

RESOLUTION OF THE
RESOURCES AND DEVELOPMENT COMMITTEE
24th Navajo Nation Council --- Second Year, 2020

AN ACTION

RELATING TO RESOURCES AND DEVELOPMENT; APPROVING A SAND AND GRAVEL LEASE TO NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY TO EXTRACT SAND AND GRAVEL FROM 4.98 ACRES, MORE OR LESS, OF NAVAJO NATION TRUST LANDS LOCATED WITHIN THE TSAILE/WHEATFIELDS CHAPTER VICINITY, NAVAJO NATION (APACHE COUNTY, ARIZONA)

BE IT ENACTED:

SECTION ONE. AUTHORITY

- A. The Resources and Development Committee is a standing committee of the Navajo Nation Council. 2 N.N.C. § 500 (A).
- B. The Resources and Development Committee of the Navajo Nation Council has authority to give final approval of all land withdrawals, non-mineral leases, permits, licenses, rights-of-way, surface easements and bonding requirements on Navajo Nation lands and unrestricted (fee) land. This authority shall include subleases, modifications, assignments, leasehold encumbrances, transfers include, renewals, and terminations. 2 N.N.C. § 501 (B) (2).

SECTION TWO. FINDINGS

- A. Navajo Engineering and Construction Authority, P.O. Box 969, Shiprock, New Mexico 87420, has submitted a request for a sand and gravel lease to occupy 4.98 acres, more or less, of Navajo Nation Trust Lands within the Tsaile/Wheatfields Chapter vicinity. The proposed Sand and Gravel Lease is attached hereto as **Exhibit A**.
- B. The proposed Sand and Gravel Lease consists of 4.98 acres, more or less, of Navajo Nation Trust Lands located in the Tsaile/Wheatfields Chapter vicinity (Apache County, State of Arizona), as described in **Exhibit B**.
- C. The land user consent documentation and letter from grazing committee representative are attached as **Exhibit C**.

- D. Environmental and archaeological studies and clearances have been completed and are attached hereto and incorporated herein by this reference as **Exhibits D-1** through **Exhibit D-5**. **Exhibits D-1** through **Exhibit D-5** include the Cultural Resource Compliance Form NNHHPD No. HPD-19-727, **Exhibit D-1**; a Cultural Resources Inventory of the proposed Navajo Engineering and Construction Authority 4.98 acre unclassified material borrow source, **Exhibit D-2**; the Biological Resources Compliance Form, NNDFW Review No. 19dan1102, **Exhibit D-3**; Wheatfields Borrow Pit Lease Biological Evaluation, **Exhibit D-4**; Wheatfields Borrow Pit Lease Environmental Assessment, **Exhibit D-5**; and Bureau of Indian Affairs, June 2, 2020 letter Finding of No Significant Impact (FONSI), **Exhibit D-6**.
- E. The Stormwater Pollution Prevention Plan is attached as **Exhibit E**. The Borrow Extraction and Reclamation Plan, Wheatfields Borrow Pit is attached as **Exhibit F**.
- F. The Navajo Engineering and Construction Authority Statement of Purpose is attached as **Exhibit G**.
- G. The Tsaile/Wheatfields Chapter Resolution TWFY10-115 supporting the material borrow mining lease is attached as **Exhibit H**.
- H. The Navajo Engineering and Construction Authority Board of Directors through Resolution NECA 10-11-19, attached as **Exhibit I**, is requesting approval of the Material Borrow Pit.
- I. The Navajo Nation Sand and Gravel Lease, **Exhibit A**, requires a bond. **Exhibit A** states: "Bond. The Lessee, shall furnish a performance and reclamation bond for One-Hundred-Fifty Thousand dollars (\$150,000.00). The Lessee shall maintain this bond at all times even if the Lease has expire[d] or is terminated. The bond shall only be released with the written consent of the Navajo Nation. The bond may also be increased by the Navajo Nation and/or the DOI. The Lessee shall request a bond release to DOI only after the Lease has been expired or terminated and Lessee has fulfilled all its obligations, including payments to the Nation and reclamation, under the terms and conditions of this Lease."
- J. The Navajo Engineering and Construction Authority Board of Directors through Resolution NECA 10-11-19, attached as **Exhibit I**, is requesting a waiver of the performance and reclamation bond requirement.

- K. Executive Official Review Document No. 014743, entitled "NECA Borrow Pit @ Tsaile/Wheatfields" is attached as **Exhibit J**.

SECTION THREE. APPROVAL

- A. The Resources and Development Committee of the Navajo Nation Council hereby approves a Sand and Gravel Lease to occupy 4.98, more or less, of Navajo Nation Trust Lands in the Tsaile/Wheatfields Chapter vicinity, Navajo Nation (Apache County, Arizona) to Navajo Engineering and Construction Authority (NECA). The location is more particularly described on the survey maps attached as **Exhibit B**.
- B. The Resources and Development Committee hereby waives the performance and reclamation bond for One-Hundred-Fifty Thousand dollars (\$150,000.00). The Lessee, Navajo Engineering and Construction Authority Board of Directors shall provide a resolution stating that the land subject to the Sand and Gravel Lease will be reclaimed at the expiration of the Lease term. This resolution will be submitted prior to the occurrence of any surface disturbance.
- C. The Resources and Development Committee hereby approves the Sand and Gravel Lease subject to, but not limited to the Sand and Gravel Lease in the attached **Exhibit A**.
- D. The Resources and Development Committee hereby authorizes the President of the Navajo Nation to execute any and all documents necessary to implement the intent and purpose of this resolution.

SECTION FOUR. DIRECTIVE

The Navajo Nation hereby directs the Navajo Nation Minerals Department to furnish a Navajo Nation Sand and Gravel Lease that does not include an access road right-of-way because the Navajo Engineering and Construction Authority is not requesting an access road. The **Exhibit A**, the Navajo Nation Sand and Gravel Lease will be replaced by the updated Navajo Nation Sand and Gravel lease that does not include an access road and does not include annual consideration for the access road right-of-way.

CERTIFICATION

I, hereby, certify that the following resolution was duly considered by the Resources and Development Committee of the 24th Navajo Nation Council at a duly called meeting held by a teleconference for which a quorum was present and that same was passed by a vote of 4 in favor, and 0 opposed, on this 14th day of October 2020.



Rickie Nez, Chairperson
Resources and Development Committee
of the 24th Navajo Nation Council

Motion: Honorable Kee Allen Begay, Jr.
Second: Honorable Wilson C. Stewart, Jr.

Chairperson Rickie Nez not voting.



NAVAJO NATION SAND AND GRAVEL LEASE

THIS AGREEMENT for a Sand and Gravel Lease (Lease) is made and entered into this _____ day of _____, _____, by and between the Navajo Nation, whose address is Post Office Box 1910, Window Rock, Arizona 86515, and NECA, herein called the Lessee and whose address is at _____.

Definitions:

Borrow

Sand & Gravel means: ~~Borrow~~ (Earth), Sand and Natural or Processed Gravel,

Department means the Navajo Nation Minerals Department.

Navajo Nation (Nation) means the Navajo Tribe of Indians.

Secretary means the Secretary of the U.S. Department of the Interior or his/her designated representative.

Performance bond means a surety bond, collateral bond or self-bond or a combination thereof, by which a lessee assures faithful performance of all the requirements this lease and mining and reclamation plan.

Reclamation means those actions taken to restore mined land as required to a post-mining land use approved by the Department.

Resources Committee means the Resources Committee of the Navajo Nation Council.

Slope means average inclination of a surface, measured from the horizontal. Normally expressed as a unit of horizontal distance to vertical distance.

Stabilize means to control movement of soil, or areas of disturbed earth by modifying the geometry of the mass, or by otherwise modifying physical or chemical properties, such as by providing a protective surface coating.

Ton means 2000 pounds.

Water table means the upper surface of a zone of saturation.

The Navajo Nation hereby grants Lessee a Lease right to extract sand and gravel from NE/4 & NW/4 of Section 28, Township 33N, Range 30E, ~~Township XXXXX Range~~ G&SRM, Apache County, State of Arizona. The Lease occupies an area of 4.98

acres, more or less, and the access road right-of-way consists of 1.68 acres, more or less. The location maps and legal descriptions of the Lease and the access road are shown in attached Exhibit "B" ~~respectively~~. The Lease shall be subject to the following terms and conditions.

1. The Lease shall be valid for a period of five (5) years effective the date it is approved by the Secretary. This date shall be known as the Effective Date of the Lease.
2. Payments to the Nation by the Lessee:
 - (i) An annual advance royalty for each lease year. The first payment in the amount of Eight Thousand dollars (\$ 8,000.00) is due within ten (10) days of the Effective Date. Subsequent annual advance royalty payments are due on or before each anniversary of the Effective Date. The annual advance royalty payment shall be credited against production royalties only during the year for which the advance royalty has been paid.
 - (ii) A royalty at the rates of \$ 1.50 per ton for each ton of material removed and sold from the Lease premises. The royalty payment shall be made on a monthly basis within fifteen (15) days following the month for which the royalty is due.
 - (iii) Annual consideration of \$ 1,310.74 for the access road right-of-way. The first payment is due (unless it is paid in lump sum for the entire term of the lease) within ten (10) days of the Effective Date and all subsequent payments shall be made on or before each anniversary of the Effective Date.
 - (iv) The subsequent annual advance payments, the royalty rate and the right-of-way consideration (if not paid in lump sum) shall be subject to annual adjustments on each anniversary of the Effective Date. The adjustments shall be based upon the increase in the Consumer Price Index (CPI), U.S. City Average for All Urban Consumers. The CPI for ~~January 2000~~ August 2020 shall be used as the base for all adjustments.
3. Mining and Reclamation Plan: The Lessee shall provide a mining and reclamation plan (Plan) to the Nation and to the U.S. Department of the Interior (DOI). The Lessee shall comply with all the requirements of the approved Plan. Lessee shall obtain the approval of the Nation and the DOI prior to making any changes in the approved Plan. The plan will include the area to mine with drainage control; annual tonnage estimates for the mining area; and the planned reclamation timing to coincide with the mining. As a general rule, slopes will not exceed 5:1 and majority of the revegetation species will be native to the area.
4. Bond: The Lessee shall furnish a performance and reclamation bond for One-Hundred-Fifty Thousand dollars (\$150,000.00). The Lessee shall maintain this bond at all times even if the Lease has expires or is terminated. The bond shall only be released with the written consent of the Navajo Nation. The bond shall only be released with the written consent for the Navajo Nation. The bond may also be

increased by the Navajo Nation and/or the DOI. The Lessee shall request a bond release to DOI only after the Lease has been expired or terminated and Lessee has fulfilled all its obligations, including payments to the Nation and reclamation, under the terms and conditions of this Lease.

5. **Records and Reports:** The Lessee shall maintain accurate records of all sand and gravel material extracted, stockpiled, sold and removed from the Lease and the royalty due and paid to the Navajo Nation. A copy of the records shall be provided to the DOI and the Navajo Nation Minerals Department (P.O. Box 1910, Window Rock, AZ: 86515) on a monthly basis within fifteen (15) days following the sale month. Monthly production reports must be filed even if there was no sale of material.
6. **Method of Payments:** All required payments under Section 2 of this Lease shall be made to the Department, in lawful money of the United States. A copy of the payments shall be provided to the DOI.
7. **Disposition of Minerals and Surface:** The Navajo Nation expressly reserves the right to use, lease or otherwise dispose of the minerals not covered by this Lease and the surface of the lands embraced within this Lease under existing laws and laws hereinafter enacted. Lessor further reserves the right to grant additional leases for the extraction and removal of sand and gravel or for any other purposes from the lands described herein. Such disposition and use shall be subject to the prior rights of the Lessee herein to use of so much of the said surface as is necessary in the extraction and removal of sand and gravel described in accordance with this Lease.
8. **Diligence:** The Lessee shall exercise diligence in the conduct of its mining operation and the land described herein shall not be held for speculative purposes, but in good faith for the extraction of sand and gravel and shall begin operation within one (1) month of the Effective Date and shall continue production thereafter at the rate specified in the plan.
9. **No work shall commence until the mandatory mine health and safety training has been provided to the workers pursuant to 30 CFR, Part 46.** The Lessee shall maintain the required training plan pursuant to the provisions of 30 CFR, Part 46. The Department shall be listed in the training plan if the Lessee wants the Department to conduct the training. The Lessee may contact the Department to arrange for the training.
10. **The Lessee may develop, use and occupy the area under the Lease for the purpose of removing sand and gravel material.** The Lessee may not develop, use or occupy the area under the Lease for any other purpose without the prior written approval of the Nation and the Secretary. Such approval of the Nation may be granted upon conditions or withheld at the sole discretion of the Nation. The Lessee may not develop, use or occupy the area under the permit for any unlawful purpose. Any unlawful use of the land within the Lease shall render the Lease void at the option of the Nation and/or the Secretary.

11. Sand and gravel material shall not be used for projects outside the Nation unless it is expressly authorized by the Resources Committee of the Navajo Nation Council.
12. In all activities conducted by the Lessee within the Navajo Nation, the Lessee shall abide by all laws and regulations of the Nation and of the United States, now in force and effect or as hereafter may come into force and effect, including but not limited to the following:
 - a. Title 25, Code of Federal Regulations, Parts 162 and 169;
 - b. Title 30, Code of Federal Regulations, Parts 46 and 56;
 - c. The Navajo Nation Mine Safety Code 18 N.N.C. § 401;
 - d. All applicable federal and Nation antiquities laws and regulations, with the following additional condition: In the event of a discovery, all operations in the immediate vicinity of the discovery must cease and the Navajo Nation Historic Preservation Department must be notified immediately. As used herein, "discovery" means any previously unidentified or incorrectly identified cultural resources, including but not limited to archaeological deposits, human remains, or location reportedly associated with Native American religious/traditional beliefs or practice.
 - e. The Navajo Preference in Employment Act, 15 N.N.C. §§ 601 et seq., the Navajo Nation Business Opportunity Act, 5 N.N.C. §§ 201 et seq., and
 - f. The Navajo Nation Water Code, 22 N.N.C. § et seq., Lessee shall apply for and submit all applicable permits and information to the Navajo Nation Water Resources Department, or its successor.
13. The Lessee shall ensure that the air quality of the Nation is not unduly degraded during operations by violating federal and Nation's applicable laws and regulations.
14. The Lessee shall clear and keep clear the lands within the Lease area to the extent compatible with the purpose of the Lease, and shall dispose of all vegetation and other materials cut, uprooted, or otherwise accumulated during any surface disturbance activities.
15. The Lessee shall at all times during the term of the Lease and at the Lessee's sole cost and expense, maintain the land subject to the Lease and all improvements located thereon and make all necessary reasonable repairs.
16. The Lessee shall obtain prior written permission to cross an existing permit or lease areas, if any, from the appropriate parties.

17. The Lessee shall be responsible for and promptly pay all damages when they are sustained, from actions the Lessee causes.
18. The Lessee shall indemnify and hold harmless the Nation and the Secretary and their respective authorized agents, employees, land users and occupants against any liability for loss of life, personal injury and property damages arising from the development, use or occupancy or use of area under the Lease by the Lessee.
19. The Lessee shall not assign, convey, transfer or sublet in any manner whatsoever, the lease or any interest therein, or in or to any of the improvements on the land subject to the lease, without the prior written consent of the Nation and the Secretary. Any such attempted assignment, conveyance or transfer without such prior written consent shall be void and of no effect. The consent of the Nation may be granted, granted upon conditions or withheld at the sole discretion of the Nation.
20. The Nation may recommend termination of the Lease by DOI for violation of any of the terms and conditions stated herein.
21. At the termination of the Lease, the Lessee shall peaceably and without legal process deliver up the possession of the premises, in good condition, usual wear and tear excepted. Upon the written request from the Nation, the Lessee shall provide the Navajo, at the Lessee's sole cost and expense, with an environmental audit assessment of the premises at least thirty (30) days after completion and notification to the Nation that all required reclamation has been performed.
22. Holding over by the Lessee after the termination of the Lease shall not constitute a renewal or extension thereof or give the Lessee any rights hereunder or in to the land subject to the Lease or to any improvements located thereon.
23. The Nation and the Secretary shall have the right, at any reasonable time during the term of the permit, to enter upon the premises, or any part thereof, to inspect the same and any improvements located therein. The Nation and Secretary have further right to audit all payments due to the Nation.
24. By acceptance of the grant of Lease, the Lessee consents to the full territorial legislative, executive and judicial jurisdiction of the Nation, including but not limited to the jurisdiction to levy fines and to enter judgments for compensatory and punitive damages and injunctive relief, in connection with all activities conducted by the Lessee within the Navajo Nation or which have a proximate (legal) effect on persons or property within the Nation.
25. By acceptance of the grant of the Lease, the Lessee covenants and agrees never to contest or challenge the legislative, executive or judicial jurisdiction of the Nation on the basis that such jurisdiction is inconsistent with the status of the Nation as an Indian 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 general health and welfare) over all lands, persons and activities within its territorial boundaries, or on any other basis not generally applicable to a similar challenge to the jurisdiction of a state government. Nothing contained in this provision shall be construed to negate or impair federal responsibilities with respect to the land subject to the Lease or to the Nation.

26. Any action or proceeding brought by the Lessee against the Nation in connection with or arising out of the terms and conditions of the Lease shall be brought only in the Courts of the Nation, and no such action or proceeding shall be brought by the Lessee against the Nation in any court of any state.
27. Nothing contained herein shall be interpreted as constituting a waiver, express or implied, of the sovereign immunity of the Nation.
28. Except as prohibited by applicable federal law, the law of the Nation shall govern the performance and enforcement of the terms and conditions contained herein.
29. The terms and conditions contained herein shall extend to and be binding upon the successors, heirs, assigns, executors, administrators, employees and agents, including all contractors and subcontractors, of the Lessee, and the term "Lessee" whenever used herein, shall be deemed to include all such successors, heirs, assigns, executors, administrators, employees and agents.
30. There is expressly reserved to the Nation full territorial legislative, executive and judicial jurisdiction over the area under the Lease and all lands burdened by the Lease, including without limitation over all persons, including the public, and all activities conducted or otherwise occurring within the area under the Lease and all lands burdened by the Lease shall be and forever remain Navajo Indian Country for purposes of Navajo Nation jurisdiction.
31. The Lessee is required to maintain and submit a certificate issued by an insurance company authorized to do business in the United States, and on the Navajo Nation, certifying that the applicant has a public liability insurance policy in force for the mining and reclamation operations pursuant to this Lease. Such policy shall provide for personal injury and property damage protection in an amount adequate to compensate any person injured or property damaged as a result of the mining and reclamation operations, including the use of explosives. Minimum insurance coverage for bodily injury and property damage shall be \$ 500,000 for each occurrence and \$1,000,000 aggregate.
 - a. The policy shall be maintained in full force during the term of the Lease and the liability period necessary to complete all reclamation requirements under the Plan.

- b. The policy shall include a rider requiring that the insurer notify the Department and DOI whenever substantive changes are made in the policy including any termination or failure to renew.
32. The Lessee shall maintain a minimum 200.00 feet buffer zone with any waters of the Navajo Nation.
33. All employees of the Lessee shall be thoroughly familiar with the Lessee's emergency response plan.
34. The Lessee shall obtain the permission of permittees of existing mineral, oil and gas lease holders, operators and rights-of-way permittees when crossing these leases and rights-of-way.
35. The Lessee shall not extract sand and gravel located in the vicinity of Oil and gas wells, including abandoned wells unless written authorization is obtained from the Navajo Nation and those federal agencies having jurisdiction.

THE NAVAJO NATION

Date

By _____
Jonathan Nez, *President*

**NAVAJO ENGINEERING
CONSTRUCTION AUTHORITY**

8-19-2020
Date

By *Brett Grubbs*
Brett Grubbs, General Manager



SCALE: 1 INCH = 50 FEET.

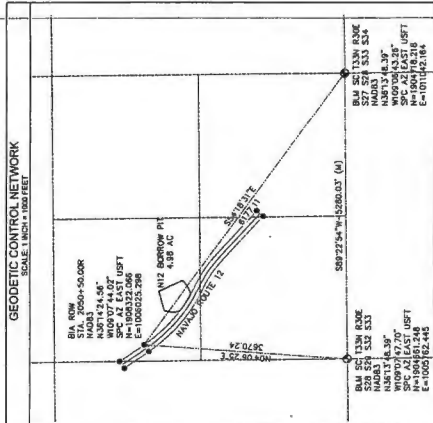
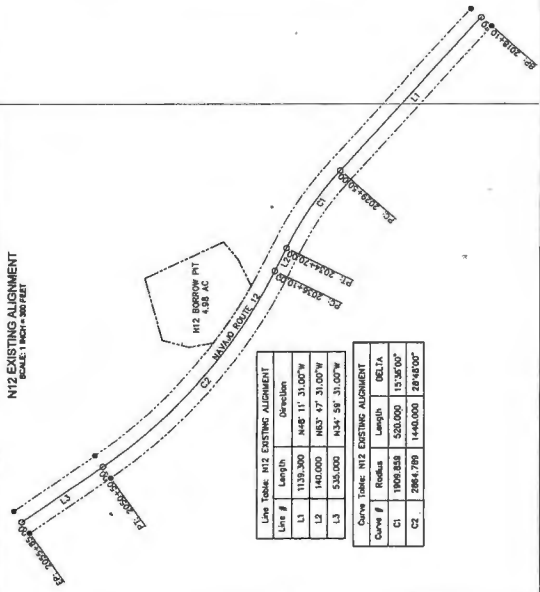
LEGEND

- ☒ FOUND BLM BRASS DISK
- ☒ FOUND CORNER
- ☐ SET CORNER
- ☐ BUILDING
- ☐ UTILITY POLE

NOTES:

1. "BAS"
2. Latitude
3. Percent
4. All data
5. Projected
6. Horizontal
7. SW corner
8. Different
9. were
10. painted
11. RMS

1. TJ3W
2. USDO

SURVEY PLAT AND LEGAL DESCRIPTION OF
WHEATFIELDS BORROW PIT[illegible]

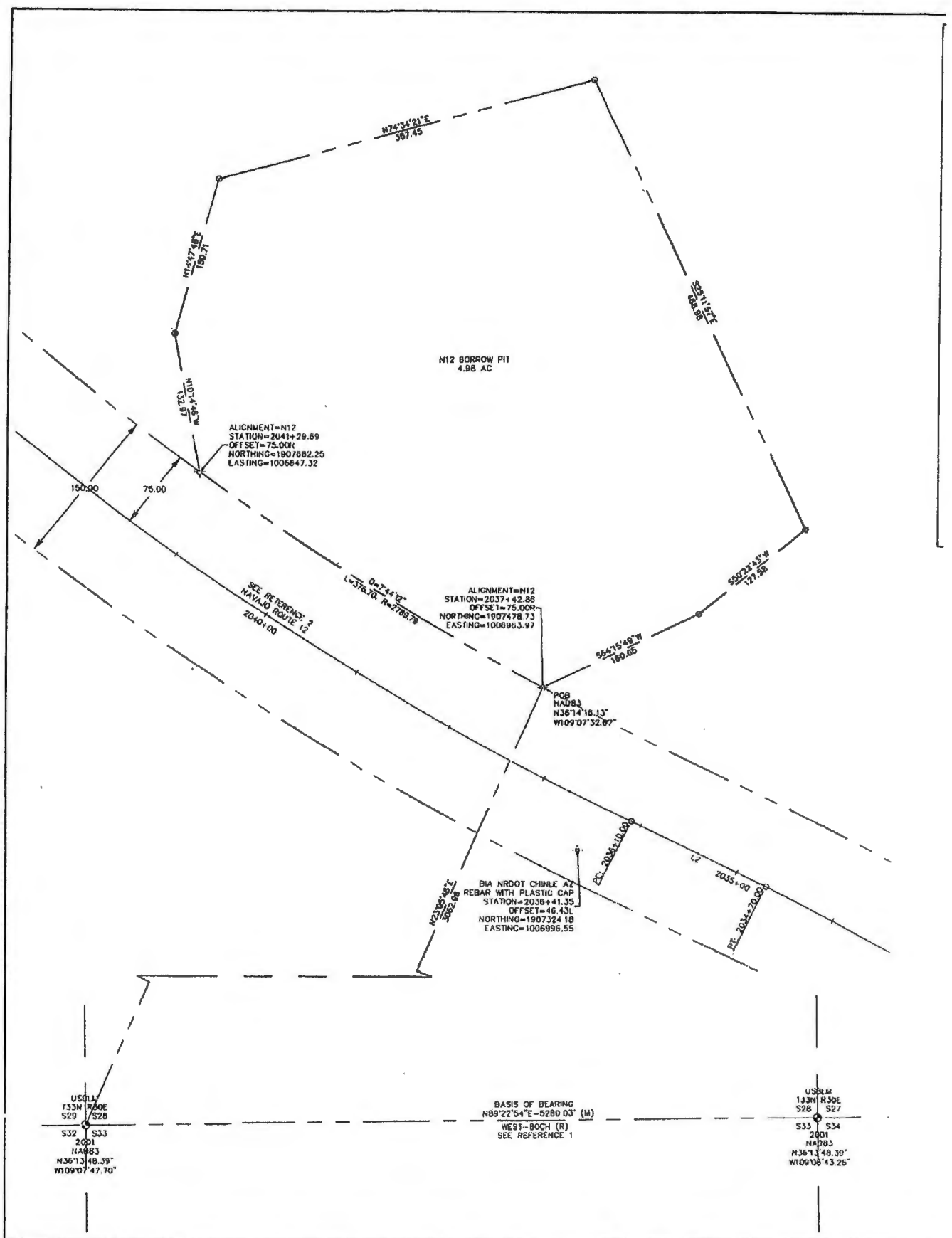
Expires: June 30, 2022

Expenses: June 30, 2022

History Public (signature)
February 7, 2014
History Public (print name)

4.88 ACRES +/-; HAVASUD INDIAN RESERVATION, DISTRICT
NW 1/4 OF SECTION 28, T33N, R30E, G4SR
T34N, R30E, G4SR, APACHE COUNTY, ARIZONA

NO EXERCISING & CONSTRUCTION
ACTIVITY



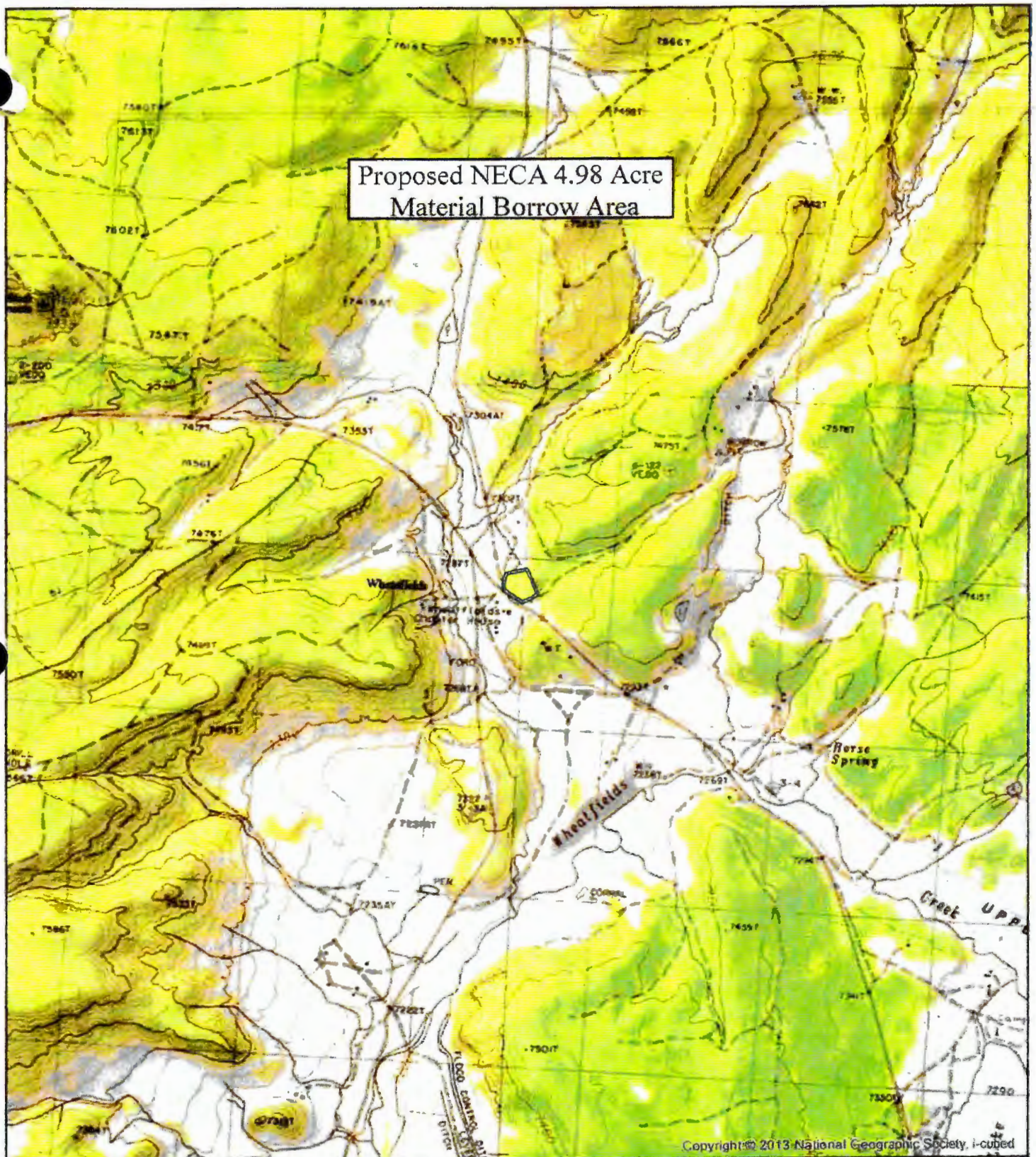


Fig.1: Map showing proposed NECA
Material Borrow project area, CAG 19-08.

Upper Wheatfields, Ariz.-N.Mex., P.E. 1983
Lower Wheatfields, Ariz., P.E. 1983
Scale = 1 : 24,000
1 in = 2000 ft.



Legend

- Material Borrow Area
- Buffer Zone

FIELD CLEARANCE CHECKLIST

(This form covers only damages and compensation to individual land users. It does not cover consideration or other fees to the Navajo Nation. Use back if necessary to complete this form).

1. Project Identification

Applicant: The Navajo Engineering and Construction Authority,
P.O. Box 969, Window Rock, AZ
 Type of Project: Borrow Material Lease
 Purpose: to excavate approximately 79,330 tons of borrow source material for
the purpose of the reconstructing 10.68 miles of Navajo Route N12
for a duration of five years
 Location: Tsaile/Wheatfields Chapter, the NAVAJO NATION,
Apache County, Arizona
 Identification Number (s): N12(19-4)1,2, & 4 Tsaile/Wheatfields, Arizona

2. Amount of Land Affected: 4.98 Acres.

3. Land Status: Trust XX

4. List names of all individuals whose land use rights will be affected by his project:

	Names:	Census Number	Type of Land Use Right
1.	<u>See attached letter.</u>		
2.			
3.			
4.			

5. Are all Land Users that have claims to the affected lands as shown in the BIA Branch of Land Operations records included in the list in Item 4? _____

6. Have Grazing Committee or Land Board Member (whichever is appropriate) for the affected area confirm Land User list in item 4 by signing acknowledgement below.

ACKNOWLEDGEMENT

I acknowledge that due notice was given to the affected community to the proposed project, and according to my records and to the best of my knowledge, the list of individuals in Item #4 includes all Land Users who have land use rights in the affected lands.

1.15.20
Date

Charles L. Chee
Grazing Committee or Land Board Member

11.3
District Number

January 15, 2020

To: The Navajo Nation
General Land Development Department
St. Michaels, Arizona

From: Charles R. Chee
Charles R. Chee, District Grazing Committee Member
Tsaile/Wheatfields Chapter

RE: CONSENT TO ISSUE A BORROW MATERIAL LEASE TO THE NAVAJO
ENGINEERING AND CONSTRUCTION AUTHORITY TO USE 4.98 ACRES
OF THE NAVAJO TRUST LANDS FOR PROJECT NO. N12(19-4)1,2, &4
TSAILE/WHEATFIELDS ROAD RECONSTRUCTION.

The Navajo Engineering and Construction Authority, Post Office Box 969, Shiprock, New Mexico (NM), 87420, proposes to submit an application for a Borrow Material Lease for 4.98 acres, more or less, on the Navajo Trust Lands for a duration of five years located in Section 28; T-33-N; R-30-E; Gila and Salt River Baseline and Meridian, Tsaile/Wheatfields Chapter, Navajo Nation, Apache County, Arizona. Approximately 79,330 tons of borrow source material will be excavated to reconstruct 10.68 miles of Navajo Route N12. Access road is not required as the borrow material area is located directly adjacent to the Navajo Route N12. This road reconstruction primarily benefits the local chapter communities.

Site visit to that particular portion of the Navajo Trust Land determined that the area is an Open Range grazing area and the current condition is severely overgrazed. Also, the Grazing Permit issued for that area has not had an annual Tally Count conducted the past two years. Therefore; surface damage compensation is not recommended for the land use rights for the above-referenced proposed project area. The Tsaile/Wheatfields Chapter appreciates and strongly recommends the area be reclaimed and reseeded upon completion of the project.

If you have any questions, regarding the land use consent, I can be contacted at (928)313-2210. Thank you.

Consent Form #2
(Compensation for Damages)

CONSENT TO USE NAVAJO NATION LANDS

TO WHOM IT MAY CONCERN:

I, _____, hereby grant consent to the Navajo Nation and the Bureau of Indian Affairs to permit The Navajo Engineering and Construction Authority and Its Assigns of P.O. Box 969, Shiprock, New Mexico 87420 to use a portion of my Grazing area for the following purpose(s): Borrow Material Lease for 4.98 acres, more or less, on the Navajo Trust Lands for a duration of five years located in Section 28; T-33-N; R-30-E; Gila and Salt River Baseline and Meridian, Tsaile/Wheatfields Chapter, Navajo Nation, Apache County, Arizona. Approximately 79,330 tons of borrow source material will be excavated to reconstruct 10.68 miles of Navajo Route N12. Access road is not required as the borrow material area is located directly adjacent to the Navajo Route N12 as shown on the map that shows the location of the proposed project.

My consent is given subject to the receipt of SEE "REMARKS" BELOW which I acknowledge as good and adequate compensation for the diminishment in value of my land use rights as a result of the above referenced project as proposed.

REMARKS: Surface damage compensation is not recommended due to overgrazing and lack of an updated Annual Tally Count the past two years.

_____ DATE	_____ GRAZING PERMITTEE SIGNATURE (OR THUMBPRINT)	_____ CENSUS NO.	_____ PERMIT NO.
_____ PHONE NO.	_____ ADDRESS (P.O. BOX, CITY, STATE, ZIP)	_____ SOCIAL SECURITY NO.	

WITNESS: _____

<u>1.15.20</u> DATE	<u>Charles R. Chu</u> GRAZING PERMITTEE SIGNATURE (OR THUMBPRINT)	<u>6</u> CENSUS NO.	<u>0</u> PERMIT NO.
------------------------	---	------------------------	------------------------

ACKNOWLEDGEMENT OF FIELD AGENT

I acknowledge that the contents of this consent form was ☒ read ☐ or **fully explained** to the grazing permit holder ☐ **Navajo** or ☒ **English**. (check where applicable)

Minnie Bidtah 01/15/2020
Field Agent Signature

Consent Form #2
(Compensation for Damages)

CONSENT TO USE NAVAJO NATION LANDS

TO WHOM IT MAY CONCERN:

I, Evelyn Begay, hereby grant consent to the Navajo Nation and the Bureau of Indian Affairs to permit The Navajo Engineering and Construction Authority and Its Assigns of P.O. Box 969, Shiprock, New Mexico 87420 to use a portion of my Grazing area for the following purpose(s): Borrow Material lease for a period of five years for 4.98 acres, more or less, on the Navajo Trust Lands in the proximity of Tsaille/Wheatfields Chapter of the Navajo Nation, located in Section 28; T-33-N; R-30-E; Gila and Salt River Baseline and Meridian, Apache County, Arizona. Borrow source material will be excavated to reconstruct 10.68 miles of Navajo Route N12. Access road is not required as the borrow material area is located directly adjacent to the Navajo Route N12 as shown on the map that shows the location of the proposed project.

My consent is given subject to the receipt of 6400 ft of gravel to residence which I acknowledge as good and adequate compensation for the diminishment in value of my land use rights as a result of the above referenced project as proposed.

REMARKS: _____

09-14-2020
DATE

Evelyn Begay
GRAZING PERMITTEE SIGNATURE
(OR THUMBPRINT)

11-343
CENSUS NO. PERMIT NO.

PHONE NO.

ADDRESS (P.O. BOX, CITY, STATE, ZIP)

SOCIAL SECURITY NO.

WITNESS:

9.14.20
DATE

Charles C. Chie
GRAZING PERMITTEE SIGNATURE
(OR THUMBPRINT)

11.3
DISTRICT.

ACKNOWLEDGEMENT OF FIELD AGENT

I acknowledge that the contents of this consent form was ☐ read ☒ or fully explained to the grazing permit holder ☒ Navajo or ☐ English. (check where applicable)

Minnie Bittak
Field Agent Signature

FIELD CLEARANCE CHECKLIST

(This form covers only damages and compensation to individual land users. It does not cover consideration or other fees to the Navajo Nation. Use back if necessary to complete this form).

1. Project Identification

Applicant: The Navajo Engineering and Construction Authority,
P.O. Box 969, Shiprock, NM 87420
Type of Project: Borrow Material Lease for a term of five years.
Purpose: Excavate borrow source material to reconstruct of 10.68 miles of
Navajo Route N12.
Location: Tsaile/Wheatfields Chapter, the NAVAJO NATION,
Apache County, Arizona
Identification Number (s): N12(19-4)1,2, & 4 Tsaile/Wheatfields, Arizona

2. Amount of Land Affected: 4.98 Acres.

3. Land Status: Trust XX

4. List names of all individuals whose land use rights will be affected by his project:

	Names:	Census Number	Type of Land Use Right
1.	<u>Evelyn Begay</u>	<u>---</u>	<u>Grazing; 11-343</u>
2.	<u>_____</u>	<u>_____</u>	<u>_____</u>
3.	<u>_____</u>	<u>_____</u>	<u>_____</u>
4.	<u>_____</u>	<u>_____</u>	<u>_____</u>

5. Are all Land Users that have claims to the affected lands as shown in the BIA Branch of Land Operations records included in the list in Item 4? yes

6. Have Grazing Committee or Land Board Member (whichever is appropriate) for the affected area confirm Land User list in item 4 by signing acknowledgement below.

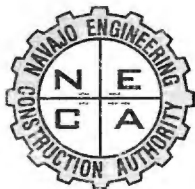
ACKNOWLEDGEMENT

I acknowledge that due notice was given to the affected community to the proposed project, and according to my records and to the best of my knowledge, the list of individuals in Item #4 includes all Land Users who have land use rights in the affected lands.

9.14.20
Date

Charles E. Chue
Grazing Committee or Land Board Member

11.3
District Number



Navajo Engineering & Construction Authority

Phone (505) 210-7070 P.O. Box 969

SHIPROCK, NEW MEXICO 87420

June 8, 2020

The Navajo Nation
Division of Natural Resources
General Land Development
Post Office Box 2249
Window Rock, Arizona 86515



Attention: Ms. Elerina Yazzie, Program Manager, GLDD

Reference: Borrow Pit Lease Application for the Wheatfields Borrow Pit,
N12(19-4)1,2 & 4, Tsale to Wheatfields, Arizona

Dear Ma'am:

Enclosed are: one signed copy of our application for a Borrow Pit Lease, one complete copy of the Appendix to Borrow Pit Lease Application for the referenced project, one thumb drive containing digital copies of the complete application packet, and a check for \$500.00 for the processing fee.

This information is for a Borrow Pit Lease Application for a Borrow site located directly north of the Wheatfields Chapter in Apache County, Arizona. Please begin the application process with this information. A copy of our application for the Wheatfield Borrow Pit has been provided to the Bureau of Indian Affairs, Chinle Agency, Realty Specialist, along with a check for \$75.00 for the filing fee and a copy of the "Appendix" for their files.

As described in our Lease application package, we propose to use this parcel of land to extract raw material for the production of borrow material. We request that the term of the permit be for a period of five years. As an Enterprise of the Navajo Nation, we request the royalty rate of \$0.75 per ton for each ton material removed and sold from the lease premises. NECA request the Navajo Nation Forestry tree inventory and appraisal of the tract relative to the proposed borrow excavation pit be waived. NECA would also like to request to use survey cross section for measurements on borrow material for payment rather than use a scale. The finale cross section will be converted to tons for payment at the end of the final borrow haul.

NECA will provide a resolution to ensure the disturbed area will be reclaimed. We also ask that this stipulation be listed in the terms and conditions attached to the permit and in the Resolution from the Resources & Development Committee of the Navajo Nation Council.

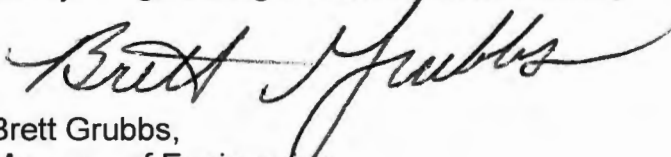
We also request that the terms and condition attached to the lease and the resolution from the Resources and Development Committee include a stipulation that authorizes NECA to begin use of the site once the borrow and gravel lease is signed by the Navajo Nation President in order to expedite the borrow extraction.

For more information, please review the Appendix to Borrow Lease Application that is attached.

We appreciate your prompt attention to this permit application.

Sincerely yours,

Navajo Engineering & Construction Authority

A handwritten signature in cursive script, reading "Brett Grubbs".

Brett Grubbs,
Manager of Engineering

Copy to: Chrono, permit file



THE NAVAJO NATION
Heritage & Historic Preservation Department
P.O. Box 4950 • Window Rock, Arizona 86515
(928) 871-7198 (tel) • (928) 871-7886 (fax)



CULTURAL RESOURCE COMPLIANCE FORM

NNHHPD NO.: HPD-19-727

CONSULTANT REPORT NO.: CAG 19-08

PROJECT TITLE: A Cultural Resources Inventory of the Proposed Navajo Engineering and Construction Authority 4.98 Acre Unclassified Material Borrow Source in the Wheatfields/Tsaile Chapter, Apache County, Arizona.

LEAD AGENCY: BIA/NRO

SPONSOR: Ammerson Barber, Navajo Engineering & Construction Authority, PO Box 969, Shiprock, NM, 87420

PROJECT DESCRIPTION: NECA is proposing to use an area approximately 4.98-acres for a material borrow source for construction/repaving of N12 Wheatfields/Tsaile Chapters. The area of effect is 4.98-acres.

PROJECT ARCHAEOLOGIST: Jeremy Begay and Jeffrey C. Begay

NAVAJO ANTIQUITIES PERMIT NO.: B19649

DATE INSPECTED: 9/19/2019

DATE OF REPORT: 10/9/2019

TOTAL ACREAGE INSPECTED: 7.21

METHOD OF INVESTIGATION: Class III pedestrian inventory with transects spaced 10 m apart

Number of Eligible Properties: 0

Number of Non-Eligible Properties: 0

Number of Unevaluated Properties: 0

Number of Burials: 0

Number of TCPs: 0

Number of Isolated Occurrences: 0

Number of In-Use Sites: 0

EFFECT/CONDITIONS OF COMPLIANCE: No Historic Properties Affected

PROCEED RECOMMENDED: Yes

CONDITIONS: No

In the event of a discovery ["discovery" means any previously unidentified or incorrectly identified cultural resources including but not limited to archaeological deposits, human remains, or locations reportedly associated with Native American religious/traditional beliefs or practices], all operations in the immediate vicinity of the discovery must cease, and the Navajo Nation Historic Preservation Department must be notified at (928) 871-7148.

FORM PREPARED BY: Tamara Billie

FINALIZED: 11/22/2019

Richard M. Begay, Department Manager/THPO

Navajo Nation Heritage and Historic Preservation Department

Date

Navajo Regional Approval:

BIA- Navajo Regional Office

12/4/19

Date

~ DOCUMENT IS VOID IF ALTERED ~

HPD Number.: HPD-19-727

LOCATION INFORMATION

LAND STATUS: NN Tribal Trust Land

STATE: AZ

DATUM: NAD83

ZONE: 12

<u>COUNTY</u>	<u>QUAD</u>	<u>UTM N</u>	<u>UTM E</u>
Apache	Lower Wheatfields, AZ	4012100	668331
	Upper Wheatfields, AZ	4012055	668319
		4012015	668327
		4011954	668424
		4011976	668468
		4012001	668497
		4012129	668435

CHAPTER

	<u>Township</u>	<u>Range</u>	<u>Sections</u>
Tsaile-Wheatfields	33N	30E	28

~ DOCUMENT IS VOID IF ALTERED ~



THE NAVAJO NATION
Historic Preservation Department

PO Box 4950, Window Rock, AZ 86515
TEL: (928) 871-7198 / 7134 FAX: (928) 871-7886

TRADITIONAL CULTURAL PROPERTY (TCP) RECORD
SEARCH VERIFICATION FORM

TCP WILL NOT SIGN/APPROVE IF THIS PORTION IS LEFT BLANK

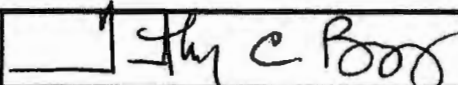
Project Information:

DATE	9/20/2019
RESEARCHER & COMPANY	Jeremy Begay, Jeffrey Begay, Brandi Bitsilli, Lisa Zohnnie, Rius Goodman (CAG)
PROJECT NAME	A CRI of the Proposed NECA 4.98 Acre Material Borrow Site
PROJECT/PERMIT NUMBER	CAG19-08 B19 649
PROJECT LOCATION	Tsaile/Wheatfields, Apache Co, AZ

TO BE FILLED OUT & SIGNED BY AUTHORIZED NNHPD STAFF ONLY

A literature search of TCP Records at NNHPD on the above date indicates the following:

☒	There are <u>no</u> TCP(s) present within the project area and/or buffer zone. The project may proceed as proposed.
☐	TCP(s) <u>are</u> present within the project area and/or buffer zone. Project may have the potential to adversely affect TCP(s). Please document TCP(s) as a summary (with only general location information) in the body of reports submitted for review to HPD/CRCS. Give full detail on the TCP Documentation Forms in a separate, and clearly labeled, confidential appendix.
☐	Project may proceed with the following stipulations:
☐	Further consultation is required. Consult with the following:
☐	There are no mitigative measures. Project may not proceed.

NNHPD/TCP Program Reviewer:		Date: 9/18/19
-----------------------------	---	---------------

Return this form along with report to the NNHPD/Compliance Section

Note: In addition to the TCP Record search, the consultant must demonstrate that a good-faith effort to consult with 1.) Surface user(s): grazing-permit holder(s) (individuals whose consents for right-of-way have been sought by developer); any other residents in or within view of the proposed project area. 2. Chapter(s) within which the proposed project is located: chapter officers and/or delegate(s) of the Navajo Nation Council; at the request of any of these individuals, the developer's consulting anthropologist will also make a presentation at a meeting of general chapter membership. 3. Other knowledgeable people recommended by the present surface user(s), chapter officials, and chapter members.

Carrizo Archaeological Group

(505) 320-9013 : Email: carrizoarch@gmail.com : Website: www.carrizoag.com



DATE: October 9th, 2019

TO: Mr. Ammerson Barber, Project Coordinator
Navajo Engineering and Construction Authority
P.O. Box 969
Shiprock, NM, 87420

REGARDING: Submission: CAG19-08: A Cultural Resources Inventory of the Proposed Navajo Engineering and Construction Authority 4.98 Acre Unclassified Material Borrow Source in the Wheatfields/Tsaile Chapter, Apache County, Arizona.

Dear Mr. Barber

Enclosed in this package is a copy of the archaeological report describing the completion of the cultural resources inventory of the proposed NECA 4.98 Acre Unclassified Material Borrow Source in the Wheatfields/Tsaile Chapter, Apache County, Arizona. The report has been submitted to the Navajo Nation Historic Preservation Department (NNHPD) in Window Rock, Arizona, for compliance review. A letter of compliance will be issued by the NNHPD within 30-50 days.

Archaeological clearance is recommended for the proposed undertaking since no significant cultural resources were encountered during the inventory. Please do not hesitate to contact me at (505) 320-9013 should you have any questions. Thank you again for your business and we look forward to working with you again in the future. Have a good day.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Begay".

Jeremy Begay
Senior Archaeologist

ARCHAEOLOGICAL INVENTORY REPORT (AIRs) DOCUMENTATION PAGE

1. RECEIPT'S ACCESSION NO:	2. (FOR HPD USE ONLY)	3. HPD REPORT NO.
4. TITLE OF REPORT: A Cultural Resources Inventory of the Proposed Navajo Engineering and Construction Authority 4.98 Acre Unclassified Material Borrow Source in the Wheatfields/Tsaile Chapter, Apache County, Arizona.		5. FIELDWORK DATES: 9/19/19
Author (s): Jeffrey C. Begay and Jeremy Begay		6. REPORT DATE: 10/9/2019
7. CONSULTANT'S NAME AND ADDRESS: Gen. Charge: Jeremy Begay, Sr. Archaeologist Org. Name: Carrizo Archaeological Group Org. Address: 1201 N. Mesa Verde Avenue Farmington, NM 87401 Phone: (505) 608-1077		8. PERMIT NO.: B19649
		9. CONSULTANT'S REPORT NO.: CAG19-08
10. SPONSOR'S NAME AND ADDRESS: Ind. Responsible: Mr. Ammerson Barber, Project Coordinator Org. Name: Navajo Engineering & Construction Authority Org. Address: P.O. Box 969 Shiprock, New Mexico 87420 Phone: (505) 210-7070		11. SPONSOR'S PROJECT NO.:
		12. AREA OF EFFECT: 4.98 acres (2.02 ha) AREA SURVEYED: 7.21 acres (2.92 ha)
13. LOCATION: a. Chapter: Wheatfields/Tsaile b. Agency: Fort Defiance c. County: Apache d. State: Arizona e. Land Status: Navajo Tribal Trust		f. UTM: See Table 1. g. Legal Description: See Table 1 h. USGS 7.5' Map: See Table 1 i. Lead Agency: Bureau of Indian Affairs
14. REPORT OR SUMMARY: (Attach additional pages if necessary) a. Description of Undertaking: See Supplemental Sheets b. Existing Data Review: See Supplemental Sheets c. Area of Environmental & Cultural Setting: See Supplemental Sheets d. Field Methods: See Supplemental Sheet: See Supplemental Sheets		
15. CULTURAL RESOURCE FINDINGS: (Attach additional pages if necessary) a. Location/Identification of Each Resource: No cultural resources were encountered during the inventory. b. Evaluation of Significance of Each Resource: NA		
16. MANAGEMENT SUMMARY/RECOMMENDATIONS: Archaeological clearance is recommended for the proposed undertaking provided that the NECA confines all proposed work to the area of effect and that should any undocumented cultural resources be uncovered all work must immediately be stopped and the discovery be reported to the Navajo Nation Heritage and Historic Preservation Department.		
17. CERTIFICATION:		
Signature: <u>[Signature]</u> Date: <u>10/9/19</u> General Charge Name: <u>Jeremy Begay, Senior Archaeologist</u>		
Signature: <u>[Signature]</u> Date: <u>10/9/19</u> Direct Charge Name: <u>Jeffrey C. Begay, Senior Archaeologist</u>		

13. LOCATION

Table 1. Designation, UTM Coordinates, Legal Description, and USGS Quad(s) for the project.

Designation	UTM Coordinates: Zone 12 (NAD 83)		Legal Description						7.5 min USGS Map
	Northing	Easting	¼	¼	¼	Sec	T	R	
Corner 1	4012100	0668331	*	*	*	28	33N	30W	Lower Wheatfields, Ariz., Provisional Edition 1983
Corner 2	4012055	0668319	*	*	*	28	33N	30W	
Corner 3	4012015	0668327	*	*	*	28	33N	30W	
Corner 4	4011954	0668424	*	*	*	28	33N	30W	
Corner 5	4011976	0668468	*	*	*	28	33N	30W	Upper Wheatfields, Ariz.-N. Mex., Provisional Edition 1983
Corner 6	4012001	0668497	*	*	*	28	33N	30W	
Corner 7	4012129	0668435	*	*	*	28	33N	30W	

14. REPORT

a. Description of Undertaking

The Navajo Engineering & Construction Authority (NECA) proposes to utilize an area of approximately 4.98 acres for a material borrow source to be utilized in upgrade construction and repaving of Navajo Route 12 in the Wheatfield/Tsalie/Black Rock Chapter, Apache County, Arizona. Construction will consist of the removal of vegetation, the mining of soils, pumping of water to reduce dust, backfilling, and environmental remediation. The area of effect measures 4.98 acres (2.02 ha).

b. Existing Data Review

Prior to field work, a literature search was conducted at the Navajo Nation Heritage and Historic Preservation Department's (NNHPD) Cultural Compliance Section (CRCS) and the Traditional Culture Program (TCP), located in Window Rock, Arizona. The CRCS records indicated that five previous projects have been conducted within 300 feet (91 meters) of the project area. The previous inventories include; NNHPD 02-739, NNHPD 005-835, NNHPD 96-353, NNHPD 89-123, and 05-1040. One archaeological site was determined to have been recorded in conjunction with archaeological project NNHPD 89-123. A check of the site location determined that archaeological site AZ-I-55-106 is located well outside of the project area and will not be impacted by the current proposed undertaking.

A file search at the NNHPD Traditional Cultural Program's sacred sites archives indicated five sacred areas are located within a 5 mile (8.04 km) radius of the project area. TCP# 221. ligai Dah Azkani / White Mesa / north of Wheatfields Lake, TCP# 268. Sei Heets'osi Bi'aad, Sei Hiits'osi Bi'aad / Sand Cone, Female / White Cone (Wheatfields), TCP# 315. To Dzis'a, To Ndzis'a / Water Streaks Away / Wheatfields, TCP# 657. Shash Diits'ini / Bony Bear / Black Pinnacle, and TCP# 1064. Che'zhin Lava Rock / Tsaile Butte. Consultations with NNHPD TCP personnel determined that no TCP's are present within the project area or buffer zone and that the project can proceed as planned.

c. Area of Environmental and Cultural Setting

The project area is located on the broad Defiance Plateau which is best described as an immense, westward dipping monocline uplifted during the late Cretaceous Period. Eons of erosion have produced numerous secondary geologic features such as; Fluted Rock, Black Creek Valley, and Hunters Point. Numerous named and unnamed, intermittent washes and arroyos have deeply incised the sedimentary uplift to create major and minor valleys, canyons, ridges, hills, mesas, and floodplains. Surface sediments observed within the project area include, fine to coarse grained alluvial, fluvial, colluvial, and aeolian packages of clay, silt, and sand and multi-lithic sand. Also observed within the project area are numerous pebble to boulder sized sedimentary clasts as well as sedimentary bedrock outcrops. The higher elevation provides for an ecosystem supporting a wide variety of flora to include; ponderosa and pinon pine, juniper, sage brush, prickly pear and cholla cacti, Indian rice grass, grama grass, narrow and broad leaf yucca, green ephedra, joint fir, globe mallow, tansy mustard, blazing star, and Russian thistle.

d. Field Methods

On September 19th, 2019, Jeffrey Begay, Brandi Bitsilli, and Rius Goodman, archaeologists with Carrizo Archaeological Group (CAG), conducted the cultural resources inventory of the project area. The project archaeologists were shown the project area by NECA Project Coordinator Mr. Ammerson Barber. The project area was surveyed by walking parallel transects in a concentric circle, spaced no more than 10 meters (32 feet) apart. A total area of 7.21 ac. (2.92 ha.) was surveyed in conjunction to this project.

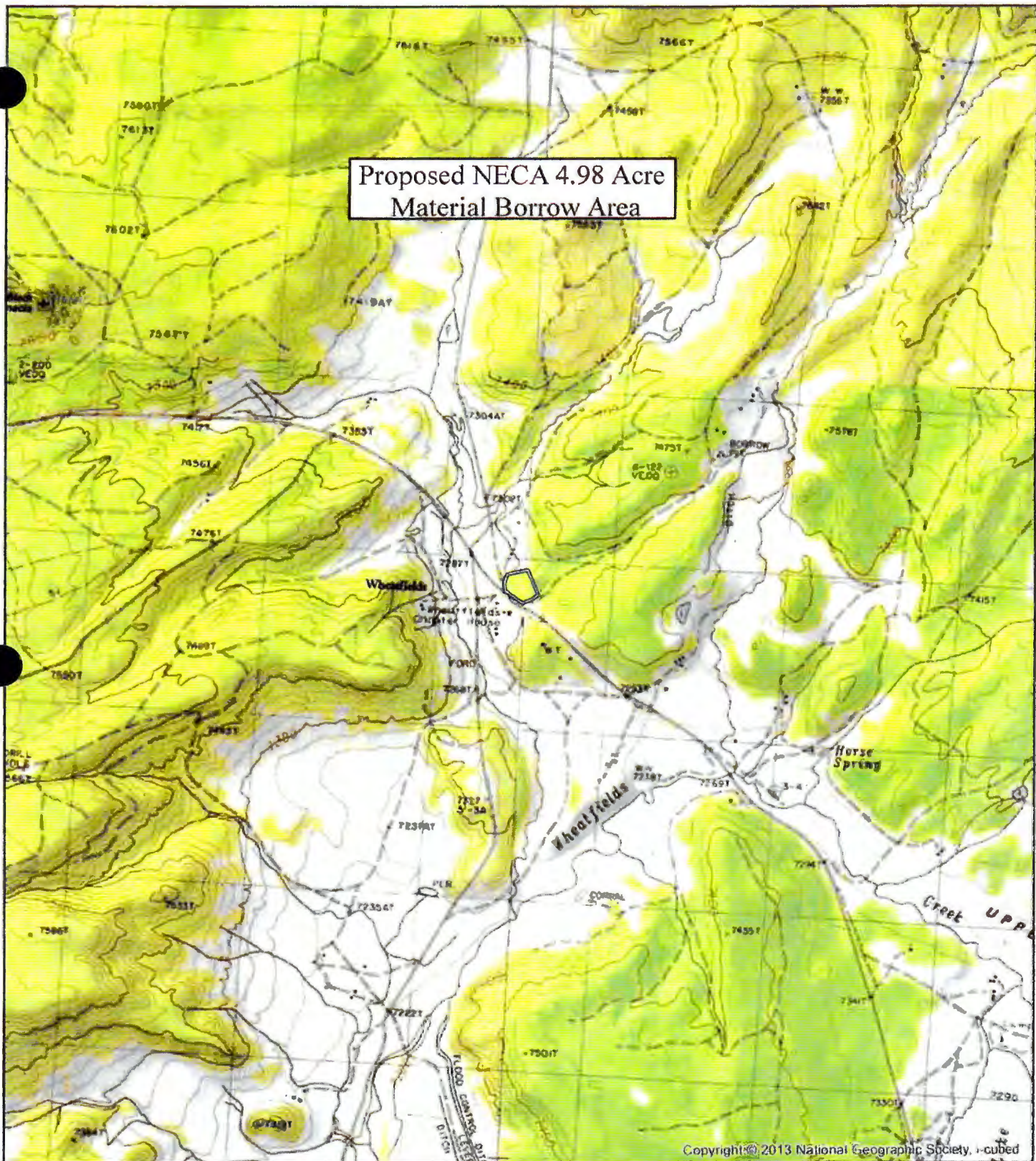
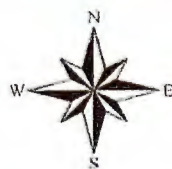


Fig.1: Map showing proposed NECA Material Borrow project area, CAG 19-08.

Upper Wheatfields, Ariz.-N.Mex., P.E. 1983
 Lower Wheatfields, Ariz., P.E. 1983
 Scale = 1 : 24,000
 1 in = 2000 ft.



Legend

- Material Borrow Area
- Buffer Zone

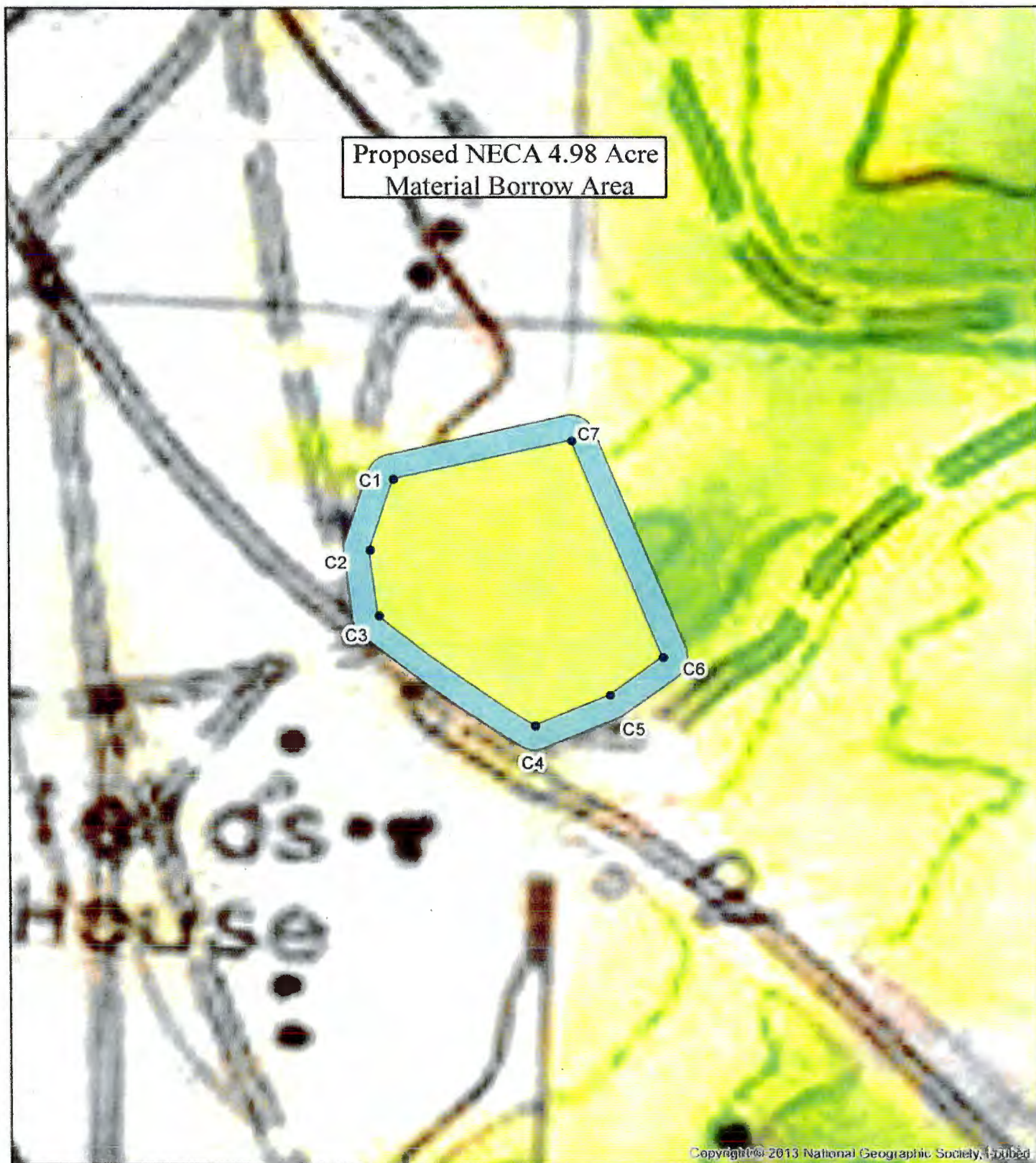


Fig. 2: Enlarged map showing proposed NECA
Material Borrow project area, CAG 19-08

Upper Wheatfields, Ariz.-N.Mex., P.E. 1983
Lower Wheatfields, Ariz., P.E. 1983

Scale = 1 : 3,000



Legend

- Corners
- Material Borrow Area
- Buffer Zone

BIOLOGICAL RESOURCES COMPLIANCE FORM
NAVAJO NATION DEPARTMENT OF FISH AND WILDLIFE
P.O. BOX 1480, WINDOW ROCK, ARIZONA 86515-1480

It is the Department's opinion the project described below, with applicable conditions, is in compliance with Tribal and Federal laws protecting biological resources including the Navajo Endangered Species and Environmental Policy Codes, U.S. Endangered Species, Migratory Bird Treaty, Eagle Protection and National Environmental Policy Acts. This form does not preclude or replace consultation with the U.S. Fish and Wildlife Service if a Federally-listed species is affected.

