ground that prompt action is necessary to carry out the purposes of the Act, including the preservation and protection of rights thereunder. Nothing herein shall be construed as foreclosing a petition which seeks comparable relief subsequent to the commencement of Commission proceedings.

L. Intervention in Commission Proceedings. Within three business days after the date on which any complaint, or petition pursuant to Section 10(K), is filed with the Commission, other than a complaint or petition filed by ONLR, the Commission shall cause copies thereof to be sent to the ONLR Director and the Attorney General of the Navajo Nation. ONLR shall have an unconditional right to intervene in the Commission proceeding initiated by such complaint or petition upon the timely application by motion accompanied by a pleading setting forth the claims for which intervention is sought.

M. Confidentiality.

1. Conciliation. In the absence of written consent of the persons concerned, statements or offers of settlement made, documents provided or conduct by participants in conciliation efforts under Section 10(F) shall not be admissible in any Commission or other proceeding relating to the Charge which is the subject of conciliation, to prove liability for or invalidity of the Charge or the amount or nature of relief therefor; provided, however, that nothing herein shall be construed as requiring the exclusion of such evidence merely because it was presented in the course of conciliation if:

(a) The evidence is otherwise discoverable; or

(b) The evidence is offered for another purpose, including without limitation, proving bias or prejudice of a witness, negativing a contention of undue delay, or proving an effort to obstruct a criminal investigation or prosecution.

2. Charge, Records and Information. Prior to the institution of Commission proceedings thereon, and in the absence of the written consent of the persons concerned, ONLR shall not disclose as a matter of public information any Charge, response thereto, any statements or other information obtained in the course of its investigation of the Charge, except that nothing herein shall prevent earlier disclosure of such information by ONLR in its discretion:

(a) To charging parties or their attorneys, respondents or their attorneys, witnesses or other interested persons where the disclosure is deemed by ONLR to be necessary for securing a resolution of the Charge, including appropriate relief therefor;

(b) To employees or representatives of the Navajo Nation or employees or representatives of federal, state or local authorities having a governmental interest in the subject matter of the Charge; or

(c) To persons for the purpose of publishing data derived from such information in a form which does not reveal the identity of charging parties, aggrieved persons, respondents or persons supplying the information.

Except as otherwise provided herein, any person to whom a permissible disclosure is made hereunder shall be bound to maintain the confidentiality of such information from further disclosure and shall use the information solely for the purpose for which it was disclosed.

3. Privileged Information. Neither ONLR, charging parties, aggrieved persons, respondents, witnesses or persons supplying information in connection with a Charge shall be compelled, either before or after commencement of Commission proceedings, to disclose any information which represents the opinions or conclusions formed by ONLR during the course of its investigation of a Charge, or any information which is protected by the attorney-client privilege, the informer's privilege referred to in Section 10(B)(10), or any other absolute or limited privilege recognized under the laws of the Navajo Nation. To the extent justice requires, the Commission may, balancing the rights of parties and affected persons, prohibit or limit the disclosure of any other information for good cause shown, including a showing that disclosure would impede enforcement of the Act, jeopardize rights guaranteed thereunder, or cause annoyance, embarrassment, oppression or undue burden or expense to parties or affected persons.

N. Non-retaliation. It shall be unlawful for any employer, labor organization, joint labor-management committee involved in apprenticeship or other matters relating to employment, employment agency or other person to, directly or indirectly, take, or attempt to induce another person to take, any action adversely affecting

(1) the terms and conditions of any person's employment or opportunities associated with such employment,

(2) an applicant's opportunity for employment,

(3) the membership of an employee or applicant for employment in a labor organization, or

(4) any other right, benefit, privilege or opportunity unrelated to employment, because such person has opposed an employment practice subject to this Act or has made a charge, testified, or assisted or participated in any manner in an investigation, proceeding or hearing under the Act.

O. Service of Documents. Service of any notice, determination or other document required to be transmitted under this Section 10 shall be accomplished by personal delivery or certified mail, return receipt requested.

Section 11. HEARING

A. The Commission shall schedule a hearing within sixty (60) days of the filing of a written complaint by a petitioner with the Commission. The hearing shall be held at a location designated by the Commission.

1. Notice: The Commission shall issue a notice of hearing. The time and place of the hearing shall be clearly described in the notice. The notice shall also set forth in clear and simple terms the nature of the alleged violations and shall state (1) the violations may be contested at a hearing before the Commission, and (2) any party may appear by counsel and cross examine adverse witnesses.

2. Upon application by a party to the Commission, or on the Commissions' own motion, the Commission may issue subpoenas compelling the disclosure by any person evidence relevant to the complaint, including a subpoena ordering, under oath as may be appropriate:

(a) The attendance and testimony of witnesses;
(b) Responses to written interrogatories;
(c) The production of evidence; and
(d) Access to evidence for the purpose of examination and copying.

3. The Commission is hereby authorized to administer oaths and compel attendance of any person at a hearing and to compel production of any documents.

4. In the event a party does not make an appearance on the day set for hearing or fails to comply with the rules of procedure set forth by the Commission for the conduct of hearings, the Commission is hereby authorized to enter a default determination against the non-appearing and/or noncomplying party.

B. Burden of Proof: In any compliance review, complaint proceeding, investigation, or hearing, the burden of proof shall be upon the respondent to show compliance with the provisions of this Act by clear and convincing evidence.

C. Hearing: The Commission shall conduct the hearing in a fair and orderly manner and extend to all parties the right to be heard.

1. The Commission shall not be bound by any formal rules of evidence.

2. The respondent shall have the opportunity to answer the complaint and the parties shall have the right to legal counsel, present witnesses, and cross-examine adverse witnesses.

3. The Commission shall issue its decision by a majority vote of a quorum present and shall be signed by the Chairman of the Commission.

4. Copies of the decision shall be sent to all parties of record in the proceeding by certified mail, return receipt.

5. The proceeding shall be recorded. Any party may request a transcript of the proceeding at their own expense.

6. The decision of the Commission shall be final with a right of appeal only on questions of law to the Navajo Nation Supreme Court.

Section 12. REMEDIES AND SANCTIONS

A. If, following notice and hearing, the Commission finds that respondent has violated the Act, the Commission shall:

1. Issue one or more remedial orders, including without limitation, directed hiring, reinstatement, displacement of non-Navajo employees, backpay, frontpay, injunctive relief, mandated corrective action to cure the violation within a reasonable period of time, and/or, upon a finding of intentional violation, imposition of civil fines; provided that liability for backpay or other forms of compensatory damages shall not accrue from a date more than two years prior to the date of filing of the Charge which is the basis for the complaint.

2. In the case of an individual suit initiated pursuant to Section 10(H) award costs and attorneys' fees if the respondent's position was not substantially justified.

3. Refer matters involving respondent contracts, agreements, leases and permits to the Navajo Nation Attorney General for appropriate action.

B. In the absence of a showing of good cause thereof, if any party to a proceeding under this Act fails to comply with a subpoena or order issued by the Commission, the Commission may impose such sanctions as are just, including without limitation any one or more of the following:

(1) In the case of noncompliance with a subpoena of documents or witnesses:

(a) An order that the matters regarding which the subpoena was issued or any other designated facts shall be deemed established for the purposes of the proceeding and in accordance with the claim of the party obtaining the order;

(b) An order refusing to allow the disobedient party to support or oppose designated claims or defenses, or prohibiting that party from introducing designated matters in evidence;

(c) An order striking pleadings or parts thereof, or staying further proceedings until the subpoena is obeyed, or dismissing the action or proceeding or any part thereof, or rendering a judgment by default against the disobedient party.

(2) In the case of noncompliance by a party or nonparty with a Commission subpoena of documents or witnesses or with any other order of the Commission:

(a) An order holding the disobedient person in contempt of the Commission and imposing appropriate sanctions therefor, including a civil fine;

(b) An order directing the disobedient person to pay the reasonable costs and/or attorney's fees caused by the noncompliance.

C. The person or party in whose favor a Commission's decision providing for remedial action is entered shall have the right to seek legal and/or equitable relief in the District Courts of the Navajo Nation to enforce the remedial action; provided that the Commission itself shall have the right to seek legal and/or equitable relief in the District Courts of the Navajo Nation to enforce civil fines or sanctions imposed by the Commission against a person or party. In both instances the Attorney General of the Navajo Nation shall have an unconditional right to intervene on behalf of the Navajo Nation. Any attempted enforcement of a Commission order or decision directing payment of money by the Navajo Nation or any of its governmental entities shall, with respect to the extent of any liability be governed by the Navajo Sovereign Immunity Act, 1 N.T.C. §§351 et seq., as amended.

Section 13. APPEAL AND STAY OF EXECUTION

A. Any party may appeal a decision of the Commission to the Navajo Nation Supreme Court by lodging a written notice of appeal, in the form prescribed by the Navajo Rules of Civil Appellate Procedure and within ten (10) days after receipt of the Commission's decision.

B. In the absence of a stipulation by the parties approved by the Commission, a stay of execution of the decision from which the appeal is taken shall only be granted upon written application of the appellant to the Commission and an opportunity for response by appellee. The application for a stay shall be filed within the period prescribed for appeal in Subsection (A) hereof. No stay shall be issued unless the appellant presents a clear and convincing showing that each of the following requirements has been satisfied:

1. Appellant is likely to prevail on the merits of the appeal;

2. Appellant will be irreparably harmed in the absence of a stay;

3. Appellee and interested persons will not be substantially harmed by a stay;

4. The public interest will be served by a stay; and

5. An appeal bond or other security, in the amount and upon the terms prescribed by Subsection (C) below, has been filed with and approved by the Commission; provided that no appeal bond shall be required of ONLR, the Navajo Nation or any governmental agency or enterprise of the Navajo Nation.

C. The appeal bond shall be issued by a duly authorized and responsible surety which shall obligate itself to pay to appellee, or any other person in whose favor an award is made by the Commission decision, the amounts specified or described in the bond upon conclusion of the appeal and failure of appellant, following written demand by appellee, to satisfy the foregoing obligations. The amount or nature of liability assumed by the surety shall be specified in the bond and shall include:

1. The total amount of all monetary awards made in the Commission decision, together with such interest thereon as may be prescribed in the Commission's decision;

2. Costs of appeal and attorneys' fees incurred by appellee in defending the appeal and which may be awarded to appellee by the Navajo Nation Supreme Court;

3. Damages sustained by appellee or other recipients of a Commission award for delay in satisfaction of the Commission decision caused by the appeal; and

4. Such other amount or liability reasonably required to be secured to protect the interests of the appellee or other award recipients.

The bond shall provide that the surety submits to the jurisdiction of the Commission and the Courts of the Navajo Nation, and irrevocably appoints the Commission as the surety's agent upon whom any papers affecting the surety's liability on the bond may be served. The surety's liability may be enforced on motion of the appellee filed with the Commission, with copies thereof served on the surety and appellant.

In lieu of posting an appeal bond, appellant may, with the approval of the Commission, post a cash bond and undertaking in the amount and upon the terms which are required above with respect to an appeal bond.

No appeal bond or cash bond and undertaking, nor the liabilities of the surety or appellant thereunder, shall be exonerated or released until all amounts and liabilities prescribed therein have been fully paid and satisfied.

D. Within three business days following the filing with the Navajo Nation Supreme Court of any appeal from a Commission proceeding, the Clerk of such Court shall, in all cases other than those in which ONLR is not either the appellant or appellee, cause copies of the notice of appeal and all other documents filed in connection therewith to be sent to the ONLR Director and the Attorney General of the Navajo Nation. ONLR shall have an unconditional right to intervene and participate as amicus in the appeal proceedings upon timely application therefor by motion lodged with the Navajo Nation Supreme Court. ONLR's right of participation shall be coextensive with that of the parties to the appeal, including the rights to file opening, answering and reply briefs, and the right to present oral argument to the Court.

Section 14. NON-NAVAJO SPOUSES

A. When a non-Navajo is legally married to a Navajo, he or she shall be entitled to preference in employment under the Act. Proof of marriage by a valid marriage certificate shall be required. In addition such non-Navajo spouse shall be required to have resided within the territorial jurisdiction of the Navajo Nation for a continuous one-year period immediately preceding the application for Navajo preference consideration.

B. Upon meeting the above requirements, such consideration shall be limited to preference in employment where the spouse would normally be in a pool of non-Navajo workers. In this instance, Navajo preference would place the non-Navajo spouse in the applicant pool of Navajos for consideration. However, preference priority shall still be given to all Navajo applicants who meet the necessary job qualifications within that pool.

C. Non-Navajo spouses having a right to secondary preference under this Section shall also have and enjoy all other employment rights granted to Navajos under the Act, it being understood that Navajos retain a priority right with respect to provisions of the Act concerning preferential treatment in employment opportunities.

Section 15. LIE-DETECTOR TEST

A. No person, shall request or require any employee or prospective employee to submit to, or take a polygraph examination as a condition of obtaining employment or of continuing employment or discharge or discipline in any manner an employee for failing, refusing, or declining to submit to or take a polygraph examination.

B. For purposes of this section, "polygraph" means any mechanical or electrical instrument or device of any type used or allegedly used to examine, test, or question individuals for the purpose of determining truthfulness. This provision shall not apply to federal or state government employees.

Section 16. RULES AND REGULATIONS

Human Services Committee of the Navajo Nation Council is hereby delegated the authority to promulgate rules and regulations necessary for the enforcement and implementation of the provisions of this Act. The Commission is hereby delegated the authority to adopt and implement, on its own initiative and without any approval, rules of procedure and practice governing the conduct of proceedings under Section 11 of the Act; provided only that such rules are consistent with the provisions of the Act.

Section 17. ALL PRIOR INCONSISTENT LAW IS REPEALED

All prior Tribal laws, rules, regulations, and provisions of the Navajo Tribal Code previously adopted which are inconsistent with this Act are hereby repealed.

Section 18. EFFECTIVE DATE AND AMENDMENT OF THE ACT

A. The effective date of this Act shall be 60 days after the passage of the Act by the Navajo Nation Council and shall remain in effect until amended or repealed by the Navajo Nation Council.

B. Any amendment or repeal of the Act shall only be effective upon approval of the Navajo Nation Council, and shall not be valid if it has the effect of amending,

modifying, limiting, expanding or waiving the Act for the benefit or to the detriment of a particular person.

C. Any amendment to the Act, unless the amendment expressly states otherwise, shall be effective 60 days after the passage thereof by the Navajo Nation Council.

D. The time limits prescribed in Section 10 relating to filing a Charge and subsequent proceedings thereon were added by amendment adopted by the Navajo Nation Council subsequent to the effective date of the original Act. Notwithstanding an actual accrual date for any alleged violation of the Act which is prior to the effective date of the amendment which added the time limits in Section 10 hereof, such alleged violation shall be deemed to accrue on the effective date of the foregoing amendment for purposes of all time limits set forth in Section 10.

Section 19. SEVERABILITY OF THE ACT

If any provision of this Act or the application thereof to any person, association, entity or circumstances is held invalid, such invalidity shall not affect the remaining provisions or applications thereof.

NAVAJO PREFERENCE IN EMPLOYMENT ACT

NPEA ORIENTATION
Check List

INITIAL	EXHIBIT	DESCRIPTION
_____	(A)	Navajo Preference in Employment Act (information) - NPEA Requirement Letter - Navajo Preference in Employment Act Poster
_____	(B)	Office of Navajo Labor Relations (information) - ONLR Office w/ Staffs
_____	(C)	Start New Workers Out Right
_____	(D)	Manpower Projection Report
_____	(E)	List of All Subcontractors
_____	(F)	Job Description – Non-Discriminatory
_____	(G)	Newspaper and Radio Station Advertisement - Navajo Preference Statement - Job Services
_____	(H)	Affirmative Action Regulation
_____	(I)	Notification for use of non-Navajo - Employer Interview Report - Justification
_____	(J)	Conditions for Employment Expressed to Applicant – Orientation on Employer Policies
_____	(K)	Written Notification for any Employee Action
_____	(L)	Weekly Manpower Reports
_____	(M)	Weekly Certified Payroll Reports
_____	(N)	Contractors/Subcontractor's Reports - Construction Progress Report (bi-weekly) - Project Completion Report
_____	(O)	Wage Rates Decision No.: _____

_____
Company Name (**please print**)

_____
Company Representative – Name and Title (**please print**)

_____
Company Representative Signature

_____
Project Name and Location

Revised 03/21/07

OFFICE OF NAVAJO LABOR RELATIONS

A

NAVAJO PREFERENCE IN EMPLOYMENT ACT

PACKET INCLUDES:

Forms and Information

1. Employer Interviews Report.
2. "Start New Workers Out Right" sheet.
3. Navajo Preference in Employment Act Poster – **Post at Job Site.**
4. Contractor/Subcontractor's Manpower Projection Report.
5. Weekly Manpower Reports.
6. Weekly Certified Payroll Reports.
7. Project Completion Report Form.

The ONLR strongly recommends that all contractors use apprentices or trainees as well as female applicants on the project. Interested parties should call the ONLR for more information. The ONLR strongly recommends that contractors make every effort to recruit and hire Navajos (see NPEA, Section 4.A.(1.) and Section 4.B.(6.)).

Contractors found in non-compliance of the NPEA shall be notified by the ONLR. Attempts will be made to resolve disputes or discrepancies informally. If no resolution can be reached, the ONLR will take whatever administrative action(s) or remedies necessary. Should this occur, the contractor will be notified in writing. If no response is received by the specified date, the ONLR will proceed with other actions including filing an ONLR Charge.

Contractors are responsible for hiring Navajo workers. All contractors are required to advertise in the area using a radio station and newspaper including the Navajo Preference Statement in the advertisement. Contractors will advertise vacancies 7–10 days.

1. Contractor(s) or subcontractor(s) shall provide a detailed job summary or description, along with wage rates or salary, for all or any position considered "specialized" by the employer.

2. The contractor and its subcontractor(s) shall retain the right to reject any job applicants; however, if the contractor or its subcontractor(s) is unable to recruit or hire Navajo, the contractor shall have:

   (a) the burden to justify the rejection of every Navajo applicant in each employee craft or category in which the contractor or its subcontractor(s) was unable to meet its requirements; and

   (b) the burden of substantiating the criteria used in hiring such employee craft on category as relevant to the job being performed.

Navajo Occupational Safety and Health Administration (NOSHA) monitor all construction activities on the Navajo Nation. Any questions or assistance regarding safety issues, NOSHA can be contacted at (928) 871-6824.

At least **two weeks prior to completion of project**, the contractor shall complete the Project Completion Report form and submit to the ONLR (the form is provided in this packet).

PLEASE CALL IF THERE ARE ANY QUESTIONS OR CONCERNS. THANK YOU.

DATE CHRONO

Name; Title
Company Name
Mailing Address
City, State, Zip Code

RE: Project Name
NPEA Requirement Letter

Dear Mr./Ms.:

Thank-you for contacting our office regarding your upcoming project.

Enclosed is the NPEA Requirement Letter along with the NPEA Orientation Checklist.

If you have any other questions, please call our office at (928) 871-6800.

Sincerely,

Name, Labor Compliance Officer
Office of Navajo Labor Relations
DIVISION OF HUMAN RESOURCES

cc: Window Rock ONLR
Chrono File

ATTACHMENT

Date CHRONO

Name
Company
Address
City, State, Zip Code

RE: NPEA REQUIREMENT LETTER

Dear Mr./Ms.:

The Office of Navajo Labor Relations ("ONLR") monitors construction projects on the Navajo Nation to ensure all contractors and/or subcontractors comply with the Navajo Preference in Employment Act ("NPEA"). The requirements are as follows:

A. Give preference in employment to enrolled members of the Navajo Nation:

1. Advertise all job vacancies in at least one newspaper and radio station serving the Navajo Nation. Note: All job announcements and advertisements shall specify a Navajo employment preference statement.

B. Establish written necessary qualifications/job descriptions for each employment position in their work force, a copy of which shall be provided to applicants or candidates at the time they express an interest in such position.

C. Use non-discriminatory job qualifications and selection criteria in employment. Any Navajo applicant or candidate who demonstrates the necessary qualifications for an employment position:

1. Is to be selected by the employer in the case of hiring, promotion, transfer, upgrading, recall and other employment opportunities with respect to such position;

2. To be retained by the employer in the case of the reduction-in-force affecting such class of positions until all non-Navajos employed in that class of position are laid off; and

3. Among a pool of applicants or candidates who are solely Navajos, the Navajo with the best qualifications is to be selected or retained.

D. Provide a fringe benefit plan that does not discriminate against Navajos in terms of coverage due to Navajo cultural or religious traditions or beliefs.

E. File with the ONLR a written Navajo Affirmative Action Plan (Program). An employer-sponsored cross-cultural program shall be an essential part of the affirmative action plans required by the NPEA. Such program shall primarily focus on the education of non-Navajo employees, including management and supervisory personnel, regarding the cultural and religious traditions or beliefs of Navajos, and their relationships to the development of employment policies that accommodate such traditions and beliefs.

F. Maintain a safe and clean working environment free of prejudice, intimidation, and harassment.

G. Not penalize, discipline, discharge, nor take any adverse action against any employee without a written notice showing just cause. This notice shall be given to the employee at the time of the adverse action.

H. Post in a conspicuous place on its premises, a Navajo preference policy notice.

I. For each Contractor/Subcontractor to be utilized on the project, the ONLR will require the following information:

1. Contractor/Subcontractor Manpower Projection Report. A list of all classifications and number of workers that will be required. This shall be submitted two weeks before start of work.

2. Job Description for each classification, listing experience, tool requirements, etc.

3. Name of Individual who will conduct the interview and hiring.

4. Employer Interview Report shall be submitted with the first certified payroll report.

5. Weekly Manpower Report shall be submitted with each week's certified payroll report.

6. Certified Payroll Report shall be submitted with each week's manpower report.

7. Navajo Affirmative Action Program shall be submitted two weeks before start of work.

8. Location of office(s) and telephone number(s) of contractors/subcontractors.

9. Name of Individual designated as contact person at the job site.

10. List of Key Personnel the contractor anticipates on bringing to the job site. These positions are usually the project superintendent and/or an individual with signatory authority. The contractors and/or subcontractors will be required to justify other positions not normally considered "key" personnel.

11. Job Summary and Duration of the Project.

The ONLR will provide an overview of NPEA requirements and in-depth orientation for all contractors. If you have any questions, call our office at (928) 871-6800.

Sincerely,

Name, Labor Compliance Officer
Office of Navajo Labor Relations
DIVISION OF HUMAN RESOURCES

cc: Window Rock ONLR
Project/Chrono File

N O T I C E OF THE NAVAJO PREFERENCE IN EMPLOYMENT ACT

Employers must post this notice in a conspicuous place on its premises where notices to employees and job applicants are customarily posted.

Title 15, N.T.C., Chapter 7 requires that all employers doing business within the boundaries of the Navajo Nation or engaged in any contracts with the Navajo Nation, shall give preference in employment to enrolled members of the Navajo Nation, and submit an affirmative action program.

Navajo Preference in Employment Act ("NPEA") applies to:

o Hiring	o Termination	o Transfers	o Recalls
o Promotion	o Reduction-in-force	o Training	o Recruitment

NPEA requires employers doing business within the territorial jurisdiction of the Navajo Nation to:

- Provide applicant with written job descriptions.
- Provide training to enhance the skills of Navajo Employees.
- Not discipline or discharge Navajo employees without just cause and written notification.
- Provide a work place free of prejudice, intimidation and harassment.
- Pay established Prevailing Wages for construction work.
- Provide Navajo Affirmative Action Program to employ Navajos in all job classifications including supervisory and management positions.

The ONLR requires employers to receive a NPEA orientation prior to commencing work on the Navajo Nation.

If you think your rights have been violated or see other possible violations of the Navajo Preference, call or write to the Office of Navajo Labor Relations for more information.

OFFICE OF NAVAJO LABOR RELATIONS

Post Office Drawer 1943
Window Rock, Arizona 86515
Phone: (928) 871-6800/6801
Facsimile: (928) 871-7088

Post Office Box 1704
Shiprock, New Mexico 87420
Phone: (505) 368-1142
Facsimile: (505) 368-1145

Post Office Box 2660
Chinle, Arizona 86503
Phone: (928) 674-2214
Facsimile: (928) 674-2216

Post Office Box 733
Tuba City, Arizona 86045
Phone: (928) 283-3100
Facsimile: (928) 283-3107

Post Office Box 550
Kayenta, Arizona 86033
Phone: (928) 697-5645
Facsimile: (928) 697-5647

NOTE: Copies of the Navajo Preference in Employment Act are available at any of the above

OFFICE OF NAVAJO LABOR RELATIONS B

The purpose of the Office of Navajo Labor Relations is as follows:

A. To monitor and enforce the NAVAJO PREFERENCE IN EMPLOYMENT ACT (NPEA), Title 15, NNC, Chapter 7.

B. To implement and carry out the labor policies of the Navajo Nation as established by the Navajo Nation Council.

C. To act as administrative agency for matter relating to employment preference in hiring, recruitment, promotion, lay-off, termination, transfer and other areas of employment.

D. To gather information from employers, employees, labor organization and governmental agencies relating to employment, compensation and working conditions.

E. To recommend and propose policies, rules, regulations, specific Navajo Preference Plans to Human Services Committee of the Navajo Nation Council.

Window Rock/Fort Defiance, AZ
Post Office Drawer 1943
Window Rock, Arizona 86515
Telephone: (928) 871-6800/6801
Fax: (928) 871-7088

Kayenta, AZ
Post Office Box 550
Kayenta, Arizona 86033
Telephone: (928) 697-5645
Fax: (928) 697-5647

Shiprock, NM
Post Office Box 1704
Shiprock, New Mexico 87420
Telephone: (505) 368-1142
Fax: (505) 368-1145

Chinle, AZ
Post Office Box 2660
Chinle, Arizona 86503
Telephone: (928) 645-2214
Fax: (928) 645-2216

Tuba City, AZ
Post Office Box 733
Tuba City, Arizona 86045
Telephone: (928) 283-3100
Fax: (928) 283-3107

Office of Navajo Labor Relations

ADMINISTRATION OFFICE:
Post Office Drawer 1943
Window Rock, Arizona 86515
Telephone: (928) 871-6800
Fax: (928) 871-7088

PHYSICAL ADDRESS:
W008-222 Doublewide Trailer
Morgan Blvd.
Window Rock, Arizona 86515

STAFF:

Reynold R. Lee, *Director*; reynoldrlee@navajo.org	(928) 871-6800/6801
Carletta Benally, *Administrative Assistant*	(928) 871-6801
Eugene Kirk, *Labor Compliance Officer*; eugenekirk@navajo.org	(928) 871-6800/6801
Gililand Damon, *Labor Compliance Officer*; gililanddamon@navajo.org	(928) 871-6800/6801
Michael Armijo, *Construction Employment Analyst*; mikearmijo@yahoo.com	(928) 871-6800/6801
Valara James, *Office Assistant*, valara_lola@yahoo.com	(928) 871-6800

Shiprock Sub-Office:
John P. Wilson, *Labor Compliance Officer*
Georgina Howe, *Office Assistant*
Post Office Box 1704
Shiprock, New Mexico 87420
Phone: (505) 368-1143
Fax: (505) 368-1145

Physical Location:
Northwest of Tse Bit'ai Shopping Center
First Trailer East of Hogan.

Chinle Sub-Office:
Harrison Bia, *Labor Compliance Officer*
Norma Horton, *Office Assistant*
Post Office Box 2660
Chinle, Arizona 86503
Phone: (928) 674-2214
Fax: (928) 674-2216

Physical Location:
Navajo Nation Government Offices
West of Chinle Chapter House.

Kayenta Sub-Office:
Delight Butler, *Labor Compliance Officer*
Tanisha Nez, *Office Assistant*
Post Office Box 550
Kayenta, Arizona 86033
Phone: (928) 697-5645
Fax: (928) 697-5647

Physical Location:
Kayenta Chapter House

Tuba City Sub-Office:
Vacant, *Labor Compliance Officer*
Mary L. Bracker, *Office Assistant*
Post Office Box 733
Tuba City, Arizona 86045
Phone: (928) 283-3100
Fax: (928) 283-3107

Physical Location:
Located on East Side of TCCC
Right next to Coalmine Sub-office.

START NEW WORKERS OUT RIGHT

C

EXECUTIVE SUMMARY

The safer construction top-management, project-management and foreman give more orientation to their workers new to the job than less safe managers. Research proves that attention to new workers is a key characteristic of safe, productive management. This information shows:

WHY orientating workers increases profits.
HOW to develop a new workers program tailored to your company.

WHY NEW WORKERS PROGRAM INCREASES PROFITS

The facts show that construction companies which are putting their workers right to work without any orientation are spending needless dollars for accident costs, lost time, damaged materials and machinery, etc. These new workers are the ones who are having the accidents, accidents, which cost thousands in workers compensation costs.

The common construction practice of putting new workers directly on the job with no orientation is creating a very high accident rate for workers in their first few days and weeks on the job.

For most construction companies, it is their new workers – no matter how experienced they are – who are having the accidents. And these accidents are costing company profits.

Accidents to new workers can be substantially reduced by an orientation for employees new to the job. The investment of time to start a new worker out right will be repaid many times over when that worker works safely and does not have an accident.

Every accident creates many costs for your company. Insurance costs are one of the major costs. A recent study by Prof. Raymond Levitt of Stanford University, of 23 construction firms engaged in highway, heavy building, industrial and specialty trade construction found that companies with formal safety orientation programs for all new hires had an average insurance modification rates, 25% lower than their competitors who did not have any such programs. These reduced costs give a distinct advantage in the bidding process and allow for greater profits. Beyond these obvious costs yet equally important, is the fact that accidents have a very adverse impact on project morale and company reputation.

Orientation will pay off by reducing accidents. Few accidents mean more profits.

HOW TO DEVELOP YOUR COMPANY'S ORIENTATION PROGRAM

A successful company orientation program includes all new workers regardless of the number of years worked in the industry. It covers every worker new to the company, new to a particular job site or only new to a crew. This means that your new worker program needs three parts – each important.

1. Top management communication to new worker of company, commitments on safety, health, and expectations for each employee.

2. Project management orientation, including the special requirements for each project.

3. Foreman orientation to job and crew.

The worker who is new to the company is also new to the project and to the crew. Such people need the most orientation. They are unfamiliar with company policies and procedures. They are unfamiliar with job site conditions. They are unfamiliar with superintendents, foremen and fellow employees. They feel that they must prove themselves to the company, the superintendent, the foreman, and their fellow workers and to themselves.

Safety orientation, however, cannot stop with them. All employees, even those with company seniority, should receive safety orientation every time they are transferred to a new job site or crew. The particular organization and layout of the work and therefore the particular safety hazards at the job site are as unfamiliar to them as to a brand new employee. On many sites, even when there is no turnover in crews on the job, conditions change so much during the course of the job that all site employees need constant update orientation. Very productive safe superintendents stop their project workers for briefing sessions every time the work changes.

TOP MANAGEMENT'S ROLE IN ORIENTATION

Your company needs to develop two programs:

1. A New Worker Orientation-to-the-Company Program.

2. A Management Training System to Insure Project and Crew Level Orientation.

ESSENTIALS OF A COMPANY ORIENTATION PROGRAM

Your company program must be developed by upper management to suit the company. After a program is implemented, it needs to be reviewed and updated to guarantee that it is functioning as designed. The type of work and number of employees will govern the extent and formality of each company's program.

NEW WORKER ACTION STEPS:

Everyone new to your crew (no matter how experienced) is a new worker

1. Ask about last job.
2. Describe the new job.
3. Show worker around site; point out hazards.
4. Introduce worker to others
5. Describe your rules.
6. Give worker a test run on tools and equipment.
7. Keep an eye on the new worker during the first few days.
8. Check back to see how the worker is coming along.

Foremen and superintendents will be more willing to spend the necessary time on a new worker orientation if they are held accountable for accidents as part of their supervisory responsibilities.

START NEW WORKERS OUT RIGHT is only the first part of the **SAFER** program. The greatest reduction in accidents and the greatest increase in savings will result from combining orientation with the other four basic points of the safer program.

1. Account for all accidents – so foremen and supervisors know that safety is an important part of their job performance.

2. Foremen and Managers plan safety into each job so the safety is an integral part of job operations.

3. Every week a toolbox/tailgate meeting is held so that what the new worker hears and learns in orientation is constantly backed up and emphasized.

4. Reinforce safe performance so that the new workers and all the others realize that foremen, supervisors, and the companies back their interest in safety with recognition of those who do a good job on safety.

Your company's program should also include:

1. An introductory letter to each employee from the company president welcoming the new worker, emphasizing the importance of safety to the company and to the president, and describing the worker's responsibility to help maintain a safe working environment.

2. A Company Safety Practices handbook issued to each new worker, which spells out the particular rules and requirements of your company.

In addition, there are a number of additional methods which construction companies have used successfully such as audio-visual presentations (films, slides, videotapes) to be viewed by each worker covering company safety policy, new employees checklists which are read by the employee before the worker begins work and which require the employee's signature of the compliance on their employment application, short booklets describing company project information, and company procedures including workweek, absentee and pay procedures, rules on safety and other basic company policies.

THE COMPANY PLANS FOR JOB SUPERINTENDENT AND FOREMAN ORIENTATION

While a company orientation program developed from the elements just described is effective in reducing accidents and accident costs, even more effective is company program combined with a strong program on the project and crew level. The most effective orientation programs depend upon the key personnel directly in contact with the new worker. The superintendent and foreman are committed to orientating the new hire.

The job superintendent has two responsibilities for orientation. First, he must communicate a project-wide commitment to safety and a continuing awareness and involvement in safety performances as well as productivity and quality. Secondly, he must be certain that the foremen understand the importance of orientation and are trained to carry it our properly. The superintendent should also take an active interest in the new worker, ensuring that the necessary safety information has been provided and that the new worker is adjusting well to the job.

The foreman is typically the most closely involved with the new worker and thus is a critical person in the orientation process. The company should expect the foreman to spend sufficient time with the new worker to start the new worker out right. Foremen who save their company money and their crewmembers' personal and economic loss by orienting their new crewmembers have well-developed methods for starting a new worker. These methods can be taught successfully to other foremen. Stanford Construction Safety Management Safety and Health Project have developed a foreman pocket card listing the new worker action steps. This card reminds the foremen what to do.

IMPORTANT NOTICE: Contractor to Complete and return this form to ONLR **PRIOR** to start of work.

D

SAMPLE
(Use Company Letterhead)

CONTRACTOR/SUBCONTRACTOR'S MANPOWER PROJECTION REPORT

CONTRACTOR: _____ DATE: _____

PROJECT: _____ LOCATION: _____

ANTICIPATED START DATE: _____ END DATE: _____

CRAFT	NUMBER REQUIRED	REMARKS	CRAFT	NUMBER REQUIRED	REMARKS
Carpenter			Cement Finisher		
Electrician			Boilermaker		
Laborer			Bricklayer		
Drywall Installer/ Taper			Equipment Operator		
Pipefitter			Truck Driver		
Plumber			Ironworker		
Roofer			Painter		
Insulator			Soft Tile Setter		
Millwright			Sheet Metal Worker		

(**Note:** any special qualifications, i.e., 125-Ton Crane Operator, Testing Requirements, Journeyman or Apprenticeship/Trainee, etc.):

_____

_____

_____

Important Notice: All Contractors having subcontractors shall submit a sub-contractor listing, which shall include the name and address of each subcontractor, telephone number and contact person.

Name: _____
(Authorized Company Representative & Title) **PRINTED**

Signature: _____

Original to:
Office of Navajo Labor Relations
ATTN: John P. Wilson, LCO
Post Office Drawer 1704
Shiprock, New Mexico 87420

Copy to:
Office of Navajo Labor Relations
ATTN: Michael Armijo, CEA
Post Office Drawer 1943
Window Rock, Arizona 86515

SUBCONTRACTORS LISTING

E

Information Required:

1. Name and addresses of all subcontractors. Include telephone numbers.

2. Name and title of company representative.

3. Brief description of what type of work the subcontractor will perform.

4. A Manpower Projection is required prior to start of work. Projected start and end date should be noted.

NOTE: A pre-construction conference is required **BEFORE** any work is started. It is the subcontractor's responsibility to contact ONLR to arrange for a separate meeting before any work begins.

JOB DESCRIPTION

F

1. Brief description or narrative picture of the job that highlights its general characteristics. The job summary should provide enough information stating the major functions and activities.

2. Avoid using ambiguous words, or those that leave themselves open to a number of possible interpretations.

3. Avoid using technical words unless you are sure they will be easily understood. If you must use them anyway, explain.

4. All employers (contractors and subcontractors) shall use non-discriminatory job qualification and selection criteria in employment.

5. Job descriptions shall contain those job-related qualifications which are essential to the performance of the basic responsibilities designated for each employment position, including any essential qualification concerning education, training and job-related experience, but excluding any qualifications relating to ability or aptitude to perform responsibilities in other employment positions. Demonstrated ability to perform essential and basic responsibilities shall be deemed satisfaction of "necessary qualifications".

NOTE: A copy of a job description shall be provided to the applicants or candidates at the time they express an interest in such position (15 NNC 604.D.).

G

RADIO STATIONS

KNDN RADIO STATION
1515 West Main Street
Farmington, New Mexico 87401
Telephone: (505) 325-1996
Fax: (505) 327-2019

KTNN RADIO STATION
Post Office Box 2569
Window Rock, Arizona 86515
Telephone: (928) 871-2582
Fax: (928) 871-3479

NEWSPAPER

DAILY TIMES
Post Office Box 450
Farmington, New Mexico 87499
Telephone: (505) 325-4545
Fax: (505) 564-4567

NAVAJO TIMES
Post Office Box 310
Window Rock, Arizona 86515
Telephone: (928) 871-6641
Fax: (928) 871-6409

GALLUP INDEPENDENT
Post Office Box 1210
Gallup, New Mexico 87305
Telephone: (505) 863-6811
Fax: (505) 722-5750

NAVAJO/HOPI OBSERVER
2224 East Cedar Avenue
Flagstaff, Arizona 86004
Telephone: (928) 226-9696
Fax: (928) 226-1115

NAVAJO PREFERENCE STATEMENT

NPEA Section 4(B). Specific Requirements for Navajo Preference

1. "All employers shall include and specify a Navajo employment preference policy statement in all job announcements and advertisements and employer policies covered by this Act".

JOB SERVICE

New Mexico Dept. of Labor
2020 E. Aztec
Gallup, New Mexico 87301
(505) 863-3884/Fax: (505) 863-3493

AZ Workforce Connection
Post Office Box 3565
Window Rock, Arizona 86515
(928) 871-4131/Fax: (928) 871-4130

New Mexico Dept. of Labor
600 W. Arrington
Farmington, New Mexico 87401
(505) 327-6126/Fax: (505) 326-6006

Dept. of Economic Security Adm.
Post Office Box 130
Tuba City, Arizona 86045
(928) 283-5201/Fax: (928) 283-4435

NPEA Section 4(B)(5): "All employers shall utilize Navajo Nation employment sources and job services for employee recruitment and referrals; provided, however, that employers do not have the foregoing obligations in the event a Navajo is selected for the employment who is a current employee of the employer."

AFFIRMATIVE ACTION REGULATIONS

H

I. INTRODUCTION

A. Pursuant to the ***Navajo Preference in Employment Act*** ("NPEA"), "all employers doing business within the territorial jurisdiction of the Navajo Nation, or engaged in any contract with the Navajo Nation shall give preference in employment to Navajos. Preference in employment shall include specific Navajo affirmative action plans and timetables for all phases of employment to achieve the tribal goals of employing Navajos in all job classifications including supervisory and management positions."

II. POLICY STATEMENT

A. The employer's policy statement shall indicate the Owner/Chief Executive Officer's position on the subject matters; assign overall responsibility, reporting and monitoring procedure. Specific items to be mentioned, should include, but are not limited to:

1. Providing employment and training opportunities for Navajo workers, including supervisory and management positions.

2. Employment decisions and personnel actions shall be based on the principles, intent and purposes of the ***Navajo Preference in Employment Act*** ("NPEA").

III. APPOINMENT OF A MANAGEMENT OFFICIAL TO IMPLEMENT NAVAJO AFFIRMATIVE ACTION PROGRAM

A. A management official who has decision-making authority shall be appointed to implement and monitor the Affirmative Action Plan Program. His/Her responsibility will include, but are not limited to the following:

1. Developing Navajo Affirmative Action Plan Program, policy statement, goals and objectives, and internal and external communication procedures.

2. Identifying and/or assisting in the identification of problem areas in Section V.D.

3. Determining and implementing corrective solution(s) identified under Section V.D. with the assistance of line supervisors.

4. Designing and implementing audit and reporting systems that will:

   a. Measure effectiveness of the employer's program.

b. Indicate and determine the need for remedial action(s).

c. Determine the degree to which the employer's goal and objectives have been accomplished.

5. Serve as liaison between the employer and the Office of Navajo Labor Relations ("ONLR").

IV. ESTABLISHMENT OF GOALS AND TIMELINES

A. The goals and timelines developed by the employers should be attainable based on analysis of the following:

1. All positions/classifications currently held by non-Navajos.

2. Qualifications required by the positions/classifications.

3. Timelines for Navajo worker(s) to obtain qualifications for positions/classification(s) held by non-Navajos, and

4. Identification of resources internally and externally to implement the plan.

V. WORKFORCE ANALYSIS

A. The affirmative action plan should contain a workforce analysis, defined as a listing of each job title as it appears in applicable collective bargaining agreements or payroll records ranked from the lowest paid to the highest paid within each department or organizational unit including mid-management and top-management. Lines of progression for each unit or department must be identified through which employees could move upward. Where there are no formal progression lines or lines or usual promotional sequences, job titles should be listed in order of wages/salary ranges.

B. An analysis of all positions/classifications of the employer, should be included, with explanation if Navajos are currently being under-utilized in any positions/classifications, "Under-utilization" is defined as having a fewer Navajos in any position/classification than would be expected by the availability of qualified Navajo workers.

C. An in-depth analysis of the following shall be made:

1. Composition of Navajo and non-Navajo employees by positions/classifications.

2. Composition of applicant flow of Navajos and non-Navajos.

3. Selection process including recruitment, job descriptions, interview criteria, written tests and final selection.

4. Retention, promotion, transfer, reduction in force and recall.

5. Apprenticeship program/trainings.

6. Company training – formal and informal.

D. If any of the following are identified in the analysis, a plan of corrective action must be established immediately:

1. An under-utilization of Navajo employees.

2. Vertical movement of Navajos occurs at a lesser rate than that of non-Navajos.

3. The selection process eliminates a significantly higher percentage of Navajos than non-Navajos.

4. Position/job descriptions are inaccurate in relation to actual duties and function.

5. Testing and/or test forms having adverse impact at a higher rate on Navajos than non-Navajos.

6. Non-support of the company's affirmative action policy by employees' supervisors or managers.

7. No formal criteria established for evaluating the effectiveness of the affirmative action program.

VI. UNIONS AND LABOR ORGANIZATIONS

A. Where employers are signatory to collective bargaining agreements, the union organizations and the employer shall file a joint employer – union affirmative action plan to the Office of Navajo Labor Relations pursuant to NPEA, Section 4.A.2.

B. The joint employer – union affirmative action policy shall specifically include a clause that the employer and the labor organization will provide preference in employment to Navajos.

C. When providing preference in employment to Navajos, the affirmative action policy shall require the following:

1. The employer shall specifically request Navajo workers for work to be done on the Navajo Nation. The employer shall not accept referrals of non-Navajos for work on the Navajo Nation, so long as potentially qualified Navajos are available, through respective local union halls.

2. The labor organization shall first refer all Navajos on the labor organization's referral list (s), regardless of their relative position on those lists.

3. The labor organization shall take necessary steps to recruit additional Navajo members so as to meet manpower requests for work to be conducted on the Navajo Nation.

VII. ENFORCEMENT

A. The designated company management official shall be responsible for compliance with the requirements of these Rules and Regulations.

B. Employers and organizations not in compliance will be subjected to formal charges in accordance with provisions of the ***Navajo Preference in Employment Act***.

C. Failure to comply with these Rules and Regulations or failure to submit an affirmative action policy may result, in addition to formal charges, corrective action by the Office of Navajo Labor Relations, including but not limited to, compelled hiring and/or training of Navajo workers.

VIII. EFFECTIVE DATE

A. These Regulations shall become effective 180 days from the date of approval by the Humans Services Committee of the Navajo Nation Council.

B. Within 90 days of the effective date, employers must have submitted an affirmative action plan to the Office of Navajo Labor Relations.

IX. AMENDMENT

A. This regulation shall be amended from time to time as deemed necessary by the Human Services Committee of the Navajo Council.

ONLR/10-01-02

OFFICE OF NAVAJO LABOR RELATIONS
EMPLOYER INTERVIEW REPORT

Project

Location

*N = Navajo
NN= Non-Navajo

Contractor

Position

DATE	APPLICANT	N/NN	ADDRESS/TELEPHONE	INTERVIEWER	RESULTS

J

CONDITION FOR EMPLOYMENT EXPRESSED TO APPLICANT

1. Explain or inform worker what's expected of him/her. The work rules or conducts.

2. Each employee should know what their position is; rate of pay, and given a written personnel action form.

3. Thorough orientation on company/employer policies and procedures.

K

WRITTEN NOTIFICATION FOR ANY EMPLOYEE ACTION

1. "All employers shall not penalize, discipline, discharge nor take any adverse action against any Navajo employee without just cause. A written notification to the employee citing such cause for any of the above actions is required in all cases." (15 NNC 604.B.(8.))

L

SAMPLE
(Use Company Letterhead)

Date: _____

Office of Navajo Labor Relations
Post Office Drawer 1943
Window Rock, Arizona 86515

RE: WEEKLY MANPOWER REPORT FOR WEEK ENDING: _____

Duration of Project: Start Date: _____

Completion Date: _____

Contract Number: _____

Project Title: _____

Project Stage of Completion (%): _____

Total Work Force (*): _____

*Justification for hiring non-Navajo employee:

_____

_____

_____

Important Notice: Each Weekly Manpower shall have a corresponding Certified Payroll Report attached.

_____
Representative Name & Title (Printed)

_____
Signature

Original to:
Office of Navajo Labor Relations
Attn: John P. Wilson, LCO
Post Office Drawer 1704
Shiprock, New Mexico 87420

Copy to:
Office of Navajo Labor Relations
Attn: Michael Armijo, CEA
Post Office Drawer 1943
Window Rock, Arizona 86515

WEEKLY MANPOWER REPORT
For Week Ending: _____

	NAVAJO		NON-NAVAJO	
	Male	Female	Male	Female
Project Superintendent				
Project Foreman				
Carpenter				
Electrician				
Laborer				
Drywaller Installer/Taper				
Plumber				
Pipefitter				
Truck Driver				
Equipment Operator				
Ironworker				
Roofer				
Painter				
Soft Tilesetter				
Insulator				
Cement Mason				
Apprentice				
Others (Specify Craft)				
_____				
_____				
TOTALS:				

(List Only those Classifications Utilized During that Week)

OFFICE OF NAVAJO LABOR RELATIONS
CERTIFIED PAYROLL

M

NAME OF CONTRACTOR OR SUBCONTRACTOR:	ADDRESS/TELEPHONE:	WAGE DECISION NO.
PAYROLL NO. / FOR WEEK ENDING:	PROJECT NAME:	LOCATION: / CONTRACT NO.

(1) NAME OF EMPLOYEE	(2) *N/NN	(3) WORK CLASSIFICATION	OT OR ST	(4) DAY AND DATE S	M	T	W	T	F	S	(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS FICA	WITH-HOLDING TAX	OTHER	TOTAL DEDUCTIONS	(9) NET WAGES PAID FOR WEEK
				HOURS WORKED EACH DAY														
			S															
			O															
			S															
			O															
			S															
			O															
			S															
			O															
			S															
			O															
			S															
			O															
			S															
			O															
			S															
			O															
			S															
			O															
			S															
			O															
			S															
			O															
			S															
			O															
			S															
			O															

(2) * N / Navajo or NN / non-Navajo (PLEASE INDICATE)

PAYROLL STATEMENT OF COMPLIANCE

Date _____

I,_____ _____
(Name of signatory party) (Title)
do hereby state:

(1) That I pay or supervise the payment of the persons employed by _____

_____ on the_____
(Contractor or subcontractor) (Building or work)

_____; that during the payroll period commencing on the _____
day of_____, 20____ and ending the_____day of_____ 20_____
all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

_____ from the full
(Contractor or subcontractor)
weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions ad defined in Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat 967; 75 Stat 357; 40 U.S.C. 267c), and described below:

_____

_____

_____

_____

(2) That any payrolls otherwise under this contract require to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with the State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

ف – In addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in Section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

ف –Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in Section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO A CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.

PROJECT STATUS REPORT
SAMPLE
(Use Company Letterhead)

Date: _____

PROJECT TITLE: _____

Duration of Project: START: _____ Completion: _____

Job Location: _____

Check Appropriate Spaces:

_____ Complete – No employees or workers on site.

_____ Near Completion, will be completed by: _____

_____ Other: _____

Additional Work Project: FROM: _____ TO: _____

Description of additional work required:

_____

_____

Company: _____

Representative Name: _____

Title: _____

IMPORTANT NOTICE

In the event contractor/subcontractor returns to perform additional work on this project, Office of Navajo Labor Relations must be contacted and a manpower projection report shall be submitted to ONLR before any work is to start. Form can be faxed to the Office of Navajo Labor Relations at:

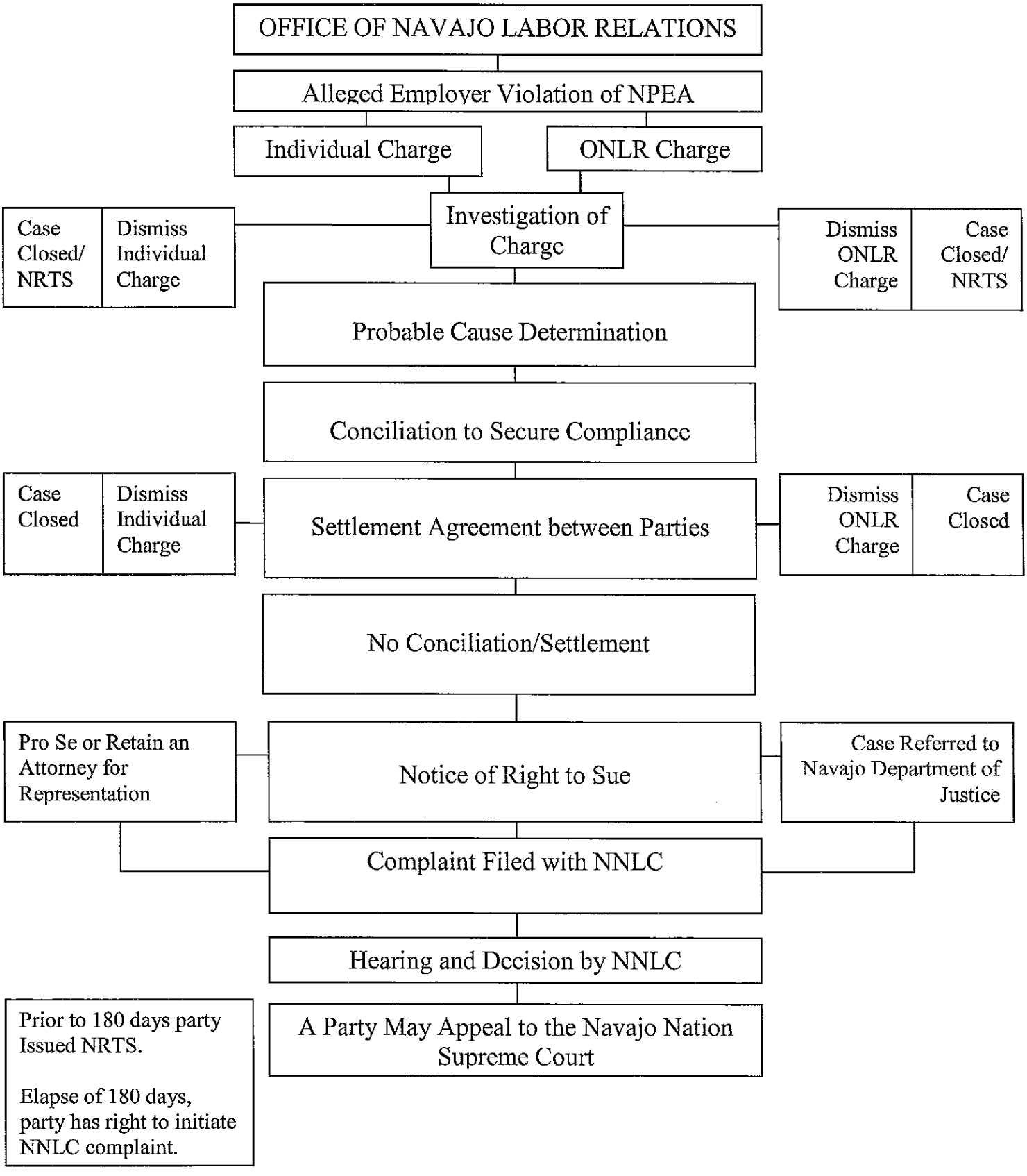
Office of Navajo Labor Relations
(505) 368-1145

NOTE: Please fill out this form within two weeks of completion of project.

Original to:
Office of Navajo Labor Relations
Attn: John P. Wilson, LCO
P. O. Drawer 1704
Shiprock, New Mexico 87420

Copy to:
Office of Navajo Labor Relations
Attn: Michael Armijo, CEA
P. O. Drawer 1943
Window Rock, Arizona 86515

INVESTIGATION PROCESS FLOW CHART



APPENDIX C

Environmental Requirements

- **BLM Pipeline Right-of-Way Stipulations**
- **BLM Tank Site Right-of-Way Stipulations**
- **Navajo Department of Agriculture Re-seeding Requirements**
- **BLM Re-vegetation Plan**

EXHIBIT A

Project:	NGWSP REACH 26.1/26.2 PIPELINE & SHORT-TERM ROW
NEPA Log Number:	DOI-BLM-NM-F010-2014-0277 EA
R/W Serial Number:	NMNM-131746; NMNM 131746-01
R/W Project Number:	N/A
Location:	SEE GRANT AND SRP FOR LEGALS
File Code:	2800
Holder:	Navajo Nation c/o Navajo Nation Water Management Branch
Address:	PO Box 678, Ft. Defiance, AZ 86504
BLM Office:	Farmington Field Office, Phone No: (505) 564-7600

PIPELINE RIGHT-OF-WAY STIPULATIONS

The following stipulations and/or mitigating measures will be implemented throughout the construction, maintenance, termination (or relinquishment), and reclamation of this project. If problems arise during or after field work is completed, the applicant/contractor(s) is required to promptly notify the Bureau's authorized representative. Consultation between the applicant/ contractor(s) and the Bureau's authorized representative may result in additional field work being required of the applicant/contractor(s) to fully implement one or more of the following stipulations.

CULTURAL STIPULATIONS

Cultural resources are present within the immediate project area. Monitoring and temporary site protection barriers may be required on this project. See Cultural Resource Record of Review, BLM Report Number 2013(I)066.1F for site specific stipulations.

SPECIAL STIPULATIONS:

1. **Threatened, Endangered or Sensitive Species:** If, in operations the operator/holder discovers any T&E / Sensitive species, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the BLM T&E specialist @ (505) 564-7600. BLM will then specify what action is to be taken. Failure to notify the BLM about a discovery may result in civil or criminal penalties in accordance with the Endangered Species Act of 1973 (as amended).

2. **For proposed projects 4.0 acres or more of vegetative disturbance**: No construction activities from May 15 to July 31 will be permitted without a migratory bird nest survey. These surveys will be conducted by a BLM/FFO approved biologist using a survey protocol provided by a BLM/FFO biologist. If any active nests are located within the proposed project area, projects activities will not be permitted until written approval by a BLM/FFO biologist. The BLM/FFO will monitor any active nests located from a nest survey.

3. **Raptors:** FFO continues raptor management for American peregrine falcon, ferruginous hawk, golden eagle, and prairie falcon. Management consists of: No construction, drilling, or completion activities shall be conducted between February 1 and June 30 within 1/3 mile of an active or historic nest. An entity that proposed an action that may be impacted by the raptor stipulation may contact FFO and inquire about the status of the effected nest. FFO may release the proposed action before June 30 when FFO determines that the young of the year have fledged and left the area, or that surveys have conclusively determined the nest is not active.

4. **Golden Eagle:** No construction, drilling, or completion activities shall be conducted between February 1 and June 30 within 1/3 mile of an active or historic nest.

5. The AO shall require and schedule a preconstruction conference with Holder prior to Holder's commencing construction and/or surface disturbing activities on the right-of-way. Holder and/or his representative shall attend this conference. Holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with the right-of-way, shall also attend this conference to review the stipulations of the grant including the plan(s) of development, as applicable.

6. At least five days prior to this conference, Holder shall provide maps or survey plats of this project to operators of

all pipelines crossed or paralleled on public/Federal lands, and contact and invite them to attend this meeting. Determining the names and contact points of these operators is the responsibility of Holder. If requested by the AO, Holder shall certify these contacts were made and that the required information was given.

7. Rocks removed from the construction area during clearing and/or ditching operations shall be scattered back on right-of-way in a random arrangement and not in bunches. Redistributing these materials on right-of-way during reclamation activities shall be accomplished by using rubber-tired equipment

A. CONSTRUCTION AND MAINTENANCE STIPULATIONS

1. **Disclaimers:** BLM's approval of this ROW does not relieve the lessee and operator from obtaining any other authorizations that may be required by other jurisdictional entities or agencies.

2. **BMP:** Farmington Field Office established environmental Best Management Practices (BMP's) will be followed during construction and reclamation of well site pads, access roads, pipeline ties, facility placement or any other surface disturbing activity associated with this project. Bureau wide standard BMP's are found in the Gold Book, Fourth Edition-Revised 2007. Farmington Field Office BMP's are integrated into the general and site specific stipulations described below.

3. **New Surface Disturbance**: Holder shall not initiate any construction or other surface disturbing activities on the right-of-way without prior written authorization of the AO.

4. **Plan of Development**: Holder shall construct, operate and maintain the facilities, improvements and structures within this right-of-way in strict conformity with the plan(s) of development which was (were) approved and made part of the grant. Any relocation, additional construction, or use that is not in accord with the approved plan(s) of development, shall not be initiated without the prior written approval of the AO.

5. **On-Site Documentation**: A copy of the complete right-of-way grant, including all stipulations and approved plan(s) of development, shall be made available on the right-of-way area during construction, operation and termination to the AO. Noncompliance with the above will be grounds for an immediate suspension of activities if it constitutes a threat to public health and safety of the environment. Construction may not proceed until a Notice to Proceed is issued.

6. **Dust Abatement:** The operator shall implement dust abatement measures as indicated in the approved POD to prevent fugitive dust from vehicular traffic, equipment operations, or wind events. The BLM may direct the operator to change the level and type of treatment (watering or application of various dust agents, surfactants, and road surfacing material) if dust abatement measures are observed to be insufficient to prevent fugitive dust.

7. **Clearing:** Trees three inches in diameter or greater will be cut and de-limbed; trunks stacked on the opposite side of the right-of-way for wood gatherers. If pipeline is next to the road put trunks on the opposite side of the road from the right-of-way to prevent driving on the right-of-way. Cut trees shall be placed so that the public can gather tress without creating additional disturbance or degrading new or existing reclamation. Trees three inches or less, slash and brush will either be chipped and used on the pipeline or hauled to an approved disposal site. When chipping trees, slash and brush, the material generated will be distributed in a manner which will not impede seeding with machinery and the establishment of successful revegetation. Stumps of trees will be used for erosion control or removed.

8. **Trenching**: Minimize the amount of open trench ahead of pipe laying and backfilling. No More than ½ mile of trench or the amount of trench that can be worked in a day will be open at any given time. Backfilling operations would be performed within a reasonable amount of time of the lowering operation to ensure the trench is not left open for more than 24 hours. Trenches left open overnight will be fenced with a temporary fence or other methods approved by the Authorized Officer. The ends of the trench will be sloped (3:1) to allow animals to escape.

   Escape ramps/crossovers will be constructed every 1320 feet. In areas where active grazing is taking place or in Wildlife Specially Designated Areas (SDA's) escape ramps/crossovers will be placed every 500 feet. The ends

of the open trench will be sloped each night with a 3:1 slope.

Established livestock and wildlife trails will be left in place as a cross over. Escape ramps/crossovers will be constructed with a minimum 3:1 slope at each end of the crossover. Crossovers will be a minimum of ten feet wide and not fenced.

The end of the pipe will be plugged to prevent animals from crawling in.

Before the trench is closed, inspect the trench for any animal that may be in the trench. Any trapped wildlife or livestock will be promptly removed and released at least 150 yards from the trench.

9. **Weather:** No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 6 inches deep, the soil shall be deemed too wet.

10. **Nesting:** If a bird nest containing eggs or young is encountered in the path of construction the operator will cease construction and consult with BLM to determine appropriate actions. Should active nests be observed, the contractor has determined that project activities cannot be avoided until after the birds have fledged (left the nest), and if no practicable or reasonable avoidance alternatives are identified, then the contractor must contact the USFWS's Migratory Bird Permit Office in Albuquerque, NM at (505) 248-7882. The contractor may proceed with work on the affected project activities following receipt of the approved permit the USFWS.

11. **Public Access:** Public access to existing roads will not be restricted without specific written approval being granted by the AO. Gates or cattleguards on the public land will not be locked or closed to public use unless specifically determined by the AO.

12. **Staking**: Holder shall survey and clearly mark the centerline and/or exterior limits of right-of-way, as determined by the AO (set reference markers for all angle stations {P.I.} on both sides of the right-of-way prior to construction activities).

13. **Top Soil:** The top 6 inches of soil material will be stripped and stockpiled separately from material removed from the trench within the right-of-way and/or temporary construction area. The stockpiled soil will be free of brush and tree limbs, trunks and roots. The stockpiled soil material will be spread on the reclaimed portions of the ROW prior to re-seeding. Spreading shall not be done when the ground or topsoil is frozen or wet. Tree limbs, trunks, stumps and roots must be removed from the site unless otherwise designated by the AO or approved POD.

14. **Waterbars**: Holder shall construct waterbars on all disturbed areas to the spacing and cross sections specified by the AO. Waterbars are to be constructed to: (1) simulate the imaginary contour lines of the slope (ideally with a grade of one or two percent); (2) drain away from the disturbed area; and (3) begin and end in vegetation or rock whenever possible. Spacing will be as follows:

Percent Slope	Spacing Intervals
less than 1%	400 feet
1 - 5%	300 feet
5 - 15%	200 feet
12 - 25%	100 feet

15. **Re-contouring:** All disturbed areas will be re-contoured to establish approximate original contours of right-of-way. This includes removing embankments, backfilling excavations, and grading to re-establish the approximate original contours of the land in the right-of-way.

16. **Restricted ROW Access:** Holder is responsible for restricting vehicle access along the ROW using methods identified in the approved POD.

17. **Liability for Damage:** If any road drainage structures (silt traps, culverts, drainage ditches or water turnouts)

are damaged or destroyed during pipeline construction the Navajo Nation will be liable for any damage and will rebuild or replace any damaged structures as per the Authorized Officer.

18. **Public Safety**: Holder shall provide for the safety of the public entering the right-of-way. This includes, but is not limited to, barricades for open trenches, flagmen/women with communication systems for single-lane roads without intervisible turnouts, and attended gates for blasting operations.

19. **Grazing Permittee Notification**: For any and all construction activities the holder will notify the grazing lease operator(s) at least ten business days prior to beginning construction to ensure there will be no conflicts between construction activities and livestock grazing operations. The holder is in no way obligated to cease or delay construction unless directed by the authorized officer. Any range improvement (fences, pipelines, ponds, etc) disturbed by construction activities will be repaired immediately following construction and will be repaired to the condition they were in prior to disturbance.

20. **Fences and Existing Improvements:** Disturbance to existing fences and other improvements on public land will be minimized and will be promptly repaired to at least their former state. Holder is responsible to contact the grazing lessee(s) prior to crossing any fence on public land or any fence between public and private land, and to offer the lessee(s) an opportunity to be present when the fence cut(s) is made so the lessee(s) can be satisfied that the fence is adequately braced and secured. Their functional use will be maintained at all times.
    a. Each fence crossed by the project will be H-braced and secured on both sides to prevent slacking of the wire, before cutting the wire. The opening thus created will be temporarily closed as necessary during construction to prevent passage of livestock.

    b. Upon completion of construction, a cattle guard is to be installed with an adjacent 16 foot gate. The cattle guard will be constructed to Bureau of Land Management specifications. Cattle guards will be kept clean and repaired or replaced when needed.

    c. A minimum of 10 feet of undisturbed surface will be maintained between fence lines and roads and/or pipelines that are constructed parallel to fences.

    d. Gaps opened in natural barriers used for livestock control during construction will be fenced to prevent drift of livestock, as directed by the AO.

21. **Cattle guards:** Cattle guards shall have grid identification marks welded into them indicating ownership, well name and number associated with the cattle guard, and foundation designs. Construction shall meet the American Association of State Highway and Transportation Officials (AASTHO) load rating H-20, although AASTHO U-80 rated grids shall be required where heavy loads, (exceeding H-20 loading) are anticipated. (See BLM standard drawings for cattle guards). Cattle- guard grid width shall not be less than eight feet and length of not less than 14 feet. A wire gate with a minimum width of 16 feet will be provided on one side of the cattle guard.

22. **Noxious Weeds:** Inventory the proposed route or site for the presence of noxious weeds. Noxious weeds are those listed on the New Mexico Noxious Weed List. The New Mexico Noxious Weed List can be updated at anytime and should be regularly checked for any changes. The following weeds have been identified as occurring on lands within the boundaries of the Farmington Field Office (FFO).

Russian Knapweed (*Centaurea repens*)	Musk Thistle (*Carduss nutans*)
Bull Thistle (*Cirsium vulgare*)	Canada Thistle (*Cirsium arvense*)
Scotch Thistle (*Onopordum acanthium)*	Hoary Cress (*Cardaria draba*)
Perennial Pepperweed (*Lepdium latiofolfium*)	Halogeton (*Halogeton glomeratus*)
Spotted Knapweed (*Centaurea maculosa*)	Dalmation Toadflax (*Linaria genistifolia*)
Yellow Toadflax (*Linaria vulgaris*)	Camelthorn (*Alhagi pseudalhagi*)
African Rue (*Penganum harmala*)	Salt Cedar (*Tamarix spp.*)
Diffuse Knapweed (*Centaurea diffusa*)	Leafy Spurge (*Euphorbia esula*)

a. Identified weeds will be treated prior to new surface disturbance. A Pesticide Use Proposal (PUP) must be submitted to and approved by the FFO Noxious Weed Coordinator prior to application of pesticide. The FFO Noxious Weeds Coordinator (505-564-7600) can provide assistance in the development of the PUP.

b. Construction equipment should be inspected and cleaned prior to coming onto the work site. This is especially important on vehicles from out of state or if coming from a weed-infested site. If fill dirt or gravel will be required, the source shall be noxious weed free.

c. The site shall be monitored for the life of the project for the presence of noxious weeds (includes maintenance and construction activities). If weeds are found the FFO Coordinator shall be notified at (505) 564-7600 and provided with a Weed Management Plan and if necessary, a PUP. The FFO Coordinator can provide assistance developing the Weed Management Plan and/or the PUP.

23. **Soil Preparation and Seeding:** Seeding will be accomplished using the procedures outlined in the Right-of-Way Plan of Development Procedure as determined by the FFO Bare Soil Procedure and Vegetative Communities.

24. **Maintenance:** In order to perform subsequent pipeline operations or install new/additional equipment, it may be necessary to drive, park, and operate on restored, interim vegetation within the previously disturbed area. This is generally acceptable provided damage is promptly repaired and reclaimed following use. Where vehicular travel has occurred as a "convenience" and interim reclamation/vegetation has been compromised, immediate remediation of the affected areas is required. Additionally, where erosion has occurred and compromised the reclamation of the pipeline, the affected area must be promptly remediated so that future erosion is prevented and the landform is stabilized.

25. The operator or his contractor will e-mail the Bureau of Land Management, Farmington Field Office, Lands Compliance Staff, dmmueller@blm.gov, 48 hours prior to completion of reclamation efforts associated with this project.

STANDARD RIGHT-OF-WAY STIPULATIONS:

1. Holder shall conduct all activities associated with the construction, operation, and termination of the right-of-way within the authorized limits of the right-of-way.

2. Disposal of all liquid and solid waste produced during operation of this right-of-way shall be in an approved manner so it will not impact the air, soil, water, vegetation or animals.

3. Holder shall not violate applicable air and water quality standards or related facility siting standards established by or pursuant to applicable Federal and State law.

4. Holder shall minimize disturbance to existing fences and other improvements on public land. The Holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. Holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be H-braced on both sides of the passageway prior to cutting the fence.

5. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, water used for pressure testing, and equipment.

6. Holder shall maintain the ROW in a safe, useable condition, as directed by the Authorized Officer (AO). (A regular maintenance program shall be included in the POD.)

7. Use of pesticides and herbicides shall comply with the applicable Federal and State laws. Pesticides and herbicides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, Holder shall obtain from the AO written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the AO. Emergency use of pesticides shall be approved in writing by the AO prior to use.

B. CULTURAL RESOURCES ARCHAEOLOGY

1. DISCOVERY OF CULTURAL RESOURCES IN THE ABSENCE OF MONITORING: If, in its operations, operator/holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to BLM District Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is successfully completed. Failure to notify BLM about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

2. DISCOVERY OF CULTURAL RESOURCES DURING MONITORING: If monitoring confirms the presence of previously unidentified cultural resources, then work in the vicinity of the discovery will be suspended and the monitor will promptly report the discovery to BLM District Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed.

3. DAMAGE TO SITES: If, in its operations, operator/holder damages, or is found to have damaged, any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator/holder agrees at his/her expense to have a permitted cultural resources consultant prepare and have executed a BLM approved data recovery plan. Damage to cultural resources may result in civil or criminal penalties in accordance with the Archeological Resource Protection Act of 1979 (as amended).

4. EMPLOYEE EDUCATION: All employees of the project, including the Project Sponsor and its contractors and sub-contractors will be informed that cultural sites are to be avoided by all personnel, personal vehicles and company equipment. This includes all personnel associated with construction, use, maintenance and abandonment of the well pad, well facilities, access and pipeline. They will also be notified that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16U.S.C. 470aa-mm).

C. ABANDONMENT

1. Ninety days prior to termination of the ROW, Holder shall contact the AO to arrange a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination and rehabilitation plan. This plan shall include, but is not limited to, removal of facilities, drainage structures, or surfacing material, recontouring, topsoiling or seeding. The AO must approve the plan in writing prior to Holder's commencement of any termination actions.

D. GENERAL

1. **After complying with all construction and/or maintenance stipulations, submit a "Proof of Construction"**

letter and an "as built" plat. Proof of Construction letters shall be filed with BLM, Farmington District, 6251 College Blvd., Farmington, NM 87402, no later than 90 days after completion of construction.

2. Holder of this right-of-way agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on this ROW (unless the release or threatened release is wholly unrelated to Holder's activity in this ROW). This agreement applies without regard to whether a release is caused by the Holder, their agent, or unrelated third parties.

3. Holder(s) shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder(s) shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (See 40 CFR, Part 702-799 and especially, provisions on polycholrinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release of spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

4. Holder of this right-of-way grant, or the Holder's successor in interest, shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and the regulations of the Secretary of the Interior issued pursuant thereto.

On behalf of the Navajo Nation, I have reviewed these stipulations and conditions and agree with them.

Navajo Nation	9-18-17 Date
BLM Field Examiner	Date

EXHIBIT A

Project:	*NGWSP REACH 26.2 PUEBLO PINTADO TANK SITE*
EA Log Number:	DOI-BLM-NM-F010-2014-*0277*-EA
R/W Serial Number:	NMNM *134542*
R/W Project Number:	*N/A*
Location:	T. 19 N., R. 7 W., Section 6, SE¼NE¼
File Code:	2800
Holder:	Navajo Nation c/o Navajo Nation Water Management Branch
Address:	PO Box 678, Ft. Defiance, AZ 86504
BLM Office:	Farmington Field Office, Phone No: (505) 564-7600

FACILITY/SITE RIGHT-OF-WAY STIPULATIONS

The following stipulations and/or mitigating measures will be implemented throughout the construction, maintenance, termination (or relinquishment), and reclamation of this project. If problems arise during or after field work is completed, the applicant/contractor(s) is required to promptly notify the Bureau's authorized representative. Consultation between the applicant/ contractor(s) and the Bureau's authorized representative may result in additional field work being required of the applicant/contractor(s) to fully implement one or more of the following stipulations.

CULTURAL STIPULATIONS

Cultural resources are present within the immediate project area. Monitoring and temporary site protection barriers may be required on this project. See Cultural Resource Record of Review, BLM Report Number 2013(I)066.1F for site-specific stipulations.

SPECIAL STIPULATIONS:

1. **Threatened, Endangered or Sensitive Species:** If, in operations the operator/holder discovers any T&E / Sensitive species, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the BLM T&E specialist @ (505) 564-7600. BLM will then specify what action is to be taken. Failure to notify the BLM about a discovery may result in civil or criminal penalties in accordance with the Endangered Species Act of 1973 (as amended).

2. **For proposed projects 4.0 acres or more of vegetative disturbance**: No construction activities from May 15 to July 31 will be permitted without a migratory bird nest survey. These surveys will be conducted by a BLM/FFO approved biologist using a survey protocol provided by a BLM/FFO biologist. If any active nests are located within the proposed project area, projects activities will not be permitted until written approval by a BLM/FFO biologist. The BLM/FFO will monitor any active nests located from a nest survey.

3. **Raptors:** FFO continues raptor management for American peregrine falcon, ferruginous hawk, golden eagle, and prairie falcon. Management consists of: No construction, drilling, or completion activities shall be conducted between February 1 and June 30 within 1/3 mile of an active or historic nest. An entity that proposed an action that may be impacted by the raptor stipulation may contact FFO and inquire about the status of the effected nest. FFO may release the proposed action before June 30 when FFO determines that the young of the year have fledged and left the area, or that surveys have conclusively determined the nest is not active.

4. **Golden Eagle:** No construction, drilling, or completion activities shall be conducted between February 1 and June 30 within 1/3 mile of an active or historic nest.

5. The AO shall require and schedule a preconstruction conference with Holder prior to Holder's commencing construction and/or surface disturbing activities on the right-of-way. Holder and/or his representative shall attend this conference. Holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with the right-of-way, shall also attend this conference to review the stipulations of the grant including the plan(s) of development, as applicable.

6. At least five days prior to this conference, Holder shall provide maps or survey plats of this project to operators of all pipelines crossed or paralleled on public/Federal lands, and contact and invite them to attend this meeting. Determining the names and contact points of these operators is the responsibility of Holder. If requested by the AO, Holder shall certify these contacts were made and that the required information was given.

7. Rocks removed from the construction area during clearing and/or ditching operations shall be scattered back on right-of-way in a random arrangement and not in bunches. Redistributing these materials on right-of-way during reclamation activities shall be accomplished by using rubber-tired equipment

A. CONSTRUCTION AND MAINTENANCE STIPULATIONS

1. **Disclaimers:** BLM's approval of this ROW does not relieve the lessee and operator from obtaining any other authorizations that may be required by other jurisdictional entities or agencies.

2. **BMP:** Farmington Field Office established environmental Best Management Practices (BMP's) will be followed during construction and reclamation of well site pads, access roads, pipeline ties, facility placement or any other surface disturbing activity associated with this project. Bureau wide standard BMP's are found in the Gold Book, Fourth Edition-Revised 2007. Farmington Field Office BMP's are integrated into the general and site specific stipulations described below.

3. **Operational Approval**: This approval is for operational activities only. Surface commingling and/or off-lease sales, storage, usage and measurement require separate approval by the AO.

4. **New Surface Disturbance**: Holder shall not initiate any construction or other surface disturbing activities on the right-of-way without prior written authorization of the AO.

5. **Plan of Development**: Holder shall construct, operate and maintain the facilities, improvements and structures within this right-of-way in strict conformity with the plan(s) of development which was (were) approved and made part of the grant. Any relocation, additional construction, or use that is not in accord with the approved plan(s) of development, shall not be initiated without the prior written approval of the AO.

6. **On-Site Documentation**: A copy of the complete right-of-way grant, including all stipulations and approved plan(s) of development, shall be made available on the right-of-way area during construction, operation and termination to the AO. Noncompliance with the above will be grounds for an immediate suspension of activities if it constitutes a threat to public health and safety of the environment. Construction may not proceed until a Notice to Proceed is issued.

7. **Dust Abatement:** The operator shall implement dust abatement measures as indicated in the approved POD to prevent fugitive dust from vehicular traffic, equipment operations, or wind events. The BLM may direct the operator to change the level and type of treatment (watering or application of various dust agents, surfactants, and road surfacing material) if dust abatement measures are observed to be insufficient to prevent fugitive dust.

8. **Clearing:** Trees three inches in diameter or greater will be cut and de-limbed; trunks stacked on the opposite side of the right-of-way for wood gatherers. Cut trees shall be placed so that the public can gather tress without creating additional disturbance or degrading new or existing reclamation. Trees three inches or less, slash and brush will either be chipped and used on the pipeline or hauled to an approved disposal site. When chipping trees, slash and brush, the material generated will be distributed in a manner which will not impede seeding with machinery and the establishment of successful revegetation. Stumps of trees will be used for erosion control or removed.

9. **Weather:** No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 6 inches

deep, the soil shall be deemed too wet.

10. **Nesting:** If a bird nest containing eggs or young is encountered in the path of construction the operator will cease construction and consult with BLM to determine appropriate actions. Should active nests be observed, the contractor has determined that project activities cannot be avoided until after the birds have fledged (left the nest), and if no practicable or reasonable avoidance alternatives are identified, then the contractor must contact the USFWS's Migratory Bird Permit Office in Albuquerque, NM at (505) 248-7882. The contractor may proceed with work on the affected project activities following receipt of the approved permit the USFWS.

11. **Public Access:** Public access to existing roads will not be restricted without specific written approval being granted by the AO. Gates or cattleguards on the public land will not be locked or closed to public use unless specifically determined by the AO.

12. **Staking**: Holder shall survey and clearly mark the centerline and/or exterior limits of right-of-way, as determined by the AO (set reference markers for all angle stations {P.I.} on both sides of the right-of-way prior to construction activities).

13. **Top Soil:** The top 6 inches of soil material will be stripped and stockpiled separately from material removed from the trench within the right-of-way and/or temporary construction area. The stockpiled soil will be free of brush and tree limbs, trunks and roots. The stockpiled soil material will be spread on the reclaimed portions of the ROW prior to re-seeding. Spreading shall not be done when the ground or topsoil is frozen or wet. Tree limbs, trunks, stumps and roots must be removed from the site unless otherwise designated by the AO or approved POD.

14. **Re-contouring:** All disturbed areas will be re-contoured to establish approximate original contours of right-of-way. This includes removing embankments, backfilling excavations, and grading to re-establish the approximate original contours of the land in the right-of-way.

15. **Restricted ROW Access:** Holder is responsible for restricting vehicle access along the ROW using methods identified in the approved POD.

16. **Liability for Damage:** If any road drainage structures (silt traps, culverts, drainage ditches or water turnouts) are damaged or destroyed during construction the Navajo Nation will be liable for any damage and will rebuild or replace any damaged structures as per the Authorized Officer.

17. **Painting of Equipment:** Within 90 days of installation, all above ground structures, excluding those that pose a safety hazard, shall be painted by the Holder to blend with the natural color of the landscape. High visibility paint and /or reflective material may be used to address safety hazards or reduce hazards that may occur when such structures are near roads. Otherwise, the paint use shall be a non-glare, non-reflective, non-chalking color of as selected from the Standard Environmental Colors listed below: Covert Green

18. **Public Safety**: Holder shall provide for the safety of the public entering the right-of-way. This includes, but is not limited to, barricades for open trenches, flagmen/women with communication systems for single-lane roads without intervisible turnouts, and attended gates for blasting operations.

19. **Grazing Permittee Notification**: For any and all construction activities the holder will notify the grazing lease operator(s) at least ten business days prior to beginning construction to ensure there will be no conflicts between construction activities and livestock grazing operations. The holder is in no way obligated to cease or delay construction unless directed by the authorized officer. Any range improvement (fences, pipelines, ponds, etc) disturbed by construction activities will be repaired immediately following construction and will be repaired to the condition they were in prior to disturbance.

20. **Fences:** Holder is responsible to contact the grazing lessee(s) prior to crossing any fence on public land or any fence between public and private land, and to offer the lessee(s) an opportunity to be present when the fence

cut(s) is made so the lessee(s) can be satisfied that the fence is adequately braced and secured.

21. **Noxious Weeds:** Inventory the proposed route or site for the presence of noxious weeds. Noxious weeds are those listed on the New Mexico Noxious Weed List. The New Mexico Noxious Weed List can be updated at anytime and should be regularly checked for any changes. The following weeds have been identified as occurring on lands within the boundaries of the Farmington Field Office (FFO).

Russian Knapweed (*Centaurea repens*)	Musk Thistle (*Carduss nutans*)
Bull Thistle (*Cirsium vulgare*)	Canada Thistle (*Cirsium arvense*)
Scotch Thistle (*Onopordum acanthium)*	Hoary Cress (*Cardaria draba*)
Perennial Pepperweed (*Lepdium latiofolfium*)	Halogeton (*Halogeton glomeratus*)
Spotted Knapweed (*Centaurea maculosa*)	Dalmation Toadflax (*Linaria genistifolia*)
Yellow Toadflax (*Linaria vulgaris*)	Camelthorn (*Alhagi pseudalhagi*)
African Rue (*Penganum harmala*)	Salt Cedar (*Tamarix spp.*)
Diffuse Knapweed (*Centaurea diffusa*)	Leafy Spurge (*Euphorbia esula*)

a. Identified weeds will be treated prior to new surface disturbance. A Pesticide Use Proposal (PUP) must be submitted to and approved by the FFO Noxious Weed Coordinator prior to application of pesticide. The FFO Noxious Weeds Coordinator (505-564-7600) can provide assistance in the development of the PUP.

b. Construction equipment and vehicles should be inspected and cleaned prior to coming onto the work site. This is especially important on vehicles from out of state or if coming from a weed-infested site. If fill dirt or gravel will be required, the source shall be noxious weed free.

c. The site shall be monitored for the life of the project for the presence of noxious weeds (includes maintenance and construction activities). If weeds are found the FFO Coordinator shall be notified at (505) 564-7600 and provided with a Weed Management Plan and if necessary, a PUP. The FFO Coordinator can provide assistance developing the Weed Management Plan and/or the PUP.

22. **Soil Preparation and Seeding:** Seeding will be accomplished using the procedures outlined in the Right-of-Way Plan of Development Procedure as determined by the FFO Bare Soil Procedure and Vegetative Communities.

23. **Maintenance:** In order to perform subsequent pipeline operations or install new/additional equipment, it may be necessary to drive, park, and operate on restored, interim vegetation within the previously disturbed area. This is generally acceptable provided damage is promptly repaired and reclaimed following use. Where vehicular travel has occurred as a "convenience" and interim reclamation/vegetation has been compromised, immediate remediation of the affected areas is required. Additionally, where erosion has occurred and compromised the reclamation of the pipeline, the affected area must be promptly remediated so that future erosion is prevented and the landform is stabilized.

24. The operator or his contractor will e-mail the Bureau of Land Management, Farmington Field Office, Lands Compliance Staff, dmmueller@blm.gov, 48 hours prior to completion of reclamation efforts associated with this project.

STANDARD RIGHT-OF-WAY STIPULATIONS:

1. Holder shall conduct all activities associated with the construction, operation, and termination of the right-of-way within the authorized limits of the right-of-way.

2. Disposal of all liquid and solid waste produced during operation of this right-of-way shall be in an approved manner so it will not impact the air, soil, water, vegetation or animals.

3. Holder shall not violate applicable air and water quality standards or related facility siting standards established by or pursuant to applicable Federal and State law.

4. Holder shall minimize disturbance to existing fences and other improvements on public land. The Holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. Holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be H-braced on both sides of the passageway prior to cutting the fence.

5. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, water used for pressure testing, and equipment.

6. Holder shall maintain the ROW in a safe, useable condition, as directed by the Authorized Officer (AO). (A regular maintenance program shall be included in the POD.)

7. Use of pesticides and herbicides shall comply with the applicable Federal and State laws. Pesticides and herbicides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, Holder shall obtain from the AO written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the AO. Emergency use of pesticides shall be approved in writing by the AO prior to use.

B. CULTURAL RESOURCES ARCHAEOLOGY

1. DISCOVERY OF CULTURAL RESOURCES IN THE ABSENCE OF MONITORING: If, in its operations, operator/holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to BLM District Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is successfully completed. Failure to notify BLM about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

2. DISCOVERY OF CULTURAL RESOURCES DURING MONITORING: If monitoring confirms the presence of previously unidentified cultural resources, then work in the vicinity of the discovery will be suspended and the monitor will promptly report the discovery to BLM District Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed.

3. DAMAGE TO SITES: If, in its operations, operator/holder damages, or is found to have damaged, any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator/holder agrees at his/her expense to have a permitted cultural resources consultant prepare and have executed a BLM approved data recovery plan. Damage to cultural resources may result in civil or criminal penalties in accordance with the Archeological Resource Protection Act of 1979 (as amended).

4. EMPLOYEE EDUCATION: All employees of the project, including the Project Sponsor and its contractors and sub-contractors will be informed that cultural sites are to be avoided by all personnel, personal vehicles and company equipment. This includes all personnel associated with construction, use, maintenance and abandonment of the well pad, well facilities, access and pipeline. They will also be notified that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16U.S.C. 470aa-mm).

C. ABANDONMENT

1. Ninety days prior to termination of the ROW, Holder shall contact the AO to arrange a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination and rehabilitation plan. This plan shall include, but is not limited to, removal of facilities, drainage structures, or surfacing material, recontouring, topsoiling or seeding. The AO must approve the plan in writing prior to Holder's commencement of any termination actions.

D. GENERAL

1. **After complying with all construction and/or maintenance stipulations, submit a "Proof of Construction" letter and an "as built" plat. Proof of Construction letters shall be filed with BLM, Farmington District, 6251 College Blvd., Farmington, NM 87402, no later than 90 days after completion of construction.**

2. Holder of this right-of-way agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on this ROW (unless the release or threatened release is wholly unrelated to Holder's activity in this ROW). This agreement applies without regard to whether a release is caused by the Holder, their agent, or unrelated third parties.

3. Holder(s) shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder(s) shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (See 40 CFR, Part 702-799 and especially, provisions on polycholrinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release of spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

4. Holder of this right-of-way grant, or the Holder's successor in interest, shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and the regulations of the Secretary of the Interior issued pursuant thereto.

On behalf of *Navajo Nation,* I have reviewed these stipulations and conditions and agree with them.

Navajo Nation	9-18-17 Date
BLM Field Examiner	Date

BLM Report Number: 2013(I)066F
USGS Map: See report
Activity Code: 1430

CULTURAL RESOURCE RECORD OF REVIEW
BUREAU OF LAND MANAGEMENT
FARMINGTON FIELD OFFICE

1. Description of Report/Project:
Project Name: Navajo Gallup Water Supply Reach 26.2
Project Sponsor: Bureau of Reclamation
Arch. Firm & Report No.: Ecosystems Management 1005b (NMCRIS 123080)
Location: T19-21N, R5-7W
Project Dimensions: Approximately 16 miles on Navajo, BLM, and private land.
BLM;
Waterline; 23,156' x 100' (40' r-o-w, 60' temporary construction easement)
Powerline; 649' x 40' (20' r-o-w, 20' temporary construction easement)
Tank site (irregular shape); 370' x 265', ca. 1.3 acres
Drainline; 835' x 40'
Sites Located: 12 sites (2 BLM, 10 Navajo Nation)
LA 65220 (NM-01-32789) - Eligible
LA 65221 (NM-01-32790) - Eligible
Determination: No historic properties affected.

2. Field Check: Yes; Date: various
Comment/Results: Multiple visits to Chacra Mesa tank site to determine site avoidance and protection conditions / stipulations.
3. Cultural ACEC: No:: Adjacent to Chacra Mesa ACEC
4. Traditional Cultural Property:No:

5. Recommendation: *PROCEED WITH ACTION* ☒ *STIPULATIONS ATTACHED* ☒
This record and recommendation is for public lands only.
6. Reviewer /Archaeologist: James M. Copeland **Date**: October 1, 2015

James M. Copeland

Report Summary	BLM	Other	Total
Acres Inventoried	245	532	777
Sites Recorded	0		
Prev. Recorded Sites	2		
Sites Avoided	2		
Sites Treated	0		

Discovery of Cultural Resources in the Presence or Absence of Monitoring: If, in its operations, Project sponsor discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the BLM Field Manager.

Note: If there are questions about this review or these stipulations, as the case may be, contact Jim Copeland (BLM) at 505-599-6335 or jcopelan@blm.gov

CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2013(I)066F

Project Name: Navajo Gallup Water Supply Reach 26.2
Project Sponsor: Bureau of Reclamation

1. SITE PROTECTION AND EMPLOYEE EDUCATION: All employees of the project, including the Project Sponsor and its contractors and sub-contractors will be informed that cultural sites are to be avoided by all personnel, personal vehicles and company equipment. This includes all personnel associated with the geotechnical studies. They will also be notified that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm).

2. ARCHAEOLOGICAL MONITORING IS REQUIRED:

A copy of these stipulations will be supplied to the archeological monitor at least two working days prior to the start of geotechnical study activities. No geotechnical study activities, including vegetation removal, may begin before the arrival of the monitor.

At a minimum, the monitor will:

- Observe all ground disturbing activities within 100 feet of BLM cultural sites.
- Ensure that the permanent site protection barriers are located as indicated on the attached map.
- Periodically inspect sites LA65220, 65221, 50002, 50004, 50005, and 50006 during construction for evidence of prohibited acts pursuant to the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm).
- Submit a report of the monitoring activities within 30 days of completion of monitoring unless other arrangements are made with the BLM. The report must include an updated site record and site map for LA65220 and LA65221 prepared to BLM standards. These stipulations must be attached to the report.

3. SITE PROTECTION BARRIER:

- Permanent barriers will be installed by the project sponsor prior to construction at sites LA65220 and LA65221 to ensure long-term avoidance of these "at risk"cultural resources. The final design will be at the discretion of the project sponsor with final approval by BLM. They will be readily obvious and prevent expansion of the tank site / booster facility during and after construction.
- The barrier(s) will be placed as indicated on the attached map.
- There will be no construction activities or vehicle traffic past the barrier(s).

4. OTHER:

- Permanently close the road as indicated on attached map.
- Closure will include ripping and seeding the road and avoiding site LA65221.

NOTE: If there are questions about these stipulations, contact Jim Copeland (BLM) at jcopelan@blm.gov

CULTURAL RESOURCE STIPULATIONS
Farmington Field Office
BLM Report Number: 2013(I)066F

Project Name: Navajo Gallup Water Supply Reach 26.2
Project Sponsor: Bureau of Reclamation

Project Name: Navajo Gallup Water Supply Reach 26.2
Project Sponsor: Bureau of Reclamation

BLM Report Number: 2013(I)066.1F
USGS Map: Pueblo Alto TP
Activity Code: 1430

CULTURAL RESOURCE RECORD OF REVIEW

BUREAU OF LAND MANAGEMENT
FARMINGTON FIELD OFFICE

1. Description of Report/Project:
Project Name: Navajo Gallup Water Supply Reach 26.2 Reroute
Project Sponsor: Bureau of Reclamation
Arch. Firm & Report No.: Ecosystems Management 1148 (NMCRIS 135755)
Location: T20N, R7W
Project Dimensions: Approximately 2.8 miles on Navajo and BLM land.
BLM;
Waterline; 23,156' x 100' (40' r-o-w, 60' temporary construction easement)
Sites Located: 8 sites (2 BLM, 6 Navajo Nation)
LA 185214 (NM-210-48899) - Not Eligible
LA 185214 (NM-210-48900) - Not Eligible
Determination: No historic properties affected.

2. Field Check: No; Date:
Comment/Results:
3. Cultural ACEC: No::
4. Traditional Cultural Property:No:

5. Recommendation: *PROCEED WITH ACTION* ☒ *STIPULATIONS ATTACHED* ☐
This record and recommendation is for public lands only.
6. Reviewer /Archaeologist: James M. Copeland **Date**: November 7, 2016

James M. Copeland

Report Summary	BLM	Other	Total
Acres Inventoried	79.8	93.7	173.5
Sites Recorded	2	4	6
Prev. Recorded Sites	0	2	2
Sites Avoided	2	6	8
Sites Treated	0	0	0

Discovery of Cultural Resources in the Presence or Absence of Monitoring: If, in its operations, Project sponsor discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the BLM Field Manager.

Note: If there are questions about this review or these stipulations, as the case may be, contact Jim Copeland (BLM) at 505-599-6335 or jcopelan@blm.gov

Navajo Department of Agriculture Re-seeding Requirements

Prepared by: Judy R. Willeto, Range Conservationist
Navajo Department of Agriculture - Ft. Defiance A.O.
P.O. Box 308
Window Rock, Arizona 86515
Telephone (602) 871-7076
FAX (602) 871-5493
Revision Date: December 6, 1994

NAVAJO TRIBAL UTILITY AUTHORITY
VEGETATIVE RECLAMATION FOR PIPELINE AND POWERLINE R.O.W.

PIPELINE (GAS, WATER, SEWAGE, ETC.)

Site Description #1

Grasses and Grasslike: Blue Gramma, Western Wheatgrass, Needle and Thread, Bottlebrush Squirreltail, etc.
Shrubs and Trees: Pinyon Pine, Juniper, Sagebrush, Rabbitbrush
Soils: Loam, Clay Loam, Sandy Loam, Sandy Clay Loam

Preparation of Site

Prior to excavation of the pipeline trench, the top 6 inches of topsoil in right of way will be removed and saved for further use to reclaim pipeline right of way. The saved topsoil will be stockpiled far enough away from the trench and line of work so, as not be be damaged. After the topsoil has been stockpiled, trenching, ripping, etc. can begin.

Restoration

Pipeline trench will be filled with excavated material, the impacted of affected area within the right of way will be smoothed evenly with the topography of the land. The saved topsoil will then be placed over smoothed right of way. Right of way will then be reseeded with the following seed mixture; TABLE A-1

TABLE A-1

Species	Cultivar	Lbs PLS/Acre
Western Wheatgrass	Arriba	3.0
Streambank Wheatgrass		2.0
Intermediate Wheatgrass	Oahe	3.0
Indian Rice Grass	Paloma	2.0
Blue Grama		2.0
Sideoats Grama		2.0
Little Bluestem		2.0
Rocky Mountain Penstemon		1.0
TOTAL POUNDS PLS PER ACRE		16.0

* PLS - Pure Live Seed

Site Description #2
Grasses and Grasslike: Western Wheatgrass, Blue Grama
Shrubs and Trees: Ponderosa Pine, Douglas fir, Blue Spruce
Soils: Loam, Clay, Clay Loam

Preparation of Site
Prior to excavation of the pipeline trench, the top 6 inches of topsoil in in right of way will be removed and saved for further use to reclaim pipeline right of way. The saved topsoil will be stockpiled far enough away from the trench and line of work so, as not be be damaged. After the topsoil has been stockpiled, trenching, ripping, etc. can begin.

Restoration
Pipeline trench will be filled with excavated material, right of way will be smoothed evenly with the topography of the land. The saved topsoil will then be placed over smoothed right of way. Right of way will then be reseeded with the following seed mixture; TABLE A-2

TABLE A-2

Species	Cultivar	Lbs PLS/Acre
Western Wheatgrass	Arriba	3.0
Streambank Wheatgrass		2.0
Intermediate Wheatgrass	Oahe	3.0
Indian Rice Grass	Paloma	2.0
Blue Grama		2.0
Sideoats Grama		2.0
Little Bluestem		2.0
Rocky Mountain Penstemon		1.0
TOTAL POUNDS PLS PER ACRE		16.0

Desription #3 (ND-1)
Grasses and Grasslike: Alkali Sacaton, Galleta, Sand Dropseed, Threeawn
Shrubs and Trees: Fourwing Saltbush, Shadscale, Greasewood
Soils: Sand, Sandy Loam

Preparation of Site
Prior to excavation of the pipeline trench, top 6 inches of topsoil in in right of way will be removed and saved for further use to reclaim pipeline right of way. The topsoil will be stockpiled far enough away from the trench and line of work so, as not be be damaged. After the topsoil has been stockpiled, trenching, ripping, etc. can begin.

Restoration
Pipeline trench will be filled with excavated material, right of way will be smoothed evenly with the topography of the land. Topsoil will then be placed

over smoothed right of way. Right of way will then be reseeded with the following seed mixture; TABLE A-3

TABLE A-3

Species	Cultivar	Lbs PLS/Acre
Alkali Sacaton		1.5
Indian Rice Grass	Paloma	2.0
Galleta	Viva	1.5
Sand Dropseed		2.0
Fourwing Saltbush		2.0
Shadscale		2.0
Western Wheatgrass	Arriba	3.0
Penstemon	Bandera	1.0
TOTAL POUNDS PLS PER ACRE		15.0

@@
@@

Powerline (Electical)

<u>Site Description #1</u>

Grasses and Grasslike: Blue Gramma, Western Wheatgrass, Needle and Thread, Bottlebrush Squirreltail, etc.
Shrubs and Trees: Pinyon Pine, Juniper, Sagebrush, Rabbitbrush
Soils: Loam, Clay Loam, Sandy Loam, Sandy Clay Loam

Preparation of Site (Extensive Impact)
Prior to excavation to install overhead powerlines with utility poles, the top six 6 inches of topsoil in the right of way will be removed and saved for further use to reclaim area. The saved topsoil will be stockpiled at an adequate distance away from worksite, to prevent usage until initial reclamation begins. Stockpiled topsoil will be specifically used for reclamation purposes, at no time will the topsoil be used as fill material to stabilize utility posts/poles.

Restoration
Utility poles with overhead powerlines have been installed, poles have been stabilized securely, area will be smooth to match the surrounding topography. After area has been smoothed, topsoil will be replaced and evenly spread over the right of way. The right of way will then be mechanically drilled seeded or under close supervision an (ATV) All Terrain Vehicles with seeding mount will be used. The right of way will be reseeded with the following seed mixture; TABLE B-1

TABLE B-1

Species		Lbs PLS/1000 sq.ft.
Western Wheatgrass	Arriba	1.0
Streambank Wheatgrass		1.0
Intermediate Wheatgrass	Oahe	1.0
Indian Rice Grass	Paloma	1.0
Blue Grama		1.0
TOTAL POUNDS PLS PER 1000 SQUARE FEET		5.0

Preparation of Site (Minimal Impact)
Prior to excavation and installation of utility posts/poles with overhead powerlines, the top (6) six inches of topsoil around post/pole location will be removed and stockpiled for later use to reclaim area. Stockpiled topsoil will be kept away from worksite, at a distance where it will not be damaged or mixed in with fill material to stabilize utility post/pole. Since reclamation will focus 10 to 30 feet in diameter around the utility post/pole this plan will be used only for minimal impacts, where a the entire right of way is not affected by construction.

Restoration
Upon installation of of the utility post/poles and overhead powerlines the affected area will be smoothed evenly to match the topography of the field. After smoothing the stockpiled topsoil will be placed evenly over affected or impacted area. The area will then hand seeded (Broadcasted) and manually raked into the soil. Do not leave seed without raking into soil, it will blow away, birds will feed on seed, etc. Specify to field staff the importance of manually raking to secure seed into the ground. Do not over rake and deep bury seed, this will result in low or no germination of the seed. Seed needs to be placed in the top one (1) inch of the soil. The following broadcast seed mixture will be used on this area; TABLE B-1

TABLE B-1

Species		Lbs PLS/100 sq.ft.
Western Wheatgrass	Arriba	1.0
Streambank Wheatgrass		1.0
Intermediate Wheatgrass	Oahe	1.0
Indian Rice Grass	Paloma	1.0
Blue Grama		1.0
TOTAL POUNDS PLS PER 1000 SQUARE FEET		5.0

Site Description #2

Grasses and Grasslike: Western Wheatgrass, Blue Grama
Shrubs and Trees: Ponderosa Pine, Douglas fir, Blue Spruce
Soils: Loam, Clay, Clay Loam

Preparation of Site (Extensive Impact)
Prior to excavation to install overhead powerlines with utility poles, the top six (6) inches of topsoil in the right of way will be removed and stockpiled for further use to reclaim area. The topsoil will be stockpiled at an adequate distance away from worksite, to prevent usage until initial reclamation begins. Stockpiled topsoil will be specifically used for reclamation purposes, at no time will the topsoil be used as fill material to stabilize utility posts/poles.

Restoration
Utility poles with overhead powerlines have been installed, poles have been stabilized securely, area will be smooth to match the surrounding topography. After area has been smoothed, topsoil will be replaced and evenly spread over the right of way. The right of way will then be mechanically drilled seeded or under close supervision an (ATV) All Terrain Vehicles with seeding mount will be used. The right of way will be reseeded with the following seed mixture; TABLE B-1

TABLE B-1

Species		Lbs PLS/1000 sq.ft.
Western Wheatgrass	Arriba	1.0
Streambank Wheatgrass		1.0
Intermediate Wheatgrass	Oahe	1.0
Indian Rice Grass	Paloma	1.0
Blue Grama		1.0
TOTAL POUNDS PLS PER 1000 SQUARE FEET		5.0

Preparation of Site (Minimal Impact)
Prior to excavation and installation of utility posts/poles with overhead powerlines, the top (6) six inches of topsoil around post/pole location will be removed and stockpiled for later use to reclaim area. Stockpiled topsoil will be kept away from worksite, at a distance where it will not be damaged or mixed in with fill material to stabilize utility post/pole. Since reclamation will focus 10 to 30 feet in diameter around the utility post/pole this plan will be used only for minimal impacts, where a the entire right of way is not affected by construction.

Restoration
Upon installation of of the utility post/poles and overhead powerlines the affected area will be smoothed evenly to match the topography of the field. After smoothing the stockpiled topsoil will be placed evenly over affected or impacted area. The area will then hand seeded (Broadcasted) and manually raked

into the soil. Do not leave seed without raking into soil, it will blow way, birds will feed on seed, etc. Specify to field staff the importance of manually raking to secure seed into the ground. Do not over rake and bury seed, this will result in low or no germination of the seed. Seed needs to be placed in the top inch of the soil. The following broadcast seed mixture will be used on this area; TABLE B-1

TABLE B-1

Species		Lbs PLS/1000 sq.ft.
Western Wheatgrass	Arriba	1.0
Streambank Wheatgrass	Sodar	1.0
Intermediate Wheatgrass	Oahe	1.0
Indian Rice Grass	Paloma	1.0
Blue Grama		1.0
TOTAL POUNDS PLS PER 1000 SQUARE FEET		5.0

Desription #3

Grasses and Grasslike: Alkali Sacaton, Galleta, Sand Dropseed, Threeawn
Shrubs and Trees: Fourwing Saltbush, Shadscale, Greasewood
Soils: Sand, Sandy Loam

Preparation of Site (Extensive Impact)
Prior to excavation to install overhead powerlines with utility poles, the top six (6) inches of topsoil in the right of way will be removed and stockpiled for further use to reclaim area. The topsoil will be stockpiled at an adequate distance away from worksite, to prevent usage, until initial reclamation begins. Stockpiled topsoil will be specifically used for reclamation purposes, at no time will the topsoil be used as fill material to stabilize utility posts/poles.

Restoration
Utility poles with overhead powerlines have been installed, poles have been stabilized securely, area will be smooth to match the surrounding topography. After area has been smoothed, topsoil will be replaced and evenly spread over the right of way. The right of way will then be mechanically drilled seeded or under close supervision an (ATV) All Terrain Vehicles with seeding mount will be used. The right of way will be reseeded with the following seed mixture; TABLE B-2

TABLE B-2

Species		Lbs PLS/1000 sq.ft.
Alkali Sacaton		1.0
Indian Rice Grass	Paloma	1.0
Galleta	Viva	1.0
Western Wheatgrass	Arriba	2.0
TOTAL POUNDS PLS PER 1000 SQUARE FEET		5.0

Preparation of Site (Minimal Impact)
Prior to excavation and installation of utility posts/poles with overhead powerlines, the top (6) six inches of topsoil around post/pole location will be removed and stockpiled for later use to reclaim area. Stockpiled topsoil will be kept away from worksite, at a distance where it will not be damaged or mixed in with fill material to stabilize utility post/pole. Since reclamation will focus 10 to 30 feet in diameter around the utility post/pole this plan will be used only for minimal impacts, where a the entire right of way is not affected by construction.

Restoration
Upon installation of of the utility post/poles and overhead powerlines the affected area will be smoothed evenly to match the topography of the field. After smoothing the stockpiled topsoil will be placed evenly over affected or imapcted area. The area will then hand seeded (Broadcasted) and manually raked into the soil. Do not leave seed without raking into soil, it will blow way, birds will feed on seed, etc. Specify to field staff the importance of manually raking to secure seed into the ground. Do not over rake and bury seed, this will result in low or no germination of the seed. Seed needs to be placed in the top inch of the soil. The following broadcast seed mixture will be used on this area; TABLE B-2

TABLE B-2

Species		Lbs PLS/1000 sq.ft.
Alkali Sacaton		1.0
Indian Rice Grass	Paloma	1.0
Galleta	Viva	1.0
Western Wheatgrass	Arriba	3.0
TOTAL POUNDS PLS PER 1000 SQUARE FEET		5.0

Special/Other Requirements

Seed

All seed must be certified to ensure viability. Start with quality seed, to acheive quality plantings.

Seeding Dates

Seeding dates in Site Description #1 (WP-1) and Site Description #2 (AN-1) will begin June 15 to August 15. The Navajo Nation in these two sites receives high levels of precipitation after August 15. Our intention is to plant before our monsoon season so, planted seed will receive moisture for proper germination and growth.

Seeding dates for Site Description #3 (ND) will begin November 1 through December 15. Dormant seedings from November to mid December are recommended for Northern Desert, due to the extreme hot temperatures and low precipitation during the summer months. Northern Desert receives most of it's precipitation during the winter in the form of snow.

Mulch

Mulch not recommended, due to the high levels of grazing by livestock. Mulch would attract livestock to the area and possibly cause damage to the reseeding. Mulch is not quality feed for horses and sheep and could also cause them to become ill and die. To avoid livestock fatalities we advise not to mulch.

BLM
APPENDIX A. REVEGETATION PLAN

This re-vegetation plan was designed to meet the requirements presented in the U.S. Department of the Interior Bureau of Land Management Farmington Field Office (BLM FFO) Bare Soil Reclamation Procedures (BLM FFO 2013) for disturbance resulting from the construction of the Navajo–Gallup Water Supply (NGWS) Reaches 26.1 and 26.2. The proposed project would consist of installing approximately 18.7 miles (30.1 km) of 10-inch and 12-inch diameter (25 and 30-cm) polyvinyl chloride pipe from the Ojo Encino North tank site to the Pueblo Pintado tank site, in Sandoval and McKinley Counties, NM. The waterline would include 40 feet (12 m) of permanent right-of-way (ROW) and 60 additional feet (18 m) of temporary construction easement (TCE). The total acreage of permanent ROW would be 91 acres (36.8 ha); the total acreage of TCE would be 136 acres (55.0 ha). The total area of ROW and TCE combined would be approximately 227 acres (91.9 hectares).

The project would also include the construction of a water storage & chlorination facility at the existing Pueblo Pintado tank site. The additional tank would have 2.3 acres (0.9 ha) of permanent easement. This tank would require the construction of a 0.26-mile-long (0.42-km) single-phase power line totaling 1.3 acre (0.5 ha).

The total area of potential disturbance for the pipeline and associated infrastructures would be approximately 230 acres (93.1 ha).

The major portion of the excavation will be done by bulldozers, scrapers and track hoes and possibly trenchers. A ripper will more than likely be used to break up sandstone, siltstone and shale. Topsoil will be stockpiled separate from general excavation material and will then be utilized during reseeding. The pipeline trench will reach a maximum depth in some areas as deep as 20 to 30 feet but typically averages around six feet in depth. The bottom width of the trench will be approximately three to four feet in width. Boring would involve a bore machine. Soil compaction would be conducted with sheepsfoot rollers, excavators, and/or jumping jack tampers. It is anticipated that water would need to be pumped from trenches when encountered to off-worksite areas. This water would need to be pumped off of the work area in order to minimize mud and rutting from heavy equipment and to dispose of excess water in the working trench. Contractors would be required to obtain all necessary permitting for such water disposal prior to commencing construction. Soils would be reshaped to original form and the area reseeded with native vegetation

The waterline and power line right-of-ways would be completely cleared of vegetation. Not all portions of the temporary construction easements would require vegetation removal because not all parts of the easements would be impacted—these would mostly function for stating areas and storage. A re-vegetation plan is required for all disturbances that remove vegetation and expose bare soil on BLM FFO lands.

The re-vegetation plan will follow the protocol outlined in Vegetation Reclamation Procedure B for disturbances over 1 acre. The initial onsite pre-disturbance visit was conducted on March 5th, 2013. Representatives from BLM FFO, BLM Rio Puerco Field Office (RPFO), and the Bureau of Reclamation met with Ecosystem Management, Inc. (EMI) to survey the vegetation communities in the project area and discuss seed mixes and noxious weed issues. Re-vegetation on lands belonging to the BLM RPFO will also follow the Bare Soil Reclamation Procedures and resulting re-vegetation plan, as agreed to following the initial onsite visit and meeting with both field offices.



Long view of typical 100-foot disturbance right-of-way for the NGWSP. Photo not from Reaches 26.1–26.2.



Cross view of typical 100-foot disturbance right-of-way for the NGWSP. Photo not from Reaches 26.1–26.2.

A.1. Site Description

Pre-disturbance site photos are presented below.

A.1.1. Vegetation Communities

Sagebrush Community—The majority of the project area is classified as the Sagebrush Community (Figure A-1). The dominant pre-disturbance vegetation consists of *Artemisia tridentata* (sagebrush), *Gutierrezia sarothrae* (broom snakeweed), and *Bouteloua gracilis* (blue grama). *G*. *sarothrae* is classified as an undesirable reclamation species in the Bare Soil Reclamation Procedures manual. *A*. *tridentata* is not included in the seed mix for this community type because it is likely to establish opportunistically without seeding. Other plants that occur in portions of the sagebrush community include *Chrysothamnus greenei* (Green's rabbitbrush), *Pleuraphis jamesii* (galleta), *Sporobolus airoides* (sacaton), and *Muhlenbergia pungens* (sandhill muhly). *S. airoides* is more common in the southern portion of Reach 26.2.

Unclassified grasslands—A portion of the south-central section of Reach 26.2 contains grasslands. These areas cannot be classified based on the eight vegetation communities corresponding to the Bare Soil Reclamation Procedures. These areas warrant a unique selection of revegetation seed mixes that do not include shrub species because the establishment of shrubs in grassland habitat would reduce the ecological function and values of these areas.