PROJECT NAME & NO.: Wheatfields Borrow Pit

DESCRIPTION: NECA proposes a mining lease of 4.98 acres for the N12 (19-4)1,2, & 4 reconstruction project.

NECA will fully reclaim the leased area upon closure of the mine.

LOCATION: 668422E 4011956N (NAD83), Tsailé/Wheatfields, Apache County, Arizona

REPRESENTATIVE: Leonard Robbins, Denali Environmental Services for Navajo Engineering & Construction Authority (NECA)

ACTION AGENCY: Bureau of Indian Affairs and Navajo Nation

B.R. REPORT TITLE / DATE / PREPARER: Wheatfields Borrow Pit Mining Lease/NOV 2019/Denali Environmental Services

SIGNIFICANT BIOLOGICAL RESOURCES FOUND: Area 2.

POTENTIAL IMPACTS

NESL SPECIES POTENTIALLY IMPACTED: NA

FEDERALLY-LISTED SPECIES AFFECTED: NA

OTHER SIGNIFICANT IMPACTS TO BIOLOGICAL RESOURCES: NA

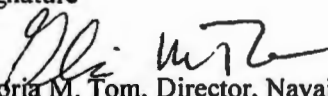
AVOIDANCE / MITIGATION MEASURES: NECA will follow the mitigation measures outlined in the BE.

CONDITIONS OF COMPLIANCE*: NA

FORM PREPARED BY / DATE: Pamela A. Kyselka/17 JAN 2020

COPIES TO: (add categories as necessary)

☐ _____ ☐ _____

2 NTC § 164 Recommendation: ☒ Approval ☐ Conditional Approval (with memo) ☐ Disapproval (with memo) ☐ Categorical Exclusion (with request letter) ☐ None (with memo)	Signature  Gloria M. Tom, Director, Navajo Nation Department of Fish and Wildlife	Date 01/21/20
--	---	-------------------------

*I understand and accept the conditions of compliance, and acknowledge that lack of signature may be grounds for the Department not recommending the above described project for approval to the Tribal Decision-maker.

Representative's signature

Date

**WHEATFIELDS BORROW PIT LEASE BIOLOGICAL EVALUATION
NAVAJO ENGINEERING & CONSTRUCTION AUTHORITY
PROJECT No. N12 (19-4)1, 2, & 4**



**POB: NW/4 Section 28 Township 33 North Range 30 East
L&L: 36° 14' 16.1" N 109° 07' 32.7" W
UTM: 668,422 m E 4,011,956 m N
Elev. 7,312' amsl**

**Prepared by
NAVAJO ENGINEERING & CONSTRUCTION AUTHORITY
P.O. Box 969
Shiprock, New Mexico 87420**

**DENALI ENVIRONMENTAL SERVICES
P.O. Box 1127
Fort Defiance, Arizona 86504
denali1946@msn.com**

November, 2019

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Figure 1. Project Location Topographic Map

Table 1. Seed Mixture for the Wheatfields Borrow Pit

Table 2. Wheatfields Borrow Pit Lease Coordinates.

Table 3. Federal Endangered Species Act Listing.

Table 4. Navajo Endangered Species List.

Table 5. Migratory Bird Treaty Act Listed Species.

Table 6. Primary Contacts Made During Preparation of this Document.

Appendix A Navajo Department of Fish & Wildlife Data Response Letter

WHEATFIELDS BORROW PIT LEASE BIOLOGICAL EVALUATION

1.0 Introduction

The Navajo Engineering & Construction Authority (NECA) of Shiprock, New Mexico wishes to make application for the proposed Wheatfields Borrow Pit Lease. The proposed pit adjoins Navajo Route N12 right of way, across the highway from the Wheatfield Chapter House, Wheatfields, Arizona. The land will be used as an open borrow pit, where heavy equipment and trucks, and borrow stockpile will be located for approximately 60 months during the widening and reconstruction of Navajo Route N12. The material source will be used to widen and reconstruct Navajo Route N12 from Wheatfields Lake extending north to Lukachukai, for a distance of 11.5 miles. Figure 1 illustrates the location of the proposed borrow pit along Navajo Route N12.

1.1 Description of the Proposed Action

In support of the highway widening and reconstruction project, NECA Project No. N12 (19-4)1, 2, & 4, the company plans to construct the proposed Wheatfields Borrow Pit Lease on 4.98 acres of Navajo Tribal Trust land. Operations would be in support of the Navajo Route N27 highway construction project. Approximately 53,924 metric tons of paving aggregate will be required during the widening and reconstruction of Navajo Route 12, from the Wheatfields Lake area extending north toward Lukachukai, for a distance of 11.5 miles. During pit operations, a dozer, front end loaders, and eighteen belly dump trucks would be in operation and stored onsite. Figure 1 illustrates the location of the proposed pit. The pit and access road shape file is shown on the survey plat at Appendix A. Haul roads will be located within the mining lease. No other infrastructure would be required.

All disturbed surface areas would be re-vegetated consistent with the American Association State Highway & Transportation Officials (AASHTO) Standards and Federal Projects (FP-14) specification in Section 625 (mulching and seed mix), and Supplemental Specifications form the basis of the plan. Stockpiling borrow material source will begin when the borrow lease is approved by the Navajo Land Department and the BIA Navajo Regional Office.

Seeding will be established by the Dry Rangeland Method. Seedbed preparation shall be accomplished with a disc harrow, chiseling tool or with other equipment, which will provide an even mixture of fertilizer into the soil. All areas to be seeded shall have fertilizer uniformly applied to the surfaces and tilled into a minimum of three inches of the soil.

After tillage is completed the seed shall be planted by disc drill with depth bands at approximately one-half inch. On slopes too steep or rocky (greater than 3:1 slope) seed may be broadcasted, and covered by dragging, hand raking or other approved method. The type of seed and pure live seed rate is as shown in Table 1. Straw mulch will follow seeding at a rate of two tons per acre.

Table 1. Seed Type and Rate for the Wheatfields Borrow Pit. Expressed in Pure Live Seed (PLS).

Grassland Savannah Vegetation Type				
Common Name	Scientific Name	Variety	Drilled Rate	Broadcast Rate
Alkali Sacaton	<i>Sporobolus airoides</i>	Salado	0.5	1
Western Wheatgrass	<i>Pascopyrum smithii</i>	Arriba	4	8
Galleta	<i>Pleuraphis jamesii</i>	Viva	4	8
Blue Grama	<i>Bouteloua gracilis</i>	Alma	1	2
Scarlet Globemallow	<i>Sphaeralcea coccinea</i>	VNS	1	2
Four-wing Saltbush	<i>Atriplex canescens</i>	Rincon	3	6
Total			13.5#/Acre	27#/Acre

Application rates of seed as specified are for Pure Live Seed (PLS). PLS is determined by multiplying the sum of germination and hard or dormant seed by purity. PLS is specified by the buyer and normally shown on the seed bags.

NECA would also prepare a *Stormwater Pollution Prevention Plan* (SWPPP) as required by Section 402 (p) of the Federal Water Pollution Control Act (formerly the Clean Water Act). A Notice of Intent for a NPDES permit application would be applied for with the U.S. Environmental Protection Agency in Washington D.C.

1.2 Location

The proposed gravel pit project is located on USGS topographic map entitled *Wheatfields*, AZ 7.5 minute quadrangle map at Figure 1. The waypoint descriptions of the project locations are shown at Table 2.

Table 2. United States Geological Survey Maps Waypoint Descriptions of Wheatfields Borrow Pit Mining Lease, Wheatfields, Arizona.

Project Description	Public Land Survey G&SR PM	Latitude and Longitude WGS 84/NAD 83	UTM, Zone 12
Southwest Corner N12 Alignment POB	NW/4 Section 28 T33N R30E	36° 14' 16.1" N 109° 07' 32.7" W	668,422 m E 4,011,956 m N
Southwest Corner N12 Alignment	NW/4 Section 28 T33N R30E	36° 14' 18.3" N 109° 07' 36.6" W	668,324 m E 4,012,015 m N
West Corner	NW/4 Section 28 T33N R30E	36° 14' 19.4" N 109° 07' 36.9" W	668,315 m E 4,012,054 m N
Northwest Corner	NW/4 Section 28 T33N R30E	36° 14' 21.1" N 109° 07' 36.3" W	668,329 m E 4,012,102 m N
Northeast Corner	NW/4 Section 28 T33N R30E	36° 14' 20.7" N 109° 07' 31.4" W	668,454 m E 4,012,090 m N

Southeast Corner	NW/4 Section 28 T33N R30E	36° 14' 17.7" N 109° 07' 29.7"W	668,495 m E 4,011, 998 m N
South Corner	NW/4 Section 28 T33N R30E	36° 14' 16.9" N 109° 07' 30.8" W	668,467 m E 4,011,977 m N

At an elevation of 7,312 feet amsl, the proposed mining lease is located east of Navajo Route N12, Wheatfield/Tsaile Chapter, Chinle Navajo Agency, Apache County, Arizona.

2.0 ENDANGERED SPECIES ACT / NAVAJO SPECIES OF CONCERN LIST / MIGRATORY BIRD TREATY ACT AUTHORITIES

The listing of threatened and endangered species (T&E) in this document is compiled by the Navajo Department of Fish and Wildlife, Navajo Natural Heritage Program (NDF&W-NNHP). The Program, under a Public Law 93-638 contract with the Navajo Regional Office, Bureau of Indian Affairs, would respond to the T&E data request and craft a data response letter (listing) for the proposed undertaking. The NNHP data response letter is shown in Appendix A.

2.1 Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.)

ESA requires all federal departments and agencies to conserve threatened and endangered species and the habitats on which they depend, and to consult with the U. S. Fish and Wildlife Service (USFWS), on all actions authorized, funded or carried out by the agency to ensure that the action will not likely jeopardize the continued existence of any threatened and endangered species or adversely modify critical habitat. Under contract, authorized by Public Law 93-638 the Indian Self Determination and Education Assistance Act of 1993, NDF&W carries out the ESA consultation function for the Navajo Regional Office, Bureau of Indian Affairs. NDF&W would review the biological evaluation document for the proposed project and would approve the report via a Biological Resource Compliance Form.

2.2 Navajo Species of Concern List (NESL)

The Resource Committee of the Navajo Nation Council, Resolution RCS-41-08 (NDF&W RCP, 2008) mandates the consideration of the Navajo Endangered Species List (NESL) special management species, not federally listed as threatened or endangered. The NESL species listed are specially managed in order to prevent or reduce the need to list the species as threatened or endangered in the future. The NDF&W will actively seek information on those species to determine if they warrant inclusion in a different group or removal from the list (NDF&W-NNHP, 2008).

2.3 Migratory Bird Treaty Act, as amended (16 U.S.C. 703 et seq.)/ EO 13186

Migratory birds and their habitats are protected under the Migratory Bird Treaty Act (MBTA) (16 USC §703-712) and EO 13186. All federal agencies are required to consider management impacts to protect migratory non-game birds. Executive Order 13186 calls for increased efforts to more fully implement the MBTA.

3.0 METHOD OF SURVEY

3.1 Offsite Survey Methods

The NDF&W- NHP was consulted via a data request letter. Natural Heritage Program responded November 8, 2019 with a listing of U.S. Fish and Wildlife Endangered Species Act (ESA) species and Navajo Endangered Species List (NESL). See Appendices A. The Migratory Bird Treaty Act (MBTA) listing on the Colorado Plateau was accessed at the USFWS website, species shown at Table 5.

3.2 Onsite Survey Methods

Onsite pedestrian surveys of the proposed borrow pit were conducted September 5, and September 9, 2019. The entire project area was covered during the field survey. The weather was sunny with ambient temperatures near 75°F. All plant and wildlife species and signs of wildlife observed in the project area were recorded and digital photos of the project area were taken. Binoculars were used to survey for raptors and potential nesting sites on nearby mesas. Onsite habitat was evaluated for all USFWS ESA, NESL, and MBTA species. All known conservation status species and potential species likely to occur in the proposed project and action areas were evaluated at Tables 3, 4, and 5 respectively.

3.3 Action Area

The proposed project action area pit would encompass 4.98 acres as shown in Figure 1. The action area would also include the access road, and pit zone of influence, which would consist of the surrounding terrain within a 1/8-mile (0.12 mile) radius of the pit boundaries.

4.0 FINDING AND DETERMINATION OF SPECIES EFFECTS

4.1 Existing Land Uses

Land use in the proposed project area is used for rangeland, transportation, forest logging and timber production in the past, present, and the future. Vicinity land uses surrounding the proposed borrow pit are open rangeland of the Montane Ponderosa Pine Forest Community, comprised of sparse Ponderosa pine, Pinyon-Juniper, shrubs, perennial grasses and annuals. See cover photograph. Navajo Route N12 and open rangeland are the predominant land use in the area. The Wheatfields Chapter House is located directly across N12 to the south. The chapter house administrative area, heavy equipment parking, and supply storage yard occupy approximately four acres of land.

The entire Wheatfields Chapter, including the proposed project area was logged during the winter months in the late 1970s and early 1980s. Forest planning compartments encompass the project area in all directions. Numerous forest logging haul roads and logging spur roads traverse the vicinity project area, including major logging access roads that connect to Navajo Route N12.

In all directions, approximately 14 scattered home sites and numerous livestock corrals are located within one-half mile of the proposed project area. Forested areas in the Wheatfields Chapter contain residential clusters, an occasional remote summer camp, and numerous livestock. The retired elderly in the area still carry on the ranching life style. Grazing permits are issued to local Navajo families, as raising livestock has been a sustainable economy in the past. Summer camps are built on family traditional use areas. Younger family members that have jobs in the region and wish to be with their elders, have moved back to the old homesteads. The forested areas are currently

grazed by domestic livestock: sheep, cattle, and horses. Numerous cattle and feral horses on open rangeland, were noted during the field survey.

Electrical 114 Kv powerlines traverses the project area, west, north and south. Navajo Route N12, Apache County Road 444, and forest roads traverses the vicinity properties in all directions. Clustered family homes, powerlines and water pipelines are prevalent in the project area.

Other land uses in the immediate area include fishing, lakeside recreation and seasonal big game hunting. Wheatfields Lake Recreational Area, designated as an Area 6 Recreation Area – is located approximately 2 miles south of the proposed project area.

The proposed Navajo Route N12 widening and reconstruction project (within the right of way) would qualify as an exception to the preparation of a BE according to the RCP pages 2 & 3: "EXCEPTIONS-Projects that do not require preparation of a BE, Part 10. Modernization of existing paved road & highways including resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes...Navajo Route 12 (from Window Rock to Tsaille)."

In accordance with the "Biological Resource Land Use Clearance Policies and Procedures (RCP) RCS-44-08", approved September 10, 2008, the Navajo Resource and Development Committee of the Navajo Nation Council, the NDF&W-NHP would designated the Wheatfields Borrow Pit project area as an Area 2, a Moderately Sensitive Area – moderate restrictions on development to avoid sensitive species/habitats.

4.2 Physical Description

Located north and east of the proposed project area, Tsaille Peak and the Chuska Mountains are the prominent land forms in the area. The proposed burrow pit would be located on the west flank of the mountain at elevations of 5,312 feet above mean sea level (amsl).

4.2.1 Topography

The general land form is characterized by distance volcano buttes and monoliths, sandstone mesas, and rock outcrops formed by the Defiance Plateau Uplift. The proposed project area is located on the west flank of the Defiance Uplift (anticline), within the Canyon DeChelly watershed. General topographic gradient of the project area moderately slopes to the west. Major drainages, originating in the Chuska Mountains, cut the landscape at a perpendicular angle that exposes and erodes rock outcrops, of sandstone, clays and shale. The surface topography and geology/soils along the proposed project area is not expected to present any specific problems to the proposed project.

4.2.2 Soils & Geology

The proposed borrow pit would be located on the west flank of the central Chuska Mountains. Soils of the forested plant community are atypical, previously disturbed from logging activity. Natural soils are comprised of the Lithic Haplustepts-Jacks family-Pachic Haplustolls complex, at 4 to 40 percent slopes, which cover the entire part of the proposed pit. Soil texture

ranges from coarse sandy loam to bedrock at 18 to 60 inches. Parent material: Residuum weathered from sandstone. The tan - brown coarse sandstone and cobble stone conglomerate, an unconformity, is situated on top of the Sonsela Sandstone Bed of the Chinle Formation. The soils in the project area and vicinity were formed primarily from alluvial deposits, sandstone and pebble rock from the alluvial sediment that was deposited in valleys and terraces (NRCS, 2019).

The Sonsela Sandstone and Monitor Butte Member surround the coarse sandstone-gravel bed material. The Sonsela Sandstone Bed is made up of light-gray to yellowish-gray sandstone and conglomerate, and the Monitor Butte Member is comprised of siltstone, sandstone, and lime-pellet conglomerate (Cooley, M.E, J.W. Harshbarger, J.P. Akers, and W.F. Hardt, 1969). No active faults have been identified or mapped in the project area. Due to the dormancy and lack of these structures, the proposed project would have no effect on geology and seismicity.

4.3 Vegetation and Wildlife - Biotic Resources - Ponderosa Pine-Oak Forest Ecosystem

The proposed Wheatfields Borrow Pit would be located in the Montane Ponderosa Pine Forest Ecosystem. The proposed pit is located on the western edge of the Chuska Mountains, on a plateau knoll at approximately 7,312 feet amsl.

Ponderosa Pine Forest surrounds the 4.98 acre tract. While Ponderosa Pine *Pinus ponderosa* is the dominant tree species over most of the forest in the project area, associated forest trees as Douglas-fir, and Quaking Aspen are also noticeable in the forest at all elevation. Gambel Oak is locally common and may dominate some of the rockier locations. Douglas-fir trees *Pseudotsuga douglasii* are scattered though out the forest on all directions.

Under natural conditions and growing amid the pine and oak canopy understory are shrubs, grasses, forbs and annuals. Understory shrubs are not especially common, but may include scattered population and plants of Fendler Ceanothus *Ceanotus fendleri*, Creeping Mahonia *Berberis repens*, Smooth Sumac *Rhus glabra*, Golden Current *Ribes aureum*, Orange Gooseberry *Ribes pinetorum* Arizona Rose *Rosa arizonica*, Blue Elderberry and Velvet Elder (*Sambucus cerulean* and *Sambucus velutina*), Utah Snowberries *Symphoricarpos utanensis*, Bush Rockspirea *Holodiscus dumosus*, and Nine Bark *Physocarpus mongynus* (Brown, D. E., 1994).

Under more open stands, grasses and grass-like plants may prevail and include montane-centered grasses and sedges, such as Mountain Muhley *Muhlenbergia montana*, Pine Dropseed *Blepharoneuron tricholepis*, Fringed Brome *Bromus ciliates*, Arizona Fescue *Festuca arizonica*, Prairie Junegrass *Koeleria cristata*, Bulb Panicum *Panicum bulbosum*, Muttongrass *Poa fendleriana*, Kentucky Bluegrass *Poa pratensis*, Squirreltail *Sitanion hystrix*, Needlegrass *Stipa pringlei*, Dryland Sedge *Carex geophila*, and Fendler Flatsedge *Cyperus fendlerianus* (Brown, D. E., 1994).

Some of the more characteristic and common forbs of the Montane Ecosystem include Western Yarrow *Achillea lanlosa*, Mountain Parsley *Pseudocymopterus montanus*, New Mexico Groundsel *Senecio neomexicanus*, Bracken Fern *Pteridium aquilinum*, Pinedrops *Pterospora andromeda*, Rusby Clover *Trifolium rusbyi*, Mountain Bluebell *Mertensia franciscana*, American Vetch *Vicia Americana*,

Arizona and Grassleaf Peavine *Lathyrus arizonicus* and *L. graminifolius*, Lupines *Lupinus* spp., Trailing and Spreading Fleabane *Erigeron flagellaris* and *E. divergens*, Dandelion *Taraxacum officinalis*, Meadowrue *Thalictrum fendleri*, Elegant Cinquefoil *Potentilla concinna*, Sawatch Knotweed *Polygonum sawatchense*, Purple Geranium *Geranium caespitosum*, and Wild Strawberry *Fragaria ovalis* (McLaughlin & Wagle).

Common understory shrubs include gooseberries and currants, Arizona Rose, Mountain and Roundleaf Snowberry, and Arizona and Bearberry Honeysuckle *Lonicera arizonica* and *L. involucrate*. The normally rich mixture of grasses and forbs include Nodding, Mountain, and Fringed Brome, wheatgrasses *Agropyron* spp., Kentucky Bluegrass, asters *Aster* spp., Bracken Fern, fleabanes *Erigeron* spp., Golden-rod, Grassleaf Peavine *Lathyrus graminifolius*, American Vetch, Rocky Mountain Iris *Iris missouriensis*, Lupines, Sneezeweed, Coneflower, Yarrow, Mintleaf Beebalm, False Mountain Bluebell, and geraniums (Brown, D. E., 1994). Aspen stands are rich wildlife communities, providing abundant food and cover (when not heavily grazed) for a wide variety of mammals and birds.

Annual plants and noxious weeds, such as Cheatgrass *Bromus tectorum*, Russian thistle *Salsolia kali*, Tansy mustard *Descurainia obtusa*, Sunflower *Helianthus annuus*, and Kochia weed *Bassia hyssopifolia* occur on the project area.

A number of mammals make their home within montane forests including Myotis Bats *Myotis aurculus*, Long-eared Myotis *M. evotis*, Long-legged Motis *M. volans*, and Big Brown Bat *Eptesicus fuscus*. Species such as the Vagrant, Dwarf, and Merriam Shrews, *Sorex vagrans*, *S. nanus*, *S. merriami*; Chickaree *Tamiasciurus hudsonicus*, and Nuttall's Cottontail *Sylvilagus nuttalli* reach their greatest abundance within mixed conifer communities, while other, such as the Tassel-eared Squirrel *Sciurus alberti* and Porcupine *Erethizon dorsatum*, are most abundant in yellow pine forests. Indicative of the montane environments are Chipmunks *Eutamias* spp., and Montane vole *Microtus* spp. Other species likely in the Montane forests are the Cottontail *Sylvilagus flordanus*, Golden-mantled Ground Squirrel *Citellus lateralis*, Deer Mouse *Peromyscus maniculatus*, Mexican Woodrat *Neotom Mexicana*, Mule Deer *Odocoileus hemionus*. Once restricted to much smaller distribution in the Southwest, the Rocky Mountain Elk *Cervus elaphus* now occupies Southwestern montane forests in Colorado, New Mexico, and Arizona (Brown, D. E., 1994).

The list of characteristic nesting avifauna (birds) is large and contains such typically montane conifer forest species as the Goshawk *Accipiter gentilis*, Flammulated Owl *Otus flammeolus*, Pygmy Owl *Glaucidium gnoma*, Spotted Owl *Strix occidentalis*, Saw-whet Owl *Aegolius acadicus*, Broad-tailed Hummingbird *Selasporus platycercus*, Western Flycatcher *Empidonax difficilis*, Steller Jay *Cyanocitta stelleri*, Pygmy Nuthatch *Sitta pygmaea*, Brown Creeper *Certhis familiaris*, Western Bluebird *Sialia Mexicana*, Townsend's Solitaire *Myadestes townsendi*, Solitary Vireo *Vireo solitaries*, Warbling Vireo *V. gilvus*, Yellow-rumped Warbler *Dendroica coronata*, Western Tanager *Piranga ludoviciana*, Evening Grosbeak *Hesperiphona vespertina*, Pine Siskin *Carduelis pinus*, Red Crossbill *Loxia curvirostra*, Juncoes, and Chipping Sparrow *Spizella passerine*; all of which extend through the Southwest. Wild turkeys *Meleagris gallopavo Mexicana*, Band-tailed Pigeon *Columbia fasciata*,

Hummingbirds *Eugenes spp.*, Pine Flycatchers *Empidonax affinis*, and Mexican Chickadee *parus sclateri* are other examples of Ponderosa Pine – Oak forest species (Brown, D. E., 1994).

Amphibians are limited to the Tiger Salamander *Ambystoma tigrinu*, Mountain Salamanders and various frogs and toads. In the Great Basin fasciation, the Western Skink *Eumeces callicephalus* – are representative lizards. Reptiles that occur in the Montane include the Short-horned Lizard *Phrynosoma douglassi*, Striped plateau lizards *Sceloporus virgatus*, Plateau whiptails *Cnemidophorus velox* Gopher Snake *Pituophis melanoleucus*, and Western Rattlesnake *Crotalus viridis* (Brown, D. E., 1994).

4.4 FEDERAL ENDANGERED SPECIES ACT (ESA) THREATENED AND ENDANGERED SPECIES

Onsite field surveys for ESA threatened and endangered species were conducted by the staff of Denali Environmental Services September 5 and September 9, 2019. Based on the field surveys, determinations of effect were created for the ESA species. No ESA listed species, or potential habitats, were found in the proposed project area. Table 3 summarizes the potential for federally listed species that would occur in the project area. The proposed action alternative would have no effect on the listed federally ESA, NESL, and MBTA species.

Table 3. USFWS Listed Species Habitat Associations and Potential Presence.

SPECIES/ STATUS	HABITAT ASSOCIATIONS	PRESENCE
Navajo Sedge <i>Carex specuicola</i> ESA Threatened NESL G3	Typically found in seeps and hanging gardens, on vertical sandstone cliffs and alcoves. Known populations occur from 4600 ft to 7200 ft.	NP – No suitable habitat: sandstone seeps and hanging garden habitat is not present on the proposed project or action area. Previous mining activity and existing land uses, i.e., livestock grazing, and road access, has rendered the area unsuitable for this species habitation.
Southwest Willow Flycatcher <i>Empidonax traillii</i> <i>extimus</i> ESA Endangered NESL G2 MBTA	Breeds/nests in dense riparian tree & shrub communities associated with rivers, swamps and other wetlands, including lakes and reservoirs. The bird nest in native vegetation including willows, seepwillow, boxelder, button-bush & cottonwood, also thickets of non-native tamarisk & Russian olive. Nest is constructed 6.5 to 23 feet above ground on saturated soils along riparian and riverine ecosystems.	NP - Natural riverine habitat and riparian ecosystems are not present in the project area; species is unlikely to occur within the project area. There would be no effect on the federally listed Southwest Willow Flycatcher endangered bird species, or their habitat.

Rhizome Fleabane <i>Erigeron rhizomatus</i> ESA Threatened NESL G2	Zuni Rhizome Fleabane <i>Erigeron rhizomatus</i> is typically found on fine textured clay soils on hillsides of mid to high elevations of 7,000 to 8,300 feet. It is known to inhabit clay soils derived from the Chinle Formation in the Zuni and Chuska Mountains (NNHP, 2008). On the Navajo Nation the species is found on the slopes of the Chuska Mountains from Lukachukai and west of Red Valley, Apache County, Arizona south to Navajo in McKinley County, New Mexico.	NP - Habitat not present and species unlikely to occur within the project area. The plant species was not present during the field surveys.
K - Known, documented observation within project area.		
S - Suitable habitat and species suspected to occur within the project area.		
NS - Habitat suitable but species is not suspected to occur within the project area.		
NP - Habitat not present and species unlikely to occur within the project area.		
CH - Designated Critical Habitat assigned to this species.		

4.5 NAVAJO ENDANGERED SPECIES LIST (NESL) SPECIES OF CONCERN

Onsite field surveys for Navajo Endangered Species List (NESL) were conducted by the staff of Denali Environmental Services September 5 and September 9, 2019. Based on the field surveys, determinations of effect were created for the NESL species. No species of concern, or potential habitats, were found in the proposed project area. None of the special management fauna and flora NESL species were observed at the time of the onsite field survey. Table 4 summarizes the Navajo listed Species of Concern that would occur on the proposed project area. The proposed action

Table 4. Habitat descriptions and presence of NESL listed (G2 to G4) Navajo Nation species potential to occur on the project area.

SPECIES & LISTING	HABITAT ASSOCIATIONS	PRESENCE
FAUNA		
Golden Eagle <i>Aquila chrysaetos</i> NESL G3	The Golden Eagle nests on steep cliffs, normally adjacent to foraging habitat of desert grasslands or desertscrub, that provide primary prey of prairie dogs, cotton tail and jack rabbits (NNHP, 2008). Nests are reused and tend to become a huge mass of sticks and debris. Golden Eagle foraging habitat is present within the propose project area, and action area. Small mammals, such as prairie dogs, jackrabbits, cottontail rabbits, field mice, gophers, etc., are of marginal abundance in the project area.	K/S - Direct impacts to the Golden Eagle would include the temporary loss of foraging habitat. Given the distance of unknown hunting territories of these raptors and suitable nesting habitat from the proposed location, it is possible that these raptors species may forage in proximity or fly through the proposed project and action areas. Existing & future land uses (livestock grazing, roadway use, housing, & mining) of the property would render the area partially unsuitable for the raptor species.

Bluehead Sucker <i>Catostomus discobolus</i> NESL G4	The species occupies a wide range of water conditions; within river/stream habitats, including water temperature, and stream volumes; often occupy the swift water areas in mountain streams.	K/NP - Habitat suitable but species is not suspected to occur within the project area; no perennial water resources occur in the project area. The proposed alternative would have no effect on the listed sucker or their habitat.
Bald Eagle <i>Haliaeetus leucocephalus</i> NESL G2	The Bald Eagle typically nest within trees in forested areas, especially mature and old-growth stands, adjacent (usually <2 km) to large bodies of water, with suitable forage of waterfowl and fish; rarely uses cliff face adjacent to large body of water. Winter roost in large trees in forests, river bottoms, or near canyon rims, usually within a few miles of ponds, lakes and rivers with adequate prey. Ponds and lakes are used until completely iced-over and prey availability is reduced.	K/S - Suitable habitat and species suspected to occur within the project area. The action area contains large expanses of mixed-conifer, ponderosa pine-oak habitat, suitable for eagle foraging, and nesting. The species was not present during the field surveys.
Three-toed Woodpecker <i>Picoides dorsalis</i> NESL G4	Nests and winters primarily in spruce, fir, aspen, or mixed-conifer forests (and possibly adjacent ponderosa pine habitats) above 2,400 m (8,000 ft.) elevation; ideal conditions have mature or old growth stands, fire-killed trees, 42-52 snags per 40 ha (100 acres), and/or large number of bark-boring beetles. Nest is placed 1 ½ -15 m high in a stump or dead/dying conifer or aspen.	K/S - Habitat suitable but species is not suspected to occur within the project area. The action area contains large expanses of mixed-conifer, ponderosa pine-oak habitat, suitable for foraging, and nesting. The species was not present during the field surveys.
Northern Saw-whet Owl <i>Aegolius acadicus</i> NESL G4	Nests in tree cavities in relatively open ponderosa pine, Douglas-fir, or mixed conifer forest; may also nest in old growth riparian woodlands. Wintering habitat is variable but dense vegetation is critical.	NS - Habitat suitable but species is not suspected to occur within the project area. The species was not present during the field surveys.
American Dipper <i>Cinclus mexicanus</i> NESL G3	Nests near clear, unpolluted streams usually ≤ 15 m in width and ≥ 2 m in depth, with a variety of riffles, pools, and waterfalls with substrate of rock, sand, and rubble; instream and stream side boulders are necessary for perches. Nests are placed on ledges or in crevices on stream-bank structures of small cliffs, large rocks, fallen logs and tree roots.	NP - Habitat is not suitable and species is not suspected to occur within the proposed project area. The species was not present during the field surveys.

Peregrine Falcon <i>Fulco peregrinus</i> NESL G3	Nesting habitat rock outcrop formations greater the minimum height of 45 meters is present in the high country of the Chuska Mountains. And the foraging resource of their preferred prey in the surrounding area would support falcon and other raptor populations.	S Although the specie was not sighted in the survey area during the field survey, suitable habitat and species suspected to occur within the project area.
Northern Pygmy Owl <i>Glaucidium gnoma</i> NESL G4	Nests in tree cavities, often near openings (e.g. meadows, lakes, and ponds), in a variety of montane forest habitats, and possibly wooded canyons. Montane habitats include coniferous (spruce, fir and ponderosa pine), mixed conifer-hardwood with oak and aspen, hardwood bottomlands, and occasionally aspen stands. May migrate to lower elevations and use woodlands or prairie foothills as wintering habitat.	NS – Habitat suitable but species is not suspected to occur within the project area. The propose project area is easily access by livestock and recreational foot and vehicle traffic. The human activity, roadway traffic, traffic noise would render the project area not appropriate for nesting habitat. The fauna species was not present during the field surveys.
Northern Leopard Frog <i>Rana pipiens</i> NESL G2	The specie is found in a variety of habitats – grassland, brushland, woodland, and forest, ranging high into the mountains. The most cold adapted of all leopard frogs, the specie frequents springs, slow flowing streams, marshes, bogs, ponds, canals, and reservoirs, usually where there is permanent water and growth of cattails or other aquatic vegetation. The specie may forage far from water in damp meadows (Stebbins, R. C., 1985).	NP No suitable wetland habitat for the Northern Leopard Frog was found on the proposed project area. Previous and existing land uses of the property have rendered the area unsuitable for Leopard Frog habitat. The species was not present during the field surveys.
Flammulated Owl <i>Otus flammeolus</i> NESL G4	Nests in tree cavities in open conifer (usually ponderosa pine) or aspen forests, often with brushy understory of dense saplings or oak shrubs and clearings; areas with old-growth are preferred. Roosts within dense stands with large-diameter trees or regeneration. Nest and roost habitats need high abundance and diversity of nocturnal arthropods for prey. Winters in lower elevation habitats, especially riparian areas.	NS – Habitat suitable but species is not suspected to occur within the project area. The proposed project area is easily access by livestock and recreational foot and vehicle traffic. The human activity, roadway traffic, and traffic noise would render the project area inappropriate for nesting habitat. The fauna species was not present during the field surveys.

Tree Swallow <i>Tachycineta bicolor</i> NESL 4	The Tree Swallow breeds in existing cavities of variety of trees species (coniferous and deciduous); often uses snags in open fields near water, especially marshes and wooded ponds. Known from the Chuska Mountains, but potential occurs throughout forested areas of Navajo Nation.	NS – Habitat suitable but species is not suspected to occur within the project area. The proposed project area is easily access by livestock and recreational foot and vehicle traffic. The human activity, roadway traffic, traffic noise would render the project area not appropriate for nesting habitat. The fauna species was not present during the field surveys.
FLORA		
Gooding's Onion <i>Allium gooddingii</i> NESL G3	Inhabits the mix forest type of Aspen-Ponderosa Pine-Douglas Fir forest. The species inhabits the north facing slopes of small canyons on the west escarpment of the south Chuska Mountains. The species generally inhabits the shady riparian understory of mixed conifer-aspen forest habitat. Individual onion plants (isolated occurrences) are also found on the dry pine needle beds intermittently above the shady understory.	NS - Habitat suitable but species is not suspected to occur within the project area. The species grow in a shady moist understory. The proposed project area is easily access by livestock, recreational foot and ATV vehicle traffic. The human activity would render the project area not appropriate for onion habitat. The flora species was not present during the field surveys.
Rydberg's Thistle <i>Cirsium rydbergii</i> NESL G4	Inhabits hanging gardens, seeps and sometimes stream banks below hanging gardens, 3300' to 6500', in Southern SJ County, Utah, northern Coconino, and Apache County, AZ.	NP Habitat not present and species unlikely to occur within the project area. Previous mining activity and existing land uses, i.e., livestock grazing, nearby family residential areas, and road access, has rendered the area unsuitable for species habitation.
Yellow Lady's Slipper <i>Cypripedium parviflorum</i> var. <i>pubescens</i> NESL G4	Occurs in moderate shade along streambanks, mountain meadows and mesic places in Ponderosa pine, mixed conifer and aspen forest communities. On the Navajo Reservation known from above 7,000 feet.	NP – Habitat not present and species unlikely to occur within the project area. The existing habitat contains a parkland forest habitat at 50%-70% cover on southern exposure. The plant species was not present during the field surveys.
Utah Bladder-fern <i>Cystopteris utahensis</i> NESL G4	The Utah Bladder-fern is found in seepages, cracks and ledges on cliffs; on calcareous substrates including sandstone, limestone, and dacite. Populations are known from 4200 to 8800 feet elevation. Only known from Canyon de Chelly National Monument.	NP – Habitat not present and species unlikely to occur within the project area. This species was not found on the project during the field surveys.

Sarah's Buckwheat <i>Eriogonum lachnogynum</i> NESL G4	Habitat: Windswept mesa tops in Pinyon-Juniper communities at 5,900 to 7,500 feet. Endemic on the Owl Rock Member of the Chinle Formation, topped by Todilto Limestone.	NP - Habitat not present and species unlikely to occur within the project area. The plant species was not present during the field surveys.
Navajo Bladderpod <i>Lesquerella navajoensis</i> NESL G3	Species mostly occurs on windward, windswept mesa rims and nearby habitat with little vegetative cover and high insolation. Also found at the base and slopes of small hills of the Chinle Formation. Typically only found in a combination of Todilto Limestone overlaying Entrada Sandstone or Chinle outcrops in pinyon-juniper communities. Suitable habitat can be identified year around.	NP - Habitat not present and species unlikely to occur within the project area. The plant species was not present during the field surveys.
Alcove Bog-orchid <i>Platanthera zothecina</i> NESL G3	Inhabits hanging gardens in seeps and alcoves, in moist streams areas from the desert shrub to pinion-juniper & Ponderosa pine/mixed conifer communities. Known population occur between 4,000' and - 7200' elevation.	NP - Habitat not present and species unlikely to occur within the project area. Previous mining activity and existing land uses, i.e., livestock grazing, nearby family residential areas, and road access, has rendered the area unsuitable for species habitation.
Alcove Death Camass <i>Zigadenus vagintus</i> NESL G3	Inhabits hanging gardens in seeps and alcoves, mostly on Navajo Sandstone, 3700' - 6700'.	NP - Habitat not present and species unlikely to occur within the project area. Previous human activity and existing land uses, i.e., livestock grazing, nearby family residential areas, and road access, has rendered the area unsuitable for species habitation.
K - Known, documented observation within project area.		
S - Suitable habitat and species suspected to occur within the project area.		
NS - Habitat suitable but species is not suspected to occur within the project area.		
NP - Habitat not present and species unlikely to occur within the project area.		
CH - Designated Critical Habitat assigned to this species.		

alternative would have no effects on any of the listed NESL special management species or their habitat.

4.6 MIGRATORY BIRD TREATY ACT LISTING

Migratory birds and their habitats are protected under the Migratory Bird Treaty Act (MBTA) (16 USC §703-712) and EO 13186. All federal agencies are required to consider management impacts to protect migratory non-game birds. Executive Order 13186 calls for increased efforts to more fully implement the MBTA. The U.S. Fish and Wildlife Service (USFWS) list of Birds of Conservation Concern (BCC) was reviewed, specifically as they pertain to the Colorado Plateau physiographic area. The area indicates there are 27 avian species occurring on the southern Rocky Mountains and Colorado Plateau. See Table 5.

Table 5. U.S. Fish and Wildlife Service, Division of Migratory Bird Management "Bird of Conservation Concern 2008" for the Southern Rockies/ Colorado Plateau (US F&WS, 2008).

SPECIES	HABITAT ASSOCIATION	EFFECTS	EFFECT RATING
Gunnison Sage Grouse <i>Centrocercus minimus</i>	Inhabits shrub-steppe dominated by sagebrush that provide canopy cover, shelter, & forage.	No conflict anticipated. Specie not present.	Zero
American Bittern <i>Botaurus lentiginosus</i>	Wading bird inhabits wetlands, usually dense marsh reeds, rushes and sedges.	No suitable habitat present.	Zero
Bald Eagle <i>Haliaeetus leucocephalus</i>	Nests in old growth ponderosa pine and Douglas fir forest. Forages on fish and waterfowl. Inhabits the coast, rivers, large lakes; also mountains, open country.	No conflict anticipated. Species not present.	Low
Ferruginous hawk <i>Buteo regalis</i>	Inhabits open grasslands or desert scrub ecosystems. Nest often occurs on rock spires and butte formations. In woodland edge habitat, nests on flat-topped junipers.	No conflict anticipated	Low
Golden Eagle <i>Aquila crysaetos</i>	Open grasslands or desert scrub, In mountainous canyon terrain. Nest on cliffs and trees	Little conflict anticipated	Low
Peregrine Falcon <i>Falco peregrinus</i>	Inhabits rugged terrain with rocky cliffs and canyons 30 to 1,000 ft. high, adjacent to rivers lakes, or streams.	Little conflict anticipated	Low
Prairie Falcon <i>Falco mexicanus</i>	Nests and forages in grassland, and open Juniper Savannah.	Little conflict anticipated	Low
Snowy Plover <i>Charadrius alexandrinus nivosus/tenuirostris</i>	Shore bird inhabits barren sandy beaches and flats.	Suitable habitat not present, no conflict anticipated.	Zero
Mountain Plover <i>Charadrius montanus</i>	Inhabits grassland plains; usually found on grassy or bare dirt fields.	Little conflict anticipated	Low
Long-billed Curlew <i>Numenius americanus</i>	Nests in wet & dry upland fields. In migration, a shore bird of wetlands and agriculture fields.	Suitable habitat not present. Specie not present.	Zero
Yellow-billed Cuckoo <i>Coccyzus americanus</i>	No suitable riparian habitat present. Inhabits open woods, orchards, and streamside willow and alder groves.	No conflict anticipated. Specie not present.	Zero

Flammulated Owl <i>Otus flammeolus</i>	Inhabits pine-oak woodland, ponderosa pine forest.	Suitable habitat not present.	Zero
Burrowing Owl <i>Athene cunicularia</i>	Inhabits grassland shrub-steppe dominated by mixed grasses. Casual vagrant to prairie dog colonies, occupying abandoned holes.	No conflict anticipated. Specie not present.	Zero
Lewis's Woodpecker <i>Melanerpes lewis</i>	Inhabits woodland forests of pine-oak. Nests in oak cavities and pine snags. Forages and stores acorns and insects.	Little conflict anticipated	Low
SW Willow Flycatcher <i>Empidonax traillii</i>	Inhabits brushy habitats in wet areas; also in pastures, mountain meadows.	No suitable habitat.	Zero
Gray Vireo <i>Vireo vicinior</i>	Found in juniper savannah and open JP woodland, with scrub component. Inhabits mountains and chaparral-juniper scrubland.	Little conflict anticipated.	Low
Pinyon Jay <i>Gymnprjonus cyanocephalus</i>	Juniper Savannah, woodland, pine-oak ecosystems associated with high open habitats w/ openings, scattered trees or shrub components.	A multi ecosystem inhabitant, little conflict anticipated.	Low
Juniper Titmouse <i>Baeolophus ridgwayi</i>	Inhabits juniper-pinyon woodland.	Little conflict anticipated	Low
Veery <i>Catharus fuscescens</i>	Inhabits dense moist woodlands and streamside thickets. Casual in the Southwest.	Little conflict anticipated	Low
Bendire's Thrasher <i>Toxostoma bendirei</i>	Brushy desert shrub, especially areas of tall vegetation, cholla cactus, creosote bush and yucca.	No suitable habitat. Specie not present.	Zero
Grace's Warbler <i>Dendroica graciae</i>	Inhabits coniferous or mixed forests of southwest mountains, especially yellow pines. Usually forages high in the trees.	Little conflict anticipated	Low
Brewer's Sparrow <i>Spizella breweri</i>	Inhabits mountain meadows and sagebrush flats.	Little conflict anticipated.	Low
Grasshopper Sparrow <i>Ammodramus savannarum</i>	Inhabits moderately open grassland habitats, with patchy bare ground, and avoid areas with extensive shrub cover. Feeds and nests on ground.	Little conflict anticipated.	Low
Chestnut-collared Long-Spur <i>Calcarius ornatus</i>	Inhabits upland grassland, generally found in dense grass; gregarious in fall and winter	Little conflict anticipated.	Low

Black Rosy-Finch <i>Leucosticte atrata</i>	Inhabits high mountains, rocky summits, alpine cirques and snowfields; winters in open country at lower elevations, spreading onto the plains.	No suitable habitat on the project area.	Zero
Brown-capped Rosy Finch <i>Leucosticte australis</i>	Inhabits high mountains, rocky summits, alpine cirques and snowfields; winters in open country at lower elevations, spreading onto the plains.	No suitable habitat on the project area.	Zero
Cassin's Finch <i>Carpodacus cassinii</i>	Woodland Ecosystem. Species inhabits evergreen woodlands.	Little conflict anticipated.	Low

Most priority bird species occur on the USFWS, Division of Migratory Bird Management "Birds of Conservation Concern 2008" (BCC 2008 list). The Service designates the Southern Rockies / Colorado Plateau region as Bird Conservation Region (BCR) 16, which the Navajo Indian Reservation and Eastern Navajo Agency are included.

Although migratory birds could potentially occur in the area, none were observed during the environmental site visit. The proposed action alternative would result in a short-term and small scale loss of vegetation due to construction. This construction project would disturb a fraction of the project area, which was previously totally disturbed during previous mining. The proposed project activities are expected to be confined to the project areas. Temporary loss of native vegetation is anticipated at the project area. Eolian deposits of native seed from the undisturbed vegetation would also help to propagate native plant species.

Once the construction equipment is removed, wildlife and migratory bird species would be expected to return to the area. To avoid any potential effects to migratory bird species or migratory bird habitat, construction of the project would take place outside the nesting season. No long-term loss of vegetation or wildlife habitat is expected. As a result, the proposed cable concrete mat construction would have no significant effects on migratory bird species.

Mitigation of Migratory Birds

NDF&W policy mandates that prior to construction the proposed activity would require a preconstruction survey of potential nesting birds on the right-of-way, should construction occur during the breeding season. Any bird nests found within the proposed project area will be reported to the NNHP biologist for appropriate mitigation prior to construction activities.

NECA will minimize the possibility of unintentional take of migratory birds. Should the proposed project involve vegetative disturbance (brush and tree removal), no construction activities from May 15 to July 31 will be permitted without a migratory bird nest survey. If any active nests are located within the proposed project area, project activities will not be permitted until written

approval by the NNHP biologist. The operator will monitor any active nests located from a nest survey. Following construction activities, the construction staging areas would require reclamation. Avoidance to the breeding season will minimize potential impacts to migratory birds.

4.7 Wetlands Habitat

The US Fish and Wildlife Service Canyon DeChelly, AZ, NM, UT, CO National Wetlands Inventory Map was reviewed. The proposed project and action area would not traverse any wetland areas as defined by the USACE Wetlands Delineation Manual of 1987 (USACE, 1987). There are no jurisdictional wetlands within the proposed project area. The proposed borrow pit and access road do not exhibit the required wetland criteria of hydric soils, hydrophilic vegetation and wetland hydrology according to the USACE, 1987 manual. There are no wetland occurrences on or near the proposed project area. No wetland mitigation measures are recommended for the site.

5.0 CONCLUSIONS

The preferred alternative and project description is logical and desirable. Project engineering feasibility has been considered. The proposed project should have no effect on ESA threatened and endangered species, NESL sensitive species, or MBTA species. The construction effect of the proposed action is discountable and insignificant.

There is no federally designated critical habitat in vicinity of the pit. No wetland or riparian habitat occurrences. The proposed land use and leasing action would have no effect on threatened, endangered or any sensitive species. Temporary loss of native vegetation is anticipated. Once the locations are regraded, topsoiled, natural vegetation and wildlife species would be expected to return to the area.

Mitigation Measures

During the proposed construction, the contractor will contract their haulage and disposal of solid waste during construction and after construction. Solid waste would be placed in dumpsters to be disposed of at a licensed landfill, on a weekly basis, by a qualified waste hauler. Contracted portable toilets would be placed onsite, and serviced weekly by the contractor.

The project would remain less-than significant by the following mitigation: 1) NECA Excavate Borrow and Reclamation Plan at Appendix E of the EA would be adhered to, in addition to the American Association State Highway & Transportation Officials (AASHTO) Standards at Section 625 (mulching and dryland seed mix) for Federal Projects (FP-14), and Supplemental Specifications. Adherence to the AASHTO reclamation standard will minimize potential impacts to disturbed ground cover, including any potential nesting and foraging habitat. 2) Navajo Engineering and Construction Authority would craft a Clean Water Act § 401 Water Quality Certification and § 402 National Pollution Discharge Elimination System (NPDES) & Stormwater Pollution Prevention Plan (SWPPP) for this approval action. NECA will follow the construction alternative during the CWA consultation with the U.S. Environmental Protection Agency.

NECA will comply with all applicable federal regulations and tribal codes required for the acquisition and implementation of the proposed mining lease. All areas of proposed project were inspected in the field to ensure that potential impacts to biotic resources would be minimized through the implementation of the proposed action and regulative requirements. These measures are described for all resources potentially impacted in Section 4.0 of this BE, and, in the ultimate, provide the Diné People a better transportation system and quality of life.

6.0 LIST OF EA DOCUMENT PREPARERS AND COOPERATING ENTITY/AGENCY

BE document was prepared by Mr. Leonard Robbins, PES, Denali Environmental Services, Fort Defiance, Arizona 86504

Table 6. Summary of Primary Contacts Made During Preparation of this Document.

PUBLIC CONTACT	TITLE	ORGANIZATION	PRESENT AT ONSITE ?
Leonard Robbins	Environmental Specialist	Denali Environmental Services	Yes
Pam Kyselka	T&E Wildlife Biologist	NDF&W-NHP	No
Dexter D. Prall	GIS Supervisor	NDF&W-NHP	No

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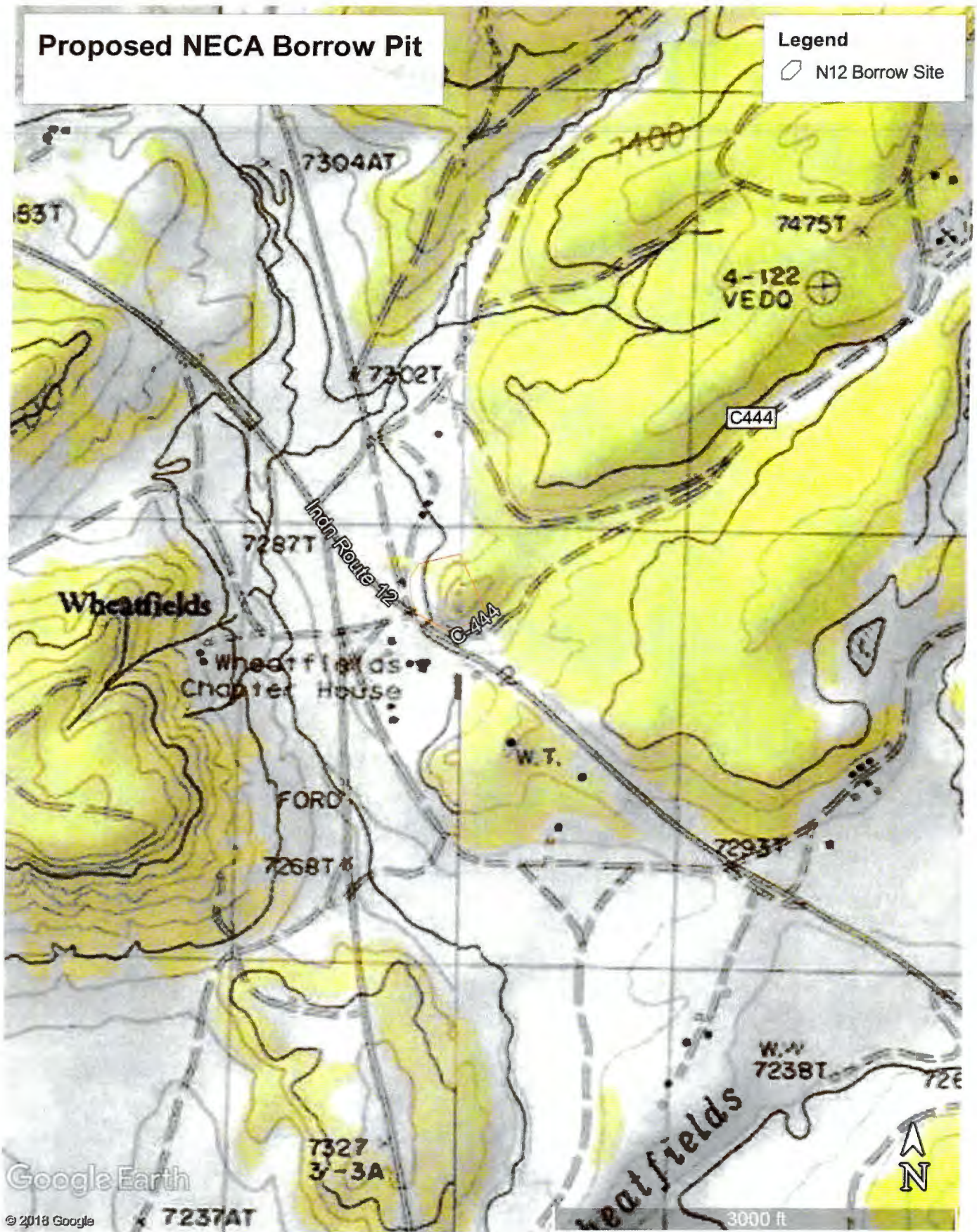
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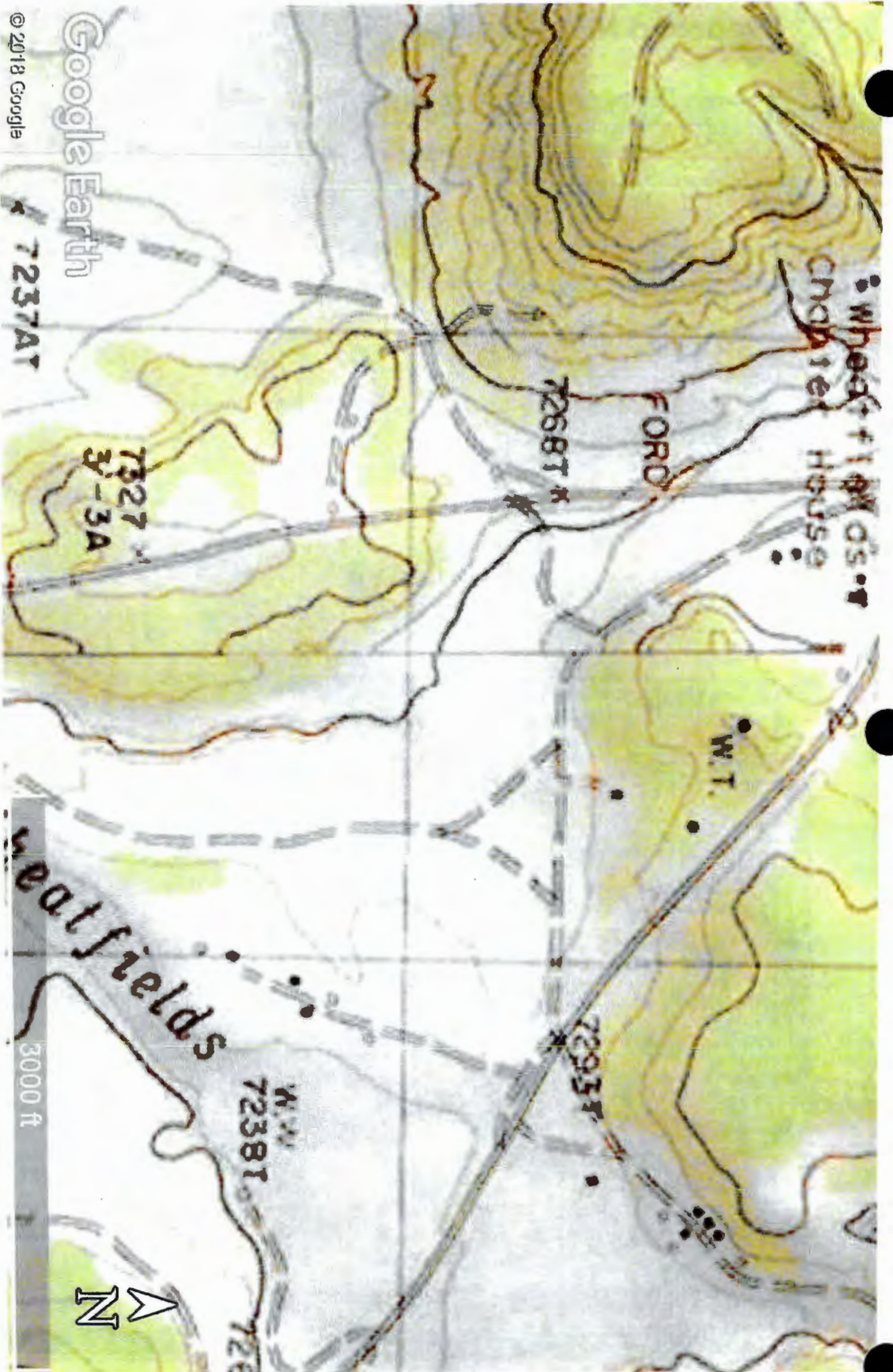
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Proposed NECA Borrow Pit

Legend

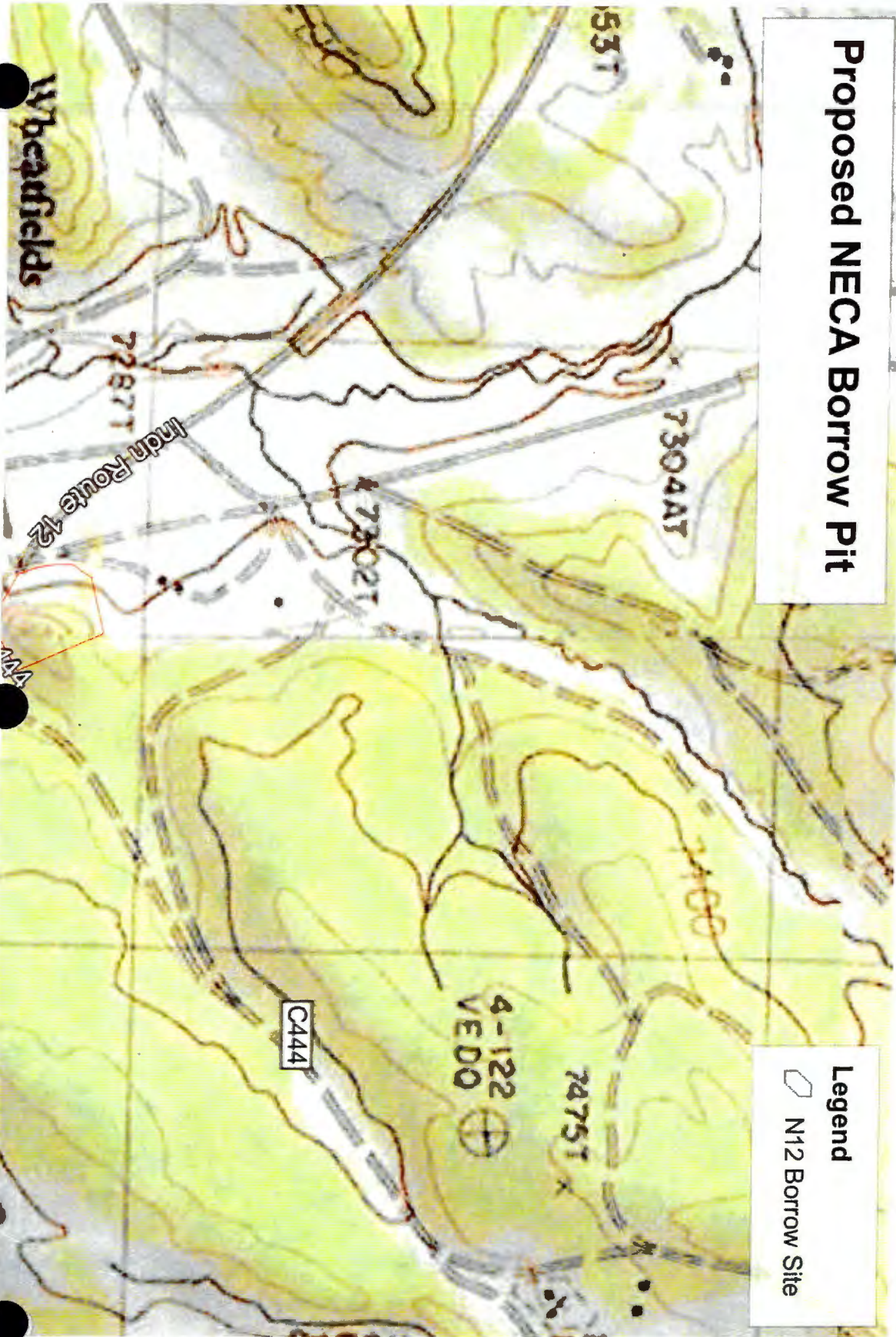
 N12 Borrow Site





Proposed NECA Borrow Pit

Legend
□ N12 Borrow Site



**WHEATFIELDS BORROW PIT LEASE ENVIRONMENTAL ASSESSMENT
NECA PROJECT N12(19-4)1,2 & 4**

**Branch of Environmental Quality Act Compliance & Review
Navajo Regional Office, Bureau of Indian Affairs, Gallup, New Mexico**



**PLS: Section 28 Township 33 North Range 30 East, G&SRM
Lat & Long: 36° 14' 21.1" N 109° 07' 36.3" W
UTM: 668,329 m E 4,012,102 m N, Zone 12
Elevation: 7,282 amsl**

**NAVAJO ENGINEERING & CONSTRUCTION AUTHORITY
No. 1 Uranium Blvd
P.O. Box 969
Shiprock, New Mexico 87420**

**Prepared by
DENALI ENVIRONMENTAL SERVICES
P.O. Box 1127
Fort Defiance, Arizona 86504**

January, 2020

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WHEATFIELDS BORROW PIT LEASE ENVIRONMENTAL ASSESSMENT

NECA PROJECT N12(19-4)1,2 & 4

In conjunction with the BIA Navajo Route N12 road widening and reconstruction project, Navajo Engineering and Construction Authority (NECA) of Shiprock, New Mexico proposes to make application with the Navajo Nation and the Bureau of Indian Affairs for a borrow pit lease. The undertaking will involve the creation of a new borrow pit that will provide source material for the reconstruction and widening of Navajo Route N12. The proposed federal action would be an approval of a five year lease from the Bureau of Indian Affairs (BIA) and the Navajo Nation. The proposed lease is subject to review under BIA regulations 25 CFR 211-Leasing of Tribal Lands for Mineral Development, and 25 CFR 216-Surface Exploration, Mining and Reclamation of Lands.