The grassland on Reach 26.2 is consists of a wide, flat valley that spans from Cañado Corrales at the northeast end of this reach to Chaco Wash at the southwest end of this reach. The area is dominated by *S*. *airoides*, *P*. *jamesii*, and *Atriplex obovata* (New Mexico saltbush). *Sarcobatus vermiculatus* (greasewood) occurs along washes in this area. A large prairie dog town is located in this area outside the right-of-way. This area is on Navajo Nation and BLM FFO land. This area is most similar to the greasewood community. We recommend that the seed mix be selected from this community type. This area spans from approximately 269271 E, 3984595 N to 266582 E, 3982495 N (NAD83 UTM Zone 13N).



Photo 1. South end of line facing northwest. Bare ground is associated with adjacent residence.



Photo 2. Near Pueblo Alto Trading Post facing southwest.



Photo 3. Near Pueblo Alto Trading Post facing northeast.



Photo 4. North of Tanner Lake facing southwest.



Photo 5. North of Tanner Lake facing northeast.



Photo 6. North-central project area facing southwest.



Photo 7. North-central project area facing northeast.



Photo 8. North end of project area facing southwest.



Photo 9. North end of project area facing northeast.



Photo 10. Unclassified grassland community.

A.2. Reclamation

A.2.1. Seed Mixes

The reduced-palatability seed mix is recommended for the widespread sagebrush community. Most of the area is subject to grazing by cattle, horses, and sheep. It is unrealistic to fence off such a large disturbance area. Furthermore, fencing would interrupt current open ranges. Seed mixes for the community types are presented in Table 1.

A.2.2. Reclamation Techniques

Provided below are some procedures and methods that may to help achieve more effective reclamation success (taken from the BLM FFO community and seed-mix descriptions).

Soil Testing: Development of a soil-testing plan for evaluation of the results of topsoil handling and reclamation procedures related to re-vegetation may prove beneficial. Suggested soil testing may include some or all of the following: pH, electrical conductivity (EC), texture, topsoil depth and overall soil depth, carbonates (reactivity), organic matter (OM), and Sodium Absorption Ratio (SAR).

Topsoil Stripping, Storage, and Replacement: At a minimum, the upper six inches of topsoil should be stripped, following the removal of vegetation during construction. The stripped topsoil should be stored separately from subsoil or other excavated material and replaced prior to final seedbed preparation.

Seedbed Preparation: For cut-and-fill slopes, initial seedbed preparation should consist of backfilling and recontouring to achieve the configuration specified in the reclamation plan. Seedbed preparation for compacted areas should be ripped to a minimum depth of 18 inches, with a maximum furrow spacing of two feet. Where practicable, ripping should be conducted in two passes at perpendicular directions. Avoid leaving large clumps or clods. If this exists, disking should be conducted. Disking and seed drills should run perpendicular to slopes to provide terracing and prevent rapid runoff and erosion. Seedbed preparation is one of the most important steps for reclamation success. Following final contouring, the backfilled or ripped surfaces should be covered evenly with topsoil. Final seedbed preparation should consists of raking or harrowing to spread topsoil prior to seeding to promote a firm seedbed. A loose seedbed makes it impossible to control the depth of seeding because the tires and the planter sink into the soil. Seedbed preparation may not be necessary for topsoil storage piles or other areas of temporary seeding.

Planting Depth: Improper planting depth, particularly the planting of some species too deeply in “fluffy” soils, is one of the major impediments to reseeding success. The Truax™ seed drill or modified rangeland drills that allow for seeding species from different seed boxes at different planting depths have been used by other BLM offices to address this issue. Efforts should be taken to ensure that perennial grasses and shrubs are planted at the appropriate depth. Intermediate-sized seeds such as wheatgrasses and shrubs should be planted at a depth of 0.5 inch, larger seeds, such as *Achnatherum hymenoides* at one to two inches, and small seeds such as *Sporobolus airoides* and *S. cryptandrus*, should be planted at a depth of 0.25 inch. In situations where differing planting depths are not practicable with the equipment being used, the entire mix should be planted no deeper than 0.25 inch. Planting too shallow is generally better than planting too deep. A review of current research methods is recommended (e.g., USDA PLANTS, USDA Plant Materials Centers and Service Areas, and native seed companies).

Soil Amendments: Amending a soil is not the same thing as mulching, although many types of mulch also are used as amendments. A "soil amendment" is any material added to a soil to improve its physical properties, such as water retention, permeability, water infiltration, drainage, aeration, nutrition, and structure. Organic amendments include sphagnum peat, humate, wood chips, grass clippings, straw, compost, manure, biosolids, sawdust, and wood ash. Inorganic amendments include vermiculite, perlite, lime, gypsum, tire chunks, pea gravel, and sand.

Mulching: Mulch may increase the success of seed germination and provide protection against erosion. Mulch should be applied within 24 hours following completion of seeding. In areas of interim reclamation that used drill-seeding or broadcast-seeding/raking, mulch should consists of crimping certified weed-free straw or certified weed-free native grass hay into the soil. Hydromulching may be used in areas of interim reclamation where crimping is impracticable, in areas of interim reclamation that were hydroseeded, and in areas of temporary seeding regardless of seeding method. Mulch applications in extremely clayey soils should be evaluated carefully to avoid developing an adobe mixture. In these cases, a soil amendment may prove more beneficial.

Timing of Seeding: Precipitation is the principal input controlling biological processes in arid and semiarid regions. The pattern of soil moisture will have a great impact on the fate of seeding. Many grasses species will germinate following significant moisture events that allow for deeper infiltration of soil moisture (4–12 inches deep). This moisture generally persists for several weeks and is available for seedling root growth and establishment. Grass species belong to one of two basic physiological types: cool season or warm season. Cool-season grasses have optimum growth temperatures of 70–75°F, with growth halting at around 40°F. Warm-season optimum temperatures occur at 85–95°F, with growth ceasing at about 55°F. The best time for seeding grass is at the beginning of the growing season. For cool-season grasses, there are two growing cycles: fall and spring. The best time to plant cool-season grasses is in late summer or early fall. For warm-season grasses, there is one growing season: summer. The best time to plant warm-season grass species is early spring or summer, with the onset of the monsoons, which typically begin early to mid-July.

The paragraph above provides the optimal timings of seeding for cool- and warm-season species that make up the seed mixes for of the eight desired plant communities for reclaiming disturbed areas. Experience in Farmington Field Office has shown that with adequate winter moisture, cool-season seeds planted in the late fall or early winter (before the ground is frozen) will germinate the following spring, setting the stage for germination of warm-season species in the mix later in the season.

Table 1. Seed mixes for community types. Species in bold are known to grow in the project area.

Common Name	Scientific Name	Variety	Season	Form	PLS lbs./acre*
Reduced Palatability seed mix (for Sagebrush and Pinyon–Juniper Communities)					
Rubber rabbitbrush	*Ericameria nauseosa*	VNS	NA	Shrub	2
Four-wing saltbush	*Atriplex canescens*	VNS	NA	Shrub	2
Fringed sage	*Artemisia frigida*	VNS	NA	Sub-shrub	2
Purple threeawn	*Aristida purpurea*	VNS	Warm	Bunch	3
Indian ricegrass	*Achnatherum hymenoides*	Paloma or Rimrock	Warm	Bunch	3.5
Blue grama	*Bouteloua gracilis*	Alma or Hachita	Warm	Sod	2
Sand dropseed†	*Sporobolus cryptandrus*	VNS	Warm	Bunch	0.25
Scarlet globemallow	*Sphaeralcea coccinea*	VNS	Warm	Forb	0.25
Rocky Mountain beeplant	*Cleome serrulata*	VNS	Warm	Forb	0.25
Hairy false goldenaster	*Heterotheca villosa*	VNS	Warm	Forb	0.25
Unclassified Grasslands seed mix (Taken from greasewood seed-pick list)					
Indian ricegrass	*Achnatherum hymenoides*	Paloma or Rimrock	Warm	Bunch	4
Sand dropseed†, ‡	*Sporobolus cryptandrus*	VNS	Warm	Bunch	5
Blue grama	*Bouteloua gracilis*	Alma or Hachita	Warm	Sod	3
Galleta	*Pleuraphis jamesii*	Viva florets	Warm	Bunch/Sod-forming	5

*Based on 60 pure live seeds (PLS) per square foot, drill seeded. Double this rate (120 PLS/ft.2) if broadcast or hydroseeded.

† *S. cryptandrus* is preferred over *S. airoides*, the common dropseed in the project area, because it is better suited for re-vegetation projects (S. Dykes, BLM FFO noxious weed coordinator, personal communication).

Additional Seeding Rates or Species: While minimum seed requirements have been provided by the BLM, it does not exclude proposals for increased seeding rates or additional species/varieties of plants to BLM for approval to achieve reclamation standards. Industry attaining an understanding of soil types, precipitation patterns, the climate, and vegetation/environment relationships could be very valuable.

Sterile Cover Crop Option: A straw mulch (see above) with no sterile cover nurse crop would be a better option than using a nurse crop in that the mulch would help preserve soil moisture in the upper 2–3 inches of soil, while nurse crops in arid environments can compete with native seedlings for moisture.

BLM Consultation: BLM is available provide consultations concerning fencing options to help minimize industry costs, should fencing be necessary to achieve reclamation success.

A.2.3. Challenges

Grazing Pressures

A challenge to successful revegetation of the project area is grazing pressure. Current BLM and Bureau of Indian Affairs grazing-allotment rates may not reflect the actual level of grazing pressure in the area. Feral horses are abundant in some places; sheep and cattle are also common. Fences are few across the project area. Large portions of the project area lack substantial grass cover, and the revegetated right-of-way may attract hungry animals from the surrounding areas. Indeed, a visual inspection of the project area suggests that heavy grazing, coupled with the recent years' drought, have had negative impacts on native vegetation. Moreover, it is impractical to fence off approximately 19 miles of right-of-way. For this reason, we have recommended the reduced-palatability seed mix for most of the area.

Noxious Weeds

Eliminating and preventing further invasion of noxious weeds is another challenge for re-vegetation.

The New Mexico Class C and BIA Navajo Region Class C noxious weed *Tamarix ramosissima* (salt cedar) was found scattered in Cañada Corrales on Reach 26.2. The New Mexico Class B and BIA Navajo Region Class B noxious weed *Halogeton glomeratus* also occurs in some portions of the project area (Figure A-2).

T. *ramosissima* should remain confined to the washes in which it occurs if measures are taken to prevent the spread of seeds. *H*. *glomeratus* can be very problematic in disturbed areas where it may thrive from lack of competition. Following the protocol in the Bare Soil Reclamation Procedures Appendix D. Surface Use Plan of Operations Weed Management, the BLM FFO weed coordinator will review the noxious weed issues in the project area and submit onsite, specific requirements and instructions for weed treatments. The requirements and instructions will include the time frame of treatment, approved herbicides that may be used, required documentation to be submitted to the FFO after treatment, and any other site-specific instructions that may be applicable. Due to the seasonal nature of effective weed-treatment techniques, the operator may be required to treat the weeds before ground disturbance or may be required to treat the weeds after ground disturbance to avoid unreasonable delays.

A.3. Monitoring and Reporting Requirements

Post-re-vegetation monitoring requirements for Vegetation Reclamation Procedure B are presented below and can be found in section 3 of the Bare Soil Reclamation Procedures (BLM FFO 2013). It is available online:http://www.blm.gov/pgdata/etc/medialib/blm/nm/field_offices/farmington/farmington_planning/surface_use_plan_of.Par.69026.File.dat/FFO%20Bare%20Soil%20Reclamation%20Procedures%202-1-13.pdf.

A.3.1. Monitoring Responsibilities

The operator is responsible for the following:

- Conducting annual monitoring starting two calendar years after approval of required earthwork and/or seeding, and continuing until the vegetation percent cover standards have been attained, or an exception has been issued by the FFO. The FFO monitoring form will be completed and submitted to the FFO by December 31 of the year monitored.
- Reading the line point-intercept transects to document to FFO that vegetation percent cover standards have been attained.
- Requesting concurrence from the FFO that vegetation percent cover standards have been attained.
- Participating in conferences with the FFO and other effected parties to analyze issues contributing to unsuccessful reclamation.
- Participating in the implementation of remedial actions developed during the conference process as necessary.
- Conducting long term monitoring (every fifth year) after vegetation percent cover standards have been attained during the life of the well.
- All areas authorized by the APD until the operator transfers the permit or abandons the project and obtains a Final Abandonment Notice (FAN) from the FFO.

The FFO is responsible for the following:

- Establishing monitoring sites in collaboration with the operator during the required earthwork and/or seeding inspection, and submitting to the operator the initial monitoring report within 60 days of earthwork and/or seeding inspection approval.
- Evaluating annual monitoring reports submitted by the operator, and acknowledging to the operator that the reports have been received and evaluated within 60 days after received from the operator.
- Providing concurrence (or not) to the operator that the vegetation percent cover standards have been attained and rational for the determination within 60 days of receiving the request for concurrence.
- Participating in conferences with the operator and other effected parties to analyze issues contributing to unsuccessful reclamation.
- Participating in the implementation of remedial actions developed during the conference process as necessary.

A.3.2. Monitoring Components

The following monitoring components are required for the Vegetation Reclamation Procedure B:

- Establish monitoring sites after seeding is completed.
- Conduct annual monitoring starting two calendar years after seeding is completed.
- Evaluate monitoring reports.
- Compile and present documentation that percent vegetation cover standards have been attained.
- Request concurrence from the FFO that percent vegetation cover standards have been attained.
- FFO will provide concurrence (or not) that percent vegetation cover standards have been attained.
- Develop remedial plans to correct impacts to re-vegetation that may prevent the revegetated area from attaining per cent vegetation cover standards.
- Conduct long term monitoring after percent vegetation cover standards have been attained.

A.3.3. Monitoring Reporting

The FFO annual monitoring form will be completed and submitted to the FFO by December 31 of the year monitored. The FFO will evaluate the monitoring reports submitted and acknowledge that the reports have been received and evaluated within 60 days after they are received.

A.4. Standards

The following are the reclamation goals for each community type.

Sagebrush Community—≥ 35% foliar cover of trees/shrubs/grasses/forbs. ≤ 10% foliar cover of invasive/undesirables. 10% is allowed toward the meeting standard of 35%.

Unclassified Grassland—≥ 25% foliar cover of trees/shrubs/grasses/forbs. ≤ 10% foliar cover of invasive/undesirables. 10% is allowed toward the meeting standard of 35% (Taken from the greasewood community type standards).

FFO will read the line point intercept transects when the vegetation appears to have the potential to attain the standard. The holder may also request FFO staff to repeat a linear transect with a representative of the holder present if the holder believes the standard may be attained. The FFO will compile the following information to document that the percent vegetation cover standards have been attained:

- The overall percent foliar cover score from the linear transects for the ROW.
- The line point intercept transect data sheets.
- Photos from each established photo point.
- Two photos of each ROW line point intercept transect location: one photo looking each direction along the ROW. One photo taken of each transect from one end of the transect looking straight down to the ground.
- The FFO will prepare a notice to the ROW file that the percent cover standards have been attained.
- A copy of the notice will be supplied to the holder upon request.

The operator may request FFO concurrence that vegetation percent cover standards have been attained any time after two calendar years of completion of earthwork and seeding. When the vegetation on a reclaimed site appears to meet the required percent re-vegetation standard, the proponent may read the transect to document that the percent vegetation standards for the site have been attained. A request for concurrence that the percent re-vegetation standards have been attained may be submitted to the FFO. The request for concurrence will include the transect data sheets and photos taken from all the initial photo points established in the initial monitoring report. The FFO will review the request and either approve or deny the request within 60 days. If the FFO denies the request, the FFO may initiate a site inspection within 60 days of the denial to analyze the site and determine if remedial actions may be appropriate.

A.5. Final Abandonment and Relinquishment

Requirements for the abandonment or relinquishment of re-vegetation monitoring for Vegetation Reclamation Procedure B are described below and can be found in section 3 of the Bare Soil Reclamation Procedures (BLM FFO 2013). It is available online:

http://www.blm.gov/pgdata/etc/medialib/blm/nm/field_offices/farmington/farmington_planning/surface_use_plan_of.Par.69026.File.dat/FFO%20Bare%20Soil%20Reclamation%20Procedures%202-1-13.pdf.

Monitoring requirements remain in effect as long as the permit, grant, or authorization remains in force, and until all associated facilities or infrastructure is abandoned by established BLM procedure and a final abandonment notice (FAN) or relinquishment is issued by the FFO. The operator must document that percent cover standards have been obtained when submitting a request for a FAN or a relinquishment. If ownership of any portion of the permit, grant, or authorization is transferred to another entity, the re-vegetation and monitoring requirements for the portion transferred will be assumed by the acquiring entity.

A.5.1. Lack of Progress in the Attainment of the Reclamation Standards

When monitoring reports indicate that bare soil reclamation is not successful, or the FFO identifies negative impacts within the reclamation area, the FFO or the permit holder/grantee may request a

conference to analyze the issues that may have contributed to reclamation failure, or lack of meaningful progress. FFO will facilitate the conference and invite potential affected parties such as the permit holder, grantee, FFO surface staff, range staff, realty staff, recreation staff, grazing permittee, or other authorized users that may be operating in the vicinity. The members of the conference will discuss the potential causes that may have contributed to the nonattainment of the reclamation standards. The conference may result in the development of a remedial plan to address the lack of re-vegetation success, or to repair and reseed damage to reclaimed areas. In cases where the permit holder/grantee can demonstrate that the site does not have the biological potential to attain the standards, the conference may result in the initiation of the exception process (see section 3 in the Bare Soil Reclamation Procedures (BLM FFO 2013).

A.6. Literature Cited

Souder, Miller and Associates. 2014. Navajo–Gallup water supply project Reach 24.1, 24.1 JAN, 25, and 26 plan of development. Souder, Miller and Associates, Albuquerque, NM.

U.S. Department of the Interior Bureau of Land Management Farmington Field Office (BLM FFO). 2013. Bare Soil Reclamation Procedures.

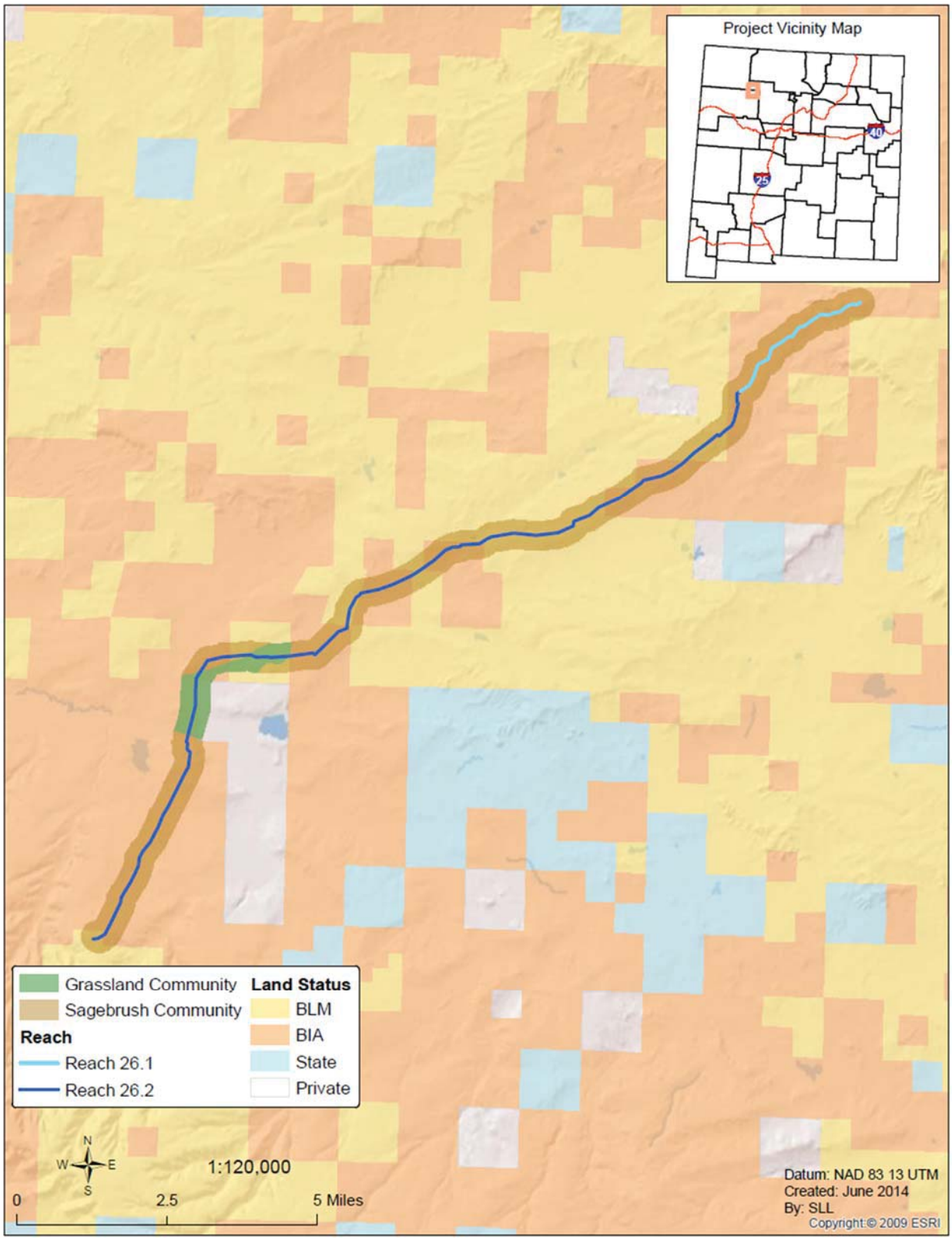


Figure A-1. Vegetation communities for Reaches 26.1 and 26.2.

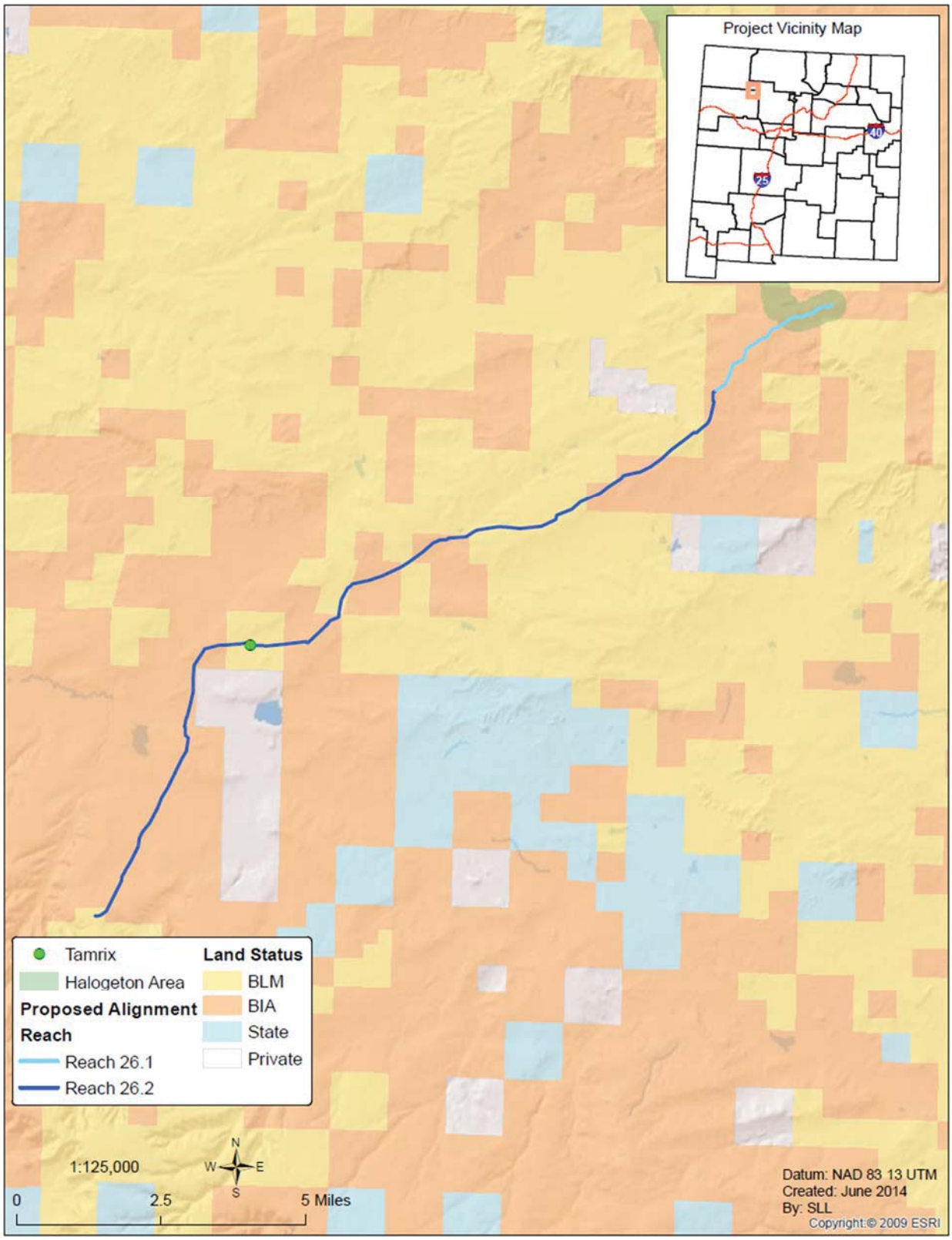


Figure A-2. General location of noxious weeds for Reaches 26.1 and 26.2.

APPENDIX D

Utility Companies Encroachment Agreements and Requirements

- **Design One-Call Information**
- **Kinder Morgan**
- **NM Gas Company**
- **PNM**
- **Jemez Mountain Electric Cooperative, Inc.**

Design One-Call Information

Note: The following information was obtained by the Engineer through a NM 811 Design One-Call locate and other coordination with utilities during design. The information presented here, and throughout the bidding documents does not relieve the Contractor of their responsibility to verify the utilities affected by the Project and coordinate with and meet the requirements of existing utility owners/operators.

Buried Gas / Petroleum:

The Project will cross the buried gas/petroleum lines owned by companies listed below. Some companies did not require the Owner to acquire an encroachment permit prior to construction. The Contractor is required to coordinate with all utilities during construction and meet all utility requirements to perform work within gas/petroleum utility right of ways. See Design Drawings for contact information and minimum crossing and encroachment requirements.

1. Enterprise-Mid America
2. SG Interests
3. Kinder Morgan*
4. New Mexico Gas Company*
5. Western Refining

   *See attached encroachment permits and forms.

Overhead electric lines:

The electric utilities listed below own overhead powerlines that are crossed by the Project. See Design Drawings for approximate location of overhead electric lines.

1. Public Service Company of New Mexico (PNM)
   a. Encroachment agreements are attached.
   b. PNM Contact during construction:
      - Electrical Emergency - (888) 342-5766.
      - Encroachment Permit - (505) 241-4491
2. Jemez Mountains Electric Cooperative (JMEC)
   a. Encroachment letter sent by SMA to JMEC attached. In June 2015, JMEC indicated the crossings did not require further review from JMEC or permits from Owner.
   b. JMEC Contact during construction: Roberto Ga, Engineering: (505) 753-2105 or (575) 289-3241; **rga@jemezcoop.org**; 71 Highway 166 Cuba, NM

Buried water infrastructure:

Navajo Tribal Utility Authority (NTUA) owns & operates existing waterlines throughout the Project area. Note that NTUA does not participate in NM One-Call. NTUA should be contacted separately for location of existing lines. Contact information and additional details regarding coordination with NTUA are provided throughout these bidding documents.

KINDER MORGAN
PRODUCTION COMPANY LP

Excavation Site Inspection

(See Instructions below)

		ONE CALL I.D. NO.	INITIAL CALL DATE	DISTRICT/LOCATION	

Excavator Company | PERSON TO CONTACT

LOCATION OF CONSTRUCTION WORK

Yes	No	
☐	☐	1. Was the pipeline required to be located?
☐	☐	2. Does the excavation require temporary marker flags?

When are they needed? Date _____ Time _____ ☐ AM ☐ PM

Have they been placed? Date _____ From _____ to _____

☐	☐	3. Will the excavation (or heavy equipment above grade) cross or be within 50 feet of the Company's pipeline(s)?
☐	☐	4. Has crossing of the pipeline(s) or excavation encroachment within 50 feet of the pipeline(s) been completed?

If no, when will it begin/resume? Date _____ Time _____ ☐ AM ☐ PM

Conditions found and type of equipment on site

ADDITIONAL COMMENTS

Notice to Excavator

Excavation equipment and blasting can damage pipelines resulting in the release of product which may cause **serious injuries and/or death and severe damage to the environment.**

No excavation is allowed within 10' (CO2: 25') of any Kinder Morgan (KM) pipeline unless a KM representative is onsite or has given explicit exception. All excavation within 2' of a KM pipeline must be done either using hand tools or, with approval, a hydrovac, unless state requirements are more stringent and require a larger tolerance zone.

To avoid damaging a pipeline:

1. Look for evidence of a pipeline including such things as caution signs, aerial patrol markers, casing vents and above ground piping. When excavating, look for warning tape.
2. Never assume the location of pipelines because:
   - They can change directions abruptly between above ground physical evidence.
   - Their depths can vary substantially in short distances.
   - More than one pipeline may be present.
3. Call Kinder Morgan to have its representative approximately locate the line and provide on-site assistance (both are free services) before **ANY** excavating activity.
4. If you encounter warning tape while excavating, cease excavation and contact the Kinder Morgan representative immediately.

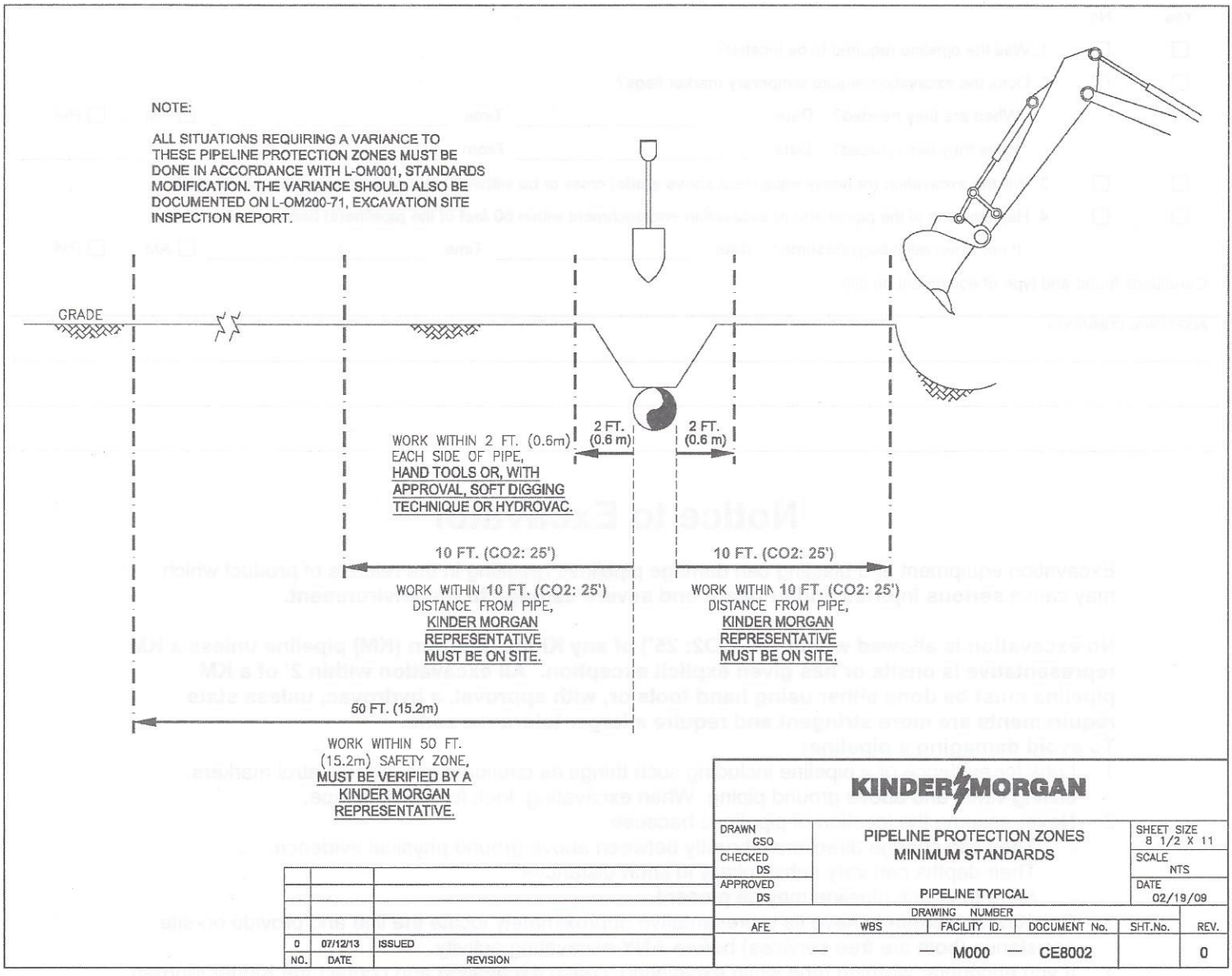
EXCAVATOR NAME

EXCAVATOR REPRESENTATIVE | TELEPHONE

COMPANY REPRESENTATIVE NAME & NUMBER

MEETING DATE	TIME	SIGNATURE *(EXCAVATOR REPRESENTATIVE)*
	☐ AM ☐ PM	

IF YOUR PLANS AS INDICATED ABOVE CHANGE, CALL (___) ___ - ____, 24/7, BEFORE YOU DIG. INADDITION CONTACT APPLICALE ONE CALL CENTER IF REQUIRED.



NO.	DATE	REVISION
0	07/12/13	ISSUED

KINDER MORGAN

DRAWN GSO	PIPELINE PROTECTION ZONES MINIMUM STANDARDS	SHEET SIZE 8 1/2 X 11
CHECKED DS		SCALE NTS
APPROVED DS	PIPELINE TYPICAL	DATE 02/19/09

DRAWING NUMBER

AFE	WBS	FACILITY ID.	DOCUMENT No.	SHT.No.	REV.
—	—	M000	— CE8002		0

NMGC ROW NO.

NEW MEXICO GAS COMPANY
NATURAL GAS EASEMENT ENCROACHMENT AGREEMENT

This Encroachment Agreement made this 13th day of, June 20 17, by and between Navajo Nation (c/o Navajo Nation Water Management Branch), (his) (hers) (theirs) (its) heirs, successors and assigns (hereinafter called "First Party"), and NEW MEXICO GAS COMPANY, INC., a Delaware Corporation (hereinafter called "NMGC"), and all collectively hereinafter called "Parties."

WITNESSETH:

WHEREAS, NMGC is the Grantee or successor in interest of a certain Easement defined as follows:

1. **A fifty (50) foot wide Public Service Company of New Mexico (PNM) Gas Services, Company Easement granted by the Navajo Nation (on October 18, 2001), known as NMGC R/W #665-109**

   Hereinafter referred to as "Easement", situated in Section 11, Township 20 North, Range 07 West, of the New Mexico Principal Meridian, County of McKinley, State of New Mexico: and

WHEREAS, First Party desires to encroach upon the Easement as more particularly specified hereinafter; and

WHEREAS, NMGC has agreed to said encroachment;

NOW, THEREFORE, for and in valuable consideration, the receipt of which is hereby acknowledged, NMGC does hereby grant First Party the right to encroach upon the Easement only to the extent of, and for the purposes specified as follows:

- **10" PVC Water Line**

Hereinafter referred to as "Encroachment", all within the Southeast Quarter of said Section 2, Township 20 North, Range 07 West of the New Mexico Principal Meridian, McKinley County, State of New Mexico. Said Encroachment location being more particularly described as follows:

NMGC's Albuquerque Mainline Star Lake Loop Line

- **Albuquerque Mainline Star Lake Loop Line (18")**
- **Albuquerque Mainline Star Lake Loop Line (20")**
- **Albuquerque Mainline Star Lake Loop Line (24")**

  - **Longitude: 107.551196°W**
  - **Latitude: 35.990303°N**

Said Encroachment is more particularly shown on Exhibit "A" and Exhibit "B", attached hereto and made a part hereof.

NOTE: ***Under no circumstances shall NMGC's natural gas pipelines be suspended for lengths greater than twelve (12) feet. If this cannot be avoided, First Party shall support NMGC's pipelines within said Easement with a strap either to a backhoe or to a steel beam lying across the entire width of the trench.***

Special Provisions:

I. PIPELINE SAFETY

A. In accordance with Federal and State laws, NMGC requires a minimum of 36 inches of vertical clearance between NMGC's natural gas transmission facilities and other underground facilities crossing perpendicular to its high-pressure natural gas transmission facilities. Furthermore, NMGC does not allow other facilities to parallel (linear installations) within its high-pressure natural gas transmission pipeline easements. In addition, Federal law requires any excavation that will expose a natural gas pipeline or occur within 18 inches from a high-pressure natural gas pipeline must be done by Operator Qualified personnel and any such excavation must be done by hand. Therefore, First Party shall observe these requirements at a minimum and shall comply with any further requirements NMGC deems necessary in order to mitigate unsafe conditions that may result from third-party damage of high-pressure natural gas facilities. Prior to the commencement of any excavation activities within a NMGC natural gas pipeline right of way, NMGC shall be notified by First Party at least ten working days prior so that the natural gas transmission facilities can be properly marked using Operator Qualified personnel and to ensure that an Operator Qualified monitor shall be on site during all excavations near the natural gas transmission pipelines.

II. RESEEDING/EROSION CONTROL

A. All disturbed areas, with the exception of the road surface and shoulder, shall be reseeded with a NMGC and appropriate governing agency approved seed mixture and to the specifications given prior to the placement of slash, chipping or rocks on the disturbed areas.

B. The seeding of disturbed areas shall commence upon completion of the construction work at First Party's risk. If revegetation is not successful after two years, the disturbed areas will be reseeded by First Party at the discretion of NMGC. This will be guided by the goal of having a ground cover on the disturbed areas that is at least 70 percent compared to the surrounding areas.

C. All seeding shall be performed in accordance with the following:

1. The disturbed areas shall be scarified, disced or ripped to provide a roughed surface before seeding.
2. No surface preparation shall be performed when the surface is wet or muddy or when the soil moisture content is such that the soil is not fully loosened by the discing operation.
3. The areas shall be drill seeded where flat ground conditions (< 3:1) allow and broadcast on steeper areas (> 3:1) when size, irregular shape or slope angle prevents the use of a seed drill.
4. Seeds may be pre-mixed by a seed dealer.
5. Each bag of seed shall be sealed and labeled by the seed dealer in accordance with federal seed laws and NM Department of Agriculture Labeling Laws.
6. All seed shall be certified weed free and analyzed for purity.
7. A Rangeland type seed drill shall be used to insure proper seed placement to promote establishment.
8. Direction of seeding shall be perpendicular to the slopes and on the contour whenever possible.
9. Following seeding, grass hay or fine gravel mulch shall be spread at the rate of 1.5-ton per acre.
10. All hay shall be certified noxious weed free.
11. The mulch shall have stems 10" in length or longer, enough to anchor into the soil, leaving 5" to 8" protrusions for erosion control.
12. The mulch shall not be applied when local winds exceed 15 miles per hour.
13. The mulch shall then be anchored with a straight harrow crimper specially designed to properly secure stems.
14. The mulch crimping operation shall be across the slope where practical and at an angle to the drilled rows.
15. Seeding activities shall be performed in accordance to all applicable rules and regulations of the area they are to be performed in.

D. Erosion control devices such as rock, water bars, silt fence and gabion structures may be required to prevent damage to the Easement as determined by NMGC.

~~III. FENCES~~

~~A. No posts for fences crossing the Easement shall be installed directly over the pipeline. Fences installed parallel to the pipeline shall not be closer than ten feet (10') to the pipeline.~~

~~IV. LANDSCAPING~~

~~A. Trees shall not be planted or permitted to remain between, over or within eight feet (8') horizontally of any pipeline placed in the Easement and shall be horizontally separated from each other by at least forty feet (40').~~

~~B. No large growing trees (i.e., trees which would reach a natural final height of over fifteen feet (15') tall) shall be allowed within the Easement.~~

~~C. Landscaping utilizing small shrubs and plants, lawns, berms or hilling within a height of thirty-six inches (36") or less and graveled or rocked areas shall be permissible.~~

V. PIPELINE COVER

A. Any change in the amount of existing material (soil) on and over the Easement must be approved in advance.

~~VI. STREETS AND ROADS~~

~~A. The pipeline must be covered a minimum of five-and-a-half feet (5 ½ ') in the center of the roadway and four feet (4') in the borrow ditch. The grade of cover shall be maintained across the full width of the Easement.~~

~~B. Roads shall not run lengthwise within the Easement and must cross such that the angle measured between the proposed road and the Easement is not less that forty-five degrees (45°).~~

~~VII. PRIVATE DRIVEWAYS~~

~~A. Driveways to any one single-family dwelling must have a minimum of three-and-a-half (3 ½') feet of cover over the pipeline.~~

~~B. Driveways shall meet all of Special Provision IV, STREETS AND ROADS.~~

~~C. Driveways to multiple dwellings will be considered on an individual basis.~~

~~VIII. EQUIPMENT CROSSINGS~~

~~A. Normal loads which do not exceed the applicable State Highway Department load bearing standards, may cross the pipeline where a minimum of five-and-a-half feet (5 ½ ') of cover is provided. Heavy equipment such as construction equipment, logging equipment, etc., must cross pipeline only at approved crossing locations where the cover has been checked by NMGC and determined adequate to meet load bearing requirements.~~

IX. OPEN WATERWAYS

A. Open waterways smaller than three feet (3') wide at the bottom are defined as "ditches" and must have a minimum of three-and-a-half feet (3 ½') of cover from the top of the pipe to the bottom of the ditch or the ditch must be lined using an approved method and material.

B. Larger open waterways are defined as "canals" and will be considered on an individual basis.

X. EXCAVATION

A. Plans for excavation on the Easement must be approved prior to commencing any work. Excavating closer than eighteen inches (18") to the pipeline shall be done by hand until the pipeline is exposed and shall be done only under supervision of an authorized NMGC representative. Excavation equipment must be positioned so that from the point of operation the equipment will not reach within eighteen inches (18") of the pipeline.

B. Any plowing or ripping of soil on the Easement, including agricultural, at depths greater than one foot (1') will be considered on an individual basis.

XI. BURIED LINE CROSSINGS

A. GENERAL REQUIREMENTS

1. An authorized NMGC representative must be on-site during all excavation, backfill and clean up work performed on the Easement.
2. All buried lines crossing the Easement must cross such that the angle measured between the proposed buried line and the Easement is not less than 45 degrees (45°).
3. All buried lines should cross under the pipeline(s). If infeasible because of underground structures, heavy rock or extreme depth of NMGC pipeline(s), approval must be granted by the appropriate NMGC Engineer/Manager.
4. All buried lines crossing the pipeline shall maintain a minimum separation of thirty-six inches (36") between the two lines, with the same grade depth carried across the entire Easement.
5. Any exceptions will be considered on an individual basis by the appropriate NMGC Engineer/Manager.

~~B. COMMUNICATION LINES (PHONE, TV, OTHER DATA LINES)~~

~~1. Shall be installed in accordance with guidelines of the National Electrical Safety Codes.~~

2. ~~Shall meet provisions #1, #2, and #4 of Special Provision IX (A), BURIED LINE CROSSINGS, GENERAL REQUIREMENTS.~~
3. ~~Shall be encased in a rigid nonmetallic conduit across the full width of the Easement.~~

C. ~~ELECTRIC POWER LINES~~
1. ~~Shall meet all of Special Provision IX (A), BURIED LINE CROSSINGS, GENERAL REQUIREMENTS.~~
2. ~~Shall be installed in accordance with guidelines of the National Safety Code (public utility power and light companies) or the National Electric Code (private power and light companies).~~
3. ~~Shall be encased in rigid nonmetallic conduit.~~
4. ~~Shall have minimum ground cover as follows: Twenty-four inches (24") for 0 to 600 volts; Thirty inches (30") for 601 to 22,000 volts; Thirty-six inches (36") for 22,001 to 40,000 volts; and Forty-two inches (42") for 40,000 volts and above.~~
5. ~~A vinyl direct buried warning tape shall be placed twelve inches (12") to eighteen inches (18") above the buried line and extend across the entire width of the Easement.~~
6. ~~Should have signs placed at each edge of the Easement to mark the underground cable angle and path of crossing. If the underground cable crosses above the pipeline, the signs shall so indicate. These signs are to be furnished by the power company, or encroaching party.~~
7. ~~If the power cable has an exposed concentric neutral, a test point from the ground wire shall be installed by the power company.~~

D. SEWER AND WATER LINES
1. Shall meet all of Special Provision IX (A), BURIED LINE CROSSING, GENERAL REQUIREMENTS.
2. Nonmetallic water lines are required. Any exceptions will be considered on an individual basis by the appropriate NMGC Engineer/Manager.
3. Sewer line crossings are limited to tight lines only. Distribution lines (perforated or non-enclosed lines) are not permitted.

E. SUBSURFACE (PLASTIC) DRAIN TILE
1. Shall meet #1, #2, and #4 of Special Provision IX (A), BURIED LINE CROSSINGS, GENERAL REQUIREMENTS.

~~F. METALLIC PIPE CROSSINGS~~
1. ~~All metallic pipe crossings shall have two corrosion test leads installed on NMGC pipeline and two on the crossing pipe at the point of the intersection.~~
2. ~~NMGC personnel must install the leads on NMGC pipeline and shall inspect the leads on the crossing pipe to verify proper installation.~~
3. ~~Metallic pipe crossing shall have an electrical insulation coating for the full width of the Easement.~~

~~XII. ABOVEGROUND LINE CROSSINGS~~
~~A. Shall maintain a minimum of thirty feet (30') clearance across the Easement.~~
~~B. Shall have no poles or appurtenances located on the Easement.~~
~~Aboveground crossings shall not be above or closer than twenty-five feet (25') horizontally to any gas escape vent (e.g. relief valve vent, station blowdown).~~

NOTE:
As a protective measure for buried lines crossing NMGC Easements, vinyl direct buried warning tape shall be placed above the crossing line when specified or as directed at the discretion of the District Engineer/Manager.

By granting the aforesaid right to encroach, NMGC does not waive or relinquish any rights or benefits that it may have, either expressed or implied, under or by reason of the Easement, including, but not limited to, the right to build, rebuild, construct, reconstruct, locate, relocate, change, remove, replace, modify, renew, operate and maintain its gas lines and other gas equipment, fixtures, appurtenances and structures that are now located, or may in the future be located, on, over, beneath, through and across the Easement. First Party, at its sole cost and expense, agrees to remove or relocate its encroachment upon the written request of NMGC within 90 days of such written request. First Party appoints NMGC its agent to accomplish said removal or relocation at First Party's expense if First Party fails to remove or relocate such encroachment within such time period.

In consideration of NMGC granting First Party the right to encroach upon the Easement, First Party hereby agrees to indemnify and hold harmless NMGC, its officers, employees or agents, from any and all claims whatsoever when such claims directly or indirectly arise out of the existence, construction, maintenance, operation, repair, condition, use or presence of the encroachment upon the Easement, or are caused by, or arise out of, the acts or omissions of First Party, its officers, employees or agents; **provided**, however, that notwithstanding anything to the contrary in this paragraph, First Party shall not be required to indemnify NMGC, its employees or agents against those claims for personal injuries or damages to property caused by or resulting from, in whole or in part, the negligence, act or omission of NMGC, its officers, employees or agents. Furthermore, NMGC shall not be responsible for any damage caused to facilities, equipment, structures or other property of First Party if damaged by reason of NMGC's use of the Easement.

First Party shall comply with all applicable laws, ordinances, rules and regulations enacted or promulgated by any federal, state or local governmental body having jurisdiction over First Party's encroachment.

The provisions hereof shall inure to the benefit of and bind the heirs, executors, administrators, personal representatives, mortgages, lessees, tenants, successors and assigns of the Parties hereto; **provided**, however, that no such heir, executor, administrator, personal representative, mortgagee, lessee, tenant, successor or assign of First Party shall have the right to use, alter or modify the encroachment in a manner which will increase the burden of the encroachment on the Easement.

IN WITNESS WHEREOF, the Parties have executed this Encroachment Agreement on the day and year first written above.

SSCAFCA

By: _____

Jason John Navajo Nation Water Management Branch

NEW MEXICO GAS COMPANY

By: _____
Chris Gallegos, Right-of-Way Agent

NMGC USE ONLY

STATE OF NEW MEXICO }
SS
COUNTY OF BERNALILLO }

This instrument was acknowledged before me on June 13, 2017.
By Chris Gallegos, Right-of-Way Agent of the New Mexico Gas Company, Inc., a Delaware corporation, on behalf of said corporation.

My commission expires:
(Seal)
November 1 2017

OFFICIAL SEAL
Jeffery Estvanko
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 11-1-17

_____
Notary Public

ACKNOWLEDGEMENT

STATE OF New Mexico }
SS
COUNTY OF Bernalillo }

This instrument was acknowledged before me on April 18, 2017.
By Jason John Navajo Nation Water Management Branch

My commission expires:
(Seal)

OFFICIAL SEAL
Judy Holland
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 8/30/2019

_____
Notary Public

ACKNOWLEDGEMENT FOR CORPORATIONS

STATE OF _____ }
SS
COUNTY OF _____ }

This instrument was acknowledged before me on _____, 20_____.

By _____.
(Name of Officer) (Title of Officer)

of _____,
(Corporation Acknowledgement)

a _____ corporation, on behalf of said corporation.
(State of Incorporation)

My commission expires:
(Seal)

_____
Notary Public

NMGC REFERENCE NUMBER

New Mexico GAS COMPANY

ENCROACHMENT REPORT

REPORT/LOG # _____

RIGHT-OF-WAY # _____

1. DATE	2. PREPARED BY (Signature)	3. TYPE OF REPORT ☐ INITIAL ☐ FOLLOW UP

4. LOCATION OF ENCROACHMENT	SECTION, TOWNSHIP & RANGE	CITY/COUNTY

5. HOW ENCROACHMENT WAS DISCOVERED: ☐ DIRECT PHONE CALL ☐ LINE SPOT REQUEST ☐ GROUND PATROL ☐ OTHER

6. TYPE OF ENCROACHMENT: ☐ BUILDING (If checked, complete item 7) ☐ ROAD ☐ DITCH ☐ LAND LEVELING ☐ UTILITY LINE ☐ OTHER (Specify) _____

7. TYPE OF BUILDING (Specify) _____

☐ URBAN ☐ RURAL ☐ OTHER (Specify) _____

8. DISTANCE FROM PIPE	PIPE SIZE (If Known)

9. DESCRIPTION OF ENCROACHMENT _____

10. PROPERTY OWNER OR TENANT	NAME	PHONE NO.
	ADDRESS	☐ OWNER ☐ TENANT

11. CONTACT RECORD	NAME OF PERSON CONTACTED AT LOCATION	PHONE NO.
	EMPLOYER'S OR BUSINESS NAME	DATE
	ADDRESS	TIME ☐ A.M. ☐ P.M.

12. WORK IS SCHEDULED TO BEGIN—TIME: ☐ A.M. ☐ P.M.

13. COMPLETE SUMMARY OF CONVERSATION AT JOB SITE

14. ACTION TAKEN

15. FOLLOW UP

New Mexico GAS COMPANY

MONITORING OF EXCAVATION ON NMGC'S TRANSMSSION PIPELINES

One Call Ticket #: _____ Received From: _____

Date: _____ Time: _____

Contractor: _____ Duration of Project (days): _____

Pipeline Name: _____ Class Location: _____

Name or Type of Project: _____

I _____ have been onsite at the following address/location:
(NMGC Representative)

_____ observing the excavation near our transmission line

during the following dates and times: Date(s): _____ Time(s): _____.

❑ Encroachment Agreement

Construction activities observed:

❑ I am an excavator for _____ and I have witnessed the NMGCO
(Contractor)
representative noted above as an observer of our excavation.

Company Name: _____

Please Sign Name: _____

Print Name: _____ Phone No.: _____

❑ Contractor refused to sign this form.

❑ All facilities being installed at this time have maintained a 3' separation from our transmission pipeline.

- **A copy must be sent to transmission engineering.**

PNM ROWT NO. 22484

ENCROACHMENT NO.

A personal commitment to New Mexico

Alvarado Square, Albuquerque, New Mexico 87158-2101

EASEMENT ENCROACHMENT AGREEMENT

THIS INFORMATION TO BE PROVIDED BY TITLE COMPANY

This Easement Encroachment Agreement made this 27TH day of May, 20 15,

by and between (BUYER/BORROWER/OWNER) The Navajo Nation, a federally recognized Indian Tribe

whose address is P.O. Box 9000, Window Rock, Navajo Nation 86515,

(hereinafter called "First Party"), (his) (her) (their) (its) heirs, successors and assigns, and PUBLIC SERVICE COMPANY OF NEW MEXICO, a New Mexico Corporation (hereinafter called "PNM"), and all collectively hereinafter called "Parties."

WITNESSETH:

WHEREAS, PNM is the Grantee of a certain Easement within the hereinafter described property;

WHEREAS, First Party desires to encroach upon the Easement as more particularly specified hereinafter; and

WHEREAS, PNM has agreed to said encroachment;

NOW THEREFORE, for and in valuable consideration, the receipt of which is hereby acknowledged, PNM does hereby grant First Party the right to encroach upon the Easement only to the extent of, and for the purposes set forth below:

PNM USE ONLY FOR LEGAL DESCRIPTION

PNM ROWT NO. 22484 (Referencing Existing PNM Doc. No. 702.6; NMNM 3742)

Encroachment of a 10-inch diameter polyvinyl chloride (PVC) DR-14 water line within an easement one-hundred (100) feet in width, between PNM 345kV pole structure WW 546 and WW 547, situate within Section 06, Township 20 North, Range 06 West of the New Mexico Principal Meridian, McKinley County, New Mexico.

Said encroachment is generally shown on the drawing attached hereto and made a part hereof as Exhibit "A".

STANDARD ENCROACHMENT GUIDELINES FOR ELECTRIC TRANSMISSION LINES

1. All construction equipment must maintain fifteen (15) feet vertical and horizontal clearance from all wires and structures.
2. All lighting masts/attachments and decorative (or shade) trees must not be more than fifteen (15) feet in height within the Easement.
3. First Party will provide a complete set of development plans to PNM for review and approval. If changes are made as a result of the review process, a final development plan will be provided by First Party to PNM before final approval is granted.
4. When required, First Party shall install a PNM approved barricade for structures affected and incur all costs associated with the barricade installation.
5. First Party shall comply with National Electrical Safety Code clearance requirements for any developments near power lines.
6. First Party shall maintain Occupational Safety and Health Administration (OSHA) electrical safety clearances throughout the construction process.

By granting the aforesaid right to encroach PNM does not waive or relinquish any rights or benefits that it may have, either expressed or implied, under or by reason of the Easement, including, but not limited to, the right to build, rebuild, construct, reconstruct, locate, relocate, change, remove, replace, modify, renew, operate and maintain its electric lines (including underground electric lines) and other electric equipment, fixtures, appurtenances and structures that are now located, or may in the future be located, on, over, beneath, through and across the Easement. First Party, at its sole cost and expense, agrees to remove or relocate its encroachment upon the written request of PNM within 90 days of such written request. First Party appoints PNM as its agent to accomplish said removal or relocation at First Party's expense if First Party fails to remove or relocate such encroachment within such time period.

PNM REFERENCE NUMBER

In consideration of PNM granting First Party the right to encroach upon the Easement, First Party hereby agrees to indemnify and hold harmless PNM, its officers, employees or agents, from any and all claims whatsoever when such claims directly or indirectly arise out of the existence, construction, maintenance, operation, repair, condition, use or presence of the encroachment upon the Easement, or are caused by, or arise out of, the acts or omissions of First Party, its officers, employees or agents; **provided**, however, that notwithstanding anything to the contrary in this paragraph, First Party shall not be required to indemnify PNM, its employees or agents against those claims for personal injuries or damages to property caused by or resulting from, in whole or in part, the negligence, act or omission of PNM, its officers, employees or agents.

In consideration of PNM permitting First Party to encroach upon the Easement, First Party agrees that PNM shall not be responsible for any damage caused to facilities, equipment, structures or other property of First Party if damaged by reason of PNM's use of Easement.

First Party shall comply with all applicable laws, ordinances, rules and regulations enacted or promulgated by any federal, state or local governmental body having jurisdiction over First Party's encroachment.

The provisions hereof shall inure to the benefit of and bind the heirs, executors, administrators, personal representatives, mortgagees, lessees, tenants, successors and assigns of the Parties hereto; **provided**, however, that no such heir, executor, administrator, personal representative, mortgagee, lessee, tenant, successor or assign of First Party shall have the right to use, alter or modify the encroachment in a manner which will increase the burden of the encroachment on the Easement.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year first written above.

FIRST PARTY

Jason John, Navajo Nation Water Management Branch

PUBLIC SERVICE COMPANY OF NEW MEXICO

By: Emilie B. Dohleman

Emilie Dohleman, Director, Land Services Department

PNM USE ONLY

STATE OF NEW MEXICO }
COUNTY OF BERNALILLO } SS
This instrument was acknowledged before me on May 27th, 20 15.
By Emilie Dohleman, Director, Land Services Department of the Public Service Company of New Mexico, a New Mexico corporation, on behalf of said corporation.

My commission expires: March 25th, 2017
(Seal)

NOTARY PUBLIC STATE OF NEW MEXICO

Notary Public

ACKNOWLEDGEMENT

STATE OF New Mexico }

COUNTY OF Bernalillo } SS
This instrument was acknowledged before me on May 14th, 20 15.

By Jason John, Navajo Nation Water Management Branch.

My commission expires:
(Seal)

OFFICIAL SEAL
Judy Holland
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 6/30/15

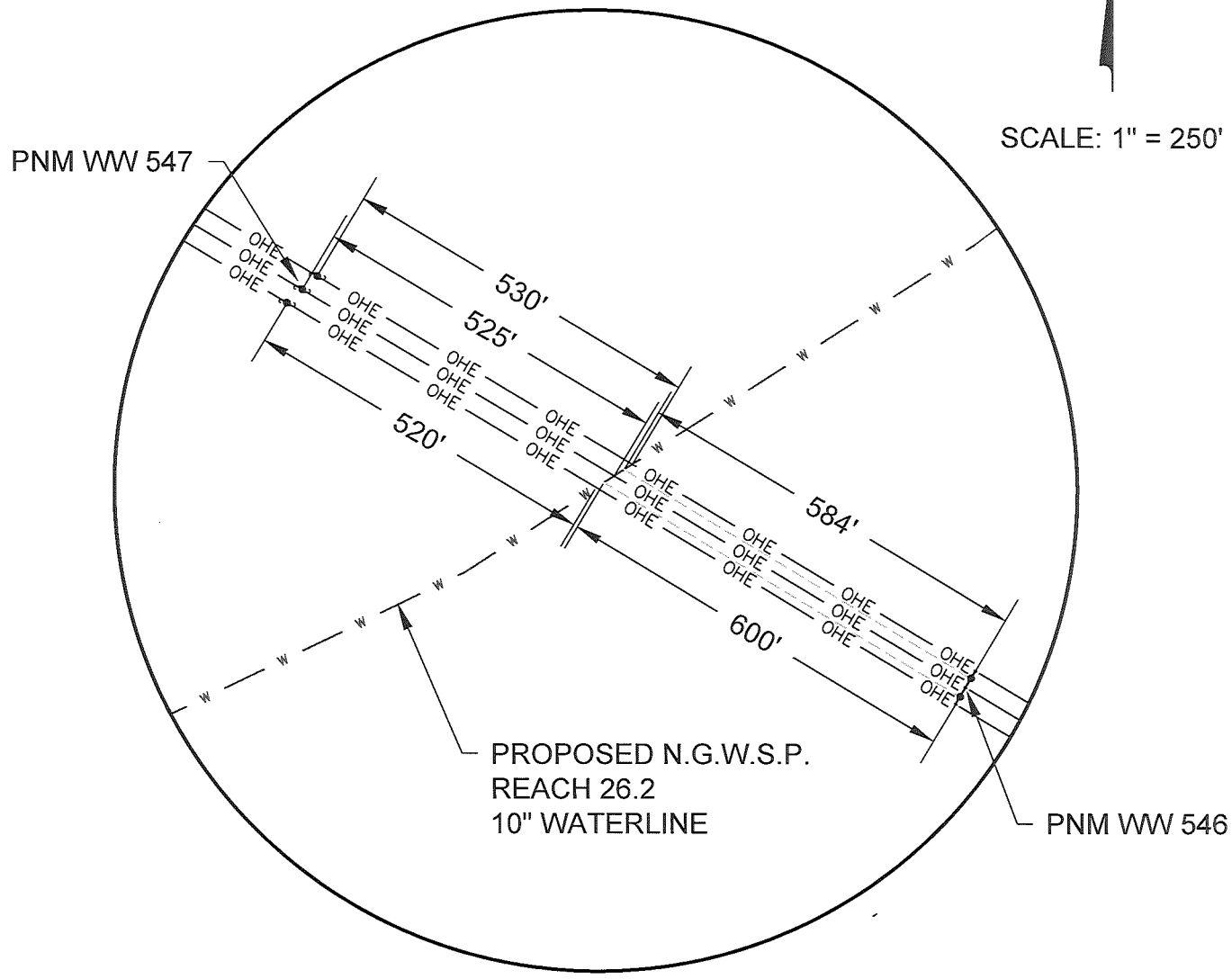
Notary Public

McKINLEY COUNTY, NEW MEXICO

SEC - 6, T - 20 - N, R - 6 - W

EXHIBIT "A"
PNM TRANSMISSION LINE CROSSING
WW 345 kV

SCALE: 1" = 250'



SMA
Engineering
Environmental
Surveying

Souder, Miller & Associates
Candelaria Road NE, Suite D
Albuquerque, NM 87107 3451
Phone (505) 299-0942 Toll-Free (877) 299-0942 Fax (505) 293-3430
www.soudermiller.com
Serving the Southwest & Rocky Mountains

client town

PNM UTILITY CROSSING
NAVAJO GALLUP WATER SUPPLY PROJECT
REACH 26.2

addtional

Designed	Drawn	Checked
AAV	AAV	RMB

Date: May 2015
Scale: Horiz: 1" = 250 Vert:
Project No: 6921307
PNM1

© Copyright 2015 Souder, Miller & Associates - All Rights Reserved

P:\6- Cutter Ph 6A (6421307)\Cutter Ph 6B_6C\CAD\PNM\Reach 26 1&2 Power Pole.dwg , AAV, 5/4/2015 9:07 PM

PNM ROWT NO. 22484

ENCROACHMENT NO.



A personal commitment to New Mexico

Alvarado Square, Albuquerque, New Mexico 87158-2101

EASEMENT ENCROACHMENT AGREEMENT

THIS INFORMATION TO BE PROVIDED BY TITLE COMPANY

This Easement Encroachment Agreement made this 14th day of June, 20 17,

by and between (BUYER/BORROWER/OWNER) **The Navajo Nation, a federally recognized Indian Tribe**

whose address is **P.O. Box 9000, Window Rock, Navajo Nation 86515**,

(hereinafter called "First Party"), (his) (her) (their) (its) heirs, successors and assigns, and PUBLIC SERVICE COMPANY OF NEW MEXICO, a New Mexico Corporation (hereinafter called "PNM"), and all collectively hereinafter called "Parties."

WITNESSETH:

WHEREAS, PNM is the Grantee of a certain Easement within the hereinafter described property;

WHEREAS, First Party desires to encroach upon the Easement as more particularly specified hereinafter; and

WHEREAS, PNM has agreed to said encroachment;

NOW THEREFORE, for and in valuable consideration, the receipt of which is hereby acknowledged, PNM does hereby grant First Party the right to encroach upon the Easement only to the extent of, and for the purposes set forth below:

PNM USE ONLY FOR LEGAL DESCRIPTION

PNM ROWT NO. 22484 (Referencing Existing PNM Doc. No. 701.8; NMNM 0559354)

Encroachment of a 10-inch diameter polyvinyl chloride (PVC) DR-14 water line within an easement one-hundred (100) feet in width, between PNM 345kV pole structure FW 505 and FW 506, situate within Section 10, Township 20 North, Range 07 West of the New Mexico Principal Meridian, McKinley County, New Mexico.

Said encroachment is generally shown on the drawing attached hereto and made a part hereof as Exhibit "A".

STANDARD ENCROACHMENT GUIDELINES FOR ELECTRIC TRANSMISSION LINES

1. **All construction equipment must maintain fifteen (15) feet vertical and horizontal clearance from all wires and structures.**
2. **All lighting masts/attachments and decorative (or shade) trees must not be more than fifteen (15) feet in height within the Easement.**
3. **First Party will provide a complete set of development plans to PNM for review and approval. If changes are made as a result of the review process, a final development plan will be provided by First Party to PNM before final approval is granted.**
4. **When required, First Party shall install a PNM approved barricade for structures affected and incur all costs associated with the barricade installation.**
5. **First Party shall comply with National Electrical Safety Code clearance requirements for any developments near power lines.**
6. **First Party shall maintain Occupational Safety and Health Administration (OSHA) electrical safety clearances throughout the construction process.**

By granting the aforesaid right to encroach PNM does not waive or relinquish any rights or benefits that it may have, either expressed or implied, under or by reason of the Easement, including, but not limited to, the right to build, rebuild, construct, reconstruct, locate, relocate, change, remove, replace, modify, renew, operate and maintain its electric lines (including underground electric lines) and other electric equipment, fixtures, appurtenances and structures that are now located, or may in the future be located, on, over, beneath, through and across the Easement. First Party, at its sole cost and expense, agrees to remove or relocate its encroachment upon the written request of PNM within 90 days of such written request. First Party appoints PNM as its agent to accomplish said removal or relocation at First Party's expense if First Party fails to remove or relocate such encroachment within such time period.

PNM REFERENCE NUMBER

Revised 03/17/2010

In consideration of PNM granting First Party the right to encroach upon the Easement, First Party hereby agrees to indemnify and hold harmless PNM, its officers, employees or agents, from any and all claims whatsoever when such claims directly or indirectly arise out of the existence, construction, maintenance, operation, repair, condition, use or presence of the encroachment upon the Easement, or are caused by, or arise out of, the acts or omissions of First Party, its officers, employees or agents; **provided**, however, that notwithstanding anything to the contrary in this paragraph, First Party shall not be required to indemnify PNM, its employees or agents against those claims for personal injuries or damages to property caused by or resulting from, in whole or in part, the negligence, act or omission of PNM, its officers, employees or agents.

In consideration of PNM permitting First Party to encroach upon the Easement, First Party agrees that PNM shall not be responsible for any damage caused to facilities, equipment, structures or other property of First Party if damaged by reason of PNM's use of Easement.

First Party shall comply with all applicable laws, ordinances, rules and regulations enacted or promulgated by any federal, state or local governmental body having jurisdiction over First Party's encroachment.

The provisions hereof shall inure to the benefit of and bind the heirs, executors, administrators, personal representatives, mortgagees, lessees, tenants, successors and assigns of the Parties hereto; **provided**, however, that no such heir, executor, administrator, personal representative, mortgagee, lessee, tenant, successor or assign of First Party shall have the right to use, alter or modify the encroachment in a manner which will increase the burden of the encroachment on the Easement.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year first written above.

FIRST PARTY

Jason John, Navajo Nation Water Management Branch

PUBLIC SERVICE COMPANY OF NEW MEXICO

By: Maureen Gannon
Maureen Gannon, Executive Director,
Environmental, Corp. Safety, and Land Services Department

PNM USE ONLY

STATE OF NEW MEXICO }
COUNTY OF BERNALILLO } SS
This instrument was acknowledged before me on June 14th, 20 17.
By Maureen Gannon, Executive Director, Environmental, Safety, and Land Services of the Public Service Company of New Mexico, a New Mexico corporation, on behalf of said corporation.

My commission expires: June 7th, 2021
(Seal)

Notary Public

ACKNOWLEDGEMENT

STATE OF New Mexico }
COUNTY OF Bernalillo } SS
This instrument was acknowledged before me on April 18, 20 17.
By Jason John, Navajo Nation Water Management Branch.

My commission expires: 8/30/2019
(Seal)

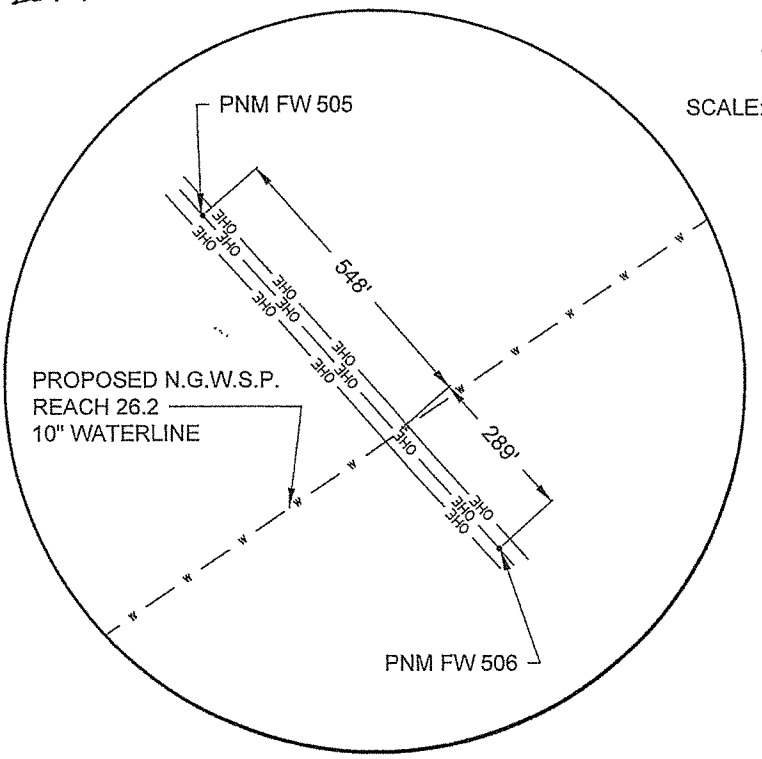
OFFICIAL SEAL
Judy Holland
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 8/30/2019

Notary Public

McKINLEY COUNTY, NEW MEXICO
SEC - 10, T - 20 - N, R - 7 - W

Approved
as submitted
Paul Morgan
Paul Morgan
PNM Trans Engr
11 April 2017

EXHIBIT "A"
PNM TRANSMISSION LINE CROSSING
FW 345 kV



SCALE: 1" = 250'

SMA
Engineering
Environmental
Surveying

Souder, Miller & Associates
Candelaria Road NE, Suite D
Albuquerque, NM 87107 3451
Phone (505) 299-0942 Toll-Free (877) 299-0942 Fax (505) 293-3430
www.soudermiller.com
Serving the Southwest & Rocky Mountains

PNM UTILITY CROSSING
NAVAJO GALLUP WATER SUPPLY PROJECT
REACH 26.2

Designed	Drawn	Checked
AAV	AAV	RMB

Date: November 15, 2016
Scale: Horiz: 1" = 250 Vert:
Project No: 6921307
PNM2

© Copyright 2015 Souder, Miller & Associates - All Rights Reserved P:\6- Cutter Ph 6A (6421307)\Cutter Ph 6B_6C\CAD\PNM\Reach 26 1&2 Power Pole at ReRoute.dwg, MLS, 11/15/2016 8:47 AM

Souder, Miller & Associates ♦ 3451 Candelaria Road NE, Suite D
Albuquerque, NM 87107-1948 ♦ (505) 299-0942 ♦ (877) 299-0942 ♦ fax (505) 293-3430

April 9, 2015

Via email and certified mail

Attention: Ms. Sheri Compton
Engineering Manager
Jemez Mountains Electric Cooperative, Inc
P.O. Box 10
Cuba, New Mexico 87013

Re: Encroachment Letter of Agreement /Notice of Intent for Utility Line Crossing for the Navajo Gallup Water Supply Project, Reaches 26.1, 26.2, and 26.3.

Dear Ms. Compton,

Souder, Miller and Associates (SMA) has been contracted by the Navajo Nation for engineering services on Reaches 26.1, 26.2, and 26.3 of the Navajo Gallup Water Supply Project. Reach 26.1 is a 2.7 mile long, 12 inch diameter PVC pipeline; Reach 26.2 is a consecutive 16 mile long, 10 inch diameter PVC pipeline; and Reach 26.3 is a 9.5 mile long, 12 and 10 inch diameter PVC pipeline. Reach 26.2 heads southwest from the end of Reach 26.1. Reach 26.3 heads southeast from the end of Reach 26.1. This project is located in Sandoval County and McKinley County.

The waterline project requires various utility crossings, some of which are electric lines owned and operated by Jemez Mountains Electric Cooperative, Inc (JMEC). Attached is a drawing of the project area showing the waterline's alignment, a larger scale drawing of select crossings, a table listing all the approximate locations where the pipeline will cross under existing JMEC overhead lines, and draft pipeline plan and profile design sheets with each crossing indicated. The table also indicates whether each JMEC electric line is a single-phase or a three-phase line.

SMA hereby notifies Jemez Mountains Electric Cooperative, Inc. via this letter of the project's need to cross/encroach on your company's electric line at the location as shown on the attached figure. Please review the figure and table to confirm that the crossing locations are accurate. Please notify us if there are other utilities owned by your company along the proposed project alignment that we have not included within this letter. Likewise, we appreciate you notifying us if any of the electric lines we have identified are not in fact JMEC lines.

If JMEC requires an encroachment agreement or crossing permit, please provide one and we will complete and submit the required documents in a timely manner. Please provide any special crossing requirements needed prior to beginning the construction. As part of this project, the contractor will be required to contact NM One Call at least 48 hours prior to crossing any existing utility line.

Please return a signed copy of this letter to acknowledge receipt and acceptance of this proposed encroachment on your company's electric line. It will be understood if we do not receive any correspondence within 30 days of the date of this letter, that all terms and conditions contained herein are acceptable to your company and we will proceed in accordance with these terms and conditions.

Souder, Miller & Associates ♦ 3451 Candelaria Road NE, Suite D
Albuquerque, NM 87107-1948 ♦ (505) 299-0942 ♦ (877) 299-0942 ♦ fax (505) 293-3430

Please advise if you have any questions or need any additional information.

Sincerely,
Souder, Miller & Associates

Ryan Biehl, P.E.
Project Engineer – Albuquerque

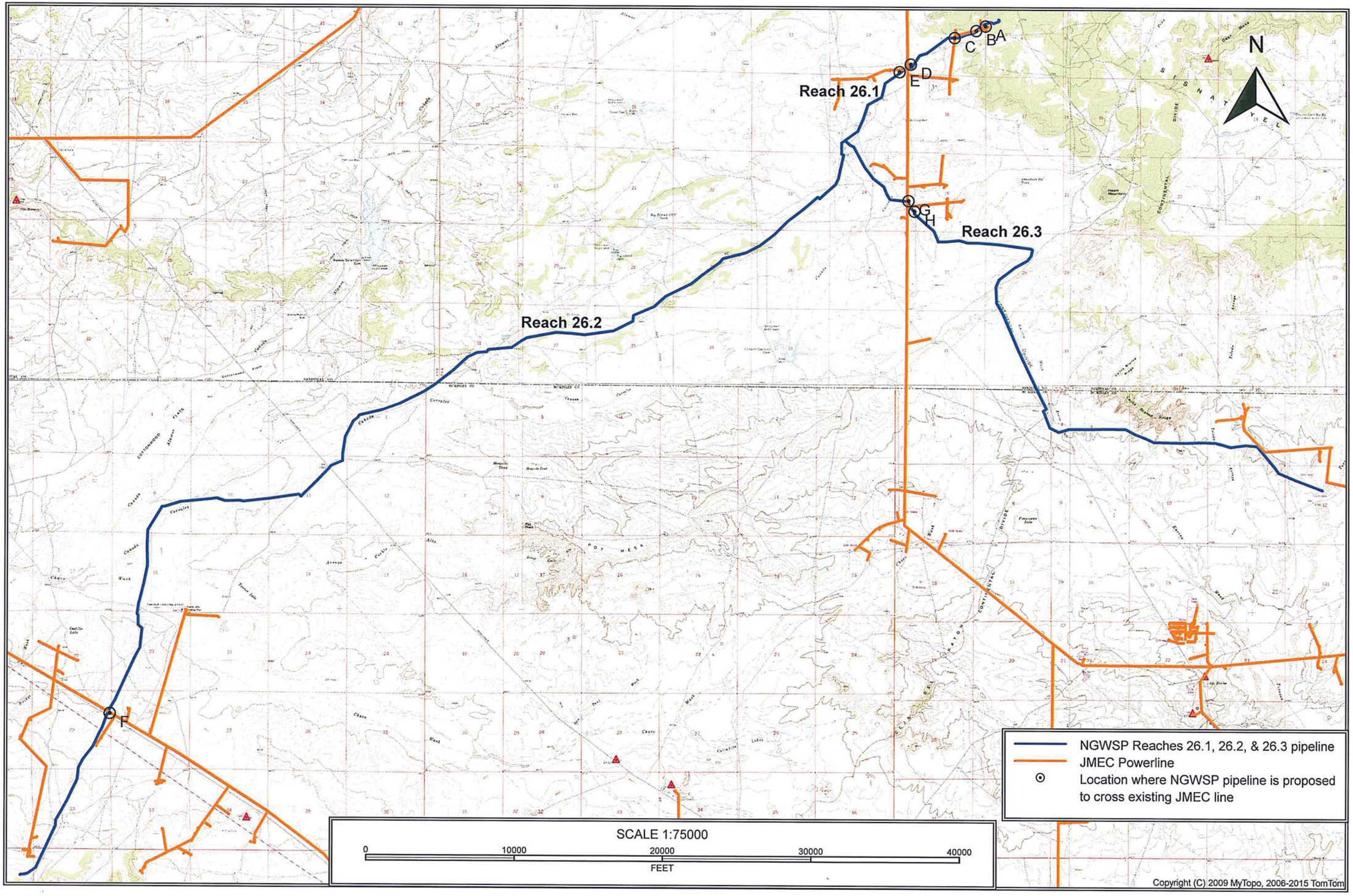
Enclosures: Maps showing NGWSP waterlines with approximate crossing locations.
Table of approximate locations of each JMEC crossing.
Draft Plan and Profile Sheets of each crossing location.

Company Acknowledgement:

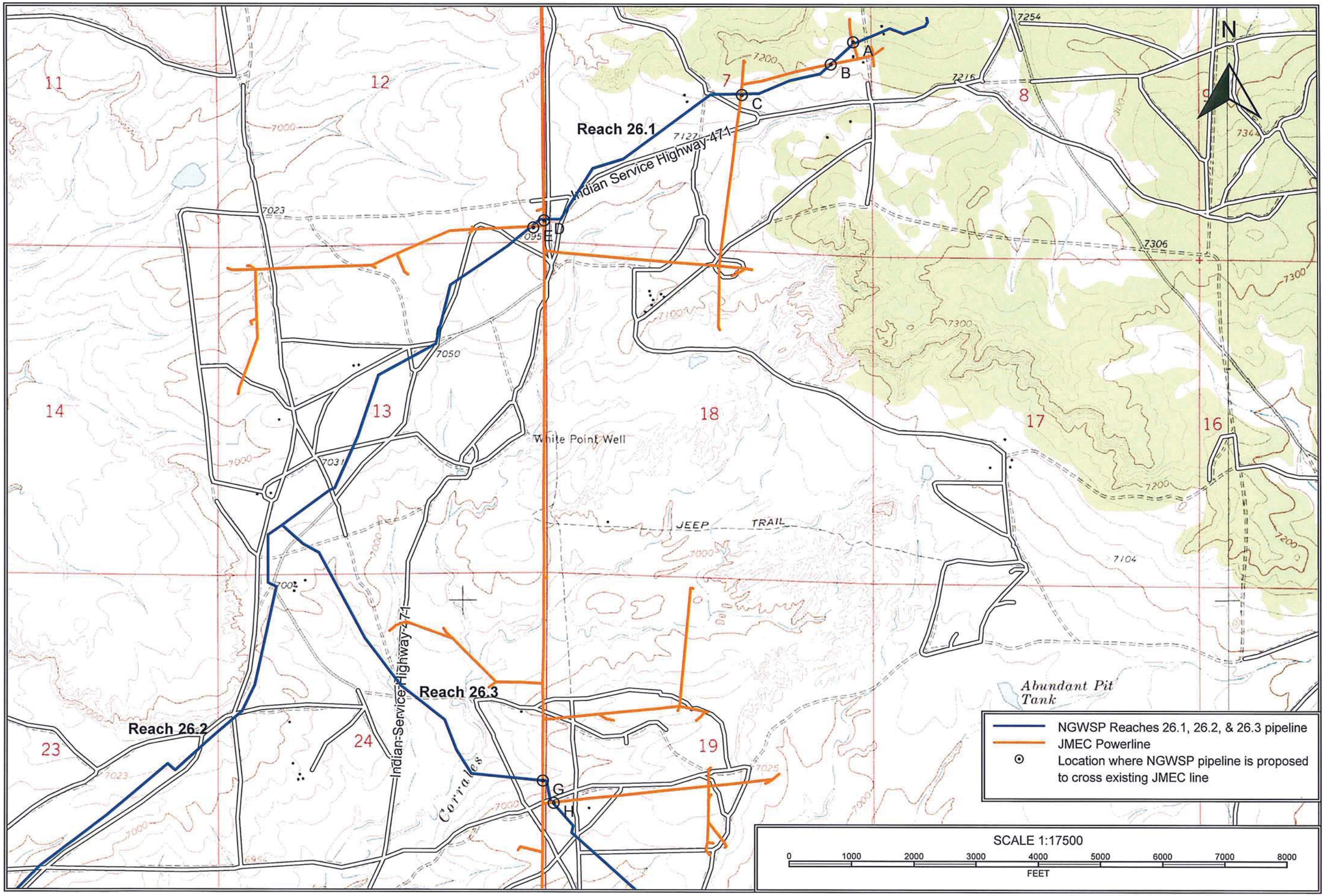
I, the undersigned, have read and understand all conditions and terms stated herein and hereby agree to the encroachment described. No additional encroachment agreement or crossing permit is required.

On June 26, 2015, Sheri Compton (JMEC Engineering) indicated by phone that JMEC is not concerned with proposed encroachments and would not provide additional review or comments.

Signature of Authorized Representative of Jemez Mountains Electric Cooperative



Map of NGWSP Reaches 26.1, 26.2, & 26.3 Alignment Showing Approximate Locations of JMEC Crossings



Zoomed-in map of Reaches 26.1, 26.2, & 26.3 Alignment Showing Approximate Locations of JMEC Crossings

Approximate Crossing Locations of NGWSP Reaches 26.1, 26.2, and 26.3 with JMEC Utility Lines

NGWSP Reach	Crossing ID	County	Township	Range	Section	Latitude (degrees)	Longitude (degrees)	Electric Line Phase
26.1	A	Sandoval	T21N	R5W	7	36.0661	107.3953	Single
26.1	B	Sandoval	T21N	R5W	7	36.06519	107.39656	Single
26.1	C	Sandoval	T21N	R5W	7	36.0639	107.40142	Single
26.1	D	Sandoval	T21N	R6W	12	36.05838	107.41217	Three
26.1	E	Sandoval	T21N	R6W	12	36.05808	107.41286	Single
26.2	F	McKinley	T20N	R7W	29	35.93913	107.59434	Single
26.3	G	Sandoval	T21N	R6W	24	36.03377	107.41227	Three
26.3	H	Sandoval	T21N	R5W	19	36.03281	107.4117	Single

APPENDIX E

BIA Road Crossing Permits

Please Note: The BIA Road Crossing Permits contained herein expired on April 30, 2016. The Navajo Nation has applied for renewals. The renewed permits will be provided to the contractor upon receipt from BIA.

RECEIVED

JAN 29 2015

Navajo Region
Division of Transportation

United States Department of the Interior
Bureau of Indian Affairs
Navajo Regional Office Division of Transportation

Application for Permission for Utility crossing within BIA Right-of-Way
(Authorization: 23 USC Part 123, 23 CFR Part 645 Subpart A & B, 25 CFR Part 170)
Rev:03/04/2014

Background: *to be filled out by Agency DOT Office*
Agency: EASTERN
Route No: N474(3)

Date: 03/11/2015
Permit No: 4N370-2015-474-227
(Assigned by Regional DOT Office)

Project No: N474(3)4
(Assigned by Regional DOT Office)

Section (A): *to be filled out by applicant*

APPLICATION is hereby made by Navajo Nation, Water Management Branch, address: P.O. Box 678, Fort Defiance, AZ 86504 Phone: 928-729-4004 to construct utility crossing(s) at the following location(s) STA. 8+090.15 m d. (Attach location map) adjacent to or crossing BIA Route: Crossing BIA 474
Station/Mile Post: N 36.0583375, W 107.4117112 Street:
for the purpose of (*supplying service to*): / / residence / / Business:
/ / School: / X / Other: Water transmission line to NTUA tank site.
. The utility shall be constructed by the applicant on or by (*date*) SPRING 2016 and shall take 7 calendar days to complete (*attach appropriate engineering sketches of each utility location)*. The applicant further agrees (at their entire expense) to comply with all the conditions, restrictions, and regulations of both the BIA Navajo Regional Division of Transportation (NRDOT) and the Navajo Nation including the requirements of Section (B) thru (F) below including the following:

1. All underground utility installations (on asphalt or concrete surfaced roads) shall cross the roadways by a boring method with a minimum cover depth of (1) one meter below the lowest ditch line elevation unless otherwise specified in section (E) below; All overhead utilities shall have a minimum of 5.5 meter clearance above the roadway surface.

2. A traffic control plan shall be prepared and submitted for approval as required in Section (C) below. This traffic control plan must be implemented prior to any work performed within the roadway right-of-way and shall meet the requirements of the "Manual on Uniform Traffic Control Devices" (MUTCD), latest edition;

3. The Utility Owner accepts full responsibility for the safety of the traveling public

during utili[illegible] installations and shall maintain at least [illegible] lane of traffic open for the public at all times.

4. All components of the above utility installation shall comply with applicable federal, state, tribal, and other local governing body laws and regulations and industry codes;

5. Any and all damages to the roadway right-of-way and appurtenances shall be repaired and/or replaced to the satisfaction of the (NRDOT) Manager;

6. The applicant shall restore the lands within the roadway right-of-way to its natural conditions including drainage, re-seeding and mulching;

7. Relocate any and all utilities within the roadway right-of-way if the NRDOT Manager determines that the utility crossing will interfere with future roadway construction and maintenance or poses a safety hazard to the traveling public;

8. Construct exposed utility lines, poles, anchors, and facility appurtenances outside the clear recovery zones of the roadway as determined by the NRDOT Manager (*preferably next to the right-of-way lines whenever possible*);

9. All utility lines crossing the roadway shall be installed in a casing pipe per attached details. Casing pipe shall be steel, ductile iron, or reinforced concrete or other approved material. Electrical, cable TV or telephone lines may be encased in non-metallic conduit. High pressure and/or hazardous liquid utility lines may call for additional protection requirements;

10. Mark all utility crossings with approved permanent markers next to the road right-of-way lines;

11. Maintain the utility lines, and all utility appurtenances, at all times so as not to allow a condition to exist which would be a safety hazard to the traveling public and/or maintenance problem to the roadway or associated structures. Promptly repair any damages to the facilities with an emergency traffic control plan implemented in accordance with the procedures outlined in the MUTCD Manual, latest edition. Prior to any utility repairs or maintenance, the utility owner must notify the appropriate Agency DOT Engineer as soon as possible after any emergency is discovered or 3 days in advance of all other routine maintenance work;

12. Upgrading of existing permitted utility lines is allowed provided the utility line does not change location with respect to the roadway. If the utility line is to be moved or the angle of the crossing with respect to the road changes substantially, the utility owner must apply for a new permit crossing;

13. Should at any time in the future the utility line(s), stated herein, no longer are to be used, these line(s) shall be removed or abandoned in place, as directed by the

Agency DOT Engineer. The applicant shall submit a letter, to the NRDOT Agency Road Engineer, requesting that the utility owner/applicant be relieved of the requirements of this permit. The Agency DOT Engineer shall promptly forward with his/her recommendation this request to the NRDOT Manager for action. All overhead lines and poles shall be removed from the roadway rights-of-way limits by the owner/applicant as directed by the NRDOT Manager;

14. On pressure lines, shut-off valves, shall be located at the roadway rights-of-way lines where such utility enters and leaves the roadway rights-of-way.

Section (B): *to be filled out by the Agency DOT Engineer (check all that applies)*

The above utility encroachment(s) shall require the following appurtenances which the applicant agrees to install in accordance with the BIA NRDOT design and construction standards.

The above utility encroachment(s) shall require:/X/ construction plans submitted for approval prior to construction; /X/ 44 meters of casing 457 mm diameter/size (min); / / manholes, valves, or poles offset ____ meters from roadway shoulder; /X/ markers for identification purposes; /X/ construct crossing at 90° to the roadway; /X/ As-Built drawings in accordance with BIA NRDOT standards . The Applicant shall further comply with the following (*please type*): SECTION A: #1 THROUGH #14.

Section (C): *to be filled out by the NRDOT Manager (check all that apply)*

The above described utilities require (*entirely at the applicant's expense*) :

/ / complete set of utility crossing drawings reflecting clearances, depth of cover, all pertinent dimensions of proposed facility with respect to the roadway, shoulder ditches, and road rights-of-way lines, structural cover details, etc.
/ / structural analysis
/ / traffic control plan meeting the requirements of the MUTCD
/ / geotechnical analysis & utility installation requirements for special utility installations
/ / archeological & environmental compliance/clearance documents
/ / Consent from the Navajo Nation (1)
/ / Consent from the State of New Mexico (1)
/ / Consent from the State of Arizona (1)
/ / Consent from Indian Allotted (1)
/ / Consent from Private Land Owner (1)

(1) Consent from the underlying land owner must be acquired in writing if the utility is crossing such land.

Any and all analyses shall be performed by registered professionals licensed in the field for which the analysis or documentation is required. The analysis required above shall conform to the BIA NRDOT standards which shall be furnished upon request. The recommendations furnished in the

analysis report(s) shall be implemented by the applicant at the time utility(s) are constructed. **In no case shall the roadway surfacing be structurally less than the adjoining roadway surfacing unless specifically waived or otherwise addressed in Section (E) below when installing utilities in open cut trenches.**

Section (D): *general construction requirements*

The applicant shall (*at his/her entire expense*) install the utility(s) to the lines and grades as shown on attached details or as required in the (*approved*) utility drawings. The work shall conform to the **Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP), latest edition,** relevant national, state, tribal, or local codes approved by NRDOT office, and the following:

- Open cut trenches through roadways shall be backfilled and compacted as per attached details and the FP, section 209. Boring pits and other excavations shall be backfilled and compacted as per attached details and the FP, section 209 with the compaction being 90% of maximum density.

- The top 152mm (6 inches) of natural ground and subgrade of road crossings shall be scarified, adjusted for optimum moisture and compacted in accordance with applicable provisions of section 204 of the FP. All subgrade construction shall be in accordance with section 204 of the FP.

- If the natural ground underneath the proposed utility crossing under the roadway prism shows unstable material, the area shall be excavated to the depths required and stabilized with structural backfill in accordance with section 704 and/or section 213 of the FP.

- The applicant shall furnish test results, certifications for all materials, and copies of all pertinent inspection records to the Agency Road Engineer to review in the field for acceptance of the work.

- The applicant shall notify the Agency DOT Engineer at least 5 working days prior to start of work and upon completion of work within the BIA right-of-way.

- The applicant shall be responsible for developing and implementing a Traffic Control Plan that meets the requirements of the MUTCD (*latest edition with supplements*) and properly maintain this plan for all work within the BIA road right-of-way.

- Any buried non-metallic utility lines shall have a metallic tape or other approved method of effectively locating the lines.

The applicant shall further comply with the following (*please type*): _____

_____

_____

Section (E): *to be filled in by .DOT Manager*

The Regional Division of Transportation hereby grants the following exception(s) to this utility crossing permit request (*please type*): No night time work

NRDOT Mgr (*initials*):

Section (F): *approvals*

This permit is hereby issued to the foregoing applicant for the expressed purpose set forth in this application and upon expressed condition that every requirement herein is faithfully performed and all the work to be performed in accordance with the plans, specifications, and requirements stipulated herein.

This permit shall have a term of ***perpetuity*** *from the date approved below or unless item (13) of Section (A) is executed. This permit shall be canceled if installation within the road right-of-way is not completed by* 04/30/16 *. The permit is transferrable and enforceable to all future owners/heirs/ successors of the utility described above.*

Signed:

Navajo Nation, Water Management Branch

Name of utility owner (print)

Applicant (owner) signature 12-10-14 *Date*

Jason John, Branch Manager

Applicant Title

Recommend for Approval:

Agency Road Engineer 1/27/15 *Date*

Concurred by:

Regional NRDOT Manager 3/9/15 *Date*

Approved By:

Navajo Regional Director 3/10/2015 *Date*

Acting

RECEIVED

JAN 29 2015

Navajo Region
Division of Transportation

United States Department of the Interior
Bureau of Indian Affairs
Navajo Regional Office Division of Transportation

Application for Permission for Utility crossing within BIA Right-of-Way
(Authorization: 23 USC Part 123, 23 CFR Part 645 Subpart A & B, 25 CFR Part 170)
Rev:03/04/2014

Background: *to be filled out by Agency DOT Office*
Agency: EASTERN
Route No: N7133

Date: 07/13/2015
Permit No: 4N370-2015-7133-234
(Assigned by Regional DOT Office)

Project No: N7133
(Assigned by Regional DOT Office)

Section (A): *to be filled out by applicant*

APPLICATION is hereby made by Navajo Nation, Water Management Branch , address: P.O. Box 678, Fort Defiance, AZ 86504 Phone: 928-729-4004 to construct utility crossing(s) at the following location(s): 2 / miles SW of BIA Route N9. (Attach location map) adjacent to or crossing BIA Route: Crossing BIA 7133 Station/Mile Post: N 35.9134814, W 107.6086849 Street: for the purpose of (*supplying service to*): / / residence / / Business: / / School: / X / Other: Water transmission line to NTUA tank site. . The utility shall be constructed by the applicant on or by (*date*) SPRING 2016 and shall take 7 calendar days to complete (*attach appropriate engineering sketches of each utility location)*. The applicant further agrees (at their entire expense) to comply with all the conditions, restrictions, and regulations of both the BIA Navajo Regional Division of Transportation (NRDOT) and the Navajo Nation including the requirements of Section (B) thru (F) below including the following:

1. All underground utility installations (on asphalt or concrete surfaced roads) shall cross the roadways by a boring method with a minimum cover depth of (1) one meter below the lowest ditch line elevation unless otherwise specified in section (E) below; All overhead utilities shall have a minimum of 5.5 meter clearance above the roadway surface.

2. A traffic control plan shall be prepared and submitted for approval as required in Section (C) below. This traffic control plan must be implemented prior to any work performed within the roadway right-of-way and shall meet the requirements of the "Manual on Uniform Traffic Control Devices" (MUTCD), latest edition;

3. The Utility Owner accepts full responsibility for the safety of the traveling public

during utility installations and shall maintain at least one lane of traffic open for the public at all times.

4. All components of the above utility installation shall comply with applicable federal, state, tribal, and other local governing body laws and regulations and industry codes;

5. Any and all damages to the roadway right-of-way and appurtenances shall be repaired and/or replaced to the satisfaction of the (NRDOT) Manager;

6. The applicant shall restore the lands within the roadway right-of-way to its natural conditions including drainage, re-seeding and mulching;

7. Relocate any and all utilities within the roadway right-of-way if the NRDOT Manager determines that the utility crossing will interfere with future roadway construction and maintenance or poses a safety hazard to the traveling public;

8. Construct exposed utility lines, poles, anchors, and facility appurtenances outside the clear recovery zones of the roadway as determined by the NRDOT Manager (*preferably next to the right-of-way lines whenever possible*);

9. All utility lines crossing the roadway shall be installed in a casing pipe per attached details. Casing pipe shall be steel, ductile iron, or reinforced concrete or other approved material. Electrical, cable TV or telephone lines may be encased in non-metallic conduit. High pressure and/or hazardous liquid utility lines may call for additional protection requirements;

10. Mark all utility crossings with approved permanent markers next to the road right-of-way lines;

11. Maintain the utility lines, and all utility appurtenances, at all times so as not to allow a condition to exist which would be a safety hazard to the traveling public and/or maintenance problem to the roadway or associated structures. Promptly repair any damages to the facilities with an emergency traffic control plan implemented in accordance with the procedures outlined in the MUTCD Manual, latest edition. Prior to any utility repairs or maintenance, the utility owner must notify the appropriate Agency DOT Engineer as soon as possible after any emergency is discovered or 3 days in advance of all other routine maintenance work;

12. Upgrading of existing permitted utility lines is allowed provided the utility line does not change location with respect to the roadway. If the utility line is to be moved or the angle of the crossing with respect to the road changes substantially, the utility owner must apply for a new permit crossing;

13. Should at any time in the future the utility line(s), stated herein, no longer are to be used, these line(s) shall be removed or abandoned in place, as directed by the

Agency DOT Engineer. The applicant shall submit a letter, to the NRDOT Agency Road Engineer, requesting that the utility owner/applicant be relieved of the requirements of this permit. The Agency DOT Engineer shall promptly forward with his/her recommendation this request to the NRDOT Manager for action. All overhead lines and poles shall be removed from the roadway rights-of-way limits by the owner/applicant as directed by the NRDOT Manager;

14. On pressure lines, shut-off valves, shall be located at the roadway rights-of-way lines where such utility enters and leaves the roadway rights-of-way.

Section (B): *to be filled out by the Agency DOT Engineer (check all that applies)*

The above utility encroachment(s) shall require the following appurtenances which the applicant agrees to install in accordance with the BIA NRDOT design and construction standards.

The above utility encroachment(s) shall require:/ X/ construction plans submitted for approval prior to construction; / X/ 30 meters of casing 457 mm diameter/size (min); / / manholes, valves, or poles offset ____ meters from roadway shoulder; / X / markers for identification purposes; / X / construct crossing at 90° to the roadway; / X / As-Built drawings in accordance with BIA NRDOT standards . The Applicant shall further comply with the following (*please type*): SECTION A : ITEMS #1 THROUGH #14.

Section (C): *to be filled out by the NRDOT Manager (check all that apply)*

The above described utilities require (*entirely at the applicant's expense*) :

- / ✓ complete set of utility crossing drawings reflecting clearances, depth of cover, all pertinent dimensions of proposed facility with respect to the roadway, shoulder ditches, and road rights-of-way lines, structural cover details, etc.
- / / structural analysis
- / ✓ traffic control plan meeting the requirements of the MUTCD
- / / geotechnical analysis & utility installation requirements for special utility installations
- / ✓ archeological & environmental compliance/clearance documents
- / / Consent from the Navajo Nation (1)
- / / Consent from the State of New Mexico (1)
- / / Consent from the State of Arizona (1)
- / / Consent from Indian Allotted (1)
- / / Consent from Private Land Owner (1)

(1) Consent from the underlying land owner must be acquired in writing if the utility is crossing such land.

Any and all analyses shall be performed by registered professionals licensed in the field for which the analysis or documentation is required. The analysis required above shall conform to the BIA NRDOT standards which shall be furnished upon request. The recommendations furnished in the

analysis report(s) shall be implemented by the applicant at the time the utility(s) are constructed. **In no case shall the roadway surfacing be structurally less than the adjoining roadway surfacing unless specifically waived or otherwise addressed in Section (E) below when installing utilities in open cut trenches.**

Section (D): *general construction requirements*

The applicant shall (*at his/her entire expense*) install the utility(s) to the lines and grades as shown on attached details or as required in the (*approved*) utility drawings. The work shall conform to the **Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP), latest edition,** relevant national, state, tribal, or local codes approved by NRDOT office, and the following:

- Open cut trenches through roadways shall be backfilled and compacted as per attached details and the FP, section 209. Boring pits and other excavations shall be backfilled and compacted as per attached details and the FP, section 209 with the compaction being 90% of maximum density.

- The top 152mm (6 inches) of natural ground and subgrade of road crossings shall be scarified, adjusted for optimum moisture and compacted in accordance with applicable provisions of section 204 of the FP. All subgrade construction shall be in accordance with section 204 of the FP.

- If the natural ground underneath the proposed utility crossing under the roadway prism shows unstable material, the area shall be excavated to the depths required and stabilized with structural backfill in accordance with section 704 and/or section 213 of the FP.

- The applicant shall furnish test results, certifications for all materials, and copies of all pertinent inspection records to the Agency Road Engineer to review in the field for acceptance of the work.

- The applicant shall notify the Agency DOT Engineer at least 5 working days prior to start of work and upon completion of work within the BIA right-of-way.

- The applicant shall be responsible for developing and implementing a Traffic Control Plan that meets the requirements of the MUTCD (*latest edition with supplements*) and properly maintain this plan for all work within the BIA road right-of-way.

- Any buried non-metallic utility lines shall have a metallic tape or other approved method of effectively locating the lines.

The applicant shall further comply with the following (*please type*): No Night Work

Section (E): *to be filled in by NRDOT Manager*

The Regional Division of Transportation hereby grants the following exception(s) to this utility crossing permit request (*please type*): _____

_____

NRDOT Mgr (*initials*): _____

Section (F): *approvals*

This permit is hereby issued to the foregoing applicant for the expressed purpose set forth in this application and upon expressed condition that every requirement herein is faithfully performed and all the work to be performed in accordance with the plans, specifications, and requirements stipulated herein.

This permit shall have a term of ***perpetuity*** *from the date approved below or unless item (13) of Section (A) is executed. This permit shall be canceled if installation within the road right-of-way is not completed by _____. The permit is transferrable and enforceable to all future owners/heirs/ successors of the utility described above.*

Signed:

Navajo Nation, Water Management Branch

Name of utility owner (print)

12-10-14

Applicant (owner) signature *Date*

Jason John, Branch Manager

Applicant Title

Recommend for Approval:

1/27/15

Agency Road Engineer *Date*

Concurred by:

7/8/15

Regional NRDOT Manager *Date*

Approved By:

7-9-15

Acting *Navajo Regional Director* *Date*

RECEIVED
JAN 29 2015
Navajo Region
Division of Transportation

United States Department of the Interior
Bureau of Indian Affairs
Navajo Regional Office Division of Transportation

Application for Permission for Utility crossing within BIA Right-of-Way
(Authorization: 23 USC Part 123, 23 CFR Part 645 Subpart A & B, 25 CFR Part 170)
Rev:03/04/2014

Background: *to be filled out by Agency DOT Office*
Agency: EASTERN
Route No: N9

Date: 07/13/2015
Permit No: 4N370-2015-9-230
(Assigned by Regional DOT Office)

Project No: N9(14)4
(Assigned by Regional DOT Office)

Section (A): *to be filled out by applicant*

APPLICATION is hereby made by Navajo Nation, Water Management Branch, address: P.O. Box 678, Fort Defiance, AZ 86504 Phone: 928-729-4004 to construct utility crossing(s) at the following location(s) MP 79.3 SE of Pueblo Pintado Chapter House. (Attach location map) adjacent to or crossing BIA Route: Crossing BIA N9
Station/Mile Post: N 35.9358137, W 107.5959314 Street:
for the purpose of (*supplying service to*): / / residence / / Business:
/ / School: / X / Other: Water transmission line to NTUA tank site.
. The utility shall be constructed by the applicant on or by (*date*) SPRING 2016 and shall take 7 calendar days to complete (*attach appropriate engineering sketches of each utility location).* The applicant further agrees (at their entire expense) to comply with all the conditions, restrictions, and regulations of both the BIA Navajo Regional Division of Transportation (NRDOT) and the Navajo Nation including the requirements of Section (B) thru (F) below including the following:

1. All underground utility installations (on asphalt or concrete surfaced roads) shall cross the roadways by a boring method with a minimum cover depth of (1) one meter below the lowest ditch line elevation unless otherwise specified in section (E) below; All overhead utilities shall have a minimum of 5.5 meter clearance above the roadway surface.

2. A traffic control plan shall be prepared and submitted for approval as required in Section (C) below. This traffic control plan must be implemented prior to any work performed within the roadway right-of-way and shall meet the requirements of the "Manual on Uniform Traffic Control Devices" (MUTCD), latest edition;

3. The Utility Owner accepts full responsibility for the safety of the traveling public

during utility installations and shall maintain at least one lane of traffic open for the public at all times.

4. All components of the above utility installation shall comply with applicable federal, state, tribal, and other local governing body laws and regulations and industry codes;

5. Any and all damages to the roadway right-of-way and appurtenances shall be repaired and/or replaced to the satisfaction of the (NRDOT) Manager;

6. The applicant shall restore the lands within the roadway right-of-way to its natural conditions including drainage, re-seeding and mulching;

7. Relocate any and all utilities within the roadway right-of-way if the NRDOT Manager determines that the utility crossing will interfere with future roadway construction and maintenance or poses a safety hazard to the traveling public;

8. Construct exposed utility lines, poles, anchors, and facility appurtenances outside the clear recovery zones of the roadway as determined by the NRDOT Manager (*preferably next to the right-of-way lines whenever possible*);

9. All utility lines crossing the roadway shall be installed in a casing pipe per attached details. Casing pipe shall be steel, ductile iron, or reinforced concrete or other approved material. Electrical, cable TV or telephone lines may be encased in non-metallic conduit. High pressure and/or hazardous liquid utility lines may call for additional protection requirements;

10. Mark all utility crossings with approved permanent markers next to the road right-of-way lines;

11. Maintain the utility lines, and all utility appurtenances, at all times so as not to allow a condition to exist which would be a safety hazard to the traveling public and/or maintenance problem to the roadway or associated structures. Promptly repair any damages to the facilities with an emergency traffic control plan implemented in accordance with the procedures outlined in the MUTCD Manual, latest edition. Prior to any utility repairs or maintenance, the utility owner must notify the appropriate Agency DOT Engineer as soon as possible after any emergency is discovered or 3 days in advance of all other routine maintenance work;

12. Upgrading of existing permitted utility lines is allowed provided the utility line does not change location with respect to the roadway. If the utility line is to be moved or the angle of the crossing with respect to the road changes substantially, the utility owner must apply for a new permit crossing;

13. Should at any time in the future the utility line(s), stated herein, no longer are to be used, these line(s) shall be removed or abandoned in place, as directed by the

Agency DOT Engineer. The applicant shall submit a letter, to the NRDOT Agency Road Engineer, requesting that the utility owner/applicant be relieved of the requirements of this permit. The Agency DOT Engineer shall promptly forward with his/her recommendation this request to the NRDOT Manager for action. All overhead lines and poles shall be removed from the roadway rights-of-way limits by the owner/applicant as directed by the NRDOT Manager;

14. On pressure lines, shut-off valves, shall be located at the roadway rights-of-way lines where such utility enters and leaves the roadway rights-of-way.

Section (B): *to be filled out by the Agency DOT Engineer (check all that applies)*

The above utility encroachment(s) shall require the following appurtenances which the applicant agrees to install in accordance with the BIA NRDOT design and construction standards.

The above utility encroachment(s) shall require:/ X/ construction plans submitted for approval prior to construction; / X/ 44 meters of casing 457 mm diameter/size (min); / / manholes, valves, or poles offset ____ meters from roadway shoulder; /X/ markers for identification purposes; / X/ construct crossing at 90° to the roadway; /X/ As-Built drawings in accordance with BIA NRDOT standards . The Applicant shall further comply with the following (*please type*): SECTION A; #1 THROUGH #14.

Section (C): *to be filled out by the NRDOT Manager (check all that apply)*

The above described utilities require (*entirely at the applicant's expense*) :

/✓/ complete set of utility crossing drawings reflecting clearances, depth of cover, all pertinent dimensions of proposed facility with respect to the roadway, shoulder ditches, and road rights-of-way lines, structural cover details, etc.
/ / structural analysis
/✓/ traffic control plan meeting the requirements of the MUTCD
/ / geotechnical analysis & utility installation requirements for special utility installations
/✓/ archeological & environmental compliance/clearance documents
/ / Consent from the Navajo Nation (1)
/ / Consent from the State of New Mexico (1)
/ / Consent from the State of Arizona (1)
/ / Consent from Indian Allotted (1)
/ / Consent from Private Land Owner (1)

(1) Consent from the underlying land owner must be acquired in writing if the utility is crossing such land.

Any and all analyses shall be performed by registered professionals licensed in the field for which the analysis or documentation is required. The analysis required above shall conform to the BIA NRDOT standards which shall be furnished upon request. The recommendations furnished in the

analysis report(s) shall be implemented by the applicant at the time utility(s) are constructed. **In no case shall the roadway surfacing be structurally less than the adjoining roadway surfacing unless specifically waived or otherwise addressed in Section (E) below when installing utilities in open cut trenches.**

Section (D): *general construction requirements*

The applicant shall (*at his/her entire expense*) install the utility(s) to the lines and grades as shown on attached details or as required in the (*approved*) utility drawings. The work shall conform to the **Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP), latest edition**, relevant national, state, tribal, or local codes approved by NRDOT office, and the following:

- Open cut trenches through roadways shall be backfilled and compacted as per attached details and the FP, section 209. Boring pits and other excavations shall be backfilled and compacted as per attached details and the FP, section 209 with the compaction being 90% of maximum density.

- The top 152mm (6 inches) of natural ground and subgrade of road crossings shall be scarified, adjusted for optimum moisture and compacted in accordance with applicable provisions of section 204 of the FP. All subgrade construction shall be in accordance with section 204 of the FP.

- If the natural ground underneath the proposed utility crossing under the roadway prism shows unstable material, the area shall be excavated to the depths required and stabilized with structural backfill in accordance with section 704 and/or section 213 of the FP.

- The applicant shall furnish test results, certifications for all materials, and copies of all pertinent inspection records to the Agency Road Engineer to review in the field for acceptance of the work.

- The applicant shall notify the Agency DOT Engineer at least 5 working days prior to start of work and upon completion of work within the BIA right-of-way.

- The applicant shall be responsible for developing and implementing a Traffic Control Plan that meets the requirements of the MUTCD (*latest edition with supplements*) and properly maintain this plan for all work within the BIA road right-of-way.

- Any buried non-metallic utility lines shall have a metallic tape or other approved method of effectively locating the lines.

The applicant shall further comply with the following (*please type*): No Night Work

Section (E): *to be filled in by .DOT Manager*

The Regional Division of Transportation hereby grants the following exception(s) to this utility crossing permit request (*please type*): _____

_____

NRDOT Mgr (*initials*): _____

Section (F): *approvals*

This permit is hereby issued to the foregoing applicant for the expressed purpose set forth in this application and upon expressed condition that every requirement herein is faithfully performed and all the work to be performed in accordance with the plans, specifications, and requirements stipulated herein.