1.0 PROJECT DESCRIPTION

1.1 Description of the Proposed Action

NECA plans to construct the proposed Wheatfields Borrow Pit lease on 4.98 acres of Navajo Tribal Trust land, Project No. N12 (19-4)1, 2, & 4. Proposed construction would be in support of the Navajo Route N12 highway widening and reconstruction project. The proposed borrow pit area would be used for source material excavation with a design borrow cut at 45,202 cubic yards, or 79,330 standard tons. Widening of N12 would commence north of Wheatfields Lake extending north to Lukachukai, for a distance of 10.68 miles. Figure 1 illustrates the location of the proposed pit. The borrow pit land survey plat and topographic map is shown at Appendix A.

Borrow pit excavation would involve a Caterpillar D8 dozer, and two 980 Caterpillar front end loaders. Loading and haulage equipment would involve the front end loaders, and tractor-trailer belly dump trucks. Within the pit, road maintenance would occasionally require a Caterpillar 140G grader, and a 4,000 gallon water truck. All heavy equipment would be stored onsite. The NECA office trailer would be equipped with a portable electrical generator located on the east side of the chapter house.

The proposed borrow pit mining operations would not require an additional access road. One existing 20 feet wide road turnouts will provide access to Navajo Route N12. No other infrastructure would be required.

During borrow pit operations, the access road turnout and pit haulage roads would be watered to control particulate matter (dust). A Caterpillar 140G road grader will be used to maintain existing roads inside the lease area. The existing roads will be graded and maintained while the borrow pit is in operations. The proposed project area perimeter will not be fenced. A berm will be constructed on the inner boundary to avoid livestock encroachment, public safety and security.

Prior to lease expiration, reclamation will commence when there is no further need for the borrow source material. NECA will reclaim and reseed the site with introduced and native vegetation in accordance with the *NECA Wheatfields Borrow Excavation and Reclamation Plan* (NECA BE&RP, 2020) at Appendix E. The reclamation seed mixture will contain greater than fifty percent native seed. The American Association State Highway & Transportation Officials Standards (AASHTO) at

Section 625 Turf Establishment (mulching and seed mix) for Federal Projects (FP-14), and Supplemental Specifications (AASHTO, 2004) would serve as a standard for reclaiming the site. See Section 3.4.3 Vegetation and Wildlife Biotic Communities – mitigation for addition reclamation discussion. Adherence to the reclamation plan will minimize potential impacts to the foraging wildlife species. Topsoil removal and stockpiling will begin on the site as soon as the use lease is approved by the BIA.

Upon completion of the project, NECA will reclaim and reseed the site with native vegetation in accordance with a *NECA Borrow Excavation and Reclamation Plan* (NECA BE&RP, 2020). Topsoil removal and stockpiling will begin on the site as soon as the use lease is approved by the BIA. The reclamation seed mixture will contain greater than fifty percent native seed. The American Association State Highway & Transportation Officials Standards (AASHTO) at Section 625 Turf Establishment (mulching and seed mix) for Federal Projects (FP-14), and Supplemental Specifications (AASHTO, 2004) would serve as a standard for reclaiming the site.

Seeding will be established by the Dry Rangeland Method. Seedbed preparation shall be accomplished with a disc harrow, chiseling tool or with other equipment, which will provide an even mixture of fertilizer into the soil. All areas to be seeded shall have fertilizer uniformly applied to the surfaces and tilled into a minimum of three inches of the soil.

After tillage is completed the seed shall be planted by disc drill with depth bands at approximately one-half inch. On slopes too steep or rocky (greater than 3:1 slope) seed may be broadcasted, and covered by dragging, hand raking or other approved method. The type of seed and pure live seed rate is as shown in Table 1. Straw mulch will follow seeding at a rate of two tons per acre.

Table 1. Seed Type and Rate of for the Wheatfields/Tsaile Borrow Pit Lease, Expressed in Pure Live Seed (PLS).

Grassland Savannah Vegetation Type				
Common Name	Scientific Name	Variety	Drilled Rate	Broadcast Rate
Alkali Sacaton	<i>Sporobolus airoides</i>	Salado	0.5	1
Western Wheatgrass.	<i>Pascopyrum smithii</i>	Arriba	4	8
Galleta	<i>Pleuraphis jamesii</i>	Viva	4	8
Blue Grama	<i>Bouteloua gracilis</i>	Alma	1	2
Scarlet Globemallow	<i>Sphaeralcea coccinea</i>	VNS	1	2
Four-wing Saltbush	<i>Atriplex canescens</i>	Rincon	3	6
Total			13.5#/Acre	27#/Acre

Application rates of seed as specified are for Pure Live Seed (PLS). PLS is determined by multiplying the sum of the germination and hard or dormant seed by purity.

A Notice of Intent for a NPDES permit application would be applied for with the U.S. Environmental Protection Agency in Washington D.C. As required by Section 402 (p) of the Clean Water Act, NECA would also prepare a *Stormwater Pollution Prevention Plan* (SWPPP) for the proposed borrow pit lease area to stabilize soil erosion and enhance re-vegetation onsite.

In accordance with 40 CFR 112.5 (b), NECA will develop a *Spill Prevention Control and Countermeasure Plan* (SPCCP) for the proposed borrow material source project. SPCCP is prepared to prevent accidental discharge of waste oil into or upon navigable waters of the U.S., minimize the impact of a spill at the facility, and to expedite cleanup activities. Any contaminated soils will be removed and transported to Envirotech hazmat treatment facility located east of Farmington, New Mexico.

1.2 Purpose and Need for the Project

The purpose of the proposed action is to provide material source for the widening and reconstruction of Navajo Route N12. The American Association State Highway & Transportation Officials Standards (AASHTO) would serve as a standard for federal highway construction projects. The widening and reconstruction of Navajo Route N12 would come in compliance with the AASHTO road construction standard based on the volume of N12 traffic. The proposed borrow pit will provide road material source for an all-weather road for the communities of Wheatfields, Tsaille, and the transient public traveling on to points north and south. The present and future road construction could stimulate growth in the region and improve the economic and social development of the chapter. The need is to provide a transportation system so that the people of the surrounding communities would have access to schools, local government services and health care centers, daily commute from their homes to their place of employment, provide for their families, and, in the ultimate, provide a better quality of life for the Diné People. Support resolution shown at Appendix B, the Wheatfields/Tsaille Chapter has passed a resolution approving the borrow pit site. In the future the Resource Committee of the NTC would address a resolution for the project.

1.3 Location

The proposed borrow pit site is located on USGS 7.5 Minute Quadrangle map entitled *Wheatfields, Arizona*, at Figure 1. Table 2 describes the proposed Wheatfields Burrow Pit Lease location adjacent to Navajo Route N12.

Table 2. United States Geological Survey Maps Waypoint Descriptions of Wheatfields Borrow Pit Lease, Wheatfields, Arizona.

Project Description	Public Land Survey G&SR PM	Latitude and Longitude WGS 84/NAD 83	UTM, Zone 12
Southwest Corner N12 Alignment POB	NW/4 Section 28 T33N R30E	36° 14' 16.1" N 109° 07' 32.7" W	668,422 m E 4,011,956 m N
Southwest Corner N12 Alignment	NW/4 Section 28 T33N R30E	36° 14' 18.3" N 109° 07' 36.6" W	668,324 m E 4,012,015 m N
West Corner	NW/4 Section 28 T33N R30E	36° 14' 19.4" N 109° 07' 36.9" W	668,315 m E 4,012,054 m N

Northwest Corner	NW/4 Section 28 T33N R30E	36° 14' 21.1" N 109° 07' 36.3" W	668,329 m E 4,012,102 m N
Northeast Corner	NW/4 Section 28 T33N R30E	36° 14' 20.7" N 109° 07' 31.4" W	668,454 m E 4,012,090 m N
Southeast Corner	NW/4 Section 28 T33N R30E	36° 14' 17.7" N 109° 07' 29.7" W	668,495 m E 4,011, 998 m N
South Corner	NW/4 Section 28 T33N R30E	36° 14' 16.9" N 109° 07' 30.8" W	668,467 m E 4,011,977 m N

At an elevation of 7,312 feet amsl, the proposed borrow pit lease is located adjacent to the existing Navajo Route N12, Wheatfields/Tsaile Chapter, Chinle Navajo Agency, Apache County, Arizona.

1.4 Project Authorization

Federal guidelines under the Indian Mineral Leasing Act (IMLA) govern borrow excavation activities on Indian reservations. The IMLA requires an approved borrow excavation and reclamation plan, for material source excavation before a lease can be granted. The proposed lease is subject to review under Leasing of Tribal Lands for Mineral Development 25 CFR 211, and Surface Exploration, Mining and Reclamation of Lands, 25 CFR 216. The proposed lease approval would allow NECA to reinvest and utilize the property for a five year term.

The proposed lease is also subject to review under the Occupational Safety Health Act (OSHA), 29 CFR 1910 - Workplace Safety & OSHA Compliance for Employees, and 29 CFR 1926 - Compliance with OSHA Regulations on Construction Sites & Work Zones.

The proposed borrow pit lies within Wheatfields/Tsaile Chapter boundary. The chapter has passed a resolution approving the proposed borrow pit site, as shown at Appendix B.

1.5 Purpose of Environmental Assessment

The environmental assessment is an instrument required by federal law and regulations to determine if potential impacts of a federal action are of such significant as to require the preparation of an environmental impact statement. The proposed federal action is approval of a borrow pit lease. The approval of the lease would allow the operator to temporary develop a tract of land, on which to construct and operate the proposed borrow excavation operation site. This document addresses potential impacts and mitigation for the borrow pit lease approval.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 Alternative Site Considered and Eliminated from Detailed Analysis

Alternate sites of adequate borrow material quality and quantity for construction projects are not available in alternate areas. The alternative locations were considered and eliminated after an analysis of soil volume, rocky out crops and numerous sighting of archaeological evidence. Soil and rock samples were collected and tested at the locations. Soil and rock samples at other alternative sites did not pass the *Unclassified Rock Material Specifications* test required in *The Standard*

Specification for Construction of Roads and Bridges on Federal Highway Projects FP-14, thus eliminated from further consideration.

2.2 No Action Alternative

This alternative would not allow NECA to acquire a material borrow source lease. Consequently, a source material borrow pit operation would not be created for the widening and reconstruction of Navajo Route N12. Other future construction projects would have to get construction materials elsewhere and at a higher price. Some proposed projects may not be constructed, due to the high cost of haulage and the addition cost of the borrow source.

2.3 NECA Borrow Pit Operations (Preferred Alternative)

NECA proposes to establish material borrow source operations at the Wheatfields location. At the proposed project location, soil and rock samples met *The Standard Specification for Construction of Roads and Bridges on Federal Highway Projects FP-14*. The existing site has favorable characteristics for borrow pit operations: shallow soils and the lack of rocky outcrop conditions. The proposed borrow pit operation would be located adjacent to Navajo Route N12, and would not require construction of addition haulage road construction.

3.0 AFFECTED RESOURCES AND ENVIRONMENTAL EFFECTS

3.1 Resources Not Considered in Detail (Non-Critical)

Initial evaluation of the alternatives indicated that there would likely be little to no direct, indirect, or cumulative effects on several resources. These resources are discussed in Sections 3.1.1 through 3.1.13 adds to the overall understanding of the environmental setting of the project area.

3.1.1 Climate

Lukachukai, Arizona is the nearest weather station to the project area. The proposed borrow pit project is located in a semi-arid climate. The project area experiences four distinct climatic seasons and has an annual average maximum temperature of 63.4° F and annual average minimum temperature of 36.8° F. Summer highs reach the 86.4° F range with summer lows in the 57.8° F average. Winter annual highs are usually in the 40.8° F range. The average annual snowfall is 16.8 inches. Average snow fall in the project area in January is 4.4 inches (WRCC 2019). Due to the small size and nature of the proposed project areas, climate would have no effect on the proposed project.

Climate change results from the incremental addition of greenhouse gases (GHG) emissions from millions of individual sources, which collectively may have an impact on a global scale. Climate change is a particularly complex challenge given its global nature and the inherent interrelationships among its sources, causation, mechanisms of action, and impacts (CEQ, 2016). With respect to cumulative impacts on regional air quality and climate change from greenhouse gas emissions, the lack of scientific tools designed to predict climate change on regional or local scales limits the ability to quantify potential future impacts of the proposed project. Analyzing greenhouse gases emission and the effects of climate change relevant to a proposed action –

particularly how climate change may change an action's effects of a proposed project – is currently not available (Garfin, G., A., et al, 2013). No mitigation of the proposed action would be required.

3.1.2 Geology and Seismicity

The tan – brown coarse sandstone and cobble stone conglomerate is an unconformity, situated on top of the Sonsela Sandstone Bed of the Chinle Formation. The Sonsela Sandstone and Monitor Butte Member surround the coarse sandstone-sandy loam material. The Sonsela Sandstone Bed is made up of light-gray to yellowish-gray sandstone and conglomerate, and the Monitor Butte Member is comprised of siltstone, sandstone, and lime-pellet conglomerate (Cooley, M.E, J.W. Harshbarger, J.P. Akers, and W.F. Hardt, 1969). No active faults have been identified or mapped in the project area. Due to the dormancy and lack of these structures, the proposed project would have no effect on geology and seismicity.

3.1.3 Fisheries

There are no fisheries or fishery habitat occurrences in the proposed lease area. No mitigation is required for any fishery adversity.

3.1.4 Socioeconomics and Environmental Justice

The proposed project would have no effects on the socioeconomics of the area because it would not directly alter or limit either present-day or future opportunities for agriculture, raising livestock, business, employment, or housing.

According to the latest census, there are approximately 2,044 people reside in the Wheatfields/Tsaile Chapter, over an area of 253 square miles, which estimates to 8.03 people per square mile. There are 1,021 housing units located in the Wheatfields/Tsaile Chapter. Native Americans make up 97.0 % of the population. Wheatfields/Tsaile Chapter's economy is primarily based on wage-earning employment. Currently most residents in the chapter area are wage earners, working at various federal, tribal government and commercial jobs in the area. Median family income is \$18,553.00 per annum. Diné College is the major employer in the area. Tsaile Public School, Lukachukai BIA Boarding School, Tsaile Health Center, and the Navajo Nation government are the other major employers in the area. Local commercial retail stores and gas stations are other sources of employment (NN DED/LSRI, 2004).

In the past, the economy was primarily based on small farm, ranching and livestock production, but this is no longer the predominate source of income. Currently, livestock production makes up a small percentage of the chapter's economy. However, the retired elderly in the area still carry on the ranching life style. Raising livestock has been their sustainable income. Ranches are relatively small, not large enough to sustain a viable operating ranch for the entire family. Younger family members that have jobs in the region and wish to be with their elders, have moved back to the old homesteads. New houses are being built on the family's traditional use areas. As the residential farm and ranch setting provides a better quality of life, in contrast to apartment living in border towns.

Environmental Justice Executive Order 12898 The mandate requires federal agencies to assess projects to ensure there would be no disproportionately high or adverse environmental, health, or safety effects on minority and low income populations. Minorities comprise a large proportion of the population residing in the action area (97%). The proposed borrow excavation will support the road reconstruction project. The project would have no disproportionate effects on minorities or low-income populations; the proposed lease will benefit all sectors of society. The Wheatfields/Tsaile Chapter has approved a supporting resolution for the project, shown at Appendix B. The Bureau of Indian Affairs, as federal trustee, would ultimately approve the lease. The proposed borrow excavation and highway reconstruction construction would allow the people to lead better lives in the community and surrounding areas, and would further provide a better quality of life for the Diné People.

3.1.5 Land Use, Resources and Zoning

Current land use in the surrounding project area is for chapter government, residential home sites, highway transportation, small farmland, rangeland, and forest timber production. The area around the proposed borrow pit is open rangeland of the Montane Ponderosa Pine Forest type.

Located across the Highway N12 to the south is the Wheatfields/Tsaile Chapter House administrative area, heavy equipment parking, and supply storage yard, occupying five acres of land. Approximately 14 scattered home sites and numerous livestock corrals are located within one-half mile of the chapter house and proposed project area. Clustered family homes, powerlines and water pipelines are prevalent in the project area. NTUA electrical service lines are situated on vicinity properties. Domestic water lines, constructed by the Indian Health Service and operated by the Navajo Tribal Utility Authority, surround the chapter house vicinity and proposed NECA borrow pit.

Navajo Route N12 is part of the major transportation system in the area. Highway N12 runs north and south from Lupton, Arizona to U.S. Highway 160 at Mexican Water and beyond. The western boundary of the proposed borrow pit is located adjacent to the highway. An existing paved turnout and Apache County Road 444, a dirt road south of the pit, would provide access to the proposed borrow pit. Major forest haul roads and logging spur roads traverse the vicinity properties in all directions.

Forest planning compartments encompass the project area in all directions. The entire Wheatfields Chapter, including the proposed project area was logged during the summer, fall and winter months of the late 1970s and early 1980s. The Navajo Nation Woodlands Inventory Analysis Report (1986-1991 measurements) estimates there is approximately 178,841 acres within the Tsaile/Wheatfields Chapter area. The various cover types that comprise the forest lands within the Chapter include pinyon pine (*Pinus edulis*), juniper (*Juniperus spp.*), and gambel oak (*Quercus gambelii*). To a lesser degree when compared to the woodland species, Ponderosa pine (*Pinus ponderosa*) and other timber species may also be present within the area (NNWIAR, 1986-1991).

Traditional land use in the proposed project area is used for rangeland, livestock production, small farms, and home sites. In the rural areas, ranching is the predominant life style in the region;

raising livestock has been a sustainable economy in the past. The surrounding land use adjoining the proposed borrow pit has historically been used for multi-family grazing land. Forested areas in the area contain residential clusters, an occasional remote summer camp. Tribal trust areas are currently grazed by domestic livestock: sheep, cattle, and horses. Grazing permits are issued to local Navajo families. According to local chapter officials, there are no existing and future land use plans to utilize this proposed borrow excavation parcel for other purposes.

Other land uses in the immediate area include fishing, lakeside recreation and seasonal big game hunting. Wheatfields Lake and Tsaile Lake Recreational Areas, designated by the Navajo Nation as an Area 6 Recreation Areas, are located three miles south, and three miles northwest of the proposed project area, respectively. The lake areas are used for fishing, including ice fishing during the winter months, boating, picnicking, hiking, and family sports. Designated by the Navajo Department of Fish & Wildlife as hunting Units 3 and Unit 4, the chapter area is used for seasonal big game hunting including deer, elk, and turkey.

In accordance with the "Biological Resource Land Use Clearance Policies and Procedures (RCP) RCS-44-08", approved September 10, 2008, the Navajo Resource and Development Committee of the Navajo Nation Council, the NDF&W-NHP would designated the Wheatfields Borrow Pit project area as an Area 2, a Moderately Sensitive Area – moderate restrictions on development to avoid sensitive species/habitats.

According to the Nation's RCP, the proposed Navajo Route N12 widening and reconstruction project (within the right of way) would qualify as a categorical exclusion to the preparation of a biological evaluation: "EXCEPTIONS-Projects that do not require preparation of a BE... Modernization of existing paved road & highways including resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes...Navajo Route 12" (from Window Rock to Tsaile).

3.1.6 Prime Farmland

Small farmland is limited in the proposed project area. A few agriculture fields (family plots) are located in vicinity of the project area. These fields would be used to grow traditional crops such as corn, beans, and squash. Lower Wheatfields contain small irrigated fields. No mitigation is required for farmland.

3.1.7 Recreation

Wheatfields and Tsaile Lake Recreational Areas are used for fishing, including ice fishing during the winter months, boating, picnicking, hiking, and family sports. Designated by the Navajo Department of Fish & Wildlife as hunting Units 3 and Unit 4, the chapter area is used for seasonal big game hunting including deer, elk, and turkey.

The small community of Wheatfields and Tsaile presents limited seasonal recreational opportunities. Baseball and softball fields, and outside basketball courts are located at the Diné College. Rodeos or "Chicken Pulls" are also a traditional sport and form of outdoor recreation in the region. Rodeo grounds are located near the community. Several rodeos are held in Tsaile

during the summer. Horseback riding is another recreational source, as horses and horse stables were observed.

Outdoor recreation would come in relation to the traditional livestock production for the local people in the vicinity. In contrast to their government jobs, fence building, ranching, farming activities would provide the ultimate form of outdoor recreation to the local families. This type of outdoor recreation (life style) would provide the relaxation, at the same time feeling of accomplishment, and family member reinforcement.

Recreation opportunities would not be impacted in the highway reconstruction project; no mitigation is required for any recreational adversity.

3.1.8 Traffic

The existing Highway N12 road is located adjacent to the proposed project area. Motorized traffic using the existing roads will be a high-priority element of the reconstruction project during the planning, construction and operation of the borrow pit. The current edition of the *Manual on Uniform Traffic Control Devices*, (MUTCD) shall be followed on all highway/road construction, utility work, maintenance operations, and the management of traffic incidents. Highway signs will be posted on the existing N12 and nearby residential roads. NECA employees and truckers will be instructed to be considerate of local traffic and livestock crossing during all safety briefings (NECA, Safety Policy Manual, 2014).

3.1.9 Noise

Noise from the borrow excavation and operation activities should not have a significant adverse effect on the local population and environment. NECA's daily work schedule will be a 10 hour work day, during the day light hours, from 7:00 am to 6:00 pm. Excavation activities will generate noise levels in the 80 db to 90 db range for short durations, less than one hour. No mitigation is required for any noise adversity.

3.1.10 Floodplain

The proposed borrow pit is not located on any floodplain; nor located in a flood prone area. The site topography generally dip southwest at approximately 1-3 degrees, which allows for ample drainage. Flood Insurance Rate Maps, as published by the Federal Emergency Management Agency, do not extend on to the project area. The project area is excluded from any floodplain designation by the agency.

3.1.11 Wetlands and Riparian Habitat

The Canyon DeChelly National Wetlands Inventory Map was reviewed. The proposed project and action area would not traverse any wetland areas as defined by the USACE Wetlands Delineation Manual of 1987 (USACE, 1987). There are no jurisdictional wetlands within the proposed project area. The map indicates livestock impoundments, classified as Palustine (*PUSAh*), unconsolidated shoreline, temporary flooded, and a dike/impoundments. *PUSAh* locations are located throughout the project area. These water impoundments are livestock watering points. The project would have no effect on the impoundments, as wetlands or riparian habitat occurrences do not exist on

the project site. Existing livestock watering impoundments in the vicinity do not exhibit hydric soils, nor hydrophilic vegetation, nor do they support a wetland hydrology (U.S. ACOE, 1987). No mitigation measures are recommended for wetland/riparian areas.

3.1.12 Hazardous, Toxic, and Radiological Waste

Other than the existing burrow pit, there are no other previous industrial uses of the area. The proposed borrow pit and adjoining property do not contain any damaged or discarded automotive or industrial batteries, pesticides, paints or other chemicals (stored or used). No fill dirt has been brought onto the property that originated from a contaminated site. There is no evidence of leaks and spills of hazardous substance or spills of petroleum products on the properties.

No Resource Conservation and Recovery Act (RCRA) Subtitle C hazardous waste sites, nor RCRA Subtitle D, non-hazardous solid waste sites occur on or near the project area. No Comprehensive Environmental Response Conservation and Liabilities Act (CERCLA) hazardous substance (including radiological waste) occur near the project area. No Toxic Substance Control Act (TSCA) waste sites occur on or near the existing site. Hence, there will be no residual hazardous effects on the proposed lease.

CRITICAL ELEMENTS

3.2 Topography and Soils

3.2.1 Existing Conditions

Tsaile Peak and the Chuska Mountains dominate the northern and eastern landscape. The proposed borrow pit would be located on the west flank of the central Chuska Mountains. The general land form is characterized by distance volcano buttes and monoliths, sandstone mesas, and rock outcrops formed by the Defiance Plateau Uplift. The proposed project area is located on the west flank of the Defiance Uplift (anticline), within the Canyon DeChelly watershed. General topographic gradient of the project area moderately slopes to the west. Major drainages, originating in the Chuska Mountains, cut the landscape at a perpendicular angle that exposes and erodes rock outcrops, of sandstone, clays and shale. The surface topography and geology/soils along the proposed project area is not expected to present any specific problems to the proposed project.

Soils of the forested plant community are atypical, previously disturbed from logging activity. Natural soils are comprised of the Lithic Haplustepts-Jacks family-Pachic Haplustolls complex, at 4 to 40 percent slopes, which cover the entire part of the proposed pit. Soil texture ranges from coarse sandy loam to bedrock at 18 to 60 inches. Parent material: Residium weathered from sandstone. The tan - brown coarse sandstone and cobble stone conglomerate, an unconformity, is situated on top of the Sonsela Sandstone Bed of the Chinle Formation. The soils in the project area and vicinity were formed primarily from alluvial deposits, sandstone and pebble rock from the alluvial sediment that was deposited in valleys and terraces (NRCS, 2019).

3.2.2 Effects

Under normal borrow excavation operations, onsite topography would not require any special adjustments, such as cut and fill, for the proposed project. Topography and soils at the project area would not be a problem. No significant mitigation would be required for onsite topography.

Soils will be impacted. The site access road turnout would be upgraded to accommodate the mobility of heavy equipment to the borrow pit, ingress and egress. Truck haulage of borrow material from the pit during mining operations would be constant during the lease period. Approximately 4.98 acres of land would be disturbed during borrow pit excavation.

3.2.3 Mitigation

Upon completion of the project, NECA will reclaim and reseed the site with native vegetation in accordance with the proposed *NECA Borrow Excavation and Reclamation Plan* (NECA BE&RP, 2020) (2020). Also, see Project Description at Section 1.0 for the reclamation of the proposed borrow pit.

NECA would also file a National Pollution Discharge Plan, Clean Water Act Section 402 (p), Notice of Intent with the U.S. Environmental Protection Agency in Washington DC, as the company would also prepare a *Stormwater Pollution Prevention Plan* (SWPPP) to stabilize soil erosion and enhance re-vegetation onsite.

3.3 Water Resources and Water Quality

3.3.1 Existing Conditions

Surface water of the proposed project area would drain toward the southwest in an unnamed wash, which eventually runs into an ephemeral basin, approximately two miles down drainage. There are no visible water wells, or tanks in the project area vicinity, or at locations in the upper watershed. Primary discharges of these drainages would occur during the spring thaw, and during occasional intense summer thundershowers in late summer. Torrential thunderstorms can produce flood-stage flows within minutes (Cooley, M. E., J. W. Harshbarger, J. P. Akers, & W. F. Hardt, 1969).

Both Wheatfields and Tsaille Lake will be used as a water source for the proposed borrow pit operations. An approved water use permit will be acquired from the Navajo Department of Water Resources, Technical, Construction and Operations Branch (NDWR TC&OB) for the use of the lake. The proposed borrow excavation lease, or other related activities would not have impact on any springs, wells or aquifer recharge areas. NECA's five year lease is not expected to exceed the limitation of the NDWR TC&OB water use permit. No impacts to the surface and natural ground water in the vicinity of the proposed project may be expected by the approval of the application.

In accordance with the NPDES, a *Stormwater Pollution Prevention Plan* (SWPPP) would be developed to protect and contain the surface water in the vicinity of the pit area. Temporary erosions controls, including straw bales, silt fences, rolled excelsior bales, and rip rap, will be installed and maintained according to the SWPPP. These measures are to control surface soil erosion onsite. (NECA USEPA NOI, 2019).

3.4 Vegetation & Wildlife Biotic Communities–Montane Ponderosa Pine Forest Ecosystem

3.4.1 Existing Conditions

The proposed Wheatfields Borrow Pit would be located in the Montane Ponderosa Pine Forest Ecosystem. The proposed pit is located on the western edge of the Chuska Mountains, on a plateau knoll at approximately 7,312 feet amsl. Ponderosa Pine Forest surrounds the 4.98 acre tract. While Ponderosa Pine *Pinus ponderosa* is the dominant tree species over most of the forest in the project area, associated forest trees as Douglas-fir, and Quaking Aspen are also noticeable in the forest at all

elevation. Gambel Oak is locally common and may dominate some of the rockier locations. Douglas-fir trees *Pseudotsuga douglasii* are scattered though out the forest.

The Navajo Nation Woodland Inventory Analysis Report (1986-1991 measurements) estimates there is approximately 816.64 cubic feet of woodland forest products per acre within the Tsaile/Wheatfields Chapter area. The woodland cover types are comprised of pinyon pine (*Pinus edulis*), juniper (*Juniperus spp.*), and gambel oak (*Quercus gambelii*). In addition, Ponderosa pine (*Pinus ponderosa*), and other timber species, are present within the area. The site produces approximately 7.70 cubic feet per acre, per year of forest products, woodland and timber combined. Timber forest products are estimated to be 217.96 board feet per acre.

Under natural conditions and growing amid the pine and oak canopy understory are shrubs, grasses, forbs and annuals. Understory shrubs are not especially common, but may include scattered population and plants of Fendler Ceanothus *Ceanotus fendleri*, Creeping Mahonia *Berberis repens*, Smooth Sumac *Rhus glabra*, Golden Current *Ribes aureum*, Orange Gooseberry *Ribes pinetorum* Arizona Rose *Rosa arizonica*, Blue Elderberry and Velvet Elder (*Sambucus cerulea* and *Sambucus velutina*), Utah Snowberries *Symphoricarpos utanensis*, Bush Rockspirea *Holodiscus dumosus*, and Nine Bark *Physocarpus mongynus* (Brown, D. E., 1994).

Under more open stands, grasses and grass-like plants may prevail and include montane-centered grasses and sedges, such as Mountain Muhley *Muhlenbergia montana*, Pine Dropseed *Blepharoneuron tricholepis*, Fringed Brome *Bromus ciliates*, Arizona Fescue *Festuca arizonica*, Prairie Junegrass *Koeleria cristata*, Bulb Panicum *Panicum bulbosum*, Muttongrass *Poa fendleriana*, Kentucky Bluegrass *Poa pratensis*, Squirreltail *Sitanion hystrix*, Needlegrass *Stipa pringlei*, Dryland Sedge *Carex geophila*, and Fendler Flatsedge *Cyperus fendlerianus* (Brown, D. E., 1994).

Some of the more characteristic and common forbs of the Montane Ecosystem include Western Yarrow *Achillea lanlosa*, Mountain Parsley *Pseudocymopterus montanus*, New Mexico Groundsel *Senecio neomexicanus*, Bracken Fern *Pteridium aquilinum*, Pinedrops *Pterospora andromeda*, Rusby Clover *Trifolium rusbyi*, Mountain Bluebell *Mertensia franciscana*, American Vetch *Vicia Americana*, Arizona and Grassleaf Peavine *Lathyrus arizonicus* and *L. graminifolius*, Lupines *Lupinus spp.*, Trailing and Spreading Fleabane *Erigeron flagellaris* and *E. divergens*, Dandelion *Taraxacum officinalis*, Meadowrue *Thalictrum fendleri*, Elegant Cinquefoil *Potentilla concinna*, Sawatch Knotweed *Polygonum sawatchense*, Purple Geranium *Geranium caespitosum*, and Wild Strawberry *Fragaria ovalis* (McLaughlin & Wagle).

Common understory shrubs include gooseberries and currants, Arizona Rose, Mountain and Roundleaf Snowberry, and Arizona and Bearberry Honeysuckle *Lonicera arizonica* and *L. involucrata*. The normally rich mixture of grasses and forbs include Nodding, Mountain, and Fringed Brome, wheatgrasses *Agropyron spp.*, Kentucky Bluegrass, asters *Aster spp.*, Bracken Fern, fleabanes *Erigeron spp.*, Golden-rod, Grassleaf Peavine *Lathyrus graminifolius*, American Vetch, Rocky Mountain Iris *Iris missouriensis*, Lupines, Sneezeweed, Coneflower, Yarrow, Mintleaf Beebalm, False Mountain Bluebell, and geraniums (Brown, D. E., 1994). Aspen stands are rich

wildlife communities, providing abundant food and cover (when not heavily grazed) for a wide variety of mammals and birds.

Annual plants and noxious weeds, such as Cheatgrass *Bromus tectorum*, Russian thistle *Salsolia kali*, Tansy mustard *Descurainia obtusa*, Sunflower *Helianthus annuus*, and Kochia weed *Bassia hyssopifolia* occur on the project area.

A number of mammals make their home within montane forests including Myotis Bats *Myotis aurculus*, Long-eared Myotis *M. evotis*, Long-legged Motis *M. volans*, and Big Brown Bat *Eptesicus fuscus*. Species such as the Vagrant, Dwarf, and Merriam Shrews, *Sorex vagrans*, *S. nanus*, *S. merriami*; Chickaree *Tamiasciurus hudsonicus*, and Nuttall's Cottontail *Sylvilagus nuttalli* reach their greatest abundance within mixed conifer communities, while other, such as the Tassel-eared Squirrel *Sciurus alberti* and Porcupine *Erethizon dorsatum*, are most abundant in yellow pine forests. Indicative of the montane environments are Chipmunks *Eutamias spp.*, and Montane vole *Microtus spp.* Other species likely in the Montane forests are the Cottontail *Sylvilagus flordanus*, Golden-mantled Ground Squirrel *Citellus lateralis*, Deer Mouse *Peromyscus maniculatus*, Mexican Woodrat *Neotom Mexicana*, Mule Deer *Odocoileus hemionus*. Once restricted to much smaller distribution in the Southwest, the Rocky Mountain Elk *Cervus elaphus* now occupies Southwestern montane forests in Colorado, New Mexico, and Arizona (Brown, D. E., 1994).

The list of characteristic nesting avifauna (birds) is large and contains such typically montane conifer forest species as the Goshawk *Accipiter gentilis*, Flammulated Owl *Otus flammeolus*, Pygmy Owl *Glaucidium gnoma*, Spotted Owl *Strix occidentalis*, Saw-whet Owl *Aegolius acadicus*, Broad-tailed Hummingbird *Selasporus platycercus*, Western Flycatcher *Empidonax difficilis*, Steller Jay *Cyanocitta stelleri*, Pygmy Nuthatch *Sitta pygmaea*, Brown Creeper *Certhis familiaris*, Western Bluebird *Sialia Mexicana*, Townsend's Solitaire *Myadestes townsendi*, Solitary Vireo *Vireo solitaries*, Warbling Vireo *V. gilvus*, Yellow-rumped Warbler *Dendroica coronata*, Western Tanager *Piranga ludoviciana*, Evening Grosbeak *Hesperiphona vespertina*, Pine Siskin *Carduelis pinus*, Red Crossbill *Loxia curvirostra*, Juncoes, and Chipping Sparrow *Spizella passerine*; all of which extend through the Southwest. Wild turkeys *Meleagris gallopavo Mexicana*, Band-tailed Pigeon *Columbia fasciata*, Hummingbirds *Eugenes spp.*, Pine Flycatchers *Empidonax affinis*, and Mexican Chickadee *parus sclateri* are other examples of Ponderosa Pine – Oak forest species (Brown, D. E., 1994).

Amphibians are limited to the Tiger Salamander *Ambystoma tigrinu*, Mountain Salamanders and various frogs and toads. In the Great Basin fasciation, the Western Skink *Eumeces callicephalus* – are representative lizards. Reptiles that occur in the Montane include the Short-horned Lizard *Phrynosoma douglassi*, Striped plateau lizards *Sceloporus virgatus*, Plateau whiptails *Cnemidophorus velox* Gopher Snake *Pituophis melanoleucus*, and Western Rattlesnake *Crotalus viridis* (Brown, D. E., 1994).

3.4.2 Effects

Vegetation and soils will be impacted. A total area of effect would be 4.98 acres of land would be disturbed during excavation operations.

3.4.3 Mitigation

Forest products will be harvested in accordance to all applicable Tribal and Federal laws and regulations regarding forest products harvesting (e.g., RCMA-48-01, 25 CFR Part 163). An approved Tribal forest product harvesting permit, Bureau of Indian Affairs forest product harvesting permit and/or contract will be issued to the Permittee and/or Contractor prior to any forest product harvesting activities on Tribal Trust Land; this includes harvest of non-native tree species (e.g., tamarisk, Russian olive). Best management practices will be identified within the Standard Provisions and Special Provisions developed by the Navajo Forestry Department and the Bureau of Indian Affairs and attached to the permit and/or contract.

Upon completion of the project, NECA will reclaim and reseed the site with native vegetation in accordance with a *NECA Borrow Excavation and Reclamation Plan* (NECA BE&RP, 2020). See Section 1.0 Project Description for further discussion. Seeding will be established by the Dry Rangeland Method. NECA would also file a National Pollution Discharge Plan, Clean Water Act Section 402 (p), Notice of Intent with the U.S. Environmental Protection Agency in Washington DC, as the company would also prepare a *Stormwater Pollution Prevention Plan* (SWPPP) to stabilize soil erosion and enhance re-vegetation onsite.

3.5 Federal Endangered Species Act (ESA) Listed Species

Onsite field surveys for ESA threatened and endangered species were conducted September 5 and September 9, 2019. Based on the field surveys, no Federal ESA listed species, or potential habitats were found in the proposed project area. The proposed action alternative would have no effect on the listed federally ESA species, Biological Resources Compliance Form 19dan102 is shown at Appendix D. Table 3 summarizes the potential for federally listed species that would occur in the project area.

Table 3. USFWS Listed Species Habitat Associations and Potential Presence.

SPECIES/ STATUS	HABITAT ASSOCIATIONS	PRESENCE
Navajo Sedge <i>Carex specuicola</i> ESA Threatened NESL G3	Typically found in seeps and hanging gardens, on vertical sandstone cliffs and alcoves. Known populations occur from 4600 ft to 7200 ft.	NP - No suitable habitat: sandstone seeps and hanging garden habitat is not present on the proposed project or action area. Previous mining activity and existing land uses, i.e., livestock grazing, and road access, has rendered the area unsuitable for this species habitation.
Southwest Willow Flycatcher <i>Empidonax traillii extimus</i> ESA Endangered NESL G2 MBTA	Breeds/nests in dense riparian tree & shrub communities associated with rivers, swamps and other wetlands, including lakes and reservoirs. The bird nest in native vegetation including willows, seepwillow, boxelder, button-bush & cottonwood, also thickets of non-native tamarisk & Russian olive. Nest is constructed 6.5 to 23 feet above ground on saturated soils along riparian and riverine ecosystems.	NP - Natural riverine habitat and riparian ecosystems are not present in the project area; species is unlikely to occur within the project area. There would be no effect on the federally listed Southwest Willow Flycatcher endangered bird species, or their habitat.

Rhizome Fleabane <i>Eregeron rhizomatus</i> ESA Threatened NESL G2	Zuni Rhizome Fleabane <i>Eregeron rhizomatus</i> is typically found on fine textured clay soils on hillsides of mid to high elevations of 7,000 to 8,300 feet. It is known to inhabit clay soils derived from the Chinle Formation in the Zuni and Chuska Mountains (NNHP, 2008). On the Navajo Nation the species is found on the slopes of the Chuska Mountains from Lukachukai and west of Red Valley, Apache County, Arizona south to Navajo in McKinley County, New Mexico.	NP - Habitat not present and species unlikely to occur within the project area. The plant species was not present during the field surveys.
K - Known, documented observation within project area.		
S - Suitable habitat and species suspected to occur within the project area.		
NS - Habitat suitable but species is not suspected to occur within the project area.		
NP - Habitat not present and species unlikely to occur within the project area.		
CH - Designated Critical Habitat assigned to this species.		

3.6 NAVAJO ENDANGERED SPECIES LIST (NESL) SPECIES OF CONCERN

Onsite field surveys for Navajo Endangered Species List (NESL) were conducted by the staff of Denali Environmental Services September 5 and September 9, 2019. Based on the field surveys, no NESL species of concern, or potential habitats were found in the proposed project area. The proposed action alternative would have no effect on the listed NESL species, Biological Resources Compliance Form 19danl102 is shown at Appendix D. Table 4 summarizes the Navajo listed Species of Concern that would occur on the proposed project area.

Table 4. Habitat descriptions and presence of NESL listed species potential to occur in the project area.

SPECIES & LISTING	HABITAT ASSOCIATIONS	PRESENCE
FAUNA		
Golden Eagle <i>Aquila chrysaetos</i> NESL G3	The Golden Eagle nests on steep cliffs, normally adjacent to foraging habitat of desert grasslands or desertscrub, that provide primary prey of prairie dogs, cotton tail and jack rabbits (NNHP, 2008). Nests are reused and tend to become a huge mass of sticks and debris. Golden Eagle foraging habitat is present within the propose project area, and action area. Small mammals, such as prairie dogs, jackrabbits, cottontail rabbits, field mice, gophers, etc., are of marginal abundance in the project area.	K/S - Direct impacts to the Golden Eagle would include the temporary loss of foraging habitat. Given the distance of unknown hunting territories of these raptors and suitable nesting habitat from the proposed location, it is possible that these raptors species may forage in proximity or fly through the proposed project and action areas. Existing & future land uses (livestock grazing, roadway use, housing, & mining) of the property would render the area partially unsuitable for the raptor species.
Bluehead Sucker <i>Catostomus discobolus</i> NESL G4	The species occupies a wide range of water conditions; within river/stream habitats, including water temperature, and stream	K/NP - Habitat suitable but species is not suspected to occur within the project area; no perennial water resources occur in the project area. The proposed

	volumes; often occupy the swift water areas in mountain streams.	alternative would have no effect on the listed sucker or their habitat.
Bald Eagle <i>Haliaeetus leucocephalus</i> NESL G2	The Bald Eagle typically nest within trees in forested areas, especially mature and old-growth stands, adjacent (usually <2 km) to large bodies of water, with suitable forage of waterfowl and fish; rarely uses cliff face adjacent to large body of water. Winter roost in large trees in forests, river bottoms, or near canyon rims, usually within a few miles of ponds, lakes and rivers with adequate prey. Ponds and lakes are used until completely iced-over and prey availability is reduced.	K/S – Suitable habitat and species suspected to occur within the project area. The action area contains large expanses of mixed-conifer, ponderosa pine-oak habitat, suitable for eagle foraging, and nesting. The specie was not present during the field surveys.
Three-toed Woodpecker <i>Picoides dorsalis</i> NESL G4	Nests and winters primarily in spruce, fir, aspen, or mixed-conifer forests (and possibly adjacent ponderosa pine habitats) above 2,400 m (8,000 ft.) elevation; ideal conditions have mature or old growth stands, fire-killed trees, 42-52 snags per 40 ha (100 acres), and/or large number of bark-boring beetles. Nest is placed 1 ½ -15 m high in a stump or dead/dying conifer or aspen.	K/S – Habitat suitable but species is not suspected to occur within the project area. The action area contains large expanses of mixed-conifer, ponderosa pine-oak habitat, suitable for foraging, and nesting. The specie was not present during the field surveys.
Northern Saw-whet Owl <i>Aeglius acadicus</i> NESL G4	Nests in tree cavities in relatively open ponderosa pine, Douglas-fir, or mixed conifer forest; may also nest in old growth riparian woodlands. Wintering habitat is variable but dense vegetation is critical.	NS – Habitat suitable but species is not suspected to occur within the project area. The specie was not present during the field surveys.
American Dipper <i>Cinclus mexicanus</i> NESL G3	Nests near clear, unpolluted streams usually ≤ 15 m in width and ≥ 2 m in depth, with a variety of riffles, pools, and waterfalls with substrate of rock, sand, and rubble; instream and stream side boulders are necessary for perches. Nests are placed on ledges or in crevices on stream-bank structures of small cliffs, large rocks, fallen logs and tree roots.	NP – Habitat is not suitable and species is not suspected to occur within the proposed project area. The species was not present during the field surveys.
Peregrine Falcon <i>Falco peregrinus</i> NESL G3	Nesting habitat rock outcrop formations greater the minimum height of 45 meters is present in the high country of the Chuska Mountains. And the foraging resource of their preferred prey in the surrounding area would support falcon and other raptor populations.	S Although the specie was not sighted in the survey area during the field survey, suitable habitat and species suspected to occur within the project area.
Northern Pygmy Owl	Nests in tree cavities, often near openings (e.g. meadows, lakes, and	NS – Habitat suitable but species is not suspected to occur within the project area.

<i>Glaucidium gnoma</i> NESL G4	ponds), in a variety of montane forest habitats, and possibly wooded canyons. Montane habitats include coniferous (spruce, fir and ponderosa pine), mixed conifer-hardwood with oak and aspen, hardwood bottomlands, and occasionally aspen stands. May migrate to lower elevations and use woodlands or prairie foothills as wintering habitat.	The proposed project area is easily accessed by livestock and recreational foot and vehicle traffic. The human activity, roadway traffic, traffic noise would render the project area not appropriate for nesting habitat. The fauna species was not present during the field surveys.
Northern Leopard Frog <i>Rana pipiens</i> NESL G2	The species is found in a variety of habitats – grassland, brushland, woodland, and forest, ranging high into the mountains. The most cold adapted of all leopard frogs, the species frequents springs, slow flowing streams, marshes, bogs, ponds, canals, and reservoirs, usually where there is permanent water and growth of cattails or other aquatic vegetation. The species may forage far from water in damp meadows (Stebbins, R. C., 1985).	NP No suitable wetland habitat for the Northern Leopard Frog was found on the proposed project area. Previous and existing land uses of the property have rendered the area unsuitable for Leopard Frog habitat. The species was not present during the field surveys.
Flammulated Owl <i>Otus flammeolus</i> NESL G4	Nests in tree cavities in open conifer (usually ponderosa pine) or aspen forests, often with brushy understory of dense saplings or oak shrubs and clearings; areas with old-growth are preferred. Roosts within dense stands with large-diameter trees or regeneration. Nest and roost habitats need high abundance and diversity of nocturnal arthropods for prey. Winters in lower elevation habitats, especially riparian areas.	NS – Habitat suitable but species is not suspected to occur within the project area. The proposed project area is easily accessed by livestock and recreational foot and vehicle traffic. The human activity, roadway traffic, and traffic noise would render the project area inappropriate for nesting habitat. The fauna species was not present during the field surveys.
Tree Swallow <i>Tachycineta bicolor</i> NESL 4	The Tree Swallow breeds in existing cavities of variety of trees species (coniferous and deciduous); often uses snags in open fields near water, especially marshes and wooded ponds. Known from the Chuska Mountains, but potential occurs throughout forested areas of Navajo Nation.	NS – Habitat suitable but species is not suspected to occur within the project area. The proposed project area is easily accessed by livestock and recreational foot and vehicle traffic. The human activity, roadway traffic, traffic noise would render the project area not appropriate for nesting habitat. The fauna species was not present during the field surveys.
FLORA		
Gooding's Onion <i>Allium goodingii</i> NESL G3	Inhabits the mix forest type of Aspen-Ponderosa Pine-Douglas Fir forest. The species inhabits the north facing slopes of small canyons on the west escarpment of the south Chuska	NS - Habitat suitable but species is not suspected to occur within the project area. The species grow in a shady moist understory. The proposed project area is easily accessed by livestock, recreational

	Mountains. The species generally inhabits the shady riparian understory of mixed conifer-aspen forest habitat. Individual onion plants (isolated occurrences) are also found on the dry pine needle beds intermittently above the shady understory.	foot and ATV vehicle traffic. The human activity would render the project area not appropriate for onion habitat. The flora species was not present during the field surveys.
Rydberg's Thistle <i>Cirsium rydbergii</i> NESL G4	Inhabits hanging gardens, seeps and sometimes stream banks below hanging gardens, 3300' to 6500', in Southern SJ County, Utah, northern Coconino, and Apache County, AZ.	NP Habitat not present and species unlikely to occur within the project area. Previous mining activity and existing land uses, i.e., livestock grazing, nearby family residential areas, and road access, has rendered the area unsuitable for species habitation.
Yellow Lady's Slipper <i>Cypripedium parviflorum</i> var. <i>pubescens</i> NESL G4	Occurs in moderate shade along streambanks, mountain meadows and mesic places in Ponderosa pine, mixed conifer and aspen forest communities. On the Navajo Reservation known from above 7,000 feet.	NP - Habitat not present and species unlikely to occur within the project area. The existing habitat contains a parkland forest habitat at 50%-70% cover on southern exposure. The plant species was not present during the field surveys.
Utah Bladder-fern <i>Cystopteris utahensis</i> NESL G4	The Utah Bladder-fern is found in seepages, cracks and ledges on cliffs; on calcareous substrates including sandstone, limestone, and dacite. Populations are known from 4200 to 8800 feet elevation. Only known from Canyon de Chelly National Monument.	NP - Habitat not present and species unlikely to occur within the project area. This species was not found on the project during the field surveys.
Sarah's Buckwheat <i>Eriogonum lachnogynum</i> NESL G4	Habitat: Windswept mesa tops in Pinyon-Juniper communities at 5,900 to 7,500 feet. Endemic on the Owl Rock Member of the Chinle Formation, topped by Todilto Limestone.	NP - Habitat not present and species unlikely to occur within the project area. The plant species was not present during the field surveys.
Navajo Bladderpod <i>Lesquerella navajoensis</i> NESL G3	Species mostly occurs on windward, windswept mesa rims and nearby habitat with little vegetative cover and high insolation. Also found at the base and slopes of small hills of the Chinle Formation. Typically only found in a combination of Todilto Limestone overlaying Entrada Sandstone or Chinle outcrops in pinyon-juniper communities. Suitable habitat can be identified year around.	NP - Habitat not present and species unlikely to occur within the project area. The plant species was not present during the field surveys.
	Inhabits hanging gardens in seeps and alcoves, in moist streams areas	NP - Habitat not present and species unlikely to occur within the project area.

Alcove Bog-orchid <i>Platanthera zothecina</i> NESL G3	from the desert shrub to pinion-juniper & Ponderosa pine/mixed conifer communities. Known population occur between 4,000' and - 7200' elevation.	Previous mining activity and existing land uses, i.e., livestock grazing, nearby family residential areas, and road access, has rendered the area unsuitable for species habitation.
Alcove Death Camass <i>Zigadenus vagintus</i> NESL G3	Inhabits hanging gardens in seeps and alcoves, mostly on Navajo Sandstone, 3700' - 6700'.	NP - Habitat not present and species unlikely to occur within the project area. Previous human activity and existing land uses, i.e., livestock grazing, nearby family residential areas, and road access, has rendered the area unsuitable for species habitation.
K - Known, documented observation within project area.		
S - Suitable habitat and species suspected to occur within the project area.		
NS - Habitat suitable but species is not suspected to occur within the project area.		
NP - Habitat not present and species unlikely to occur within the project area.		
CH - Designated Critical Habitat assigned to this species.		

The proposed action alternative would have no effects on any of the listed NESL special management species or their habitat.

3.7 MIGRATORY BIRD TREATY ACT LISTING

3.7.1 Existing Condition

Migratory birds and their habitats are protected under the Migratory Bird Treaty Act (MBTA) (16 USC §703-712) and EO 13186. All federal agencies are required to consider management impacts to protect migratory non-game birds. Executive Order 13186 calls for increased efforts to more fully implement the MBTA. The U.S. Fish and Wildlife Service (USFWS) list of Birds of Conservation Concern (BCC) was reviewed, specifically as they pertain to the Colorado Plateau physiographic area. The area indicates there are 27 avian species occurring on the southern Rocky Mountains and Colorado Plateau. See Table 5.

Most priority bird species occur on the USFWS, Division of Migratory Bird Management "Birds of Conservation Concern 2008" (BCC 2008 list). The Service designates the Southern Rockies / Colorado Plateau region as Bird Conservation Region (BCR) 16, which the Navajo Indian Reservation and Eastern Navajo Agency are included.

3.7.2 Effects

Although migratory birds could potentially occur in the area, none were observed during the environmental site visit. The proposed action alternative would result in a short-term and small scale loss of vegetation due to construction. This construction project would disturb a fraction of the project area, which was previously disturbed during previous excavation. The proposed project activities are expected to be confined to the project areas. Temporary loss of native vegetation is anticipated at the project area. Eolian deposits of native seed from the undisturbed vegetation would also help to propagate native plant species.

Table 5. U.S. Fish and Wildlife Service, Division of Migratory Bird Management "Bird of Conservation Concern 2008" for the Southern Rockies/ Colorado Plateau (US F&WS, 2008).

SPECIES	HABITAT ASSOCIATION	EFFECTS	EFFECT RATING
Gunnison Sage Grouse <i>Centrocercus minimus</i>	Inhabits shrub-steppe dominated by sagebrush that provide canopy cover, shelter, & forage.	No conflict anticipated. Specie not present.	Zero
American Bittern <i>Botaurus lentiginosus</i>	Wading bird inhabits wetlands, usually dense marsh reeds, rushes and sedges.	No suitable habitat present.	Zero
Bald Eagle <i>Haliaeetus leucocephalus</i>	Nests in old growth ponderosa pine and Douglas fir forest. Forages on fish and waterfowl. Inhabits the coast, rivers, large lakes; also mountains, open country.	No conflict anticipated. Species not present.	Low
Ferruginous hawk <i>Buteo regalis</i>	Inhabits open grasslands or desert scrub ecosystems. Nest often occurs on rock spires and butte formations. In woodland edge habitat, nests on flat-topped junipers.	No conflict anticipated	Low
Golden Eagle <i>Aquila crysaetos</i>	Open grasslands or desert scrub, In mountainous canyon terrain. Nest on cliffs and trees	Little conflict anticipated	Low
Peregrine Falcon <i>Falco peregrinus</i>	Inhabits rugged terrain with rocky cliffs and canyons 30 to 1,000 ft. high, adjacent to rivers lakes, or streams.	Little conflict anticipated	Low
Prairie Falcon <i>Falco mexicanus</i>	Nests and forages in grassland, and open Juniper Savannah.	Little conflict anticipated	Low
Snowy Plover <i>Charadrius alexandrinus nivosus/tenuirostris</i>	Shore bird inhabits barren sandy beaches and flats.	Suitable habitat not present, no conflict anticipated.	Zero
Mountain Plover <i>Charadrius montanus</i>	Inhabits grassland plains; usually found on grassy or bare dirt fields.	Little conflict anticipated	Low
Long-billed Curlew <i>Numenius americanus</i>	Nests in wet & dry upland fields. In migration, a shore bird of wetlands and agriculture fields.	Suitable habitat not present. Specie not present.	Zero
Yellow-billed Cuckoo <i>Coccyzus americanus</i>	No suitable riparian habitat present. Inhabits open woods, orchards, and streamside willow and alder groves.	No conflict anticipated. Specie not present.	Zero
Flammulated Owl <i>Otus flammcolus</i>	Inhabits pine-oak woodland, ponderosa pine forest.	Suitable habitat not present.	Zero

Burrowing Owl <i>Athene cunicularia</i>	Inhabits grassland shrub-steppe dominated by mixed grasses. Casual vagrant to prairie dog colonies, occupying abandoned holes.	No conflict anticipated. Specie not present.	Zero
Lewis's Woodpecker <i>Melanerpes lewis</i>	Inhabits woodland forests of pine-oak. Nests in oak cavities and pine snags. Forages and stores acorns and insects.	Little conflict anticipated	Low
SW Willow Flycatcher <i>Empidonax traillii</i>	Inhabits brushy habitats in wet areas; also in pastures, mountain meadows.	No suitable habitat.	Zero
Gray Vireo <i>Vireo vicinior</i>	Found in juniper savannah and open JP woodland, with scrub component. Inhabits mountains and chaparral-juniper scrubland.	Little conflict anticipated.	Low
Pinyon Jay <i>Gymnoprjonus cyanocephalus</i>	Juniper Savannah, woodland, pine-oak ecosystems associated with high open habitats w/ openings, scattered trees or shrub components.	A multi ecosystem inhabitant, little conflict anticipated.	Low
Juniper Titmouse <i>Baeolophus ridgwayi</i>	Inhabits juniper-pinyon woodland.	Little conflict anticipated	Low
Veery <i>Catharus fuscescens</i>	Inhabits dense moist woodlands and streamside thickets. Casual in the Southwest.	Little conflict anticipated	Low
Bendire's Thrasher <i>Toxostoma bendirei</i>	Brushy desert shrub, especially areas of tall vegetation, cholla cactus, creosote bush and yucca.	No suitable habitat. Specie not present.	Zero
Grace's Warbler <i>Dendroica graciae</i>	Inhabits coniferous or mixed forests of southwest mountains, especially yellow pines. Usually forages high in the trees.	Little conflict anticipated	Low
Brewer's Sparrow <i>Spizella breweri</i>	Inhabits mountain meadows and sagebrush flats.	Little conflict anticipated.	Low
Grasshopper Sparrow <i>Ammodramus savannarum</i>	Inhabits moderately open grassland habitats, with patchy bare ground, and avoid areas with extensive shrub cover. Feeds and nests on ground.	Little conflict anticipated.	Low
Chestnut-collared Long-Spur <i>Calcarius ornatus</i>	Inhabits upland grassland, generally found in dense grass; gregarious in fall and winter	Little conflict anticipated.	Low

Black Rosy-Finch <i>Leucosticte atrata</i>	Inhabits high mountains, rocky summits, alpine cirques and snowfields; winters in open country at lower elevations, spreading onto the plains.	No suitable habitat on the project area.	Zero
Brown-capped Rosy Finch <i>Leucosticte australis</i>	Inhabits high mountains, rocky summits, alpine cirques and snowfields; winters in open country at lower elevations, spreading onto the plains.	No suitable habitat on the project area.	Zero
Cassin's Finch <i>Carpodacus cassinii</i>	Woodland Ecosystem. Species inhabits evergreen woodlands.	Little conflict anticipated.	Low

Once the construction equipment is removed, wildlife and migratory bird species would be expected to return to the area. To avoid any potential effects to migratory bird species or migratory bird habitat, construction of the project would take place outside the nesting season. No long-term loss of vegetation or wildlife habitat is expected. As a result, the proposed pit excavation would have no significant effects on migratory bird species.

3.7.3 Mitigation of Migratory Birds

NDF&W policy mandates that prior to construction the proposed activity would require a preconstruction survey of potential nesting birds on the right-of-way, should construction occur during the breeding season. Any bird nests found within the proposed project area will be reported to the NNHP biologist for appropriate mitigation prior to construction activities.

NECA will minimize the possibility of unintentional take of migratory birds. Should the proposed project involve vegetative disturbance (brush and tree removal), no construction activities from May 15 to July 31 will be permitted without a migratory bird nest survey. If any active nests are located within the proposed project area, project activities will not be permitted until written approval by the NNHP biologist. The operator will monitor any active nests located from a nest survey. Following construction activities, the construction staging areas would require reclamation. Avoidance to the breeding season will minimize potential impacts to migratory birds.

3.8 Air Quality

3.8.1 Existing Conditions

The area of the proposed action is in an "attainment area" for the National Ambient Air Quality Standard (NAAQS) listed pollutants regulated by the Clean Air Act, but is in an "undesignated class" air quality area. Air quality in the proposed project area, near the existing CR 444 dirt road, is good. The Navajo Reservation generally meets all standards of the NAAQS, and is considered to be in an "attainment area". However, the Navajo Reservation is officially considered to be in an "undesignated class" air quality area, neither a Class II nor a Class III area, as indicated by the Navajo Nation Environmental Protection Administration, Air Quality Program (NEPA AQP, 2011).

Other factors that currently affect air quality in the area include dust from vehicular traffic on dirt roads, livestock herding activities, dust from recreational use, and emissions from vehicle motors. Impacts to air quality attributable to this project would be temporary and minor. Air pollution from the borrow pit activity, motorized equipment and dust dissemination would discontinue at the completion of the project.

3.8.2 Effects

An alternative would be considered to have significant effect on air quality if it would 1) violate any National Ambient Air Quality Standard (NAAQS), 2) contribute on a long-term basis to an existing or projected air quality violation, 3) expose humans or sensitive species to substantial pollutant concentrations, or 4) not conform to applicable local standards.

The proposed action alternative would have no long-term effects on air quality. However, short-term effects on air quality would be expected during borrow pit operations. Emission levels from fugitive dust from disturbed surface areas, and vehicle emissions from operating heavy equipment would occur. Based on the size and nature of the proposed project, these short term emissions would not be expected to contribute enough pollutants to exceed the NAAQS. Therefore, no significant short-term or long-term effects to air quality are expected. The implementation of the BMP's would be implemented to avoid effects or to ensure that any unavoidable effects on air quality remain less than significant.

3.8.3 Mitigation

Impact to air quality from replacement activity will be short term. Dust from heavy equipment is anticipated to be minimal. Following construction activities, disturbed areas will be reclaimed and reseeded with a rangeland grass/forbs/shrub mixture. Adherence to the *NECA Borrow Excavation and Reclamation Plan* (NECA BE&RP, 2020) will minimize potential impacts to air quality and sensitive receptor species.

Construction activities shall be confined to the existing lease area described in the project description of this EA to avoid further disruption to the local setting and the NAAQS. The significant threshold, primary standard, for particulate matter of 35 ug/m³ daily (24 hour) PM 2.5 NAAQS is not expected to be exceeded under the proposed action alternative.

3.9 Esthetics and Visual Resources

3.9.1 Existing Conditions

No esthetics or visual studies have been conducted in the project area. However, regional visibility in the project area can be considered to be good.

3.9.2 Effects

Ground disturbing activities with regard to the proposed undertaking will be extensive with the use of heavy equipment. Currently, the primary ambient air pollutant in the project area is an occasional wind-blown dust devil, common during in the spring and summer. Dust from vehicular traffic along unimproved roads, in the vicinity, are common in the area.

3.9.3 Mitigation

In accordance with the *NECA Borrow Extraction and Reclamation Plan* (NECA BE&RP, 2020) the borrow pit would be regraded to the approximate original contours. In slopes would be reduced to

a 3:1 slope. Head walls would be reduced to a terrace profile. Disturbed soils during any future site preparation would be dampened by watering for dust suppression and soil compaction.

3.10 Cultural Resources

3.10.1 Existing Conditions

Carrizo Archaeological Group of Farmington, New Mexico completed the cultural resource inventory report. The firm crafted a field report for the 4.98 total acres. The borrow pit mining lease is entitled: *A Cultural Resource Inventory of the Proposed Navajo Engineering & Construction Authority 4.98 Acre Unclassified Material Borrow Source in the Wheatfields/Tsaile Chapter, Apache County, Arizona*. No cultural resources were encountered during the inventory. A Cultural Resource Compliance Form, NNHPD Number HPD-19-727, has been created for this undertaking, as shown in Appendix C.

3.10.2 Effects

The cultural resource inventory covers the affected area of 7.21 acres total, which would include a buffer zone around the proposed borrow pit at 4.98 acres. The project area would be fenced, all activities will remain within the demarcated and legal land survey area. There are no known sacred sites or traditional cultural resources within the project area or buffer zone. According to the archaeology field inventory "No cultural resources were encountered during the inventory".

3.10.3 Mitigation

Archaeological clearance is recommended for the proposed undertaking provided that: *In the event of a discovery ["discovery" means any previously unidentified or incorrectly identified cultural resources including but not limited to archaeological deposits, human remains, or locations reportedly associated with Native American religious/traditional beliefs or practices], all operations in the immediate vicinity of the discovery must cease, and the Navajo Nation Historic Preservation Department must be notified at (928) 871-7148.*

4.0 CUMULATIVE IMPACTS AND CONSIDERATIONS FOR SELECTION OF THE PREFERRED ALTERNATIVE

Cumulative effects are effects of the project in consideration with other past, present, or reasonably foreseeable projects in the local area. There are no past projects that resulted in identifiable long-term effects having a cumulative relationship with the effects of the proposed project.

In the past, the traditional land use in the proposed project area is used for rangeland, livestock production and scattered home sites. In the rural area, ranching is the predominant life style in the region; raising livestock has been a sustainable economy in the past. The surrounding land use has historically been used for multi-family grazing land. The tribal trust areas are currently grazed by domestic livestock: sheep, cattle, and horses.