This permit shall have a term of ***perpetuity*** *from the date approved below or unless item (13) of Section (A) is executed. This permit shall be canceled if installation within the road right-of-way is not completed by* April 2016 *. The permit is transferrable and enforceable to all future owners/heirs/ successors of the utility described above.*

Signed:

Navajo Nation, Water Management Branch

Name of utility owner (print)

Applicant (owner) signature 12-10-14 *Date*

Jason John, Branch Manager

Applicant Title

Recommend for Approval:

Agency Road Engineer 1/27/14 *Date*

Concurred by:

Regional NRDOT Manager 2/8/15 *Date*

Approved By:

Acting *Navajo Regional Director* 7-9-15 *Date*

APPENDIX F

Survey Authorization Forms

- **Owner Provided Survey Request Form**
- **Authorization Form for Contractor Reimbursed Work**
- **Acknowledgement of Contractor Reimbursed Standby Time**

SOUDER, MILLER & ASSOCIATES

3451 Candelaria NE, Ste. A-D
Albuquerque, NM 87107
Phone: (505) 256-7364 FAX: (505) 256-7600
www.soudermiller.com

Owner - Provided Survey Request Form

(48-Business Hours notice required for scheduling crews)

CONTRACTOR: _____ **CLIENT JOB #:** _____

CONTACT: _____ **PHONE:** _____

CLIENT ADDRESS: _____ **FAX:** _____

JOB NAME: Navajo Gallup Water Supply Project Reaches 26.1 & 26.2 **SMA JOB #:** 6921307

TYPE OF WORK REQUESTED:

EASEMENT LINE ☐	CULTURAL AREA LINE ☐	STRUCTURE/FOUNDATION ☐
TCE LINE ☐	ABC BLUE TOPS ☐	PUMP STATION ☐
WATER LINE ☐	SUBGRADE RED TOPS ☐	TANK BENCHMARK ☐
CENTERLINE STAKING ☐	ACCESS/TURNOUT ROAD ☐	FINAL AS-BUILT SURVEY ☐
FENCING ☐	OTHER (DESCRIBE): ☐	_____

WHAT OFFSETS ARE REQUIRED?* (i.e. 10' left, 3' south, etc.):

Note: If off-sets are not specified but found necessary due to field conditions calculations charges may apply.

LIMITS/LOCATIONS OF WORK REQUESTED (i.e. sta-sta, point numbers, etc.):

FROM STATION: **TO STATION:**

OTHER:

DAY/DATE REQUESTED: _____ **ARRIVAL TIME REQUESTED**:** _____

Note: If unreasonable delays to survey crew occur due to project readiness, standby fees may apply.

PRINT NAME OF PERSON REQUESTING WORK: _____

TITLE: _____

SIGNATURE: _____

CELL PHONE #: _____

Return this request via FAX to: James Combs at (505) 256-7600

Souder, Miller & Associates

3451 Candelaria Rd. NE Suite-A
Albuquerque, New Mexico 87107
Phone: (505) 256-7364 FAX: (505) 256-7364
www.soudermiller.com

Authorization Form For Contractor Reimbursed Work

CONTRACTOR: _____

CONTACT: _____ **PHONE:** _____

ADDRESS: _____ **FAX:** _____

JOB LOCATION/DESCRIPTION: Navajo Gallup Water Supply Project Reaches 26.1 & 26.2 **SMA JOB #** 6921307

DESCRIPTION OF WORK REQUESTED: _____

Change Order (additional to work scope)? _____
Re-Stake (Stakes destroyed or missing)? _____

TITLE	*PER HOUR	Est. Hours	TITLE	*PER HOUR	Est. Units
Professional Land Surveyor	$140.00		Project Surveyor/Manager	$105.00	
2-Man Crew (GPS/Total Station)	$170.00		CADD Drafting	$85.00	
1-Man Crew (GPS/Total Station)	$120.00		Vehicle Mileage (per mile)	$0.54	

***Total Estimated Hours:** _____ ***Estimated Fee:** _____

Estimated hours and fees are for information only, actual hours worked will be used and attached to the final invoice along with a copy of this approval sheet.

NOTES: _____

By signing below I acknowledge that the work outlined above is approved and will be submitted for additional billing at the contract hourly rates. I further acknowledge that I am authorized by the CONTRACTOR to commit additional project resources.

PLEASE NOTE: SMA field staff members are not authorized to complete any additional work without execution of this form. Additional remobilization to complete additional work on subsequent trips will be in addition to original bid amounts.

CLIENT REPRESENTATIVE SIGNATURE: _____ Print: _____

DATE: _____ **TITLE:** _____

SMA REPRESENTATIVE SIGNATURE: _____ Print: _____

DATE: _____

Souder, Miller & Associates

3451 Candelaria Rd. NE Suite-A
Albuquerque, New Mexico 87107
Phone: (505) 256-7364 FAX: (505) 256-7600
www.soudermiller.com

Acknowledgement Of Contractor Reimbursed Standby Time

CONTRACTOR: _____

CONTACT: _____ **PHONE:** _____

ADDRESS: _____ **FAX:** _____

JOB LOCATION/DESCRIPTION: **Navajo Gallup Water Supply Project Reaches 26.1 & 26.2** **SMA JOB #** **6921307**

DESCRIPTION OF TASK THAT IS DELAYED: _____

TITLE	*PER HOUR	Est. Hours	TITLE	*PER HOUR	Est. Units
Professional Land Surveyor	$140.00		Project Surveyor/Manager	$105.00	
2-Man Crew (GPS/Total Station)	$170.00		CADD Drafting	$85.00	
1-Man Crew (GPS/Total Station)	$120.00		Vehicle Mileage (per mile)	$0.54	

***Total Estimated Hours:** _____ ***Estimated Fee:** _____

Estimated hours and fees are for information only, actual standby hours will be used and attached to the final nvoice along with a copy of this approval sheet.

NOTES: _____

By signing below I acknowledge that the SMA survey representative(s) are at the project site at the requested time but are unable to complete planned activities due to conditions beyond the control of SMA. I further acknowledge that any standby time in excess of 0.5 hour cumulative per day will be submitted for additional billing at the contract hourly rates. (Alternatively the crew may be released; however, additional mobilization charges may apply.) I further acknowledge that I am authorized by the CONTRACTOR to commit additional project resources.

PLEASE NOTE: SMA field staff members are not authorized to remain at the job site on standby in excess of 0.5 hour cumulative per day without execution of this form.

CONTRACTOR REP. SIGNATURE: _____ **Print:** _____

DATE: _____ **TITLE:** _____

SMA REPRESENTATIVE SIGNATURE: _____ **Print:** _____

DATE: _____

APPENDIX G

Hydrostatic Test Pressure Requirements

Reaches 26.1 & 26.2 Pressure Test Summary

Test Section[1]					Testing ARV Location			Allowable Leakage Calculations[2]		
Beginning Station LF	Ending Station LF	Length of Test Section ft	Nominal Pipe Diameter in	Pipe DR -	Station LF	Elevation ft-aMSL	Test Pressure psi	Number of Joints Tested (N) -	Diameter of Pipe (D) in	Allowable Leakage, 2 Hour Test (2Q) gal.
-1+61	16+39	1800	12	18	-01+55	7287	**210**	90	11.65	**4.34**
16+39	32+28	1589	12	18	16+57	7208	**214**	79	11.65	**3.84**
32+28	69+83	3754	12	18	32+42	7159	**210**	188	11.65	**9.06**
69+83	103+39	3357	12	18	70+00	7097	**212**	168	11.65	**8.10**
103+39	140+86	3747	12	18	103+57	7048	**223**	187	11.65	**9.04**
140+86	183+21	4235	10	18	178+85	7043	**211**	212	9.79	**8.59**
183+21	227+73	4452	10	18	183+38	7039	**214**	223	9.79	**9.03**
227+73	268+94	4121	10	18	240+90	7000	**217**	206	9.79	**8.36**
268+94	316+33	4739	10	18	269+11	6960	**211**	237	9.79	**9.61**
316+33	339+52	2319	10	18	316+50	6904	**236**	116	9.79	**4.70**
339+52	384+83	4531	10	18	343+07	6872	**254**	227	9.79	**9.19**
384+83	415+06	3023	10	14	385+00	6831	**283**	151	9.68	**6.06**
415+06	430+00	1494	10	14	415+24	6783	**300**	75	9.68	**3.00**
430+00	482+27	5227	10	18	430+00	6768	**220**	261	9.79	**10.60**
482+27	531+25	4898	10	14	482+45	6695	**287**	245	9.68	**9.82**
531+25	584+00	5275	10	14	531+43	6654	**291**	264	9.68	**10.58**
584+00	626+51	4251	10	14	600+14	6659	**287**	213	9.68	**8.52**
626+51	678+33	5181	10	14	626+69	6647	**286**	259	9.68	**10.39**
678+33	730+93	5260	10	14	678+50	6602	**309**	263	9.68	**10.55**
730+93	783+32	5239	10	14	731+10	6541	**338**	262	9.68	**10.51**
783+32	819+80	3648	10	14	811+44	6660	**284**	182	9.68	**7.32**
819+80	870+28	5048	10	14	819+97	6630	**295**	252	9.68	**10.12**
870+28	902+39	3211	10	14	902+22	6695	**280**	161	9.68	**6.44**
902+39	930+50	2811	10	18	930+33	6744	**232**	141	9.79	**5.70**
930+50	951+50	2100	10	18	951+33	6823	**210**	105	9.79	**4.26**
951+50	968+50	1700	10	18	968+33	6890	**210**	85	9.79	**3.45**
968+50	Tank Site	1968	10	18	Tank Site	6960	**210**	98	9.79	**3.99**
Pueblo Pintado Tank Site Piping			8	18	In Cl2 bldg.	6971	**125**	0	7.98	**0.00**

Notes:

[1] Pipe used for Reaches 26.1 & 26.2 has a diameter of 12" or 10", and is DR 18 PVC (pressure rating of 235 psi) or DR 14 PVC (pressures rating of 305 psi).

[2] Where the AWWA M23 Allowable Leakage **per Hour** $(Q) = \frac{ND(P^{1/2})}{7400}$. Allowable Leakage values above are for 2 hour tests, 2*(Q).

APPENDIX H

NTUA Permission to Tap an Existing Waterline Application includes Utility Transfer Agreement for Water and Wastewater Facilities

NAVAJO TRIBAL UTILITY AUTHORITY

WATER & WASTEWATER FACILITIES
PERMISSION TO TAP

NAME:_____

LOCATION:_____

DISTRICT:_____

For

_____FACILITIES

NTUA Project No. _____

NTUA WATER SERVICE TAP PROCEDURES

The following procedures are to be adhered to by customer(s) and/or private contractor(s) for all water and wastewater taps and line constructions involving NTUA systems.

Approval of the permission to tap form will be granted upon full compliance with NTUA's requirements. Non-compliance of these requirements and/or NTUA's construction and material standards will result in disapproval to tap and/or construction; and service will not be initiated until all discrepancies are corrected.

Listed below are the necessary steps (check list) for all concerned parties to follow. When construction is completed and all pertinent information and documents are compiled and submitted; the District Manager and Water/Wastewater Foreman will approve and submit a copy of the final transfer package to the NTUA HQ Civil Engineering Dept. NOTE: The NTUA does not accept operation and maintenance responsibilities for customer sewer service lines or septic tank systems. These will be the customer's responsibility.

1. (__) Permission to tap forms initiated at the local NTUA District office. The respective NTUA District office shall provide the necessary information and plans required to the customer/requestor; and assist the requestor in completing the forms. All the necessary information required from the customer to complete the form should be obtained at this point.

2. (__) Proposed Construction Plans and Specifications: The completed permission to tap form and the proposed construction plan(s) are to be submitted to the District Manager and Water/Wastewater Foreman for their review and approval, at least 10 working days prior to construction. Utilize the attached forms provided, WS-1d or WWS-1d, for the "Proposed Construction" plans and use the NTUA legends; with direction indicated by the North arrow. Include the location of septic systems. The forms are for residential installations only. Commercial projects shall submit three (3) sets of plans for both the water and sewer combined.

3. (__) Standard Material Listing: The respective NTUA District Office will review the standard drawings (WS-1, WS-2, WS-3, SS-1) and select the drawing(s) that apply. Please note the standard drawings are for 1" and 2" water services and 4" wastewater services only. Water service(s) over 2" and wastewater service(s) over 4", will require deviation from the standard construction drawings and material listings. Contact NTUA HQ Civil Engineering Dept. for any deviation. Note: The NTUA does not compensate customers for any donated materials.

4. (__) Rights-of-Ways: the customer and/or contractor will be responsible for obtaining Rights-of-Ways and/or clear Grants of Easements; to be submitted with the permission to tap forms.

5. (__) The customer(s) shall provide copies of home-site lease or land use permits, archeological clearances, deposits, service applications, customer meter requests, and etc.

6. (__) Pressure readings, elevations, and system as-built ties information: these are to be provided on both the proposed and the as-built drawings. Flow requirements and demand should be submitted to size the meter and/or verify wastewater system capacity. The NTUA can assist customer(s) in determining these requirements.

7. (__) Open Trench Policy: NTUA may monitor the tap and construction of water and wastewater facilities. It is important to notify one of the main contact persons at NTUA at least three working days prior to actual construction.

8. (__) Final Inspection: All discrepancies/deficiencies shall be corrected by the customer and /or contractor and verified by NTUA.

9. (__) As-built requirements and cost of plant: Very Important! The NTUA requires as-constructed as-built drawings with swing ties and all pertinent information, to be submitted upon completion. Please submit a cost of plant list up to the metering point, of the following: (The cost of plant should be attached to the TA as Exhibit "A".)

   A. MATERIALS (List of items installed.)
   B. LABOR
   C. EQUIPMENT
   * D. TOTAL

   * Total cost of plant to be included on transfer agreement.

10. (__) The customer(s) and/or contractor(s) shall provide NTUA a one-year warranty period on workmanship and materials. The Transfer Agreement will document the beginning date of the warranty period and it will authorize the NTUA to incorporate the capitalized portion of the project (see Item 9, the cost of plant) into the plant records; and to operate and maintain such facilities. (See attached Transfer Agreement.)

11. (__) Initiation of service by the NTUA.

12. (__) Submit a copy of the **Transfer Package** to NTUA HQ Civil Engineering. Provide copies to customer(s) and respective NTUA District Office.

   A. Complete Construction As-Built drawings with NTUA system tie information.
   B. R.O.W. Agreement/Grant of Easement
   C. Final Inspection Certifications
   D. Completed Transfer Agreement w/Cost of Plant

Instructions-Permission to Tap an existing NTUA Water line

This form is to be filled out and submitted to NTUA at least ten (10) working days prior to the requested date of construction of the tap. The ten (10) working days is to allow for the scheduling of an NTUA inspector and this does not imply that a full review with permission to tap being approved or disapproved will be issued in that time period.

Upon approval, a copy of the approved permission to tap form will be sent to the requestor with the local NTUA office retaining the original copy.

All addresses shall include the Zip Code. All telephone numbers shall include the Area Code.

1 a. Permanent addresses and telephone number of the requestor. In some cases this will be a contractor, if not the customer.

b. Local address and telephone number.

c. Vicinity location of the tap and/or project.

2. If the person to coordinate with NTUA is the same as item 1a, then write the appropriate number and letter in the name space. In most cases, this is the customer and not a contractor. If other than 1a, complete the information required.

3. Complete information required.

4. Self-explanatory.

5. Self-explanatory.

6. One copy of the PTT with the specifications and drawings is to remain at the local NTUA District Office. After review by the District Office, the original request form and copies of both the specifications and drawings are to be forwarded to the NTUA Headquarters Civil Engineering Department, unless this is an I.H.S./O.E.H. P.L. 86-121 project or a N.H.A. project.

   If this is a P.L. 86-121 project, the documents will be sent to the NTUA Headquarters Special Operations Department. If this is a N.H.A. project, the documents will be sent to the NTUA NHA Projects Coordinator, NTUA Headquarters, Civil Engineering Department.

   If both sewer and water taps are requested and covered in the same set of drawings and specifications, the original copy of the PTT and copies of the drawings and specifications are to be forwarded to the NTUA Headquarters Civil Engineering Department. Reproducible Mylar's or Sepias may be substituted for drawings forwarded to NTUA Headquarters since the Engineering Department can reproduce the copies required.

Under any "NO" conditions, other than P.L. 86-121 projects, attach a note of explanation.

Before forwarding the documentations to NTUA Headquarters, Civil Engineering Department, the local NTUA District Office will check the drawing(s) for:

A. The basis of elevation as given by showing the bench-mark identification, location, and elevation;

B. A description of the tap point that gives specific ties to existing facilities and drawings in the NTUA files.

C. Detail drawing of tap point and materials to be used; may require submittals.

D. The portion of the proposed system that is to be transferred to NTUA for operations and maintenance is indicated, per attached ROW and/or Grant of Easement Documentation(s). Item "D" does not apply to P.L. 86-121 projects since this is covered in detail in other documents.

7. The type of service requested such as Residential Domestic, Commercial, or Industrial and Permanent or Temporary Service, (e.g., "Permanent Residential Domestic"), will be stated plus the meter size. If questions arise contact the NTUA Civil Engineering for assistance on information required for these entries on the request forms.

8. Provide customer requested flows rates and demands required.

9. If the customer requires both domestic and fire flow services, the NTUA may require a single or dual meter set up for this purpose based on flow rates required. Flow rates required shall be submitted.

10. The hour of the day as well as the date, are expected entries in this space. Provide enough lead-time for tap approval and to schedule an inspector, a minimum of ten (10) working days.

11. Signatures of customer(s) and/or contractor(s) responsible for tap construction and acceptance by NTUA.

12. Self-explanatory.

13. The District Engineering will do a complete review of the PTT with the assistance of the District Water Department.

14. The District Water Foreman will do a complete review of the PTT with the assistance of the District Engineering Dept. Attach a list of District operational constraints and current operating problems that affect or will be caused by the approval of this permission to tap. If there are no operational constraints or problems, write "NOP" beside the date of the signature.

15. Self-explanatory

16. The District Manager will do a complete review of the permission to tap forms and related documents.

17. Self-explanatory, per the local NTUA District office schedule.

18. Self-explanatory.

19. Unless otherwise noted, a list of restrictions, recommendations, conditions, notes, and etc. on the approval will be stated.

PERMISSION TO TAP AN
EXISTING N.T.U.A. WATER LINE

1. Requester

   a. NAME :_____
   TITLE :_____
   ORGANIZATION :_____
   PERMANENT :_____
   ADDRESS _____
   TELEPHONE # :_____

   b. LOCAL ADDRESS :_____
   _____
   LOCAL PHONE # :_____

   c. VICINITY/LOCATION:_____
   OF TAP/PROJECT _____

2. Person responsible for tap construction and its acceptance by the Navajo Tribal Utility Authority.

   NAME :_____
   TITLE :_____
   ORGANIZATION :_____
   ADDRESS :_____
   _____
   TELEPHONE # :_____

3. Person responsible for paying the Navajo Tribal Utility Authority for service after the construction is completed and accepted.

   NAME :_____
   TITLE :_____
   ORGANIZATION :_____
   ADDRESS :_____
   _____
   TELEPHONE # :_____

4. Date request is submitted to the Navajo Tribal Utility Authority.

   DATE :_____

5. Submitted to:

   NAME :_____
   TITLE :_____
   NTUA OFFICE :_____

6. Specifications and Drawings of proposed construction attached? _____ (Yes/No).

7. Actual Services:

ACTUAL NUMBER :_____
METER SIZE :_____
TYPE OF SERVICE :_____
_____
REMARKS (Type of Building Served): _____
_____

8. Water demand/customer requested flow rates and minimum available pressure at the meter outlet.

NORMAL :_____GPM
PEAK :_____GPM
PRESSURE :_____ PSI
@ ELEVATION OF :_____ FT. above MSL

9. Fire Flow Demand is not guaranteed and is based only on what the system will provide. FOR NTUA INFORMATION: Flow rate and minimum available pressure at the meter outlet.

	Sprinkler system	Total Fire Hydrant Flow
QUANTITY	:_____	_____ GPM
DURATION	:_____	_____ MINS.
PRESSURE	:_____	_____ PSI
SIMULTANEOUS USE	_____	(YES/NO)

10. Requested Date and Time of the actual construction of the tap: _____

11. I agree to adhere to the Navajo Tribal Utility Authority (NTUA) construction methods, material standards, line test procedures, disinfections requirements, water and wastewater construction policies, As-built drawing requirements, and tariff requirements, as they pertain to tapping the existing NTUA water and wastewater facilities; and the constructed utilities to be transferred to NTUA for operations and maintenance, with services provided by the NTUA thereafter.

_____ _____ _____
Signature Print Date

_____ _____ _____
Signature Print Date

_____ _____ _____
Signature Print Date

12. Is this service downstream from a previous Master Metered area? _____(Yes/No).

13. Specifications and proposed construction drawings reviewed by:

_____ _____
District Engineering Dept. Date

14. Specifications and proposed construction drawings reviewed and approved by:

_____ _____
District W/WW Foreman Date *OCP? (Yes/No)

* "OC/P" = Operational constraints/problems. If YES, attach list of current operating problems that will affect PTT.

15. Assigned NTUA inspector's name.

_____
Name/Title

16. Reviewed by District Manager.

_____ _____
Signature Date

17. Approved time and date of construction of tap.

Time and Date: _____

18. Permission to Tap reviewed and approved by.

_____ _____
NTUA HQ, Civil Engineering Dept./Title Date

19. Comments / Remarks:

FINAL INSPECTION FOR INDIVIDUAL FACILITIES

Homeowner's Name: _____
Address: _____
_____

Location of Service: _____
Water System Name/Project No: _____

Description of Building Served: _____

Facilities Installed: (__) Water line/Water tap
(__) Sewer line/Sewer tap
(__) Sewer septic system. Note: For information only.

Construction Completion Date: _____

Construction As-Built provided
To Operating Utility: Date:_____ By:_____

Final Inspection Date: _____

Attendees: NAME(S) REPRESENTING:

_____

_____

_____

_____

_____

The facilities indicated above have been completed and inspected, with all deficiencies (if any) corrected to NTUA's requirements and such facilities have been transferred to NTUA per the **"Transfer Agreement"** for normal operation and maintenance.

_____ will warranty these facilities against defects in material and workmanship for one year, beginning _____ and ending _____.

_____ _____
Customer's Signature/Date NTUA Representative/Title/Date

WATER/WASTEWATER TEST CERTIFICATIONS

DISTRICT:_____ DATE:_____

WATER SYSTEM

CUSTOMER:_____
LOCATION:_____

LOCATION OF LINE TESTED: _____
LENGTH, SIZE, & TYPE OF PIPE: _____
DATE OF TEST(s): _____ PASSED : _____ *FAILED:_____
*If FAILED, waterline must be re-tested.

PRESSURE TEST RESULTS: (Attach work sheets)

1. Test Pressure :_____ PSI..
2. Duration of Test :_____ HRS.
3. Allowable Leakage :_____ Gals.
4. Total Leakage :_____ Gals.

DATE (Water Sample to Lab) :_____ Lab no.:_____

RESULTS OF BACTEE: PASSED : _____*FAILED: _____
*If FAILED, water must be re-sampled.

TEST RESULTS CERTIFIED BY:_____
NTUA REPRESENTATIVE / TITLE DATE

WASTEWATER SYSTEM

CUSTOMER: _____
LOCATION: _____

DATE OF TEST(s):_____
LOCATION OF LINE TESTED:_____SECTION OF _____
LENGTH, SIZE, & TYPE OF PIPE:_____
SIZE, & TYPE OF MANHOLE (S):_____

WASTEWATER TESTS: (Attach work sheets)

1. Line Test* :_____ Gal/Section/2 hrs.
2. Manhole Test**:_____ Gal/MH/2 Hrs.

TEST RESULTS CERTIFIED BY: _____
NTUA REPRESENTATIVE / TITLE DATE

* Allowable Leakage: ≤ 1 Gal./Section/2hrs. for 8" to 12" lines, regardless of length, with 4 feet of head test pressure.

** Allowable Exfiltration: ≤ 5 gal/MH/2 hrs. regardless of height.

EXHIBIT A

Geotechnical Investigation Report

Revised Geotechnical Investigation for Navajo Gallup Water Supply Project (NGWSP) Reaches 26.1 & 26.2, Project No. 15-1-057, X^8eVinyard, June 9, 2016.

Note:
The following clarification is made within Article 1.3.J of Section 01 00 00 of the Technical Specifications with regard to geotechnical reports.

Exhibit A to the Contract Documents contains geotechnical reports which include shrinkage factors, in-situ soil moisture measurements, and Standard Proctor test results (including optimal moisture content) from test holes at various locations within the project area. Contractor is advised that test holes reveal information about only a very small area, and sub-surface conditions between the test holes may vary. Contractor is wholly responsible for any assumptions made about sub-surface conditions between the test holes. Moreover, in-situ moisture content varies with time, and the Owner makes no representation that the in-situ moisture at the time the measurements were taken will be the same at the time of construction. The results of the Proctor and in-site moisture tests are provided for Contractor's convenience only; they are not considered "Technical Data", as defined in Article 5.03 of the General Conditions, upon which the Contractor is entitled to base his/ her bid.

1. The Contractor is entitled, however, to rely upon the soil bearing capacity and other geotechnical design criteria for the design of tank and building foundations at the pump station and tank sites. Moreover, the Contractor shall be required to follow the recommendations of the geotechnical report for building & tank foundation design, sub-foundation, and overexcavation.

REVISED

Geotechnical Investigation

Pueblo Pintado Tank Site
Includes NGWSP Reaches 26.1 & 26.2
Pueblo Pintado in New Mexico

Prepared for:
Souder, Miller & Associates

Project No.: 15-1-057

June 9, 2016

8916-A ADAMS ST., NE
ALBUQUERQUE, NM 87113
OFFICE: 505.797.9743
CONTACTUS@X8EVINYARD.COM

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 PROPOSED CONSTRUCTION 1

3.0 SITE CONDITIONS 2

4.0 SITE SUBSURFACE CONDITIONS 2

5.0 LABORATORY TESTING 3

6.0 FOUNDATIONS 4

7.0 CONCRETE SLABS-ON-GRADE 5

8.0 EARTHWORK 5

- 8.1 GENERAL 5
- 8.2 CLEARING AND GRUBBING 6
- 8.3 EXCAVATION 6
- 8.4 NATURAL GROUND PREPARATION 6
- 8.5 FILL PLACEMENT AND COMPACTION 6
- 8.6 OBSERVATION 7
- 8.7 FREQUENCY OF TESTING 7

9.0 SITE GRADING AND DRAINAGE 7

10.0 LANDSCAPING 7

11.0 UTILITIES 8

12.0 TRENCHES AND EXCAVATIONS 8

13.0 CLOSURE 8

SITE PLANS	Figures 1
LOGS OF TEST HOLES & TEST PITS	2-4
NOTES - LOGS OF TEST HOLES	5
CONSOLIDATION TEST RESULTS	6-8
SUMMARY OF LABORATORY TEST DATA	Table 1

8916-A Adams Street NE
Albuquerque, NM 87113

Office: 505.797.9743
Fax: 505.797.9749

TABLE OF CONTENTS

APPENDIX

EARTHWORK PROCEDURES Page A

NGWSP REACHES 26.1 & 26.2 OJO ENCINO TO PUEBLO PINTADO Page B
(X8e Vinyard Project Number 14-1-086)

PARTIAL PIPELINE RE-ROUTE NGWSP REACHES 26.1 & 26.2 PUEBLO PINTADO Page C
(X8e Vinyard Project Number 16-1-032)

8916-A Adams Street NE
Albuquerque, NM 87113

Office: 505.797.9743
Fax: 505.797.9749

1.0 INTRODUCTION

This report presents the results of our geotechnical investigation for the proposed Pueblo Pintado Tank Site located in Pueblo Pintado of the Navajo Nation, New Mexico.

The investigation was performed to determine site subsurface conditions and, based upon the conditions observed in the test holes, to develop geotechnical recommendations for:

Foundation Design;
Slabs-on-Grade;
Lateral Earth Pressures;
Site Grading; and
Earthwork Construction.

The conclusions and recommendations presented are based on information provided to us regarding the proposed development, on subsurface conditions disclosed by the test holes, on laboratory testing, and upon the local standards of our profession at the time this report was prepared.

The conclusions and recommendations presented in this report also considered the historical data contained in the Geotechnical Investigation Navajo Gallup Water Supply Project (NGWSP) Reaches 26.1 and 26.2 Ojo Encino to Pueblo Pintado, prepared by X8e Vinyard, X8e Vinyard Project No.: 14-1-086, dated December 11, 2014, a copy of which is presented in the Appendix. Due to the changes from one large capacity water tank to two smaller capacity water tanks and subsequent re-siting of the water tanks and Chlorinator Building, the site preparation and foundation recommendations in this report, 15-1-057rev, supersede the recommendations previously provided in the 14-1-086 report. Recommendations addressed in the 14-1-086 report concerning the proposed pipeline remain applicable.

This investigation was not performed to determine the presence of potentially hazardous waste or radon gas. Determination of the presence of potentially hazardous materials was beyond the scope of this investigation and requires the use of exploration techniques and analytic testing which were not appropriate for this investigation. If desired, X8e Vinyard will perform an environmental audit of the site.

2.0 PROPOSED CONSTRUCTION

We anticipate that the proposed project will consist of two water storage tanks, which will replace the previous design based on one water storage tank at the Pueblo Pintado Tank site. Both tanks will be approximately 32 feet in height, 31 feet in diameter, and hold approximately 175,000 gallons. The project also includes a Chlorinator Building, approximately 130 square feet in plan, which will consist of pre-cast concrete construction. No basements or below grade structures are anticipated. Maximum exterior wall loads of up to 2.0 kips per lineal foot are anticipated for the proposed Chlorinator Building based on information recently provided indicating a maximum building height of 9 feet 2 inches. It is anticipated that the supporting soils at the base of the proposed water storage tank will be subjected to approximately 2,000 pounds per square foot based on the foregoing dimensions. If structure loads or configuration differ from those indicated in this report, this office should be notified.

3.0 SITE CONDITIONS

The project site is situated south of Counselor and east of Pueblo Pintado, New Mexico, with the 19 miles of pipeline traversing across the counties of Sandoval and McKinley. The project site in the area of the proposed Chlorinator Building has been re-sited where the existing water storage tank is to be removed. The two new water storage tanks will be located west and southwest of the existing water storage tank. The new tanks are bounded to the north by a building beyond, to the east by undeveloped land, and to the south and west by Indian Service Route N474. Drainage visually appears to be from north to south. Vegetation consisted of weeds and small shrubs. The project site in the area of the proposed Water Storage Tank and Chlorination Building is bounded to the west, north and east by undeveloped land and to the south by an existing water storage tank. Drainage visually appears to from east to west. Vegetation in this area consisted of weeds and grasses a far distance beyond the existing tank as the immediate surrounding area is nearly void of vegetation. Configuration of the project area is indicated on the Site Plan, Figure 1.

4.0 SITE SUBSURFACE CONDITIONS

To explore the site subsurface conditions, three test holes were drilled during September 30, 2015 at the approximate locations shown on the Site Plan, Figure1. The soils encountered at the site of the proposed Water Storage Tanks and Chlorinator Building consisted of silty gravel (GM) with sand, silty sand (SM) with varying amounts of gravel, clayey sand (SC) with varying amounts of gravel, sandy silt (ML) and sandy lean clay (CL). The gravel is described as slightly moist and very dense. The silty sands are described as fine grained, slightly moist to medium moist, medium dense to very dense. The clayey sands are described as fine grained, slightly moist to moist and very dense. The sandy silt is described as slightly moist and hard. The sandy lean clays are described as slightly moist and very stiff to hard.

Neither flowing groundwater nor bedrock was encountered in the test holes to a depth of twenty feet and eleven and one half inches, the maximum depth of exploration. However, groundwater conditions may change with time due to precipitation, variations in groundwater level, seepage from ponding areas, or leaking utilities.

Most of the soils encountered in the test holes exhibit slight consolidation potential under the anticipated structural loads. Slight to moderate additional consolidation (collapse) occurs when site soils increase in moisture content. Refer to Figures 6 through 8.

The soils encountered at the originally proposed site of the Water Storage Tank and Chlorinator Building as indicated in the Geotechnical Investigation NGWSP Reaches 26.1 & 26.2 Ojo Encino to Pueblo Pintada report prepared by X8e Vinyard, Project No.: 14-1-086, dated December 11, 2014, consisted of silty sand (SM), clayey sand (SC), sandy silt (ML) and lean clay (CL) with varying amounts of sand. A layer of dense, silty gravel (GM) with sand was encountered below 10 feet of dense, silty sand and the gravel was underlain by hard, lean clay extending to the total depth investigated in Test Hole V38-A drilled at the proposed Chlorinator Building location. Test Holes V38-B, V38-C and V38-D were drilled at the proposed water storage tank location. The soils encountered within the originally single water storage tank location varied appreciably with respect to soil type, both with depth and laterally across the proposed tank area. Locations of these test holes drilled for the above referenced report are shown on the attached Site Plan, Figure 1D, in Appendix B.

Most of the soils that were encountered in the earlier investigation exhibited slight to moderate consolidation potential under the anticipated structural loads. Slight to moderate additional consolidation (collapse) occurred when the tested soils increased in moisture content. Refer to Figures 36 through 41 of Appendix B.

The test holes allow observation of a very small portion of the soils below the site. Significant variations in subsurface conditions may occur across the project site, which were not disclosed by the test holes.

5.0 LABORATORY TESTING

A laboratory testing program was performed on samples obtained during the field investigation which appeared representative of the soils encountered in the test holes and test pits. The laboratory testing program was structured to determine the physical properties of the soils encountered in the test holes necessary for development of geotechnical recommendations.

The laboratory testing program included:

- Moisture Content;
- Dry Density;
- Sieve Analysis;
- Atterberg Limits; and
- Consolidation/Collapse.

Moisture Content and Dry Density tests were performed to evaluate the in-place soil density and moisture content. Test results help to evaluate settlement potential. Test results indicate the soils encountered in the test holes have an average dry density of approximately 106 pcf. Natural moisture content averaged approximately 6.7 percent. Test results are presented on the Logs of Test Holes, Figures 2 through 4, and are summarized on Table 1.

Sieve Analysis and Atterberg Limits tests were performed to confirm field soil classifications and to provide information on general physical soil properties. Test results are presented on Table 1.

Consolidation/Collapse tests were performed to evaluate structure settlement and to determine the effect of water on site soils. The results indicate that the tested soils are slightly compressible under anticipated loads. Minimal additional settlement (collapse) occurred when the tested soils increased in moisture content. Test results are presented on Figures 6 through 8.

Results of consolidation/collapse tests performed as part of the previously referenced geotechnical report indicated that the tested soils were slightly to moderately compressible under anticipated loads. Slight to moderate additional settlement (collapse) occurred when the tested soils increased in moisture content. Test results for the soil samples of the referenced geotechnical report are presented on Figures 36 through 41 in Appendix B.

6.0 FOUNDATIONS

If the recommendations presented in this report are implemented particularly those regarding site grading and drainage, the proposed Chlorinator Building may be supported on conventional spread and strip footings or turned down edge and the two (2) proposed 175,000-Gallon Water Storage Tanks may be supported on either reinforced concrete ring wall footings or a steel floor with a steel retainer ring. The foundation for the Chlorinator and Surge Tank buildings should bear on a minimum thickness of two feet of structural fill. The ring wall footings of Water Storage Tank No. 1, as indicated on the attached Site Plan, Figure 1, should bear on a minimum thickness of three feet of structural fill. The base of the Water Storage Tank No. 1 should bear on a minimum thickness of five feet of structural fill. The ring wall footings of Water Storage Tank No. 2, as indicated on Figure 1, should bear on a minimum thickness of five feet of structural fill. The base of the Water Storage Tank No. 2 should bear on a minimum thickness of eight feet of structural fill. A four-inch layer of oil-treated sand should be provided below the tank bases. Weep holes through the ring wall footings should be provided at frequent spacings or as recommended by the tank manufacturer. Structural fill should extend a minimum of three feet laterally beyond the edge of all footings. Foundations may be designed for an allowable bearing pressure of 2,000 pounds per square foot. This value may be increased by one-third for short-term loads due to wind and earthquakes. If it is not feasible to implement the site grading, drainage, and landscaping recommendations presented herein, an alternate foundation system may be required. This office should be contacted for additional recommendations.

The base of exterior footings for each of these structures should be embedded a minimum of three feet below lowest adjacent grade. The base of interior footings should be embedded a minimum of twenty-four inches below finish pad grade. Spread and strip footings should be a minimum of twenty-four and eighteen inches wide, respectively. However, local building codes may require greater dimensions.

Lateral foundation loads will be resisted by a combination of passive soil pressure against the sides of footings and friction along the base. A passive soil resistance of 300 pounds per cubic foot may be utilized for design. Frictional resistance may be determined by multiplying foundation dead load by a coefficient of friction of 0.40.

Prior to fill placement and following footing excavation, the natural soils should be scarified to a depth of eight inches and moistened to near optimum moisture content (±3%). The exposed soils should then be compacted to a minimum of 95% of maximum density as determined by ASTM D-1557. All fill below structures should be placed and compacted as detailed in the attached Appendix. Prior to pouring concrete footing excavations should be cleaned of any slough, loose soil, or debris. Footing excavations should be compacted as detailed in the attached Appendix.

Foundations designed and constructed as described herein are not anticipated to settle more than one inch. Differential settlement between adjacent column footings should not exceed one-half of the above value. Foundations should be designed and constructed to tolerate the above settlement. Foundations should be designed by a qualified structural engineer.

The site soils will consolidate if allowed to increase in moisture content. With appropriate landscape irrigation and site grading and drainage as detailed in this report the moisture content of the soils within five to ten feet of the ground surface may increase. The recommendations presented in this report for site preparation are the minimum we consider prudent to address this

degree of moisture penetration. In the event moisture penetration to depths greater than seven feet occurs, movement substantially greater than quoted above will occur.

Based upon the results of this investigation and our previous experience in the site vicinity, an International Building Code Site Classification of "D" may be utilized for design.

7.0 CONCRETE SLABS-ON-GRADE

Concrete slabs-on-grade may be utilized. The slab of the Chlorinator Building should bear on a minimum thickness of three feet of structural fill. Minimum floor slab thickness, overall slab reinforcement, and sawed joints or control joints should be determined by a qualified structural engineer. Conventional slabs should be isolated from all foundations, stem walls, and utility lines. Monolithic slabs should be isolated from all utilities. Frequent joints should be scored or cut in slabs to control the location of cracks.

Thickened slabs may be utilized to support interior partitions. Thickened slabs should be a minimum of twelve inches in width and should be designed to exert a maximum earth pressure of 500 pounds per square foot. Wall loads on thickened slabs should not exceed 800 pounds per linear foot. The thickness and reinforcement should be determined by a qualified structural engineer.

Slabs should be adequately reinforced with steel. Slab reinforcement should be turned down into turned down edges.

For structural design of the floor slab, a modulus of subgrade reaction of 300 kips per cubic foot may be utilized. This value is for a 1' x 1' square or a 1' wide strip. The above value may be modified for various effective widths based upon the following equation:

$K_s = 300\left[\frac{B+1}{2B}\right]^2$

K_s = Modulus of subgrade reaction (kips per cubic foot)

B = Effective width of loaded area (feet)

If moisture-sensitive floor covering is utilized, the flooring manufacturer should be contacted to determine the necessity of a vapor barrier. The moisture barrier may consist of a 6-mil polyethylene film or equivalent. The barrier may be overlain with one or two inches of clean sand to provide a working surface and reduce shrinkage cracking.

Slabs of the proposed Chlorinator Building should bear on a minimum of three feet of structural fill. Prior to placing slabs or structural fill, the natural soils should be stripped of vegetation, scarified to a depth of eight inches, and moistened to a near optimum (±3%) moisture content. The exposed soils should then be compacted to a minimum of 95% of maximum density as determined by ASTM D-1557. All fill below slabs should be placed and compacted as detailed in the attached Appendix.

8.0 EARTHWORK

8.1 General

The settlement estimates presented in this report are based upon the assumption that site earthwork will be performed as recommended in this report and the attached Appendix. Presented below is a summary of the site earthwork recommendations. Detailed earthwork procedures are presented in the attached Appendix.

Prior to commencing earthwork the Contractor should obtain appropriate Proctor tests. Field density testing and evaluation of the suitability of the proposed materials performed prior to completion of the Proctor is "Preliminary" and may change based upon the results of the Proctor testing.

8.2 Clearing and Grubbing

Prior to placing structural fill, all borrow and fill areas should be stripped of vegetation and deleterious materials. All strippings should be hauled off-site or utilized in landscaped areas.

All existing utilities, septic tanks, leach fields, and disturbed soil should be removed from below the proposed structures. The resulting excavations should be backfilled with compacted fill as detailed in the attached Appendix.

8.3 Excavation

We anticipate that on-site soils can be excavated with conventional earthwork equipment. The designer should consider the effects of deep excavations in close proximity of existing structures. Occasional cobbles or boulders may be encountered during excavation. Cobbles and boulders should be disposed of off-site or utilized for landscaping. Cobbles and boulders should not be placed within structural fills. Cobbles and boulders as defined in ASTM D-2487.

8.4 Natural Ground Preparation

Prior to placing structural fill and subsequent to final grading in cut areas, the exposed soils should be scarified to a depth of eight inches and moisture conditioned to a near optimum (±3%) moisture content. The exposed soils should then be compacted to a minimum of 95% of maximum density as determined by ASTM D-1557. If vibratory compaction poses a threat to nearby structures, static compaction should be utilized.

8.5 Fill Placement and Compaction

Structural fill should be placed in horizontal lifts a maximum of eight inches in loose thickness, moisture conditioned to near optimum moisture content, and mechanically compacted. Fill below footings and slabs should be compacted to a minimum of 95% of maximum dry density as determined by ASTM D-1557. The upper five feet of subsurface soils at the site of the proposed Chlorinator Building are not anticipated to be suitable for re-use as structural fill. The previously referenced Geotechnical Investigation report also indicated the possibility that the upper five feet of subsurface soils within the area of Test Hole V38-D was not anticipated to be suitable for re-use as structural fill. Imported soils may be blended with the existing soils, provided that the resulting

blended material satisfies structural fill criteria. The designer should consider the effects of vibrations associated with compaction operations within deep excavations situated near existing structures.

8.6 Observation and Testing

Placement and compaction of structural fill should be observed and tested by a qualified geotechnical engineer or his representative. The purpose of the observation and testing is to confirm that the recommendations presented herein are followed and to provide supplemental recommendations, if subsurface conditions differ from those anticipated.

Foundation excavations should be observed by a qualified geotechnical engineer, or his representative, prior to placement of reinforcement or concrete. The purpose of the observation is to determine if the exposed soils are similar to those anticipated.

8.7 Frequency of Testing

Earthwork should be tested periodically to confirm the fill is compacted to the criteria presented in this report. Prior to placing fill, the natural ground should be moisture conditioned, compacted, and tested to confirm it is properly compacted. Fill should be placed in maximum eight-inch thick loose lifts, but in no case thicker than can be compacted with the equipment being utilized. Fill should be moisture conditioned and compacted as detailed in this report. Fill areas should be tested at maximum one-foot vertical intervals. If fill areas are worked at different times, each individual area should be tested. Following finish grading, the final surface should be tested. Following foundation excavation, the footing excavations should be tested. Utility trench backfill should be tested as necessary.

9.0 SITE GRADING AND DRAINAGE

The settlement estimates presented in this report assume the site will be graded to drain properly. If the site does not drain properly, structure settlement substantially greater than quoted in this report will occur.

The site soils are slightly to moderately collapsible if allowed to increase in moisture content. To reduce the risk of structure settlement the site should be graded to rapidly drain away from structures. Splash blocks should be utilized below down spouts and canales.

If ponding areas are required, they should be located as far away from structures as possible, a minimum of ten feet. If this criteria cannot be met, this office should be contacted for supplemental recommendations.

Roof gutters and downspouts should be utilized. Roof gutters should discharge to a hard surface at the front of the structure. Water should run off rapidly.

10.0 LANDSCAPING

Landscaping adjacent to structures should be designed and constructed to minimize the potential for wetting of soils supporting the proposed facilities. If soils supporting the proposed

facilities are allowed to increase in moisture content to a depth greater than seven feet settlement greater than quoted in this report will occur.

Trees and shrubs within five feet of structures should be hand watered or watered using controlled drip irrigation. If drip irrigation is used, emitters should discharge no more than one gallon per hour. If grass must be planted within five feet of structures, watering should be carefully controlled to prevent overwatering. Grassed areas adjacent to structures should be sloped so that excess irrigation water will run off promptly. Sprinkler lines and drip irrigation mains should be located a minimum of five feet away from foundations.

Mowing strips, planters and sidewalks should not "dam" water adjacent to structures. If necessary, mowing strips should be perforated to allow water to flow away from structures.

All interior planters should be closed bottom and watertight.

11.0 UTILITIES

The site soils are collapsible if allowed to increase in moisture content. If post-construction water or sewer line leaks occur, localized settlement will occur. Following installation, all water and sewer lines should be pressure checked for leaks. Any leaks found should be repaired.

Backfill in utility line trenches below slabs, driveways, and pavement should be compacted to a minimum of 90% of maximum density as determined by ASTM D-698. Backfill in pipe line trenches beyond these areas should be compacted to a minimum of 85% of maximum density as determined by ASTM D-698. Utility trenches should be as narrow as can be properly compacted. To reduce the possibility of breaking utility lines with compaction equipment, heavy compactors should not be utilized.

Utility trenches may not be compacted to the same degree as the remainder of the building pad. Therefore, wall footings, interior walls and thickened slabs should not be placed longitudinally over utility trenches. Column footings should not be placed over utility trenches.

12.0 TRENCHES AND EXCAVATIONS

All trenches greater than four feet in depth must be sloped, shored or braced or otherwise supported according to OSHA Construction and Safety Standards. Material excavated from the trench or spoil must be placed a minimum of two feet from the edge of the excavation. The spoil should be retained in an effective manner such that no loose material can fall into the excavation.

Temporary construction excavations less than eight feet deep should be sloped no steeper than 1½:1 (horizontal:vertical). If deeper excavations are required, this office should be contacted for supplemental recommendations. Limited raveling of slopes will occur particularly as the exposed soils dry out. Heavy equipment and material stockpiles should be located a minimum of five feet from the top of slope.

13.0 CLOSURE

This report was prepared for the exclusive use of our Client. The recommendations presented in this report are based upon the subsurface conditions disclosed by the test holes. Soil

and groundwater conditions may vary between test holes and with time. Note that the recommendations regarding the water tanks and the Chlorinator Building as addressed in this report supersede those that had previously been addressed in the earlier (NGWSP) Reaches 26.1 and 26.2 Ojo Encino to Pueblo Pintado (Project No. 14-1-086) report. The recommendations associated with the pipeline of the earlier report are still applicable.

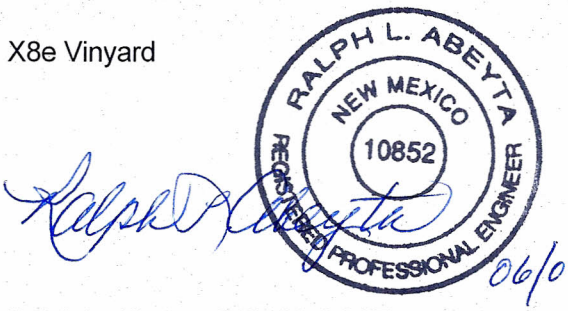
This report reflects our interpretation of the site subsurface conditions. We strongly recommend that prior to bidding all contractors perform their own subsurface investigation to form their own opinion of the site soil, rock, and groundwater conditions. Should contractors elect to use this report for construction, bidding or estimating purposes, they do so at their own risk.

In a southwest climate it is particularly important to protect the soils supporting the proposed structure from an increase in moisture content. If soils supporting the structure increase in moisture content due to any cause such as poor site drainage, ponding areas, or leaking utility lines, significant structural settlement and distress may occur.

If conditions are encountered during construction which differ from those presented herein, this office should be contacted for supplemental recommendations. The staff of X8e Vinyard is available for supplemental consultation as necessary.

This office would be pleased to review site grading and drainage plans to evaluate conformance with the recommendations presented herein. All site earthwork should be observed by a qualified geotechnical engineer or his representative. X8e Vinyard would be pleased to provide these services.

X8e Vinyard

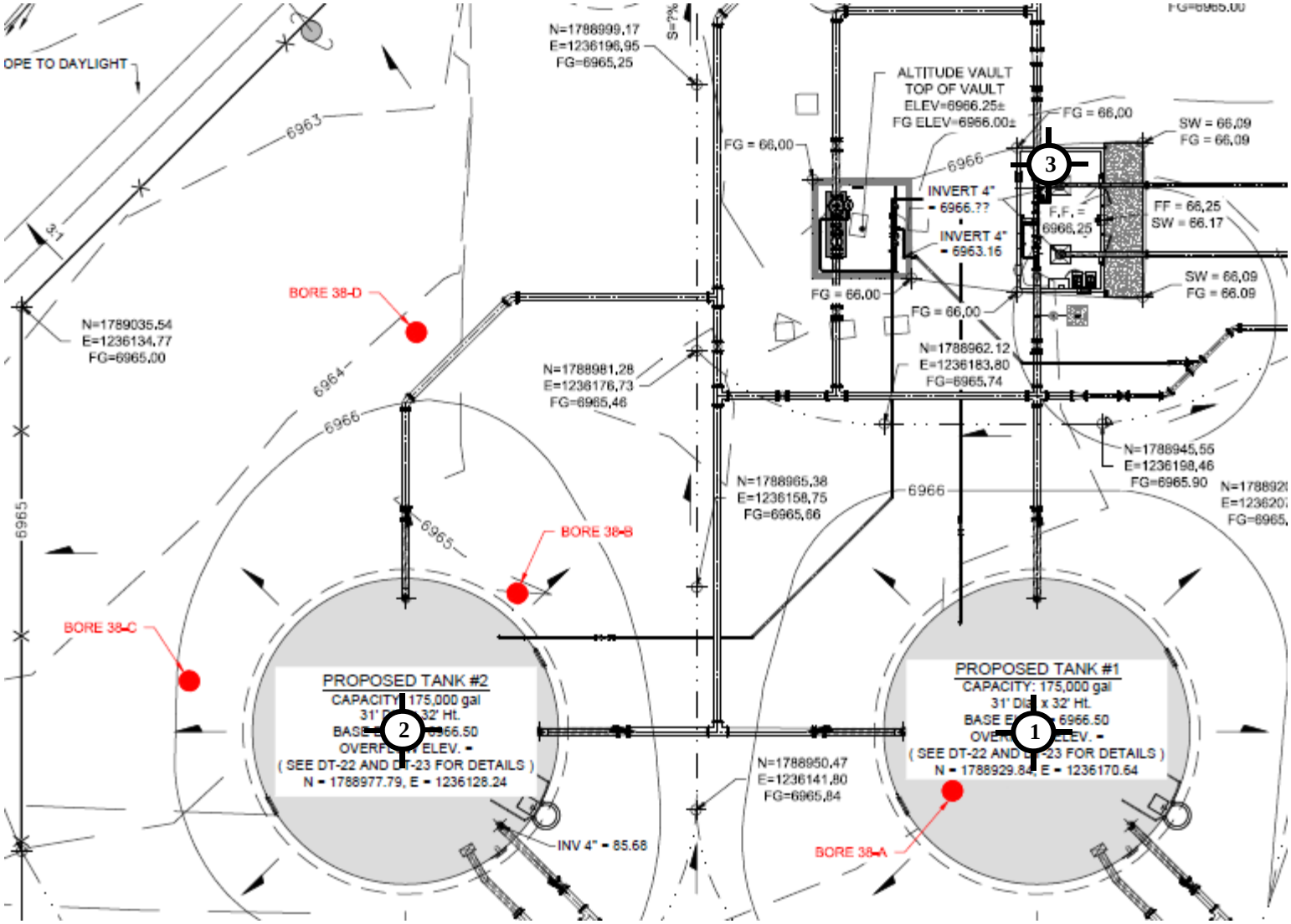


06/09/16

Ralph L. Abeyta, P.E., M. ASCE

X8e Vinyard Project No.: 15-1-057

SITE PLAN
***Scale Unknown**



= Test Hole Location

FIGURE 1

LOG OF TEST HOLE NO. 1

Project: Pueblo Pintado Tank Site
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 15-1-057
Date Drilled: 9/30/15
Drilling Method: 7" H.S.A.

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
						SM	SAND, silty, fine grained, dense, slightly moist, light brow
	40	R	109	4.7	1,2,5		
5							
	51	R	109	5.4	1,2		Very dense, brown
10							
	81	S		9.6	1,2	CL	CLAY, sandy lean, hard, slightly moist, greenish brown, caliche
15							
	50/1.5"	S		1.8		SM	SAND, silty with gravel, fine grained, very dense, slightly mois yellowish brown
20							
	50/5.5"	S		11.7		CL	CLAY, sandy lean, hard, slightly moist, greenish brow
							Bottom of hole at 20' - 11½"
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 2

LOG OF TEST HOLE NO. 2

Project: Pueblo Pintado Tank Site
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 15-1-057
Date Drilled: 9/30/15
Drilling Method: 7" H.S.A.

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5	20	R	102	5.1		SM	SAND, silty, fine grained, medium dense, slightly moist, ligl brown
10	34	R	108	6.5	1,2,5	ML	SILT, sandy, hard, slightly moist, light brow
	50/3"	S		6.7	1,2	SC	SAND, clayey, fine grained, very dense, slightly moist, greenish brown, caliche
15							
20	50/2"	S		2.0	1,2	GM	GRAVEL, silty with sand, fine to coarse grained, very dense, slightly moist, light brow
	50/4"	S		3.5			Bottom of hole at 20' - 4"
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 3

LOG OF TEST HOLE NO. 3

Project: Pueblo Pintado Tank Site
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 15-1-057
Date Drilled: 9/30/15
Drilling Method: 7" H.S.A.

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5	21	R	106	6.7	1,2,5	CL	CLAY, sandy, lean, very stiff, slightly moist, light brow
10	21	R	103	4.6	1,2	SM	SAND, silty, fine grained, medium dense, medium moist, ligl brown
	23	S		9.6		CL	CLAY, sandy lean, very stiff, slightly moist, greenish brown, caliche
15							
20	50/4"	S		9.9	1,2	SC	SAND, clayey with gravel, fine grained, very dense, moist, brown
	50/2"	S		12.0			Slightly more gravelly
25							Bottom of hole at 20' - 8"
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 4

NOTES - LOGS OF TEST HOLES

Test hole locations were determined by compass bearing and pacing distances from known topographic points.

"Drilling Method" refers to the equipment utilized to advance the test hole. A seven-inch outside diameter, continuous flight, hollowstem auger was utilized.

"S" under "Sample Type" indicates a Standard Penetration test (ASTM D-1586). The Standard Penetration sampler is 2 inches in outside diameter and 1 3/8 inches inside diameter.

"R" under "Sample Type" indicates a 3-inch outside diameter by 2.5-inch inside diameter sampler. The sampler is lined with 1-inch high brass rings.

"B" under "Sample Type" indicates a bulk sample.

"Blows Per Foot" indicates the number of blows of a 140-pound hammer falling 30 inches required to drive the indicated sampler 12 inches.

"NR" under "Blows/Foot" indicates that no sample was recovered.

"Dry Density PCF" indicates the laboratory determined soil dry density in pounds per cubic foot.

"Water Content %" indicates the laboratory determined soil moisture content in percent (ASTM D-2216).