Current land use in the surrounding project area is for chapter government, residential home sites, highway transportation, small farmland, rangeland, and forest timber production. The area around the proposed borrow pit is open rangeland of the Montane Ponderosa Pine Forest type.

According to chapter officials there would be no other proposals or other developments planned in the reasonably foreseeable future in the area. Pit closure and reclamation would prove that open

rangeland of perennial native grass, shrubs, and pinyon-juniper trees could be restore to its natural state. The proposed action will not have significant impact on the human environment.

5.0 PUBLIC INVOLVEMENT

In a public meeting, the Wheatfields/Tsaile Chapter was consulted, and passed resolution in support of the project. The Resource Committee of the Navajo Nation Council would consider and pass resolution for the project.

6.0 COORDINATION AND REVIEW OF THE EA

The Navajo Minerals Department, and Land Development Office would review and process the application for committee approval. The Resource Committee of the Navajo Nation Council would consider and pass resolution for the project. The Navajo Regional Office, in coordination with the Real Estate Services office, Bureau of Land Management, and the Branch of Environmental Quality Act Compliance and Review, would review the application package and make a determination as result of their review. The Navajo Regional Director BIA would make final approval of the borrow pit lease.

NECA would also file a National Pollution Discharge Elimination Plan, Clean Water Act Section 402 (p), a Notice of Intent with the U.S. Environmental Protection Agency in Washington DC, as the company would also prepare a *Stormwater Pollution Prevention Plan* (SWPPP) to stabilize soil erosion and enhance re-vegetation onsite.

NECA conducted consultation with the Navajo Department of Fish and Wildlife, Navajo Nation. The Navajo Department of Fish and Wildlife website was consulted for the Biological Resources Land Clearance Policy and Procedures. The consultation would assure mandated protection of ESA and Navajo threatened and endangered species. A NDF&W-NHP concurrence letter and a *Biological Resource Compliance Form* at Appendices D is created for the project.

Carrizo Archaeological Group of Farmington, New Mexico conducted the project archeological survey and crafted a field report. According to the field inventory "No Historic Properties Affected" is recommended for the proposed site. A NHPD concurrence letter and *Cultural Resource Compliance Form* at Appendices C created for the project.

7.0 CONCLUSIONS & COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

The preferred alternative is reasonable. No significant adverse impacts to the human environment have been identified in the development of this environment assessment.

Clean Air Act, as amended and recodified (42 U.S.C. 7401 et seq.) Compliance. The proposed project is not expected to violate any Federal air quality standards and would not degrade the attainment of air quality objectives of the air shed.

Clean Water Act § 402 Compliance. The Environmental Protection Agency administers Section 402 of the Clean Water Act (formerly the Federal Water Pollution Control Act). Operators are normally

required to obtain all necessary permits and approvals for projects requiring CWA permits prior to any disturbance activities.

Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) Compliance. No Federally listed species or special management species (NESL) or their habitats have been identified in or near the project area. ESA requires all federal departments and agencies to conserve threatened and endangered species and the habitats on which they depend, and to consult with the U. S. Fish and Wildlife Service (USFWS), on all actions authorized, funded or carried out by the agency to ensure that the action will not likely jeopardize the continued existence of any threatened and endangered species or adversely modify critical habitat.

Executive Order 11988, Floodplain Management Compliance. This order directs all Federal agencies to avoid to the extent possible the adverse effects associated with the modification of floodplains, and to avoid support of floodplain development wherever there is a practicable alternative. Floodplains would have no effect on the proposed project.

Executive Order 12898 Environmental Justice Compliance. The order directs all Federal agencies to identify and address disproportionate adverse effects of their programs, policies and activities on minority and low-income populations. The proposed action will benefit all sectors of society; no minority or low income populations would be directly adversely affected from proposed action. Indirect effects could include positive effects due to overall benefit related to the project site in the area. The project would increase the quality of life for the Diné People.

Farmland Protection Policy Act (7 U.S.C. 4201 et seq.) Compliance. There are no effects on prime farmland or farmland of statewide importance because no prime farmland exists in the project area.

Harvesting of Forest Products If any forest products are to be harvested from the project area, they will be inventoried and appraised in accordance to the *Navajo Nation Forest and Woodland Regulations (RCMA-48-01)*, *Part 53 Indian Affairs Manual Chapter 3 – Harvest of Forest Products*, and Code of Federal Regulations Part 163. It is anticipated the stumpage (appraised fair market value minus the cost to harvest/transport/implement mitigation requirements) would be less than \$25,000.00 due to the small size of the proposed project area.

Migratory Bird Treaty Act, as amended (16 U.S.C. 703 et seq.)/ EO 13186 Compliance. Migratory birds and their habitats are protected under the Migratory Bird Treaty Act (MBTA) (16 USC §703-712) and EO 13186. All federal agencies are required to consider management impacts to protect migratory non-game birds. Executive Order 13186 calls for increased efforts to more fully implement the MBTA. The proposed action would have no significant effect on the bird species or their habitat.

National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) Compliance. The final EA and signed FONSI are in full compliance with NEPA.

National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 et seq.) Compliance. The Navajo Nation Historic Preservation Department requires NHPA compliance and consultation with all development projects on the Navajo Nation. NNHPD has determined that NHPA § 106 responsibilities are adhered to, as no historic properties would be affected.

Recourse Conservation and Recovery Act (RCRA), Comprehensive Environmental Response Conservation and Liabilities Act (CERCLA), or Toxic Substance Control Act (TSCA) Compliance. There are no Recourse Conservation and Recovery Act (RCRA), Comprehensive Environmental Response Conservation and Liabilities Act (CERCLA), or Toxic Substance Control Act (TSCA) sites on the proposed site.

8.0 LIST OF PREPARERS / CONSULTATION AND COORDINATION

This environmental assessment was prepared by Mr. Leonard Robbins, PES, Denali Environmental Services, P. O. Box 1127, Fort Defiance, Arizona 86504.

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Figure 1. Wheatfields Borrow Excavation Lease Map @ 4.98 Acres
Navajo Engineering & Construction Authority Shiprock, NM

NECA Project No. N12(19-4)1,2 & 4

Wheatfields, AZ USGS Quadrangle Map

Southwest Corner N12 Alignment POB

PLS: NW/4 Section 28 T33N R30E

L&L: 36° 14' 16.1" N 109° 07' 32.7" W

UTM: 668,422 m E 4,011,956 m N

Elev. 7,342' amsl

Southwest Corner N12 Alignment

PLS: NW/4 Section 28 T33N R30E

L&L: 36° 14' 18.3" N 109° 07' 36.6" W

UTM: 668,324 m E 4,012,015 m N

Elev. 7,296' amsl

West Corner

PLS: NW/4 Section 28 T33N R30E

L&L: 36° 14' 19.4" N 109° 07' 36.9" W

UTM: 668,315 m E 4,012,054 m N

Elev. 7,311' amsl

Northwest Corner

PLS: NW/4 Section 28 T33N R30E

L&L: 36° 14' 21.1" N 109° 07' 36.3" W

UTM: 668,329 m E 4,012,102 m N

Elev. 7,282' amsl

Northeast Corner

PLS: NW/4 Section 28 T33N R30E

L&L: 36° 14' 20.7" N 109° 07' 31.4" W

UTM: 668,454 m E 4,012,090 m N

Elev. 7,328' amsl

Southeast Corner

PLS: NW/4 Section 28 T33N R30E

L&L: 36° 14' 17.7" N 109° 07' 29.7" W

UTM: 668,495 m E 4,011,998 m N

Elev. 7,320' amsl

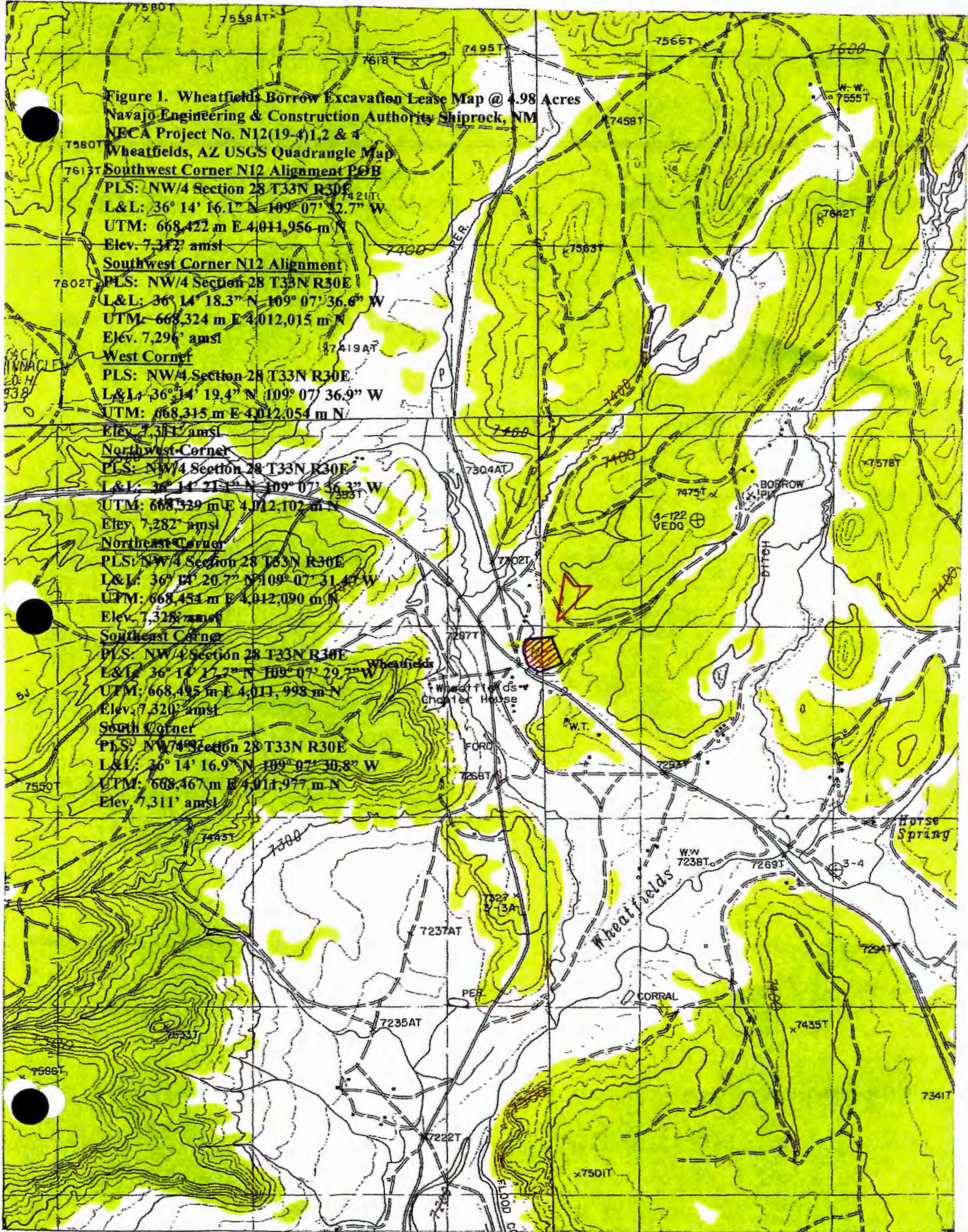
South Corner

PLS: NW/4 Section 28 T33N R30E

L&L: 36° 14' 16.9" N 109° 07' 30.8" W

UTM: 668,467 m E 4,011,977 m N

Elev. 7,311' amsl



Denali Environmental Services

P. O. Box 1127
Fort Defiance, Arizona 86504
(928) 729-2626 Phone & Fax

Letter of Transmittal

Date: January 17, 2020

Navajo Forestry Department
Attn: Frankie Thompson
P. O. Box 230
Fort Defiance, Arizona 86504

WE ARE SENDING YOU:

NEPA Environmental Assessment	NHPA Cult Res Field Survey Summary Rprt	ESA Bio Resources Data Request Response Letter	CERCLA Phase I ESA Document
NEPA Environmental Assessment FONSI	NHPA Cultural Res Compliance Form	ESA Bio Resources Evaluation / Assmnt	CERCLA ESA Request for Proposal
NEPA Categorical Exclusion	HUD Statutory Work Sheet (SWS)	ESA Bio Resources Compliance Form	Clean Water Act SWPPP
NEPA EA Request for Quote	HUD SWS Request for Quote	ESA Bio Resources Request for Quote	Project Change Order
NEPA EA Scope of Work	HUD SWS Scope of Work	ESA Bio Resources Scope of Work	Invoice
NEPA EA Other	NHPA/HUD Other	ESA Other	X Other: Forestry Consultation

Copies	Date	Project No.	Description
1 each	01/17/2020		NECA Land Survey Plat & Associated Maps for the proposed Wheatfields Borrow Excavation Pit.

THESE ARE TRANSMITTED AS CHECKED BELOW:

For your coordination	X	Forestry Consultation	Prepare a response
Circulate among staff		Invoice For your approval	X For your use
As requested		For review and comment	Approved as submitted
Submit ____ copies for distribution		For your information, no response is necessary	Make copies for your use, and return original

REMARKS: NECA of Shiprock, NM proposes to construct and operate a 4.98 acre Wheatfields Borrow Excavation Pit in the Wheatfields/Tsaile Chapter in support of the proposed Navajo Route N12 widening and reconstruction project. We request a forest tree inventory and appraisal of the tract relative to the proposed excavation pit. Attached is a project description taken from the draft EA for the project.

Cc: NECA Christine Padilla & Ammerson Barber

Leonard Robbins, Denali



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Navajo Regional Office
P.O. Box 1060
Gallup, New Mexico 87305

JUN 02 2020

Mr. Leonard Robbins
Denali Environmental
Post Office Box 1127
Fort Defiance, Arizona 86504

Dear Mr. Robbins:

The Environmental Assessment (EA), EA-20-012220-1, received February 5, 2020, for the Proposed Wheatfields Borrow Pit Lease NECA Project N12 (19-4) 1,2 & 4 Wheatfields, New Mexico, was reviewed in the Office of Environmental Quality Act Compliance and Review, Navajo Regional Office.

Navajo Engineering and Construction Authority of Shiprock New Mexico is seeking a mineral lease to construct the proposed Wheatfields Borrow Pit located in the Wheatfields Community in the vicinity of Wheatfields Chapter, Apache County, Arizona. The Borrow Pit Lease is encompassing $4.98 \pm$ acres, on Navajo Tribal Trust Land. The proposed borrow pit area would be used for source material excavation with a design borrow cut at 45,202 cubic yards, or 79,330 standard tons. This material is going to be used for widening N12 for a distance of 10.68 miles commencing from North of Wheatfields Lake, North to Lukachukai.

In accordance with Section 102 (2) (c) of the National Environmental Policy Act (NEPA) of 1969, as amended, and the Council of Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations (CFR) Parts 1500-1508), the Bureau of Indian Affairs, Navajo Regional Office, finds that the Proposed Action is not a major federal action that will significantly impact the quality of the human environment. Therefore, an Environmental Impact Statement is not required for implementing the Proposed Action. This Finding of No Significant Impact (FONSI) is supported by the EA and the supporting appendices and documents.

If you have questions, you may contact Mr. Lyle Ben, Acting Supervisory Environmental Protection Specialist at (505) 863-8287.

Sincerely,

BARTHOLOMEW
STEVENS

Bartholomew Stevens
Regional Director, Navajo

Digitally signed by
BARTHOLOMEW STEVENS
Date: 2020.06.02 12:04:40 -06'00'

Enclosure





United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Navajo Regional Office
P.O. Box 1060
Gallup, New Mexico 87305

Mr. Leonard Robbins
Denali Environmental
Post Office Box 1127
Fort Defiance, Arizona 86504

Dear Mr. Robbins:

The Environmental Assessment (EA), **EA-20-012220-1**, received February 5, 2020, for the Proposed **Wheatfields Borrow Pit Lease NECA Project N12 (19-4) 1,2 & 4 Wheatfields, New Mexico**, was reviewed in the Office of Environmental Quality Act Compliance and Review, Navajo Regional Office.

Navajo Engineering and Construction Authority of Shiprock New Mexico is seeking a mineral lease to construct the proposed Wheatfields Borrow Pit located in the Wheatfields Community in the vicinity of Wheatfields Chapter, Apache County, Arizona. The Borrow Pit Lease is encompassing $4.98 \pm$ acres, on Navajo Tribal Trust Land. The proposed borrow pit area would be used for source material excavation with a design borrow cut at 45,202 cubic yards, or 79,330 standard tons. This material is going to be used for widening N12 for a distance of 10.68 miles commencing from North of Wheatfields Lake, North to Lukachukai.

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If you have questions, you may contact Mr. Lyle Ben, Acting Supervisory Environmental Protection Specialist at (505) 863-8287.

Sincerely,

Bartholomew Stevens
Regional Director, Navajo

Enclosure

FINDING OF NO SIGNIFICANT IMPACT
ENVIRONMENTAL ASSESSMENT EA-20-012220-1
Wheatfields Borrow Pit Lease NECA Project N12 (19-4)1, 2 & 4 Wheatfields, New Mexico
Navajo Engineering and Construction Authority (NECA)

Location: Wheatfields Community, Apache County, State of Arizona
Quadrangle Wheatfields, Arizona USGS 7.5

NW/4 Section 28 T33N, R30E, Wheatfields, Arizona

Wheatfields Chapter, Apache County, Arizona

Navajo Engineering and Construction Authority of Shiprock New Mexico is seeking a mineral lease to construct the proposed Wheatfields Borrow Pit located in the Wheatfields Community in the vicinity of Wheatfields Chapter, Apache County, Arizona. The Borrow Pit Lease is encompassing $4.98 \pm$ acres, on Navajo Tribal Trust Land. The proposed borrow pit area would be used for source material excavation with a design borrow cut at 45,202 cubic yards, or 79,330 standard tons. This material is going to be used for widening N12 for a distance of 10.68 miles commencing from North of Wheatfields Lake, North to Lukachukai.

The BIA's deliberation as to whether a Finding of No Significant Impact (FONSI) is appropriate, or, whether an Environmental Impact Statement (EIS) should be prepared, took into consideration, the following issues, which are addressed in the environmental assessment (EA).

1. **Beneficial and adverse environmental impacts:** The EA demonstrates that there will be no significant adverse or beneficial impacts on the quality of the human environment, including: land Resources, water resources, air resources, biotic resources, cultural resources, socioeconomic conditions, resources/land use patterns, and other values.
2. **Public health and safety:** Under the no action alternative, this alternative would not allow NECA to acquire a material borrow source lease. A source material borrow pit operation would not be created for the widening and reconstruction of Navajo Route 12. Also other future construction projects would have to get construction materials at an alternate location resulting in higher prices. That would have an effect of proposed construction projects not being constructed, due to high cost of haulage and the additional cost of borrow source.

With the preferred Alternative, NECA proposes to establish material borrow source operations at the Wheatfields location. At the proposed project location, soil and rock samples met "The Standard Specification for Construction of Roads and Bridges on Federal Highway Projects FP-14." The existing site has favorable characteristics for borrow pit operation would be location adjacent to Navajo Route 12, and would not require construction of additional haulage road construction.

Overall, the borrow pit lease will be for the beneficial use of widening of a road to serve a growing population in the Wheatfields area. The project would have no disproportionate effects on minorities or low income populations; the proposed lease will benefit all sectors of society.

A Mining and Reclamation Plan has been developed for this project. The plan incorporates training on raw material extraction, safety requirements outlined in the Occupational Safety and Health Administration Code of Federal Regulations 1910 & 1926, Mining Operations, Dust Control, Traffic Control, Solid Waste contact and reclamation and abandonment

3. **Clean Water Act (CWA) Compliance:** When a project spans, crosses or results in work in a river bed, stream bed or wetland, permits from the U.S. Army Corps of Engineers (ACOE) and/or the Navajo Nation Environmental Protection Agency, Water Quality Program may be required, including: Section 401, Water Quality Certification; Section 402(p), Storm Water Pollution Prevention Plan, if the project activity will disturb surfaces of ½ acre or more; and Section 404, Permit for Discharge of Dredge or Fill Material into Waters of the US. The applicant shall submit and obtain approval for all required applications prior to construction. The applicant shall adhere to all mitigation measures and strategies developed with the U.S. Army Corps of Engineers and the Navajo Nation Environmental Protection Agency: Based on the EA, this project does not cross or span any waters of the US. Present and future construction work or other related activities will not have an impact of any springs, wells or aquifer recharge areas. No impacts to the surface and natural ground water in the vicinity of the proposed project may be expected by the approval of the application

In accordance with the NPDES, a Stormwater Pollution Prevention Plan (SWPPP) would be developed to protect and contain the surface water in the vicinity of the pit area. Temporary erosions controls, including straw bales, silt fences, rolled excelsior bales, and rip rap, will be installed and maintained according to the SWPPP. These measures are to control surface soil erosion onsite..

4. **Unique characteristics of the geographic area:** The project area is not unique within its geographical setting and is similar to other areas in the region. There are no prime farmlands, wild and scenic rivers, wilderness areas, refuges, park lands, unique ecological areas, or other unique or rare characteristics of the land and aquatic environs that will be significantly affected.

The Navajo Nation Woodlands Inventory Analysis Report (1986-1991 measurement) estimates there is approximately 178,841 acres within the Tsaille/Wheatfields Chapter area. The various cover types that comprise the forest lands within the Chapter include pinyon pine (*Pinus edulis*), juniper (*Juniperus spp.*), and gambel oak (*Quercus gambelii*). To a lesser degree when compared to the woodlands species, Ponderosa pine (*Pinus ponderosa*) and other timber species may also present within the area.

5. **Degree to which the effects on the quality of the human environment are likely to be highly controversial:** There are no known scientific controversies over the effects of the proposed project on the human environment.
6. **Degree to which the effects are highly uncertain or involve unique or unknown risks:** There are no known effects on the human environment that are highly uncertain or involve unique or unknown risks.
7. **Degree to which this action will establish a precedent for future actions with significant effects:** This project will not set a precedent for similar projects that may be implemented by the BIA or other agencies.
8. **Relationship to other actions with cumulatively significant impacts:** There are no known incremental effects of the action that become significant when added to other past, present, or reasonably foreseeable future actions that have affected, or will affect, the project area. The Navajo Nation Woodland Inventory Analysis Report (1986-1991 measurement) estimates there is approximately 816.64 cubic feet of woodland forest products per acre within the Tsaille/Wheatfields Chapter area. The woodland cover types are comprised of pinyon pine (*Pinus edulis*), juniper (*Juniperus spp.*), and gambel oak (*Quercus gambelii*). In addition, Ponderosa pine (*Pinus ponderosa*),

and other timber species, are present within the area. The site produces approximately 7.70 cubic feet of forest products, woodland and timber combined, per acre per year.

9. **Degree to which the action may affect districts, sites, objects, or structures listed on, or eligible for, the National Register of Historic Places, or may cause loss of significant cultural resources:** The Navajo Nation Historic Preservation Department (NNHPD) issued Cultural Resources Compliance Form (CRCF) with NNHPD No. HPD-19-727 on December 4, 2019.

The Cultural Resource Compliance Form finds that proposed project will have a "No Historic Properties Will Be Affected" within the area of this undertaking with conditions. Archaeological approval is hereby granted for the undertaking within the area noted in attachments.

In the event of a discovery of a previously unidentified or incorrectly identified cultural resource(s), all operations in the immediate vicinity of the discovery must cease, and the NNHPD must be notified.

10. **Degree to which the action may affect threatened, endangered, or sensitive species or their habitat:** A Biological Resources Compliance Form (BRCF) with NNDFW Review No. 19dan1102, was issued by the Navajo Nation Department of Fish and Wildlife (NNDFW) on January 21, 2020, approving the proposed action with guidance to follow the avoidance/mitigation measures outlined in the BE and no conditions of compliance are identified for this project.

11. **Whether the action violates Federal or local laws or requirements imposed for the protection of the environment:** The proposed project will not violate any Federal or Tribal environmental laws or requirements.

12. **Indian Trust Assets:** Timber forest products are estimated to be 217.96 board feet per acre. Forest products will be harvested in accordance to all applicable Tribal and Federal laws and regulations regarding forest product harvesting (e.g., RCMA-48-01, 25 CFR Part 163).

An approved Tribal forest product harvesting permit, Bureau of Indian Affairs forest product harvesting permit and/or contract will be issued to the Permittee and/or Contractor prior to any forest product harvesting activities on Tribal Trust Land; this includes harvest of non-native tree species (e.g., tamarisk, Russian olive). Best management practices will be identified within the Standard Provisions and Special Provisions developed by the Navajo Forestry Department and Bureau of Indian Affairs and attached to the permit and/or contract

If any forest products are to be harvested from the project area, they will be inventoried and appraised in accordance to the Navajo Nation Forest and Woodland Regulations (RCMA-48-01), Part 53 Indian Affairs Manual Chapter 3 - Harvest of Forest Products, and 25 Code of Federal Regulation Part 163. It is anticipated the stumpage (appraised fair market value minus the cost to harvest/transport/implement mitigation requirements) would be less than \$25,000.00 due to the small size of the proposed project area.

The proposed project area does not contain any Indian Trust Assets in the form of perennial water resources, fisheries, saleable timber, paleontology resources or agricultural resources. The proposed project area is not part of any right-of-way avoidance and exclusion areas, wilderness area, special management area, area of critical environmental concern, or other protected area.

13. Climate Change, its effects on the proposed action and its environmental impacts: The proposed action will have little to no effect on climate change.

CONCLUSION

The proposed action is the Preferred Alternative. It does not constitute a major federal action, which normally requires preparation of an environmental impact statement (EIS).

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

BARTHOLOMEW STEVENS

Bartholomew Stevens
Regional Director, Navajo
Bureau of Indian Affairs
U.S. Department of the Interior

Digitally signed by BARTHOLOMEW
STEVENS

Date: 2020.06.02 12:03:10 -06'00'

Date

Stormwater Pollution Prevention Plan (SWPPP)



For Construction Activities at:

Project 1402
N12 Wheatfield to Tsaille, Arizona
Wheatfields/Tsaille, Arizona 86556
Michael Redhorse: 505-406-7489
Jamie Sagg: 505-406-2150

SWPPP Prepared for (Owner):

Navajo DOT – Executive Project Management
Darryl Bradley: Principal Civil Engineer /Project Manager
P.O. Box 3690, #16 Old Coal Mine Road
Mentmore, NM 87319

505-371-8300
505-371-8399
dbradley@navajodot.org

SWPPP Prepared by (Contractor):

Navajo Engineering and Construction Authority
P.O. Box 969
Shiprock, New Mexico 87420
505-210-7070
505-210-7008

SWPPP Preparation Date:

08/26/2019

Estimated Project Dates:

Project Start Date: 11/11/2019

Project Completion Date: 09/08/2021

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SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES

1.1 Owner and Operator

A. Operator:

NAVAJO ENGINEERING AND CONSTRUCTION
AUTHORITY
Herman Patterson
P.O. Box 969
Shiprock, New Mexico 87420
505-701-1379
Herman@navajo.net

AREA OF CONTROL OF PROJECT:

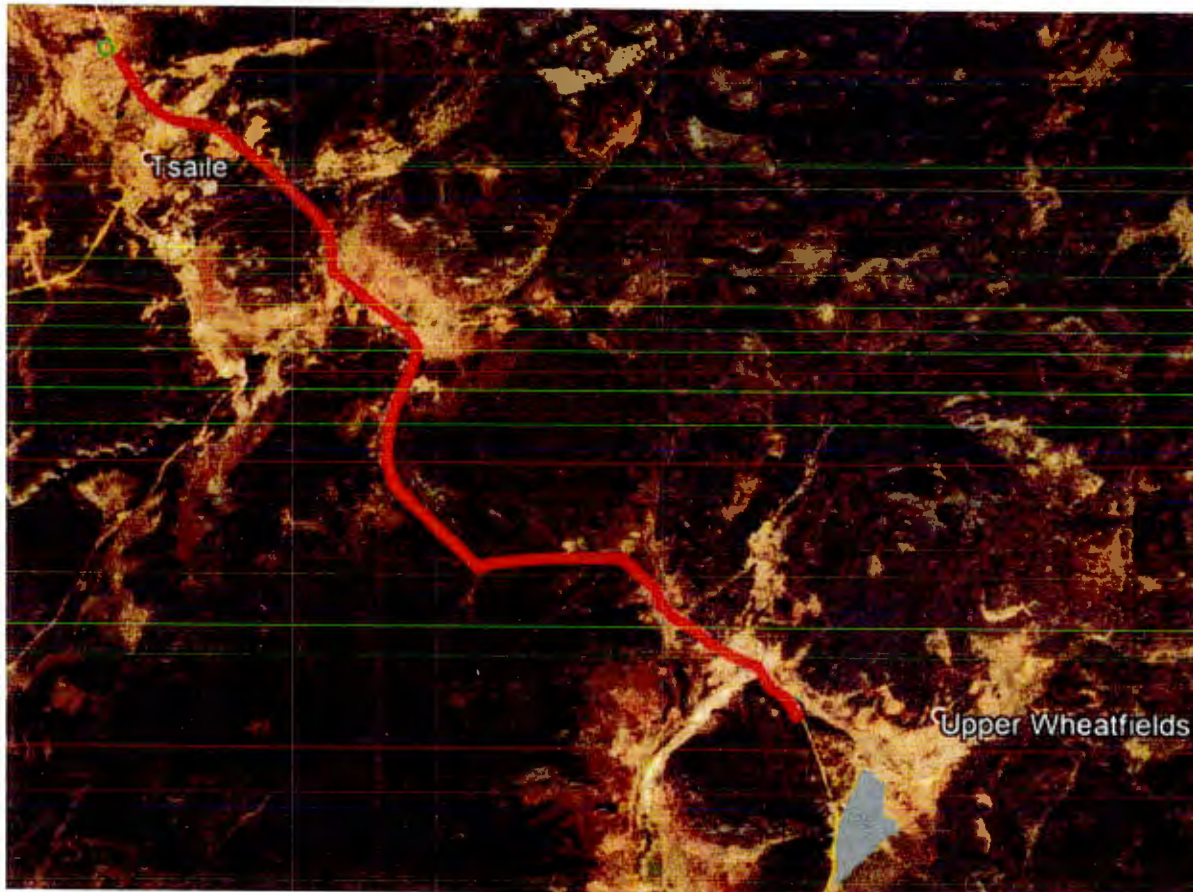
N12(19-4)1,2, &4

BOP STA. 38+700 TO EOP STA. 55+900

Owner:

NAVAJO DOT – EXECUTIVE PROJECT MANAGEMENT

Darryl Bradley: Civil Engineer/Project Manager
P.O. Box 3690, #16 Old Coal Mine Road
Mentmore, NM 87319
505-371-8300
dbradley@navajodot.org



B. Subcontractors: See Attached Listing:

C. Emergency 24-Hour Contact:**NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY**

Herman Patterson: Construction Manager – 505-701-1379

Michael Redhorse: Area Project Superintendent – 505-406-7489

Jamie Sagg: Project Engineer – 505-406-2150

Daniel Gourneau: Safety Manager – 505-406-7665

Lemuel Benallie: Safety Officer – 505-406-6078

Malcom Tsosie: Safety Officer – 505-406-2970

1.2 Stormwater Team

Stormwater Team		
Name, position, and contact	Responsibilities	I Have Read the CGP and Understand the Applicable Requirements
Herman Patterson Construction Manager 505-701-1379 Herman@navajo.net	Overall Construction Supervision (NECA)	☐ Yes ☒ No Date: Click here to enter a date.
Michael Redhorse Area Project Superintendent 505-406-7489 Michael@navajo.net	Day-to-day operations of area project sites	☒ Yes Date: 7/14/2017
Jamie Sagg NECA Project Engineer 505-406-2150 Jamie@navajo.net	Day-to-day operations and materials at project site	☒ Yes Date: 10/28/2019
Lee B. Roy NECA ESH Field Officer 928-205-1180 Lee@navajo.net	Field Inspections for 402 permit per month	☒ Yes Date: 7/14/2017
Darryl Bradley Principal Civil Engineer 505-371-8300 dbradley@navajodot.org	Overall approval of contract work on the project	☐ Yes ☒ No Date: Click here to enter a date.

SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING**2.1 Project/Site Information****Project Name and Address**

Project/Site Name: 1402: Wheatfields to Tsaille Widen Roadway Project N12

Project Street/Location: BOP STA. 38+700 TO EOP STA. 55+900

City: Wheatfields/Tsaile

State: Arizona

ZIP Code: 86507

County or Similar Subdivision: Apache

Business days and hours for the project: MST: Monday thru Thursday: 7:00 AM to 5:30 PM

DST: Monday thru Friday 8:00 AM to 4:30 PM.

Project Latitude/Longitude: Beginning of Project.Latitude: 36.2231° N
(decimal degrees)Longitude: - 111.1046 ° W
(decimal degrees)

Latitude/longitude data source:

☒ Map ☐ GPS ☐ Other (please specify: **Google Earth**)

Horizontal Reference Datum:

☐ NAD 27 ☒ NAD 83 ☐ WGS 84

Additional Project InformationAre you requesting permit coverage as a "federal operator" as defined in Appendix A of the 2017 CGP? ☐ Yes ☒ NoIs the project/site located on Indian country lands, or located on a property of religious or cultural significance to an Indian tribe? ☒ Yes ☐ No

If yes, provide the name of the Indian tribe associated with the area of Indian country: Navajo Nation

2.2 Discharge InformationDoes your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? ☐ Yes ☒ NoAre there any waters of the U.S. within 50 feet of your project's earth disturbances? ☒ Yes ☐ No

Discharge Information

For each point of discharge, provide a point of discharge ID (a unique 3-digit ID, e.g., 001, 002), the name of the first water of the U.S. that receives stormwater directly from the point of discharge and/or from the MS4 that the point of discharge discharges to, and the following receiving water information, if applicable:

Point of Discharge ID	Name of receiving water:	Is the receiving water impaired (on the CWA 303(d) list)?	If yes, list the pollutants that are causing the impairment:	Has a TMDL been completed for this receiving waterbody?	If yes, list TMDL Name and ID:	Pollutant(s) for which there is a TMDL:	Is this receiving water designated as a Tier 2, Tier 2.5, or Tier 3 water?	If yes, specify which Tier (2, 2.5, or 3)?
1	Aqua Sal Creek	☐ Yes ☒ No		☐ Yes ☒ No			☐ Yes ☒ No	
2	Tsaile Creek	☐ Yes ☒ No		☐ Yes ☒ No			☐ Yes ☒ No	
3	Tsaile Lake	☒ Yes ☒ No		☐ Yes ☒ No			☐ Yes ☒ No	
	Black Pinnacle Spring	☐ Yes ☒ No		☐ Yes ☒ No			☐ Yes ☒ No	
5	Wheatfields Creek	☐ Yes ☒ No		☐ Yes ☒ No			☐ Yes ☒ No	

2.3 Nature of the Construction Activities**General Description of Project :**

**GRADE, DRAINAGE, AGGREGATE BASE COURSE,
HOT ASPHALTIC CONCRETE PAVEMENT, ARCH STRUCTURES and MISCELLANEOUS
CONSTRUCTION FOR LENGTH OF 17.2 km (10.68 miles) OF ROADWAY.**

Size of Construction Site

Size of Property: Roadway Wheatfield : Borrow Pit	17.2 Kilometers 2.02 Ha
Total Area Expected to be Disturbed by Construction Activities	20.6 Ha
Maximum Area Expected to be Disturbed at Any One Time	3.00 Ha

Type of Construction Site (check all that apply):

☐ Single-Family Residential ☐ Multi-Family Residential ☐ Commercial ☐ Industrial
☐ Institutional ☒ Highway or Road ☐ Utility ☐ Other _____

Will there be demolition of any structure built or renovated before January 1, 1980?

☐ Yes ☒ No

If yes, do any of the structures being demolished have at least 10,000 square feet of floor space?

☐ Yes ☐ No ☒ N/A

Was the pre-development land use used for agriculture (see Appendix A for definition of "agricultural land")?

☐ Yes ☒ No

Pollutant-Generating Activities

List and describe all pollutant-generating activities and indicate for each activity the type of pollutant that will be generated. Take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos, that will be disturbed during construction.

Potential Source Construction Site Pollutants								
Potential Sources of Sediment to Stormwater Runoff	Primary Pollutant	Other Pollutants						
	Sediment	Nutrients (e.g. Nitrogen)	Heavy Metals	pH (acids/bases)	Pesticides/Herbicides	Oil & Grease	Bacteria & Viruses	Toxic Chemicals
Clearing and Grading, Filling	X	X				X		X
Topsoil Removal	X	X				X		X
Stockpiles	X	X				X		X
Hauling	X					X		X
Material Delivery and Storage	X					X		X
Material use during installation	X							X
Sanitary Facilities	X			X			X	X
Equipment Staging/Storage	X					X		X
Equipment Maintenance	X					X		X
Vehicle Tracking	X	X				X		
Revegetation/Reseeding	X	X				X		
Spreading, Compaction of Fill Materials	X	X				X		

Removal of Obstructions and General Excavating	X	X				X		X	
BMP Placement	X	X				X		X	

Potential Sources of Pollution (SDS will be on-site, NIOSH Chemical Hazard, ERG)

Material/Chemical	Physical Description	Stormwater Pollutants	Area where Material/Chemical is used on site
Glue, adhesives	White or yellow liquid	Polymers, epoxies	Building construction, general use
PVC cleaner, adhesive	Blue or purple: liquid, clear or opaque liquid	Solvents	PVC pipe joining and related construction
Paints	Various colored liquid	Metal oxides, volatile organic compounds, talc, calcium carbonate, arsenic, other metals	Building construction, Stripping of roadway, surface coatings
Concrete curing compounds	Creamy white liquid	Synthetic resin compound, acrylic compound, wax compound, chlorinated rubber compound	Construction of wing walls, box culverts, ROW monuments,
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil	Construction/material staging areas, secondary containment areas where equipment are use and possible leaks or spills
Gasoline/Diesel	Colorless, pale brown or pink	Benzene, ethyl benzene, toluene, xylene, Methyl Tert-Butyl Ether (MTBE), petroleum distillate, oil and grease	Construction/material staging areas, secondary containment areas where equipment are use and possible leaks or spills
Antifreeze/coolants	Clear, yellow/green/orange liquid	Ethylene glycol, propylene glycol, copper, lead, zinc	Fuel and staging areas possible leaks or broken hoses from equipment
Sanitary toilets	Various colored liquid	Bacteria, parasites, viruses	Staging areas: Construction yard and locations throughout linear project

Pesticides (insecticides, fungicides, herbicides)	Various colored to colorless liquid, powder, pellets or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic	outside services, reseeder, NOTE: NO herbicides or pesticides allowed on project site
Dumpsters	Various colored liquids	Bacteria, parasites, viruses	Construction yard/Fuel areas
Concrete related materials	White solid/gray liquid	Limestone, sand, high pH, chromium	Construction of wing walls, box culverts, ROW monuments, fence strain posts, misc. construction

ADDITIONAL MATERIAL/CHEMICAL LISTING WILL BE IN THE NIOSH CHEMICAL LISTING AND ER
GUIDE BOOK WHICH WILL BE LOCATED AT THE PROJECT SITE.

Construction Support Activities

Describe any construction support activities for the project:

WHEATFIELD/ TSAILE EQUIPMENT STAGING AND MATERIAL STORAGE YARDS

36.5832, -111.0852

MICHAEL REDHORSE
505-406-7489
Michael@navajo.net

JAMIE SAGG
505-406-2150
Jamie@navajo.net

WHEATFIELDS BORROW PIT

36.2385, -109.1261

CHRISTINE PADILLA
505-686-3163
Christine@navajo.net

N12 TSAILE/ WHEATFIELDS ROAD CONSTRUCTION HOT PLANT

36.3224, -109.2284

CHRISTINE PADILLA
505-686-3163
Christine@navajo.net

2.4 Sequence and Estimated Dates of Construction Activities**Phase I**

INSTALLATION OF TEMPORARY EROSION CONTROL MEASURES (TECM)	
Estimated Start Date of Construction Activities for this Phase	12/19/2019
Estimated End Date of Construction Activities for this Phase	9/8/2021
Estimated Date of Application of Stabilization Measures for Areas of the Site Required to be Stabilized	8/9/2021
Estimated Date when Stormwater Controls will be Removed	9/3/2021

Phase II

CONTINUE WITH TECM DURING SOIL DISTURBING ACTIVITIES INCLUDING REMOVAL OF EXISTING STRUCTURES, CLEARING, INSTALLATION OF WATERLINES, CONSTRUCTION OF SURGE TANK FACILITIES, WATER, DRAINAGE STRUCTURES, STABILIZATION, VARIOUS EXCAVATION AREA, GRADING, BKFILL	
Estimated Start Date of Construction Activities for this Phase	12/19/2019
Estimated End Date of Construction Activities for this Phase	9/8/2021
Estimated Date of Application of Stabilization Measures for Areas of the Site Required to be Stabilized	5/3/2021
Estimated Date(s) when Stormwater Controls will be Removed	9/8/2021

Task Name	Duration	Est Start	Est Finish
Construction Services	472 days	Tue 11/19/19	Wed 9/8/21
Construction Yard Set-up	5 days	Tue 11/19/19	Mon 11/25/19
Temporary Traffic Control	472 days	Tue 11/19/19	Wed 9/8/21
Mobilization	472 days	Tue 11/19/19	Wed 9/8/21
Quality Control Manager	472 days	Tue 11/19/19	Wed 9/8/21
Erosion Control & Maintenance	462 days	Tue 12/3/19	Wed 9/8/21
Clear & Grubbing - Logging BOP to EOP	100 days	Mon 12/2/19	Fri 4/17/20
Detour / CSPA N504 - Bridge	20 days	Mon 12/2/19	Fri 12/27/19
Detour / CSPA N505 - Bridge	20 days	Mon 12/30/19	Fri 1/24/20
N504 Bridge Removal	47 days	Mon 1/27/20	Tue 3/31/20
N505 Bridge Removal	43 days	Wed 4/1/20	Fri 5/29/20
N504 Bridge	69 days	Mon 6/1/20	Thu 9/3/20
Foundation Excavation & Concrete	42 days	Mon 6/1/20	Tue 7/28/20
Pile Driving	10 days	Wed 7/29/20	Tue 8/11/20
Install Precast Arch Culvert units with Precast wingwalls	17 days	Wed 8/12/20	Thu 9/3/20
N505 Bridge	74 days	Fri 9/4/20	Wed 12/16/20
Foundation Excavation & Concrete	36 days	Fri 9/4/20	Fri 10/23/20
Pile Driving	5 days	Mon 10/26/20	Fri 10/30/20

Install Precast Arch Culvert units with Precast wingwalls	17 days	Mon 11/2/20	Tue 11/24/20
Concrete Wall Barrier w/ Transition	16 days	Wed 11/25/20	Wed 12/16/20
Roadway	375 days	Mon 3/2/20	Fri 8/6/21
Clear & Grubbing	15 days	Mon 3/2/20	Fri 3/20/20
Milling	36 days	Mon 3/23/20	Mon 5/11/20
Culvert Pipes & End Sections- 3 Backfill Crew	120 days	Tue 4/28/20	Mon 10/12/20
Roadway Excavation	122 days	Tue 4/28/20	Wed 10/14/20
Unclassified Borrow	30 days	Thu 10/15/20	Wed 11/25/20
Subgrade Stabilization	16 days	Thu 11/26/20	Thu 12/17/20
Finish Subgrade	50 days	Fri 12/18/20	Thu 2/25/21
Untreated CRABC & ABC	43 days	Fri 2/26/21	Tue 4/27/21
Prime Coat	10 days	Wed 4/28/21	Tue 5/11/21
Hot Asphaltic Concrete Paving	55 days	Wed 5/12/21	Tue 7/27/21
ABC/CRAB Shoulders	8 days	Wed 7/28/21	Fri 8/6/21
Miscellaneous Service	460 days	Mon 12/2/19	Fri 9/3/21
Removal of Structures & Obstructions	20 days	Mon 12/2/19	Fri 12/27/19
Remove, Clean & Salvage	43 days	Mon 12/30/19	Wed 2/26/20
Wildlife Crossing Fence	49 days	Thu 2/27/20	Tue 5/5/20
Cattle guards & Gate	86 days	Wed 5/6/20	Wed 9/2/20
Minor Concrete	39 days	Thu 9/3/20	Tue 10/27/20
Erosion Control Matting	30 days	Wed 10/28/20	Tue 12/8/20
Placed Riprap CI 2	15 days	Wed 12/9/20	Tue 12/29/20
Wire Enclosed - CI 2	113 days	Wed 12/30/20	Fri 6/4/21
R/W Monument & Reference Marker	24 days	Mon 6/7/21	Thu 7/8/21
Permanent Signs /Pavement Markings	15 days	Mon 7/19/21	Fri 8/6/21
Straw Mulching & Seeding Dry Method	20 days	Mon 8/9/21	Fri 9/3/21
Punch & Closeout	3 days	Mon 9/6/21	Wed 9/8/21
Punch List Items	3 days	Mon 9/6/21	Wed 9/8/21
Project Completion	0 days	Wed 9/8/21	Wed 9/8/21

2.5 Authorized Non-Stormwater Discharges**List of Authorized Non-Stormwater Discharges Present at the Site**

Type of Authorized Non-Stormwater Discharge	Likely to be Present at Your Site?
Discharges from emergency fire-fighting activities, if needed	☒ Yes ☐ No
Waters used to wash vehicles and equipment	☒ Yes ☐ No
Water used to control dust	☒ Yes ☐ No
Type of Authorized Non-Stormwater Discharge	Likely to be Present at Your Site?
Water to use for processing material, Fill for linear construction	☒ Yes ☐ No
Water for compaction of culvert installation	☒ Yes ☐ No
Uncontaminated, non-turbid discharges of water used for construction	☒ Yes ☐ No
Construction dewatering water from the un-named wash/Kaibeto Creek	☒ Yes ☐ No
Water for compaction, concrete structures	☒ Yes ☐ No

2.6 Site Maps, additional attached to Appendix A of this SWPPP.

SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS**3.1 Endangered Species Protection****Eligibility Criterion**☒ **Criterion A: No ESA-listed species and/or designated critical habitat present in action area.**

Using the process outlined in Appendix D of this permit, you certify that ESA-listed species and designated critical habitat(s) under the jurisdiction of the USFWS or NMFS are not likely to occur in your site's "action area" as defined in Appendix A of this permit.

Basis statement content/Supporting documentation: A basis statement supporting the selection of Criterion A should identify the USFWS and NMFS information sources used. Attaching aerial image(s) of the site to your NOI is helpful to EPA, USFWS, and NMFS in confirming eligibility under this criterion. Please Note: NMFS' jurisdiction includes ESA-listed marine and estuarine species that spawn in inland rivers. Check the applicable source(s) of information you relied upon:

- ☒ Specific communication (Biological Resources Compliance Form) with staff of the NNDFW. December 02, 2016 per Jeffrey Cole, Wildlife Manager, NNDFW
- ☒ Specific communication (Categorical Exclusion Determination/Approval under 23 CFR 771.117a) with staff of the FLH-FHWA. October 26, 2016, David Cremer, Senior Environmental Specialist

See FONSI Attachment in Appendix L of this SWPPP

3.2 Historic Preservation**Appendix E, Step 1**

Do you plan on installing any of the following stormwater controls at your site? **NO**

- ☐ Dike
- ☐ Berm
- ☐ Catch Basin
- ☐ Pond
- ☐ Stormwater Conveyance Channel (e.g., ditch, trench, perimeter drain, swale, etc.)
- ☐ Culvert
- ☐ Other type of ground-disturbing stormwater control:

3.3 Safe Drinking Water Act Underground Injection Control Requirements: N/A

SECTION 4: EROSION AND SEDIMENT CONTROLS

Temporary Stabilization:

The temporary erosion and sediment control measures to be used are listed below:

Ditch Blocks (Furrow Ditches):

Ditch blocks will be constructed along the uphill perimeter of disturbed areas of the site to divert run-on/run-off around the construction site. The ditch blocks will be used to collect runoff from the disturbed areas and direct the runoff to natural sediment impoundments or off-site. Ditch blocks and furrow ditches may be constructed if recommended temporary erosion control measures are ineffective and field adjustments are needed.

Gravel Bags Barriers

A flexible design building block made of bags filled with weighted materials including, gravel. These bags are used to divert arroyo channels, act as barrier walls in sediment basins, and retaining walls between fill slopes and watercourses during construction operations. The gravel bags will be placed immediately upslope of culvert inlets, in arroyo or drainage channels, or at the base of fill slopes to reduce the velocity of the runoff and minimize erosion, as deemed necessary. Gravel bags shall also be used as stabilization measures on rocky soil areas

- ❖ Place gravel bags across swales or drainage ditches to reduce the velocity of flow and enhance solids settlement.
- ❖ Gravel bags may be used if field conditions make the recommended temporary erosion control measures ineffective and field adjustments are needed.

Silt fences:

Silt fence consist of Geotextile fabric stretched between posts, with the lower edge securely embedded in soil, per the **ASTM 6462-03 requirement**, downstream of the disturbed areas. They intercept runoff from sheet flow and provide filtration, sedimentation, and velocity reduction. Silt fences will be constructed along the toe of fill slopes or at ROW limits, around drop inlets, near culverts, sheet flow and low flow directions. Silt fence is intended to be used as a temporary feature of the site. Silt fence will intercept sediment from disturbed areas during construction operations. Design and placement criteria for silt fences are as follows:

- ❖ The silt fences should be placed just beyond the clearing limits of the fill areas before construction or at ROW limits of the project area(s).
- ❖ Silt fence will be placed perpendicular to the drainage ditches carrying runoff flows from all disturbed areas.
- ❖ For stream flow paths with slopes less than 2%, silt fences should be no more than 60 m (200 feet) apart.
- ❖ For stream flow paths with slopes between 50:1 and 5:1, silt fences should be no more than 30 m (100 feet) apart.
- ❖ For stream flow paths with slopes between 5:1 and 2:1, silt fences should be no more than 15 m (50 feet) apart.

- ❖ For stream flow paths with slopes between 2:1 and greater, silt fences should be no more than 6 m (20 feet) apart. Maximum slopes should not exceed 1:1.
- ❖ Silt fence should also be located by the culvert inlets and outlets in accordance to the SWPPP site plan, before runoff reaches drainage and leaves the construction site.

Silt fences and other BMPs may be adjusted due to field conditions to fully implement this Plan. Installation to follow **manufacturer** installation instructions. **NOTE:** some of this site maybe solid rock; the use of silt fence may not be practical and an alternative such as check dams or other field acceptable alternative may be used. Many items will not work due to the inability to fix the BMP in position hence the check dam recommendation.

Tracking (Surface Roughening):

Soil surfaces left in a roughened condition by mechanically creating horizontal depressions, or by not fine grading or polishing, should be implemented as a temporary stabilization in disturbed areas to protect the site from wind and water erosion, before other temporary and/or permanent measures are installed. All disturbed areas shall be monitored at the end of each day's operations, unless other temporary or permanent erosion control measures are in place.

Tracking should be implemented on embankments or surfaces or depressions in the slope shall be created (i.e. stair step grading). The track walk will begin at the toe of the slope and proceed up slope moving over after each pass, creating depressions of no less than 5 cm (2 inches). To avoid unsafe conditions for operation of heavy equipment, **no slopes steeper than 2:1 ratio shall be tracked**. Also slopes with **rock shall not be tracked**.

Temporary Mulch:

Other embankments, not requiring riprap or that cannot be seeded within the specified time, shall receive temporary straw mulch. The straw mulch will be crimped into the slope by using tracked equipment, a crimping disk or a tackifier material applied to the mulch on the steep slopes where crimping is not practical.

Wattles:

A wattle is a temporary sediment barrier constructed at the perimeter of a disturbed area from the residue materials available from clearing and grubbing the site, and generally, covered with a filter fabric. Design and placement criteria for wattles are as follows:

- ❖ Wattles should be placed at the perimeter of a disturbed area following any clearing and grubbing.
- ❖ Wattles should be placed at the top of cut slopes to divert, slow or disperse flows on cut slope construction
- ❖ Wattles should be used only in areas of very low anticipated sheet flow.
- ❖ Wattles should be buried in trenches 7.5 to 15 cm (3 to 6 inches) deep along a contour and staked with steel fence (Tee Posts) or 51mm X 51mm X 0.6 to 0.91-meter wood stakes. A minimum of two stakes per wattle not more than 60 cm apart. Stakes to be driven a minimum of 60 cm (24 inches) into native soils.
- ❖ Wattles should be placed perpendicular to flow and not more than 30 meters (100 feet) apart.
- ❖ Wattles should extend up a channel wall to a point where bottom of the upslope is at a point of termination on the slope higher than the top of the wattle in the channel.

- ❖ Wattles should be butted end to end tightly.

Wattles barriers may be constructed if required due to field conditions and adjustments to fully implement this Plan. Installation to follow manufacturer specifications.

Check Dams are:

A temporary barrier constructed in channels that are anticipated to have high flows and possible heavy sediment loads. Design and placement criteria for check dams are as follows:

- ❖ Drainage area not to exceed 12.89 Ha in area.
- ❖ Placed perpendicular to flow.
- ❖ For stream flow paths with slopes less than 2%, check dams should be no more than 60 m (200 feet) apart.
- ❖ For stream flow paths with slopes between 50:1 and 5:1, check dams should be no more than 30 m (100 feet) apart.
- ❖ Maximum height of check dam overflow should not to exceed 60 cm (24 inches).
- ❖ Center of check dam to be 15 cm (6 inches) lower than outer edge.
- ❖ Terminate dam to insure no undercutting or bypassing, this may require engineered materials.
- ❖ Materials for construction of check dams should consist of native materials, rock, or gravel bags.

Check dams may be constructed if required due to field conditions and adjustments to fully implement this Plan.

Earthen Berms are:

A temporary sediment barrier constructed along channels and down slope areas for anticipated low flows and possible heavy sediment loads, and for energy dissipation and sedimentation. Design and placement criteria are as follows:

- ❖ Placed perpendicular to flow.
- ❖ Placed above disturbed cut or fill slopes and existing slopes to prevent run-on or runoff
- ❖ Maximum height of earthen berm not to exceed 60 cm (24 inches).
- ❖ Top of dam to be parallel with ground surface contours.
- ❖ Terminate dam to minimize undercutting or bypassing.
- ❖ Materials to consist of native materials or sandbags.

Implementations of earthen berms as a temporary erosion control measure are not called out in this SWPPP. However, earthen berms may be constructed as permanent control measures if field conditions warrant this.

Erosion Control Blankets:

Organic or synthetic blankets consisting of a photo-degradable plastic netting which covers and is entwined in a natural organic or manmade mulching material. The mulching material can be wood fiber, excelsior, straw, coconut fiber, synthetic fiber or a combination of the same. These blankets are used to control erosion on steep slopes or channels, where tracking (i.e. surface roughing) cannot be completed safely and temporary mulch will not hold, until final vegetation can be established. Design and placement criteria are as follows:

- ❖ Placement of blankets to be used on slopes 2:1 or steeper will be installed following completion of slope to final design grades
- ❖ Installation of blankets shall be in accordance with the manufacturer's recommendations:
- ❖ Blankets shall be placed smoothly but loosely on the soil without stretching
- ❖ Blankets shall be placed parallel to the direction of flow.
- ❖ The upslope end of the blanket shall be buried in a trench 15 cm (6") wide by 15 cm (6") deep.
- ❖ Wherever one roll of blanket ends and another begins use a 15 cm (6") wide overlap, with the uphill blanket placed on top of the downhill blanket.
- ❖ Blankets to be anchored in slopes using staples. Staples shall be made of wire 4.2 mm (0.162 inches) or larger in diameter. "U" shaped staples shall have legs 30 cm (12") and a 2.5cm (1") crown. Staples will be placed 3'-0" O.C. or per manufacturer's recommendations.
- ❖ Maintenance of blankets shall be in accordance with the manufacturer's recommendations, and at a minimum, include re-anchor of loosened matting and replacement of missing matting and staples as required.
- ❖ Erosion control blankets may be used if required due to field conditions and adjustments to fully implement this plan.

Erosion and Sediment Control Inspection and Maintenance Practices

Below are inspection and maintenance practices that will be used to maintain erosion and sediment controls. **NECA will select three individuals who will be responsible for inspections, maintenance and repair activities, and filling out the field inspection and maintenance report.**

- Less than one half of the site is recommended to be cleared and grubbed at one time.
- Inspection frequency of all control measures will be inspected at least once every 7 calendar days and within 24 hours of the end of a storm event of **FP-14 requirements**.
- FP-14 requirements: **11 mm or 0.43 inches per contract requirements**.
- Inspection frequency may be reduced to at least once every month if :
 1. The entire site is temporarily stabilized,
 2. Runoff is unlikely due to winter conditions, or
 3. Construction is occurring during seasonal arid periods in arid areas and semi-arid areas.

- All control measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from silt fences when it has reached one-third the height of the fence.
- Silt fence, if added, will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- The slope dikes, check dams and wattles will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 10 percent of the design capacity or at the end of the job.
- Slope dikes, check dams and wattles will be inspected and any breaches promptly repaired on a daily basis. Slope dikes may be moved to avoid conflicts with current work, but must be replaced after the work is completed for that day.
- Temporary and permanent seeding and landscaping will be inspected for bare spots, washouts, and healthy growth.

A NECA **maintenance inspection report** will be made after each inspection along with a report from the subcontractor of Quality Control, on the completion of any installation or maintenance

4.1 **Natural Buffers or Equivalent Sediment Controls**

Temporary erosion control measures will be in place prior to clearing, grubbing, or grading of any other portions of the site. Areas where construction activity temporarily ceases for more than **21 days** will be stabilized with temporary mulch **within 14 days** of the last disturbance. Once construction activity ceases permanently in an area, that area will be stabilized with surface roughening, permanent seed, and mulch. After the entire site is stabilized, the accumulated sediment will be removed from all temporary and permanent erosion control measures.

Buffer Compliance Alternatives

Are there any waters of the U.S. within 50 feet of your project's earth disturbances? ☒ YES ☐ NO

Check the compliance alternative that you have chosen:

- ☒ It is infeasible to provide and maintain an undisturbed natural buffer of any size, therefore I will implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.
- ☒ I qualify for one of the exceptions in Part 2.2.1.b. (If you have checked this box, provide information on the applicable buffer exception that applies, below.)

Buffer Exceptions

Which of the following exceptions to the buffer requirements applies to your site?

- ☒ There is no discharge of stormwater to the water of the U.S. that is located 50 feet from my construction disturbances.

- ☐ For a "linear construction sites" (defined in Appendix A), site constraints (e.g., limited right-of-way) make it infeasible to meet any of the CGP Part 2.2.1.

SEE CONSTRUCTION PLANS AT AREAS WHERE THE ROAD WILL MEET UP ALONG THE AQUA SAL CREEK, TSAILE CREEK AND WHEATFIELDS CREEK...THE DESIGN PREVENT ANY USE OF ANY TYPE OF BUFFER.

- ☐ Buffer disturbances are authorized under a CWA Section 404 permit. FILL AND DREDGING OF MATERIAL TO PLACE SUITABLE MATERIAL IN AN AREA THAT THE 404 PERMIT DEFINES HOW MUCH MATERIAL THAT WILL AFFECT THESE AREAS.

4.2 Perimeter Controls

Temporary erosion control measures will be in place prior to clearing, grubbing, or grading of any other portions of the site. Areas where construction activity temporarily ceases for more than **21 days** will be stabilized with temporary mulch **within 14 days** of the last disturbance. **Once construction activity ceases permanently in an area, that area will be stabilized with surface roughening, permanent seed, and mulch.** After the entire site is stabilized, the accumulated sediment will be removed from all temporary and permanent erosion control measures.

Specific Perimeter Controls

ASPEN WATTLES: WESTERN EXCELSIOR				
Description: EARTHEN BERMES WITH WATTLES PRIOR TO EARTH DISTURBANCE				
Installation	12/3/2019			
Maintenance Requirements	Remove sediment before it has accumulated to one-half of the above-ground height of any perimeter control.			
Design Specifications	MATERIAL PROPERTIES AND DIMENSIONS WESTERN EXCELSIOR: ASPEN EXCELSIOR LOGS Table 1 -Specified Expected Values			
	Diameter	10 ft (3.0 m) Length	20 ft (6.0 m) Length	25 ft (7.6 m) Length
	9 in (0.23 m)	25.0 lbs (11.3 kg) 2.5 lbs/ft (3.7 kg/m) 5.8 lbs/ft' (93.3 kg/m')	50.0 lbs (22.7 kg) 2.5 lbs/ft (3.7 kg/m) 5.7 lbs/ft' (92.2 kg/m')	62.5 lbs (28.4 kg) 2.5 lbs/ft (3.7 kg/m) 5.7 lbs/ft' (91.9 kg/m')
	12 in (0.31 m)	30.0 lbs (13.6 kg) 3.0 lbs/ft (4.5 kg/m) 4.0 lbs/ft' (63.5 kg/m')	60.0 lbs (27.2 kg) 3.0 lbs/ft (4.5 kg/m) 3.9 lbs/ft' (62.5 kg/m')	75.0 lbs (34.0 kg) 3.0 lbs/ft (4.5 kg/m) 3.9 lbs/ft' (62.3 kg/m')
	18 in (0.46 m)	50.0 lbs (22.7 kg) 5.0 lbs/ft (7.4 kg/m) 3.0 lbs/ft' (47.9 kg/m')	100.0 lbs (45.4 kg) 5.0 lbs/ft (7.4 kg/m) 2.9 lbs/ft' (46.7 kg/m')	125.0 lbs (56.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.9 lbs/ft' (46.4 kg/m')
	20 in (0.51 m)	50 lbs (22.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.4 lbs/ft' (39.0 kg/m')	100.0 lbs (45.4 kg) 5.0 lbs/ft (7.4 kg/m) 2.4 lbs/ftl(37.9 kg/m')	125.0 lbs (56.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.3 lbs/ft' (37.7 kg/m')
	Table 2 -Netting			
	Fiber Composition: High Altitude Machine Curled Aspen Excelsior			
	Fiber Dimensions : 80% Greater than 6 in.			
	Netting: 0.50" x 0.50" Heavy Duty Synthetic			
	Configuration: Cylindrical with Closed Ends			
	End Closure: Hog Ring or Tied			
	*All values shown measured at the time of manufacture. Document # WE_EXCEL_AEL_SPEC. This document has been developed to provide the characteristic properties of the product described and supersedes all previous versions. For question, to request performance data or installation recommendations, contact Western Excelsior at 1-866-540-9810 or wexcotech@westernexcelsior.com. Updated 8/19/2015.			