"Unified Classification" indicates the field soil classification as per ASTM D-2488. When appropriate, the field classification is modified based upon subsequent laboratory tests.

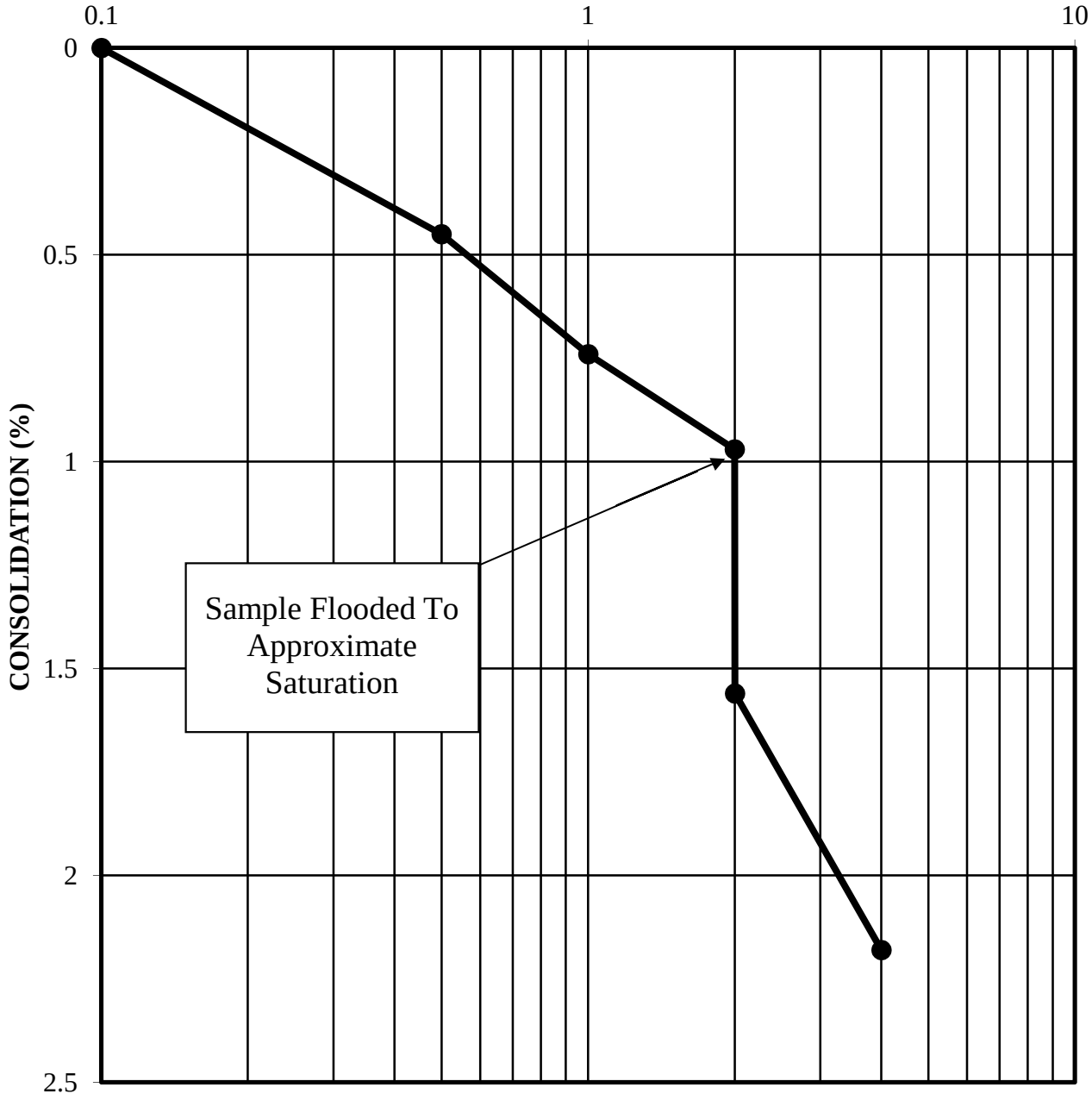
Variations in soil profile, consistency, and moisture content may occur between test holes. Subsurface conditions may also vary between test holes and with time.

Figure No.: 5

8916-A Adams Street NE
Albuquerque, NM 87113

Office: 505.797.9743
Fax: 505.797.9749

CONSOLIDATION TEST RESULTS

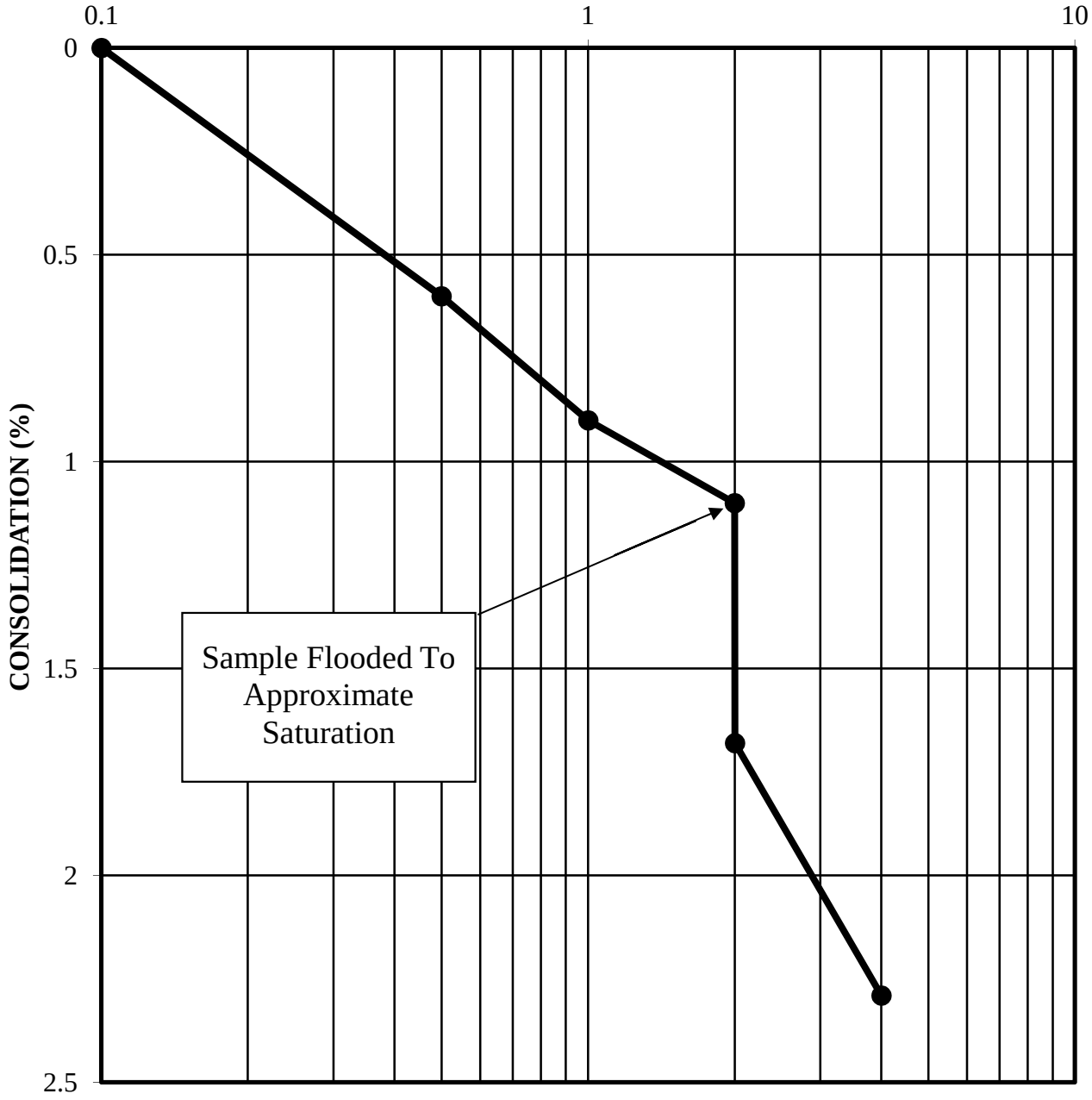


TEST HOLE NUMBER: 1
SAMPLE DEPTH: 2 FEET
SOIL DESCRIPTION: Silty SAND (SM)
MOISTURE CONTENT: 4.7 %
BULK UNIT WEIGHT: 109 pcf

PROJECT: Pueblo Pintado Tank Site in Pueblo Pintado, New Mexico
PROJECT NO.: 15-1-057

FIGURE NO.: 6

CONSOLIDATION TEST RESULTS

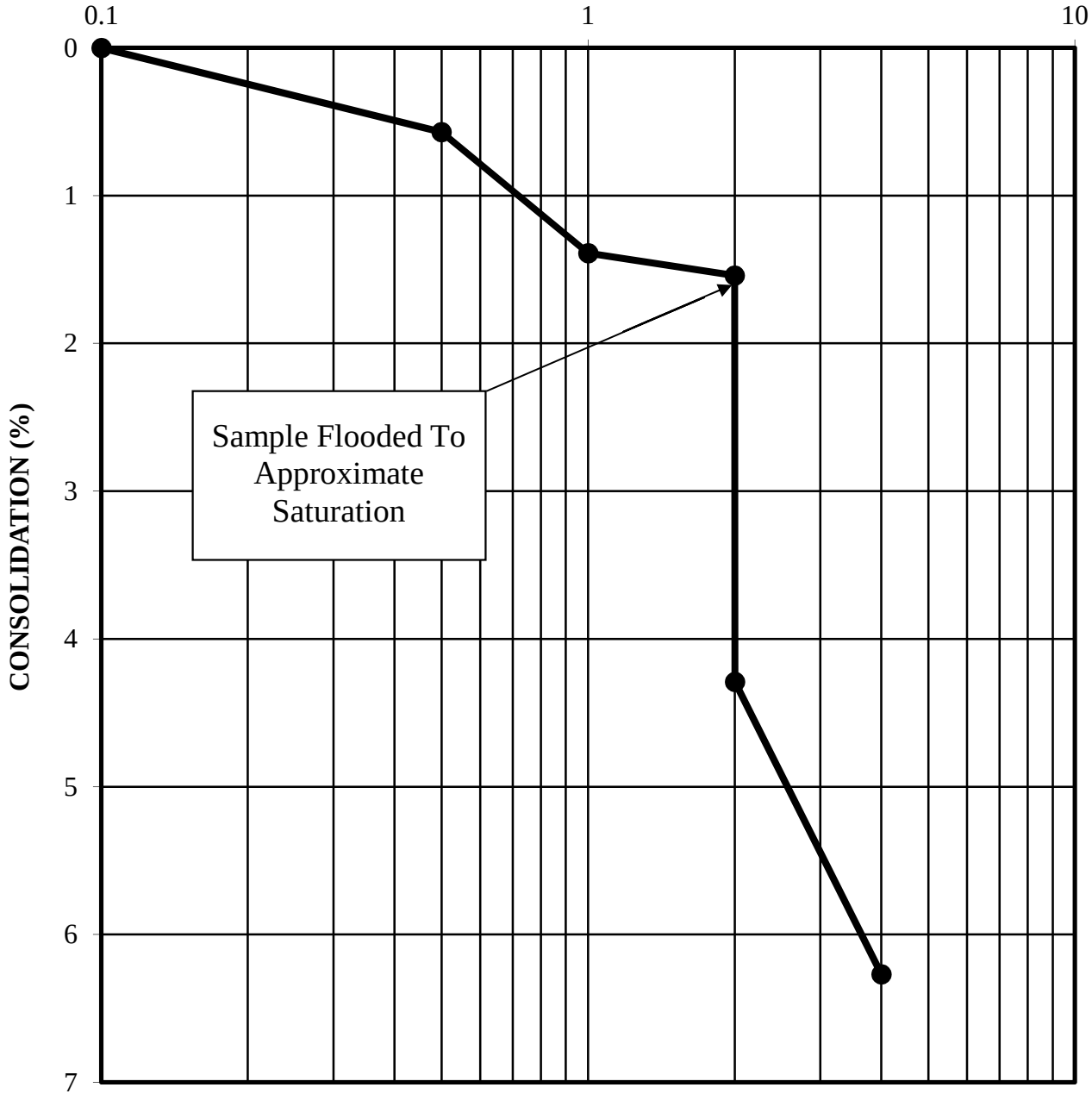


TEST HOLE NUMBER: 2
SAMPLE DEPTH: 5 FEET
SOIL DESCRIPTION: Sandy SILT (ML)
MOISTURE CONTENT: 6.5 %
BULK UNIT WEIGHT: 108 pcf

PROJECT: Pueblo Pintado Tank Site in Pueblo Pintado, New Mexico
PROJECT NO.: 15-1-057

FIGURE NO.: 7

CONSOLIDATION TEST RESULTS



TEST HOLE NUMBER: 3
SAMPLE DEPTH: 2 FEET
SOIL DESCRIPTION: Sandy lean CLAY (CL)
MOISTURE CONTENT: 6.7 %
BULK UNIT WEIGHT: 106 pcf

PROJECT: Pueblo Pintado Tank Site in Pueblo Pintado, New Mexico
PROJECT NO.: 15-1-057

FIGURE NO.: 8

SUMMARY OF LABORATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Natural Dry Density (pcf)	Natural Moisture Content (%)	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
					LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
1	2	SM	109	4.7	NV	NP								100	91	35.2	Silty SAND
1	5	SM	109	5.4	24	NP							100	99	94	36.4	Silty SAND
1	10	CL		9.6	36	21			100	98	95	93	91	89	86	54.5	Sandy lean CLAY
1	15			1.8													
1	20			11.7													
2	2		102	5.1													
2	5	ML	108	6.5	26	NP							100	99	96	50.6	Sandy SILT
2	10	SC		6.7	30	17		100	95	93	91	89	88	86	82	46.0	Clayey SAND
2	15	GM		2.0	NV	NP	100	68	55	50	47	45	44	43	41	18.0	Silty GRAVEL with sand
2	20			3.5													
3	2	CL	106	6.7	25	8								100	96	63.6	Sandy lean CLAY
3	5	SM	103	4.6	NV	NP								100	93	32.0	Silty SAND
3	10			9.6													
3	15	SC		9.9	33	21	100	89	86	82	80	77	75	73	70	47.8	Clayey SAND with gravel
3	20			12.0													

X8e Vinyard Project No.: 15-1-057

Project: Pueblo Pintado Tank Site - Pueblo Pintado, NM **Table No.: 1**

APPENDIX A
EARTHWORK PROCEDURES

8916-A Adams Street NE
Albuquerque, NM 87113
contactus@x8evinyard.com
Phone: 505.797.9743
Fax: 505.797.9749

APPENDIX
EARTHWORK PROCEDURES

General

The Geotechnical Engineer shall be the Owner's representative to observe and evaluate the earthwork operations. The Contractor shall cooperate with the Geotechnical Engineer in the performance of the Engineer's duties.

Clearing and Grubbing

Prior to placing structural fill all borrow areas and areas to receive structural fill shall be stripped of vegetation and deleterious materials. Strippings shall be hauled off-site or stockpiled for subsequent use in landscaped areas or nonstructural fill areas as designated by the Owner or his representative and approved by the Geotechnical Engineer.

Site Preparation - Fill Areas

Prior to placing structural fill the areas to be filled shall be scarified to a depth of eight inches and moisture conditioned as described below. The area to be filled shall then be compacted to a minimum of 95 percent of maximum density as determined by ASTM D-1557. If vibratory compaction techniques pose a threat to the structural integrity of nearby facilities a static compactor shall be used. Any soft or "spongy" areas shall be removed as directed by the Geotechnical Engineer and replaced with structural fill as described herein.

Site Preparation - Cut Areas

Following excavation to rough grade, all building and pavement areas shall be scarified to a depth of eight inches and moisture conditioned as described below. All building and paved areas shall be compacted to a minimum of 95 percent of maximum density as determined by ASTM D-1557. If vibratory compaction techniques pose a threat to the structural integrity of nearby facilities, a static compactor shall be used. Any soft or "spongy" areas shall be removed as directed by the Geotechnical Engineer and replaced with structural fill as described herein.

Foundation, Slab and Pavement Subgrade Preparation

Prior to placing reinforcement, footings, slabs, or pavement, the supporting soils shall be prepared, moisture conditioned, and compacted as described herein.

Structural Fill Material

Structural fill material shall be nonexpansive soil which may be gravel, sand, silt or clay, or a combination there of.

Sieve Size	Percent Passing By Weight
4”	100
1”	90-100
No. 4	70-100
No. 200	10-40

Structural fill material shall exhibit a plasticity index of ten or less. No organic, frozen or

decomposable material shall be utilized. All structural fill material shall be approved by the Geotechnical Engineer.

Structural Fill Placement

Structural fill material shall be blended as necessary to produce a homogeneous material. Fill material shall be spread in horizontal lifts no greater than eight inches in uncompacted thickness, but in no case thicker than can be properly compacted with the equipment to be utilized. If structural fill is to be placed on slopes steeper than 5:1 (horizontal:vertical) the natural ground shall be benched with minimum three foot wide benches at maximum two foot vertical intervals.

Moisture Conditioning

Structural fill material shall be dried or moistened as necessary, prior to compacting, to within ± three percent of optimum moisture content as determined by ASTM D-1557. Moisture shall be distributed uniformly throughout each lift.

Compaction

Structural fill shall be mechanically compacted to the following:

	Minimum Compaction ASTM D-1557
Foundation Support	95%
Slab Support	95%
Below Slab Utility Trenches	90%
General Site Grading	90%
Pavement Support	-
Upper 8" of Subgrade	95%
All other fill below pavement	90%

Aggregate Base Course shall be compacted to a minimum of 95% of maximum density as determined by ASTM D-1557.

Asphaltic concrete shall be compacted to a range of 93% to 97% of the maximum Theoretical Unit Weight in accordance with ASTM D2041.

Compaction by flooding and jetting is specifically prohibited unless authorized in advance by the Owner or his representative and the Geotechnical Engineer.

Observation and Testing

The Geotechnical Engineer or his representative shall perform field density tests with a frequency and at the locations he feels appropriate. The Geotechnical Engineer or his representative will perform Proctor tests on representative samples of all structural fill material for compliance to structural fill requirements on page A-1. To minimize delays, the Earthwork Contractor is encouraged to submit soil samples prior to use for proctor testing.

APPENDIX B

NGWSP REACHES 26.1 & 26.2 OJO ENCINO TO PUEBLO PINTADO

(X8E VINYARD PROJECT NUMBER 14-1-086)

8916-A Adams Street NE
Albuquerque, NM 87113
contactus@x8evinyard.com
Phone: 505.797.9743
Fax: 505.797.9749

X8e Vinyard Project No.: 14-1-086

SITE PLAN
***Scale Unknown**

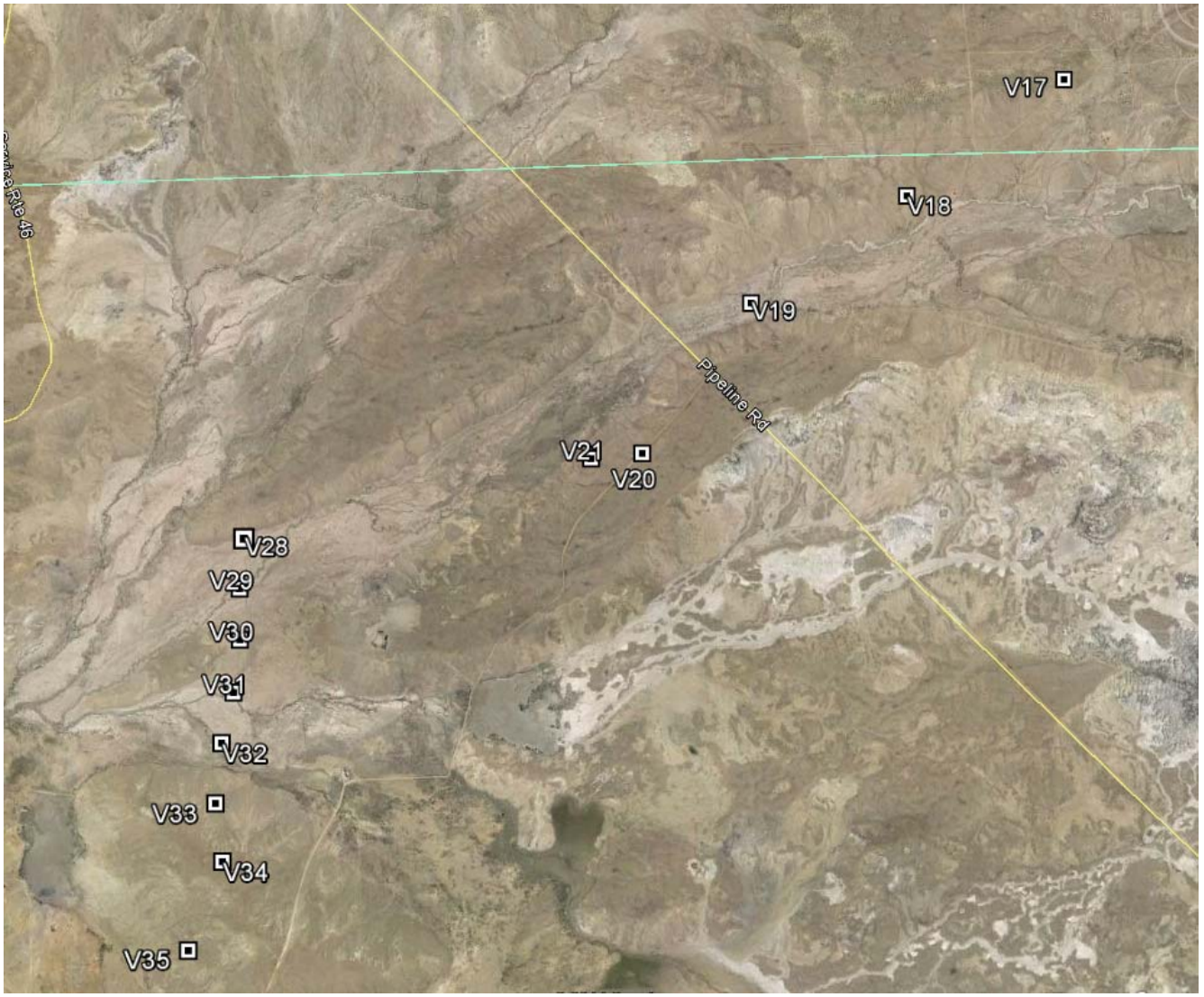


Test Pit Location

FIGURE 1A

X8e Vinyard Project No.: 14-1-086

SITE PLAN
***Scale Unknown**



Test Pit Location

FIGURE 1B

X8e Vinyard Project No.: 14-1-086

SITE PLAN
***Scale Unknown**



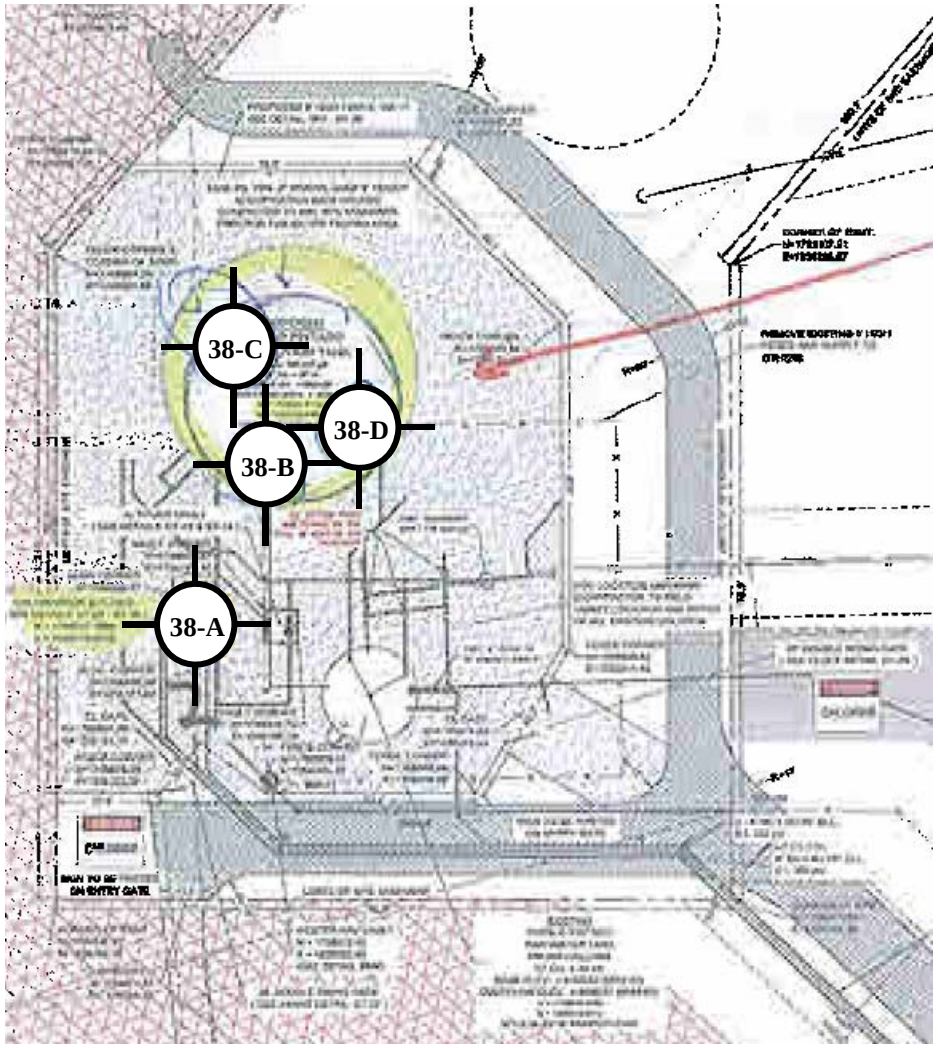


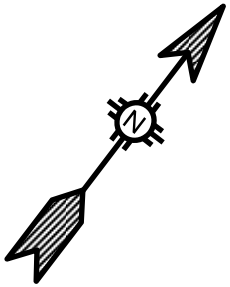
Test Pit Location

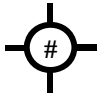
FIGURE 1C

X8e Vinyard Project No.: 14-1-086

SITE PLAN
***Scale Unknown**







Test Boring Location

FIGURE 1D

X8e Vinyard Project No.: 14-1-086

SITE PLAN
***Scale Unknown**



Test Boring Location

FIGURE 1E

X8e Vinyard Project No.: 14-1-086

SITE PLAN
***Scale Unknown**



Test Boring Location

FIGURE 1F

LOG OF TEST HOLE NO. V1

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 11/24/2014
Drilling Method: 7" H.S.A.

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5	21	R	109	3.3	1,2,5	SM	SAND, silty, fine to medium grained, medium dense, slightl moist, yellowish browr
	28	R	107	2.3		SP-SM	SAND, poorly graded with silt, fine to medium grained, medium dense, slightly moist, yellow
10	13	S		4.0		SC	SAND, clayey, fine to medium grained, medium dense, slightly moist, light brown
15	13	S		2.3		SM	SAND, silty, fine to medium grained, trace gravel, medium dense, slightly moist, light brown
20	14	S		2.7		SC	SAND, clayey, fine to medium grained, medium dense, slightl moist, grayish brown
25							Bottom of hole at 21½'
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 2

LOG OF TEST PIT NO. V2

Project: NGWSP Reaches 26.2 Pueblo Pintado
Project No.: 14-1-086
Elevation: N/A
Date Drilled: 10/2/2014
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, dry, loose, light brown Slightly moist, medium dense, brown Dense Sandstone fragments, damp, light brown/white Medium dense Dense, light brown Orange brown
10 15 20 25 30 35							Bottom of pit 8'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 3

LOG OF TEST PIT NO. V3

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/2/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, slightly damp, medium dense, dark brown Moist, brown Thin layer of weathered sandstone fragments Dry, light brown
10							Bottom of pit 6'
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 4

LOG OF TEST PIT NO. V4

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/2/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5		B				SM	SAND, silty, loose, moist, dark brown Medium dense, dry Moist
10							Bottom of pit 8'
15							NOTE: Bulk sample for proctor.
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 5

LOG OF TEST PIT NO. V5

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/2/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, medium dense, dry, light brown Brown Slightly moist, brown Dry, light brown
10 15 20 25 30 35							Bottom of pit 6'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 6

LOG OF TEST PIT NO. V7

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/2/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5		B				SM	Silty SAND, dry, medium dense, light brown Dense, slightly moist, light brown Medium dense Loose
10							Bottom of pit 8' Note: Bult sample for proctor.
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 7

LOG OF TEST PIT NO. V8

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/3/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, dense, dry, light brown Weathered sandstone fragments, slightly moist, light brown/white
10							Loose, light brown Bottom of pit 6'
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 8

LOG OF TEST PIT NO. V9

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/3/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, dry, loose, light brown Slightly moist, medium dense, brown Slight calcium deposit with silty sand Dense Medium dense
		B				SW-SM	Well graded SAND with silt, dense, slightly moist, brown
10							Bottom of pit 8'
15							Note: Bulk sample for proctor.
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 9

LOG OF TEST PIT NO. V10

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/3/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, loose, dry, light brown Medium dense Dense
10 15 20 25 30 35							Bottom of pit 8'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 10

LOG OF TEST PIT NO. V11

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/3/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5		B				SM	Silty SAND, loose, dry, light brown Medium dense Dense Silty sand with calcium deposits
10							Bottom of pit 8' Note: Bulk sample for proctor
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 11

LOG OF TEST PIT NO. V12

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/3/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, loose, dry, light brown Medium dense, slightly moist
10							Bottom of pit 6'
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 12

LOG OF TEST PIT NO. V17

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/3/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
						SM	Silty SAND, loose, dry, light brown Medium dense
						CL	Lean CLAY with sand, stiff, dry, brown
						SM	Silty SAND, medium dense, dry, loose
5		B				ML	Sandy SILT, very stiff, dry, brown
10							Bottom of pit 5' Note: Bulk sample for proctor
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 13

LOG OF TEST PIT NO. V18

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/3/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, loose, dry, light brown Dense Medium dense, slightly moist, brown
10							Bottom of pit 6'
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 14

LOG OF TEST PIT NO. V19

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/3/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, loose, dry, light brown Medium dense Loose, slightly moist
10							Bottom of pit 6'
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 15

LOG OF TEST PIT NO. V20

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/3/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, loose, dry, light brown Medium dense
10							Bottom of pit 6'
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 16

LOG OF TEST PIT NO. V21

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/3/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, loose, dry, light brown Medium dense Slightly moist
10 15 20 25 30 35							Bottom of pit 8'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 17

LOG OF TEST PIT NO. V28

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/6/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, loose, dry, light brown Medium dense, slightly moist, brown Dry, light brown
10 15 20 25 30 35							Bottom of pit 6'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 18

LOG OF TEST PIT NO. V29

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/6/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
						SM	Silty SAND, loose, dry, light brown Medium dense, slightly moist
5		B				SC	Clayey SAND, medium dense, moist, dark brown Dry, light brown Slightly moist, dark brown
10							Bottom of pit 8' Note: Bulk sample for proctor.
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 19

LOG OF TEST PIT NO. V30

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/6/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, dense, dry, light brown Medium dense, moist, dark brown Dense Dry, light brown
10							Bottom of pit 8'
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 20

LOG OF TEST PIT NO. V31

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/6/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, loose, dry, light brown Medium dense, brown Very dense Dense, dark brown
10 15 20 25 30 35							Bottom of pit 8'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 21

LOG OF TEST PIT NO. V32

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/6/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
						SM	Silty SAND, loose, dry, light brown Medium dense
5						SC	Clayey SAND, loose, dry, light brown
10							Bottom of pit 6'
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 22

LOG OF TEST PIT NO. V33

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/6/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
						SM	Silty SAND, loose, dry, light brown Medium dense
5							Sandstone fragments, dense, very dry, white/light brown
							Bottom of pit 4'-2"
10							
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 23

LOG OF TEST PIT NO. V34

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/6/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
						SM	Silty SAND, loose, dry, light brown
							Medium dense
							Slightly moist, brown
							Calcium deposits, dry, brown/white
5							Weathered sandstone fragments, dense, white
							Sandstone, hard
							Bottom of pit 5½'
10							
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 24

LOG OF TEST PIT NO. V35

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/6/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
						SM	Silty SAND, loose, dry, light brown Medium dense
5						SC	Clayey SAND, loose to medium dense, slightly moist, light brown
10							Bottom of pit 6'
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 25

LOG OF TEST PIT NO. V36

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/6/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
						SM	Silty SAND, loose, dry, light brown
							Medium dense
							Weathered sandstone fragments, very dense, white
							Sandstone, moderately hard
5							Bottom of pit 3½'
10							
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 26

LOG OF TEST PIT NO. V37

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 10/6/2014
Drilling Method: Backhoe

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5						SM	Silty SAND, loose, dry, light brown Medium dense Slightly moist, brown Calcium deposits, dry brown/white
							Sandstone, hard, white/light brown
							Bottom of pit 6'
10							
15							
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 27

LOG OF TEST HOLE NO. V38-A

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 11/24/2014
Drilling Method: 7" H.S.A.

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
	35	R	104	5.2	1,2,5	SM	SAND, silty, fine grained, dense, slightly moist, light brown, caliche
5	39	R	109	5.0			
10	39	S		3.6	1,2	GM	GRAVEL, silty, dense, slightly moist, brown and yellow, sandstone fragments
						CL	CLAY, lean, slight gravel-size sandstone fragments, hard, slightly damp, light brown and yellow
15	50/1"	S		1.4			Trace gravel, dry
20	50/4"	S		10.7			No gravel, no sandstone fragments recovered in split spoon sampler
							Bottom of hole at 20'-10"
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 28

LOG OF TEST HOLE NO. V38-B

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 11/24/2014
Drilling Method: 7" H.S.A.

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
						SM	SAND, silty, fine to medium grained, medium dense, moist, brown
	17	R	108	7.1	1,2,5		
5							
	33	R	102	7.1	1,2,5	ML	SILT, sandy, fine grained, hard, moist, brown
10							
	50/2"	S		8.6		CL	CLAY, lean, hard, slightly moist, yellowish brown
15							
	50/3"	S		1.6			Sandstone fragments, yellow
20							
	50/6"	S		10.7			Brown and yellow Bottom of hole at 20½'
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 29

LOG OF TEST HOLE NO. V38-C

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 11/24/2014
Drilling Method: 7" H.S.A.

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5	13	S		6.3		SC	SAND, clayey, fine grained, medium dense, moist, brown
	24	R	107	7.2	1,2,5		Caliche pieces
10	55	R		9.1	1,2,5	CL	CLAY, sandy lean, hard, slightly moist, brown with orange spots
15	78	S	120	5.1	1,2	SM	SAND, silty, fine to medium grained, slight gravel, very dense, moist, yellow
20	50/1.5"	S		2.1			
25	50/2"	S		11.2	1,2	CL	CLAY, sandy lean, hard, moist, yellow and brown
30							Bottom of hole at 20'-8"
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 30

LOG OF TEST HOLE NO. V38-D

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 11/24/2014
Drilling Method: 7" H.S.A.

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5	33	S		5.8	1,2	ML	SILT, sandy, hard, moist, brown
10	47	R	107	5.5		SM	SAND, silty, fine grained, dense, slightly moist, light brown Fine to medium grained, brown with orange spots
15	36	R	104	5.8	1,2,5		Gravel size sandstone fragments
20	50/1"	S		1.2		SC	SAND, clayey, fine grained, very dense, slightly moist, yellow
25	50/2"	S		11.8			Bottom of hole at 20'-2"
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 31

LOG OF TEST HOLE NO. V-Bore

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

Project No.: 14-1-086
Date Drilled: 11/24/2014
Drilling Method: 7" H.S.A.

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
5	29	S		3.2	1,2	SM	SAND, silty, fine grained, medium dense, slightly moist, light brown
	35	S		2.3		SP-SM	SAND, poorly graded with silt, fine grained, dense, slightly moist, light brown
10	34	S		6.0		CL	CLAY, lean with sand, hard, dry, light brown
15							Bottom of hole at 11½'
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 32

LOG OF TEST HOLE NO. 80

Project: NGWSP Reaches 26.2 Pueblo Pintado
Elevation: N/A
Depth to Groundwater: Not Encountered

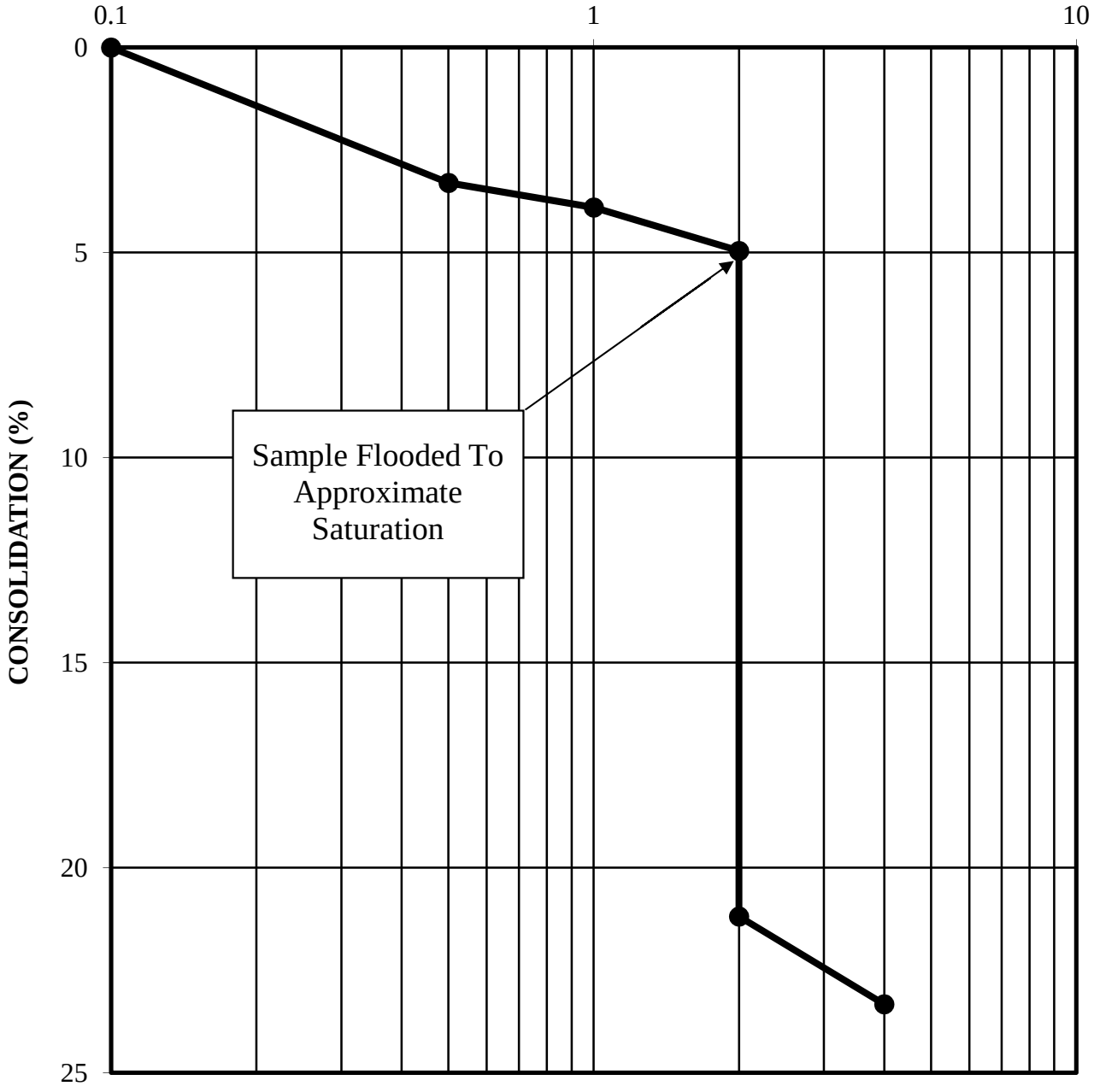
Project No.: 14-1-086
Date Drilled: 11/24/2014
Drilling Method: 7" H.S.A.

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
						CL	CLAY, lean, slightly sandy, very stiff, slightly moist, light brown
	25	S		5.1			
5							
	7	S		5.8			Medium stiff
10							
	52	S		9.8			Sandy, light brown/brown and burgundy stripes
15							Sandstone fragments, slightly silty, less moisture, light brown
	81	S		9.4			
							Bottom of hole at 16½'
20							
25							
30							
35							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 33

CONSOLIDATION TEST RESULTS

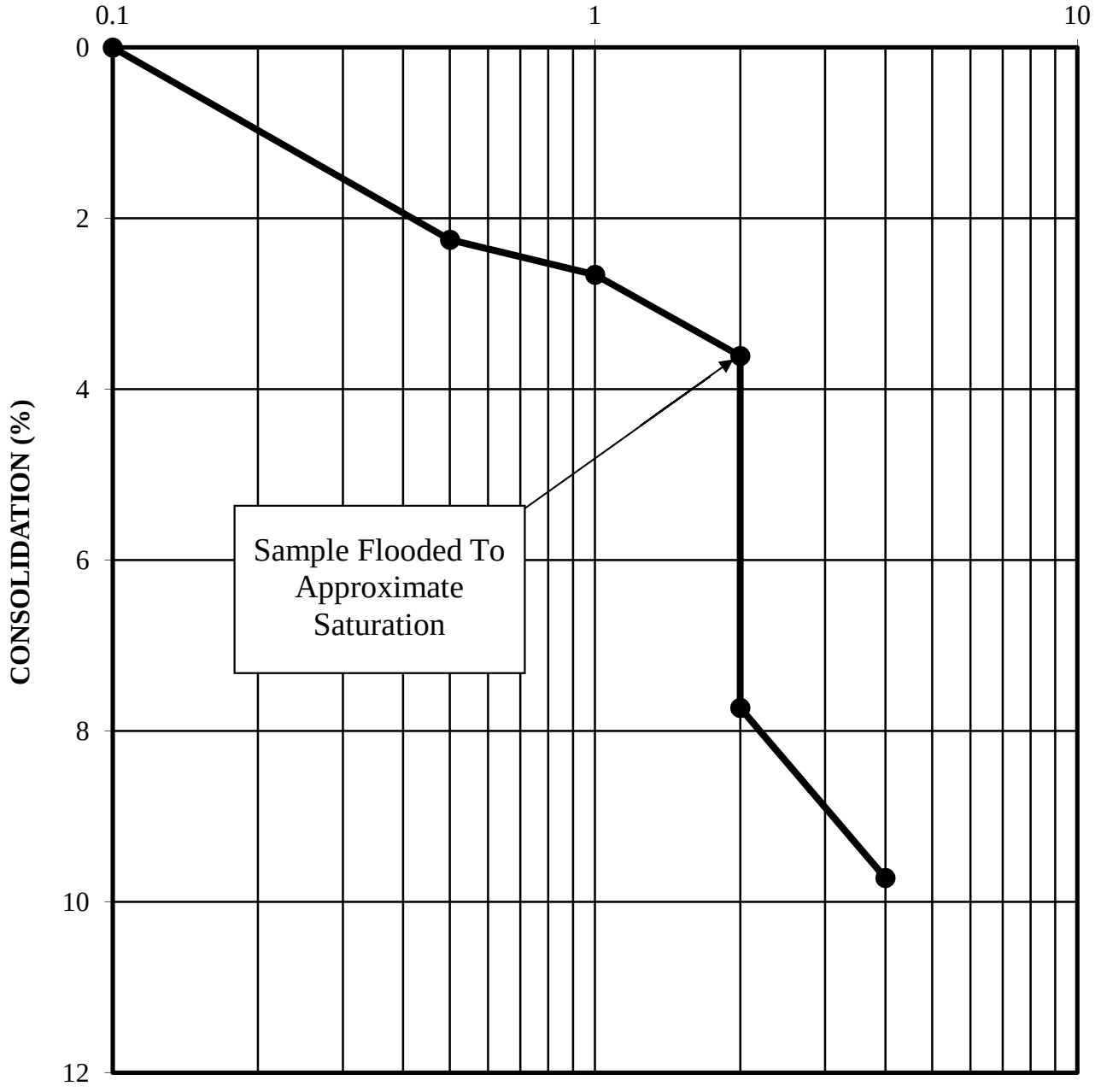


TEST HOLE NUMBER: V1
SAMPLE DEPTH: 2 FEET
SOIL DESCRIPTION: Silty SAND (SM)
MOISTURE CONTENT: 3.3 %
BULK UNIT WEIGHT: 109 pcf

PROJECT: NGWSP Reaches 26.2 Pueblo Pintado
PROJECT NO.: 14-1-086

FIGURE NO.: 35

CONSOLIDATION TEST RESULTS

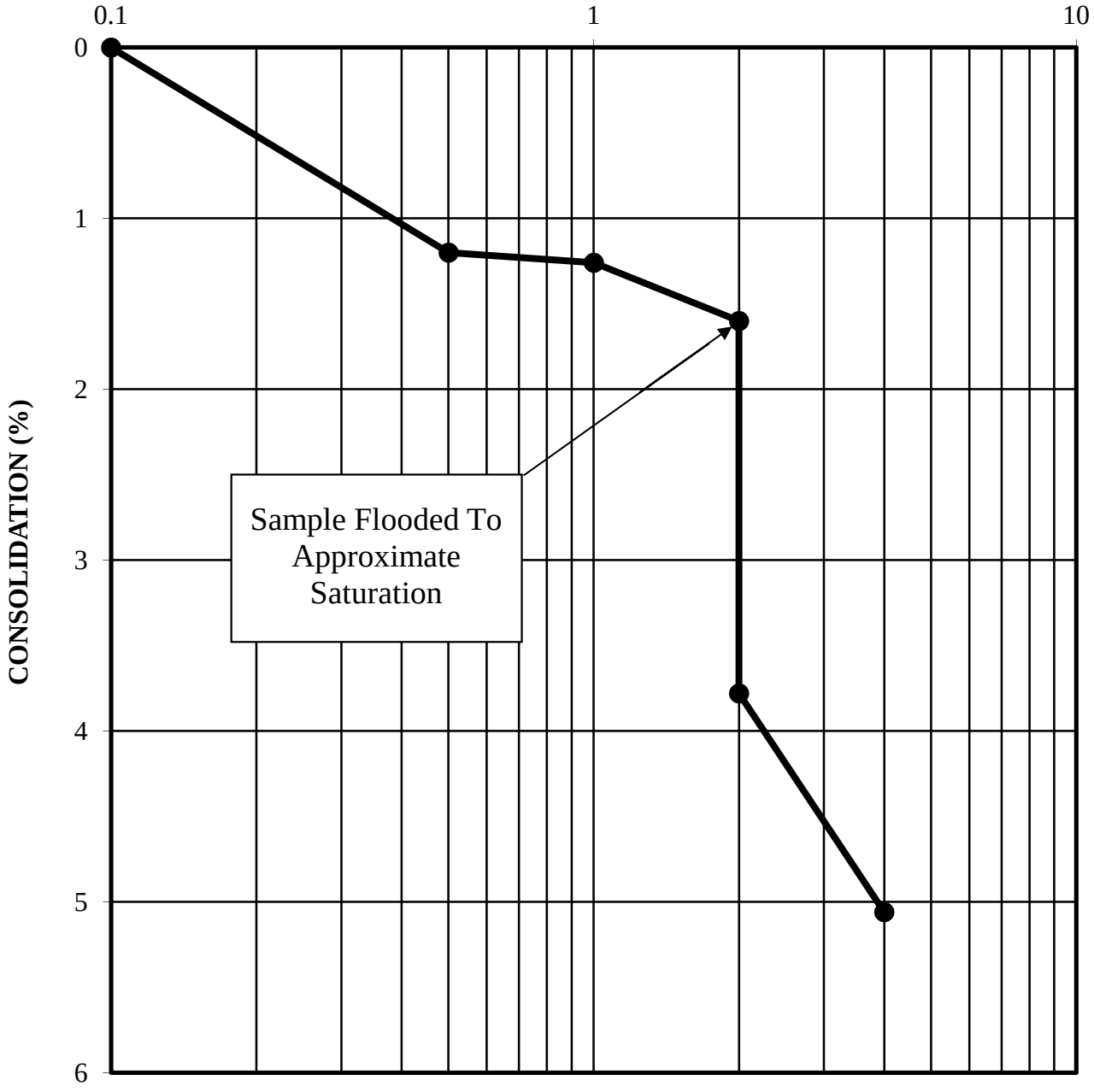


TEST HOLE NUMBER: V38-A
SAMPLE DEPTH: 2 FEET
SOIL DESCRIPTION: Silty SAND (SM)
MOISTURE CONTENT: 5.2 %
BULK UNIT WEIGHT: 104 pcf

PROJECT: NGWSP Reaches 26.2 Pueblo Pintado
PROJECT NO.: 14-1-086

FIGURE NO.: 36

CONSOLIDATION TEST RESULTS

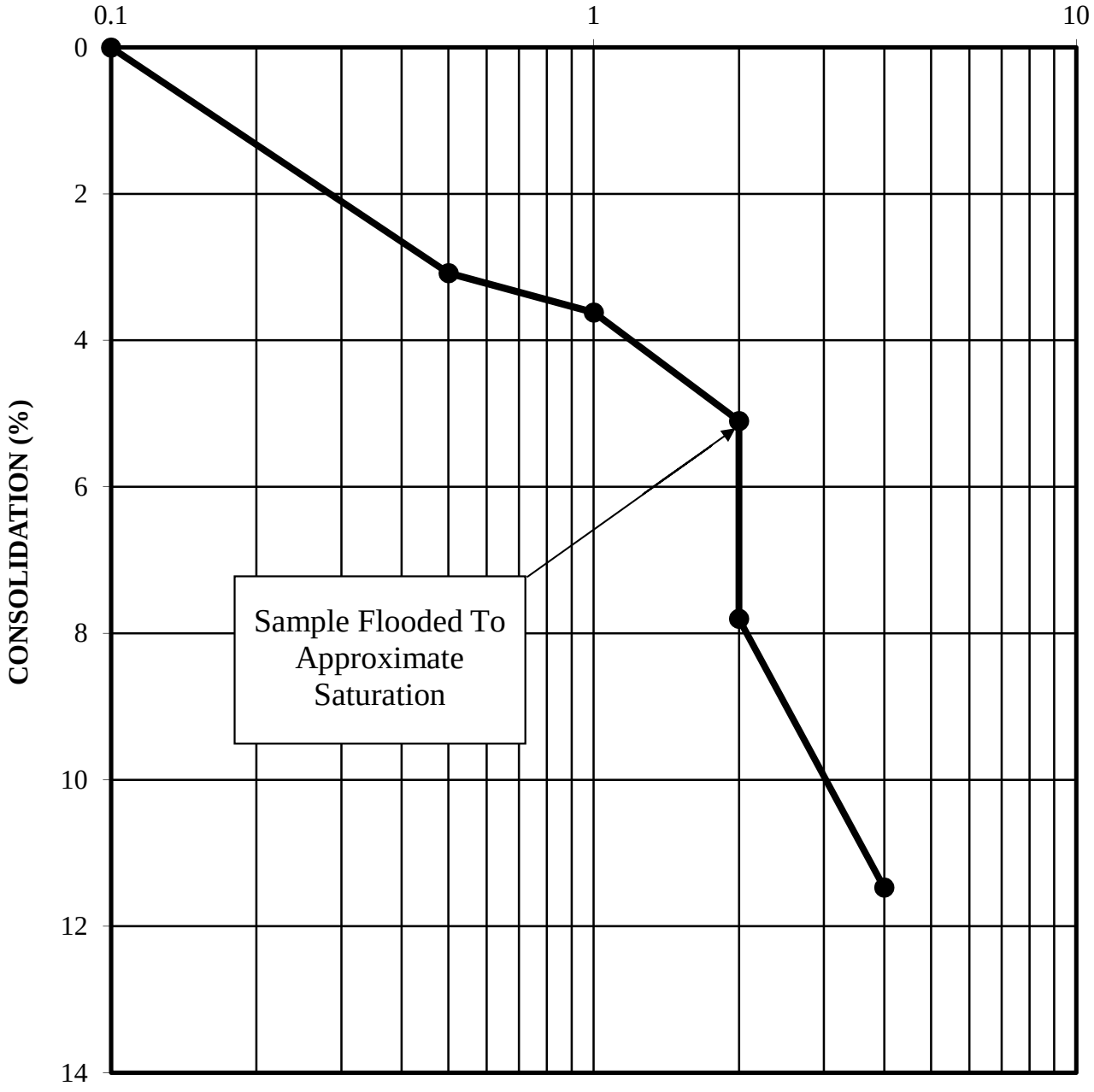


TEST HOLE NUMBER: V38-B
SAMPLE DEPTH: 2 FEET
SOIL DESCRIPTION: Silty SAND (SM)
MOISTURE CONTENT: 7.1 %
BULK UNIT WEIGHT: 108 pcf

PROJECT: NGWSP Reaches 26.2 Pueblo Pintado
PROJECT NO.: 14-1-086

FIGURE NO.: 37

CONSOLIDATION TEST RESULTS

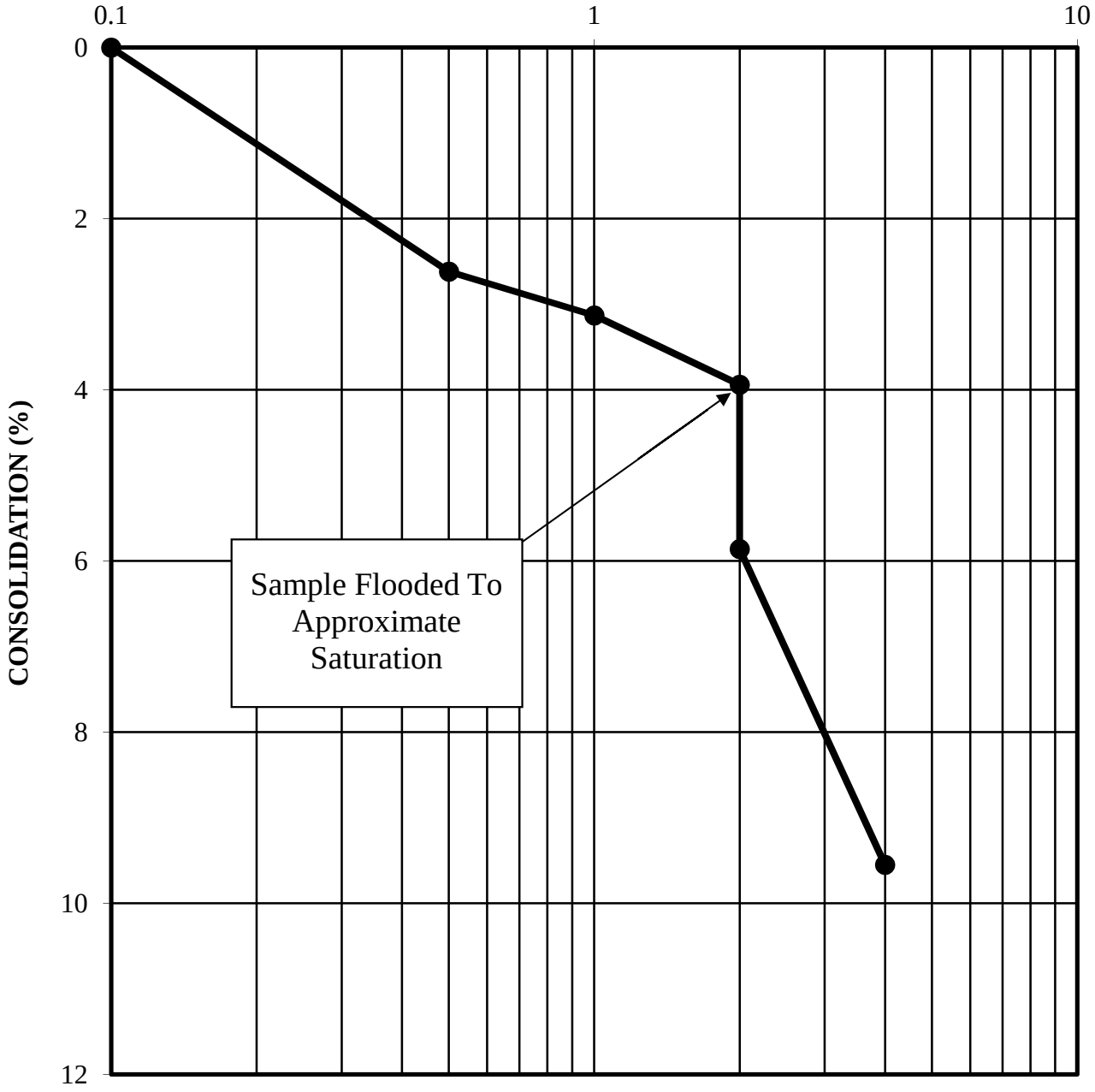


TEST HOLE NUMBER: V38-B
SAMPLE DEPTH: 5 FEET
SOIL DESCRIPTION: Sandy SILT (ML)
MOISTURE CONTENT: 7.1 %
BULK UNIT WEIGHT: 102 pcf