4.3 Sediment Track-Out**Specific Track-Out Controls**

Description: CATTLE GUARDS ALONG N12	
Installation	EXISTING
Maintenance Requirements	Sediment that has been tracked-out from the site onto paved roads, or other paved areas outside the site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming cattle guard, or by using other similarly effective means of sediment removal. NECA is prohibited from hosing or sweeping tracked-out sediment into any storm water conveyance, storm drain inlet
Design Specifications	EXISTING N12 CATTLE GUARDS

4.4 Stockpiled Sediment or Soil

- STOCKPILE MANAGEMENT WILL OCCUR ALONG LINEAR PROJECT N6331 FROM BOP 33+920.00 TO EOP 37+564.614 LEFT AND RIGHT.
-

Specific Stockpile Controls

Description: TEMPORARY WATTLES /GRAVEL BAGS AROUND OR NEAR STOCKPILES	
Installation	12/3/2019
Maintenance Requirements	KEEP WATTLES/GRAVEL BAGS MAINTAIN AND FREE OF ANY CONSTRUCTION MATERIAL FROM STOCKPILES FROM GETTING INTO WASHES. INSPECT GRAVEL BAGS AFTER EACH RAINFALL AND WEEKLY THROUGHOUT THE RAINY SEASON. INSPECT WATTLES/GRAVEL BAGS FOR SEDIMENT ACCUMULATIONS AND REMOVE SEDIMENT WHEN IT REACHES ONE-HALF OF HEIGHT. THE REMOVED SEDIMENT WILL BE INCORPORATED INTO THE CONSTRUCTION ROW. REMOVE WATTLES/GRAVEL BAGS WHEN NO LONGER NEEDED. REMOVE SEDIMENT ACCUMULATIONS AND CLEAN, REGRADE, AND STABILIZE AREA

**Design
Specifications****MATERIAL PROPERTIES AND DIMENSIONS
WESTERN EXCELSIOR: ASPEN EXCELSIOR LOGS****Table 1 -Specified Expected Values**

Diameter	10 ft (3.0 m) Length	20 ft (6.0 m) Length	25 ft (7.6 m) Length
9 in (0.23 m)	25.0 lbs (11.3 kg) 2.5 lbs/ft (3.7 kg/m) 5.8 lbs/ft' (93.3 kg/m')	50.0 lbs (22.7 kg) 2.5 lbs/ft (3.7 kg/m) 5.7 lbs/ft' (92.2 kg/m')	62.5 lbs (28.4 kg) 2.5 lbs/ft (3.7 kg/m) 5.7 lbs/ft' (91.9 kg/m')
12 in (0.31 m)	30.0 lbs (13.6 kg) 3.0 lbs/ft (4.5 kg/m) 4.0 lbs/ft' (63.5 kg/m')	60.0 lbs (27.2 kg) 3.0 lbs/ft (4.5 kg/m) 3.9 lbs/ft' (62.5 kg/m')	75.0 lbs (34.0 kg) 3.0 lbs/ft (4.5 kg/m) 3.9 lbs/ft' (62.3 kg/m')
18 in (0.46 m)	50.0 lbs (22.7 kg) 5.0 lbs/ft (7.4 kg/m) 3.0 lbs/ft' (47.9 kg/m')	100.0 lbs (45.4 kg) 5.0 lbs/ft (7.4 kg/m) 2.9 lbs/ft' (46.7 kg/m')	125.0 lbs (56.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.9 lbs/ft' (46.4 kg/m')
20 in (0.51 m)	50 lbs (22.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.4 lbs/ft' (39.0 kg/m')	100.0 lbs (45.4 kg) 5.0 lbs/ft (7.4 kg/m) 2.4 lbs/ftl(37.9 kg/m')	125.0 lbs (56.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.3 lbs/ft' (37.7 kg/m')

Table 2 -Netting

Fiber Composition: High Altitude Machine Curled Aspen Excelsior

Fiber Dimensions : 80% Greater than 6 in.

Netting: 0.50" x 0.50" Heavy Duty Synthetic

Configuration: Cylindrical with Closed Ends

End Closure: Hog Ring or Tied

*All values shown measured at the time of manufacture.

Document # WE_EXCEL_AEL_SPEC. This document has been developed to provide the characteristic properties of the product described and supersedes all previous versions. For question, to request performance data or installation recommendations, contact Western Excelsior at 1-866-540-9810 or wexcotech@westernexcelsior.com. Updated 8/19/2015.

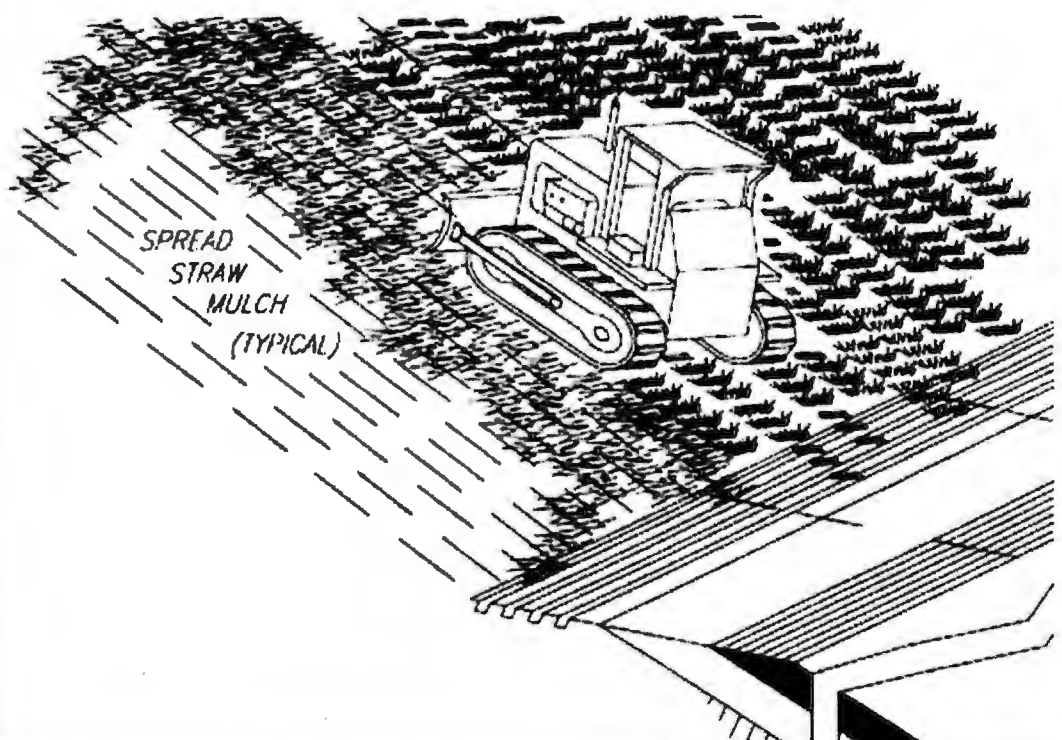
4.5 Minimize Dust

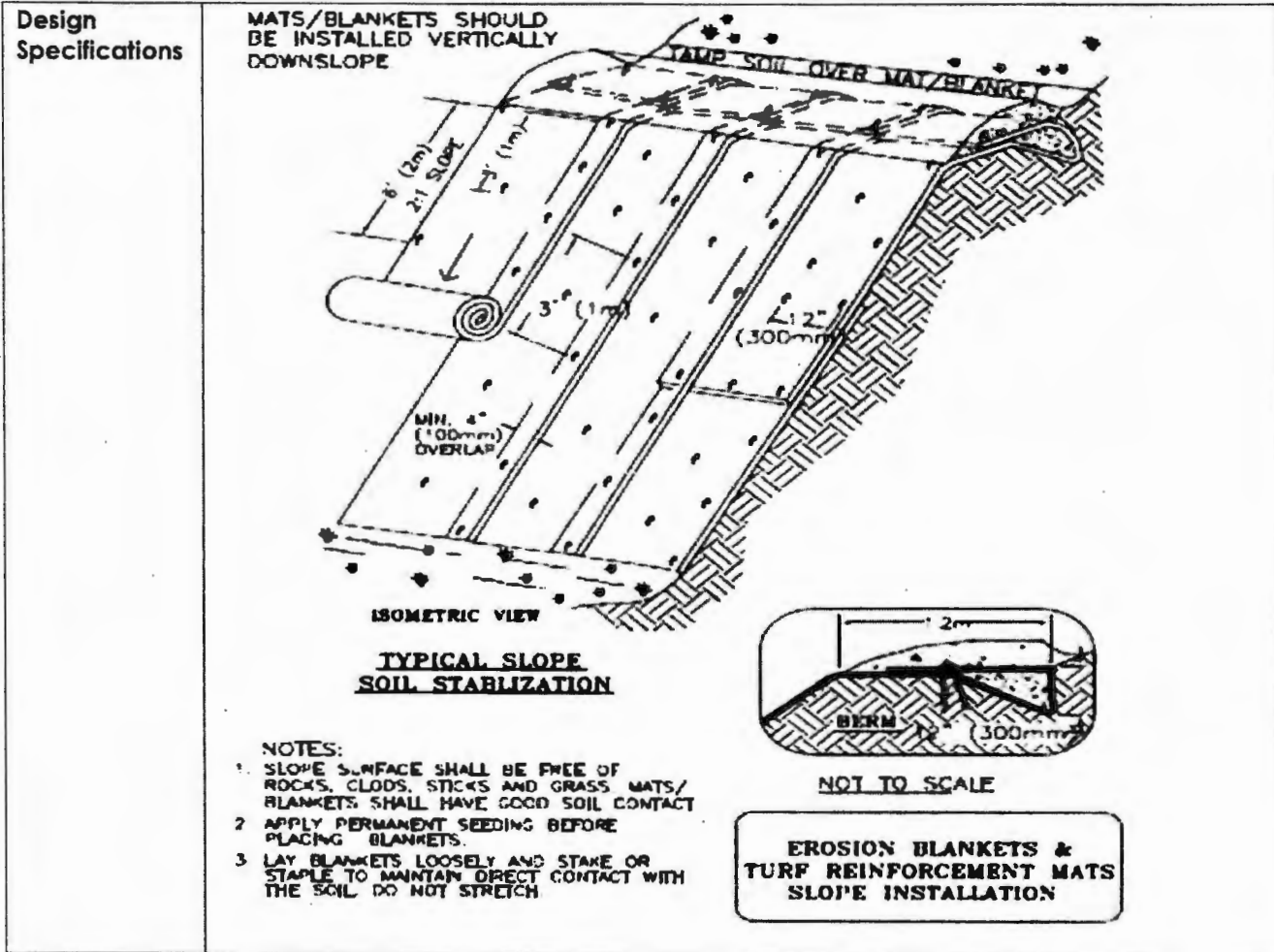
- USE OF WATER TRUCK FOR PROCESSING MATERIAL FOR COMPACTION AND FOR ROADWAY DUST CONTROL.

Specific Dust Controls

Description: WATER TRUCK	
Installation	3/2/2020
Maintenance Requirements	KEEP WATER FROM LEAVING ROW AND USE WATTLES OR OTHER BMPs TO PREVENT IT.
Design Specifications	NONE, STANDARD 1500 GALLON WATER TRUCK.

4.6 Minimize Steep Slope Disturbances**Specific Steep Slope Controls**

Description: SLOPE TRACK-WALKING OR MULCHING	
Installation	4/28/2020
Maintenance Requirements	EQUIPMENT BULLDOZER, HAND SPREAD MULCH EROSION CONTROL MATTING
Design Specifications	



4.7 Topsoil

Specific Topsoil Controls

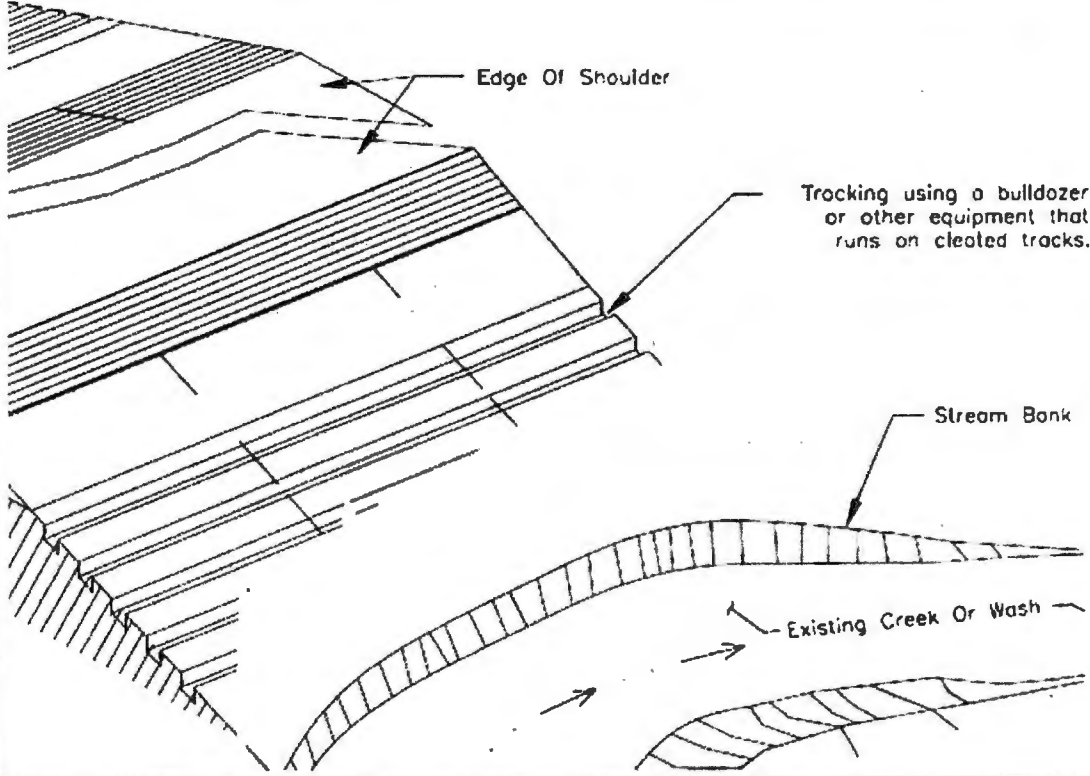
Description: WILL BE USING TOPSOIL FOR BACKFILL MATERIAL OF ROADWAY AND SIDE SLOPE AND FOR USE AS PIPE ZONE MATERIAL	
Installation	4/28/2020
Maintenance Requirements	COMPACTION AND PROCESSING OF MATERIAL
Design Specifications	PER FEDERAL PROJECTS (FP) 03 REQUIREMENTS

4.8 Soil Compaction

General

- SLOPE MATTING ON SIDE OF ROADWAY AND WATTLES IF NEEDED

Specific Soil Compaction Controls

Description: COMPACTION OF SIDE SLOPE AND AT PRISM OF FILL PER THE REQUIREMENTS OF THE NDOT SPECIFICATIONS	
Installation	3/2/2020
Maintenance Requirements	USAGE OF TRACK-WALKING IF NEEDED AS THE FILL SLOPE RISES TO CATCH POINT
Design Specifications	

4.9 Storm Drain Inlets: N/A

4.10 Stormwater Conveyance Channels: N/A

4.11 Sediment Basins: N/A

4.12 Chemical Treatment: N/A

4.13 Dewatering Practices: N/A

4.14 Other Stormwater Controls

- GRAVEL BAGS-AS NEEDED IN AREAS NOT ACCESSABLE TO WATTLES

Specific Stormwater Control Practices

Description: GRAVEL BAGS	
Installation	12/3/2019
Maintenance Requirements	REMOVE SEDIMENT BEFORE IT HAS ACCUMULATED TO ONE-HALF OF THE ABOVE-GROUND HEIGHT OF ANY PERIMETER CONTROL
Design Specifications	BAGS SHALL BE WOVEN POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE FABRIC, minimum unit weight 4 ounces per square yard; mullen burst strength exceeding 300 psi in conformance with the requirements in ASTM designation D3786; and ultraviolet stability exceeding 70 percent in conformance with the requirements in ASTM designation D4355. Gravel shall be between 0.4 and 0.8 inch in diameter and shall be clean and free from clay balls, organic matter, and other deleterious materials. The filled bags shall be between 28 and 48 pounds in mass.

4.15 Site Stabilization

Once NECA begins construction, consider using the Grading/Stabilization Activities log in Appendix H, of this SWPPP, to document the work compliance with the stabilization requirements in CGP Part 2.2.14.

Total Amount of Land Disturbance Occurring at Any One Time

- ☐ Two Hectares or less
☒ More than Two Hectares

GRADING AND TRACK-WALKING, ALSO THE USE OF EROSION MATTING AND SEEDING Arid, semi-arid, or drought-stricken area	
☐ Vegetative ☐ Non-Vegetative ☐ Temporary ☒ Permanent	
Description: - TRACK-WALKING, MATTING, AND SEEDING - Immediately initiate, and within 14 calendar days of a temporary or permanent cessation of work in any portion of the site complete, the installation of temporary non-vegetative stabilization measures to the extent necessary to prevent erosion; As soon as practicable, given conditions or circumstances on the site, complete all activities necessary to seed the area to be stabilized; and (iii) If construction is occurring during the seasonally dry period, indicate in the SWPPP.	
Dry Period	- Beginning date of seasonally dry period: 4/1/2019 - Ending date of seasonally dry period: 6/30/2019 - Site conditions during this period: DRY WITH INTERMITTING MONSOON RAINS, BY THEN GROUND CONDITIONS WILL BE MUDDY.
Installation and completion schedule	SITE PREPARATION, DRILL SEED APPLICATION. PLACEMENT OF MATTING IF NEEDED. - Approximate installation date: 2/17/2020 - Approximate completion date: 2/24/2020
Maintenance Requirements	Repair erosion and/or undermining at the top of the slope. Repair undermining beneath RECP(s), pull back the RECP(s), fill and compact eroded area, reseed and then secure RECP(s) firmly. Reposition or replace RECPs that have moved along the slope or channel and secure firmly. Replace damaged RECPs.

Design
Specifications**BIOMAC® CC 028.2**
DOUBLE NET COCONUT ROLLED EROSION CONTROL PRODUCT

BIOMAC® CC 028.2 is made with uniformly distributed 100% coconut fiber and two polypropylene net securely sewn together with UV stabilized thread. The lightly compressed blankets are wrapped and include a product label and code. The blankets are palletized for easy transportation. The BIOMAC® CC 028.2 has functional longevity of approximately 36 months, but will vary depending on soil and climatic conditions, and is suitable for slopes 1:1 and medium to high flow channels. The BIOMAC® CC 028.2 meets Type 4 specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17.

Material	1	2	
	100% Coconut		
Netting	Type		Net Color
Top	Medium weight UV Stabilized Polypropylene		Black
Middle	None		
Bottom	Medium weight UV Stabilized Polypropylene		
Net Opening	Top	Middle	Bottom
	0.5" X 0.5"		0.75" X 0.75"
Thread	Type		Color
	UV Stabilized Thread		Black
Roll Size	Standard	"A" Size	Weight
Width	7.5 ft (2.3 m)	3.75 ft (1.1 m)	15 ft (4.6 m)
Length	120 ft (36.6 m)	240 ft (73.2 m)	120 ft (36.6 m)
Weight ±10%	57 lbs (25.9 kg)	57 lb (25.9 kg)	114 lb (51.7 kg)
Area	100 yd ² (83.6 m ²)	100 yd ² (83.6 m ²)	200 yd ² (167.2 m ²)
#/Pallet	20	9	16

Physical Properties

Property	Test Method	Typical
Mass/Unit Area	ASTM D6413	5.25 oz/yd ² (156 g/m ²)
Thickness	ASTM D5525	0.26 in (6.60 mm)
Tensile Strength ML	ASTM D6818	310 lb/in (122 kN/m)
Elongation ML	ASTM D6818	20.5 %
Tensile Strength TD	ASTM D6818	250 lb/in (166 kN/m)
Elongation TD	ASTM D6818	20.5 %
Light Penetration	ASTM D6867	16 %
Density / Specific Gravity	ASTM D2976	NA
Water Absorbance	ASTM D1117	16 %

*ML = Machine direction; TD = Transverse direction

Slope Performance Design Values

Property	Test Method		Value
C Factor	ASTM D6422		0.51
Slope Length (ft)	≤ 31	31-21	≥ 21
< 50 ft (15 m)	0.015	0.023	0.032
50 ft - 100 ft	0.030	0.024	0.060
> 100 ft (30 m)	0.084	0.084	0.130

*Large Scale Results obtained by 3rd Party GAI Accredited Independent Laboratory

Erosion Control Design Values

Test Method	Parameters	Results
	50 mm (2 in) in 30 min	6.6% ± 0.5
ECTC Method 2 Horizontal	100 mm (4 in) in 30 min	6.6% ± 0.43
	150 mm (6 in) in 30 min	6.6% ± 0.40
ECTC Method 3 Slope Acceleration	Flow at 2 ft/s in 30 min	7.9% ± 0.4
ECTC Method 4 Sedimentation Top soil - rescue, 1" dry installation		7.2 %
*Erosion Control Design Values should be used for design purposes		
**Soil Loss Rate = Soil Loss Rate Stabilized Zone with R _{0.05} = 1.0 factor		
***The preceding test data should only be reproduced with the permission of AASHTO. However, the data are not intended to be used for design purposes.		

Channel Performance Design Values

Property	Test Method	Value
Unvegetated Shear Stress	ASTM D 6460	2.50 lb/ft ² (119 N/m ²)
Unvegetated Velocity	ASTM D 6460	1.50 ft/s (0.46 m/s)
Unvegetated Shear Stress	NA	NA
Unvegetated Velocity	NA	NA
Minimum H (Value Represents a Range)		0.60

*Large Scale Results obtained by 3rd Party GAI Accredited Independent Laboratory

SECTION 5: POLLUTION PREVENTION STANDARDS**5.1 Potential Sources of Pollution****Construction Site Pollutants**

Pollutant-Generating Activity	Pollutants or Pollutant Constituents (that could be discharged if exposed to stormwater)	Location on Site (or reference SWPPP site map where this is shown)
Concrete Curb and Gutter	Concrete waste, sediment, form oil	CBC and Crossing
Sidewalks	Concrete waste, sediment, form oil	CBC and Crossing
Concrete Slope Paving Concrete Spillway	Concrete waste, sediment, form oil	CBC and Crossing
Guardrails	Oil, sediment	Roadway Fill areas
Cattle guard/Fencing	Concrete waste	ROW
Fence Removal	sediment	ROW and other areas
ROW markers	Concrete waste, sediment	ROW
Erosion BMPS and Seeding	sediment	B.O.P. to E.O.P., Hot Plant and Borrow pits
Sign and Delineators installation	sediment	Linear roadway
Rumble strips	Asphalt waste	Hot plant
Pavement markings	Paint waste	Roadway
Temporary Traffic Control	sediment	Roadway/alternate roadway
Remove existing CMP	sediment	wash crossing
Stockpile Material	sediment	wash crossing
Equipment Work	petroleum-based material	Throughout site, maintaining
Non-Discharge Watering of site with Water truck	sediment	wash crossing
Form slope blankets, Rebar	waste concrete, form-oil, iron oxides, sediment	wash crossing
Pour Concrete, admixtures	sediment,	wash crossing
Material backfilling	sediment	wash crossing
Roadway construction	sediment	wash crossing
Erosion control matting/seeding	sediment	wash crossing

5.2 Spill Prevention and Response

Copy of SPCC Plan to be included in this SWPPP

5.3 Fueling and Maintenance of Equipment or Vehicles

- **FUELING IN AREAS OF THE PROJECT SO AS IT WILL NOT COME IN CONTACT OR GO BEYOND THE RIGHT OF WAY TO TSAILE CREEK, WHEATFIELDS CREEK, AQUA SAL CREEK AND BLACK PINNALE SPRING.**

Specific Pollution Prevention Practices

GATOR SOCKS OR LINED AREA	
Description: DRIP PAN OR ABSORBENTS SUCH AS GATOR SOCKS FOR LEAKS AND SPILLS IF THEY OCCUR.	
Installation	11/19/2019
Maintenance Requirements	Absorbents will take on the properties of whatever is absorbed; measures must taken as if it was the chemical or liquid itself. Minimize the dust generation and accumulation of these absorbents dispose of as non-hazardous material, depending on material absorbed.
Design Specifications	Fluid Absorbed: Oils, Coolants, Solvents, Water – Universal Color: Gray Dimensions: ext. dia. 3" x 42" L Recycled Content: 99% Pre-Consumer Recycled Cellulose Filler Absorbency: Up to 10 gal. per box Absorbency: per Up to 64 oz. per sock Configuration: Sock Filler: Corn Cob Skin/Outer Mesh: Skin - Polypropylene Weight: 20.1 lbs. Application: Leaks & Drips, Maintenance

5.4 Washing of Equipment and Vehicles**General**

- POLLUTION PREVENTION OF WASHING

Specific Pollution Prevention Practices

POLLUTION PREVENTION OF WASHING	
Description: SEDIMENT WATTLES OR GATOR SOCKS	
Installation	11/19/2019
Maintenance Requirements	WATTLES AND GATOR SOCKS AROUND EQUIPMENT OR VEHICLE.

5.5 Storage, Handling, and Disposal of Building Products, Materials, and Wastes

Per requirements listed below, USEPA CGP Parts 5.5.1, 5.5.2, 5.5.3, 5.5.4, 5.5.5, and 5.5.6

5.5.1 Building Products

- PRODUCTS WILL BE COVERED TO MINIMIZE EXPOSURE FROM STORMWATER THAT MAY OCCUR DURING THE WORK PERIOD.

Specific Pollution Prevention Practices

INSERT NAME OF POLLUTION PREVENTION PRACTICE	
Description: CONSTRUCTION MATERIALS	
Installation	11/19/2019
Maintenance Requirements	Locate storage of materials away from waterways. Supply Safety Data Sheets (SDS) for all materials stored. Store materials in a covered area during the wet season. Do not store materials directly on the ground.

5.5.2 Pesticides, Herbicides, Insecticides, Fertilizers: N/A**General**

- Landscape Materials:** MINIMIZE EXPOSURE TO STORMWATER UNTIL INSTALLED PER CONSTRUCTION PLANS. *see below*

Specific Pollution Prevention Practices

Description: EROSION CONTROL MATTING ON SIDE FILL SLOPES.	
Installation	10/28/2020
Maintenance Requirements	Manually unroll blankets down the slope to prevent stretching or pulling out of the anchor trench. Do not walk on the installed blanket. Follow the manufacturer's recommendations for overlapping and stapling. Prepare slopes (smooth, uniform surface) prior to blanket installation so the blanket makes contact with the entire soil surface when secured.

5.5.3 Diesel Fuel, Oil, Hydraulic Fluids, Other Petroleum Products, and Other Chemicals**General**

- Products will be stored in water-tight container and visques will be used to minimize exposure from stormwater. Any spills will be cleaned up immediately using dry cleaning methods and dispose of properly and possibly using a secondary containment, such as absorbent socks

Specific Pollution Prevention Practices

Description: SPCC REQUIREMENTS AT PROJECT SITE	
Installation	11/18/2019
Maintenance Requirements	Handle all pollutants in a manner that does not cause contamination of storm water. Covers, contains, and protects all materials from vandalism so that, if spilled, the materials would not pose an immediate risk to the wash near-by. Maintain and repair heavy equipment using spill prevention measures such as drip pans and, if necessary, cover. Mobile fuel truck and the pick-up truck with tanks will be parked in a lined area, which is locked when they are not in use.

5.5.4 Hazardous or Toxic Waste

(Note: Examples include paints, solvents, petroleum-based products, wood preservatives, additives, curing compounds, acids.)

General

- DISPOSAL OF SCRAP CONSTRUCTION MATERIAL, CONCRETE DEBRIS AND OTHER TRASH MATERIALS.

Specific Pollution Prevention Practices

INSERT NAME OF POLLUTION PREVENTION PRACTICE	
Description: STORE WASTE IN COVERED CONTAINERS AND DISPOSE IN ACCORDANCE TO LOCAL REQUIREMENTS	
Installation	11/18/2019
Maintenance Requirements	clean up and removal from site for proper disposal by outside contractor

5.5.5 Construction and Domestic Waste**General**

- PROVIDE DUMPSTER TO CONTAIN CONSTRUCTION WASTE. THE DUMPSTER NEEDS TO BE COVERED SO AS MATERIAL WILL NOT GET INTO NEARBY WASHES OR WATERWAYS.

Specific Pollution Prevention Practices

Description: TRASH DUMPSTER	
Installation	11/18/2019
Maintenance Requirements	empty dumpster in a timely manner to assure no overflow of construction waste.

5.5.6 Sanitary Waste**General**

- PORTABLE TOILETS

Specific Pollution Prevention Practices

Description: PORTA-A-JOHN FOR EMPLOYEES	
Installation	11/18/2019
Maintenance Requirements	Position portable toilets so as it will not be tipped over and is located far away from wash. Clean out according to subcontractor schedule.

5.6 Washing of Containers used for Concrete or Other Materials

- Do not wash out concrete trucks onto the ground. Wash out concrete trucks in designated concrete washout area.
- Do not allow wash-down from concrete aggregate areas to drain directly to surface waters or natural or constructed storm water conveyances.
- Use forms or solid barriers, such as pilings, for concrete pours within 15 feet of surface waters.
- When feasible, schedule larger concrete pours for the dry season.
- Use BMPs whenever feasible to prevent storm water from coming into contact with freshly poured concrete and concrete waste.
- Always monitor for elevating pH levels in storm water runoff, prevent high-pH storm water from discharging.

Specific Pollution Prevention Practices

CONCRETE WASTE DUMP	
Description: LINED CONCRETE WASTE DUMP	
Installation	6/1/2020
Maintenance Requirements	Cleanout waste concrete for disposal outside ROW. Keep any form oil or like material in designated areas. Cleanout concrete washout in a timely matter so as it does not overflow.
Design Specifications	WASHOUT CAN USE STACKED WATTLES COVER WITH HEAVY LINER.

5.7 Fertilizers: N/A**5.8 Other Pollution Prevention Practices: N/A**

SECTION 6: INSPECTION, MAINTENANCE, AND CORRECTIVE ACTION**6.1 Inspection Personnel and Procedures****Personnel Responsible for Inspections****MICHAEL REDHORSE****JAMIE SAGG**

and OTHER ASSIGNED EMPLOYEES AS PROJECT PROGRESSES

Inspection Schedule

Standard Frequency: ☒ Every 7 days ☐ Every 14 days and within 24 hours of 0.43 inches, per contract requirements , rain or the occurrence of runoff from snowmelt sufficient to cause a discharge
Reduced Frequency For stabilized areas on "linear construction sites" ☒ Twice during first month, no more than 14 calendar days apart; then once more within 24 hours of 0.43 inches, per contract requirements , rain. ▪ ALONG LINEAR PROJECT N6331 FROM BOP 33+920.00 TO EOP 37+564.614 LEFT AND RIGHT. ▪ 3/9/2020 END DATE OF AREAS TO BE COMPLETED
For arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought ☒ Once per month and within 24 hours of 0.43 inches, per contract requirements , rain. Insert beginning and ending dates of the seasonally-defined dry period for your area or the valid period of drought: ▪ Beginning date of seasonally dry period: 4/1/2019 ▪ Ending date of seasonally dry period: 6/30/2019
For frozen conditions where earth-disturbing activities are being conducted ☒ Once per month Insert beginning and ending dates of frozen conditions on your site: ▪ Beginning date of frozen conditions: 11/12/2018 Ending date of frozen conditions: 3/1/2019 ▪ Beginning date of frozen conditions: 11/11/2019 Ending date of frozen conditions: 3/3/2020

Rain Gauge Location:

1. Tsalle Arizona Project Office/Material Yard
2. Wheatfields Arizona N12 Borrow Pit
3. Tsalle Arizona N12 Hot Plant Site

Inspection Report Forms:

COPY OF INSPECTION REPORT FORMS IN APPENDIX D IN THIS SWPPP

6.2 Corrective Action

Personnel Responsible for Corrective Actions

Michael Redhorse, Area Project Superintendent

Jamie Sagg, Project Engineer

Other Assigned Employees As Project Progresses

Corrective Action Forms

COPY OF CORRECTIVE ACTION FORMS IN APPENDIX E IN THIS SWPPP

6.3 Delegation of Authority

Duly Authorized Representative

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY

Herman Patterson

Construction Manager

P.O. Box 969

Shiprock, New Mexico 87420

505-701-1379

Herman@navajo.net

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY

Michael Redhorse

Area Project Superintendent

P.O. Box 969

Shiprock, New Mexico 87420

505-406-7489

Michael@navajo.net

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY

Jamie Sagg

Project Field Coordinator/Engineer

P.O. Box 969

Shiprock, New Mexico 87420

928-209-2028

jamie@navajo.net

SECTION 7: TRAINING**Table 7-1: Documentation for Completion of Training**

Name	Describe Training	Date Training Completed
CALVERT OWEN	CGP 2008/BMPs	5/15/2009
CHRISTINE PADILLA	CGP 2017/BMPs	9/8/2017
LEE B. ROY	CGP 2017/BMPs	7/14/2017
MICHAEL REDHORSE	CGP 2017/BMPs	7/14/2017
Other Assigned Employees As Project Progresses		

SECTION 8: CERTIFICATION AND NOTIFICATION**Navajo Nation Enterprise's Certification**

NECA certify under penalty of law that this document and all attachments were prepared in accordance with the **2017 General Construction Permit of the USEPA / NPDES regulations**. This certification is designed to assure that qualified personnel properly gathered and evaluated the information submitted, based on the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. NECA is aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

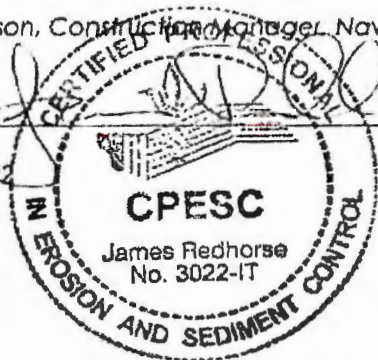
Signed: _____

Date: _____

Herman Patterson, Construction Manager, Navajo Engineering and Construction Authority

Prepared by: _____

CPESC-IT #3022

**Owner's Certification**

The Owner, under the penalty of the law that the Owner understands the terms and conditions of the general **National Pollutant Discharge Elimination System (NPDES)** permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signed: _____

Date: _____

(NDOT) Representative, *Darryl Bradley, Principal Civil Engineer*
Navajo Department of Transportation
P.O. Box 4620, Window Rock, Arizona 86515



NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY

BORROW EXTRACTION AND RECLAMATION PLAN WHEATFIELDS BORROW PIT WHEATFIELDS, ARIZONA

Prepared for:

Borrow Pit Lease
Navajo Nation and the Bureau of Indian Affairs



Prepared by:
NAVAJO ENGINEERING & CONSTRUCTION AUTHORITY
P.O. Box 969
Shiprock, New Mexico 87420

**BORROW EXTRACTION AND RECLAMATION PLAN
WHEATFIELDS PIT
WHEATFIELDS, ARIZONA**

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APPENDICES

- Appendix A** **Wheatfields Borrow Pit; Turn off to Pit: Wheatfields Chapter House; NECA Yard & Fuel Storage Area**
- Appendix B** **Navajo Nation's Department of Water Resources Permits**
- Appendix C** **Land Survey Plat and Legal Description**
- Appendix D** **Borrow Site Map – Estimated NECA Borrow Pit Quantities and Scales, Stockpiles, Equipment Fueling Area, BMPS, Topsoil Stockpile, Berms**
- Appendix E** **Map of Borrow Truck Route, Borrow Stockpiles, Frontier phone Pedestal Box**
- Appendix F** **Borrow Pit on 7.5-minute USGS quadrangle map entitled Wheatfields , AZA**
- Appendix G** **NECA Employee Training List**
- Appendix H** **Occupational Safety and Health Administration OSHA 29 CFR 1910 & 1926**
- Appendix I** **NECA Safety Policy**
- Appendix J** **NECA Emergency Action Plan for Wheatfields Borrow Pit**
- Appendix K** **Wheatfields Borrow Traffic Control Plan**
- Appendix L** **Multi-Section General Permit (MSGP) for Stormwater Pollution Prevention Plan (SWPPP)**
Attachments A,B,C,G, and H of the SWPPP are available for review at the NECA main office
Please contact Christine Padilla or James Redhorse at:
PO Box 969
Shiprock, New Mexico 87420
Telephone: 505-210-7070
Email Address: christine@navajo.net : James-Redhorse@navajo.net
Fax number: 505-210-7009
- Appendix M** **Federal Highway Projects / FP-14 Specification Section 625 -Turf Establishment**

MINING AND RECLAMATION PLAN

Wheatfields Borrow Pit

Navajo Engineering & Construction Authority - Shiprock, New Mexico

1.0 Introduction

Navajo Engineering and Construction Authority (NECA) has applied for a mining lease for a period of five-years for road construction projects to produce borrow material from a new borrow pit source. In the Fall of 2019 NECA was awarded the N12 roadway project which consists of reconstructing the Navajo Route N12 from Tsaile, Arizona to Wheatfields, Arizona. The reconstruction of Navajo Route N12 will be approximately 10.68 miles long. NECA wants to use a pit located within the Tsaile/Wheatfields Chapter boundary in Apache County, Arizona. Material from the Wheatfields Pit will be used for the Construction of N12 roadway subgrade and be known as "unclassified borrow" material. NECA plans to use the borrow pit for the upcoming year of 2020. The reconstruction project will commence in the winter of 2019. The mining of the borrow material will begin on site as soon as the borrow lease is approved. Access to the borrow pit is a existing dirt turn off to one residence, see [Appendix A](#). The borrow material is a terrace of unconsolidated alluvial deposits with traces of sandstone and silty sand. The area will accommodate mining of borrow material and hauling to the N12 project. Water for the dust control will be obtained through official permit WUP No. 20.0065 and No. 20.0066 from the Navajo Nation, the locations are Tsaile Creek – Bridge 505 & 504, see [Appendix B](#). The approved water permit, from the Navajo Nation's Department of Water Resources, can be found in [Appendix B](#). Rehabilitation and reclamation measures will be initiated following the completion of the N12 roadway project.

All applicable Navajo Nation and Federal laws or regulations will be observed throughout the life of this mine and the associated lease.

1.1 Purpose of the Mining Plan Federal guidelines under the Indian Mineral Leasing Act (IMLA) govern mining activities on Indian reservations and lands under Federal jurisdiction. A federally approved mining and reclamation plan is required before a mining lease can be approved by the Bureau of Indian Affairs, for the Secretary of the Interior. Mining and Reclamation Plan approval by the Mining Supervisor will satisfy this requirement. The Bureau of Land Management (BLM) is presently tasked with being the Mining Supervisor for the Department of the Interior. The initial borrow material mined from the Wheatfields pit will be used for unclassified borrow material for the N12 project. No screening or other processing is currently expected to be performed on this mined material.

1.2 Description of Pit The development of a source of borrow material of 4.98 acres on Federal Trust Lands within the Navajo Nation. The legal description of the proposed borrow pit is at Section 28 Township 33 North and Range 30 East of the Gila Salt River Meridian. The project Land Survey Plat Map includes the surveyor's legal description, and it is shown on [Appendix C](#). The estimated quantity of material needed for the N12 road reconstruction is approximately 45,202 cubic yards (79,330 tons). Excavation and surface disturbance for the N12 project would be completed within one year (see [Appendix D](#) for NECA Excavation Process). The borrow pit site is located on the west flank of the Defiance Uplift (anticline) and within the Canyon De Chelly

watershed. Runoff from this site is generally expected to flow to the south into Wheatfields wash. This is part of the greater San Juan River drainage basin.

The truck hauling route into the borrow pit has a radius of approximately 392 feet see [Appendix E](#). The traffic control is discussed in Section 2.4.

A Frontier phone pedestal sets on the southwest corner of borrow pit, see [Appendix D](#). The phone line runs across the road from Wheatfields Chapter to the residence on the north side of pit. Frontier is in the process to relocated the phone pedestal out of the borrow pit area.

Due to the nature of soils at the site, the operator does not anticipate encountering oversize boulders resource. There will not be processing at the proposed site.

1.3 Location the Wheatfields borrow pit is across from the Wheatfields Chapter house. The proposed mining lease area is 4.98 acres within the Navajo Nation see [Appendix F](#). The proposed borrow pit is located on the 7.5-minute USGS quadrangle map entitled Wheatfields, AZ.

1.4 Land Survey Plat and Legal Description The legal description of the proposed mine is in Section 28 Township 33 North and Range 30 East of the Gila Salt River Meridian. The Land Survey Plat Map, with the surveyor's legal description is shown in boundary Map see [Appendix C](#).

1.5 Chapter Resolution The proposed material source pit would be located on Navajo Partition Land (NPL), across the Wheatfields Chapter. NECA has acquired an approved Chapter resolution and all grazing permittees consent to the Wheatfields Borrow pit.

1.6 Conformance with the Land Use Plan The proposed borrow pit is located on Navajo tribal trust Land. The proposed lease is undeveloped and there are no current land use plans for the area. There are no existing sheep camps on the proposed property, nor are there any improvements. According to the local chapter official there are no plans to utilize this parcel for other purposes.

1.7 Training NECA Safety Department holds an in-house employee training see [Appendix G](#), which includes information on National Pollutant Discharges Elimination System (NPDES) permitting. Also, an Occupational Safety and Health Administration (OSHA) 10 & 30-Hour Outreach in Construction class and 10 & 30 Outreach for General Industry.

A comprehensive safety plan and training plan for training and retraining of raw material exaction of OSHA CFR 1910 & 1926 (Construction Training, Safety and Health) and NECA Safety Policy Manual will be adopted in the Wheatfields borrow pit by NECA see [Appendix H & I](#). The training is to inform and educate employees and trucking subcontractors about their responsibilities for working in a safe environment. OSHA requirements will be met prior to excavation of borrow material from the Wheatfield Pit.

1.8 Site Preparation NECA's command center or administration office for this operation will be located by the Wheatfields Chapter House, Arizona see [Appendix A](#). The borrow pit will not be fenced off. Prior to borrow excavation NECA will berm the outer bank for safety. The berms shall be at least mid-axle height of the largest self-propelled mobile equipment which usually travels the roadway. During active excavation operations, security will be provided 24 hours

per day, 7 days a week by at least four personnel. Reclamation will begin following active borrow excavation.

NECA will have one or more portable toilets available at N12 Wheatfields Chapter Construction Yard, depending on the number of employees and truck drivers are being used at the pit. A map of the Sanitation Facilities, Employee Parking and Equipment Fueling Area is shown see [Appendix E](#).

1.9 Estimated Reserved and Annual Tonnage to be Excavated NECA will use a certified scale to measure by weight and report production in tons. The scale will be set up on the west side of pit see [Appendix E](#). NECA will turn in monthly tonnage reports to the Navajo Nation and the U.S. Department of the Interior's Office of Natural Resource Revenue (ONRR) with the royalty payment.

2.0 Borrow Mining Operations The BIA and the BLM will each be notified prior to the beginning of site preparation and excavation, prior to initiating reclamation activities, and at the end of excavation activity.

The location and the depth of the borrow material is estimated to be two hundred thousand (200,000) tons of recoverable material. The quantity of material to be used for the N12 project is approximately 45,202 CY (79,330 tons) see [Appendix D](#). This facility will be a borrow material surface excavation and be subject to the requirements of OSHA CFR 1910 & 1926 included: 1910 Subpart E-Exit Routes and Emergency Planning; 1926 subpart E – Personal Protection ;1910 & 1926 Subpart G, C & D – Occupational Health and Environmental Control ;1910 Subpart H – Hazardous Materials; 1910 subpart N – Materials storage and Handling; 1926 Subpart O – Motor Vehicles, Mechanized Equipment, and Marine Operations; etc. See [Appendix H](#). MSHA's authorizing regulations, under Title 30 of the Code of Federal Regulations (CFR), identify that safety regulations for this type of mining operation are administered by OSHA, since there is no "processing" of material involved. Under BIA's authority, Title 25 of the CFR, and BLM's authority, Title 43 of the CFR, this operation is defined as a mine. NECA shall conform to all applicable regulations, including those for health and safety, that may apply.

There will be topsoil stripping and storage on the north west section of pit see [Appendix E](#). Reclamation and revegetation are discussed in Section 2.8. Drilling and blasting will not be required. The fine-grained silty sands loam source material will be soft enough to forego drilling and blasting. See additional discussion in Section 2.1, titled Drilling and Blasting Plan.

The Wheatfields excavation is to remove raw earthen material, no screening, crushing, or other processing is expected. The raw material will be pushed into a stockpile and loaded into belly dump trucks for transport off site.

Trees located in the pit area will be removed by the Navajo Nation Forestry Department.

NECA expects to start mining material starting October 15, 2020, but this date may change depending on the permit approval. There will be a minimum of 3 employees onsite during active excavation operations. Additional personnel onsite may include truck drivers conveying material from the borrow pit. The truck drivers will go through a hazard training and are required to wear PPE while onsite. The truck drivers shall not be permitted to exit their vehicles within the borrow pit during active operations.

NECA estimates 76 loads a day or more ($76 \times 21 \text{ tons} = 1596.00 \text{ tons}$), 5 days a week, until October of 2020. NECA's work schedule will switch to 4 days a week working 10 hours a day. This schedule, will increase the hauling to approximately 120 loads a day. Depending on demand, NECA may use two loaders in the pit for loading trucks.

Borrow Excavation operations will be in one stage:

NECA will be excavating using a D8 Dozer ripping and moving material toward the south side of borrow pit, then stockpiling with a loader. The estimate quantity is 45,202 cubic yards the estimate calculations in tons will be approximately 79,330 tons. It will take approximately 3,690 trucks loads ($79,330 \text{ tons} / 21.5 \text{ tons per load} = 3,690$) to haul 79,330 tons.

For the borrow mining area, see **Appendix D** There is topsoil to be removed and to be placed along the north west boundary for further use in the reclamation process. We expect to cut 2 feet to 40 feet depth of raw material for borrow. The dozer will start on the north west side and working eastward pushing borrow to the south creating a long stockpile along the right-of-way N12. On the northwest side of pit the Dozer will level area for the scales to be set up, and for truck to make a circle route for loading see **Appendix E**. The dozer will make a stair step slope at 3-to-1 during excavation. Tracking should be implemented on embankments or surfaces or depressions in the slope. The slope shall be created (i.e. stair step grading) and the slopes will not be steeper than 3-to-1. The borrow material will be loaded into belly dumps or end dump trucks for the N12 project. As we mine from the north to south of the borrow pit boundary, NECA will maintain any BMPs and earth berms as the field adjustments occur. This maintenance is to satisfy OSHA and the SWPPP.

As outlined in the Storm Water Pollution Prevention Plan (SWPPP) temporary erosion control measures will be installed at the foot of the stockpiles and at any discharge points to prevent movement of soil from the site. For reference see **Appendix E**. It is expected that borrow processing, and stockpiling will begin upon the approval of borrow lease. In general, we expect the hours of operation will be sunup (7:00 am) to sundown (5:00 pm). From March to October and from November to April (8:00 am) to (5:00 pm), Monday through Friday, until completion of the N12 project. The erosion control will remain in place, monitored/maintained through the duration of lease.

2.1 Drilling and Blasting Plan Drilling, Blasting, Crushing, Screening, or Processing shall not occur as part of this mining operation.

2.2 Equipment List Although it is not possible to provide an exact list of the equipment that will be used in the borrow pit operation during the five-year term of the lease, we will describe the size and type of equipment that we expect to use. The borrow extraction will most likely consist of the following equipment:

- One or Two Cat 938 or 950 Loader bucket capacity approximately 5 cu. yds.
- D 8 Dozer
- 4,000-gallon International, Kenworth or freight Liner water truck, pulled from the N12 project, as needed
- Freightliner FL70 – Service Truck, once a day
- Excavator – 250,270, or 300 bucket 36", if needed

Borrow hauling will most likely include the following equipment:

- One or Two Cat 938 or 950 Loader bucket capacity approximately 5 cu. yds.

Belly-Dump or End-Dump trailer units - approximately 10-25 tons
Cat 14G or 140G Motor Grader for Pit and hauled road maintenance when needed

The operational service area for the equipment see Appendix E.

NECA. For the Emergency Response Plan see Appendix J, which will be implemented for this mining project. At the project site NECA's Project Superintendent and Foremen will be having daily "toolbox meetings", discussing Safety procedures and Job Hazarders Analysis (JHA).

2.3 Air Quality and Dust Control During mining operations, dust control will be provided by water trucks listed above in the equipment list. It will take approximately 8,000 gallons of water a day base on our pervious pit the Emma Brown pit located 11.1 south of Chinle, for dust control for the pit and access roads is approximently a radius of 392 feet in length and 15 feet wide. Water for dust control may come from either official permit WUP NO. 20.0065 or 20.0066 from the Navajo Nation from, Tsaile Creek – Bridge 505 & 504 NECA will set up a water pump with a load out stand at both lakes for the source permitted by the Navajo Nation Department of Water Resources.

2.4 Traffic Control Access to the borrow pit is adjacent to BIA / Navajo route N12. Signs will be posted on the existing N12 road and residential roads, warning the public traffic of heavy equipment and hauling trucks see Appendix K The borrow pit entrance and access will be graded with the Grader to allow for eighteen-wheeler traffic (semi-truck and belly-dump trailer) for a safe access when construction operation is ongoing see Appendix E. Employees and truckers will be instructed to be considerate of local traffic and the resident.

NECA is estimating to have at least ten to twenty-five trucks for the borrow hauling for the N12 project. NECA plans to schedule the borrow haul the beginning of October, 2020.

2.5 Solids Waste Contact Should there be a fuel/oil spill, the contaminated material will be hauled off in an end dump to be disposed at a licensed landfill by a qualified waste hauler.

No fuel storage, petroleum and waste products will be stored at the borrow pit. NECA will have Fuel storage tanks located across the pit at the Wheatfields Construction yard, located on the east of the Wheatfields Chapter House see Appendix E Fuel used for equipment at pit will be hauled in with a NECA freightliner FL70 service truck through the day, as needed. NECA Service Truck will service equipment. See designated area Appendix E for servicing equipment in borrow pit. A standard spill kit containing absorbent materials, empty containers, and a shovel will be maintained at the scale site and the NECA service truck. Spills of fuel and petroleum products will be handled according to the standard policies regarding cleanup and disposal of contaminated soils. This will require contaminated soils be removed and transported to a licensed disposal facility. Envirotech located in Farmington, New Mexico is the designated disposal facility.

NECA employees at pit will do a visual walk around daily to pick up any existing trash, the trash receptacle located in the sanitize area see Appendix E.

2.6 Stormwater Plan Temporary erosion controls will be installed and maintained in accordance with a Stormwater Pollution Prevention Plan (SWPPP) for the Wheatfields Borrow Pit. NECA has

implemented Multi-Section General Permit for Stormwater Discharge Associated with Industrial Activity (MSGP) see section 16 of the Borrow Lease package see [Appendix L](#).

2.7 Spill Prevention Control and Countermeasure In accordance to 40 CFR 112.3 (c), a Spill Prevention Control and Countermeasure Plan (SPCCP) is developed for the N12 Project. The SPCCP is a Tier 1 Self-Certification Statement, will facilitate the potential for an accidental discharge of oil or waste oil into or upon navigable waters of the U.S. In the unlikelyhood of a spill occurrence, this plan is prepared to prevent and minimize the impact of a spill at the facility and to expedite control and cleanup activities. Spills of petroleum products will be handled according to NECA's SPCCP policies regarding cleanup and disposal of contaminated soils.

NECA's maintenance on the heavy equipment at the borrow pit will be parked at the designated area for service, should there be any minor equipment repairs or other minor maintenance work by the mechanic or oiler it would be performed onsite see "Equipment E fuel Area and Service Area". Other major equipment repairs it will be hauled off for repair to the NECA shop in Shiprock, New Mexico. Waste oil will not be stored on site. Any changed motor oil will be hauled to a commercial receptor for disposal. NECA's mine operator shall ensure the borrow material will have no contamination.

NECA will monitor all SWPPP erosion controls and drainages from the borrow area at least every three months and when heavy rain has occurred for the life of the borrow lease or if NECA cancels lease.

NECA sanitation facilities, employee parking and fueling area will be located at wheatfields construction yard site see [Appendix E](#).

2.8 Reclamation and Abandonment

Reclamation of the Wheatfields Borrow Pit shall begin upon completion of the N12 project, expected August 2021. The site will be returned to near natural state to minimize erosion and accepted by the Navajo Nation. There will not be any slopes steeper than 3-to-1. Disturbed surfaces will be ripped and disked to loosen areas compacted by traffic, then seeded. Final reclamation activities of this borrow pit will occur at the same time the N12 project is seeding.

The site will be reclaimed as described in [Appendix M](#), in the document titled Section 625 – Turf Establishment. The seed mix will be obtained from Revegetation Services in Mesa, Arizona. While seeding there will be no watering because the seeding will be allowed to germinate when natural moisture is sufficient to maintain growth. The success of the revegetation will be determined by acceptance of the Navajo Nation Environmental Protection Agency (NNEPA), who will perform the final certification of reclamation. Upon completion of reclamation, the area will be suitable for limited livestock grazing. The traffic control signs will be removed when use of the Wheatfields Borrow Pit is completed.

Prevention of erosion is covered by the Storm Water Pollution Prevention Plan see section 16 of the Borrow Lease package. Temporary erosion control measures installed under the SWPPP will be left in place until final certification of reclamation. Dust control on the site will be maintained by water trucks equipped with spray bars.

The site is approximately 4.98-acres in size and we expect to disturb 1.75-acres which is 35% the total surface acreage of the Lease. (128,730 sq. ft. = 1.75 acres) see [Appendix D](#) the Mini. Lease has been requested for a period of five-years. NECA expects the reclamation to take place

when the borrow operation for N12 is complete. It will be seeded at the same time as the N12 project is seeded. Once the N12 project is complete, no additional borrow excavation will occur without approval of a new or modified Mining and Reclamation Plan.

NECA will submit a Performance Bond, Verification of Coverage and State of Arizona Contractor's License to the BIA prior to borrow extraction.

According to the standard terms and condition that will be attached to the Navajo Nation Resources and Development Committee Resolution, and, eventually, the Borrow Lease, final certification of reclamation and releasement of the "bond" will be done by the Navajo Nation Environmental Protection Agency, The Bureau of Indian Affairs and The Bureau of Land Management.

Wheatfields Borrow Pit, Wheatefields Chapter House and NECA Yard

Turn out to Borrow Pit - Appendix A

Legend

-  Navajo Nation Wheatfield Chapter
-  Wheatfields

Wheatfields Pit

Turn out to Borrow Pit

Wheatfields Chapter House

NECA Office Trailer / Yard and Fuel Storage Area

Google Earth

500 ft



**COMPLY w/Navajo
Water Code/TCOB
Rules and Regulations.
SUBMITTAL of
Water Withdrawn
LOAD COUNTS is
REQUIRED.**

Department of Water Resources
Technical, Construction and Operations Branch
P.O. Box 678
Fort Defiance, Arizona 86504
Ph. No. (928) 729-4132/Fax No. (928) 729-4421
www.watercode.navajo-nsn.gov

APPROVED

WATER USE PERMIT

WUP NO: **20.0065**

VALID FROM 12/01/2019 to 12/01/2020

NOTE: This permit is valid only upon signature of the Branch Director, Technical, Construction and Operations Branch (TCOB), or Director, Department of Water Resources (DWR) or Division Director, Division of Natural Resources (DNR). Please read Water Use Permit information sheet before completing this form.

APPLICANT: Navajo Engineering and Construction Authority
LAST NAME FIRST; OR COMPANY NAME
 MAILING ADDRESS: P. O. Box 969
 CITY: Shiprock STATE: New Mexico ZIP CODE: 87420
 CONTACT PERSON: Herman Patterson TELEPHONE NO: 505-210-7036
 EMAIL ADDRESS: herman@navajo.net

 DATE RECEIVED: 12/09/19 DATE COMPLETED 01/09/2020
 \$25.00 Filing Fee Received _____ Receipt No. _____ Initial MAJ

IDENTIFIED WATER SOURCE TO BE USED

☐ Spring No: _____ ☒ Stream Name: Tsalle Creek - Bridge 505
☐ Stockpond Name/No: _____ ☐ Lake/Reservoir Name: _____
☐ Well No: _____ ☐ Injection Well No: _____

Amount of water requested: 100,000 gallons

☐ Other Description/Name: _____ Grazing District: 11
 Chapter: Tsalle/Wheatfields Chapter Code: TSAL

State:	☒ AZ/Arizona	NM/New Mexico	UT/Utah
County:	☒ AP/Apache	MK/McKinley	SJ/San Juan
	NA/Navajo	VL/Valencia	KA/Kane
	CO/Coconino	BL/Bernalillo	
		SD/Sandoval	
		SO/Socorro	
		RA/Rio Arriba	
		SA/San Juan	

Quad. No: (7.5 min. Series) TSALLE Quad
 UTM COORDINATES: X (East) 663811 Y (North) 4016770 ZONE 12

<u>NE SE SW NW</u>	<u>NE SE SW NW</u>	<u>NE SE SW NW</u>	<u>12</u>	<u>33N</u>	<u>29E</u>
10 Acre	40 Acre	160 Acre	Section	Township	Range

WUP NO: **20.0065**

LAND STATUS			
☒ TRUST ☐ FEE ☐ LEASE ☐ ALLOTMENT ☐ OTHER WATERSHED NAME: <u>Chinle Wash</u> USGS WATERSHED CODE NO. <u>14080204000</u>			
CONSUMPTIVE WATER USE NEEDED FOR			
PRIMARY: ☐ Domestic ☐ Municipal ☐ Livestock ☐ Irrigation Agriculture ☐ Wildlife and Fish ☐ Recreational ☐ Industrial ☐ Mining ☐ Commercial ☒ Other N12 Road Construction			
DOMESTIC/MUNICIPAL: Number of People: <u>N/A</u> Number of Homes: <u>N/A</u> Others: <u>N/A</u>			
TYPE OF LIVESTOCK: <u>N/A</u> ☐ Horses No: _____ ☐ Cattle No: _____ ☐ Other: _____ ☐ Goats No: _____ ☐ Sheep No: _____ ☐ No: _____			
TYPE OF CROPS: <u>N/A</u> ☐ Row (ie., corn) ☐ Forage-Hay-Pasture ☐ Small Grains ☐ Horticulture (ie., Fruits & Vegetables) Acres _____ Acres _____ Acres _____ Acres _____			
TYPE OF WILDLIFE: <u>N/A</u> ☐ Fish No: _____ ☐ Large Game No: _____ ☐ Others No: _____ ☐ Small Game No: _____ ☐ Birds No: _____			
IF WATER IS USED FOR INDUSTRIAL OR MINING PURPOSES, ATTACH WATER SUPPLY PLAN DESCRIBING SOURCE AND METHODS OF DIVERSION, CONVEYANCE AND USES.			
SEASON OF MAXIMUM USE: Spring ☒ Summer Fall Winter			
MAXIMUM RATE OF USE: <u>50</u> ☒ GPM ☐ CFS			
EXPECTED DATE WATER USAGE TO BEGIN: <u>December 2020</u>			
EXPECTED VOLUME OF WATER TO BE USED: <u>0.30689</u> ac/ft (<u>100,000</u> gallons)			
METHOD OF WATER DIVERSION: ☐ Instream Pump ☐ Gate or Gravity Flow ☒ Other: <u>Pump in creek</u>			
METHOD OF WATER CONVEYANCE: ☐ Ditch ☐ Canal ☐ Pipeline ☒ Truck ☐ Other: _____			
ATTACH AN 8 1/2" X 11" MAP SHOWING EXACT LOCATION OF IDENTIFIED WATER SOURCE AND SCENARIO/ LOCATION OF WHERE WATER IS TO BE USED.			
RETURN FLOW OR DISCHARGE			
AMOUNT OF WATER: <u>N/A</u> ☐ GPM ☐ CFS ☐ GPD		METHOD: ☐ Direct ☐ Indirect ☐ Injection	
IS DISCHARGE TREATED ☐ YES ☐ NO		IS TEMPERATURE AFFECTED ☐ YES ☐ NO	
IS QUALITY AFFECTED ☐ YES ☐ NO		NPDES PERMIT NUMBER: <u>N/A</u>	
FEDERAL/UC PERMIT: <u>N/A</u>			

20.0065

CONDITIONS

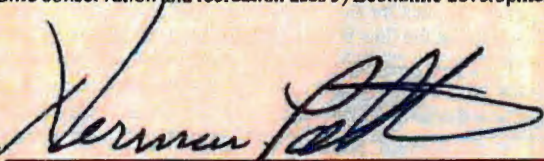
1. Purpose of definition the Technical Construction and Operations Branch (TCOB), Navajo Nation Department of Water Resources (Department) and "Permittee" means entity, company, water user and its successors.
2. Permittee agrees to comply with the terms and conditions of the Water Use Permit and the Navajo Nation Water Code. Permittee understands and agrees that failure to comply with the permit shall result in forfeiture of this permit.
3. This permit may be revoked if:
 - A. Permittee is not in compliance with any conditions set forth in this permit.
 - B. Permittee is in violation of any provision of the Navajo Nation Water Code.
 - C. Insufficient water supplies are present for whatever reason or terms.
 - D. For any other due cause as a result of negative findings from investigation that is performed by both department and permittee.
4. Permit is valid only for the terms specified and shall expire at the end of the term or at the completion of the proposed project or required water usage, whichever comes first. Permittee's rights to obtain water will be limited to the allocated amount. Permittee does not have authority to transfer, convey, or allocate the water subject to this permit to any third party or for any other project not specified herein. It is further agreed between the parties that this permit does not give the Permittee the right to haul water for hire on the Navajo Reservation, or on land subject to the jurisdiction of the Navajo Nation.
5. Permittee agrees to pay for the water used at the applicable water use rate fee. Payment must be made by Permittee within ten working days of receipt of the invoice. The fees for this permit will be adjusted annually over the next five (5) years by multiplying the fee amount that is in effect at the time of an adjustment by the CPI change. The new fee amount shall take effect immediately. CPI change means the amount reported as the "12 months Percent Change" under the column for "Annual" in the Consumer Price Index All Urban Consumers, U.S. City Average, All Items, Base Periods 1982-84=100 (not seasonally adjusted), as published by the Bureau of Labor Statistics of the United States Department of Labor ("BLS") for the calendar year prior to the year in which the CPI Adjustment is being made. If the applicable BLS publication ceases to be compiled or published, then such other available data or index as the Navajo Nation determines would be the most comparable to such index shall be used. An Annual Consumer Price Index adjustment from the Bureau of Labor Statistics will be used for the compounded water use rate and current effective annual interest rate. The annual billing period will be from January through December. Any restructuring of water use fees or water rate increase by the Resources and Development Committee of the Navajo Nation Council will be effective immediately.
6. Permittee agrees to submit meter readings or other evidence showing the quantity of water withdrawn pursuant to this permit to the TCOB office at the end of the term or at the completion of the proposed project or required water usage, whichever comes first. The water use data will be submitted by the Permittee.
7. Any breach of this permit or any failure to pay in full for the water used by due date will be a breach of this permit and the Navajo Nation may terminate this permit upon any breach by giving the Permittee notice of such termination in writing not less than ten (10) days prior to the effective date of termination, provided that if, Permittee remedies any such breach within said ten (10) days period, the permit will remain in effect. Said notice shall state the grounds upon which the termination is being made. It will be a breach of this permit and grounds for termination thereof, if Permittee obtains, or attempts to obtain any other water from any source within the jurisdiction of the Navajo Nation other than the source or sources permitted in this permit.
8. Permittee agrees to obtain a Water Use Permit for each place of withdrawal of water in conjunction with the place of use prior to making use of such source. Authorization granted under this permit is only for the stated use of the indicated water source location. Permittee is responsible for obtaining any applicable permit from the appropriate department/agency that may be required for the proposed work.
9. Permittee agrees to hold harmless and indemnify the Navajo Nation against any and all losses, costs, damages, claims, expenses or other liability whatsoever, rising out of, or connected with Permittee's services under this permit including but not limited to, any accident or injury to person or property.

20.0065

CONDITIONS

10. All disputes arising from the subject matter of this permit or the performance thereof will be settled in the Navajo Nation Courts and under the laws of the Navajo Nation. Nothing herein shall be construed as a waiver of the sovereign immunity of the Navajo Nation, pursuant to 1 N.T.C. §351 et seq.
11. Permittee agrees to maintain the immediate area in a safe and sanitary manner, free of unnecessary debris.
12. If permittee hires sub-contractors to haul water covered by Water Use Permit, Permittee must notify the Navajo TCOB office of sub-contractors in writing.
13. In case of a Tribal Well, no more than two-thirds of the water in the water tank will be withdrawn. Before further withdrawals are to be made from a water tank, the water level in the tank must be allowed to rise back to the original level.
14. It is agreed that the Department of Water Resources reserves the right to limit the quantity of water that can be taken under this permit to the above stated amount or less, to limit or restrict the sources of the Navajo Nation and in the best interests of the Navajo Nation. Such limitation will be imposed at the discretion of the Director, Department of Water Resources.
15. Permittee agrees to allow reasonable entry upon their premises by Navajo Nation Employees engaged in the administration of this permit.
16. When insufficient water supplies are present for whatever reason or terms, the following priority of uses shall be considered in the order in which they are listed: 1) Domestic and municipal uses 2) Stock watering uses 3) Agriculture uses 4) Instream needs, for fish, wildlife conservation and recreation uses 5) Economic development uses including industrial and power uses.

Permittee's Signature



Date

11-18-19

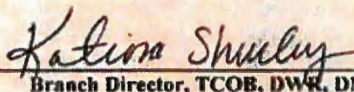
OFFICIAL USE ONLY☒ Yes () No

Technical Reviewer

Date

01/09/2020

Approved/Disapproved:



Branch Director, TCOB, DWR, DNR

Date

1/9/2020

If Disapproved State Reasons:

20.0065

Legend
□ Feature 1

Bridge Water Point Sta 49-664

Earth Point

Bridge 505

UTMs
East - 683811
North - 4018770

Google Earth

20.0065

**COMPLY w/Navajo
Water Code/TCOB
Rules and Regulations.
SUBMITTAL of
Water Withdrawn
LOAD COUNTS is
REQUIRED.**

Department of Water Resources
Technical, Construction and Operations Branch
P.O. Box 678
Fort Defiance, Arizona 86504
Ph. No. (928) 729-4132/Fax No. (928) 729-4421
www.watercode.navajo-nsn.gov

APPROVED

20.0066

WATER USE PERMIT

WUP NO: _____

VALID FROM 12/01/2019 to 12/01/2020

NOTE: This permit is valid only upon signature of the Branch Director, Technical, Construction and Operations Branch (TCOB), or Director, Department of Water Resources (DWR) or Division Director, Division of Natural Resources (DNR). Please read Water Use Permit information sheet before completing this form.

APPLICANT: Navajo Engineering and Construction Authority
LAST NAME FIRST, OR COMPANY NAME

MAILING ADDRESS: P. O. Box 969

CITY: Shiprock STATE: New Mexico ZIP CODE: 87420

CONTACT PERSON: Herman Patterson TELEPHONE NO: 505-210-7036

EMAIL ADDRESS: herman@navajo.net

DATE RECEIVED: 12/09/19 DATE COMPLETED 01/09/2020

\$25.00 Filing Fee Received _____ Receipt No. _____ Initial MP

IDENTIFIED WATER SOURCE TO BE USED

☐ Spring No: _____ ☒ Stream Name: Wheatfields Creek - Bridge 504

☐ Stockpond Name/No: _____ ☐ Lake/Reservoir Name: _____

☐ Well No: _____ ☐ Injection Well No: _____

Amount of water requested: 100,000 gallons

☐ Other Description/Name: _____ Grazing District: 11

Chapter: Tsaile/Wheatfields Chapter Code: TSAI

State: ☒ AZ/Arizona ☐ NM/New Mexico ☐ UT/Utah

County: ☒ AP/Apache ☐ MK/McKinley ☐ SJ/San Juan
☐ NA/Navajo ☐ VL/Valencia ☐ KA/Kane
☐ CO/Coconino ☐ BL/Bernalillo
☐ SD/Sandoval
☐ SO/Socorro
☐ RA/Rio Arriba
☐ SA/San Juan

Quad. No: (7.5 min. Series) Upper Wheatfields- QUAD

UTM COORDINATES: X (East) 669681 Y (North) 4011039 ZONE 12

NE SE SW NW / NE SE SW NW / NE SE SW NW
10 Acre 40 Acre 160 Acre 34 33N 30E
Section Township Range

WUP NO:

☒ **TRUST**☐ **FEE**☐ LEASE**ALLOTMENT**☐ OTHER

WATERSHED NAME: Chinle Wash

USGS WATERSHED CODE NO/4080204000

PRIMARY:

- () Domestic

- () **Municipal**

- () **Livestock**

- ### () Irrigation Agriculture

- () **Wildlife and Fish**

- () Recreational**

- () Industrial

- () Mining

- () Commercial

- ✓ **Other N12 Road Construction**

DOMESTIC/MUNICIPAL:

Number of People: N/A Number of Homes: N/A Others: N/A

TYPE OF LIVESTOCK: N/A () Horses No: _____ () Goats No: _____
() Cattle No: _____ () Sheep No: _____
() Other: _____ () No: _____

TYPE OF CROPS: N/A

() Row (ie., corn)	Acres
() Forage-Hay-Pasture	Acres
() Small Grains	Acres
() Horticulture (ie., Fruits & Vegetables)	Acres

TYPE OF WILDLIFE: N/A () Fish No: _____ () Small Game No: _____
 () Large Game No: _____ () Birds No: _____
 () Others No: _____

IF WATER IS USED FOR INDUSTRIAL OR MINING PURPOSES, ATTACH WATER SUPPLY PLAN DESCRIBING SOURCE AND METHODS OF DIVERSION, CONVEYANCE AND USES.

SEASON OF MAXIMUM USE: Spring ☐ Summer ☒ Fall ☐ Winter ☐

MAXIMUM RATE OF USE: 50 **✓ GPM** **() CFS**

EXPECTED DATE WATER USAGE TO BEGIN: December 2020

EXPECTED VOLUME OF WATER TO BE USED: 0.30689 ac/ft (100,000 gallons)

METHOD OF WATER DIVERSION: Instream Pump Gate or Gravity Flow
☒ **Other:** Pump in creek

METHOD OF WATER CONVEYANCE:	Ditch Other:	Canal	Pipeline	✓ Truck
-----------------------------	-----------------	-------	----------	---------

ATTACH AN 8 1/2" X 11" MAP SHOWING EXACT LOCATION OF IDENTIFIED WATER SOURCE AND SCENARIO/ LOCATION OF WHERE WATER IS TO BE USED.

RETURN FLOW OR DISCHARGE

AMOUNT OF WATER: N/A

() GPM

() CFS

() GPD

METHOD:

() Direct

() Indirect

() Injection

IS DISCHARGE TREATED () YES () NO

IS QUALITY AFFECTED ☐ YES ☐ NO

FEDERAL/UIC PERMIT: N/A

IS TEMPERATURE AFFECTED () YES () NO

NPDES PERMIT NUMBER: N/A

CONDITIONS

20.0066

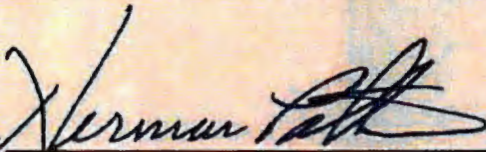
1. Purpose of definition the Technical Construction and Operations Branch (TCOB), Navajo Nation Department of Water Resources (Department) and "Permittee" means entity, company, water user and its successors.
2. Permittee agrees to comply with the terms and conditions of the Water Use Permit and the Navajo Nation Water Code. Permittee understands and agrees that failure to comply with the permit shall result in forfeiture of this permit.
3. This permit may be revoked if:
 - A. Permittee is not in compliance with any conditions set forth in this permit.
 - B. Permittee is in violation of any provision of the Navajo Nation Water Code.
 - C. Insufficient water supplies are present for whatever reason or terms.
 - D. For any other due cause as a result of negative findings from investigation that is performed by both department and permittee.
4. Permit is valid only for the terms specified and shall expire at the end of the term or at the completion of the proposed project or required water usage, whichever comes first. Permittee's rights to obtain water will be limited to the allocated amount. Permittee does not have authority to transfer, convey, or allocate the water subject to this permit to any third party or for any other project not specified herein. It is further agreed between the parties that this permit does not give the Permittee the right to haul water for hire on the Navajo Reservation, or on land subject to the jurisdiction of the Navajo Nation.
5. Permittee agrees to pay for the water used at the applicable water use rate fee. Payment must be made by Permittee within ten working days of receipt of the invoice. The fees for this permit will be adjusted annually over the next five (5) years by multiplying the fee amount that is in effect at the time of an adjustment by the CPI change. The new fee amount shall take effect immediately. CPI change means the amount reported as the "12 months Percent Change" under the column for "Annual" in the Consumer Price Index All Urban Consumers, U.S. City Average, All Items, Base Periods 1982-84=100 (not seasonally adjusted), as published by the Bureau of Labor Statistics of the United States Department of Labor ("BLS") for the calendar year prior to the year in which the CPI Adjustment is being made. If the applicable BLS publication ceases to be compiled or published, then such other available data or index as the Navajo Nation determines would be the most comparable to such index shall be used. An Annual Consumer Price Index adjustment from the Bureau of Labor Statistics will be used for the compounded water use rate and current effective annual interest rate. The annual billing period will be from January through December. Any restructuring of water use fees or water rate increase by the Resources and Development Committee of the Navajo Nation Council will be effective immediately.
6. Permittee agrees to submit meter readings or other evidence showing the quantity of water withdrawn pursuant to this permit to the TCOB office at the end of the term or at the completion of the proposed project or required water usage, whichever comes first. The water use data will be submitted by the Permittee.
7. Any breach of this permit or any failure to pay in full for the water used by due date will be a breach of this permit and the Navajo Nation may terminate this permit upon any breach by giving the Permittee notice of such termination in writing not less than ten (10) days prior to the effective date of termination, provided that if, Permittee remedies any such breach within said ten (10) days period, the permit will remain in effect. Said notice shall state the grounds upon which the termination is being made. It will be a breach of this permit and grounds for termination thereof, if Permittee obtains, or attempts to obtain any other water from any source within the jurisdiction of the Navajo Nation other than the source or sources permitted in this permit.
8. Permittee agrees to obtain a Water Use Permit for each place of withdrawal of water in conjunction with the place of use prior to making use of such source. Authorization granted under this permit is only for the stated use of the indicated water source location. Permittee is responsible for obtaining any applicable permit from the appropriate department/agency that may be required for the proposed work.
9. Permittee agrees to hold harmless and indemnify the Navajo Nation against any and all losses, costs, damages, claims, expenses or other liability whatsoever, rising out of, or connected with Permittee's services under this permit including but not limited to, any accident or injury to person or property.

20.0066

CONDITIONS

10. All disputes arising from the subject matter of this permit or the performance thereof will be settled in the Navajo Nation Courts and under the laws of the Navajo Nation. Nothing herein shall be construed as a waiver of the sovereign immunity of the Navajo Nation, pursuant to 1 N.T.C. §351 et seq.
11. Permittee agrees to maintain the immediate area in a safe and sanitary manner, free of unnecessary debris.
12. If permittee hires sub-contractors to haul water covered by Water Use Permit, Permittee must notify the Navajo TCOB office of sub-contractors in writing.
13. In case of a Tribal Well, no more than two-thirds of the water in the water tank will be withdrawn. Before further withdrawals are to be made from a water tank, the water level in the tank must be allowed to rise back to the original level.
14. It is agreed that the Department of Water Resources reserves the right to limit the quantity of water that can be taken under this permit to the above stated amount or less, to limit or restrict the sources of the Navajo Nation and in the best interests of the Navajo Nation. Such limitation will be imposed at the discretion of the Director, Department of Water Resources.
15. Permittee agrees to allow reasonable entry upon their premises by Navajo Nation Employees engaged in the administration of this permit.
16. When insufficient water supplies are present for whatever reason or terms, the following priority of uses shall be considered in the order in which they are listed: 1) Domestic and municipal uses 2) Stock watering uses 3) Agriculture uses 4) Instream needs, for fish, wildlife conservation and recreation uses 5) Economic development uses including industrial and power uses.

Permittee's Signature



Date

11-18-19

OFFICIAL USE ONLY

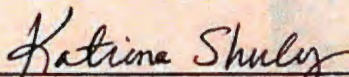
☒ Yes () No

Technical Reviewer

Date

01/09/2020

Approved/Disapproved:



Branch Director, TCOB, DWR, DNR

Date

1/9/2020

If Disapproved State Reasons:

Revised 08/10/17

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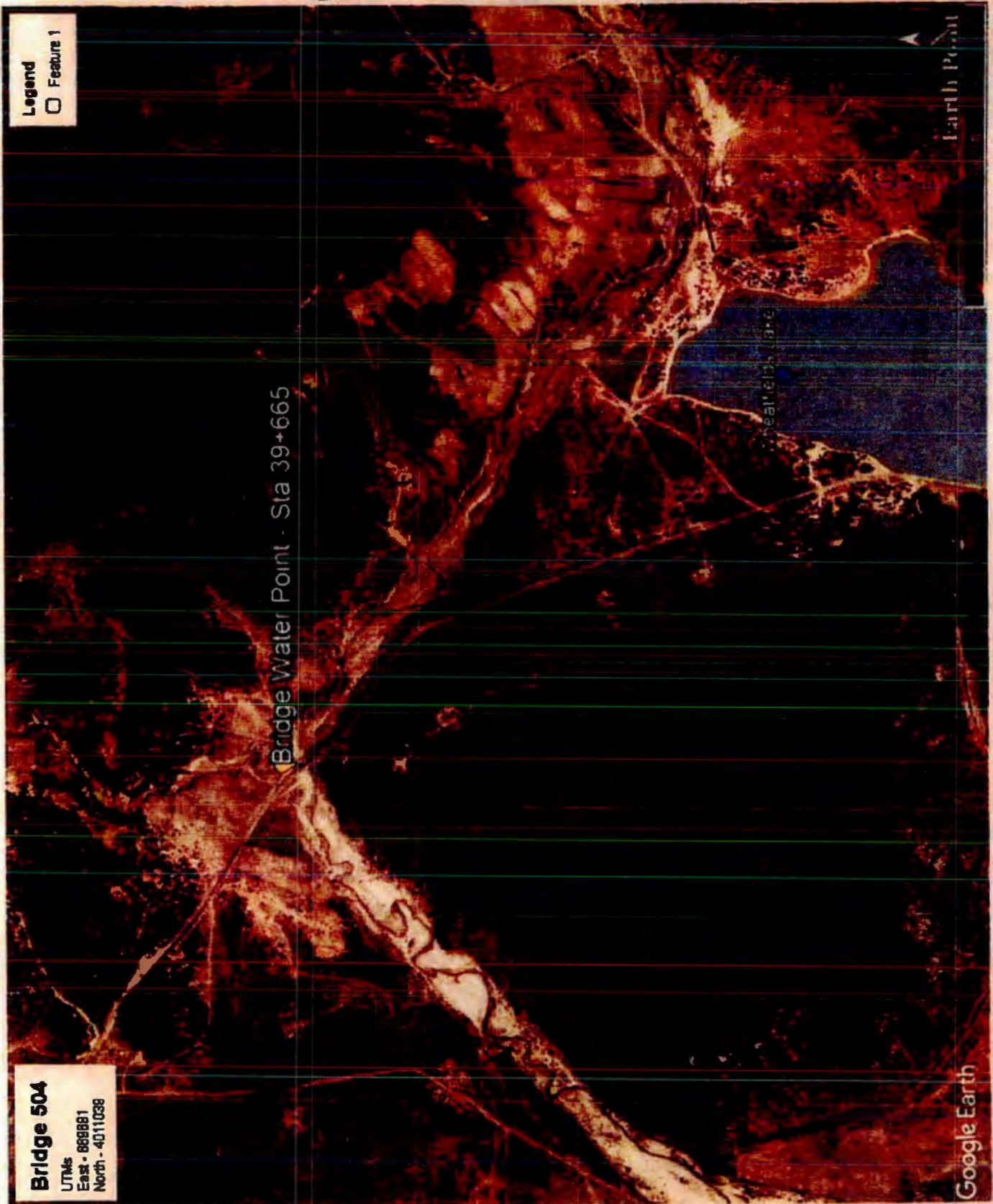
Legend
□ Feature 1

Bridge Water Point - Sta 39+665

Bridge 504
UTMs
East - 888881
North - 4011038

Google Earth

Earth Point



The plan view illustrates the N12 Existing Alignment, which follows a curved path. Key features include:

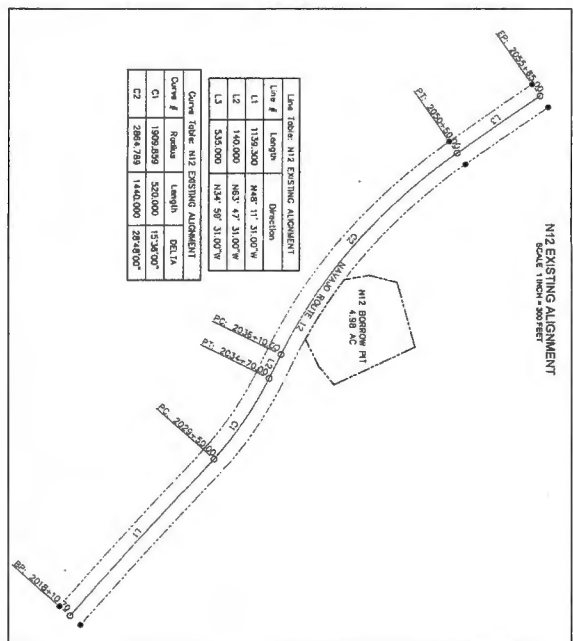
- Stationing:** The alignment is marked with stationing points: BP 20+18.88+00, PI 20+20.00+00, PC 20+22.50+00, PT 20+26.70+00, and PI 20+28.88+00.
- Curves:** The alignment consists of two circular curves:
 - Curve 1: L1 = 1135.300', MAG 11° 31.00'W
 - Curve 2: L2 = 146.000', MAG 47° 31.00'W
 - Curve 3: L3 = 555.000', MAG 59° 31.00'W
- Bridge:** A bridge structure crosses the alignment, labeled "N12 BRIDGE PI 459.00'".
- Right-of-Way:** The alignment is flanked by dashed lines representing the right-of-way boundaries.

Curve #	Length	Direction
L1	1135.300'	MAG 11° 31.00'W
L2	146.000'	MAG 47° 31.00'W
L3	555.000'	MAG 59° 31.00'W

Curve #	Radius	Length	DELTA
C1	1090.059'	520.000'	15.26°07'
C2	2384.719'	1440.000'	28°43'07'

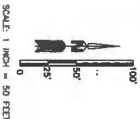
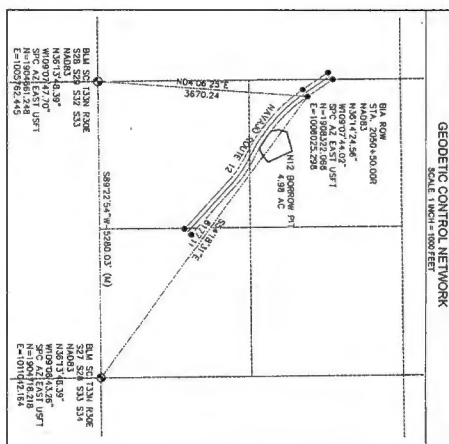
Line Table: N12 EXISTING ALIGNMENT			
Line #		Direction	
L1	1159.300	MS+ 11.31.00"W	
L2	1440.000	N63° 47' 31.00"W	
L3	535.000	N34° 50' 31.00"W	

Curve Table: N12 EXISTING ALIGNMENT			
Curve #	Radius	Length	DELTA
C1	1909.839	320.000	153.3670°
C2	2864.769	1440.000	287.4670°



LEGEND

- ◆ FOUND BLM BRASS DISK
- FOUND CORNER
- SET CORNER
- BUILDING
- UTILITY POLE

[illegible]SURVEY PLAT AND LEGAL DESCRIPTION OF
WHITFIELD'S ROSSBORO PIT[illegible]

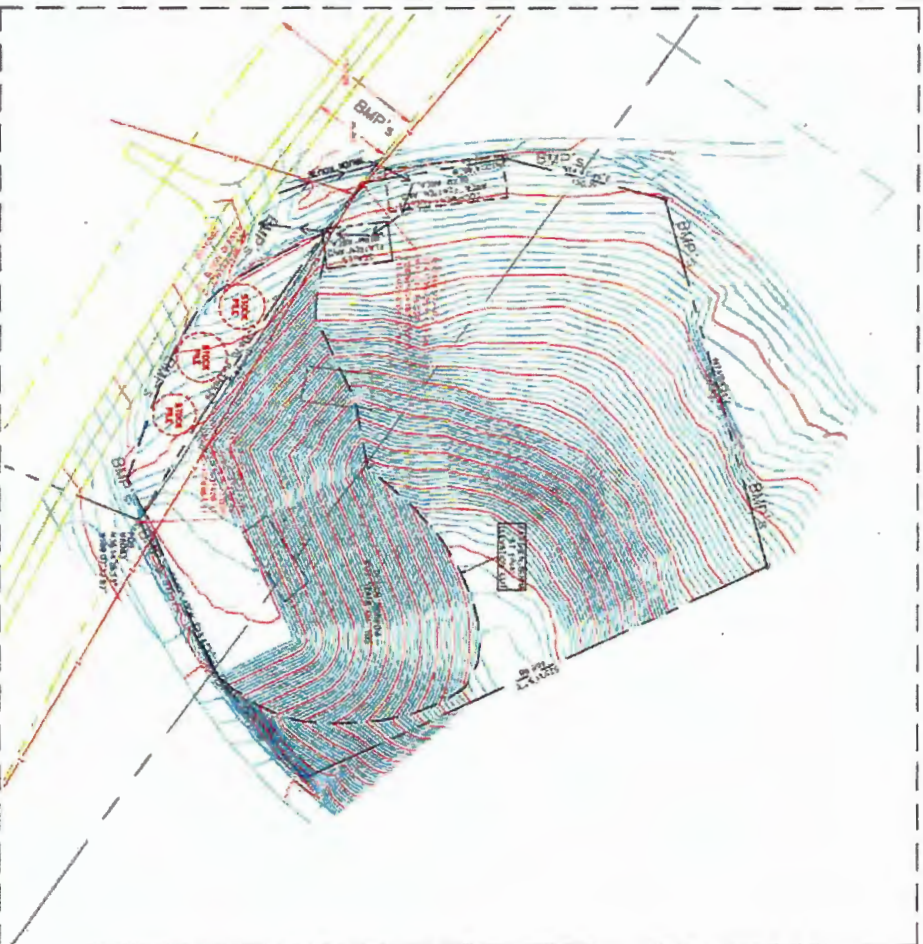
Subscribed and sworn to

2002
 I am better than this 1st day of August, 2014

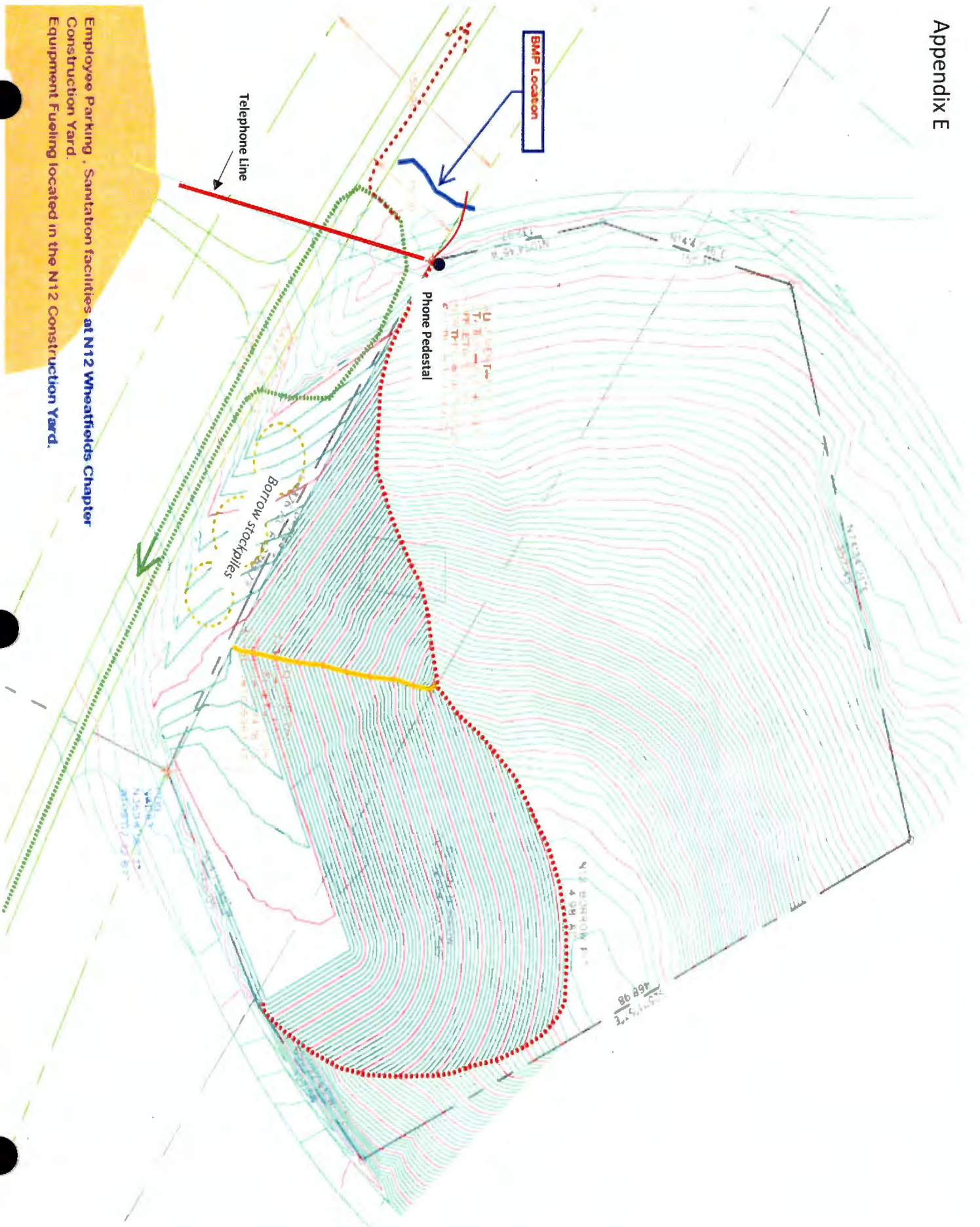
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 Fiction T 35 Sic
 History Public (artist name)

1	STAFF PLAT AND LEGAL DESCRIPTION OF UNIMPROVED SECTION IN DISTRICT 11, UNIT 3 4.88 ACRES +/-, NEARLY 1/2 SECTION 28, T10N, R20E, C68W NE 1/4 OF SECTION 28, T10N, R20E, C68W T10N, R20E CO. 68W, NE 1/4	1
2		2
3	WALSH ENGINEERING & CONSTRUCTION AUTHOR DATE: 10-1-2001 PROJECT: 100-000011 ISSUED TO: 100-000011	3

1	STAFF PLAT AND LEGAL DESCRIPTION OF UNIMPROVED SECTION IN DISTRICT 11, UNIT 3 4.88 ACRES +/-, NEARLY 1/2 SECTION 28, T10N, R20E, C68W NE 1/4 OF SECTION 28, T10N, R20E, C68W T10N, R20E CO. 68W, NE 1/4	1
2		2
3	WALSH ENGINEERING & CONSTRUCTION AUTHOR DATE: 10-1-2001 PROJECT: 100-000011 ISSUED TO: 100-000011	3

[illegible]

Appendix E



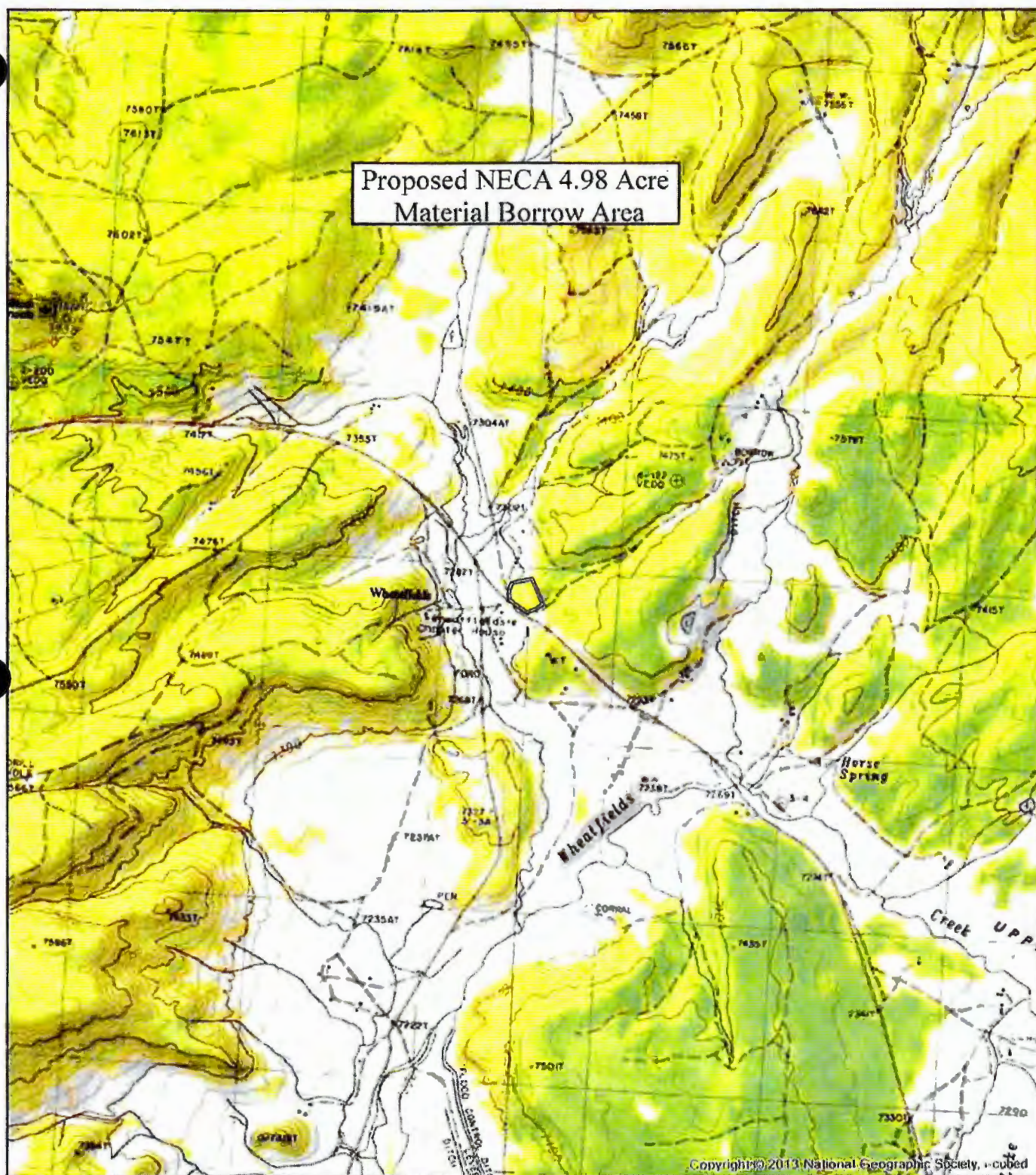


Fig.1: Map showing proposed NECA Material Borrow project area, CAG 19-08.

Upper Wheatfields, Ariz-N.Mex., P.E. 1983
Lower Wheatfields, Ariz., P.E. 1983
Scale = 1 : 24,000
1 in = 2000 ft.



Legend

- Material Borrow Area
- Buffer Zone

**Navajo Engineering and Construction Authority
Employee Training List**

Material Lifts	
Asbestos Awareness	
Confined Space Entry for General and Construction Industry	
Crane and Rigging Safety	
Fall Protection	
First Aid/CPR/AED	American Red Cross
Flagger	Associated Contractors of New Mexico
Forklift Operation	
Hazard Communication (GHS)	
HAZWOPER	New Environment, Inc.
Ladders and Stairway Safety	
New Employee Orientation	
OSHA 10 & 30 Outreach for Construction Industry	
OSHA 10 & 30 Outreach for General Industry	
Personal Protection Equipment	
Respiratory Protection	
Scaffolds	
Supervisor's Alcohol and Drug Reasonable Suspicion Training	DATA
Trenching and Excavation	
MSHA New Miner / San Juan School of Energy	

The safety personnel are authorized instructors through the University of Texas at Arlington, unless indicated. If any other trainings are needed the safety personnel are able to research and develop a training presentation. The safety personnel have various credentials from the UTA (Specialist in Safety and Health, Certified Safety and Health Officer, and Safety, Health, and Environmental Professional).

Daniel Gourneau, Safety Manager/SSH (Construction)	(505) 210-7017
Lemuel D. Benallie, Field Safety Officer/SSH/CSHO/SHEP (General and Construction)	(505) 210-7018
Byron R. Smith, Field Safety Officer/SSH (Construction)	(505) 210-7019

APPENDIX A
INTERAGENCY AGREEMENT
BETWEEN THE
MINE SAFETY AND HEALTH ADMINISTRATION
U.S. DEPARTMENT OF LABOR
AND THE
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
U.S. DEPARTMENT OF LABOR

The Mine Safety and Health Administration (MSHA), U.S. Department of Labor, and the Occupational Safety and Health Administration (OSHA), U.S. Department of Labor, have entered into this agreement to delineate certain areas of authority, set forth factors regarding determinations relating to convenience of administration, provide a procedure for determining general jurisdictional questions, and provide for coordination between MSHA and OSHA in all areas of mutual interest.

A. AUTHORITY AND PRINCIPLE

1. The Federal Mine Safety and Health Act of 1977, Pub. L. 95-164 as amended by Pub. L. 95-164 (Mine Act), authorizes the Secretary of Labor to promulgate and enforce safety and health standards regarding working conditions of employees engaged in underground and surface mineral extraction (mining), related operations, and preparation and milling of the minerals extracted.

2. The Occupational Safety and Health Act of 1970 (OSH Act) gives the Secretary of Labor authority over all working conditions of employees engaged in business affecting commerce except those conditions with respect to which other Federal agencies exercise statutory authority to prescribe or enforce regulations affecting occupational safety or health. The OSH Act also provides that States may operate their own occupational safety and health programs under a plan approved by the Secretary.

3. This agreement is entered into the set forth the general principle and specific procedures which will guide MSHA and OSHA. The agreement will also serve as guidance to employers and employees in the affected industries in determining the jurisdiction of the two statute involved. The general principle is that as to unsafe and unhealthful working conditions on mine sites and in milling operations, the Secretary will apply the provisions of the Mine Act and standards promulgated thereunder to eliminate those conditions. However, where the provisions of the Mine Act either do not cover or do not otherwise apply to occupational safety and health hazards on mine or mill sites (e.g., hospitals on mine sites) or where there is statutory coverage under the Mine Act but there exist no MSHA standards applicable to particular working conditions on such sites, then the OSH Act will be applied to those working conditions. Also, if an employer has control of the working conditions on the mine site or milling operation and such employer is neither a mine operator nor an independent contractor subject to the Mine Act, the OSH Act may be applied to such an employer where

A-1

OSHA Instruction CPL 2.42 CH-1 September 16, 1980 Office of Compliance Programming

the application of the OSH Act would, in such a case, provide a more effective remedy than citing a mine operator or an independent contractor subject to the Mine Act who does not, in such circumstances, have direct control over the working conditions.

B. CLARIFICATION OF AUTHORITY

1. Section 4 of the Mine Act gives MSHA Jurisdiction over each coal or other mine and each operator of such mine. Section 3(d) defines "operator" and includes in that definition independent contractors performing construction at mines.

2. Section 3(h)(1) of the Mine Act gives MSHA jurisdiction over lands, structures, facilities, equipment, and other property used in, to be used in, or resulting from mineral extraction or used in or to be used in mineral milling. This includes the authority to regulate the construction of such facilities, structures and other property. Further, Section 3(h)(1) directs the Secretary Of Labor, in

making a determination of what constitutes mineral milling, to give due consideration to the convenience of administration resulting from the delegation to one Assistant Secretary of all authority with respect to the health and safety of miners employed at one physical establishment.

3. Appendix A provides more detailed descriptions of the kinds of operations included in mining and milling and the kinds of ancillary operations over which OSHA has authority. Notwithstanding the clarification of authority provided by Appendix A, there will remain areas of uncertainty regarding the application of the Mine Act, especially in operations near the termination of the milling cycle and the beginning of the manufacturing cycle.

4. Under section 3(h)(1), the scope of the term milling may be expanded to apply to mineral product manufacturing processes where these processes are related, technologically or geographically, to milling. Or, the term milling may be narrowed to exclude from the scope of the term processes listed in Appendix A where such processes are unrelated, technologically, or geographically, to mineral milling. Determinations shall be made by agreements between MSHA and OSHA.

5. The following factors, among others, shall be considered in making determinations of what constitutes mineral milling under section 3(h)(1) and whether a physical establishment is subject to either authority by MSHA or OSHA: the processes conducted at the facility, the relation of all processes at the facility to each other, the number of individuals employed in each process, and the expertise and enforcement capability of each agency with respect to the safety and health hazards associated with all the processes conducted at the facility. The consideration of these factors will reflect Congress intention that doubts be resolved in favor of inclusion of a facility within the coverage of the Mine Act.

6. Pursuant to the authority in section 3(h)(1) to determine what constitutes mineral milling considering convenience of administration, the following jurisdictional determinations are made:

A-2

OSHA Instruction CPL 2.42 CH-1 September 16, 1980 Office of Compliance Programming

a. MSHA jurisdiction includes salt processing facilities on mine property; electrolytic plants where the plants are an integral part of milling operations; stone cutting and stone saving operations on mine property where such operations do not occur in a stone polishing or finishing plant; and alumina and cement plants.

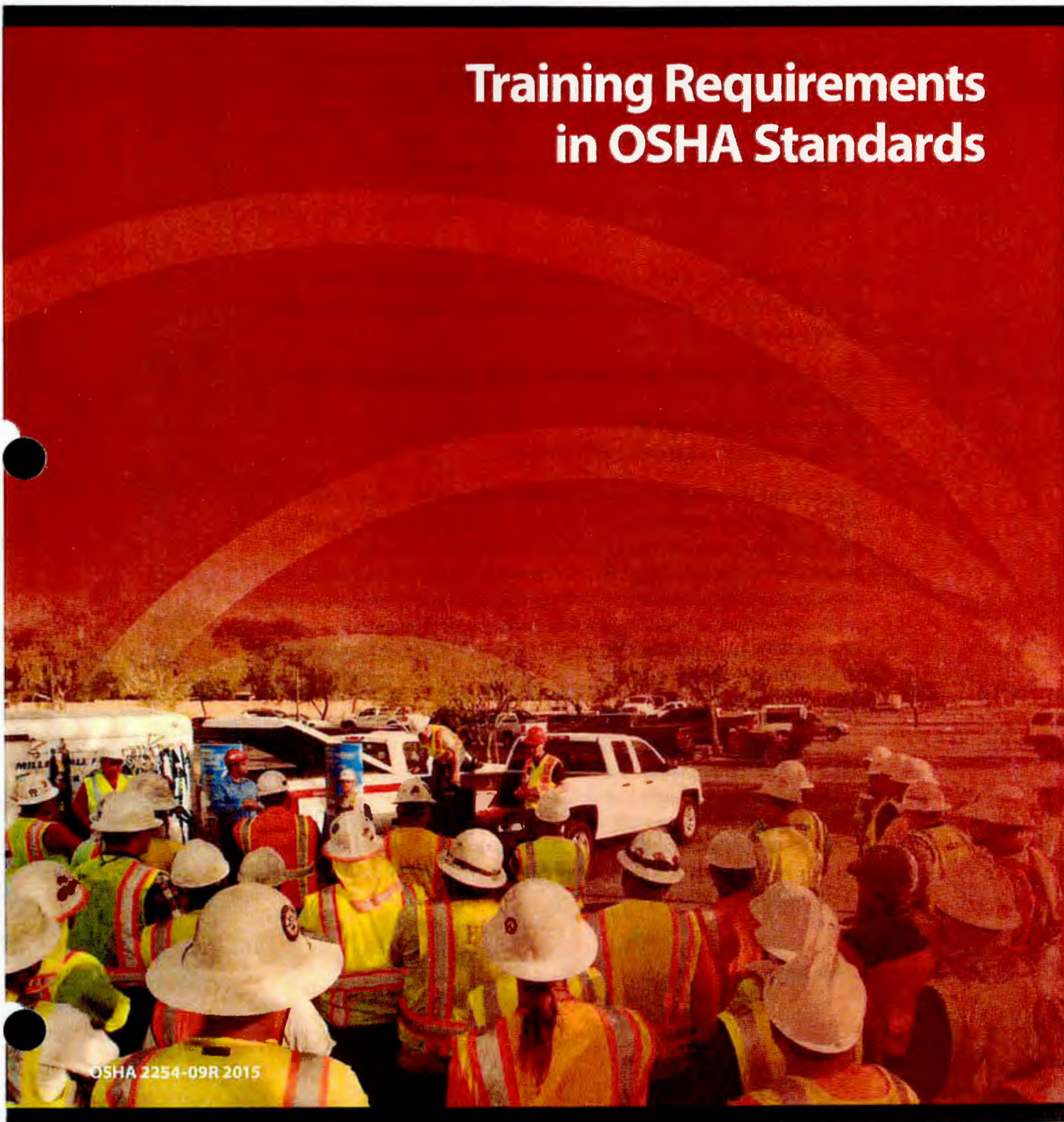
b. OSHA jurisdiction includes the following, whether or not located on mine property: brick, clay pipe and refractory plants; ceramic plants; fertilizer product operations; concrete batch, asphalt batch, and hot mix plants; smelters and refineries. OSHA jurisdiction also includes salt and cement distribution terminals not located on mine property, and milling operations associated with gypsum board plants not located on mine property.

7. "Borrow Pits" are subject to OSHA jurisdiction except those borrow pits located on mine property or related to mining. (For example, a borrow pit used to build a road or construct a surface facility on mine property is subject to OSHA jurisdiction). Borrow pits means an area of land where the overburden, consisting of unconsolidated rock, glacial debris, or other earth material over lying bedrock is extracted from the surface. Extraction occurs on a one-time only basis or only intermittently as need occurs, for use as fill materials by the extracting party in the form in which it is extracted. No milling is involved, except for the use of a scalping screen to remove large rocks, wood and trash. The material is used by the extracting party more for its bulk than its intrinsic qualities on land which is relatively near the borrow pit.

8. When any question of jurisdiction between MSHA and OSHA arises, the appropriate MSHA District Manager and OSHA Regional Administrator or OSHA State Designee in those States with approved plans shall attempt to resolve it at the local level in accordance with this Memorandum and existing law and policy. Jurisdictional questions that can not be decided at the local level shall be



Training Requirements in OSHA Standards





Occupational Safety and Health Act of 1970

“To assure safe and healthful working conditions for working men and women; by authorizing enforcement of the standards developed under the Act; by assisting and encouraging the States in their efforts to assure safe and healthful working conditions; by providing for research, information, education, and training in the field of occupational safety and health.”

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Voice phone: (202) 693-1999;

teletypewriter (TTY) number: 1-877-889-5627.

This publication provides a general overview of a variety of standards-related topics. This publication does not alter or determine compliance responsibilities which are set forth in OSHA standards, and the *Occupational Safety and Health Act*. Moreover, because interpretations and enforcement policy may change over time, for additional guidance on OSHA compliance requirements, the reader should consult current administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the courts.

This guidance document is not a standard or regulation, and it creates no new legal obligations. It contains descriptions of mandatory safety and health standards. The Occupational Safety and Health Act requires employers to comply with safety and health standards and regulations promulgated by OSHA or by a state with an OSHA-approved state plan. In addition, the Act's General Duty Clause, Section 5(a)(1), requires employers to provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm.

Training Requirements in OSHA Standards

Occupational Safety and Health Administration
U.S. Department of Labor



OSHA 2254-09R 2015

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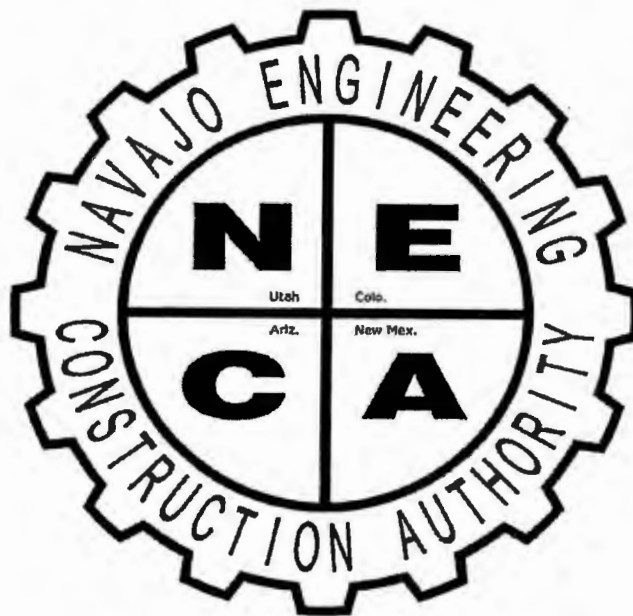
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NAVAJO ENGINEERING & CONSTRUCTION AUTHORITY

AN ENTERPRISE OF THE NAVAJO NATION



SAFETY POLICY MANUAL

REVISED July 2014

EFFECTIVE August 1, 2014

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY

SAFETY POLICY

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INTRODUCTION

NECA's *Safety Policy Manual* is intended to provide information on safe work practices. The information provided can help prevent injuries and property loss. This safety policy alone will not prevent injuries or property loss, nor does it cover all of the scenarios that may result in an injury or property loss that may result in an injury and accident. It simply emphasizes certain instances and practices as a minimum to be followed as an employee of NECA.

Safety and the well-being of all employees are first and foremost at Navajo Engineering and Construction Authority (NECA). NECA has **ZERO TOLERANCE** for unsafe acts or actions that place individuals and equipment in harm's way. Anyone who knowingly places people and or equipment in harm's way will be terminated immediately.

Being employed at NECA you accept the responsibility to strive towards an accident free environment. It is your responsibility to protect yourself and fellow employees from common workplace hazards.

No employee is required to perform work that is unsafe or dangerous to life and health. Each employee's ability in detecting hazards, reporting unsafe conditions and controlling workplace hazard is a condition of employment. It is each employee's responsibility to immediately inform his/her supervisor about situations that need to be corrected. There shall be no retaliation to employees for reporting a safety violation.

The Safety Policy Manual shall be reviewed continuously and may change as safety regulations change. All suggestions will be considered and reviewed and all revisions shall be approved by management and disseminated to all NECA employees.

FORWARD

Being an enterprise of the Navajo Nation, NECA shall comply with all regulations set forth by the Navajo Occupational Safety and Health Act of 2000 and **enforced by the Navajo Nation Occupational Safety and Health Administration (NNOSHA)**, including policies governing the safety and health of our employees and the safe operation of NECA.

Whenever an employee is uncertain about how to do a job safely, it is his/her responsibility to ask a qualified person for assistance.

I. MANAGEMENT

The management of Navajo Engineering and Construction Authority hereby pledges its support and interest in an accident and injury control program and continues to solicit employees' cooperation and participation in the Safety Program.

All management and supervisory personnel shall fully cooperate with the Safety Department Manager and implement his recommendations and policies set forth in this manual.

The employee shall start learning about his/her job and develop attitudes about many things – including SAFETY on the first day. Therefore, much of the effort put into NECA Safety Program will be directed toward education and influencing the employee's safety behavior.

Activities to Build Safe Attitudes

- A. Encourage the employees to actively participate in the Safety Program.
- B. Formally train and educate the employees in safe practices as required or necessary.
- C. Post safety notices for the employees and promote safety in the communities.
- D. Reward employees through the Safety Incentive Program.

II. ASSIGNMENT OF AUTHORITY

The NECA Safety Manager shall be responsible for NECA's Safety Program.

Safety Manager

The Safety Manager will be in charge of the Safety Department. He will supervise the Field Safety Officers to whom he may delegate the authority for activities.

Safety Officers

The Safety Officer must be able to determine:

- A. Assist the foreman on how to remove physical hazards from work areas.
- B. Assist the foreman on how to substitute safe practices for the unsafe practice of employees.
- C. Promote safety, by attending field safety meetings.
- D. That safety practices and conditions are observed throughout the projects.
- E. Review that proper arrangement is made for treating and transporting injured personnel.
- F. Review all accident reports and assist the foremen in developing a plan to eliminate unsafe practices or conditions from recurrence by stopping all job activities to conduct post incident safety meeting as required or necessary.

Failure to adhere to A-F of this section will result in immediate disciplinary action, up to and including termination.

General Manager and Operations Manager

The General Manager and Operations Manager shall ensure the safety program is adhered to by all NECA Employees.

General Superintendents and Field Superintendents

General Superintendent and Field Superintendents shall be responsible for carrying out the following:

- A. Promote safety, by attending field safety meetings.
- B. Determine that safety practices and conditions are observed throughout the entire assigned project.
- C. See that proper arrangements are made for treating and transporting injured personnel.
- D. Review all accident reports and review disciplinary action taken by the foremen and take steps to eliminate unsafe practices or conditions from recurrence by stopping all job activities to conduct post incident safety meeting as required or necessary.
- E. Insure that all subcontract work is completed in a safe manner and require all subcontractors to comply with NECA Safety Program and all governmental regulations pertaining thereto.
- F. Enforce all contents of this manual to insure contracting agency personnel and the Office of Environmental Health participate in NECA Safety Program.

Failure to adhere to A-F of this section will result in immediate disciplinary action, up to and including termination.

Foremen

The Foremen is responsible for safe work conditions and practices of their crews by complying with the following:

- A. Orientate all new employees of NECA by clearly explaining and reviewing the *NECA Safety Policy Manual* at the time of sign-up and document the orientation. Documentation of the orientation shall be forwarded to the Safety Department Manager.
- B. Conduct a weekly project wide Safety Meeting and document the meeting on the appropriate form. A copy of the meeting minutes shall be forwarded to the Safety Manager for review.
- C. Insures that Tailgate Safety Meetings are conducted at the beginning of each work day and/or when confronted with a new task during the work day for each affected project crew. A copy of the meeting minutes shall be forwarded to the Safety Manager for review.
- D. Completes a Job Hazard Analysis (JHA) for task requiring such documentation. A copy of the JHA shall be forwarded to the Safety Manager for review.
- E. See that all injuries are properly cared for and the proper documents are filled out for the incident; conduct an immediate investigation of the accident causing an injury, and report the same to his/her immediate supervisor and Safety Department.
- F. Plan for the transportation and setting up of temporary traffic control devices.

- G. Provide required personal protective clothing and equipment and insure employees utilize and maintain them correctly. Insures that all subcontractors on his/her worksite adhere to the Subcontractor's section of this policy.

Failure to adhere to A-G of this section will result in immediate disciplinary action, up to and including termination.

Subcontractors

All subcontractors are informed that the construction phases of each project falls under the jurisdiction of the Navajo Occupational Safety and Health Administration. No subcontractor shall allow any employee to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his/her health or safety as determined under construction safety and health standards (Title 29, Labor, Code of Federal Regulations Chapter IVII, Part 1926 of the Federal Register) as adopted by the Navajo Nation.

Subcontractors are further advised that sand and gravel or other mining phases of this project falls under the jurisdiction of the Navajo Nation Mine Safety and Health Administration (NNMSHA). It is the Subcontractor's obligation to conduct his operations on the project in accordance with the applicable NNMSHA Health and Safety standards.

Subcontractor's personnel are required to wear all required personal protective equipment at all times while on any NECA premises as directed by the applicable NOSHA standard(s) or directed by the NECA Project Superintendent/Foreman.

All costs to NECA resulting from citations caused by a subcontractor's failure to comply with applicable health and safety standards shall be borne by the subcontractor.

III. MAINTAINING SAFE WORKING CONDITIONS

Safety Planning

Safety planning shall be a part of everyday NECA activities and shall be included in all NECA pre-construction conferences with consideration given to the following:

- A. Proper training of the assigned employees.
- B. Availability of emergency and first aid services and equipment. Telephone numbers of police, fire department, hospital, clinics, etc. must be known and displayed at all times.
- C. Sanitation facilities shall be provided.
- D. On the job safety planning shall be a daily operation.
- E. Drinking water should be made available to the crews at all times.

Job Observation

A safety inspection of work practices shall require the active participation of all supervisory personnel. The inspection shall be a safety observation plan by which Superintendents and Foremen observe work as it is in progress. The observation shall include the use of tools, materials and equipment, as well as any unsafe method(s) or order of procedure in performing an act that indicates or lack of planning or failure to take into account all the circumstances surrounding the particular job. If any deficiencies are found, immediate corrections shall be made.

Field Safety Officers

The Field Safety Officers shall inspect work locations on regular intervals. Inspections shall be documented on the approved inspection form. The Field Superintendent or Foreman shall be informed of any deficiencies in their area.

The Safety Officer shall re-inspect the area in question within a reasonable amount of time to determine compliance. Inspections indicating immediate danger to life or health shall be grounds for shut down of the operation.

It is the responsibility of the project superintendent or foreman to correct all deficiencies.

The Project Superintendent and Foreman shall keep a record of deficiencies to determine whether deficiencies are recurring.

Failure to adhere to this section will result in immediate disciplinary action, up to and including termination.

IV. ESTABLISHMENT OF SAFETY TRAINING

Project Superintendents and Foremen

- A. Shall devote a portion of each production meeting to safety.
- B. Shall participate in various safety training sessions required by NECA, equipment and suppliers/dealers, and insurance services.
- C. Shall be trained in first aid, CPR and AED procedures.

Employees

The training of employees shall begin the first day he/she goes to work.

- A. Shall review and understand the *Field Employee's Handbook* and this safety policy with the immediate supervisor.
- B. Each employee shall receive a copy of *NECA Field Employee's Handbook* which contains work rules, policies, procedures and Safety Program at the time of sign-up.

- C. Signs and posters describing NECA Safety Program shall be posted on bulletin boards and adhered to.
- D. Shall attend Weekly Safety Meetings.
- E. Shall adhere to the foreman's instructions concerning the safe performance of his/her job.
- F. Shall receive task training for specific circumstances that require such training.
- G. Each employee shall perform a hazardous analysis of their immediate worksite and surroundings.
- H. Every employee is responsible for housekeeping duties that affect their worksite.
- I. All injuries that occur on the job must be reported to the supervisor immediately.

Failure to adhere to A-I of this section will result in immediate disciplinary action, up to and including termination.

Accident and Injury Reporting

Every accident that occurs will be thoroughly investigated as soon as possible to find its cause and to prevent recurrence.

- A. **ALL** accidents, property damages and injuries shall be reported by the foreman/supervisor immediately following the accident;
- B. The worker is responsible to immediately report his/her injury to his/her supervisor and the safety department.
- C. The supervisor is responsible to complete the report, including photographs, statements, and arrange for estimates for repair, etc.
- D. Upon completion of the investigation the Safety Officer shall review the accident report and work with all employees involved in devising a means to prevent recurrence.
- E. All accidents, property damages and injuries shall be reported to the NECA Safety Department.
- F. Safety Department shall maintain monthly job reports concerning injuries, accident, property damage and safety meeting minutes.
- G. Safety Department shall also maintain annual Occupational Injury and Illness Records per Occupational Safety and Health Act (OHS) regulations.

Failure to adhere to A-G of this section will result in immediate disciplinary action, up to and including termination.

V. SAFETY POLICIES

No employee of NECA shall work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his/her health or safety as determined under rules promulgated in the Navajo Occupational Safety and Health Act (NOHSA).

Safe work performance is the first and the utmost concern of NECA. Safety is every employee's responsibility. Each and every employee is expected to work in a safe manner, both for self-protection and that of co-workers. When it is determined by the immediate supervisor or the Safety Department that a worker is **deliberately** disobeying the Safety Program and where he/she continues through unsafe acts to endanger his/her own life and the lives of others, **will result in immediate disciplinary action, up to and including termination.**

Hazardous Energy Control (Lockout/Tagout)

These procedures will apply to the control of energy when installing, removing, servicing, connecting into existing utility systems, or maintaining machines and equipment. These procedures will be utilized to prevent unexpected energization, start up, or release of stored energy that may cause injuries to employees. The energy source can be electrical, mechanical, hydraulic, pneumatic, chemical, or other sources. Employees will be trained to perform and abide by Lockout/Tagout controls. Authorized employees will document energy control procedures and make sure that the controls are communicated to other employees. Inspections shall be performed to ensure the effectiveness of the hazardous energy control system.

- A. The NECA lockout device shall be standardized and have one or more of the following including a tagout indicating the reason for lockout.
 - 1. **DO NOT START**
 - 2. **DO NOT OPEN**
 - 3. **DO NOT OPERATE**
 - 4. **DO NOT CLOSE**
 - 5. **DO NOT ENERGIZE**

Each lockout device shall have a tagout device attached.
- B. The Lockout/Tagout device(s) shall indicate the identity of the employee applying the device(s).
- C. Lockout/Tagout device(s) will be placed on the energy source that controls the machine or equipment. If more than one energy source exists, all sources will be isolated with the Lockout/Tagout devices.
- D. Authorized employees are required to test Lockout/Tagout devices to ensure that all energy sources are disabled and the machine or equipment cannot be operated.
- E. Lockout/Tagout devices shall not be used for any other purpose, but to control hazardous energy.
- F. Lockout/Tagout devices shall be capable of withstanding the environment to which they are exposed for the minimum period of time that exposure is expected.
- G. Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other metal cutting tools.

- H. Tagout devices shall be able to withstand accidental or inadvertent removal. Attaching material should be non-reusable, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds.

Release from Lockout/Tagout

Before removing any Lockout/Tagout devices, these procedures shall be followed:

- A. The work area shall be inspected to ensure that all nonessential items and that all employees are safely positioned or removed.
- B. All components of the machine or equipment have to be operationally intact.

Each Lockout/Tagout device shall be removed from each energy controlling device by the employee who applied the device. If the employee who applied the device is not available, this employee needs to be contracted and notified that the device is being removed. If this person is not contacted, only the supervisors or the safety representative will have the authority of removing the device(s). The authorized employee who applied the Lockout/Tagout devices shall be notified that his or her devices were removed when he or she returns to the work area. This shall include documentation of such removal.

Hearing Protection:

- 1. The NECA shall make ANSI approved hearing protectors available to all employees at no cost. Employees exposed to an eight (8) hour time – weighted average of 85 - decibels or greater are required to use hearing protection. Hearing protection shall be replaced as necessary.
- 2. Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in the table when measured on the A - scale of a standard sound level meter at slow response.
- 3. When employees are subjected to sound levels exceeding those listed in the table, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of the table, personal protective equipment shall be provided and used to reduce sound levels within the levels of the table.

Permissible Noise Exposure:
Duration Per Day (hours)

Sound Level dBA slow
response

8	90
6	92
4	95
3	97
2	100
1 – ½	102
1	105
½	110
¼ or less	115

- 4. Any machine that creates excessive noise shall be equipped with mufflers.

Equipment

The following inspections shall be made before any equipment/vehicle is operated. Each assigned equipment must have.

- A. A fire extinguisher in good working condition with unbroken seal.
- B. An operating horn.
- C. Operating brakes, operating headlights lights, directional lights, and beacon if the equipment is equipped with such devices.
- D. A working back up alarm (if equipped).
- E. Seat belts.

If any of the above items are not present or not in working order the vehicle **shall not** be operated until repairs are made. The supervisor shall be notified immediately of any discrepancies.

All rubber tire heavy equipment shall be escorted by a company vehicle with flashers and beacon when traveling on any public roadway.

Job Site Safety

- A. The use of cellular phones (except in an emergency situation), MP3 players, iPods or other devices that may distract an employee is prohibited on any jobsite unless it is job related. At which time the employee shall go to the nearest safe spot to complete the call.
- B. Be constantly alert.
- C. Stand in the clear where the operator can see you.
- D. Stay out from under heavy loads and away from equipment travel patterns.
- E. No passenger is allowed to be with the operator on any moving equipment.
- F. Do not measure work, oil, verify quantity or adjust equipment while it is in motion.
- G. Do not speed when driving heavy equipment.
- H. No improper parking.
- I. Ground all the moving parts when not operating.
- J. All motor vehicles must be parked out and away from the work area.
- K. Foreman, grade-checker and anyone arriving at the heavy construction site must wear the required personal protective equipment.

Air Compressors

- A. Employees shall wear safety-toed shoes or metal toe guards when operating pneumatic tampers, jackhammers, or spades.
- B. Eye protection shall be worn when employees are operating pavement breakers, chippers, concrete saws, buffers or grinders.
- C. At no time during its operation shall an employee point a portable tool at anyone.
- D. Loose or bulky clothing shall not be worn when operating portable air drills, reamers, hammers, tampers, etc.
- E. Tools shall be kept in good condition with all bits correctly grounded.
- F. All cutting air tools should be returned to the shop for grinding.

- G. Employee shall verify that safety set screws are installed and maintained on all shaft collars. All shaft collars shall be kept tight while the machine is operating or when it is being carried to and from the job.
- H. The hose and all connections attached to compressed air equipment shall be checked for defects, wear, and loose connections before they are used. The nozzle on the air hose shall be under control before the air pressure is turned on. Serious injuries can result from the whipping action of a nozzle that gets out of control.
- I. All outgoing hoses from the compressor and tools/equipment shall have a whip check and safety pins in place prior to use.
- J. When an air hammer is not to be used for an extended period, the air shall be shut off at the compressor and the pressure released at the hammer.
- K. Dust respirator should be worn when operating an air compressor. If the operation requires the use of dust suppression, the Safety Officer shall determine the type of respirator required.
- L. Two (2) employees shall be present when air compressors are in use.
- M. Ear protection shall be provided for and used by those employees working around air compressors.
- N. Compressed air used for blowing or cleaning parts shall be regulated down to no more than 30 psi.