PROJECT: NGWSP Reaches 26.2 Pueblo Pintado
PROJECT NO.: 14-1-086

FIGURE NO.: 38

CONSOLIDATION TEST RESULTS

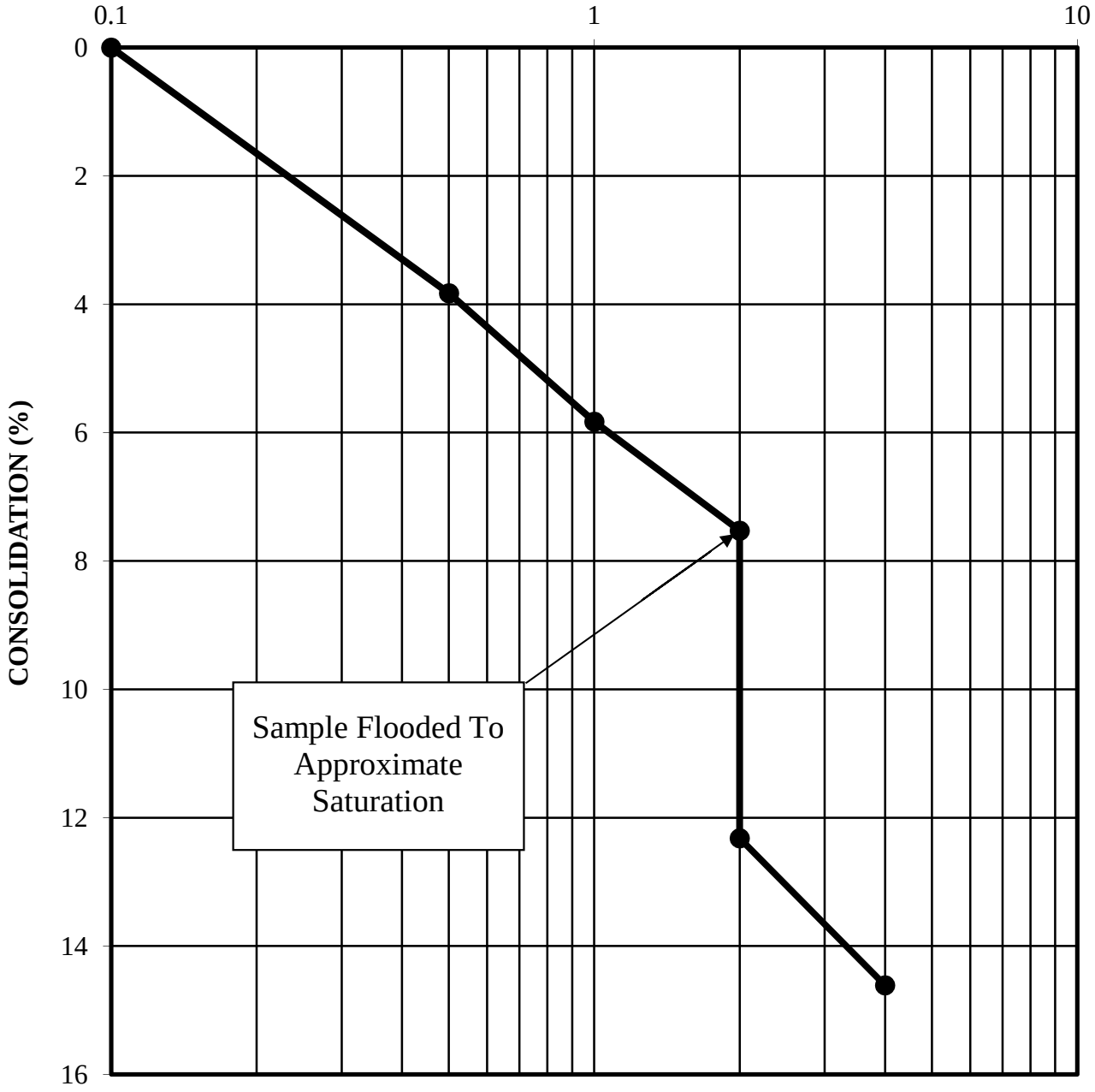


TEST HOLE NUMBER: V38-C
SAMPLE DEPTH: 5 FEET
SOIL DESCRIPTION: Clayey SAND (SC)
MOISTURE CONTENT: 7.2 %
BULK UNIT WEIGHT: 107 pcf

PROJECT: NGWSP Reaches 26.2 Pueblo Pintado
PROJECT NO.: 14-1-086

FIGURE NO.: 39

CONSOLIDATION TEST RESULTS

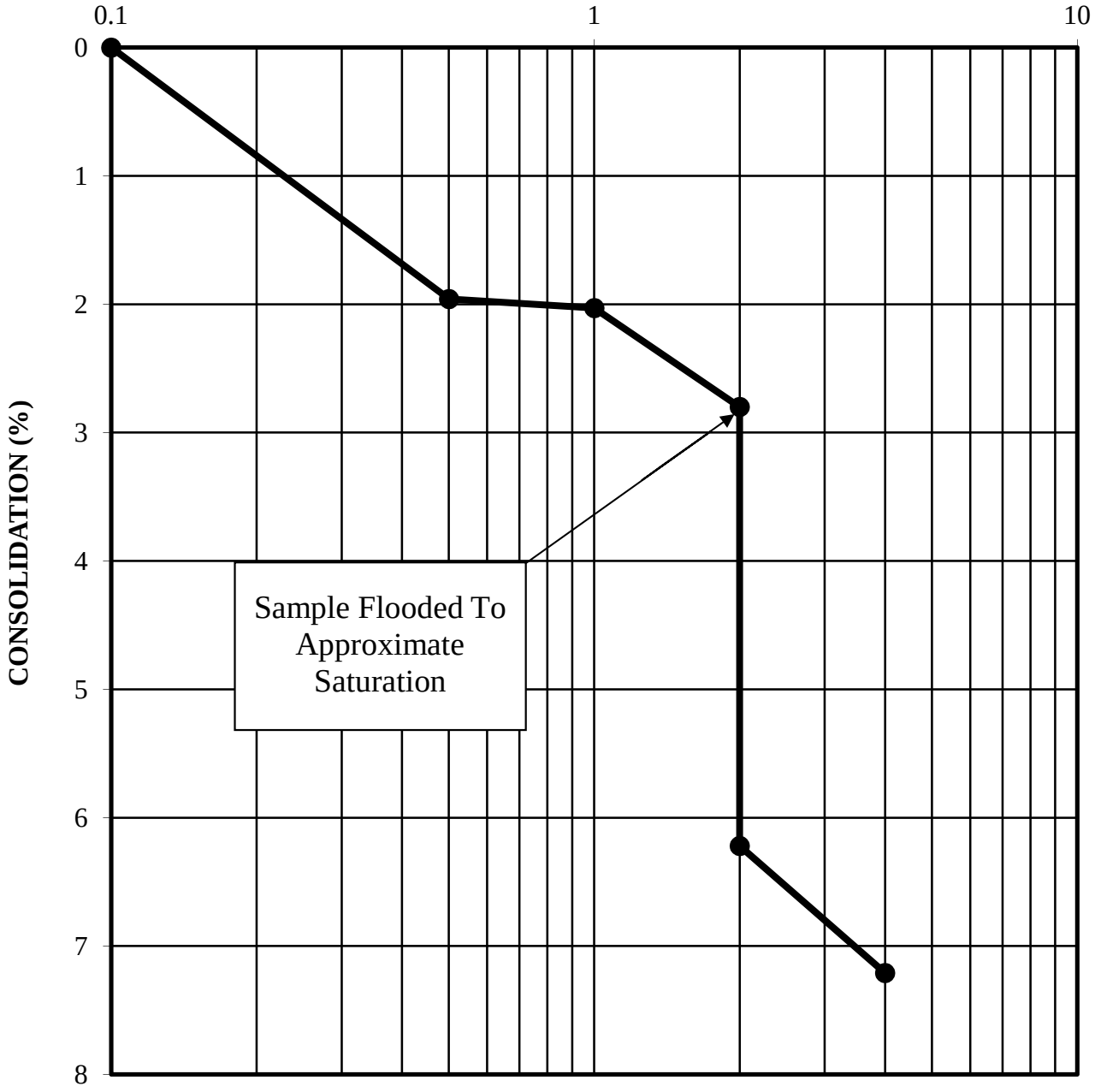


TEST HOLE NUMBER: V38-C
SAMPLE DEPTH: 7 FEET
SOIL DESCRIPTION: Sandy lean CLAY (CL)
MOISTURE CONTENT: 9.1 %
BULK UNIT WEIGHT: 120 pcf

PROJECT: NGWSP Reaches 26.2 Pueblo Pintado
PROJECT NO.: 14-1-086

FIGURE NO.: 40

CONSOLIDATION TEST RESULTS



TEST HOLE NUMBER: V38-D
SAMPLE DEPTH: 10 FEET
SOIL DESCRIPTION: Silty SAND with gravel (SM)
MOISTURE CONTENT: 5.8 %
BULK UNIT WEIGHT: 104 pcf

PROJECT: NGWSP Reaches 26.2 Pueblo Pintado
PROJECT NO.: 14-1-086

FIGURE NO.: 41

COMPACTION TEST RESULTS

PROJECT : NGWSP Reaches 26.2 Pueblo Pintado CLIENT: Souder, Miller & Associates

TECHNICIAN: Alex Abeyta

PROJECT NO.: 14-1-086 REPORT NO.: 1 pg 1/2 DATE: 10/2/14 - 10/3/14

COA PROJECT NO.:

Test No.	Location	Elevation	Proctor Number	Field Moisture (%)	Field Dry Density (PCF)	Relative Compaction (%)	Specified Compaction (%)
1	Test pit V3	-4' FSG	2	12.0	71.9	62	NA
2	Test pit V3	-6' FSG	2	3.4	67.8	59	NA
3	Test pit V5	-4' FSG	1	6.5	84.3	91	NA
4	Test pit V5	-6' FSG	1	5.1	66.1	72	NA
5	Test pit V8	-4' FSG	6	13.8	69.5	66	NA
6	Test pit V8	-6' FSG	6	8.9	69.0	66	NA
7	Test pit V12	-4' FSG	4	6.8	84.0	70	NA
8	Test pit V12	-6' FSG	4	8.2	85.8	72	NA
9	Test pit V17	-4' FSG	1	29.7	65.8	71	NA
10	Test pit V18	-4' FSG	3	11.5	77.7	65	NA
11	Test pit V18	-6' FSG	3	8.3	70.0	58	NA
12	Test pit V19	-4' FSG	3	11.1	64.7	54	NA
13	Test pit V19	-6' FSG	3	6.0	68.9	58	NA
14	Test pit V20	-4' FSG	3	4.9	96.0	80	NA
15	Test pit V20	-6' FSG	3	8.0	88.7	74	NA
16	Test pit V28	-4' FSG	3	4.9	86.3	72	NA
17	Test pit V28	-6' FSG	3	4.9	86.8	73	NA

Proctor Test Utilized

Proctor No.	Sample Location	Opt. Moisture Content (%)	Maximum Dry Dens (pcf)	Soil Description
2	V4 @ 2' backhoe pit (14-434)	10.8	115.9	Silty SAND
1	V17 @ 4' backhoe pit (14-433)	13.5	92.2	Sandy SILT
3	V7 @ 4' backhoe pit (14-435)	12.3	119.7	Silty SAND
4	V11 @ 7' backhoe pit (14-436)	12.0	119.2	Silty SAND
6	V9 @ 7' backhoe pit (14-432)	13.4	104.6	Well-graded SAND with silt

WEATHER: Cloudy, 42º, light breeze

EQUIPMENT: Backhoe

REMARKS: Contracting personnel informed of the test results.

Figure 42

COMPACTION TEST RESULTS

PROJECT : NGWSP Reaches 26.2 Pueblo Pintado CLIENT: Souder, Miller & Associates

TECHNICIAN: Alex Abeyta

PROJECT NO.: 14-1-086 REPORT NO.: 1 pg 2/2 DATE: 10/2/14 - 10/3/14

COA PROJECT NO.:

Test No.	Location	Elevation	Proctor Number	Field Moisture (%)	Field Dry Density (PCF)	Relative Compaction (%)	Specified Compaction (%)
18	Test pit V32	-4' FSG	5	8.6	59.9	54	NA
19	Test pit V32	-6' FSG	5	8.2	71.0	64	NA
20	Test pit V35	-4' FSG	5	11.6	65.4	59	NA
21	Test pit V35	-6' FSG	5	8.9	74.4	67	NA
22	Test pit V36	-3.5' FSG	3	6.4	92.3	77	NA
23	Test pit V37	-4' FSG	3	13.6	70.7	59	NA
24	Test pit V37	-6' FSG	3	28.5	64.2	54	NA

Proctor Test Utilized

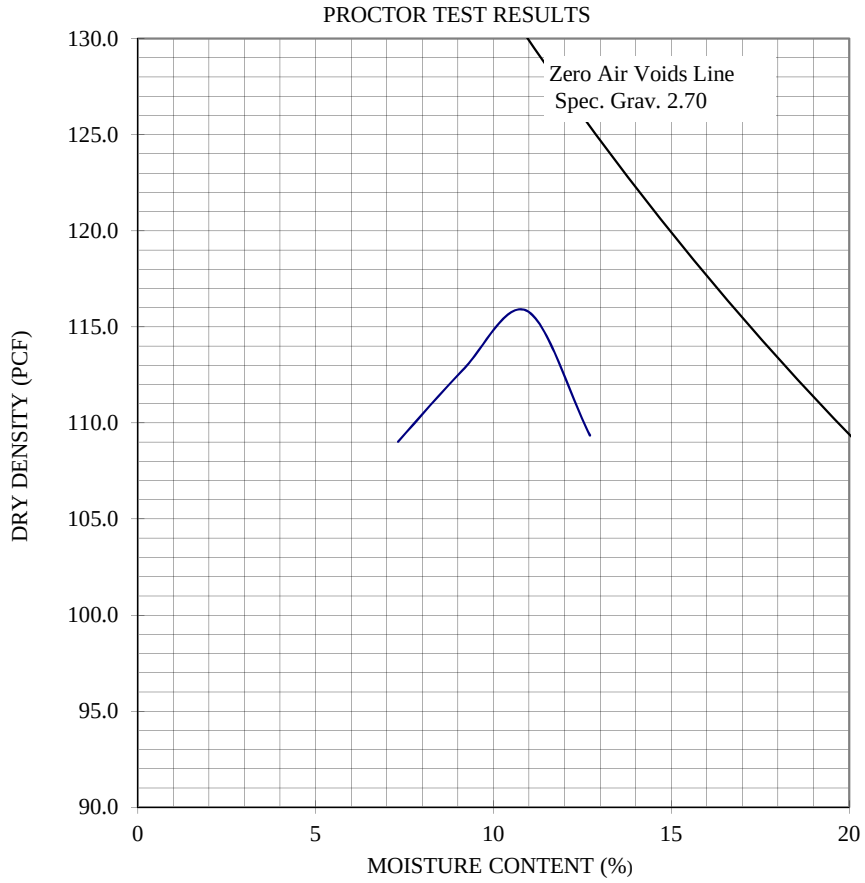
Proctor No.	Sample Location	Opt. Moisture Content (%)	Maximum Dry Dens (pcf)	Soil Description
5	V29 @ 3' backhoe pit (14-437)	14.5	111.0	Clayey SAND
3	V7 @ 4' backhoe pit (14-435)	12.3	119.7	Silty SAND

WEATHER: Cloudy, 42º, light breeze

EQUIPMENT: Backhoe

REMARKS: Contracting personnel informed of the test results.

Figure 43



Max Dry Density= 115.9 PCF

Optimum Moist.= 10.8 %

Test Method : ASTM D698-A

X8eVinyard Project No.: **14-1-086** **COA Number:**

Project Title : **NGWSP Reaches 26.2**

Date Sampled : **10/3/14** **Sample No. :** **434**

Sample Location : **V4 @ 2' backhoe pit**

Sieve Analysis ASTM C-136

Sieve	mm	% Passing	Spec.
3"	75.0		
2"	50.0		
1 1/2"	37.5		
1"	25.0		
3/4"	19.0		
1/2"	12.5		
3/8"	9.5		
No. 4	4.75		
No. 8	2.36		
No. 10	2.00		
No. 16	1.18	100	
No. 30	0.60	97	
No. 40	0.425	94	
No. 50	0.300	85	
No. 80	0.180	60	
No. 100	0.150	49	
No. 200	0.075	24	

Atterberg Limits ASTM D4318

	Results	Spec.
LIQUID LIMIT	NV	
PLASTIC LIMIT	NV	
PLASTICITY INDEX	NP	

NV=Not Valid NP=Non Plastic

ASTM D2487 USCS: **SM** **(Silty SAND.)**

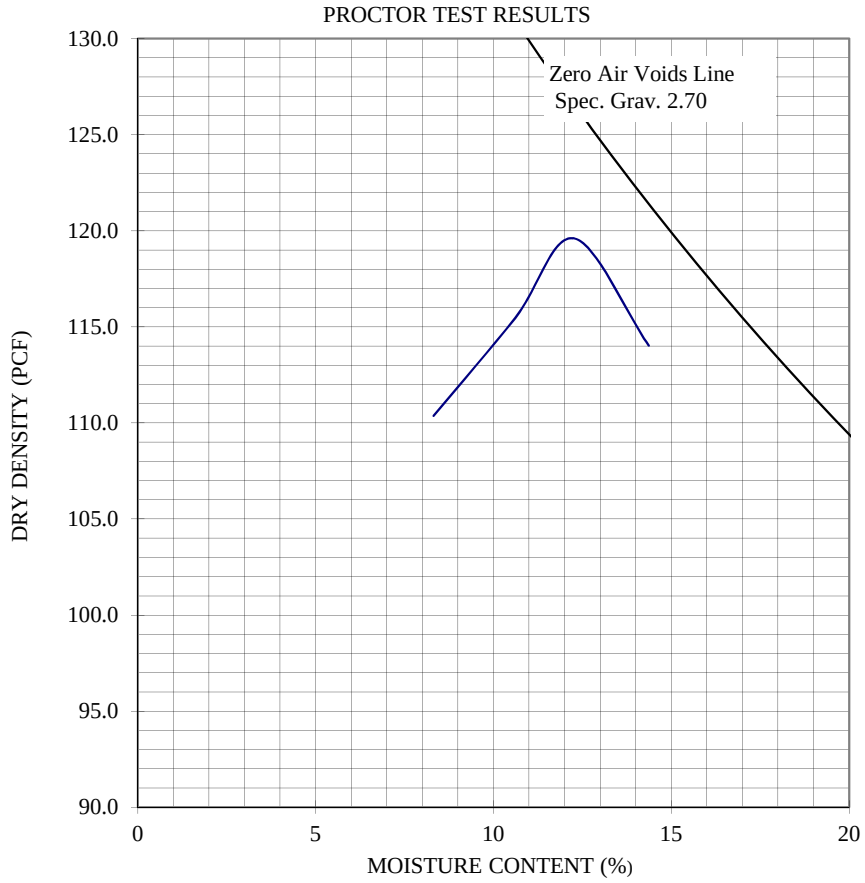
AASHTO M145 CLASS.: **A-2-4**

EST. R-VALUE: **50**
(Based on NMSHTD 97 Charts)

Specification Used : **None**

Figure: 44

Revision 11/21/12



Max Dry Density= 119.7 PCF

Optimum Moist.= 12.3 %

Test Method : ASTM D698-B

X8eVinyard Project No.: **14-1-086** **COA Number:**

Project Title : **NGWSP Reaches 26.2**

Date Sampled : **10/3/14** **Sample No. :** **435**

Sample Location : **V7 @ 4' backhoe pit**

Sieve Analysis ASTM C-136

Sieve	mm	% Passing	Spec.
3"	75.0		
2"	50.0		
1 1/2"	37.5		
1"	25.0		
3/4"	19.0		
1/2"	12.5		
3/8"	9.5	100	
No. 4	4.75	99	
No. 8	2.36	98	
No. 10	2.00	98	
No. 16	1.18	95	
No. 30	0.60	81	
No. 40	0.425	69	
No. 50	0.300	56	
No. 80	0.180	39	
No. 100	0.150	34	
No. 200	0.075	21	

Atterberg Limits ASTM D4318

	Results	Spec.
LIQUID LIMIT	NV	
PLASTIC LIMIT	NV	
PLASTICITY INDEX	NP	

NV=Not Valid NP=Non Plastic

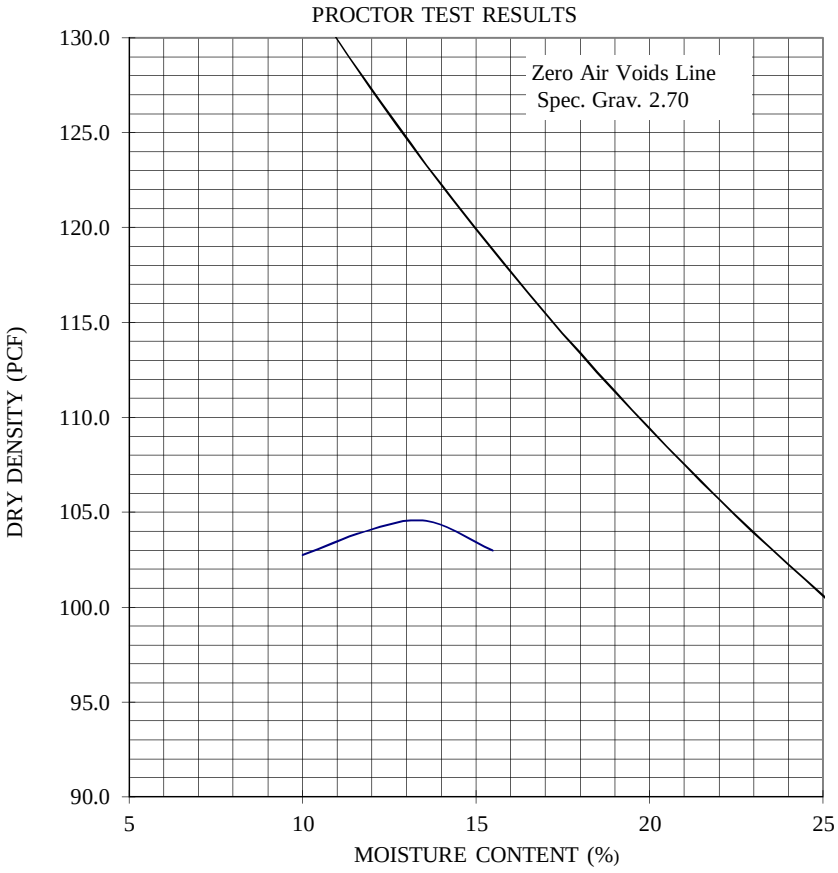
ASTM D2487 USCS: **SM** **(Silty SAND.)**

AASHTO M145 CLASS.: **A-2-4**

EST. R-VALUE: **50**
(Based on NMSHTD 97 Charts)

Specification Used : **None**

Figure: 45



Max Dry Density= 104.6 PCF

Optimum Moist.= 13.4 %

Test Method : ASTM D698-B

X8eVinyard Project No.: 14-1-086 **COA Number:**

Project Title : NGWSP Reaches 26.2

Date Sampled : 10/3/14 **Sample No. : 432**

Sample Location : V9 @ 8' backhoe pit

Sieve Analysis ASTM C-136

Sieve	mm	% Passing	Spec.
3"	75.0		
2"	50.0		
1 1/2"	37.5		
1"	25.0		
3/4"	19.0		
1/2"	12.5		
3/8"	9.5		
No. 4	4.75		
No. 8	2.36		
No. 10	2.00	100	
No. 16	1.18	98	
No. 30	0.60	88	
No. 40	0.425	74	
No. 50	0.300	51	
No. 80	0.180	21	
No. 100	0.150	15	
No. 200	0.075	6.2	

Atterberg Limits ASTM D4318

	Results	Spec.
LIQUID LIMIT	NV	
PLASTIC LIMIT	NV	
PLASTICITY INDEX	NP	

NV=Not Valid NP=Non Plastic

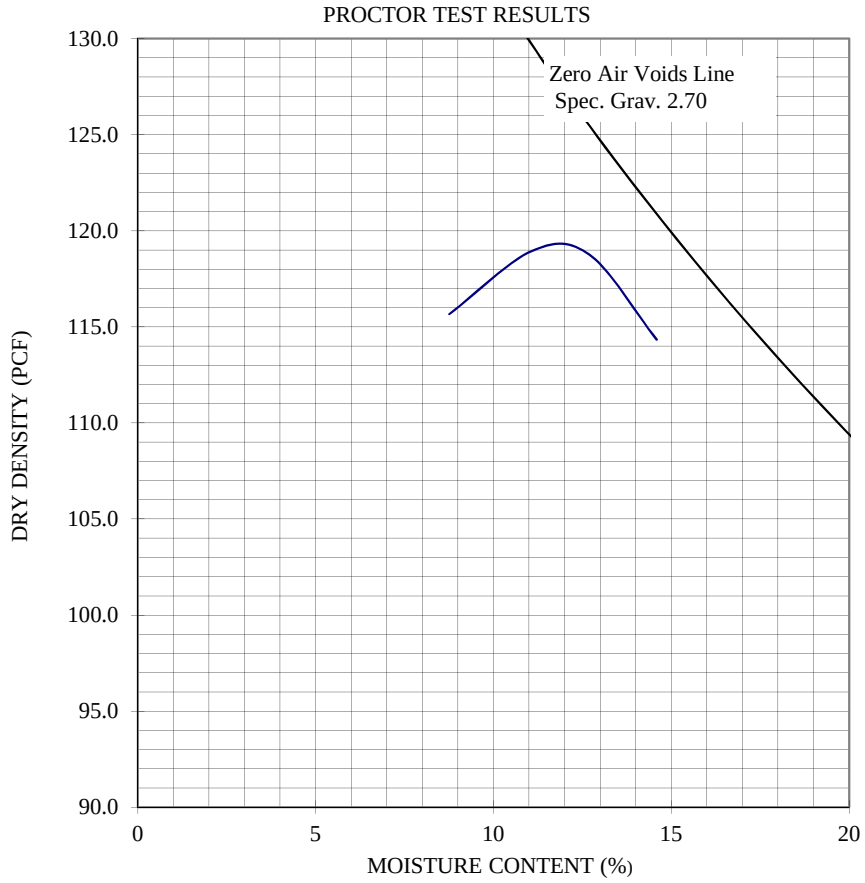
ASTM D2487 USCS: SW-SM **(Well graded SAND with silt.)**

AASHTO M145 CLASS. A-3

EST. R-VALUE: 55
(Based on NMSHTD 97 Charts)

Specification Used : None

Figure: 46



Max Dry Density= 119.2 PCF

Optimum Moist.= 12.0 %

Test Method : ASTM D698-A

X8eVinyard Project No.: **14-1-086** **COA Number:**

Project Title : **NGWSP Reaches 26.2**

Date Sampled : **10/3/14** **Sample No. :** **436**

Sample Location : **V11 @ 7' backhoe pit**

Sieve Analysis ASTM C-136

Sieve	mm	% Passing	Spec.
3"	75.0		
2"	50.0		
1 1/2"	37.5		
1"	25.0		
3/4"	19.0		
1/2"	12.5		
3/8"	9.5		
No. 4	4.75		
No. 8	2.36		
No. 10	2.00		
No. 16	1.18	100	
No. 30	0.60	96	
No. 40	0.425	91	
No. 50	0.300	80	
No. 80	0.180	58	
No. 100	0.150	51	
No. 200	0.075	30	

Atterberg Limits ASTM D4318

	Results	Spec.
LIQUID LIMIT	NV	
PLASTIC LIMIT	NV	
PLASTICITY INDEX	NP	

NV=Not Valid NP=Non Plastic

ASTM D2487 USCS: **SM** **(Silty SAND.)**

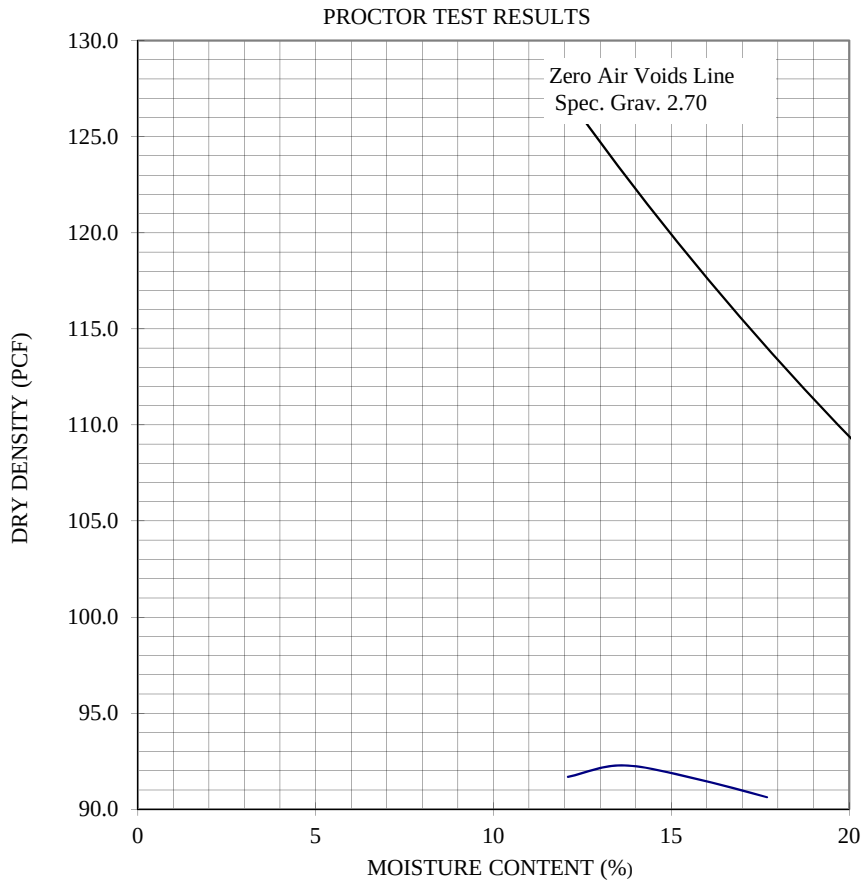
AASHTO M145 CLASS.: **A-2-4**

EST. R-VALUE: **50**
(Based on NMSHTD 97 Charts)

Specification Used : **None**

Figure: 47

Revision 11/21/12



Max Dry Density= 92.2 PCF

Optimum Moist.= 13.5 %

Test Method : ASTM D698-C

X8eVinyard Project No.: **14-1-086** **COA Number:**

Project Title : **NGWSP Reaches 26.2**

Date Sampled : **10/3/14** **Sample No. :** **433**

Sample Location : **V17 @ 4' backhoe pit**

Sieve Analysis ASTM C-136

Sieve	mm	% Passing	Spec.
3"	75.0		
2"	50.0		
1 1/2"	37.5		
1"	25.0		
3/4"	19.0	100	
1/2"	12.5	99	
3/8"	9.5	99	
No. 4	4.75	99	
No. 8	2.36	98	
No. 10	2.00	98	
No. 16	1.18	98	
No. 30	0.60	97	
No. 40	0.425	93	
No. 50	0.300	84	
No. 80	0.180	70	
No. 100	0.150	66	
No. 200	0.075	57	

Atterberg Limits ASTM D4318

	Results	Spec.
LIQUID LIMIT	NV	
PLASTIC LIMIT	NV	
PLASTICITY INDEX	NP	

NV=Not Valid NP=Non Plastic

ASTM D2487 USCS: **ML** **(Sandy SILT.)**

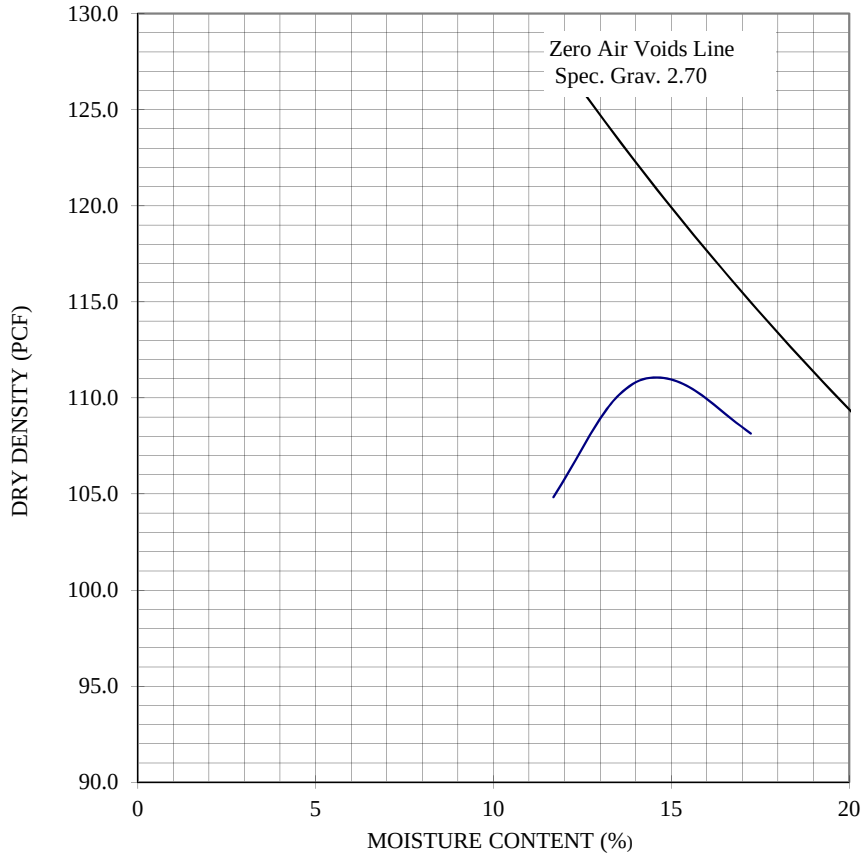
AASHTO M145 CLASS.: **A-4**

EST. R-VALUE: **45**
(Based on NMSHTD 97 Charts)

Specification Used : **None**

Figure: 48

PROCTOR TEST RESULTS



Max Dry Density= 111.0 PCF

Optimum Moist.= 14.5 %

Test Method : ASTM D698-A

X8eVinyard Project No.: **14-1-086** **COA Number:**

Project Title : **NGWSP Reaches 26.2**

Date Sampled : **10/3/14** **Sample No. :** **437**

Sample Location : **V29 @ 3' backhoe pit**

Sieve Analysis ASTM C-136

Sieve	mm	% Passing	Spec.
3"	75.0		
2"	50.0		
1 1/2"	37.5		
1"	25.0		
3/4"	19.0		
1/2"	12.5		
3/8"	9.5		
No. 4	4.75		
No. 8	2.36		
No. 10	2.00		
No. 16	1.18	100	
No. 30	0.60	99	
No. 40	0.425	97	
No. 50	0.300	82	
No. 80	0.180	72	
No. 100	0.150	54	
No. 200	0.075	44	

Atterberg Limits ASTM D4318

	Results	Spec.
LIQUID LIMIT	29	
PLASTIC LIMIT	15	
PLASTICITY INDEX	14	

ASTM D2487 USCS: **SC** **(Clayey SAND.)**

AASHTO M145 CLASS.: **A-6**

EST. R-VALUE: **12**
(Based on NMSHTD 97 Charts)

Specification Used : **None**

Figure: 49

SUMMARY OF LABORATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Natural Dry Density (pcf)	Natural Moisture Content (%)	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
					LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
vbore	2	SM		3.2	NV	NP						100	98	86	45	18.2	SAND, silty
vbore	5			2.3													
vbore	10			6.0													
V1	2	SM	109	3.3	NV	NP				100	99	96	83	58	33	21.9	SAND, silty
V1	5		107	2.3													
V1	10			4.0													
V1	15			2.3													
V1	20			2.7													
V38-A	2	SM	104	5.2	NV	NP							100	99	94	42.5	SAND, silty
V38-A	5		109	5.0													
V38-A	10	GM		3.6	NV	NP	100	93	69	60	57	55	54	52	48	23.4	GRAVEL, silty
V38-A	15			1.4													
V38-A	20			10.7													
V38-B	2	SM	108	7.1	24	NP							100	99	93	42.0	SAND, silty
V38-B	5	ML	102	7.1	22	NP					100	99	98	98	94	52.2	SILT, sandy
V38-B	10			8.6													
V38-B	15			1.6													
V38-B	20			10.7													
V38-C	2			6.3													
V38-C	5	SC	107	7.2	26	9								100	96	47.5	SAND, clayey

X8e Vinyard Project No.: 14-1-086

Project: NGWSP Reaches 26.2 Pueblo Pintado **Table No.: 1**

SUMMARY OF LABORATORY TEST DATA

Test Hole	Depth (feet)	Unified Classification	Natural Dry Density (pcf)	Natural Moisture Content (%)	Atterberg Limits		SIEVE ANALYSIS-% PASSING BY WEIGHT										Description
					LL	PI	1 1/2"	3/4"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
V38-C	7	CL	120	9.1	31	16	100	100	100	99	98	98	97	96	94	60.7	CLAY, sandy lean
V38-C	10	SM		5.1	NV	NP		100	95	90	86	83	82	81	77	37.8	SAND, silty
V38-C	15			2.1													
V38-C	20	CL		11.2	26	10		100	99	98	97	96	96	94	92	67.5	CLAY, sandy lean
V38-D	2	ML		5.8	24	NP							100	99	95	50.0	SILT, sandy
V38-D	5		107	5.5													
V38-D	10	SM	104	5.8	NV	NP		100	89	85	82	81	80	79	75	36.3	SAND, silty with gravel
V38-D	15			1.2													
V38-D	20			11.8													
80	2			5.1													
80	5			5.8													
80	10	CL		9.8	30	17			100	99	98	96	95	93	91	63.0	CLAY, sandy lean
80	15			9.4													

X8e Vinyard Project No.: 14-1-086

Project: NGWSP Reaches 26.2 Pueblo Pintado **Table No.: 1**

APPENDIX C

PARTIAL PIPELINE RE-ROUTE

NGWSP REACHES 26.1 & 26.2 PUEBLO PINTADO

(X8E VINYARD PROJECT NUMBER 16-1-032)

8916-A Adams Street NE
Albuquerque, NM 87113
contactus@x8evinyard.com
Phone: 505.797.9743
Fax: 505.797.9749

APPENDIX B

PARTIAL PIPELINE RE-ROUTE

NGWSP REACHES 26.2 PUEBLO PINTADO

X8E VINYARD PROJECT NUMBER 16-1-032

8916-A Adams Street NE
Albuquerque, NM 87113
contactus@x8evinyard.com
Phone: 505.797.9743
Fax: 505.797.9749

X8e Vinyard Project No.: 16-1-032

SITE PLAN
*Scale Unknown



Test Pit Location

FIGURE 1

LOG OF TEST HOLE NO. 1

Project: NGWSP Reaches 26.2 Pueblo Pintado
Project No.: 16-1-032
Elevation: N/A
Date Drilled: 3/24/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1 2 3 4		B				CL	CLAY, lean with sand, stiff, slightly moist, brown
5 6		B				SC-SM	SAND, silty, clayey, medium dense, slightly moist, olive brown
							Bottom of hole at 6½'

LOG OF TEST HOLE NO. 2

Elevation: N/A
Date Drilled: 3/24/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1 2 3 4 5 6		B				SC	SAND, clayey, medium dense, slightly moist, olive brown
		B				CL	CLAY, lean, medium stiff, slightly moist, brown with white caliche, nodules
7							Bottom of hole at 6½'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 2

LOG OF TEST HOLE NO. 3

Project: NGWSP Reaches 26.2 Pueblo Pintado
Project No.: 16-1-032
Elevation: N/A
Date Drilled: 3/24/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1						CL	CLAY, lean, stiff, slightly moist, brown with white caliche pieces
2							
3		B					
4							
5							
6							
		B				SM	SAND, silty, trace clay lumps, medium dense, olive brown
							Bottom of hole at 6½'

LOG OF TEST HOLE NO. 4

Elevation: N/A
Date Drilled: 3/24/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1						SC-SM	SAND, silty, clayey, medium dense, slightly moist, brown
2							
3							
		B					
4							
5							
6		B				CL	CLAY, lean with sand, stiff, slightly moist, brown with white caliche pieces
7							Bottom of hole at 6½'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 3

LOG OF TEST HOLE NO. 5

Project: NGWSP Reaches 26.2 Pueblo Pintado
Project No.: 16-1-032
Elevation: N/A
Date Drilled: 3/24/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1							NOTE: Site was inaccessible.
2							
3							
4							
5							
6							

LOG OF TEST HOLE NO. 6

Elevation: N/A
Date Drilled: 3/24/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1							NOTE: Site was inaccessible.
2							
3							
4							
5							
6							
7							

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 4

LOG OF TEST HOLE NO. 7

Project: NGWSP Reaches 26.2 Pueblo Pintado
Project No.: 16-1-032
Elevation: N/A
Date Drilled: 3/24/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1						SM	SAND, silty, fine grained, trace small clay nodules, loose, slightly moist, brown
2							
3							
4		B					
5							
6							
							Bottom of hole at 6½'

LOG OF TEST HOLE NO. 8

Elevation: N/A
Date Drilled: 3/24/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1						SM	SAND, silty, fine grained, trace small clay nodules, loose, slightly moist, brown
2							
3							
4							
5							
6							
		B					
7							Bottom of hole at 6½'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 5

LOG OF TEST HOLE NO. 9

Project: NGWSP Reaches 26.2 Pueblo Pintado
Project No.: 16-1-032
Elevation: N/A
Date Drilled: 3/25/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1						SM	SAND, silty, fine grained, trace small clay nodules, loose, slightly moist, brown
2							
3							
4		B					
5							
6							
							Bottom of hole at 6½'

LOG OF TEST HOLE NO. 10

Elevation: N/A
Date Drilled: 3/25/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1						SC-SM	SAND, silty, clayey, loose, slightly moist, brown
2							
3							
4		B					
5							
6							
		B				SM	SAND, silty, fine grained, loose, slightly moist, brown
7							Bottom of hole at 6½'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 6

LOG OF TEST HOLE NO. 11

Project: NGWSP Reaches 26.2 Pueblo Pintado
Project No.: 16-1-032
Elevation: N/A
Date Drilled: 3/25/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1						SM	SAND, silty, trace of silty, clayey fines, fine grained, loose, slightly moist, brown
2							
3							
4		B					
5							
6							
							Bottom of hole at 6½'

LOG OF TEST HOLE NO. 12

Elevation: N/A
Date Drilled: 3/25/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1						SM	SAND, silty, trace of silty, clayey fines, fine grained, loose, slightly moist, brown
2							
3							
4		B					
5							
6							
7							Bottom of hole at 6½'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 7

LOG OF TEST HOLE NO. 13

Project: NGWSP Reaches 26.2 Pueblo Pintado
Project No.: 16-1-032
Elevation: N/A
Date Drilled: 3/25/16
Depth to Groundwater: Not Encountered
Drilling Method: Backhoe - 24" Bucket

Depth, feet	Blows/Foot	Sample Type	Dry Density pcf	Water Content, %	Additional Testing	Unified Classification	Material Description
1 2 3 4 5 6		B				SM	SAND, silty, trace silty, clayey fines, fine grained, loose, moist, light brown
							Bottom of hole 6½'

ADDITIONAL TESTS: 1= Sieve Analysis 2= Atterberg Limits 3=Direct Shear 4=R-Value 5=Other

Figure: 8

COMPACTION TEST RESULTS

PROJECT : Partial Pipeline Re-Route NGWSP Reaches 26.2 CLIENT: Souder, Miller, & Associates
Pueblo Pintado, Pueblo Pintado, NM TECHNICIAN: Anthony Carabajal
PROJECT NO.: 16-1-032 REPORT NO.: 1 pg 1 DATE: 3/24/16
COA PROJECT NO.:

Test No.	Location	Elevation	Proctor Number	Field Moisture (%)	Field Dry Density (PCF)	Relative Compaction (%)	Specified Compaction (%)
1	Pit #1	FSG	1	6.4	91.4	76	95
2	Pit #1	-1' FSG	1	6.2	88.0	73	95
3	Pit #1	-2' FSG	1	5.4	86.2	72	95
4	Pit #1	-3' FSG	1	6.8	86.0	71	95
5	Pit #1	-4' FSG	1	6.0	84.1	70	95
6	Pit #1	-5' FSG	1	5.6	85.2	71	95
7	Pit #1	-6' FSG	1	5.4	88.0	73	95
8	Pit #2	FSG	1	6.8	87.4	73	95
9	Pit #2	-1' FSG	1	7.2	84.3	70	95
10	Pit #2	-2' FSG	1	5.3	86.2	72	95
11	Pit #2	-3' FSG	1	5.8	84.8	70	95
12	Pit #2	-4' FSG	1	4.2	86.2	72	95
13	Pit #2	-5' FSG	1	6.8	84.0	70	95
14	Pit #2	-6' FSG	1	7.2	85.2	71	95
15	Pit #3	FSG	1	3.1	92.4	77	95
16	Pit #3	-1' FSG	1	6.6	88.0	73	95

Proctor Test Utilized

Proctor No.	Sample Location	Opt. Moisture Content (%)	Maximum Dry Dens (pcf)	Soil Description
1	3rd pit, 3' down (16-094)	11.5	120.4	Silty SAND

WEATHER: Clear
EQUIPMENT: Backhoe
REMARKS:

Figure: 9

COMPACTION TEST RESULTS

PROJECT : Partial Pipeline Re-Route NGWSP Reaches 26.2 CLIENT: Souder, Miller, & Associates
Pueblo Pintado, Pueblo Pintado, NM TECHNICIAN: Anthony Carabajal
PROJECT NO.: 16-1-032 REPORT NO.: 1 pg 2 DATE: 3/24/16
COA PROJECT NO.:

Test No.	Location	Elevation	Proctor Number	Field Moisture (%)	Field Dry Density (PCF)	Relative Compaction (%)	Specified Compaction (%)
17	Pit #3	-2' FSG	1	5.0	88.2	73	95
18	Pit #3	-3' FSG	1	4.4	86.4	72	95
19	Pit #3	-4' FSG	1	4.8	88.2	73	95
20	Pit #3	-5' FSG	1	4.4	84.6	70	95
21	Pit #3	-6' FSG	1	3.5	84.2	70	95
22	Pit #4	FSG	1	3.5	88.4	73	95
23	Pit #4	-1' FSG	1	7.8	89.2	74	95
24	Pit #4	-2' FSG	1	3.7	88.2	73	95
25	Pit #4	-3' FSG	1	4.4	87.5	73	95
26	Pit #4	-4' FSG	1	4.8	84.3	70	95
27	Pit #4	-5' FSG	1	4.6	82.0	68	95
28	Pit #4	-6' FSG	1	5.2	83.4	69	95
29	Pit #7	FSG	1	5.5	94.0	78	95
30	Pit #7	-1' FSG	1	5.0	93.2	77	95
31	Pit #7	-2' FSG	1	4.0	90.0	75	95
32	Pit #7	-3' FSG	1	4.4	84.2	70	95

Proctor Test Utilized

Proctor No.	Sample Location	Opt. Moisture Content (%)	Maximum Dry Dens (pcf)	Soil Description
1	3rd pit, 3' down (16-094)	11.5	120.4	Silty SAND

WEATHER: Clear
EQUIPMENT: Backhoe
REMARKS:

Figure: 10

COMPACTION TEST RESULTS

PROJECT : Partial Pipeline Re-Route NGWSP Reaches 26.2 CLIENT: Souder, Miller, & Associates
Pueblo Pintado, Pueblo Pintado, NM TECHNICIAN: Anthony Carabajal
PROJECT NO.: 16-1-032 REPORT NO.: 1 pg 3 DATE: 3/24/16 and 3/25/16
COA PROJECT NO.:

Test No.	Location	Elevation	Proctor Number	Field Moisture (%)	Field Dry Density (PCF)	Relative Compaction (%)	Specified Compaction (%)
33	Pit #7	-4' FSG	1	4.7	86.4	72	95
34	Pit #7	-5' FSG	1	4.8	88.3	73	95
35	Pit #7	-6' FSG	1	5.2	87.0	72	95
36	Pit #8	FSG	1	3.0	90.2	75	95
37	Pit #8	-1' FSG	1	2.8	91.4	76	95
38	Pit #8	-2' FSG	1	3.6	88.9	74	95
39	Pit #8	-3' FSG	1	4.5	86.4	72	95
40	Pit #8	-4' FSG	1	4.0	85.6	71	95
41	Pit #8	-5' FSG	1	5.2	87.4	73	95
42	Pit #8	-6' FSG	1	5.4	83.2	69	95
43	Pit #9	FSG	1	3.8	94.6	79	95
44	Pit #9	-1' FSG	1	3.0	93.2	77	95
45	Pit #9	-2' FSG	1	4.2	91.4	76	95
46	Pit #9	-3' FSG	1	4.0	92.2	77	95
47	Pit #9	-4' FSG	1	4.2	90.1	75	95
48	Pit #9	-5' FSG	1	4.8	87.6	73	95

Proctor Test Utilized

Proctor No.	Sample Location	Opt. Moisture Content (%)	Maximum Dry Dens (pcf)	Soil Description
1	3rd pit, 3' down (16-094)	11.5	120.4	Silty SAND

WEATHER: Clear
EQUIPMENT: Backhoe
REMARKS:

Figure: 11

COMPACTION TEST RESULTS

PROJECT : Partial Pipeline Re-Route NGWSP Reaches 26.2 CLIENT: Souder, Miller, & Associates
Pueblo Pintado, Pueblo Pintado, NM TECHNICIAN: Anthony Carabajal
PROJECT NO.: 16-1-032 REPORT NO.: 1 pg 4 DATE: 3/25/16
COA PROJECT NO.:

Test No.	Location	Elevation	Proctor Number	Field Moisture (%)	Field Dry Density (PCF)	Relative Compaction (%)	Specified Compaction (%)
49	Pit #9	-6' FSG	1	5.0	88.4	73	95
50	Pit #10	FSG	2	3.4	94.4	86	95
51	Pit #10	-1' FSG	2	3.6	93.2	85	95
52	Pit #10	-2' FSG	2	3.4	92.4	85	95
53	Pit #10	-3' FSG	2	3.8	96.5	88	95
54	Pit #10	-4' FSG	2	4.5	88.2	81	95
55	Pit #10	-5' FSG	2	4.8	89.6	82	95
56	Pit #10	-6' FSG	2	4.6	87.4	80	95
57	Pit #11	FSG	2	3.8	88.4	81	95
58	Pit #11	-1' FSG	2	4.2	86.5	79	95
59	Pit #11	-2' FSG	2	3.6	78.5	72	95
60	Pit #11	-3' FSG	2	3.4	84.3	77	95
61	Pit #11	-4' FSG	2	3.8	82.2	75	95
62	Pit #11	-5' FSG	2	4.4	80.2	73	95
63	Pit #11	-6' FSG	2	4.0	83.6	77	95
64	Pit #12	FSG	2	3.8	89.2	82	95

Proctor Test Utilized

Proctor No.	Sample Location	Opt. Moisture Content (%)	Maximum Dry Dens (pcf)	Soil Description
1	3rd pit, 3' down (16-094)	11.5	120.4	Silty SAND
2	10th pit, 4' down (16-095)	7.4	109.2	Well graded SAND with silt

WEATHER: Clear
EQUIPMENT: Backhoe
REMARKS:

Figure: 12

COMPACTION TEST RESULTS

PROJECT : Partial Pipeline Re-Route NGWSP Reaches 26.2 CLIENT: Souder, Miller, & Associates
Pueblo Pintado, Pueblo Pintado, NM TECHNICIAN: Anthony Carabajal
PROJECT NO.: 16-1-032 REPORT NO.: 1 pg 5 DATE: 3/25/16
COA PROJECT NO.:

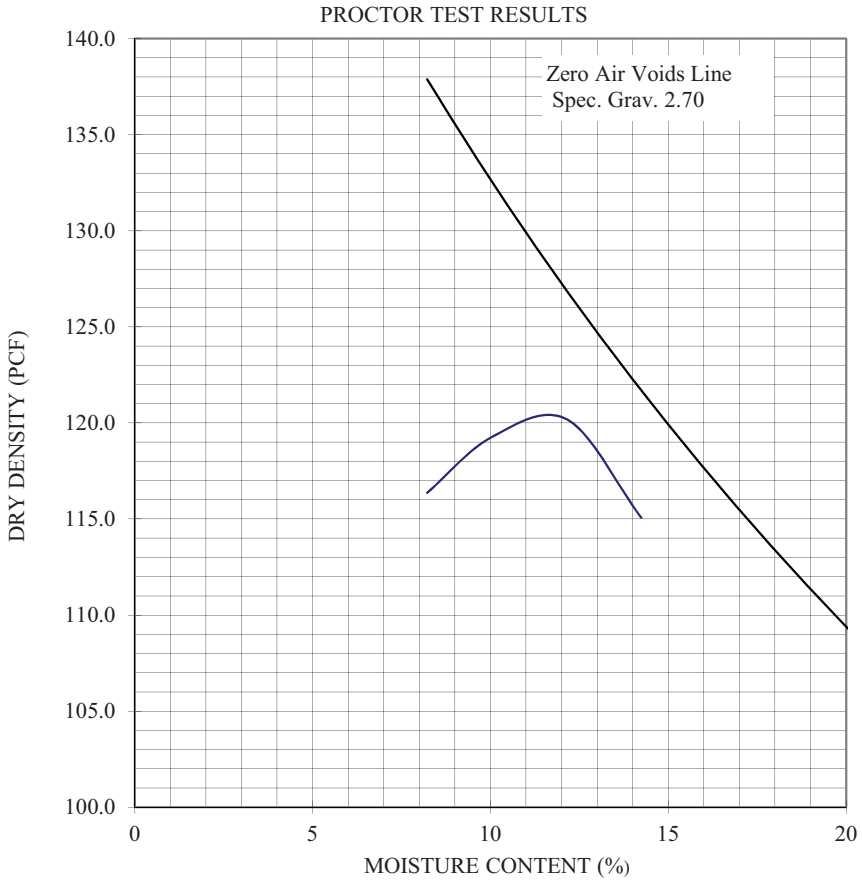
Test No.	Location	Elevation	Proctor Number	Field Moisture (%)	Field Dry Density (PCF)	Relative Compaction (%)	Specified Compaction (%)
65	Pit #12	-1' FSG	2	4.0	84.6	77	95
66	Pit #12	-2' FSG	2	4.4	88.0	81	95
67	Pit #12	-3' FSG	2	5.0	78.4	72	95
68	Pit #12	-4' FSG	2	5.6	83.6	77	95
69	Pit #12	-5' FSG	2	4.2	82.9	76	95
70	Pit #12	-6' FSG	2	4.4	86.4	79	95
71	Pit #13	FSG	2	4.0	88.4	81	95
72	Pit #13	-1' FSG	2	4.2	86.2	79	95
73	Pit #13	-2' FSG	2	3.8	84.4	77	95
74	Pit #13	-3' FSG	2	5.2	85.2	78	95
75	Pit #13	-4' FSG	2	4.8	80.1	73	95
76	Pit #13	-5' FSG	2	4.6	82.8	76	95
77	Pit #13	-6' FSG	2	4.8	81.0	74	95

Proctor Test Utilized

Proctor No.	Sample Location	Opt. Moisture Content (%)	Maximum Dry Dens (pcf)	Soil Description
1	3rd pit, 3' down (16-094)	11.5	120.4	Silty SAND
2	10th pit, 4' down (16-095)	7.4	109.2	Well graded SAND with silt

WEATHER: Clear
EQUIPMENT: Backhoe
REMARKS:

Figure: 13



Max Dry Density= 120.4 PCF

Optimum Moist.= 11.5 %

Test Method : ASTM D1557-B

X8eVinyard Project No.: **16-1-032** **COA Number:**

Project Title : **Pueblo Pintado**

Date Sampled : **3/25/2016** **Sample No. :** **94**

Sample Location : **3rd pit, 3' down.**

Sieve Analysis ASTM C-136

Sieve	mm	% Passing	Spec.
3"	75.0		
2"	50.0		
1 1/2"	37.5		
1"	25.0	100	
3/4"	19.0	99	
1/2"	12.5	97	
3/8"	9.5	96	
No. 4	4.75	94	
No. 8	2.36	94	
No. 10	2.00	94	
No. 16	1.18	93	
No. 30	0.60	89	
No. 40	0.425	85	
No. 50	0.300	73	
No. 80	0.180	49	
No. 100	0.150	42	
No. 200	0.075	26	

Atterberg Limits ASTM D4318

	Results	Spec.
LIQUID LIMIT	NV	
PLASTIC LIMIT	NV	
PLASTICITY INDEX	NP	

NV=Not Valid NP=Non Plastic

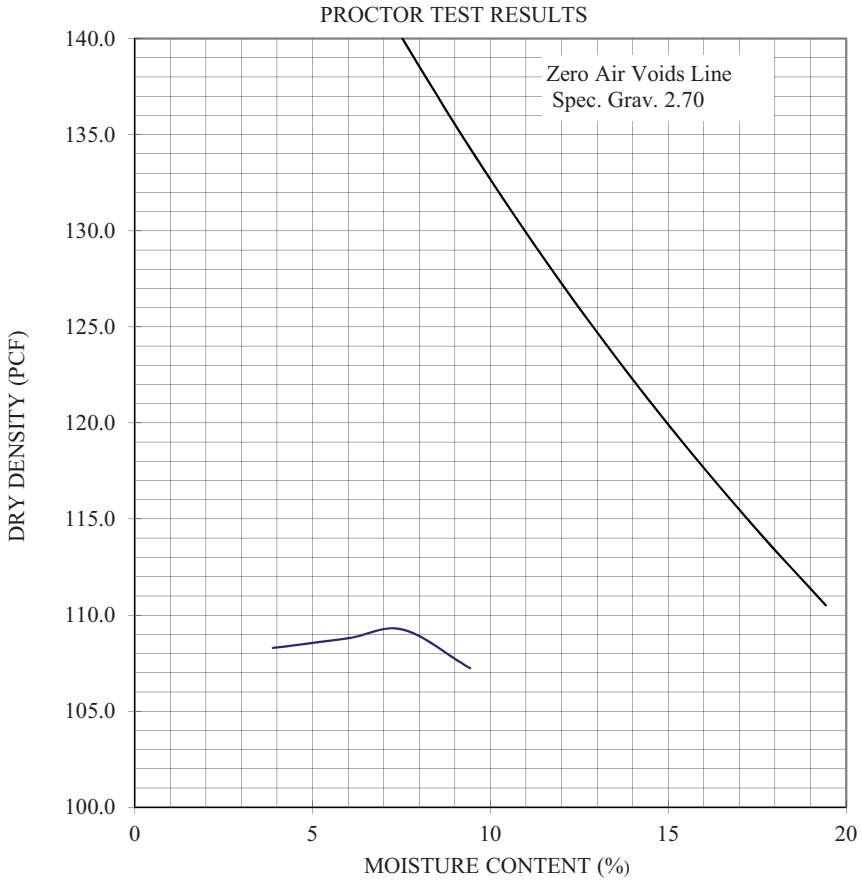
ASTM D2487 USCS: **SM** **(Silty SAND.)**

AASHTO M145 CLASS.: **A-2-4**

EST. R-VALUE: **50**
(Based on NMSHTD 97 Charts)

Specification Used : **None**

Figure: 14



Max Dry Density= 109.2 PCF

Optimum Moist.= 7.4 %

Test Method : ASTM D1557-A

X8eVinyard Project No.: **16-1-032** **COA Number:**

Project Title : **Pueblo Pintado**

Date Sampled : **3/25/2016** **Sample No. :** **95**

Sample Location : **10th pit, 4' down.**

Sieve Analysis ASTM C-136

Sieve	mm	% Passing	Spec.
3"	75.0		
2"	50.0		
1 1/2"	37.5		
1"	25.0		
3/4"	19.0	100	
1/2"	12.5	98	
3/8"	9.5	97	
No. 4	4.75	97	
No. 8	2.36	96	
No. 10	2.00	96	
No. 16	1.18	94	
No. 30	0.60	75	
No. 40	0.425	56	
No. 50	0.300	32	
No. 80	0.180	14	
No. 100	0.150	11	
No. 200	0.075	5.9	

Atterberg Limits ASTM D4318

	Results	Spec.
LIQUID LIMIT	NV	
PLASTIC LIMIT	NV	
PLASTICITY INDEX	NP	

NV=Not Valid NP=Non Plastic

ASTM D2487 USCS: **SW-SM** **(Well graded SAND with silt.)**

AASHTO M145 CLASS.: **A-3**

EST. R-VALUE: **55**
(Based on NMSHTD 97 Charts)

Specification Used : **None**

Figure: 15

EXHIBIT B

Soil and Rock Potholing Information

Note:
The following clarification is made within Article 1.3.K of Section 01 00 00 of the Technical Specifications with regard to soil and rock potholing information.