SEE ALSO, pages 41 and 42 on Pneumatic Tools

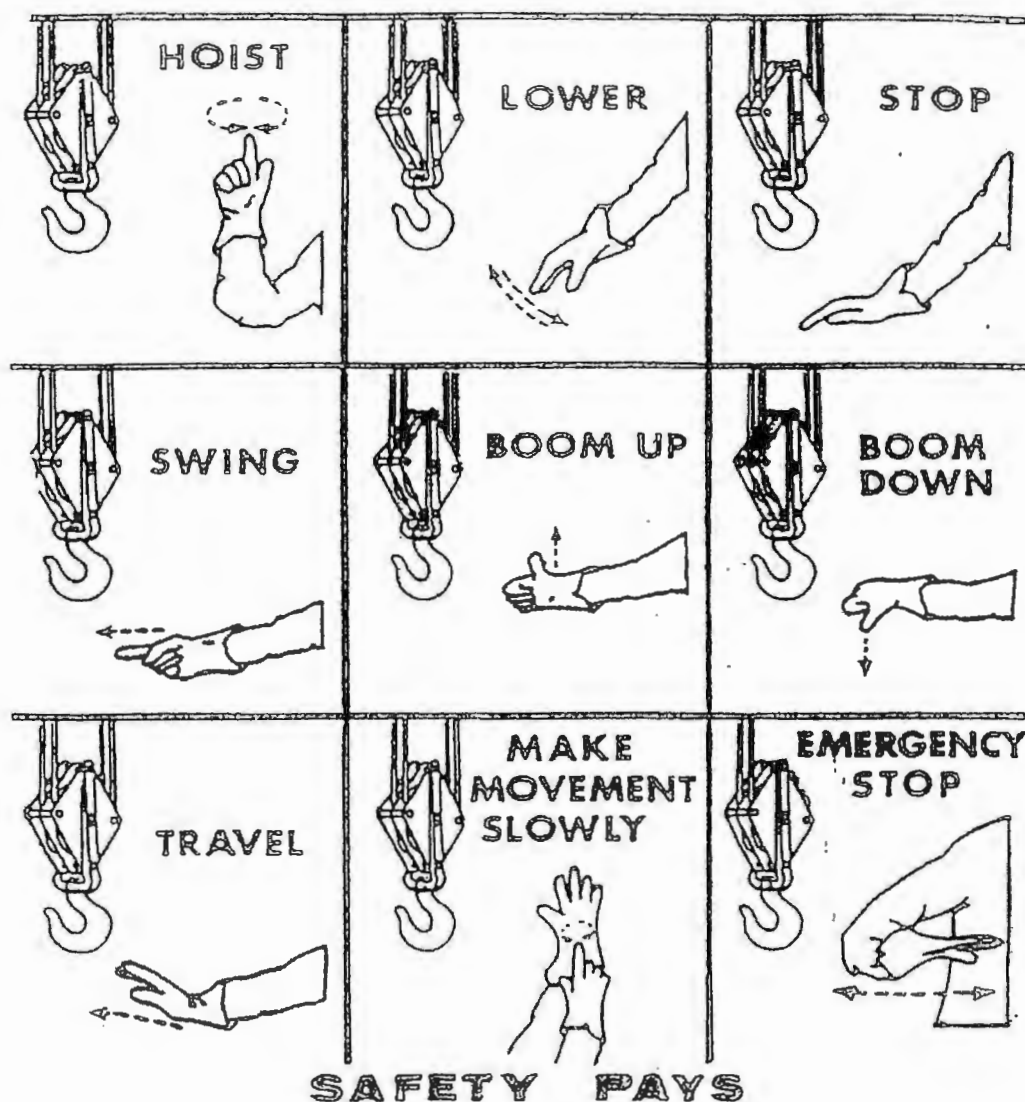
Crane Safety

The following rules must be followed when working around cranes;

- A. Only authorized employees will be allowed to operate all crane or hoisting devices on any NECA premises.
- B. All crane operators must have an updated Crane Operator's certification or license in possession while operating the crane.
- C. Rated load capacities and special warning or instructions shall be conspicuously posted on all cranes. These instructions or warnings shall be visible to the operator while he is at his control stations.
- D. Each crane shall be inspected before each use and all needed repairs shall be made prior to use. The qualified operator, with his immediate supervisor, shall make the inspection before making the first pick. The Equipment Manager shall provide all necessary checklist/inspection forms.
 - 1. Check slings, hooks and shackles for condition. DESTROY all slings that are kinked and frayed. If three (3) wires are broken in one strand or six (6) wires in one rope lay then destroy it. DESTROY all hooks and shackles that are distorted or that are worn more than 20% in a critical area.
 - 2. Replace any cable that has been kinked or has visible damage.
 - 3. Replace worn or rusty hoist and boom cables. Cables should be replaced if the wear on outer wires is 25% of the diameter or if three (3) wires are broken on one strand or six (6) wires in one rope lay.
- E. Give proper consideration to positioning the crane. Decisions regarding positioning are always the certified operator's responsibility.
- F. Cranes must be located so that no part of the rig can come within 10 feet of any energized power line, or as required by law.

- G. When it is necessary to work in close proximity to power lines, consideration should be given to minimize the hazards by:
 - 1. Having lines moved or de-energized.
 - 2. Using boom insulator, insulated hooks, or other safety devices.
 - 3. Use standard crane signals given by **only one person**. The signalman must remain visible to the operator and provide signals through completion of the picking cycle
- H. Never add extra counterweight or tie down the back of the crane. This overloads component parts, and while damage may not be apparent, eventually something will fail.
- I. The operator shall never leave the cab with the load SUSPENDED and NEVER LEAVE the crane cab when the crane engine is running.
- J. The certified operator and immediate supervisor must take all of the preceding safety into consideration while preparing a Job Hazard Analysis (JHA) for each crane set up and pick. Each JHA must be reviewed by all of the employees that are involved during the pick. No crane setup or hoisting is allowed without a specific JHA and pre-pick meeting. The pre-pick meeting is to inform all personnel involved about the specific JHA.

CRANE SIGNALS



SAFETY PAYS
CRANE INSPECTION FORM

	<u>ACCEPT</u>	<u>REJECT</u>	<u>REMARKS</u>
(A) Deformed, cracked or corroded members	_____	_____	_____
(B) Loose bolts or rivets	_____	_____	_____
(C) Cracked or worn sheaves and drums	_____	_____	_____
(D) Worn, cracked or distorted parts (Pins, bearings, shafts, gears, rollers, etc.)	_____	_____	_____
(E) Excessive wear on brake system parts, linings, pawls, and ratchets	_____	_____	_____
(F) Load, wind and other indicators over their full range for significant inaccuracies	_____	_____	_____
(G) Gasoline, diesel, electric or other power plants for improper performance	_____	_____	_____
(H) Excessive wear of chain drive sprockets and excessive chain stretch	_____	_____	_____
(I) Crane hooks (magnetic particle or other suitable crack detecting methods)	_____	_____	_____
(J) Electrical apparatus	_____	_____	_____

NOTE: Any unsafe conditions disclosed by the inspection requirements of this procedure shall be corrected before operation of the crane is resumed.
 Qualified personnel shall make all corrections and repairs.

Signature: _____

Date: _____

Motor Vehicles

- A. No employee is allowed to ride in the bed of the pickup truck.
- B. The parking brake must be set whenever the vehicle is parked.
- C. No employee is permitted to ride on loads, fenders, running boards or tailgates
- D. Drivers must not move vehicles until riders comply with all safety precautions adhered to and all passengers are properly situated in the cab of the vehicle.
- E. All NECA vehicles that are smaller than a two ton truck will reverse into parking spaces. All company vehicles will honk their horn twice before moving in reverse. All company vehicles will honk their horn once before moving forward.
- F. All employees on the work site are to walk around their entire vehicle before entering,
- G. All vehicles will be parked away from the work area and hazards.
- H. All employees operating a NECA company vehicle must possess a valid driver's license and adhere to NECA's Vehicle Operator's Policy Manual.
- I. Any traffic violation causing an accident shall result in immediate termination

Transport Trucks – 2 Ton and above, including trailers

Supervisors are responsible for going over *specific hazards on every job* with their truck drivers. All NECA drivers must conform to the safe driving precautions listed below

- A. Know the local, state and federal traffic rules and regulations. Comply fully. Any traffic violation causing an accident shall result in immediate termination.
- B. Be familiar with the operation of the truck assigned to you. Know what it can do and cannot do.
- C. Keep your vehicle mechanically sound. Report unsafe conditions and have them corrected at once.
- D. Be considerate and use common sense with respect to the protection and rights of other drivers and pedestrians.
- E. When mechanical trouble develops and you must stop on the side of the road. Put up warning devices immediately in accordance with regulations.
- F. Adapt vehicle speed to weather, road conditions, traffic and visibility. Never exceed posted speed limits.
- G. Stop at STOP signs and signals. Rolling stops are not permitted and will result in disciplinary action.
- H. Stay alert; Keep your eyes on the road ahead and moving from right to left, so you are aware of traffic approaching on side roads. When you are uncertain of a driver's intentions, slow down.
- I. **REPORT ALL ACCIDENTS IMMEDIATELY**. Failure to do so will result in termination. Use accident forms located in glove box.
- J. Have current CDL license and medical card in possession while operating.
- K. The parking brake must be set whenever the vehicle is parked. Vehicles parked on an incline must have the wheels chocked.
- L. See Safety Department Manager for Commercial Drivers Policy

Hand-Held Cell Phones While Driving or Operating any Company Vehicle and Equipment Policy

NECA will not tolerate texting or talking on any (personal or company issued) hand-held cellular phone while operating any company issued vehicle or equipment. This includes, but is not limited to, answering or making phone calls, engaging in phone conversations, reading or responding to e-mails and text messages.

The following are recommendations to eliminate the use of cellular phones while operating any company issued vehicle or equipment:

- A. Turn cell phones off or put on silent or vibrate before starting the vehicle.
- B. Pull over to a safe place if a call must be made or received while on the road.
- C. Modify voice mail greeting to indicate that you are unavailable to answer calls or return messages while driving.
- D. Inform clients, associates and business partners of this policy as an explanation of why calls may not be returned immediately.

NECA is concerned about the safety of its employees. It is our goal that if we lead by example, the practice of no texting or talking on hand-held cell phones while behind the wheel will spread throughout the community.

Violation of this policy will result in immediate disciplinary action, up to and including termination.

Excavation and Trenching

Navajo Engineering and Construction Authority's (NECA) written Trenching & Excavation Program is designed for all excavation employees. It is the policy of NECA to permit only trained and authorized personnel to create or work in excavations.

The Safety Department is responsible for developing and maintaining the written Trenching & Excavation Program. This program is administered under the direction of the Safety Manager or designated person(s).

Before Excavating

Before any excavating begins, the following steps shall be followed:

- A. Mark the proposed excavation site or route with white flags.
- B. Contact the state's 811 Center to request a utilities locate. Documentation of this request shall be on site at all times throughout the duration of the project site.
- C. Contact the utility companies or property owners and request companies or owners find the exact location of the underground installations in the area.

- D. If the utility companies or owners do not respond within 48 hours, or the period established by law or ordinance, or if they cannot establish the location of the utility lines, the excavation may proceed with caution.
- E. Remove, or adequately support, the following objects buildings, trees, rocks, and sidewalks in the excavation area that could create a hazard to employees.
- F. Using Appendix A to 29 CFR 1926, Subpart P, classify the type of soil and rock deposits at the site as either stable rock, Type A, Type B, or Type C soil. The soil classification is based on the results of at least one visual and at least one manual analysis conducted by a competent person. Details of the acceptable visual and manual analyses are to be found in Appendix A of 29 CFR 1926, Subpart P.
- G. NOTE: Soil classification is not necessary if the excavation will be sloped to an angle of one and one-half horizontal to one vertical.
- H. Have the competent person choose the appropriate method for protective support systems, as necessary. See the Protective Support Systems section for the procedures used for selecting this system.

Soil Classifications

- A. Stable Rock refers to natural solid mineral matter which can be excavated with vertical sides and remain intact while exposed. Stable rock can be excavated at vertical slope (90°)
- B. Type A Soil is cohesive with an unconfined compressive strength of 1.5 tons per square foot (tsf). Type A soils include clay, silty clay, sandy clay, clay loam, caliche, hardpan, and sometimes-silty clay loam and sandy clay loam. No soil should be classified as Type A if it is fissured; subject to vibration from traffic, pile driving, or similar effects; previously disturbed; or part of a sloped, layered system where the slope is four horizontal to one vertical or greater. This type of soil shall be sloped or benched at 3/4H: 1V (53°).
- C. Type B Soil is cohesive soil with an unconfined compressive strength greater than .5 tsf but less than 1.5 tsf. Type B soils include granular cohesion less soils like angular gravel, silt, silt loam, sandy loam, and sometimes silty clay loam and sandy clay loam; previously disturbed soils that are not Type C fissured soils and soils subject to vibration that would otherwise be classified as Type A; dry rock that is not stable; and material that is part of a sloped, layered system where the layers dip on a slope less steep than four horizontal to one vertical. This type of soil shall be sloped or benched at 1H: 1V (45°).
- D. TYPE C SOIL is cohesive soil with an unconfined compressive strength of .5 tsf or less. Type C soils include granular soils such as gravel, sand, and loamy sand; submerged soil; soil from which water is freely seeping; submerged rock that is not stable; or material in a sloped, layered system where the layers dip into the excavation at a slope of four horizontal to one vertical or steeper. This type of soil shall be sloped at 1 1/2H: 1V (34°). No benching is allowed in this type of soil.

Protective Support Systems

NECA will protect each employee from cave-ins during an excavation by an adequate protective system designed in accordance with the Occupational Safety & Health Administration (OSHA) standards, as adopted by the Navajo Safety and Health Administration.

NECA has standard operating procedures regarding protective support systems for excavations which are in accordance with safe practices and procedures and OSHA excavation regulations, as adopted by the Navajo Safety and Health Administration.

Protective systems for use in excavations more than 20 feet in depth must be designed by a registered professional engineer, as adopted by the Navajo Safety and Health Administration.

General Requirements for Excavations

The following rules are to be followed at all times by all employees working on, in, or near excavations, as applicable:

- A. All employees on all excavation projects shall wear warning vests or other suitable garments made of reflectorized or high-visibility material.
- B. All excavations must be sloped to the angle of maximum allowable slope, based on the soil type.
- C. Trenches four (4) feet or deeper must be shored, sloped or benched to the angle of maximum allowable slope or as conditions warrant.
- D. A warning system shall be used to alert operators of heavy equipment and other employees at the work site of the edge of an excavation.
- E. Adequate protection shall be provided to protect employees from falling rock, soil, or other materials and equipment. Protection is provided by placing and keeping such materials or equipment at least 2 feet from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.
- F. Where equipment operates near excavations or trenches, the sides of the excavation must be shored or braced as necessary to withstand forces exerted by the superimposed load. Stop logs or other secure barricades, at least half the height of the largest machine's tire, must be installed at the edges of such excavations.
- G. Materials used for sheeting, shoring or bracing must be in good condition.
- H. Employees are not permitted under loads that are handled by lifting or digging equipment.
- I. Employees are not allowed to work in the excavation above other employees unless the lower level employees are adequately protected.
- J. While the excavation is open, underground installations are protected, supported, or removed as necessary, to safeguard employees. Adjacent structures are supported to prevent possible collapse.

- K. Employees are not permitted to work in excavations where water has accumulated or is accumulating unless adequate precautions have been taken. Diversion ditches, dikes, or other means are used to prevent surface water from entering an excavation and to provide drainage to the adjacent area.
- L. Sufficient means for exiting excavations 4 feet deep or more are provided, and are within 25 feet of lateral travel for employees.
- M. Guardrails are provided if there are walkways or bridges crossing over an excavation.
- N. Any open trench, manhole, floor opening or like hazard shall be barricaded so that employees and members of the public cannot fall into them.
- O. Any open trench, manhole, and floor opening or like hazard exposed **3 days or more** shall be barricaded so that employees and members of the public cannot fall into them in accordance with the Traffic Control Policy.

Inspection Procedures

- A. Before any employee enters an excavation greater than 4 feet in depth, the competent person shall test the atmosphere where oxygen deficiency or a hazardous atmosphere exists or could reasonably exist (i.e., excavations in landfill areas or excavations in areas where hazardous substances are stored nearby). Emergency rescue equipment shall be readily available and attended when hazardous atmospheric conditions exist or may develop.
- B. The competent person shall inspect the excavation and the adjacent areas on a daily basis for possible cave-ins, failure of protective systems and equipment, hazardous atmospheres or other hazardous conditions. Inspections are also required after the occurrence of any natural (such as rain) or man-made events (such as blasting) that could increase the potential for hazards. Employees may not begin work until after being informed by the competent person that these inspections are complete.
- C. A NECA Competent Person shall inspect excavations daily and during poor weather or when circumstances change. The NECA inspection checklist is included in this policy.

Training

The Program Administrator and supervisor will identify all employees who need either Competent Person Training (8 Hours) or Employee Awareness Training (2 Hours Minimum). Training records of attendees shall be kept on file in the NECA Safety Department for a period of five (5) years.

For employees who don't work in or around excavations but who may become bystanders, NECA require that they attend an Awareness Training.

Updated trainings shall be done every two (2) years or as necessary.

Failure to adhere to this section will result in immediate disciplinary action, up to and including termination.

Blasting and the Use of Explosives

General Provisions

Whenever NECA is working with explosives the following policy shall apply and adhered to by all affected employees.

The RESPONSIBLE PERSON directs the management and policies of the applicant pertaining to explosive materials. The Responsible Person is responsible for the purchase of all explosive materials. When necessary, the Responsible Person may request the vendor to deliver the explosives to the jobsite. Technical assistance from outside sources may be requested or needed for larger and more difficult shots.

The POSSESSOR (Blaster) is responsible for the physical inventory and inspections of all explosive materials. The Possessor will determine which explosives are in good condition and safe to keep and which explosives need to be removed and discarded.

- A. NECA shall permit only authorized and qualified persons to handle and use explosives.
- B. The blaster-in-charge and loading crew shall inspect the blast site before loading begins.
- C. The blast site shall be clearly marked and all non-essential equipment and people shall not be allowed on the blast site once the hole loading begins, or be no less than 50 feet from a loaded hole.
- D. Smoking, firearms, matches, open flame lamps, and other fires, flame of heat producing devices and sparks shall be prohibited in or near explosive magazines or while explosives are being handled, transported or used.
- E. No person shall be allowed to handle or use explosives while under the influence of intoxicating liquors, narcotics, or other dangerous drugs.
- F. All explosives shall be accounted for at all times. Explosives not being used shall be kept in a locked magazine, unavailable to persons not authorized to handle them. The employer shall maintain an inventory and use record of all explosives. Appropriate authorities shall be notified of any loss, theft, or unauthorized entry into a magazine.
- G. No explosives or blasting agents shall be abandoned.
- H. No fire shall be fought where the fire is in imminent danger of contact with explosives. All employees shall be removed to a safe area, 2,500 feet away.
- I. Original containers, or Class II magazines, shall be used for taking detonators and other explosives from storage magazines to the blasting area.
- J. When blasting is done in congested areas or in proximity to structure, railway, or highways, or any other installation that may be damaged, the blaster shall take special precautions in the loading, delaying, initiation, and confinement of each blast with mats or other methods so as to control the throw of fragments, and thus prevent bodily injury to employees.
- K. Employees authorized to prepare explosive charges or conduct blasting operations shall use every reasonable precaution including, but not limited to,

visual and audible warning signals, flags, or barricades, to ensure employee safety.

- L. Insofar as possible, blasting operations above ground shall be conducted between sunup and sundown.
- M. Due precautions shall be taken to prevent accidental discharge of electric blasting caps from current induced by radar, radio transmitters, lightning, adjacent power lines, dust storms, or other sources of unrelated electricity. These precautions shall include:
 - 1. Detonators shall be short circuited in holes which have been primed and shunted until wired into the blasting circuit.
 - 2. The suspension of all blasting operations and removal of persons from the blasting area during the approach and progress of an electric storm;
 - 3. The prominent display of adequate signs, warning against the use of mobile radio transmitters, on all roads within 1,000 feet of blasting operations
 - 4. Ensuring that mobile radio transmitters which are less than 100 feet away from the blasting shall be off.
 - 5. Empty boxes and paper and fiber packing materials, which have previously contained high explosives shall not be used again for any purpose, but shall be destroyed by burning at an approved location
 - 6. Explosives, blasting agents, and blasting supplies that are obviously deteriorated or damaged shall not be used.
 - 7. Blasting operations in the proximity of overhead power lines, communication lines, utility services, or other services and structures shall not be carried on until the operators and/or owners have been notified and measures for safe control have been taken.

Blaster Qualification

The blaster shall be responsible for all blasting activities and shall have final say to such activities. All employees on sites of blasting activities or handling any explosives shall be under the direct supervision of the blaster.

- A. The blaster shall be able to understand and give written and oral orders.
- B. The blaster shall be in good physical condition and not be addicted to narcotics, intoxicants, or similar types of drugs.
- C. The blaster shall be qualified, by reason of training, knowledge, or experience, in the field of transporting, storing, handling, and use of explosives, and have a working knowledge of state and local laws and regulations which pertain to explosives.
- D. Any person performing blasting activities must have a valid, current blasters certificate acceptable by the United States Department of Justice Bureau of Alcohol, Tobacco, Firearms and Explosives.
- E. The blaster certification shall be carried by the blaster or shall be on file at the office or at the blasting area during the blasting operation.
- F. Only those individuals listed as RESPONSIBLE PERSONS and EMPLOYEE POSSESSORS with a background clearance status of 'CLEARED' are

authorized to transport, ship, receive, or possess explosive materials in the course of employment with NECA.

Planning

A request for blasting will be done in writing and addressed to the Possessor.

- A. The request will be made by the Supervisor of the Foreman or Management. The request will include the name of the Foreman, Job Number, location of area in request, and the approximate date the blasting will commence.
- B. The Possessor will do a Preliminary Site Assessment.
- C. The Possessor will create a Blasting Plan that will be reviewed and followed by the individuals involved on the day of the blasting.
- D. The Possessor will do a Post Site Assessment.
- E. Each Assessment will include photographs, diagrams and distances from the blast area to homes, utilities and highways.

Types of magazines

- A. Type 1 magazine. Permanent magazines of the storage of high explosive
- B. Type 2 magazines. Mobile and portable indoor and outdoor magazines for the storage of high explosives.
- C. Type 3 magazines. Portable outdoor magazines for the temporary storage of high explosives while attended (for example, a "day-box"), subject to the limitations.
- D. Type 4 magazines. Magazines for the storage of low explosives
- E. Type 5 magazines. Magazines for the storage of blasting agents

Smoking and Open Flames

Smoking, matches, open flames, and spark producing devices are not permitted:

- A. In any magazine
- B. Within 50 feet of any outdoor magazine
- C. Within any room containing an indoor magazine

Misfires

- A. An explosive charge or any part of an explosive charge that fails to detonate after initiation shall be considered a misfire.
- B. If a misfire occurs, the blaster shall note the location of the misfired explosive, and shall not approach the misfired explosive for at least one hour.
- C. Explosives which are aflame or emitting smoke shall not be approached for at least one hour after evidence of combustion ceases.
- D. The area shall remain guarded or closed until a search of the area has been done and the misfire hazard is removed, or the blaster-in-charge pronounces the area safe.
- E. Misfires shall be handled by the blaster-in-charge and only those employees necessary to remove the hazard and guard the area shall remain in the area.
- F. Impact to explosive materials shall be avoided when searching for non-visible misfired charges.

- G. A misfired armed charge shall be disposed of where it is found with a secondary charge.

Transportation

Transportation of explosives, blasting agents, and blasting supplies on public highways shall be in accordance with the provisions of 1926.900, Subpart U.

Housekeeping

Magazines are to be kept clean, dry, and free of grit, paper, empty packages and containers, and rubbish. Floors are to be regularly swept. Brooms and other utensils used in cleaning and maintenance of magazines must have no spark-producing metal parts.

When any explosive material has deteriorated it is to be destroyed in accordance with the advice or instructions of the manufacturer.

The area surrounding magazines is to be kept clear of rubbish, brush, dry grass, or trees for not less than 25 feet in all directions.

Volatile (gas) materials are to be kept a distance of not less than 50 feet from outdoor magazines.

Living foliage which is used to stabilize the earthen covering of a magazine need not be removed.

Cleaning equipment shall not be stored or left in the explosive magazines.

Lighting

Only battery-activated safety lights or battery-activated safety lanterns may be used in explosives storage magazines.

Failure to adhere to this section will result in immediate disciplinary action, up to and including termination.

Housekeeping

Housekeeping is everyone's responsibility; therefore, all areas shall be maintained and kept free of hazards and debris. Good housekeeping prevents serious slips, trips, falls and the possibility of starting a fire. Each employee is responsible for;

- A. Wiping up spills immediately.
- B. Returning equipment after using it.
- C. Keeping cabinets used for storage closed.
- D. Disposing of trash and waste promptly.

Personal Protective Equipment

Required personal protective equipment in accordance to OSHA Standards will be provided by NECA at no cost to the employees. Hard-hats eye and face protection, safety belts, harnesses, lifelines, dust mask/respirators, and hearing protection shall be used by all employees whenever a hazard exists which warrants such use.

- A. **Hard-hat:** A head protection device to shield the worker's head from impact, flying particles, electric shock, overhead spills, and entanglement of hair in machinery.
 - 1. Hard hats are to be worn properly in the manner specifically intended (bill to the front), unless approved by the manufacturer.
 - 2. No bandanas, hoods, caps or hats of any types shall be worn under hard hats, unless approved by the manufacturer.
- B. **Safety glasses, goggles, face shield:** An eye protection device to shield the workers' eyes from flying objects, chemical splashes, harmful radiation, and dust.
 - 1. Safety glasses are used for work requiring only frontal protection.
 - 2. Goggles and certain types of safety glasses are designed to provide frontal and peripheral shielding from flying objects. The proper dark or clear safety glasses shall be worn dependent of lighting. Dark glasses shall be removed when indoor.
 - 3. Face shield is used for work involving hazards that not only endanger eyesight but also may disfigure the face. As a rule, this type of face protection should be worn over basic eye protection device such as safety glasses or goggles.
 - 4. Welding helmet is used to protect the head and face from flying particles, hot metal, sparks, and intense radiant energy. It is equipped with filter lenses to protect the welder's eyes from harmful UV radiation.
- C. **Ear plug/foams:** Hearing protection devices shall be used by the affected employee to protect him/her from exposure to excessive noise levels which may cause permanent hearing loss.
- D. **Respiratory Protection:** Each worksite condition shall be evaluated by the affected supervisor and the Safety Officer to determine the proper selection of respiratory protection. Some tasks may require using of an N-95 respirator for various situations. Bandanas are not to be used in place of dust mask.
- E. **Belts, harnesses, and lifelines:** They are designed to be worn by workers in locations where there is danger of falling, or when the employee is exposed to a confined space with a hazardous atmosphere.
 - 1. Class I, body belts – Restrict a worker to a particular area and aid in preventing falls.
 - 2. Class II, chest harnesses – Allow freedom of movement where fall hazards is slight.
 - 3. Class III, body harnesses – Used when movement at dangerous heights is necessary.
 - 4. Class IV, suspension belts – Used where work cannot be performed from a fixed surface and the worker must be suspended entirely.
- F. **Hand Protection:** Gloves are the primary type of industrial hand protection from pinch points, sharp edges, and abrasive surfaces. A wide range of devices are available that offer specific protection against particular hazards such as temperature extremes, caustics, water, chemicals, electricity, and radiation.

Every employee on a jobsite or designated area shall have a pair of gloves on when outside the cab of any vehicle or equipment. Gloves are required at all times and will be provided by NECA as a part of standard issued PPE.

- G. **Foot protection:** Safety toe shoes and boots are the types of footwear that protects the employee's feet from hazards such as compression and impact. Heavy materials, chemicals, temperature extremes, water, greases, static electricity, and molten metal are among the hazards that require protective footwear.
 - a. All employees on construction work sites shall wear durable slip resistant and at least, ankle length leather work boots with soles that are resistant to nails or penetrating objects.
 - b. All employees operating or working near compaction equipment are required to wear either steel toed safety boots or metatarsal protection equipment.
- H. **Miscellaneous equipment:** Life jacket or buoyant work vest (U.S. Coast Guard approved) shall be worn by employees working over or near water, or where the danger of drowning exists. Ring buoys with at least 90 feet of line shall be provided and readily available for emergency rescue operations. At least one life saving boat shall be immediately available at locations where employees are working over water.
- I. **NECA is not required to pay for:** Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.
- J. Any personal protective equipment that is purchased by an employee must meet the requirements for the job at hand. Any PPE that is purchased must first be inspected by the immediate supervisor or Program Administrator to assure the equipment is adequate for the work to be conducted. Employees will be shown the proper maintenance and cleaning of the equipment by the Program Administrator or designee.
- K. NECA is not responsible to replace any employee purchased PPE. The supervisor has the final decision in allowing the employee to utilize an acceptable employee purchased PPE.
- L. NECA will only replace company issued PPE, except when the employee has lost or intentionally damaged the PPE.

Violation of this policy will result in immediate disciplinary action, up to and including termination.

Scaffolding

Employees working on scaffolds shall be made aware of the hazards associated with scaffolds. The two basic safety hazards are falls and injuries from falling objects. These steps are to be followed:

- A. Each scaffold must be inspected, approved, and erected by a competent person prior to initial use, and at the beginning of every shift.

- B. If alterations are made, the entire system must be inspected , approved , and erected by a competent person
- C. Scaffolds and their components shall be capable of supporting without failure at least 4 times the maximum intended load. All planking shall be Scaffold Grades, or equivalent, Guardrails, mid-rails and toe boards must be installed on all open sides of scaffolds that are more than six feet in height, or on any scaffold less than 48 inches wide.
- D. Guardrails, mid-rails and toe boards should be constructed from components furnished by the manufacturer. Where this is not possible, use 2 x 4 inch lumber for the guardrails and 1 x 4 inch lumber for the mid-rails and toe boards.
- E. Scaffold planks must be clear and must extend beyond the end supports at least six inches, but not more than 12 inches.
- F. All scaffolds must be fully planked. No employee may work from a single plank.
- G. Scaffold planks must be visually inspected before each use. Damaged scaffold planks must be DESTROYED immediately.
- H. Do not overload scaffolds. Materials should be brought up as needed and removed when the work or task is completed.

Rolling Scaffolds

Riding rolling scaffolds is prohibited.

Underground Utilities

The Navajo Nation, Federal and State laws require that the owners, of any and all underground utilities (water, sewer, gas or oil, telephone or electrical) be notified prior to excavation in any area. The Safety Department shall be notified of any gas line crossing prior to excavating. This will offer the owner of the utilities an opportunity to locate them for your safety and convenience to prevent any damage. Notify anyone and everyone whom you even remotely (i.e., NTUA, Frontier, etc.) suspect may have underground utilities in any area before you dig. Make a note of the date, time, means of communications, and above all, the name of the person you spoke to. Damaging underground utilities is a dangerous and hazardous task, which is expensive and for the most part, unnecessary.

Prior to any excavation, an up-to-date One Call shall be in place and on site. If you should happen to break or damage a utility line notify the owner immediately or call Base 5 for assistance in contacting the owner.

If you should cause a gas pipeline break you should do the following:

- A. Immediately shut off the equipment.
- B. Abandon equipment.
- C. Leave the area quickly.
- D. Warn others.
- E. Seek the aid of local authorities.
- F. Notify the pipeline owner or call Base 5 for assistance in contacting the owner.

From the moment of the break, the action the superintendent/foreman takes will determine the outcome of the accident.

Fall Protection

To prevent employees from falling off, onto, or through working levels and to protect employees from being struck by falling objects, the following systems and procedures shall be followed;

The foreman will assess the workplace to determine if the walking and working surface on which employees are to work have the strength and structural integrity to support workers safely. Employees are not permitted to work on those surfaces until it is determined the surface has the requisite strength and structural integrity to support them.

Once the foreman determined that the surface is safe for employees to work on, he must select one of the options listed below for the work operation 6 feet or more above lower level;

- A. Guard Rails Systems
- B. Safety Net Systems
- C. Personal Fall Arrest Systems

When working with fall protection, NECA requires that the affected employee utilize 100% tie-off.

If **Guardrails Systems** are used the top edge height of the rails must be 42 inches plus or minus 3 inches above the walking/working level. If wire rope is used as guardrail it must be one-quarter inch nominal diameter or thickness and be flagged at not more than 6 feet intervals with high-visibility material.

Covers or guardrail systems shall be erected around holes. Guardrails are not to be used as an anchor for personal fall arrest systems.

If **Safety Net Systems** are used the nets must be installed as close as practicable under the walking/working surface on which employees are working and never more than 30 feet below such levels.

Safety nets shall be inspected at least once a week for wear, damage and other deterioration. Defective nets shall not be used.

Safety nets shall be installed with sufficient clearance underneath to prevent contact with the surface or structure below.

If Personal **Fall Arrest Systems** are used the anchorage shall be designed, installed, and used under the direction of a competent person. Anchorage used to attach personal fall arrest systems shall be independent of any anchorage being used to support or suspend platforms.

Positioning device systems are full body harness systems. They are to set up so that workers can free fall no farther than 2 feet. They shall be secured to an anchorage capable of supporting at least twice the potential impact load. Snap hooks, dee-rings and other connectors used with positioning devices systems must be inspected before each use. Any defective items must be put out of service immediately.

Non-locking snap hooks shall not be used for fall arrest systems.

Body belts for fall arrest systems shall not be used.

Lifeline shall be protected against being cut or abraded. A self-retracting lifelines and lanyards that automatically limit free fall distance to two feet or less should be used. Lanyards and vertical lifelines must be free of cuts or knots. Any defective lifeline must be put out of service immediately.

To protect employees working below from falling objects excess mortar, broken or scattered masonry units and all other materials and debris shall be kept clear of the working area by removal at regular intervals.

Only employees engaged in the construction will be authorized in the walking/working zone except those inspecting, investigating, or assessing workplace condition prior to the actual start of work or after all work has been completed.

Employees will be trained in the proper selection, use and maintenance protection systems. The safety department will prepare a written Hazard Training Certification that identifies the employee trained and the date of training. The employee and trainer must sign the certification record.

Work Zone Traffic Control

The most current edition of the *Manual on Uniform Traffic Control Devices*, (MUTCD) shall be followed on all highway/road construction, utility work, maintenance operations, and the management of traffic incidents.

Temporary Traffic Control (TTC) shall be an integral and high-priority element of every project from planning through design and construction. The primary function of TTC is to move vehicles and pedestrians safely and expeditiously through or around work zones while protecting on-site workers and equipment.

A Temporary Traffic Control Plan shall be prepared and understood by all responsible parties before a worksite is occupied.

A certified Traffic Control Supervisor (TCS) shall be assigned to all aspects of traffic control management and supervision. The TCS shall have a set of traffic control plans and a current copy of the MUTCD readily available at all times. The TCS shall maintain and sign a project traffic control diary. The TCS shall have in their possession at all times, a valid driver's license, valid ID, and TCS certification card.

A TCS shall only assign a certified Traffic Control Technician (TCT) to assist with the placement, inspection and maintenance of traffic control signs and devices. All other non-certified personnel are prohibited from such duties. A TCS shall be readily available within one hour of work zone should a TCT need the assistance of a TCS. The TCT shall have in their possession at all times, a valid driver's license, valid ID, and TCS certification card.

Good public relations shall be maintained. Road user movements shall be inhibited as little as practical. Motorist, bicyclists and pedestrians should be guided in a clear and positive manner.

Flagging

Because flagging is one of the most hazardous activities on the roadway, each person assigned to this task shall be adequately trained and certified. The TCS or TCT shall make sure each flagger has in their possession at all times, a valid ID and traffic control flagger certification card.

Exemptions: Personnel that have not completed a flagger-training course may be assigned duties as flagger only during emergencies.

Emergency assignments are temporary and last only until a certified flagger can be put into that position.

Flaggers should be able to satisfactorily demonstrate the following abilities:

- A. Ability to receive and communicate specific instructions clearly, firmly and courteously.
- B. Ability to move and maneuver quickly in order to avoid danger from errant vehicles.
- C. Ability to control signaling devices (such as paddles and flags) in order to provide clear and positive guidance to drivers.
- D. Ability to understand and apply safe traffic control practices, sometimes in stressful or emergency situations.
- E. Ability to recognize dangerous traffic situations and warn workers in sufficient time to avoid injury.

To distinguish between the Flaggers and other employees on any worksite:

- A. Flaggers shall utilize Class 2 fluorescent yellow-green safety vest.
- B. All non-traffic control personnel shall wear Class 2 fluorescent orange-red safety apparel.

For the purpose of nighttime flagging, hours of darkness means one-half hour before sunset to one-half hour after sunrise. Nighttime flaggers shall wear a combination of Class 3 fluorescent yellow-green safety vest and pant. Flagger stations shall be illuminated, except in emergencies.

Flagger stations shall be located such that approaching road users will have sufficient sight distance so as to stop at the intended stopping point. Except in emergency situations, flagger stations shall be preceded by Advanced Warning Signs.

Flaggers shall face their traffic at all times. Position flaggers so they are not exposed to traffic or equipment approaching from behind.

Flaggers shall stand alone, away from other workers, work vehicles, or equipment. Flaggers shall be clearly visible to the first approaching road user at all times.

The use of cellular phones, Mp3 players, iPods, tablets or other similar devices shall not be utilized while performing flagman operations. Flaggers shall be issued a hand-held radio as needed. Hand-held radios should be able to transmit a signal at least one mile with decent to clear communication.

Exemptions: Cellular phones may only be utilized for emergency communications only.

Hand-signaling devices (Figure 6E-3)

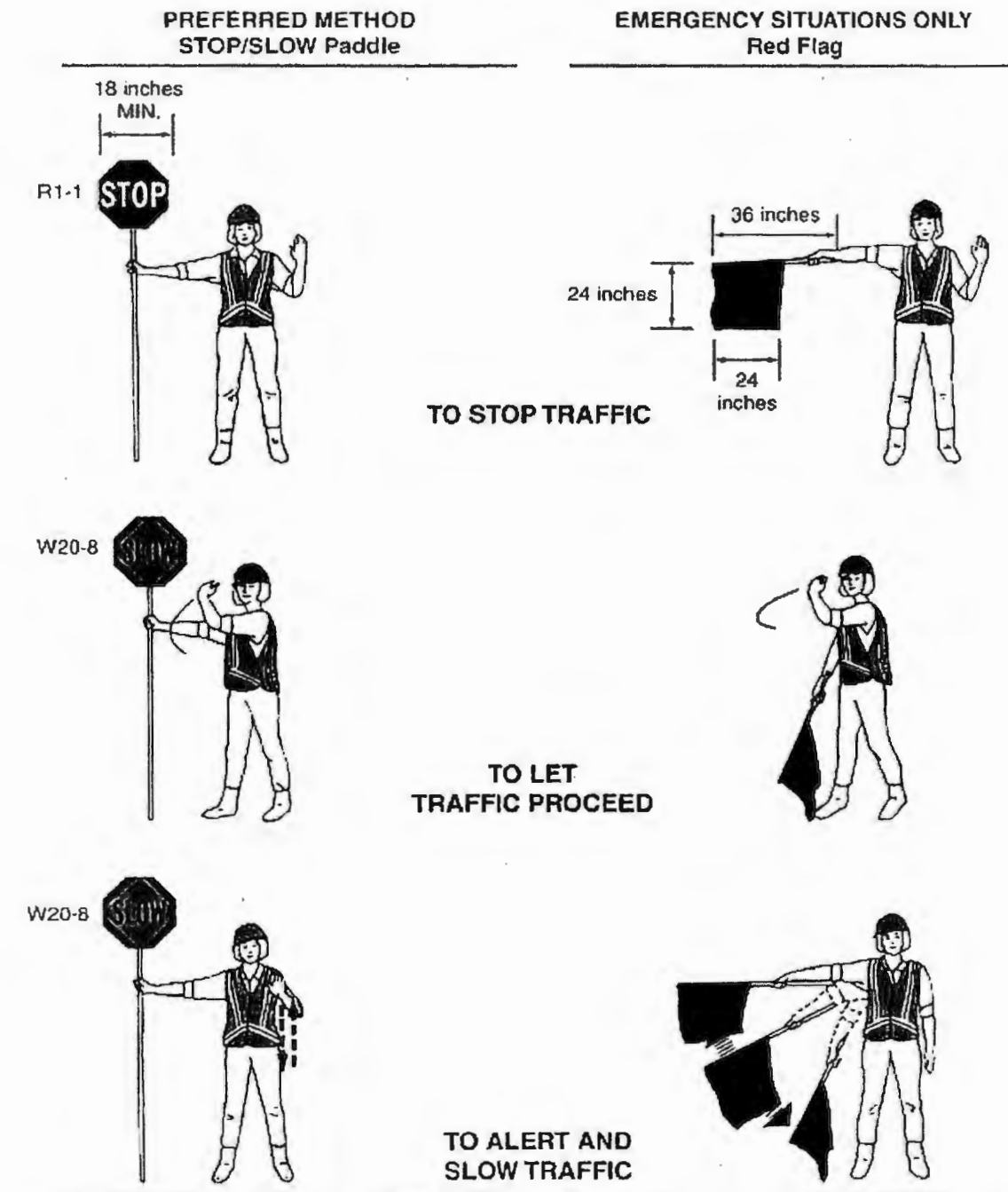
The STOP/SLOW paddle shall be the primary and preferred hand-held signaling device because paddles give road users more positive guidance than orange flags. Paddles shall be at least 18 inches wide with letters at least 6 inches high.

The use of orange flags shall be limited to emergency situations only. Flags, when used, shall be a minimum of 24 inches square and securely fastened to a staff approximately 36 inches in length.

For nighttime flagging, the STOP/SLOW paddle or flag shall be retro-reflectorized.

Flaggers may use a wand in an emergency situation to supplement the STOP/SLOW paddle or flag.

Figure 6E-3. Use of Hand-Signaling Devices by Flaggers



Traffic Control Devices

Traffic control devices such as signs, vertical panels, barricades, arrow boards, drums, cones and other similar devices shall be used when workers and/or equipment are exposed to vehicular traffic.

Advanced warning signs

Advanced warning signs shall be utilized to warn and alert drivers of hazards created by construction, maintenance or utility activities on or within highway right of way.

Advanced warning signs shall be placed on the right-hand side of the road unless otherwise provided by the MUTCD manual.

Signs shall be maintained for cleanliness, visibility and correct positioning. Signs that have lost significant legibility shall be promptly replaced.

Sign spacing shall follow Table 6C-1 below. 500 feet spacing is generally appropriate for rural roads.

Table 6C-1. Recommended Advance Warning Sign Minimum Spacing

Road Type	Distance Between Signs**		
	A	B	C
Urban (low speed)*	100 feet	100 feet	100 feet
Urban (high speed)*	350 feet	350 feet	350 feet
Rural	500 feet	500 feet	500 feet
Expressway / Freeway	1,000 feet	1,500 feet	2,640 feet

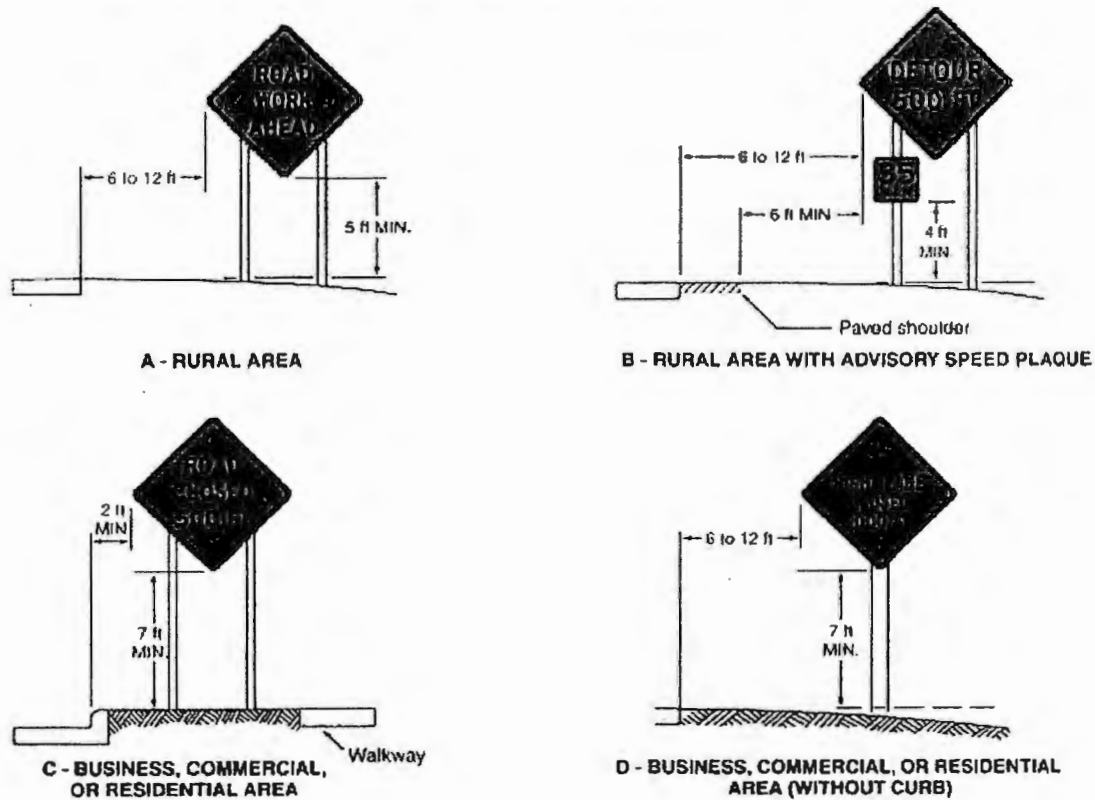
* Speed category to be determined by the highway agency

** The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign" is the sign that is furthest upstream from the TTC zone.)

Ground-mounted sign installation shall follow Figure 6F-1. Ground-mounted signs installed at the side of the road in rural areas shall be mounted at a height at least 5 feet, measured from the bottom of the sign to the near edge of the pavement.

All ground-mounted sign supports shall be crashworthy.

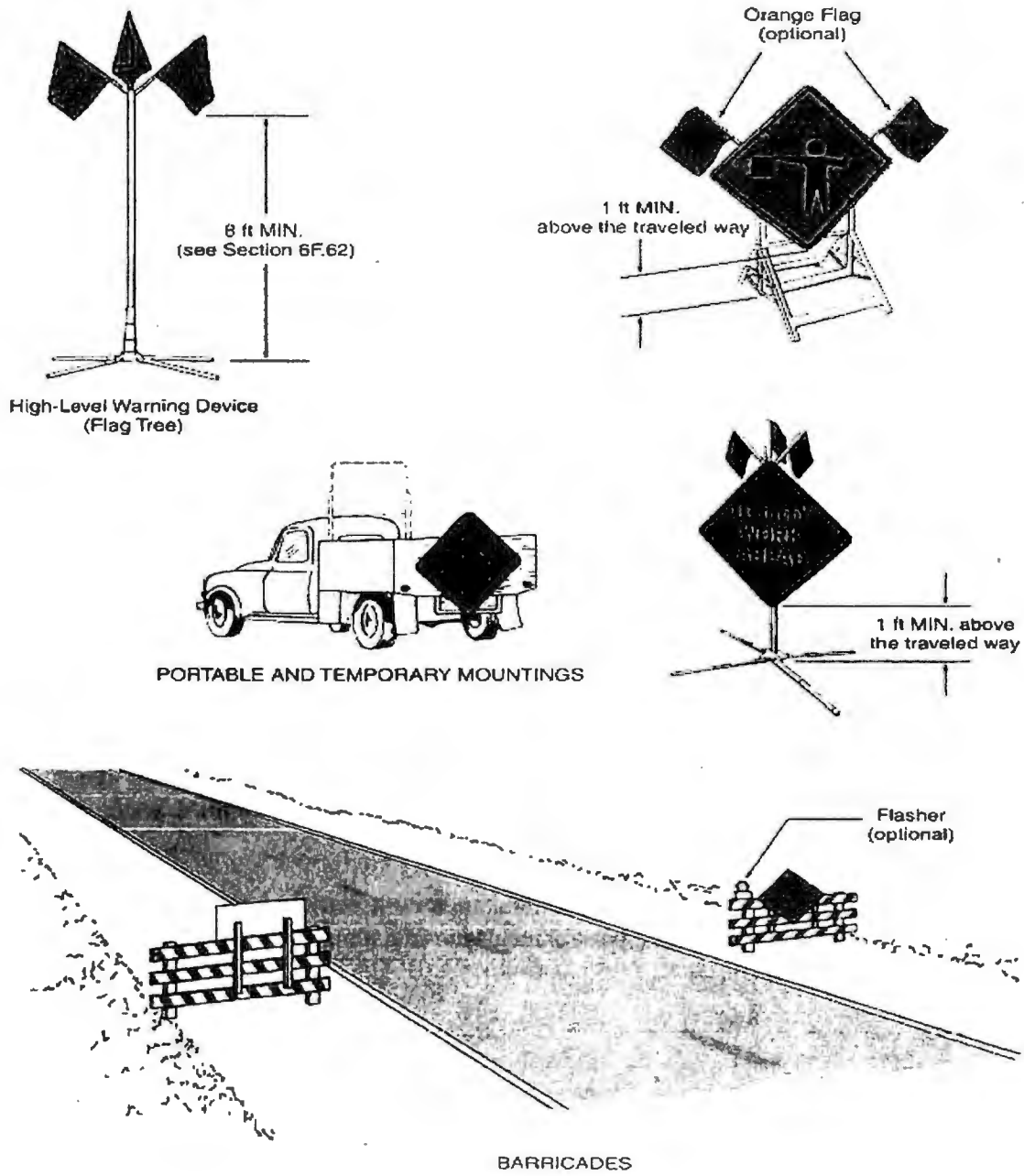
Figure 6F-1. Height and Lateral Location of Signs—Typical Installations



Signs mounted on portable supports (such as sign stands) shall be at least 1 foot above the traveled way (refer to Figure 6F-2). All portable supports shall be crashworthy. Any alterations made to portable supports that have not been successfully crash tested shall be considered “not crashworthy.”

For mobile operations, a sign may be mounted on a work vehicle, a shadow vehicle or a trailer stationed in advance of the work zone or moving along side it.

Figure 6F-2. Methods of Mounting Signs Other Than on Posts



Channelizing Devices

Channelizing devices include drums (orange barrels), vertical panels, cones, tubular markers, longitudinal channelizing devices and barricades. (See Figure 6F-7)

Channelizing devices provide for smooth and gradual vehicular traffic flow from one lane to another, onto a bypass or detour, or into a narrower traveled way. Channelizing devices are also used to channelize traffic away from work areas, pavement drop-offs, pedestrian paths, open trenches or opposing directions of traffic.

Channelizing devices shall be crashworthy.

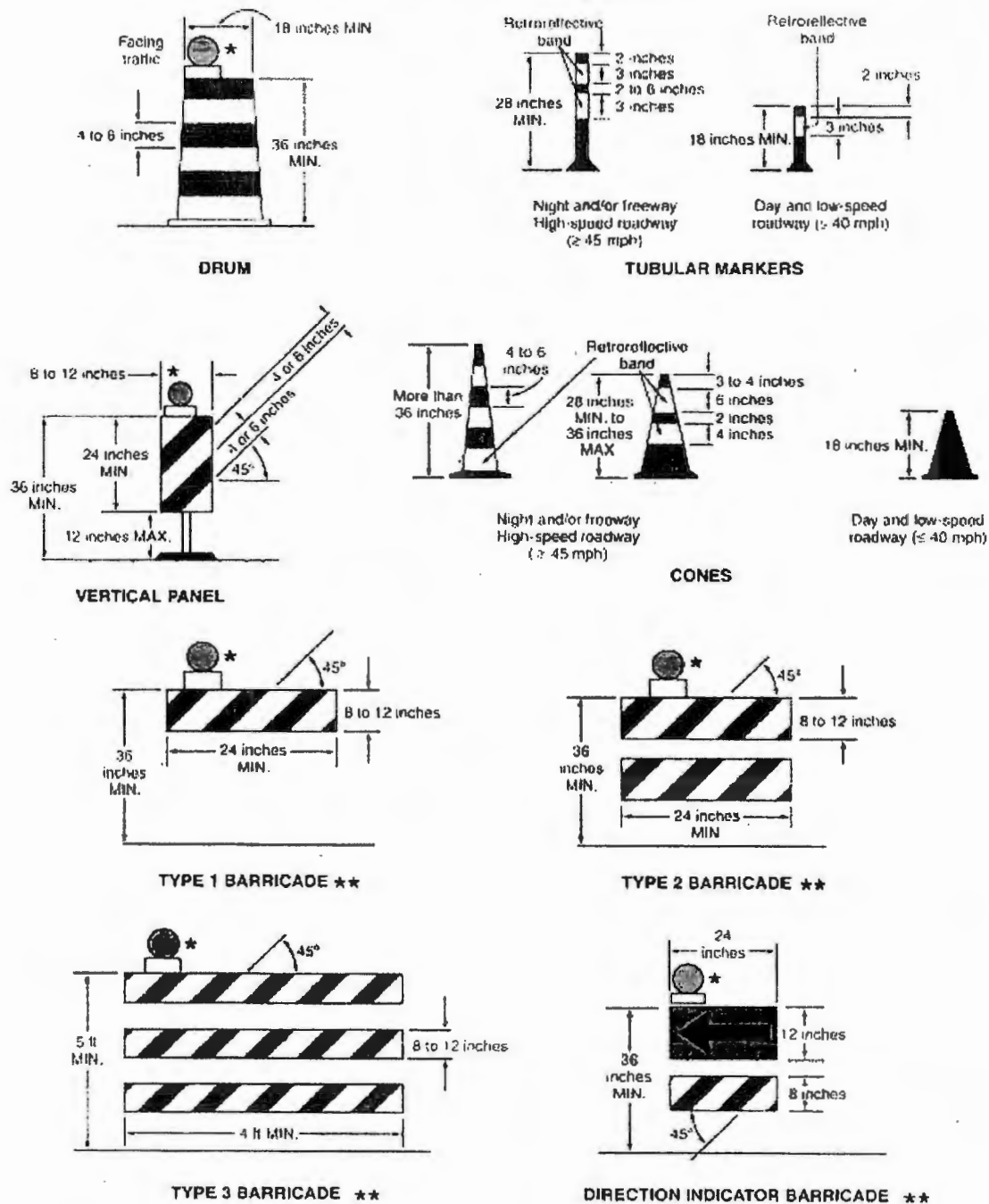
Channelizing devices shall be kept clean, visible, and properly positioned at all times. Devices that are damaged or have lost significant amount of retro reflectivity and effectiveness shall be replaced.

Spacing between channelizing devices:

- A. For transition taper channelization, the spacing between devices shall not exceed 1.0 times the speed limit in mph.
- B. For tangent (centerline) channelization, the spacing between devices shall not exceed 2.0 times the speed in mph.
- C. For downstream taper channelization, the spacing between devices shall not exceed 2.0 times the speed in mph.

The maximum and minimum heights of channelizing devices shall follow Figure 6F-7.

Figure 6F-7. Channelizing Devices



* Warning lights (optional)

** Rail stripe widths shall be 6 inches, except that 4-inch wide stripes may be used if rail lengths are less than 36 inches. The sides of barricades facing traffic shall have retroreflective rail faces.

Before any new detour or temporary route is opened to traffic, all necessary signs shall be in place. All TTC devices shall be removed as soon as practical when they are no longer needed.

If there is an approved Traffic Control Plan that adheres to or is more stringent than the MUTCD Manual illustrations, that plan shall be followed.

Addition of Typical Application diagrams:

- A. Work beyond the Shoulder (TA-1)
- B. Work on the Shoulder (TA-3)
- C. Lane Closure on a Two-Lane Road using Flaggers (TA-10)
- D. Haul Road Crossing (TA-14)
- E. Short-Duration or Mobile Operations on a shoulder (TA-4)

Safety Meetings Topics

Please see Safety Meeting Topics in Appendix A.

Mechanical Shop Safety

Below is a list, at minimum, guidelines for the Mechanic Shop to be aware of but not limited to:

- A. Forced ventilation shall be provided for exhaust fumes and hose attachments shall be affixed to tailpipes.
- B. Ventilation fans shall be used during any welding operations inside buildings or as required in confined spaces. Oxygen tanks are not to be used in place of ventilation fans.
- C. Overhead doors shall be maintained on a regular basis to insure proper safe working condition.
- D. Housekeeping shall be kept up with at all times.
- E. Electrical cords and pneumatic hoses shall not be laid on the floor to present a tripping hazard.
- F. Oil, grease, etc., shall be cleaned up immediately when spilled.
- G. Fire extinguisher shall be located in a conspicuous location for easy access and use.
- H. Tires being installed on 2 – piece rims shall be inflated only with the use of tire cages.
- I. Proper inflation of tires shall be pressurized at the manufacturer's specifications.
- J. Electrically powered tools shall be grounded.
- K. Stationary grinding wheels shall be secured to a table or floor.
 - 1. Worn wheels shall be replaced.
 - 2. Prior to use, grinding wheels shall be inspected for damage, wear, and in good working condition.
 - 3. Each affected employee utilizing a grinder shall protect their face and eyes with a face shield. A shield shall be maintained over the grinding wheel to control sparks.

- L. The hooks and chains of the hoist shall be verified every three (3) months to insure the tag/certification is attached and legible. This shall be performed by the competent person.

Battery Storage

- A. Lead acid batteries shall be stored in a separate area and shall be marked: "DANGER: ACID". A suitable facility for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.
- B. When working with storage or storing batteries, employees shall wear rubber gloves and aprons to protect themselves from accidental spills and splashes.
- C. Suitable eye protection shall be worn when working with batteries.
- D. No smoking shall be permitted within buildings or storage areas where batteries are housed.
- E. The storage area for wet cells shall be well ventilated.
- F. A soda solution to a neutralize spill shall be stored in the general area where lead acid batteries.
- G. Initial charging and any work performed on batteries shall be in accordance with instructions set forth by the manufacturer's recommendations.
- H. Acid shall never be poured into water.
- I. Distilled water shall be stored in glass, plastic, or rubber containers.
- J. Battery connections should be clean, bright, and free of corrosion.
- K. An ABC extinguisher in working condition shall be located in the general area for fire control.
- L. Objects, especially metal shall never be placed on top or across cells.
- M. Gas escape holes in cell caps shall be open and clear. Caps shall never be cleaned while they are on the cell.
- N. Material should not be stored in front of batteries.
- O. A hanger should be provided for the rubber aprons and gloves.
- P. Cells shall not be over filled.
- Q. Plates shall always be kept covered with fluids to the waterline mark.
- R. A non-metallic flashlight shall be available for battery inspection.
- S. All battery connections should be tight to avoid sparking.
- T. All lists of these rules shall be posted by all wet cells.
- U. Only approved wrenches shall be used on battery connections.
- V. Pliers, channel lock pliers, pipe wrenches, etc., shall never be used.

Extension Cords

- A. Only approved commercial grade and inspected extension cords shall be used.
- B. Both the cord and the connection should be examined carefully before being used.
- C. Extension cords shall be suspended over aisles or working areas where possible in order to prevent tripping hazards.
- D. Extension cords shall not be hung over nails or other sharp edges nor shall they be kinked or left where a vehicle may run over them.
- E. Extension cords shall not be allowed to come in contact with oil, hot surfaces, or chemicals.

- F. An extension cord shall never have any defect in the insulation if so, it shall be replaced.
- G. Extension cords shall be stored in a clean, dry place where they can lie loosely coiled.
- H. The cord shall not be used as a line to raise or lower the tool from one elevation to another.

Stairways

- A. Stairways with four (4) steps or more shall have a handrail. This also applies to field living vans.
- B. Stairways more than 42 inches wide shall have two (2) handrails.
- C. Handrail shall be 42 inches high, $\pm$ 3 inches.

Tools

Chains

- A. Care shall be taken not to overload a chain. All lifting chains shall have a load rating tag attached.
- B. The links of a chain under load are subjected to severe bending action when in contact with sharp corners or edges. Appropriate materials shall be used as a guard or weight-bearing surface to prevent nicking the chain.
- C. Employees shall not kink a chain in order to shorten it.
- D. When a load is to be lifted, the slack shall be taken up and the load started slowly and uniformly.
- E. A chain shall not be used if an inspection reveals a fracture, insecure weld, missing load rating tag, or other defects.
- F. Chains shall be stored in a dry area in order to prevent rusting.

Chain Saws

- A. Saws shall be stopped for re-fueling or servicing.
- B. Chain saws shall not be used in enclosed spaces.
- C. The blade shall be covered in a sheath when not in use.
- D. Only those employees having previous experience with a chain saw shall be allowed to operate the saw unless under the direct supervision of one having had experience.
- E. P.P.E. such as non-slip sole work shoes, gloves, safety glasses, face guard, chaps, and earplugs shall be utilized.
- F. No loose clothing shall be worn while operating a chain saw.

Electrical Hand Tools

- A. Tools shall be kept in safe condition, cleaned, oiled, and repaired.
- B. Electric hand tools shall be grounded when in use.
- C. Only approved and inspected extension cords shall be used.
- D. Both the cord and the connections should be examined carefully before being used.
- E. Extension cords shall be suspended over aisles or working areas where possible in order to prevent tripping hazards.

- F. Extension cords shall not be hung over nails or other sharp edges, shall not be kinked, or left where a vehicle may run over them.
- G. Extension cords shall never be allowed to come in contact with oil, hot surfaces, or chemicals.
- H. An extension cord shall never have any defect in the insulation if so, it shall be replaced.
- I. Goggles or a face shield shall be worn while using electric hand tools if there is any danger of flying particles.
- J. Pneumatic hand tools rather than electric ones shall be used in the presence of flammable vapors or gases.
- K. Extension cords shall be stored in a clean, dry place where they can lie loosely coiled.
- L. The flexible shaft of an electric hand tool shall never be allowed to form a loop as this will make a knot, jerking the tool out of the operator's hand.
- M. Goggles shall always be worn when using a portable grinder; the operator shall keep out of line with the wheel.
- N. Adequate respiratory protection shall be used when operating portable grinders or buffers on toxic material, such as lead, zinc, brass or paint.
- O. Loose clothing shall not be worn when work is being done with any portable electric tool.
- P. Nails or other objects shall not be inserted in the ventilating openings to stop the fan while tightening the chuck or performing any other operations.
- Q. Tools shall be handled carefully to avoid dropping them.
- R. The cord shall not be used as a line to raise or lower a tool from one elevation to another.
- S. Belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating, or moving parts of equipment shall be guarded if such parts are exposed to contact with employees or otherwise create a hazard.
- T. All hand held powered platen sanders, grinders with wheels two (2) inches in diameter or less, routers, planers, laminated trimmers, nibblers, shears, scroll saws, and jigsaws with blade shanks one-fourth (1/4) of an inch wide or less may be equipped with only a positive "on-off" control.
- U. All hand-held powered drills, tappers, fastener drivers, horizontal, vertical, and angle grinders with wheels greater than two (2) inches in diameter, disc sanders, belt sanders, reciprocating saws saber saws, and other similar operating powered tools shall be equipped with a momentary contact "on-off" control and may have a lock-on control provided that turn off can be accomplished by a single motion of the same finger or fingers that turn it on.
- V. All other hand-held powered tools, such as circular saws, chain saws, and percussion tools without positive accessory holding means, shall be equipped with a constant pressure switch that will shut off the power when the pressure is released.

Pneumatic Tools

- A. Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.

- B. Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.
- C. Compressed air shall not be used for cleaning purposes except where reduced to less than 30 psi and then only with effective chip guarding and personal protective equipment, such as head, eye, face, and ear protection. The 30 psi requirement does not apply to concrete form, mill scale, and similar cleaning purposes.
- D. The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded.
- E. The use of hoses for hoisting and lowering tools shall not be permitted.
- F. All hoses exceeding ½ - inch inside diameter shall have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.
- G. Hoses should be protected from traffic and pedestrians.
- H. Hoses shall be placed so that no tripping hazard is created.
- I. Loose clothing should not be worn while operating a pneumatic tool.
- J. In order to prevent the bit from sticking, employees should avoid feeding the machine too fast.
- K. Drills should be lined up straight with the hole. If tipped, the bit is almost sure to stick.
- L. Two (2) employees shall be present during the operation of the larger tamping machines.
- M. Safety set screws shall be installed and maintained on all shaft collars.
- N. Compressed air shall not be used to dust off clothing or any part of the body. Such practice is dangerous because the air may enter the tissues or a body opening and cause serious consequences.
- O. All hose clamps shall be checked routinely for tightness.

Personal Tools

Any personal hand/power or electrical tools brought on any NECA worksite by an employee shall be inspected and approved by the immediate supervisor.