Data in Exhibit B - Soil and Rock Potholing Information identifies the results of the 'potholing' that was performed at various locations along the waterline alignment. This data is provided for informational purposes only and will not be used as a basis for payment. Final quantities will be determined in the field during the construction process, in coordination with the Engineer.

Navajo Gallup Water Supply Project, Reaches 26.1 and 26.2, "Pot-Holing" Information
Ojo-Encino North Tank to Pueblo Pintado Tank, New Mexico
November 29, 2012, December 3, 4, 5, 2012, and October 2,3,6, 2014
All coordinates are in NAD83 system zone 12N

Hole #	Station	Latitude	Longitude	Subsurface Conditions	Depth to Refusal
1	000+05.87	36.06696	107.39238	Sandstone visible at surface	**0 feet**
2	005+81.43	36.06688	107.39393	Sand, underlain by friable sandstone	None at 8 Feet
3	011+03.55	36.06621	107.39552	Friable sandstone visible at surface	**0 feet**
4	016+25.67	36.06553	107.39716	Silty-clay	None at 8 Feet
5	023+97.20	36.06465	107.39931	sandy-silt, underlain by sandstone	**6.7 Feet**
6	034+78.41	36.06406	107.40279	Silty-sand grading to sand with sandstone	None at 8 Feet
7	039+70.67	36.06359	107.40437	Silty-sand	None at 8 Feet
8	048+80.23	36.06200	107.40675	Silty-clay grading to sandy-silt	None at 8 Feet
9	058+50.00	36.06076	107.40961	Silty-sand	None at 8 Feet
10	069+66.04	36.05840	107.41185	Clayey-silt grading to silty-sand with calcium carbonate cementation	None at 8 Feet
11	093+99.82	36.05476	107.41846	Clayey-silt with calcium carbonate cementation	None at 8 Feet
12	111+05.76	36.05154	107.42182	Silty-sand	None at 8 Feet
13	130+11.65	36.04671	107.42418	Clayey-silt with calcium carbonate cementation	None at 8 Feet
14	151+67.88	36.04242	107.42775	Clayey-silt with calcium carbonate cementation grading to sandy-silt	None at 8 Feet
15	171+47.45	36.03728	107.42891	Clay grading to sandy-silt	None at 8 Feet
16	186+61.84	36.03442	107.43259	Sand grading to sandstone	**7.25 Feet**
17	202+04.23	36.03226	107.43657	Sand grading to friable sandstone	None at 8 Feet
18	216+13.03	36.03002	107.44049	Clay	None at 8 Feet
19	228+37.90	36.02752	107.44328	Silty-sand	None at 8 Feet
20	259+21.69	36.02361	107.45239	Silty-sand	None at 8 Feet
21	272+44.74	36.02205	107.45621	Silty-sand	None at 8 Feet
22	286+92.51	36.01973	107.46019	Silty-sand	None at 8 Feet
23	305+34.93	36.01723	107.46555	Sandy-clay with calcium carbonate cementation	None at 8 Feet
24	323+18.24	36.01441	107.47044	Sand	None at 8 Feet
25	332+33.38	36.01337	107.47322	Silty-clay with calcium carbonate cementation	None at 8 Feet
26	353+97.51	36.01010	107.47873	Sand grading to silty-clay	None at 8 Feet
27	377+45.13	36.00901	107.48653	Silty-sand grading to friable sandstone	None at 8 Feet
28	391+00.00	36.00927	107.49067	Sand grading to friable sandstone	None at 8 Feet
29	409+06.65	36.00875	107.49712	Sand grading to sandstone with calcium carbonate cementation	None at 8 Feet
30	431+32.76	36.00666	107.50397	Sand	None at 8 Feet
31	446+36.68	36.00591	107.50890	Sand	None at 8 Feet
32	463+82.61	36.00415	107.51410	Silty-Sand grading to sandstone with calcium carbonate cementation	None at 8 Feet
33	481+51.82	36.00103	107.51868	Silty-sand grading to friable sandstone	None at 8 Feet
34	495+33.83	35.99884	107.52249	Silty-sand grading to sandstone/dark gray mudstone	None at 8 Feet
35	511+48.23	35.99681	107.52733	Silty-clay	None at 8 Feet
36	527+25.29	35.99512	107.53223	Silty-clay grading to sandstone	None at 8 Feet
37	545+50.00	35.99369	107.53812	Sand	None at 8 Feet
38	546+64.00	35.993366	107.53843	Clay to clayey/silty sand	None at 6.5 Feet*
39	559+83.00	35.99236	107.54270	Clayey-sand to clay	None at 6.5 Feet*
40	569+65.00	35.99121	107.54571	Clay to silty-sand	None at 6.5 Feet*

*Stations 546+65 to 687+34 had a maximum depth of 6.5 feet, whereas all other locations were at least 8 feet in depth.

Navajo Gallup Water Supply Project, Reaches 26.1 and 26.2, "Pot-Holing" Information
Ojo-Encino North Tank to Pueblo Pintado Tank, New Mexico
November 29, 2012, December 3, 4, 5, 2012, and October 2,3,6, 2014
All coordinates are in NAD83 system zone 12N

Hole #	Station	Latitude	Longitude	Subsurface Conditions	Depth to Refusal
41	580+07.00	35.99070	107.54920	Clayey/silty sand to clay	None at 6.5 Feet*
42	617+72.00	35.98772	107.56123	Silty sand	None at 6.5 Feet*
43	629+85.00	35.98603	107.56473	Silty sand	None at 6.5 Feet*
44	641+72.00	35.98420	107.56805	Silty sand	None at 6.5 Feet*
45	653+57.00	35.982225	107.57136	Clayey sand to silty sand	None at 6.5 Feet*
46	663+26.00	35.98074	107.57396	Silty sand	None at 6.5 Feet*
47	675+39.00	35.97897	107.57745	Silty sand	None at 6.5 Feet*
48	687+34.00	35.97762	107.58112	Silty sand	None at 6.5 Feet*
49	736+77.90	35.97075	107.58613	Silty-sand grading to clayey-sand	None at 8 Feet
50	749+58.36	35.96723	107.58613	Silty-sand	None at 8 Feet
51	762+77.80	35.96365	107.58669	Silty-sand	None at 8 Feet
52	790+55.37	35.95626	107.58817	Silty-sand grading to sandstone fragments	**4 Feet**
53	805+70.37	35.95243	107.58753	Silty-sand grading to hard sandstone	**5.5 Feet**
54	820+08.89	35.94877	107.58916	Sandy-silt grading to sandstone	**6.8 Feet**
55	829+33.75	35.94690	107.59161	Silty-sand grading to sandstone grading to gray mudstone	None at 8 Feet
56	837+37.73	35.94446	107.59161	Silty-sand	None at 8 Feet
57	850+69.68	35.94114	107.59350	Sand grading to sandstone	**6.3 Feet**
58	860+79.53	35.93873	107.59518	Silty-sand with friable sandstone	None at 8 Feet
59	871+15.86	35.93607	107.59640	Silty-clay with calcium carbonate cementation	None at 8 Feet
60	873+08.04	35.93562	107.59674	Sandy-clay grading to clay	None at 8 Feet
61	880+25.29	35.93388	107.59789	Sandy-clay grading to sandstone	**3 Feet**
62	885+92.80	35.93242	107.59859	Sandy-clay grading to sandstone	**2.5 Feet**
63	897+58.83	35.92986	107.60094	Sandy-clay grading to sandstone	**4 Feet**
64	909+91.72	35.92662	107.60192	Clayey-sand grading to sandstone	**2 Feet**
65	915+21.31	35.92536	107.60283	Clay grading to sandstone	**2.8 Feet**
66	922+61.68	35.92345	107.60371	Sandy-clay grading to clay	None at 8 Feet
67	931+54.50	35.92131	107.60518	Silty-clay grading to sandstone	**2 Feet**
68	934+14.96	35.92070	107.60564	Clay underlain by sandstone	**5 Feet**
69	941+14.43	35.91899	107.60677	Clayey-sand underlain by sandstone	**7 Feet**
70	948+81.50	35.91706	107.60753	Clay	None at 8 Feet
71	955+27.16	35.91540	107.60831	Sandy-silt underlain by sandstone	**6.5 Feet**
72	960+81.11	35.91401	107.60907	Sandstone	**0.5 Feet**
73	970+39.65	35.91159	107.61035	Clay underlain by friable sandstone	None at 8 Feet
74	976+00.00	35.91034	107.61121	Clay underlain by sandstone	**5 Feet**
75	982+00.00	35.90933	107.61304	Clay underlain by sandstone	**5 Feet**

*Stations 546+65 to 687+34 had a maximum depth of 6.5 feet, whereas all other locations were at least 8 feet in depth.

EXHIBIT C

Soil Chemical Analysis

Soil Chemistry Analysis

Concrete site work for Reaches 26.1 and 26.2

The Reach 26.1 surge tank site and the Reach 26.2 Pueblo Pintado tank site are two of the sites requiring concrete site work on Reaches 26.1 and 26.2.

To determine the Type of cement to use for each site, and if any extra provisions are required; soil from the surge tank site and the Pueblo Pintado tank site were analyzed for chloride, sulfate, and pH levels. The results were compared to the American Concrete Institute's Building Code Requirements for Structural Concrete (ACI 318-11) manual standards, pertinent pages of which are included after this summary. The Portland Cement Association was referenced for pH level limitations. The results report from Hall Environmental Analysis Laboratory, Inc., is also included after this summary.

Type V concrete is required if the dissolved sulfate in water of the soil in which it is in contact with is between 1,500 and 10,000 ppm. The sulfate concentrations for the Reaches 26.1 and 26.2 sites were all below this range, and Type V concrete is not required.

Additional provisions are required for concrete if the chloride concentration of the contact soil is more than 0.15% by weight of cement. The Chloride concentration at the Reaches 26.1 and 26.2 sites were all below this limit, and additional provisions are not required.

Additional provisions are required for concrete if the pH level of the contact soil is less than 6.5. The pH at the Reaches 26.1 and 26.2 sites were all above this limit, and no additional provisions are required.

No additional provisions are needed for the concrete work at the Reaches 26.1 and 26.2 sites. Type I/II cement should be used for concrete construction. A licensed structural engineer of SMA confirmed these results.

CODE

4

4.2.1 — The licensed design professional shall assign exposure classes based on the severity of the anticipated exposure of structural concrete members for each exposure category according to Table 4.2.1.

TABLE 4.2.1 — EXPOSURE CATEGORIES AND CLASSES

Category	Severity	Class	Condition	
F Freezing and thawing	Not applicable	F0	Concrete not exposed to freezing-and-thawing cycles	
	Moderate	F1	Concrete exposed to freezing-and-thawing cycles and occasional exposure to moisture	
	Severe	F2	Concrete exposed to freezing-and-thawing cycles and in continuous contact with moisture	
	Very severe	F3	Concrete exposed to freezing-and-thawing and in continuous contact with moisture and exposed to deicing chemicals	
S Sulfate			**Water-soluble sulfate (SO_4) in soil, percent by mass***	**Dissolved sulfate (SO_4) in water, ppm†**
	Not applicable	S0	$SO_4 < 0.10$	$SO_4 < 150$
	Moderate	S1	$0.10 \le SO_4 < 0.20$	$150 \le SO_4 < 1500$ Seawater
	Severe	S2	$0.20 \le SO_4 \le 2.00$	$1500 \le SO_4 \le 10{,}000$
	Very severe	S3	$SO_4 > 2.00$	$SO_4 > 10{,}000$
P Requiring low permeability	Not applicable	P0	In contact with water where low permeability is not required	
	Required	P1	In contact with water where low permeability is required.	
C Corrosion protection of reinforcement	Not applicable	C0	Concrete dry or protected from moisture	
	Moderate	C1	Concrete exposed to moisture but not to external sources of chlorides	
	Severe	C2	Concrete exposed to moisture and an external source of chlorides from deicing chemicals, salt, brackish water, seawater, or spray from these sources	

*Percent sulfate by mass in soil shall be determined by ASTM C1580.
†Concentration of dissolved sulfates in water in ppm shall be determined by ASTM D516 or ASTM D4130.

COMMENTARY

finishes. These items are beyond the scope of the Code and should be covered specifically in the project specifications. Concrete ingredients and proportions are to be selected to meet the minimum requirements stated in the Code and the additional requirements of contract documents.

R4.2.1 — The Code addresses four exposure categories that affect the requirements for concrete to ensure adequate durability:

Exposure Category F applies to exterior concrete that is exposed to moisture and cycles of freezing and thawing, with or without deicing chemicals.

Exposure Category S applies to concrete in contact with soil or water containing deleterious amounts of water-soluble sulfate ions as defined in Table 4.2.1.

Exposure Category P applies to concrete in contact with water requiring low permeability.

Exposure Category C applies to reinforced and prestressed concrete exposed to conditions that require additional protection against corrosion of reinforcement.

Severity of exposure within each category is defined by classes with increasing numerical values representing increasingly severe exposure conditions. A classification of "0" is assigned when the exposure severity has negligible effect or does not apply to the structural member.

Exposure Category F is subdivided into four exposure classes: **Exposure Class F0** is assigned to concrete that will not be exposed to cycles of freezing and thawing. **Exposure Class F1** is assigned to concrete exposed to cycles of freezing and thawing and that will be occasionally exposed to moisture before freezing. Examples of Class F1 are exterior walls, beams, girders, and slabs not in direct contact with soil. **Exposure Class F2** is assigned to concrete exposed to cycles of freezing and thawing that is in continuous contact with moisture before freezing. An example is an exterior water tank or vertical members in contact with soil. Exposure Classes F1 and F2 are conditions where exposure to deicing salt is not anticipated. **Exposure Class F3** is assigned to concrete exposed to cycles of freezing and thawing, in continuous contact with moisture, and where exposure to deicing chemicals is anticipated. Examples are horizontal members in parking structures.

Exposure Category S is subdivided into four exposure classes: **Exposure Class S0** is assigned for conditions where the water-soluble sulfate concentration in contact with concrete is low and injurious sulfate attack is not a concern. **Exposure Classes S1, S2, and S3** are assigned for structural concrete members in direct contact with soluble sulfates in soil or water. The severity of exposure increases

American Concrete Institute Copyrighted Material—www.concrete.org

CODE

TABLE 4.3.1 — REQUIREMENTS FOR CONCRETE BY EXPOSURE CLASS

Exposure Class	Max. *w/cm**	Min. f'_c, psi	Additional minimum requirements			
			Air content			Limits on cementitious materials
F0	N/A	2500	N/A			N/A
F1	0.45	4500	Table 4.4.1			N/A
F2	0.45	4500	Table 4.4.1			N/A
F3	0.45	4500	Table 4.4.1			Table 4.4.2
			Cementitious materials†—types			Calcium chloride admixture
			ASTM C150	ASTM C595	ASTM C1157	
S0	N/A	2500	No Type restriction	No Type restriction	No Type restriction	No restriction
S1	0.50	4000	II‡	IP(MS), IS (<70) (MS)	MS	No restriction
S2	0.45	4500	V§	IP (HS) IS (<70) (HS)	HS	Not permitted
S3	0.45	4500	V + pozzolan or slag‖	IP (HS) + pozzolan or slag‖ or IS (<70) (HS) + pozzolan or slag‖	HS + pozzolan or slag‖	Not permitted
P0	N/A	2500	None			
P1	0.50	4000	None			
			Maximum water-soluble chloride ion (Cl^-) content in concrete, percent by weight of cement#			
			Reinforced concrete	Prestressed concrete	Related provisions	
C0	N/A	2500	1.00	0.06	None	
C1	N/A	2500	0.30	0.06		
C2	0.40	5000	0.15	0.06	7.7.6, 18.16**	

*For lightweight concrete, see 4.1.2.
†Alternative combinations of cementitious materials of those listed in Table 4.3.1 shall be permitted when tested for sulfate resistance and meeting the criteria in 4.5.1.
‡For seawater exposure, other types of portland cements with tricalcium aluminate (C_3A) contents up to 10 percent are permitted is the *w/cm* does not exceed 0.40.
§Other available types of cement such as Type III or Type I are permitted in Exposure Classes S1 or S2 if the C_3A contents are less than 8 or 5 percent, respectively.
‖The amount of the specific source of the pozzolan or slag to be used shall not be less than the amount that has been determined by service record to improve sulfate resistance when used in concrete containing Type V cement. Alternatively, the amount of the specific source of the pozzolan or slag to be used shall not be less than the amount tested in accordance with ASTM C1012 and meeting the criteria in 4.5.1.
#Water-soluble chloride ion content that is contributed from the ingredients including water, aggregates, cementitious materials, and admixtures shall be determined on the concrete mixture by ASTM C1218 at age between 28 and 42 days.
**Requirements of 7.7.6 shall be satisfied. See 18.16 for unbonded tendons.

COMMENTARY

content. For Exposure Class S1 (moderate exposure), Type II cement is limited to a maximum C_3A content of 8.0 percent under ASTM C150. The blended cements under ASTM C595 with the MS designation are appropriate for use in Exposure Class S1. The appropriate types under ASTM C595 are IP(MS) and IS(<70)(MS) and under C1157 is Type MS. For Exposure Class S2 (severe exposure), Type V cement with a maximum C_3A content of 5 percent is specified. Blended cements Types IP (HS) and IS (<70) (HS) under ASTM C595 and Type HS under ASTM C1157 can also be used. In certain areas, the C_3A content of other available types such as Type III or Type I may be less than 8 or 5 percent and are usable in moderate or severe sulfate exposures. Note that sulfate-resisting cement will not increase resistance to some chemically aggressive solutions, for example, sulfuric acid. The project specifications should cover all special cases.

The use of fly ash (ASTM C618, Class F), natural pozzolans (ASTM C618, Class N), silica fume (ASTM C1240), or ground-granulated blast-furnace slag (ASTM C989) also has been shown to improve the sulfate resistance of concrete.[4.1-4.3] ASTM C1012 can be used to evaluate the sulfate resistance of mixtures using combinations of cementitious materials as determined in 4.5.1. For Exposure Class S3, the alternative in ACI 318-05 allowing use of Type V plus pozzolan, based on records of successful service, instead of meeting the testing requirements of 4.5.1, still exists and has been expanded to consider the use of slag and the blended cements.

Table 4.2.1 lists seawater under Exposure Class S1 (moderate exposure), even though it generally contains more than 1500 ppm SO_4. Portland cement with higher C_3A content improves binding of chlorides present in seawater and the Code permits other types of portland cement with C_3A up to 10 percent if the maximum *w/cm* is reduced to 0.40.

In addition to the proper selection of cementitious materials, other requirements for durable concrete exposed to water-soluble sulfate are essential, such as low *w/cm*, strength, adequate air entrainment, adequate consolidation, uniformity, adequate cover of reinforcement, and sufficient moist curing to develop the potential properties of the concrete.

Exposure Class P1: The Code includes an Exposure Class P1 for concrete that needs to have a low permeability when in direct contact with water and where the other exposure conditions defined in Table 4.2.1 do not apply. The primary means to obtain low permeability is to use a low *w/cm*. Low permeability can be also achieved by optimizing the cementitious materials used in the concrete mixture. One standard method that provides a performance-based indicator of low permeability of concrete is ASTM C1202, which is more reliable in laboratory evaluations than for field-based acceptance.

American Concrete Institute Copyrighted Material—www.concrete.org

CODE

COMMENTARY

Exposure Class C2: For reinforced and prestressed concrete in Exposure Class C2, the maximum *w/cm*, minimum specified compressive strength, and minimum cover are the basic requirements to be considered. Conditions in structures where chlorides may be applied should be evaluated, such as in parking structures where chlorides may be tracked in by vehicles, or in structures near seawater. Epoxy- or zinc-coated bars or cover greater than the minimum required in 7.7 may be desirable. Use of slag meeting ASTM C989 or fly ash meeting ASTM C618 and increased levels of specified compressive strength provide increased protection. Use of silica fume meeting ASTM C1240 with an appropriate high-range water reducer, ASTM C494, Types F and G, or ASTM C1017 can also provide additional protection.[4.4] The use of ASTM C1202[4.5] to test concrete mixtures proposed for use will provide additional information on the performance of the mixtures.

Exposure Classes C0, C1, and C2: For Exposure Classes C0, C1, and C2, the chloride ion limits apply. For reinforced concrete, the permitted maximum amount of water-soluble chloride ions incorporated into the concrete, measured by ASTM C1218 at ages between 28 and 42 days, depend on the degree of exposure to an anticipated external source of moisture and chlorides. For prestressed concrete, the same limit of 0.06 percent chloride ion by weight of cement applies regardless of exposure.

Additional information on the effects of chlorides on the corrosion of reinforcing steel is given in ACI 201.2R,[4.6] which provides guidance on concrete durability, and ACI 222R,[4.7] which provides guidance on factors that impact corrosion of metals in concrete. An initial evaluation of the chloride ion content of the proposed concrete mixture may be obtained by testing individual concrete ingredients for total chloride ion content. If total chloride ion content, calculated on the basis of concrete proportions, exceeds those permitted in Table 4.3.1, it may be necessary to test samples of the hardened concrete for water-soluble chloride ion content. Some of the chloride ions present in the ingredients will either be insoluble in water or will react with the cement during hydration and become insoluble under the test procedures described in ASTM C1218.

When concretes are tested for water-soluble chloride ion content, the tests should be made at an age of 28 to 42 days. The limits in Table 4.3.1 are to be applied to chlorides contributed from the concrete ingredients, not those from the environment surrounding the concrete. For reinforced concrete that will be dry in service (Exposure Class C0), a limit of 1 percent has been included to control the water-soluble chlorides introduced by concrete-making materials. Table 4.3.1 includes limits of 0.30 and 0.15 percent for reinforced concrete subject to Exposure Classes C1 and C2, respectively.

American Concrete Institute Copyrighted Material—www.concrete.org

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 07, 2015

Emily Sotelo

Souder Miller & Associates
3451 Candelaria, NE Suite D
Albuquerque, NM 87107
TEL: (505) 299-7246
FAX

RE: NGWSP Reaches 26.1 & 26.2 OrderNo.: 1501020

Dear Emily Sotelo:

Hall Environmental Analysis Laboratory received 4 sample(s) on 1/5/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,



Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1501020**
Date Reported: **1/7/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder Miller & Associates
Client Sample ID: V3@4ft 14-1-086
Project: NGWSP Reaches 26.1 & 26.2
Collection Date: 1/5/2015 11:15:00 AM
Lab ID: 1501020-001 **Matrix:** SOIL **Received Date:** 1/5/2015 11:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **lgp**	
Chloride	ND	30		mg/Kg	20	1/6/2015 4:13:40 PM	17085
Sulfate	68	30		mg/Kg	20	1/6/2015 4:13:40 PM	17085
SM4500-H+B: PH						Analyst: **JRR**	
pH	8.32	1.68		pH Units	1	1/6/2015 11:08:00 AM	R23497

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder Miller & Associates
Client Sample ID: 4@15'-20' Cuttings 14-1-086, W
Project: NGWSP Reaches 26.1 & 26.2
Collection Date: 1/5/2015 11:15:00 AM
Lab ID: 1501020-003 **Matrix:** SOIL **Received Date:** 1/5/2015 11:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **lgp**	
Chloride	77	30		mg/Kg	20	1/6/2015 4:38:29 PM	17085
Sulfate	580	30		mg/Kg	20	1/6/2015 4:38:29 PM	17085
SM4500-H+B: PH						Analyst: **JRR**	
pH	8.19	1.68		pH Units	1	1/6/2015 11:08:00 AM	R23497

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2.
RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder Miller & Associates
Client Sample ID: 3@5' Cuttings 14-1-086, Water T
Project: NGWSP Reaches 26.1 & 26.2
Collection Date: 1/5/2015 11:15:00 AM
Lab ID: 1501020-004 **Matrix:** SOIL **Received Date:** 1/5/2015 11:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **lgp**	
Chloride	110	30		mg/Kg	20	1/6/2015 4:50:54 PM	17085
Sulfate	1700	30		mg/Kg	20	1/6/2015 4:50:54 PM	17085
SM4500-H+B: PH						Analyst: **JRR**	
pH	8.02	1.68		pH Units	1	1/6/2015 11:08:00 AM	R23497

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1501020**

07-Jan-15

Client: Souder Miller & Associates

Project: NGWSP Reaches 26.1 & 26.2

Sample ID	**MB-17085**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**17085**	RunNo:	**23511**					
Prep Date:	**1/6/2015**	Analysis Date:	**1/6/2015**	SeqNo:	**694508**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								
Sulfate	ND	1.5								

Sample ID	**LCS-17085**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**17085**	RunNo:	**23511**					
Prep Date:	**1/6/2015**	Analysis Date:	**1/6/2015**	SeqNo:	**694509**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.8	90	110			
Sulfate	29	1.5	30.00	0	95.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1501020**

07-Jan-15

Client: Souder Miller & Associates

Project: NGWSP Reaches 26.1 & 26.2

Sample ID **1501020-001ADUP**	SampType: **DUP**			TestCode: **SM4500-H+B: pH**						
Client ID: **V3@4ft 14-1-086**	Batch ID: **R23497**			RunNo: **23497**						
Prep Date:	Analysis Date: **1/6/2015**			SeqNo: **694129**		Units: **pH Units**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.31	1.68								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

EXHIBIT D

Submittal Cover Sheet (Blank)
and Submittals Checklist

Contractor Submittal Form

Project: Navajo Gallup Water Supply Project Reaches 26.1 & 26.2 **Submittal No**: _____

Date: _____ **SMA Project No**: 6921307

Contractor: _____ **Number of Copies:** _____

Supplier: _____

Manufacturer: _____

Specification No: _____ **Drawing No.:** _____

Are there any deviations from the contract documents? **No ☐** **Yes ☐**
(Explain) _____

_____

_____

Product Description: _____

_____

Contractor Signed: _____

Engineer's Comments:

Review is limited to check for compliance with design concept. No changes from provisions of contract document are intended and Contractor remains responsible for compliance with revisions therein.

The Contractor is solely responsible for quantities; correctness of dimensions; verification of physical interrelation of elements of the work as required by the drawings and specifications and by field determination; fabrication procedures, construction methods, techniques and sequences. This review does not relieve the Contractor from these responsibilities.

Non-conformities and errors detected have been noted but such markings, or lack thereof, shall not relieve the Contractor from compliance with all requirements of the contract drawings and specifications.

- ☐ **No Exception Taken**
- ☐ **Submittal Rejected**
- ☐ **Correction Required As Noted**
- ☐ **Revise and Resubmit To Engineer**
- ☐ **Contractor Submit Specified Item**
- ☐ **Approved as Corrected**

_____

_____

_____

_____

_____

Engineer Signed: _____ **Date:** _____

					SUBMITTALS CHECKLIST
					Project Name: Navajo Gallup Water Supply Project Reaches 26.1 & 26.2
					Project Number: 6421307
	Item	**Date Received**	**Date Reviewed**	**Review Status**	**Comments**
Item	***Basic Requirements 01 00 00***				
1	All required permits not obtained by Owner, incl. 402 flushing permit and State of NM building permits				
2	Gas company encroachment agreements				
3	Water import permit (if required)				
4	Water use permit				
5	Line flushing plan, incl. gpm, gpd, hours and dates for flushing, water source, etc.				
6	Work Schedule (monthly)				
7	Record drawings (monthly)				
8	Notification of plan to work within ROW of BIA road				
9	Notification of working 100 ft of culturally sensitive area				
10	Safety plan				
11	Stormwater pollution prevention plan (SWPPP), including plan, permits, BMPs				
12	Schedule for manufacturer's start-up and operator training dates				
13	NTUA Permission To Tap existing waterline				
14	Requests for additional time or extra work (if necessary)				
	Surveying 02 21 13				
15	Survey data				
16	Survey request form				
17	Plans, surveys or staking discrepancies				
	Tank Site Demolition 02 41 16				
18	Tank removal work plan				
19	Removal and disposal of waste plan				
20	Dismantling procedures plan				
21	Transportation and disposal of aboveground water tanks and contents plan				
22	Site safety plan				
23	Drawing of valving and sequence of work to maintain uninterrupted water service				
24	Demolition drawings				
25	Permits (as required)				
26	Off-site removal of debris and materials reports				
27	Demolition plan, methods, sequencing and scheduling				
	Concrete Forms and Accessories 03 10 00				
28	Concrete Form Materials				
29	Concrete Form release Agent				
	Concrete Reinforcement 03 20 00				
30	Concrete Reinforcement				
31	Reinforcing Steel Placing Drawings				
	Joints in Concrete 03 29 00				
32	Joint locations				
	Cast-In-Place Concrete 03 30 00				
33	Concrete mix design and batch plant report				
34	Concrete delivery tickets				
35	Reinforcement inspection report (where needed)				
36	Concrete field tests results				
37	Compression tests results				
38	Cement material				
39	Cement mill test reports				
	Grout 03 60 00				
40	Grout Mix Design				
	Steel Doors and Frames 08 11 13				
41	Personnel door, with hinges, safety devises, and hardware				
42	Components (exterior doors, frames, core, end closure, thermal insulation)				
43	Heavy duty hinges				
44	Weatherstripping				
45	Heavy duty cane bolt and gate stop assembly				
46	Door closers				
	Bullet-Resistant Steel Doors and Frames 08 11 14				
47	Bullet resistant man door, with safety devices, hinges, sight glass, and hardware				
48	Components (exterior doors, frames, core, end closure, thermal insulation)				
49	Glazing				

	Item	Date Received	Date Reviewed	Review Status	Comments
50	Door closers				
51	Heavy duty cane bolt and gate stop assembly				
52	Finishes				
53	Manufacturer's warranty, product Data, glazing information, and installation instructions				
	Door Hardware 08 71 00				
54	Hardware (lock, closer, kickplate, gasket, floor stop)				
	Water Storage Painting 09 97 14				
55	Contractor, Welder, Personnel qualifications				
56	Paint schedule				
57	Tank interior primer				
58	Tank interior finish				
59	Tank exterior primer				
60	Tank exterior finish				
61	Dry film thickness test				
62	Exterior tank floor (interior and exterior)				
63	Interior roof laps (interior and exterior)				
64	Above-ground pipes coatings (interior and exterior)				
65	Buried pipe and fittings coatings (interior and exterior)				
66	Color charts				
67	Test Results				
	Chlorination Facility Plumbing 22 11 05				
68	Manufacturers installation instructions				
69	Manufacturers certificates				
70	Piping - steel, DI, PVC				
71	Flanges and fittings - steel, DI, PVC				
72	Ball valves - stainless steel				
73	Ball valves - ductile iron				
74	Ball valves - PVC				
75	Check valves				
76	Pipe hangers and supports				
77	Sleeves				
78	Water pressure gauges				
79	Electronic Control Valve and valve controller				
80	Air release and vacuum breaker valves				
81	Pressure relief valves				
82	Hose bibs and sample cocks				
83	Booster pump - chemical room				
84	Booster pump - control room				
85	Y-Strainer				
86	Hydropneumatic pressure tank				
87	Tapping saddles/ sleeves				
88	Paint - steel pipe and uncoated ferrous appurtenances				
	General Electrical Provisions 26 01 00				
89	Materials list				
90	Shop drawings				
91	Electrical identification				
92	Signage				
	Control Voltage Electrical Wire and Cables 26 05 23				
93	Communication Cable				
94	Paired Cable				
95	Control Wire				
96	Test Reports				
	Raceways 26 11 00				
97	Metal Conduit and Tubing				
98	Nonmetallic Conduit				
99	Plastic-coated metal conduit (for chemical room of chlorinator bldg)				
100	Fittings				
101	Warning Tape				
	Wires and Cables 26 12 00				
102	Wires and cables				
103	Vertical cable supports				
104	Connectors and lugs				
105	Circuits				
106	Tests and procedures				
107	Test results reports				

	Item	Date Received	Date Reviewed	Review Status	Comments
	Transformers 26 12 16				
108	Transformer shop drawings				
109	Dry type transformer				
110	Field test report				
	Outlet Boxes 26 13 00				
111	Boxes, Enclosures, and Cabinets				
112	Handholes and UG Boxes				
	Cabinets 26 13 30				
113	Cabinets with locks and ground bar				
	Wiring Devices 26 14 00				
114	Switches & Occupancy Sensors				
115	Receptacles				
116	Plug caps				
117	Device plates				
118	Enclosures				
119	Test Reports				
	Motors 26 15 00				
120	Motors				
121	Test results				
	Motors Starters 26 15 50				
122	Shop drawings				
123	Control diagrams				
124	Starter				
125	Starter enclosure				
126	Overcurrent devices				
127	Controls				
128	Field test report				
	Panelboards 26 16 00				
129	Shop drawings				
130	Control Panels and Panelboards				
131	Cabinets				
132	Breakers				
133	Test reports				
134	Load Center Product Data				
135	Protective Device Product Data				
136	TVSS Product Data				
137	Load Center Shop Drawings				
138	Panel Schedules				
	Motor and Circuit Disconnects 26 17 00				
139	Safety type disconnecting switches				
140	Separately enclosed motor snap switches				
	Fuses 26 18 10				
141	Product Data for Fuses				
	Relays and Contractors 26 19 00				
142	Relays and contactors				
143	Enclosures				
	Chlorinator Instrumentation and Controls 26 27 33				
144	Cl2 Building Electrical Shop Drawings / Electrical Diagram				
145	Manufacturer's installation, calibration and test procedures				
146	Magnetic flow meter and pulse transmitter module				
147	Pressure transmitter				
148	Thermostat				
149	Intrusion switch				
150	Limit switch				
151	Pilot lights				
152	Control stations				
153	Control relays				
154	Control power transformers				
155	Overcurrent protection				
156	Smoke detectors				
157	Wiring continuity field test results				
158	Spare parts list				
159	Warranties and software licenses				
160	Antenna Mounting Supports				
161	Instrument calibration records				
	Surge Tank Bldg. & Control Vault Instrumentation 26 27 34				
162	**Provide all component data and part numbers to SCADA programmer for approval prior to purchase**				
163	Surge tank building shop drawings with arrangements, wire diagrams, locations of components, and physical routing of wiring. Include dimensions, I/O point terminations, and grounding lay-out.				

	Item	Date Received	Date Reviewed	Review Status	Comments
164	Control valve vault shop drawings with arrangements, wire diagrams, locations of components, and physical routing of wiring. Include dimensions, I/O point terminations, and grounding lay-out.				
165	Thermostat				
166	Intrusion switch				
167	Smoke Detector				
168	Switches				
169	Control relays				
170	Control power transformers				
171	Overcurrent protection				
172	Control Vault Shop drawings				
173	Control Vault Wiring diagrams				
174	Field wiring tests records				
175	Instrument calibration records				
176	Spare parts list				
177	O&M Manuals				
178	Warranties and software licenses				
	Impressed Current Cathodic Protection 26 42 10				
179	Detailed calculations, drawings, sizing and data of system components				
180	Qualifications of company performing work				
181	NACE Cathodic Protection Specialist certification and license performing design work				
182	Rectifier				
183	Batteries				
184	Connection insulation				
185	Tank-to-Water potential control devices				
186	Monitoring reference cells				
187	Locations for potential measurement openings				
188	Elapsed time meter				
189	Impressed current anode segments				
190	Electrical cable				
191	Conduit				
192	Anode suspension ropes				
193	Cable connectors				
194	Final certified operations/ start-up report				
195	Cathodic protection system service agreement				
	Grounding 26 45 00				
196	Grounding Electrodes				
197	Grounding Conductors				
198	Ground Connections				
199	Field QC test reports				
	Exterior Lighting 26 56 00				
200	Exterior Light Fixtures				
201	Test Reports				
	Lightning Protection System 26 60 10				
202	Shop drawings and plans				
203	Air terminal rods				
204	Connectors				
205	Conductors				
206	Ground rods				
207	Underwriters Laboratories, Inc. certification				
	SCADA Radio Telemetry System 27 43 30				
208	Shop drawings				
209	Equipment list				
210	Source / Field QC test reports				
211	O&M data				
212	Remote telemetry radios				
213	Remote antennas				
214	Transmission lines				
215	Coaxial transient surge protector				
216	SCADA PLC control panel, incl. PLC, HMI, processor, back plane, input module, relay output module, analog input module, terminal strips, power supply, surge suppressor, ethernet switch, lightning arrestor				
217	I/O List				
218	PLC/Radio control cabinet				
219	Field operational test reports				
	Site Clearing 31 10 00				
220	Notification to work within 100 ft of designated restricted area (as necessary)				

	Item	Date Received	Date Reviewed	Review Status	Comments
	Rock Removal 31 23 18				
221	Notification of rock to be removed				
222	Type of equipment to be used				
223	Sieve analyses and geotechnical data (as necessary)				
	Backfill 31 23 23				
224	Compaction test results				
225	Native backfill material				
226	Engineered Fill Material				
227	Imported backfill material				
228	Classification of materials reports/records				
	Soil Cement Slurry 31 23 25				
229	Method to prevent pipe flotation during slurry placement				
230	Soil cement mix design, incl. soil gradation and plasticity, pozolan tests, cement material data				
231	Quality control plan (if native soils used)				
232	Soil Cement Installation Plan				
	Cable Concrete 31 35 27				
233	Concrete Mix Design				
234	Concrete laboratory test results				
235	Cable Concrete Mat Design				
236	Geotextile fabric				
237	Cables				
238	Clamps				
239	Cable Concrete Installation Plan				
	Rip Rap and Rock Lining 31 37 00				
240	Verification of final quantities, dimensions and locations of riprap				
241	Samples of riprap material for inspection				
242	Samples of riprap material testing results				
243	Rock for wire enclosed riprap (incl. gradation)				
244	Rock for uncaged riprap (incl. gradation)				
245	Cage materials, incl. wire mesh, selvedges, stakes, tie wire, geotextile fabric				
	Aggregate Base Course and Gravel 32 11 23				
246	Aggregate base course				
247	Clean gravel				
	Chain Link Fences and Gates 32 31 13				
248	Shop drawings (installation plan)				
249	Fencing Materials				
250	Swing gates with center stop				
	Seeding 32 92 19				
251	Documentation of coordination with NNDA and BLM				
252	Seed mixtures with certifications				
253	Coordination of seeding locations and dates				
254	Seeding procedure and dates				
255	Fertilizer				
256	Mulch (if used)				
257	Protection of seeded areas plan				
	Horizontal Directional Drilling 33 05 23.13				
258	Equipment technical data (sizing, capacity, capabilities, drill bit, and other equipment)				
259	Installation plan, incl. proposed horizontal and vertical alignments, pit plans, pipe lay-down and fusion areas, dewatering plans, sequence of operations, method of spoils removal, method of monitoring line and grade, method of detecting surface movement				
260	Contingency plan for unforeseen subsurface conditions, damage to existing utilities, soil heaving or settlement, and other contingencies				
261	Drilling fluid				
262	High strength tracer wire and connectors				
263	HDD installer qualifications				
264	Material manufacturer's technical data and certificates				
265	Depth of pipe records				
266	Horizontal location of pipe records				
267	Records of any unexpected subsurface conditions or uncharted utilities discovered				
268	Depths and locations of any abandoned bores or equipment				
	Public Water Transmission Systems 33 11 13				
269	Pipe restraint plan				
270	Pre-construction site photos/ videos				
271	Shop drawings of custom-fabricated steel fittings				
272	Cathodic protection and monitoring system designs and components. Incl. locations, drawings, calculations, material data for all components (incl. isolation kits, cables, cable colors, test stations, thermite welds, anodes, connectors, warning tape) & personnel NACE certifications				
273	Contractor-provided survey data and as-built drawings				
274	Gasketed PVC pipe. Include factory test results.				

	Item	Date Received	Date Reviewed	Review Status	Comments
275	Petroleum-resistant pipe gaskets				
276	Fusible PVC pipe. Include factory test results.				
277	Fusible PVC sweeps, including shop drawings, factory testing results, and post-bending factory inspection report				
278	Ductile iron pipe, MJ fittings, mechanical joints, TR Flex joints and lockers, MJ restraints, flanged fittings, flanges/ gaskets. Include factor test results.				
279	FBE coatings for ductile iron pipe, fittings, and joints (specify where used)				
280	Liquid epoxy coatings for ductile iron pipe and fittings (specify where used)				
281	Bituminous coatings for ductile iron pipe and fittings (specify where used)				
282	Cement mortar linings for ductile iron pipe and fittings (specify where used)				
283	Polyethylene jackets for ductile iron pipe and fittings (std & V-bio)				
284	Steel pipe, fittings, and flanges/ gaskets. Include factory test results.				
285	FBE coatings for steel pipe and fittings, incl. substrate surface preparation				
286	Tape coatings (AWWA C209)				
287	Stainless steel pipe, fittings, and flanges. Include factory test results.				
288	Tapping sleeves				
289	Tapping saddles				
290	Dectectable warning tape				
291	Tracer wire				
292	Carsonite marker posts				
293	Casing (steel & PVC)				
294	Casing spacers				
295	Casing end seals				
296	Petroleum-resistant end seals				
297	Foam Pig				
298	FBE coatings cure testing results				
299	FBE coating holiday testing results - factory and field tests				
300	Fusion bonded epoxy coatings repair/touchup materials				
301	Hydrostatic pressure testing results				
302	Fusible PVC fusion personnel qualifications				
303	Fusible PVC fusion machines, data loggers, cooling equipment, IR pyrometer, weather protection canopy, facing blades, bead removal equipment				
304	Fusion joint QAQC reports and data logs				
305	Fusible PVC pipe supplemental factory tests				
306	Fusible PVC joint destructive testing results				
307	Shop welds testing results, x-rays, and welders' certifications				
308	Field welds (steel pipe and fittings) test results and welders' certifications				
309	Cathodic protection system testing report and start-up report				
310	Tracer wire testing results				
311	Proposed & actual pipe lines and grades (if different from those shown on Plans)				
	Water Surge Control Tanks 33 12 15				
312	Surge tank				
313	Equipment weights and anchor bolt design				
314	Transient surge analysis report				
315	Surge tank field measurements/ dimensional drawing (post delivery)				
316	Surge tank manufacturer ISO-9001 certification				
317	Stainless steel magnetic level gauge				
318	Proco fitting				
319	Pressure transducers				
320	Stainless steel ball valves				
321	Steel pipe, tee, blind flange, SS flange bolt kits, rubber gasket				
322	Painting and coating				
323	Startup QC testing report				
	Water Utility Valves 33 12 16				
324	Resilient wedge gate valve				
325	Stainless steel ball valve for air/vacuum breaker valves assemblies				
326	Stainless steel ball valve for flush valve				
327	Ductile iron ball valves				
328	Valve Actuators				
329	Orifice plates				
330	1/2" air release valve				
331	1" air release valve				
332	2" vacuum breaker valve with 1" air release valve				
333	Dismantling joints				
334	Flush valve rubber check valves				
335	Valve boxes				
336	Meter cans				
337	Pipe hangers & supports				

	Item	Date Received	Date Reviewed	Review Status	Comments
338	Valve vaults				
339	Vault insulation				
340	Vault hatch - shallow well				
341	Vault hatch- halliday				
342	Draft damper				
343	Valve ID placards (site valves only) - include proof				
344	Warning placards (gate and ball valve box lids) - include proof				
345	Valve ID tags (2-inch vacuum breaker valves) - include proof				
346	Blue paint - galvanized steel air vents / surface visible appurtenances				
347	Valve coatings				
348	Fusion bonded/liquid epoxy coating cure testing				
349	Holiday testing results				
350	Touch up and repair of fusion bonded epoxy coatings material				
351	O&M data				
352	Open/shut-off valve tool				
	Pre-fabricated Control Valve Vault 33 12 17				
353	Shop drawings				
354	Wiring schematics and control panel layout drawing				
355	Startup procedures				
356	Primary Control Valves, including all pilot controls, indicators, and appurtenances				
357	PCV insertion flow meter				
358	PCV solenoid control valve				
359	Pressure Relief Valve, including AC trim, all pilot controls, indicators, and appurtenances				
360	Relief Valve limit switch indicator				
361	Isolation ball valves				
362	Vacuum breaker/air release valve				
363	Orifice plates				
364	Water pressure gauges				
365	Groove and clamp fittings				
366	Steel pipe, fittings, flanges				
367	Gaskets				
368	Pipe supports				
369	Dismantling joints				
370	Valve Vault				
371	Access covers				
372	Foam insulation				
373	Aluminum sump grate				
374	Safety ladder				
375	Draft damper				
376	Valve identification placards				
377	Valve identification tags and fasteners				
378	Light fixtures				
379	Pressure transmitter				
380	Solar power system, incl. panels, inverter, charge controller, battery bank, structure				
381	Coatings test results				
382	Service reports (post start-up)				
383	Pressure test results				
384	Warranties				
385	O&M manuals				
	Disinfection of Water Utility Transmission Systems 33 13 00				
386	Disinfection procedures				
387	Disinfection chemicals				
388	Proposed number of and location of sampling sites				
389	Disinfection testing (Cl2 residual) reports				
390	Bacteriological testing results				
391	Notification to flush, circulate and clean using domestic water				
392	Permission To Tap (must be signed by NTUA prior to connecting to existing system)				
	Water Storage Tank Disinfection 33 13 13				
393	Disinfection procedures				
394	Disinfection chemicals				
395	Disinfection testing (Cl2 residual) reports				
396	Bacteriological testing results				
	Welded Steel Water Storage Tank 33 16 19				
397	Tank Design Calculations (PE-sealed)				
398	Tank Design Drawings (PE-sealed)				
399	Tank Foundation Calcs (PE-sealed)				
400	Detailed erection drawings (PE-sealed)				

	Item	Date Received	Date Reviewed	Review Status	Comments
401	Cathodic protection design (PE-sealed)				
402	Personnel certificates and qualification				
403	Carbon steel sheet				
404	Carbon steel plate				
405	Expansion joint fittings and other specialty fittings				
406	Ladders and ladder safety devices				
407	Manways/steel riser, ladders and other accessories				
408	Pipe and pipe connections				
409	Removable silt stop				
410	Overflow				
411	Roof ladder				
412	Safety cages, rest platforms, roof-ladder handrails or other safety devices				
413	Vent				
414	Hatch				
415	Water level indicator assembly				
416	Concrete Mix, drawings, curing methods, tests				
417	Reinforcing steel bars				
418	Tank manufacturer's field report				
419	Radiographic films and test segments report				
	Glass Coated Bolted Steel Water Tank 33 16 21				
420	Tank design calculations (PE-sealed)				
421	Tank shop drawings (PE-sealed)				
422	Tank foundation calculations (PE-sealed)				
423	Tank foundation shop drawings (PE-sealed)				
424	Detailed erection drawings (PE-sealed)				
425	Cathodic protection design (PE-sealed)				
426	Color sample				
427	Personnel certificates and qualification				
428	Tank Floor Sheet / Bolt plan with pipe penetrations shown				
429	Expansion joint fittings and other specialty fittings				
430	Ladders and ladder safety devices				
431	Manways/steel riser, ladders and other accessories				
432	Steel Plates and sheets				
433	Horizontal wind stiffeners				
434	Bolt fasteners				
435	Sealants				
436	Pipe penetrations locations coordination				
437	Penetrating pipes and pipe collars coating				
438	Factory test inspection results				
439	Field test reports				
440	Removable silt stop				
441	Overflow				
442	Roof ladder				
443	Safety cages, rest platforms, roof-ladder handrails or other safety devices				
444	Vent				
445	Hatch				
446	Water level indicator assembly				
447	Concrete Mix, drawings, curing methods, tests				
448	Reinforcing steel bars				
449	Cathodic protection components				
450	Tank manufacturer's warranties				
451	Manufacturer's certificate				
	Pipe Culverts 33 42 13				
452	Corrugated steel pipe				
453	End sections				
	Chlorination Equipment 44 44 16				
454	Shop drawings				
455	Vacuum regulator				
456	Automatic switchover				
457	Chlorine control unit/ rotameter				
458	Chlorine vacuum switch				
459	Chlorine injector assembly, incl. throat and tailpiece				
460	Insertion diffuser assembly				
461	Chlorine vent and vacuum tubing				
462	Electronic two cylinder chlorine with digital display				
463	Chlorine gas detection system				
464	SCBA and hard case				

	Item	Date Received	Date Reviewed	Review Status	Comments
465	Gas cylinder mounting bracket				
466	Field performance test results				
467	O&M manual				
	Miscellaneous Drawings				
	Surge Tank Building DT-15 to DT-19 and Chlorinator Building DT-25 to DT-27				
468	Pre-cast concrete building shop drawings - Surge Tank Building				
469	Pre-cast concrete building shop drawings - Chlorinator Building				
470	Truss shop drawings				
471	Exhaust fan				
472	Wall heater				
473	Interior FRP sheeting				
	Chlorinator Building DT-25 to DT-27				
474	Building shop drawings				
475	Truss shop drawings				
476	Precast concrete building				
477	Exhaust fan				
478	Wall heater				
479	Interior FRP sheeting				

Important Note: The items listed on this form require submittal data. However, this list should not be considered all inclusive. If Technical Specifications or the Drawings include other submittal requirements, those must be met as well. Also, the Engineer may require additional submittals beyond those identified above and/or in the Specifications and Drawings.