Welding

- A. Prior to any welding a Hot Works Permit shall be completed.
- B. Toxic preservative coatings shall be scraped four (4) inches from the area of heat application, or air-line respirators shall be used.
- C. Only goggles, spectacles, and helmets in excellent condition shall be used.
- D. Any faulty or defective equipment shall be reported to the supervisor and replaced immediately.
- E. When welding or cutting on walls, floors, and/or ceiling, etc., employees shall inspect the opposite side of the wall for any fire hazard.
- F. When practical, objects to be welded, cut or heated shall be moved to a designated safe location, or, if the objects to be welded, cut, or heated cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place or otherwise protected.
- G. If the object to be welded, cut, or heated cannot be moved and if all the fire hazards cannot be removed, positive means shall be taken to confine the heat and sparks and to protect the immovable fire hazards from them.

- H. No welding, cutting, or heating shall be done where the application of flammable paints, the presence of other flammable compounds or heavy dust concentrations.
- I. Suitable fire extinguishing equipment shall be immediately available in a state of readiness for instant use.
- J. Drums or barrels that had contained a flammable substances; oil, grease, solvent, thinner, etc., shall not be cut with a torch.
- K. No welding shall be done in an atmosphere-lacking proper ventilation.
- L. All welders shall wear flameproof gauntlet gloves, and shoulder covers shall be worn for overhead welding.
- M. There shall be no leaks of cooling water, shielding gas, or engine fuel on welding trucks or equipment.
- N. If welding in a tank or sub-surface structure, employees shall wear a lifeline, and the Confined Space Entry Program shall be followed.
- O. Welder's clothing shall be free from oil and grease.

Gas Welding

- A. Acetylene cylinder valves shall not be opened more than $\frac{1}{2}$ turn and preferably no more than $\frac{3}{4}$ – turn.
- B. Approved flash arrestors shall be installed between the torch and hoses.
- C. Only proper tools shall be used to clean torches.
- D. Matches and hot spots from previous work shall not be used to ignite acetylene torches.
- E. Torches shall be inspected before each use.
- F. If gauges are found not working correctly, they shall be taken out of service and replaced immediately.
- G. Hose connections shall be kept free of oil and grease.
- H. A single hose having more than one (1) gas passage shall not be used. When taping hoses together, not more than four (4) inches out of 12 shall be taped.
- I. Hoses shall be inspected daily before use. Hoses in doubtful condition shall not be used and replaced immediately.
- J. Hose couplings shall be of the type that cannot be unlocked by means of a straight pull without rotary motion.
- K. Boxes used for storage of hoses shall be ventilated.
- L. Hoses shall be laid out so that they will not create a tripping hazard.
- M. Valves shall be “cracked” before regular hook-ups are attempted. Operators should stand clear and crack valves away from sources of ignition.
- N. Cylinder valves shall be opened slowly.
- O. Special wrenches should be left in place so that the gas may be shut off quickly.
- P. Regulators shall be used on all fuel gas cylinders.
- Q. Cylinder valves shall be closed and gas shall be released from the regulator before the regulator is removed.
- R. If a cylinder is found to be leaking and cannot be repaired by tightening connections, it shall be tagged and removed to a safe area immediately.
- S. All gauges should be removed from oxygen and acetylene cylinders while being transported.

- T. Stored oxygen cylinders must be separated from stored acetylene cylinders or combustible materials (especially oil or grease) by at least 20 feet or separated by a non-combustible barrier.
- U. All pressurized gas cylinders in transport shall be transported in an upright secured position. The hoses and gauges must be removed and the cylinder must be capped.

Electric Welding

- A. When welding is being done near other employees, welders shall use a shield or screen.
- B. The frames of all arc-welding units shall be grounded.
- C. When electrode holders are left unattended, the electrodes shall be removed and the holders shall be placed and protected that they cannot make electrical contact with employees or conducting objects.
- D. Hot electrode holders shall not be dipped in water. To do so may expose the arc welder or cutter to electric shock.
- E. When the arc welder or cutter has to leave his work or to stop for any appreciable length of time, or when the arc welding or cutting machine is to be moved, the power supply switch to the equipment shall be opened.
- F. Any faulty or defective equipment shall be reported to the supervisor immediately.
- G. Whenever practicable, all arc welding and cutting operations shall be shielded by non-combustible screen which will protect employees and other persons working in the vicinity from the direct rays of the arc.
- H. Normally two (2) men shall be present. The helper shall maintain a constant watch for fire hazards.
- I. All electrode holders shall be of ample capacity.
- J. Current-carrying parts held by the arc welder shall be insulated.
- K. Cables shall be of ample capacity and shall be fully insulated.
- L. When using a pipeline as a ground return circuit, employees shall determine that an electrical contact exists at all joints. If the pipeline is used continuously, the joints shall be bonded, and in this case, periodic inspections shall be made for electrolysis and fire hazards.
- M. Chains, wire ropes, cranes, hoists and elevators shall not be used to carry welding current.
- N. Machines shall be dry before they are used.

Indoor Welding

General mechanical ventilation shall be of sufficient capacity and so arranged as to produce the number of air changes necessary to maintain welding fumes and smoke within safe limits. This calls for freely movable bonds to be placed closed to the work area so that fumes and smoke will be removed properly. Fumes shall be exhausted to a safe area.

Fuel Storage Facilities

- A. Fuel and other petroleum products stored on the project are to be located inside a lined retention area surrounded by berms of adequate height to contain a fuel spill.

Appendix I

The berm shall be one and a half ($1 \frac{1}{2}$) times the largest tank's volume in the retention area.

- B. All drivers are required to exercise extreme caution when filling their vehicles, to avoid spills and overflows.
- C. Engine must be turned off before fueling.
- D. NOTE – add fuel storage drawing,

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY

P O Box 969
Shiprock, New Mexico 87420
(505) 368-5151

SPILL INCIDENT SUMMARY FORM

This form must be completed for any reportable spills of Petroleum Products or Chemical spills that occur in NECA Yard or out on the NECA Project sites. Call NECA Safety Department immediately after the spill.

Location of spill: _____ Date: _____

Time: _____ Total amount of spill: _____

What caused the spill:

Corrective Action Taken:

Plans for preventing recurrence:

Foreman (Print)

Signature

Title

Supervisor (Print)

Signature

Title

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY
P O BOX 969
SHIPROCK, NEW MEXICO 87420
(505) 368-5151

ABOVE STORAGE TANKS AND FIRE SAFETY
MONTHLY VISUAL INSPECTION FORM

Project Name: _____ Date: _____

Location of Tanks: _____

DESCRIPTION	STORAGE TANK 1	STORAGE TANK 2	STORAGE TANK 3	STORAGE TANK 4	OIL DRUMS	OTHER
AST ONLY						
SIZE OF TANK						
PRODUCT						

PUMPS

Corrosion						
Hose						
Leakage						
Nozzle						
Pump Condition						

SECONDARY CONTAINMENT

Plastic Liner						
Dirt Dike						
Fence						

FIRE SAFETY

Fire Extinguisher						
No Smoking Sign						
Placard						
Locks						
Security						

Keep this document for your records for three years.

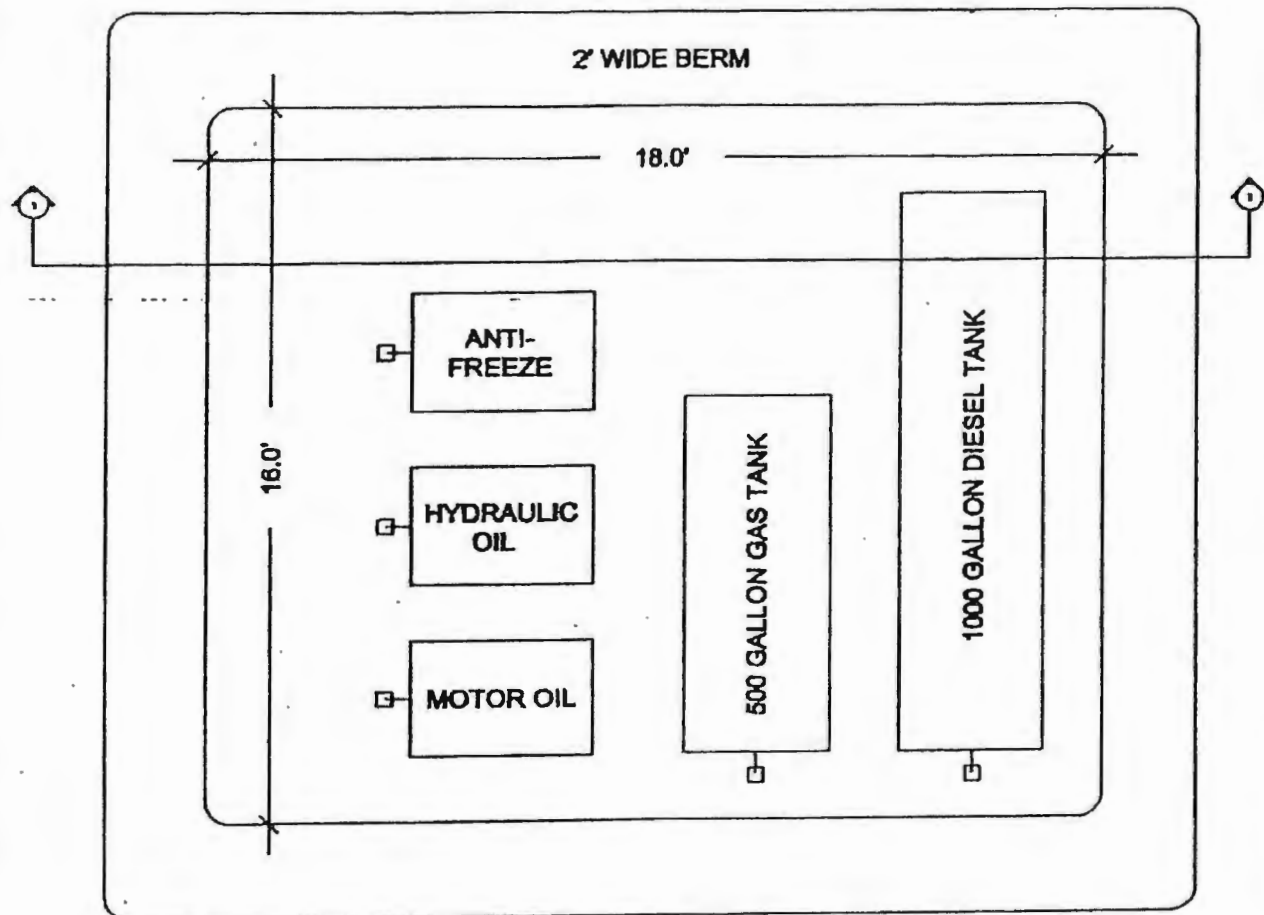
APPENDIX A.

Safety Meetings Topics

The topics listed below are basic suggestions for safety discussions that can be presented at safety meetings. However, additional topics may be introduced at any time during the safety meeting. Each Superintendent/Foreman shall conduct the Field Safety Meeting in a manner that invites input and participation from the crew.

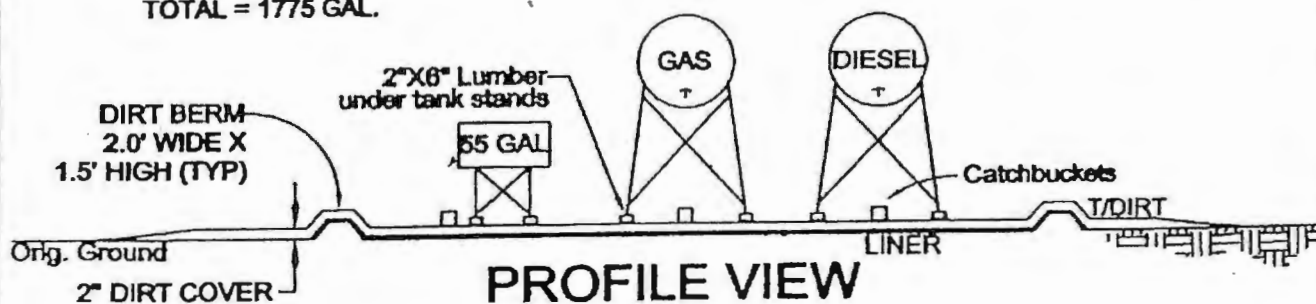
1. Trenching Operations and Hazards
2. Blasting Operations and Hazards
3. Machinery Operations and Hazards
4. Personal Protective Equipment
5. Environment Factors and Hazards
6. Insects, dogs, and snakes
7. Heat stress
8. Snow, rain, ice and dust
9. Accident and Injury Reporting
10. First Aid
11. Confined spaces
12. Use of Scaffolding and ladders
13. Use of seat belts
14. Sandblasting and painting
15. Welding and grinding
16. Employee responsibilities
17. Safety belts and lifelines
18. Hand tools
19. Machine guards
20. Housekeeping
21. Flagging and signing
22. Lifting and carrying
23. Crane safety
24. Electrical safety
25. Fire prevention
26. Spill Prevention Control Countermeasure Plan (SPCCP)
27. Drug and Alcohol free work place.

PLAN VIEW



DIESEL = 1000
 GASOLINE = 500
 OILS = 275
 TOTAL = 1775 GAL.

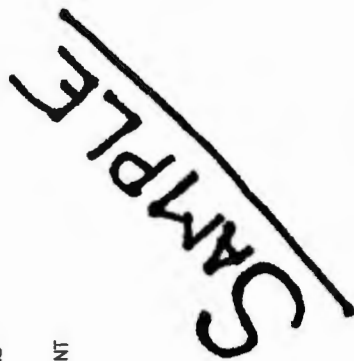
TOTAL BERM CAPACITY: 3,230 GAL.
 TOTAL TANK CAPACITY: 1,775 GAL.



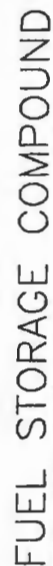
PROFILE VIEW

SECTION

STANDARD DETAIL FUEL STORAGE LOCATION: NECA YARDS	Designed by: W. Beqay	Checked by: W. Beqay
	Not to Scale: Use plan dimensions.	
	DATE: September 9, 1998 (Original Design)	
	REVISION: 2 10-30-98	
NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY	PDH	CONTAINMENT PLAN
		SHEET 1 OF 1



1. STORAGE AREA TO HAVE 50' MIN. DISTANCE FROM ANY BLDG.
2. THE TANKS TO HAVE APPROX. 10 FT. CLEARANCE BETWEEN THEM.
3. SPILL CAPACITY EXCEEDS THE VOLUME OF THE 10,000 GAL. FUEL TANK WITH FREEBOARD FOR PRECIPITATION.
4. ALL DIMENSIONS AND NOTES MAY VARY DUE TO FIELD CONDITIONS.
5. MAX. TANK CAPACITY 10,000 GAL. DIESEL, 2,000 GAL. GASOLINE AND STORAGE DRUMS.
6. SPILL CAPACITY 29,006 GAL.



DRAWN BY: BRETT GRUBBS

Date 1-21-09rev not to scale

DWG. NO. 1367-FUEL-001

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY HAND PROTECTION POLICY

Navajo Engineering and Construction Authority (NECA) standards require that PPE be used by employees whenever workplace hazards are discovered that could damage any part of the body. In addition, NECA requires all employees to wear PPE, such as but not limited to, safety glasses, face shields, safety shoes, hearing protection (ear plugs/ear muffs), gloves, etc. as required by their job duties. PPE is to be used as a tool to reduce the hazards employees face in their daily job duties. PPE is not to be used and will not be used as a substitute for safe work practices, machine guards, or other controls designed by equipment manufacturers or other engineering sources. PPE is to be used in conjunction with these controls to increase employee protection.

This Hand Protection Policy serves as a reinforcement of NECA's commitment to the safety and health of its employees. Again, PPE is a tool, which when used correctly, reduces the hazards employees face on the job

All employees are required to wear, at a minimum, Type 3 Cut Resistant gloves when on any NECA construction site, shop, warehouse, and yards. This excludes performing office or administrative tasks, or when conducting tasks that require the appropriate hand protection (see guide of this section).

When operating moving machinery such as drills, saws, grinders or other rotating and moving equipment, CAUTION SHALL be taken, as the equipment could catch the glove and pull the employee's hand into the hazardous areas. Cut resistant gloves are not intended to be used as a means of stopping sharp moving blades, sharp points, or other cutting tools. Cut resistant gloves only minimizes the exposure. Elimination or administrative measures should be the primary options.

The following is a guide to the most common types of protective work gloves and the types of hazards they can guard against:

Hazard	Type of Glove
Contact with biological or chemicals other than oils, solvents, corrosives or toxic material, these gloves are not cut resistant and should only be worn for the intended task.	Impervious disposable gloves: Disposable gloves, usually made of lightweight rubber, latex, or nitrile can help guard against mild irritants.
Contact with oils, solvents, corrosives, or toxic material, these gloves are not cut resistant and should only be worn for the intended task.	Chemical-resistant utility gloves: Chemical resistant gloves may be made of rubber, nitrile, neoprene, polyvinyl alcohol, or vinyl, etc. These gloves protect hands from corrosives, oils, and solvents. When selecting chemical resistant gloves, be sure to consult the manufacturers' recommendations, especially if the gloved hand will be immersed in the chemical.
Laceration, at a minimum, employees engaged in these activities shall utilize Type 3 Cut Resistant hand protection.	Cut-resistant material (e.g. Kevlar TM): Metal mesh gloves are used to protect hands from accidental cuts and scratches. Persons working with cutting tools, scalpels, scissors, or other sharp instruments use them most commonly.

Contact with hot or cold objects, these gloves are not cut resistant and should only be worn for the intended task.	Welders', aluminized, insulated, cryo, and freezer gloves are a few of the types of gloves used to insulate hands from intense heat or cold. <u>Canvas or leather work gloves:</u> (1) Fabric gloves are made of cotton or fabric blends and are generally used to improve grip when handling slippery objects. (2) Leather gloves are also used in combination with an insulated liner when working with electricity.
--	--

Enforcement

An employee that fails to wear the required personal protective equipment (as stated in this policy) shall be subject to a one-day suspension without pay. A repeat offense will result in further disciplinary action up to and including termination.

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY'S SAFETY POLICY MANUAL

ACKNOWLEDGEMENT FORM

I hereby acknowledge that I have been orientated on *Navajo Engineering and Construction Authority's Safety Policy Manual*. I fully understand that I must have a thorough understanding of the Manual. I will abide by these instructions and practices.

I acknowledge that NECA safety rules and regulations are instituted for the benefit of all parties to ensure a safe and healthful working environment.

I further acknowledge adherence to these rules and regulations is a condition of my employment with NECA.

I also understand that failure to adhere to NECA Safety Policies will result in immediate disciplinary action, up to and including termination.

By signing below, indicates that I have been made aware of NECA's safety policies and procedures and I was given the opportunity to ask questions concerning the *NECA's Safety Policy Manual*.

Employee Signature

Supervisor Signature

Employee Print Name

Supervisor Print Name

Date Signed

Date Signed

**NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY
WHEATFIELDS BORROW PIT - NECA PROJECT N12**

I. INTRODUCTION

Navajo Engineering & Construction Authority's (NECA or Authority) written Emergency Action Plan provides employees with guidelines in the event of any natural or man-made emergency occurring within the confines of its facility Wheatfields Borrow Pit.

This Emergency Action Plan is site specific for work being within at the NECA Wheatfields Borrow Pit, located across the Wheatfields Chapter House. The Michael Redhorse, Project Superintendent is the designated Emergency Coordinator.

A copy of this Emergency Action Plan is kept at the following location:

Navajo Engineering & Construction Authority
Safety Department
One Uranium Blvd.
Shiprock, NM
(505) 210-7070

A copy of this plan will be kept at NECA N12 Yard. The plan shall be made available to all employees. A copy of the current *NECA Safety Policy* will be on site.

II. GENERAL INFORMATION

The person to contact concerning this Emergency Action Plan:
Daniel Gourneau, Safety Manager
One Uranium Blvd.
Shiprock, NM
(505) 210-7017

III. EMERGENCY PREPAREDNESS

Emergency Contact Numbers

1. CHINLE FIRE DEPARTMENT: 911 or (928) 674-2105
2. NAVAJO EMS CHINLE: 911 OR (928) 674 - 7099
3. POLICE: 911 or (928) 674-2111
4. SECURITY after 5pm M-F and on weekends/holidays 24 hours: Michael Redhorse (505) 406-7489.

Utility Company Emergency Contacts

1. Navajo Tribal Utility Authority (NTUA): (800) 528-5011
2. Frontier Communication: (800) 871-5581

Evacuation Routes

Evacuation route maps have been posted in each work area. The following information is marked on evacuation maps:

1. Emergency exits
2. Primary and secondary evacuation routes
3. Locations of fire extinguishers
4. Fire alarm pull stations' location

5. Assembly points

All personnel should know at least two evacuation routes. All emergency exits shall be free of obstructions at all times.

IV. EMERGENCY REPORTING AND EVACUATION PROCEDURES

In the event of an emergency occurring on any NECA N12 Project worksite, affected employees will:

1. Immediately stop the work and notify the supervisor and/or the Safety Department.
2. Contact the local authorities, i.e., fire department, emergency medical services, or police (hereafter, Public Safety Service(s)).
3. Employees will report to the designated meeting spot for a head count.
4. After an emergency, no employee shall leave the meeting site until properly accounted for and excused by the competent person.

Types of emergencies to be reported by site personnel are:

1. Injury or Medical
2. Fire
3. Severe Weather
4. Chemical Spill
5. Threatening or disruptive employee, vendor, customer, or visitor

V. EMERGENCY RESPONSE

Injury or Medical Emergency

Each department or building manager shall designate and identify employees trained in first aid/CPR/AED use. The identified employee(s) shall be notified when the need for treatment of an injured or ill employee is in need of evaluation.

1. Assess the scene for safety. No employee is to enter an unsafe scene for any reason.
2. Treat the injured after determining the scene is safe to enter.
3. If necessary, call medical emergency phone number:
Ambulance
Fire Department
Police Department if ambulance or Fire Department is unavailable.
4. Provide the following information:
 - a. Nature of medical emergency,
 - b. Location of the emergency (address, building, room identification), and
 - c. Your name and phone number from which you are calling.
5. Do not move victim unless absolutely necessary.
6. Call the one of the personnel trained in CPR and First Aid to provide the required assistance prior to the arrival of the professional medical help:
7. If personnel trained in First Aid are not available, as a minimum, attempt to provide the following assistance:
 - a. Stop the bleeding with firm pressure on the wounds (note: avoid contact with blood or other bodily fluids).
 - b. Clear the air passages using the abdominal thrusts and back blows in case of choking.
8. In case of rendering assistance to personnel exposed to hazardous materials, consult the Safety Data Sheet (SDS) and wear the appropriate personal protective equipment.
9. Attempt first aid ONLY if trained and qualified.

Fire Emergency

Appendix J

1. When fire is discovered:
 - a. Activate the nearest fire alarm (if installed)
 - b. Notify the local Fire Department
 - c. If the fire alarm is not available, notify the site personnel about the fire emergency by the following means (check applicable):
 - i. Voice Communication
 - ii. Phone
 - iii. In-house radio
2. Fight the fire ONLY if:
 - a. The Fire Department has been notified.
 - b. The fire is small and is not spreading to other areas.
 - c. Escaping the area is possible by backing up to the nearest exit.
 - d. The fire extinguisher is in working condition and personnel are trained to use it.
3. Upon being notified about the fire emergency, occupants must:
 - a. Leave the building using the designated escape routes.
 - b. Assemble in the designated area identified by the department or building manager.
 - c. Remain outside until the competent authority (Designated Official or designee) announces that it is safe to reenter.
4. Department Manager or Designated Employee shall:
 - a. Disconnect utilities and equipment unless doing so jeopardizes his/her safety.
 - b. Coordinate an orderly evacuation of personnel.
 - c. Perform an accurate head count of personnel reported to the designated area.
 - d. Determine a rescue method to locate missing personnel.
 - e. Provide the Fire Department personnel with the necessary information about the facility.
 - f. Perform assessment and coordinate weather forecast office emergency closing procedures
5. Lobbies and Hallways:

The Receptionist or assigned front desk person in each building is responsible to:

 - a. Ensure that all employees and visitors have evacuated the lobby, restrooms, and hallways.
 - b. Assist or request for assistance with all physically challenged employees and visitors in emergency evacuation.
 - c. Report any problems to the Emergency Coordinator at the assembly area.

Severe Weather and Natural Disasters

1. Tornado:
 - a. When a warning is issued by sirens or other means, seek inside shelter.
 - i. Consider the following:
 - Small interior rooms on the lowest floor and without windows,
 - Hallways on the lowest floor away from doors and windows, and
 - Rooms constructed with reinforced concrete, brick, or block with no windows.
 - b. Stay away from outside walls and windows.
 - c. Use arms to protect head and neck.
 - d. Remain sheltered until the tornado threat is announced to be over.
2. Earthquake:
 - a. Stay calm and await instructions from the Emergency Coordinator or the designated official.
 - b. Keep away from overhead fixtures, windows, filing cabinets, and electrical power.
 - c. Assist people with disabilities in finding a safe place.
 - d. Evacuate as instructed by the Emergency Coordinator and/or the designated official.

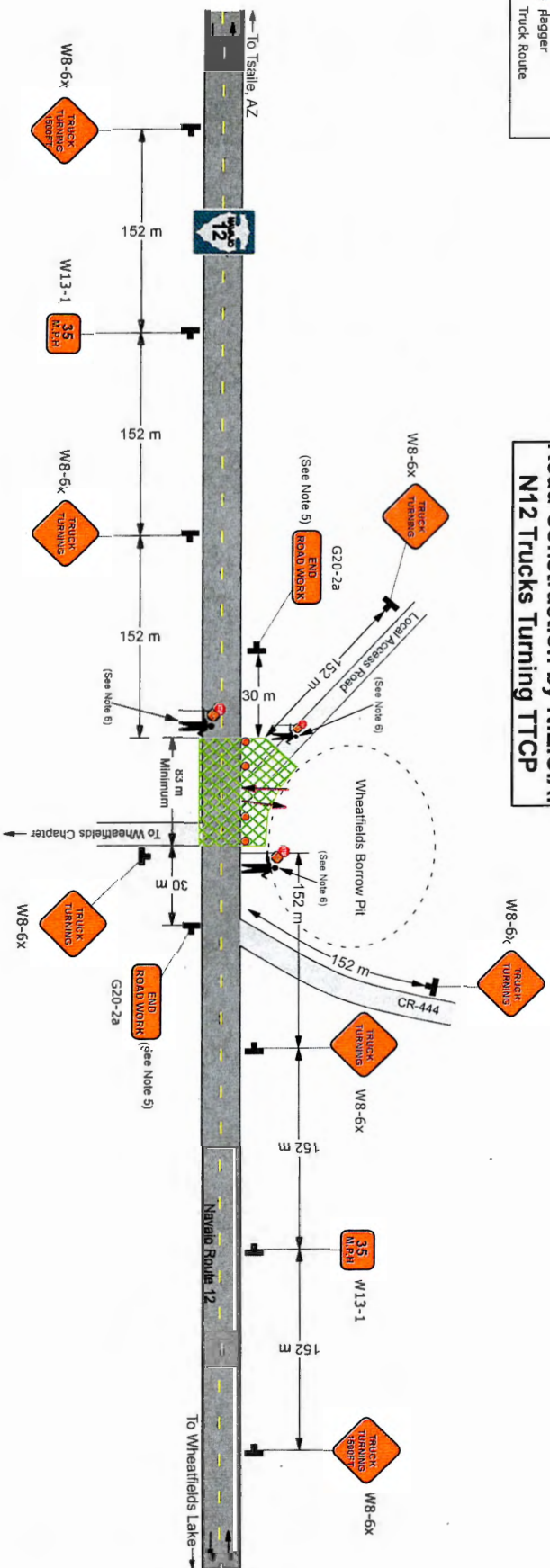
3. Flood:
 - a. If indoors:
 - i. Be ready to evacuate as directed by the Emergency Coordinator and/or the designated official.
 - ii. Follow the recommended primary or secondary evacuation routes.
 - b. If outdoors:
 - i. Climb to high ground and stay there.
 - ii. Avoid walking or driving through flood water.
 - iii. If car stalls, abandon it immediately and climb to a higher ground.
4. Blizzard:
 - a. The Project Superintendent shall determine the need for shelter in place based on the weather conditions.
 - b. Stay calm and await instructions from the Emergency Coordinator or the designated official.
 - c. Stay indoors!
 - d. If there is no heat:
 - i. Close off unneeded rooms or areas.
 - Stuff towels or rags in cracks under doors.
 - Cover windows at night.
 - Eat and drink. Food provides the body with energy and heat. Fluids prevent dehydration.
 - Wear layers of loose-fitting, light-weight, warm clothing, if available.
 - ii. Exercise to keep blood circulating and to keep warm.
5. If confronted with a threatening or disruptive employee, vendor, customer, or visitor:
 - a. Notify your supervisor or another nearby employee.
 - b. Stay calm and non-confrontational.
 - c. Slow everything down.
 - d. Speak slowly and keep distance from perpetrator.
 - e. Do not become animated in your body language.
 - f. If a weapon is displayed, try to go to a safe area and summon the police.

VI. REVIEW

The Emergency Action Plan shall be reviewed continuously and may change as necessary. All suggestions will be considered and reviewed and all revisions shall be approved by management and disseminated to all NECA employees.

Legend	
	Channelizing Device
	Turning Area
	Flagger
	Truck Route

Wheatfields Borrow Pit Road Construction by N.E.C.A. M12 Trucks Turning TTCP

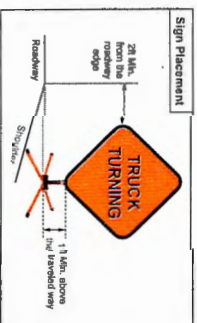


- General Notes:
1. All traffic control devices and signs shall be in accordance with the MUTCD manual (latest edition) and the AZ Supplemental MUTCD.
 2. Final location and spacing of road signs and devices may be adjusted to fit onsite field conditions based on the daily Job Hazard Analysis and progression of work.
 3. Borrow Pit truck route shall be maintained in a drivable condition.
 4. All TTC signs and devices shall be maintained for cleanliness, visibility and correct positioning.
 5. If lane closure is completely within project BOP-EOP limits, "End Road Work" (G20-2a) sign may be omitted.
 6. If traffic conditions warrant, flaggers may be utilized at the truck turning intersection, FLAGGER (W20-7a) and BE PREPARED TO STOP (W20-7b) advanced warning signs shall be added to sequence of signs preceding flagger location. Sign spacing shall be 152 m. Flaggers shall follow the procedures provided in Section 6E.07 and 6E.08 of the MUTCD manual. Flaggers shall be equipped with two way radios for communication. Flaggers shall wear a class 2 or higher yellow/green high visibility safety apparel.



Date: 12/30/2019 Author: B. Smith Project: M12/19-4) 1,2&4 Road Construction, Bridge & Misc. Construction
Project Number: 1402 Sheet Number: 1 of 1 Borrow Pit Supervisor: C. Padilla

Comments:
Trucks Turning TTCP for Borrow Pit Hauling
Navajo Route 12 - Wheatfields, Arizona to Tsalie, Arizona
TTC Plan not to scale



Manifest	
2 x G20-2a end road work	
2 x W13-1 xx mph	
7 x W8-6x W8-6x truck turning	

Stormwater Pollution Prevention Plan (SWPPP)

For Construction Activities at:

Project 1402
N12 Wheatfield to Tsale, Arizona
Wheatfields/Tsale , Arizona 86556
Michael Redhorse: 505-406-7489
Jamie Sagg: 505-406-2150

SWPPP Prepared for (Owner):

Navajo DOT – Executive Project Management
Darryl Bradley: Principal Civil Engineer /Project Manager
P.O. Box 3690, #16 Old Coal Mine Road
Mentmore, NM 87319
505-371-8300
505-371-8399
dbradley@navajodot.org

SWPPP Prepared by (Contractor):

Navajo Engineering and Construction Authority
P.O. Box 969
Shiprock, New Mexico 87420
505-210-7070
505-210-7008

SWPPP Preparation Date:

08/26/2019

Estimated Project Dates:

Project Start Date: 11/11/2019

Project Completion Date: 09/08/2021

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SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES

1.1 Owner and Operator

A. Operator:

NAVAJO ENGINEERING AND CONSTRUCTION
AUTHORITY

Herman Patterson

P.O. Box 969

Shiprock, New Mexico 87420

505-701-1379

Herman@navajo.net

AREA OF CONTROL OF PROJECT:

N12(19-4)1,2, &4

BOP STA. 38+700 TO EOP STA. 55+900

Owner:

NAVAJO DOT – EXECUTIVE PROJECT MANAGEMENT

Darryl Bradley: Civil Engineer/Project Manager

P.O. Box 3690, #16 Old Coal Mine Road

Mentmore, NM 87319

505-371-8300

dbradley@navajodot.org



B. Subcontractors: See Attached Listing:

C. Emergency 24-Hour Contact:**NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY**

Herman Patterson: Construction Manager – 505-701-1379

Michael Redhorse: Area Project Superintendent – 505-406-7489

Jamie Sagg: Project Engineer – 505-406-2150

Daniel Gourneau: Safety Manager – 505-406-7665

Lemuel Benallie: Safety Officer – 505-406-6078

Malcom Tsosie: Safety Officer – 505-406-2970

1.2 Stormwater Team

Stormwater Team		
Name, position, and contact	Responsibilities	I Have Read the CGP and Understand the Applicable Requirements
Herman Patterson Construction Manager 505-701-1379 Herman@navajo.net	Overall Construction Supervision (NECA)	☐ Yes ☒ No Date: Click here to enter a date.
Michael Redhorse Area Project Superintendent 505-406-7489 Michael@navajo.net	Day-to-day operations of area project sites	☒ Yes Date: 7/14/2017
Jamie Sagg NECA Project Engineer 505-406-2150 Jamie@navajo.net	Day-to-day operations and materials at project site	☒ Yes Date: 10/28/2019
Lee B. Roy NECA ESH Field Officer 928-205-1180 Lee@navajo.net	Field Inspections for 402 permit per month	☒ Yes Date: 7/14/2017
Darryl Bradley Principal Civil Engineer 505-371-8300 dbradley@navajodot.org	Overall approval of contract work on the project	☐ Yes ☒ No Date: Click here to enter a date.

SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING**2.1 Project/Site Information****Project Name and Address**

Project/Site Name: 1402: Wheatfields to Tsale Widen Roadway Project N12

Project Street/Location: BOP STA. 38+700 TO EOP STA. 55+900

City: Wheatfields/Tsale

State: Arizona

ZIP Code: 86507

County or Similar Subdivision: Apache

Business days and hours for the project: MST: Monday thru Thursday: 7:00 AM to 5:30 PM

DST: Monday thru Friday 8:00 AM to 4:30 PM.

Project Latitude/Longitude: Beginning of Project.Latitude: 36.2231° N
(decimal degrees)Longitude: - 111.1046 ° W
(decimal degrees)

Latitude/longitude data source:

☒ Map ☐ GPS ☐ Other (please specify: **Google Earth**)

Horizontal Reference Datum:

☐ NAD 27 ☒ NAD 83 ☐ WGS 84**Additional Project Information**Are you requesting permit coverage as a "federal operator" as defined in Appendix A of the 2017 CGP? ☐ Yes ☒ NoIs the project/site located on Indian country lands, or located on a property of religious or cultural significance to an Indian tribe? ☒ Yes ☐ No

If yes, provide the name of the Indian tribe associated with the area of Indian country: Navajo Nation

2.2 Discharge InformationDoes your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? ☐ Yes ☒ NoAre there any waters of the U.S. within 50 feet of your project's earth disturbances? ☒ Yes ☐ No

Discharge Information

For each point of discharge, provide a point of discharge ID (a unique 3-digit ID, e.g., 001, 002), the name of the first water of the U.S. that receives stormwater directly from the point of discharge and/or from the MS4 that the point of discharge discharges to, and the following receiving water information, if applicable:								
Point of Discharge ID	Name of receiving water:	Is the receiving water impaired (on the CWA 303(d) list)?	If yes, list the pollutants that are causing the impairment:	Has a TMDL been completed for this receiving waterbody?	If yes, list TMDL Name and ID:	Pollutant(s) for which there is a TMDL:	Is this receiving water designated as a Tier 2, Tier 2.5, or Tier 3 water?	If yes, specify which Tier (2, 2.5, or 3)?
1	Aqua Sal Creek	☐ Yes ☒ No		☐ Yes ☒ No			☐ Yes ☒ No	
2	Tsaile Creek	☐ Yes ☒ No		☐ Yes ☒ No			☐ Yes ☒ No	
3	Tsaile Lake	☒ Yes ☒ No		☐ Yes ☒ No			☐ Yes ☒ No	
	Black Pinnacle Spring	☐ Yes ☒ No		☐ Yes ☒ No			☐ Yes ☒ No	
5	Wheatfields Creek	☐ Yes ☒ No		☐ Yes ☒ No			☐ Yes ☒ No	

2.3 Nature of the Construction Activities**General Description of Project :**

**GRADE, DRAINAGE, AGGREGATE BASE COURSE,
HOT ASPHALTIC CONCRETE PAVEMENT, ARCH STRUCTURES and MISCELLANEOUS
CONSTRUCTION FOR LENGTH OF 17.2 km (10.68 miles) OF ROADWAY.**

Size of Construction Site

Size of Property: Roadway	17.2 Kilometers
Wheatfield : Borrow Pit	2.02 Ha
Total Area Expected to be Disturbed by Construction Activities	20.6 Ha
Maximum Area Expected to be Disturbed at Any One Time	3.00 Ha

Type of Construction Site (check all that apply):

- ☐ Single-Family Residential ☐ Multi-Family Residential ☐ Commercial ☐ Industrial
☐ Institutional ☒ Highway or Road ☐ Utility ☐ Other _____

Will there be demolition of any structure built or renovated before January 1, 1980?

☐ Yes ☒ No

If yes, do any of the structures being demolished have at least 10,000 square feet of floor space?

☐ Yes ☐ No ☒ N/A

Was the pre-development land use used for agriculture (see Appendix A for definition of "agricultural land")?

☐ Yes ☒ No

Pollutant-Generating Activities

List and describe all pollutant-generating activities and indicate for each activity the type of pollutant that will be generated. Take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos, that will be disturbed during construction.

Potential Source Construction Site Pollutants								
Potential Sources of Sediment to Stormwater Runoff	Primary Pollutant	Other Pollutants						
	Sediment	Nutrients (e.g. Nitrogen)	Heavy Metals	pH (acids/bases)	Pesticides/Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids
Clearing and Grading, Filling	X	X				X		X
Topsoil Removal	X	X				X		X
Stockpiles	X	X				X		X
Hauling	X					X		X
Material Delivery and Storage	X					X		X
Material use during installation	X							X
Sanitary Facilities	X			X			X	X
Equipment Staging/Storage	X					X		X
Equipment Maintenance	X					X		X
Vehicle Tracking	X	X				X		
Revegetation/Reseeding	X	X				X		
Spreading, Compaction of Fill Materials	X	X				X		

Removal of Obstructions and General Excavating	X	X				X		X	
BMP Placement	X	X				X		X	

Potential Sources of Pollution (SDS will be on-site, NIOSH Chemical Hazard, ERG)

Material/Chemical	Physical Description	Stormwater Pollutants	Area where Material/Chemical is used on site
Glue, adhesives	White or yellow liquid	Polymers, epoxies	Building construction, general use
PVC cleaner, adhesive	Blue or purple: liquid, clear or opaque liquid	Solvents	PVC pipe joining and related construction
Paints	Various colored liquid	Metal oxides, volatile organic compounds, talc, calcium carbonate, arsenic, other metals	Building construction, Stripping of roadway, surface coatings
Concrete curing compounds	Creamy white liquid	Synthetic resin compound, acrylic compound, wax compound, chlorinated rubber compound	Construction of wing walls, box culverts, ROW monuments,
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil	Construction/material staging areas, secondary containment areas where equipment are use and possible leaks or spills
Gasoline/Diesel	Colorless, pale brown or pink	Benzene, ethyl benzene, toluene, xylene, Methyl Tert-Butyl Ether (MTBE), petroleum distillate, oil and grease	Construction/material staging areas, secondary containment areas where equipment are use and possible leaks or spills
Antifreeze/coolants	Clear, yellow/green/orange liquid	Ethylene glycol, propylene glycol, copper, lead, zinc	Fuel and staging areas possible leaks or broken hoses from equipment
Sanitary toilets	Various colored liquid	Bacteria, parasites, viruses	Staging areas: Construction yard and locations throughout linear project

Pesticides (insecticides, fungicides, herbicides	Various colored to colorless liquid, powder, pellets or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic	outside services, reseeder, NOTE: NO herbicides or pesticides allowed on project site
Dumpsters	Various colored liquids	Bacteria, parasites, viruses	Construction yard/Fuel areas
Concrete related materials	White solid/gray liquid	Limestone, sand, high pH, chromium	Construction of wing walls, box culverts, ROW monuments, fence strain posts, misc. construction

ADDITIONAL MATERIAL/CHEMICAL LISTING WILL BE IN THE NIOSH CHEMICAL LISTING AND ER
GUIDE BOOK WHICH WILL BE LOCATED AT THE PROJECT SITE.

Construction Support Activities

Describe any construction support activities for the project:

WHEATFIELD/ TSAILE EQUIPMENT STAGING AND MATERIAL STORAGE YARDS

36.5832, -111.0852

MICHAEL REDHORSE
505-406-7489
Michael@navajo.net

JAMIE SAGG
505-406-2150
Jamie@navajo.net

WHEATFIELDS BORROW PIT

36.2385, -109.1261

CHRISTINE PADILLA
505-686-3163
Christine@navajo.net

N12 TSAILE/ WHEATFIELDS ROAD CONSTRUCTION HOT PLANT

36.3224, -109.2284

CHRISTINE PADILLA
505-686-3163
Christine@navajo.net

2.4 Sequence and Estimated Dates of Construction Activities**Phase I**

INSTALLATION OF TEMPORARY EROSION CONTROL MEASURES (TECM)	
Estimated Start Date of Construction Activities for this Phase	12/19/2019
Estimated End Date of Construction Activities for this Phase	9/8/2021
Estimated Date of Application of Stabilization Measures for Areas of the Site Required to be Stabilized	8/9/2021
Estimated Date when Stormwater Controls will be Removed	9/3/2021

Phase II

CONTINUE WITH TECM DURING SOIL DISTURBING ACTIVITIES INCLUDING REMOVAL OF EXISTING STRUCTURES, CLEARING, INSTALLATION OF WATERLINES, CONSTRUCTION OF SURGE TANK FACILITIES, WATER, DRAINAGE STRUCTURES, STABILIZATION, VARIOUS EXCAVATION AREA, GRADING, BKFILL	
Estimated Start Date of Construction Activities for this Phase	12/19/2019
Estimated End Date of Construction Activities for this Phase	9/8/2021
Estimated Date of Application of Stabilization Measures for Areas of the Site Required to be Stabilized	5/3/2021
Estimated Date(s) when Stormwater Controls will be Removed	9/8/2021

Task Name	Duration	Est Start	Est Finish
Construction Services	472 days	Tue 11/19/19	Wed 9/8/21
Construction Yard Set-up	5 days	Tue 11/19/19	Mon 11/25/19
Temporary Traffic Control	472 days	Tue 11/19/19	Wed 9/8/21
Mobilization	472 days	Tue 11/19/19	Wed 9/8/21
Quality Control Manager	472 days	Tue 11/19/19	Wed 9/8/21
Erosion Control & Maintenance	462 days	Tue 12/3/19	Wed 9/8/21
Clear & Grubbing - Logging BOP to EOP	100 days	Mon 12/2/19	Fri 4/17/20
Detour / CSPA N504 - Bridge	20 days	Mon 12/2/19	Fri 12/27/19
Detour / CSPA N505 - Bridge	20 days	Mon 12/30/19	Fri 1/24/20
N504 Bridge Removal	47 days	Mon 1/27/20	Tue 3/31/20
N505 Bridge Removal	43 days	Wed 4/1/20	Fri 5/29/20
N504 Bridge	69 days	Mon 6/1/20	Thu 9/3/20
Foundation Excavation & Concrete	42 days	Mon 6/1/20	Tue 7/28/20
Pile Driving	10 days	Wed 7/29/20	Tue 8/11/20
Install Precast Arch Culvert units with Precast wingwalls	17 days	Wed 8/12/20	Thu 9/3/20
N505 Bridge	74 days	Fri 9/4/20	Wed 12/16/20
Foundation Excavation & Concrete	36 days	Fri 9/4/20	Fri 10/23/20
Pile Driving	5 days	Mon 10/26/20	Fri 10/30/20

Install Precast Arch Culvert units with Precast wingwalls	17 days	Mon 11/2/20	Tue 11/24/20
Concrete Wall Barrier w/ Transition	16 days	Wed 11/25/20	Wed 12/16/20
Roadway	375 days	Mon 3/2/20	Fri 8/6/21
Clear & Grubbing	15 days	Mon 3/2/20	Fri 3/20/20
Milling	36 days	Mon 3/23/20	Mon 5/11/20
Culvert Pipes & End Sections- 3 Backfill Crew	120 days	Tue 4/28/20	Mon 10/12/20
Roadway Excavation	122 days	Tue 4/28/20	Wed 10/14/20
Unclassified Borrow	30 days	Thu 10/15/20	Wed 11/25/20
Subgrade Stabilization	16 days	Thu 11/26/20	Thu 12/17/20
Finish Subgrade	50 days	Fri 12/18/20	Thu 2/25/21
Untreated CRABC & ABC	43 days	Fri 2/26/21	Tue 4/27/21
Prime Coat	10 days	Wed 4/28/21	Tue 5/11/21
Hot Asphaltic Concrete Paving	55 days	Wed 5/12/21	Tue 7/27/21
ABC/CRAB Shoulders	8 days	Wed 7/28/21	Fri 8/6/21
Miscellaneous Service	460 days	Mon 12/2/19	Fri 9/3/21
Removal of Structures & Obstructions	20 days	Mon 12/2/19	Fri 12/27/19
Remove, Clean & Salvage	43 days	Mon 12/30/19	Wed 2/26/20
Wildlife Crossing Fence	49 days	Thu 2/27/20	Tue 5/5/20
Cattle guards & Gate	86 days	Wed 5/6/20	Wed 9/2/20
Minor Concrete	39 days	Thu 9/3/20	Tue 10/27/20
Erosion Control Matting	30 days	Wed 10/28/20	Tue 12/8/20
Placed Riprap CI 2	15 days	Wed 12/9/20	Tue 12/29/20
Wire Enclosed - CI 2	113 days	Wed 12/30/20	Fri 6/4/21
R/W Monument & Reference Marker	24 days	Mon 6/7/21	Thu 7/8/21
Permanent Signs /Pavement Markings	15 days	Mon 7/19/21	Fri 8/6/21
Straw Mulching & Seeding Dry Method	20 days	Mon 8/9/21	Fri 9/3/21
Punch & Closeout	3 days	Mon 9/6/21	Wed 9/8/21
Punch List Items	3 days	Mon 9/6/21	Wed 9/8/21
Project Completion	0 days	Wed 9/8/21	Wed 9/8/21

2.5 Authorized Non-Stormwater Discharges**List of Authorized Non-Stormwater Discharges Present at the Site**

Type of Authorized Non-Stormwater Discharge	Likely to be Present at Your Site?
Discharges from emergency fire-fighting activities, if needed	☒ Yes ☐ No
Waters used to wash vehicles and equipment	☒ Yes ☐ No
Water used to control dust	☒ Yes ☐ No
Type of Authorized Non-Stormwater Discharge	Likely to be Present at Your Site?
Water to use for processing material, Fill for linear construction	☒ Yes ☐ No
Water for compaction of culvert installation	☒ Yes ☐ No
Uncontaminated, non-turbid discharges of water used for construction	☒ Yes ☐ No
Construction dewatering water from the un-named wash/Kaibeto Creek	☒ Yes ☐ No
Water for compaction, concrete structures	☒ Yes ☐ No

2.6 Site Maps, additional attached to Appendix A of this SWPPP.

SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS**3.1 Endangered Species Protection****Eligibility Criterion**☒ **Criterion A: No ESA-listed species and/or designated critical habitat present in action area.**

Using the process outlined in Appendix D of this permit, you certify that ESA-listed species and designated critical habitat(s) under the jurisdiction of the USFWS or NMFS are not likely to occur in your site's "action area" as defined in Appendix A of this permit.

Basis statement content/Supporting documentation: A basis statement supporting the selection of Criterion A should identify the USFWS and NMFS information sources used. Attaching aerial image(s) of the site to your NOI is helpful to EPA, USFWS, and NMFS in confirming eligibility under this criterion. Please Note: NMFS' jurisdiction includes ESA-listed marine and estuarine species that spawn in inland rivers. Check the applicable source(s) of information you relied upon:

- ☒ Specific communication (Biological Resources Compliance Form) with staff of the NNDFW. December 02, 2016 per Jeffrey Cole, Wildlife Manager, NNDFW
- ☒ Specific communication (Categorical Exclusion Determination/Approval under 23 CFR 771.117a) with staff of the FLH-FHWA. October 26, 2016, David Cremer, Senior Environmental Specialist

See FONSI Attachment in Appendix L of this SWPPP

3.2 Historic Preservation**Appendix E, Step 1**

Do you plan on installing any of the following stormwater controls at your site? **NO**

- ☐ Dike
- ☐ Berm
- ☐ Catch Basin
- ☐ Pond
- ☐ Stormwater Conveyance Channel (e.g., ditch, trench, perimeter drain, swale, etc.)
- ☐ Culvert
- ☐ Other type of ground-disturbing stormwater control:

3.3 Safe Drinking Water Act Underground Injection Control Requirements: N/A

SECTION 4: EROSION AND SEDIMENT CONTROLS

Temporary Stabilization:

The temporary erosion and sediment control measures to be used are listed below:

Ditch Blocks (Furrow Ditches):

Ditch blocks will be constructed along the uphill perimeter of disturbed areas of the site to divert run-on/run-off around the construction site. The ditch blocks will be used to collect runoff from the disturbed areas and direct the runoff to natural sediment impoundments or off-site. Ditch blocks and furrow ditches may be constructed if recommended temporary erosion control measures are ineffective and field adjustments are needed.

Gravel Bags Barriers

A flexible design building block made of bags filled with weighted materials including, gravel. These bags are used to divert arroyo channels, act as barrier walls in sediment basins, and retaining walls between fill slopes and watercourses during construction operations. The gravel bags will be placed immediately upslope of culvert inlets, in arroyo or drainage channels, or at the base of fill slopes to reduce the velocity of the runoff and minimize erosion, as deemed necessary. Gravel bags shall also be used as stabilization measures on rocky soil areas

- ❖ Place gravel bags across swales or drainage ditches to reduce the velocity of flow and enhance solids settlement.
- ❖ Gravel bags may be used if field conditions make the recommended temporary erosion control measures ineffective and field adjustments are needed.

Silt fences:

Silt fence consist of Geotextile fabric stretched between posts, with the lower edge securely embedded in soil, per the **ASTM 6462-03 requirement**, downstream of the disturbed areas. They intercept runoff from sheet flow and provide filtration, sedimentation, and velocity reduction. Silt fences will be constructed along the toe of fill slopes or at ROW limits, around drop inlets, near culverts, sheet flow and low flow directions. Silt fence is intended to be used as a temporary feature of the site. Silt fence will intercept sediment from disturbed areas during construction operations. Design and placement criteria for silt fences are as follows:

- ❖ The silt fences should be placed just beyond the clearing limits of the fill areas before construction or at ROW limits of the project area(s).
- ❖ Silt fence will be placed perpendicular to the drainage ditches carrying runoff flows from all disturbed areas.
- ❖ For stream flow paths with slopes less than 2%, silt fences should be no more than 60 m (200 feet) apart.
- ❖ For stream flow paths with slopes between 50:1 and 5:1, silt fences should be no more than 30 m (100 feet) apart.
- ❖ For stream flow paths with slopes between 5:1 and 2:1, silt fences should be no more than 15 m (50 feet) apart.

- ❖ For stream flow paths with slopes between 2:1 and greater, silt fences should be no more than 6 m (20 feet) apart. Maximum slopes should not exceed 1:1.
 - ❖ Silt fence should also be located by the culvert inlets and outlets in accordance to the SWPPP site plan, before runoff reaches drainage and leaves the construction site.
- Silt fences and other BMPs may be adjusted due to field conditions to fully implement this Plan. Installation to follow **manufacturer** installation instructions. **NOTE:** some of this site maybe solid rock; the use of silt fence may not be practical and an alternative such as check dams or other field acceptable alternative may be used. Many items will not work due to the inability to fix the BMP in position hence the check dam recommendation.

Tracking (Surface Roughening):

Soil surfaces left in a roughened condition by mechanically creating horizontal depressions, or by not fine grading or polishing, should be implemented as a temporary stabilization in disturbed areas to protect the site from wind and water erosion, before other temporary and/or permanent measures are installed. All disturbed areas shall be monitored at the end of each day's operations, unless other temporary or permanent erosion control measures are in place.

Tracking should be implemented on embankments or surfaces or depressions in the slope shall be created (i.e. stair step grading). The track walk will begin at the toe of the slope and proceed up slope moving over after each pass, creating depressions of no less than 5 cm (2 inches). To avoid unsafe conditions for operation of heavy equipment, **no slopes steeper than 2:1 ratio shall be tracked**. Also slopes with **rock shall not be tracked**.

Temporary Mulch:

Other embankments, not requiring riprap or that cannot be seeded within the specified time, shall receive temporary straw mulch. The straw mulch will be crimped into the slope by using tracked equipment, a crimping disk or a tackifier material applied to the mulch on the steep slopes where crimping is not practical.

Wattles:

A wattle is a temporary sediment barrier constructed at the perimeter of a disturbed area from the residue materials available from clearing and grubbing the site, and generally, covered with a filter fabric. Design and placement criteria for wattles are as follows:

- ❖ Wattles should be placed at the perimeter of a disturbed area following any clearing and grubbing.
- ❖ Wattles should be placed at the top of cut slopes to divert, slow or disperse flows on cut slope construction
- ❖ Wattles should be used only in areas of very low anticipated sheet flow.
- ❖ Wattles should be buried in trenches 7.5 to 15 cm (3 to 6 inches) deep along a contour and staked with steel fence (Tee Posts) or 51mm X 51mm X 0.6 to 0.91-meter wood stakes. A minimum of two stakes per wattle not more than 60 cm apart. Stakes to be driven a minimum of 60 cm (24 inches) into native soils.
- ❖ Wattles should be placed perpendicular to flow and not more than 30 meters (100 feet) apart.
- ❖ Wattles should extend up a channel wall to a point where bottom of the upslope is at a point of termination on the slope higher than the top of the wattle in the channel.

- ❖ Wattles should be butted end to end tightly.

Wattles barriers may be constructed if required due to field conditions and adjustments to fully implement this Plan. Installation to follow manufacturer specifications.

Check Dams are:

A temporary barrier constructed in channels that are anticipated to have high flows and possible heavy sediment loads. Design and placement criteria for check dams are as follows:

- ❖ Drainage area not to exceed 12.89 Ha in area.
- ❖ Placed perpendicular to flow.
- ❖ For stream flow paths with slopes less than 2%, check dams should be no more than 60 m (200 feet) apart.
- ❖ For stream flow paths with slopes between 50:1 and 5:1, check dams should be no more than 30 m (100 feet) apart.
- ❖ Maximum height of check dam overflow should not to exceed 60 cm (24 inches).
- ❖ Center of check dam to be 15 cm (6 inches) lower than outer edge.
- ❖ Terminate dam to insure no undercutting or bypassing, this may require engineered materials.
- ❖ Materials for construction of check dams should consist of native materials, rock, or gravel bags.

Check dams may be constructed if required due to field conditions and adjustments to fully implement this Plan.

Earthen Berms are:

A temporary sediment barrier constructed along channels and down slope areas for anticipated low flows and possible heavy sediment loads, and for energy dissipation and sedimentation. Design and placement criteria are as follows:

- ❖ Placed perpendicular to flow.
- ❖ Placed above disturbed cut or fill slopes and existing slopes to prevent run-on or runoff
- ❖ Maximum height of earthen berm not to exceed 60 cm (24 inches).
- ❖ Top of dam to be parallel with ground surface contours.
- ❖ Terminate dam to minimize undercutting or bypassing.
- ❖ Materials to consist of native materials or sandbags.

Implementations of earthen berms as a temporary erosion control measure are not called out in this SWPPP. However, earthen berms may be constructed as permanent control measures if field conditions warrant this.

Erosion Control Blankets:

Organic or synthetic blankets consisting of a photo-degradable plastic netting which covers and is entwined in a natural organic or manmade mulching material. The mulching material can be wood fiber, excelsior, straw, coconut fiber, synthetic fiber or a combination of the same. These blankets are used to control erosion on steep slopes or channels, where tracking (i.e. surface roughing) cannot be completed safely and temporary mulch will not hold, until final vegetation can be established. Design and placement criteria are as follows:

- ❖ Placement of blankets to be used on slopes 2:1 or steeper will be installed following completion of slope to final design grades
- ❖ Installation of blankets shall be in accordance with the manufacturer's recommendations:
- ❖ Blankets shall be placed smoothly but loosely on the soil without stretching
- ❖ Blankets shall be placed parallel to the direction of flow.
- ❖ The upslope end of the blanket shall be buried in a trench 15 cm (6") wide by 15 cm (6") deep.
- ❖ Wherever one roll of blanket ends and another begins use a 15 cm (6") wide overlap, with the uphill blanket placed on top of the downhill blanket.
- ❖ Blankets to be anchored in slopes using staples. Staples shall be made of wire 4.2 mm (0.162 inches) or larger in diameter. "U" shaped staples shall have legs 30 cm (12") and a 2.5cm (1") crown. Staples will be placed 3'-0" O.C. or per manufacturer's recommendations.
- ❖ Maintenance of blankets shall be in accordance with the manufacturer's recommendations, and at a minimum, include re-anchor of loosened matting and replacement of missing matting and staples as required.
- ❖ Erosion control blankets may be used if required due to field conditions and adjustments to fully implement this plan.

Erosion and Sediment Control Inspection and Maintenance Practices

Below are inspection and maintenance practices that will be used to maintain erosion and sediment controls. **NECA will select three individuals who will be responsible for inspections, maintenance and repair activities, and filling out the field inspection and maintenance report.**

- Less than one half of the site is recommended to be cleared and grubbed at one time.
- Inspection frequency of all control measures will be inspected at least once every 7 calendar days and within 24 hours of the end of a storm event of **FP-14 requirements**.
- FP-14 requirements: **11 mm or 0.43 inches per contract requirements**.
- Inspection frequency may be reduced to at least once every month if :
 1. The entire site is temporarily stabilized,
 2. Runoff is unlikely due to winter conditions, or
 3. Construction is occurring during seasonal arid periods in arid areas and semi-arid areas.

- All control measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from silt fences when it has reached one-third the height of the fence.
- Silt fence, if added, will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- The slope dikes, check dams and wattles will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 10 percent of the design capacity or at the end of the job.
- Slope dikes, check dams and wattles will be inspected and any breaches promptly repaired on a daily basis. Slope dikes may be moved to avoid conflicts with current work, but must be replaced after the work is completed for that day.
- Temporary and permanent seeding and landscaping will be inspected for bare spots, washouts, and healthy growth.

A NECA **maintenance inspection report** will be made after each inspection along with a report from the subcontractor of Quality Control, on the completion of any installation or maintenance

4.1 **Natural Buffers or Equivalent Sediment Controls**

Temporary erosion control measures will be in place prior to clearing, grubbing, or grading of any other portions of the site. Areas where construction activity temporarily ceases for more than **21 days** will be stabilized with temporary mulch **within 14 days** of the last disturbance. Once construction activity ceases permanently in an area, that area will be stabilized with surface roughening, permanent seed, and mulch. After the entire site is stabilized, the accumulated sediment will be removed from all temporary and permanent erosion control measures.

Buffer Compliance Alternatives

Are there any waters of the U.S. within 50 feet of your project's earth disturbances? ☒ YES ☐ NO

Check the compliance alternative that you have chosen:

- ☒ It is infeasible to provide and maintain an undisturbed natural buffer of any size, therefore I will implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.
- ☒ I qualify for one of the exceptions in Part 2.2.1.b. (If you have checked this box, provide information on the applicable buffer exception that applies, below.)

Buffer Exceptions

Which of the following exceptions to the buffer requirements applies to your site?

- ☒ There is no discharge of stormwater to the water of the U.S. that is located 50 feet from my construction disturbances.

- ☐ For a "linear construction sites" (defined in Appendix A), site constraints (e.g., limited right-of-way) make it infeasible to meet any of the CGP Part 2.2.1.

SEE CONSTRUCTION PLANS AT AREAS WHERE THE ROAD WILL MEET UP ALONG THE AQUA SAL CREEK, TSAILE CREEK AND WHEATFIELDS CREEK...THE DESIGN PREVENT ANY USE OF ANY TYPE OF BUFFER.

- ☐ Buffer disturbances are authorized under a CWA Section 404 permit. FILL AND DREDGING OF MATERIAL TO PLACE SUITABLE MATERIAL IN AN AREA THAT THE 404 PERMIT DEFINES HOW MUCH MATERIAL THAT WILL AFFECT THESE AREAS.

4.2 Perimeter Controls

Temporary erosion control measures will be in place prior to clearing, grubbing, or grading of any other portions of the site. Areas where construction activity temporarily ceases for more than **21 days** will be stabilized with temporary mulch **within 14 days** of the last disturbance. **Once construction activity ceases permanently in an area, that area will be stabilized with surface roughening, permanent seed, and mulch.** After the entire site is stabilized, the accumulated sediment will be removed from all temporary and permanent erosion control measures.

Specific Perimeter Controls

ASPEN WATTLES: WESTERN EXCELSIOR

Description: EARTHEN BERMES WITH WATTLES PRIOR TO EARTH DISTURBANCE

Installation 12/3/2019

Maintenance Requirements Remove sediment before it has accumulated to one-half of the above-ground height of any perimeter control.

Design Specifications MATERIAL PROPERTIES AND DIMENSIONS
WESTERN EXCELSIOR: ASPEN EXCELSIOR LOGS

Table 1 -Specified Expected Values

Diameter	10 ft (3.0 m) Length	20 ft (6.0 m) Length	25 ft (7.6 m) Length
9 in (0.23 m)	25.0 lbs (11.3 kg) 2.5 lbs/ft (3.7 kg/m) 5.8 lbs/ft' (93.3 kg/m')	50.0 lbs (22.7 kg) 2.5 lbs/ft (3.7 kg/m) 5.7 lbs/ft' (92.2 kg/m')	62.5 lbs (28.4 kg) 2.5 lbs/ft (3.7 kg/m) 5.7 lbs/ft' (91.9 kg/m')
12 in (0.31 m)	30.0 lbs (13.6 kg) 3.0 lbs/ft (4.5 kg/m) 4.0 lbs/ft' (63.5 kg/m')	60.0 lbs (27.2 kg) 3.0 lbs/ft (4.5 kg/m) 3.9 lbs/ft' (62.5 kg/m')	75.0 lbs (34.0 kg) 3.0 lbs/ft (4.5 kg/m) 3.9 lbs/ft' (62.3 kg/m')
18 in (0.46 m)	50.0 lbs (22.7 kg) 5.0 lbs/ft (7.4 kg/m) 3.0 lbs/ft' (47.9 kg/m')	100.0 lbs (45.4 kg) 5.0 lbs/ft (7.4 kg/m) 2.9 lbs/ft' (46.7 kg/m')	125.0 lbs (56.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.9 lbs/ft' (46.4 kg/m')
20 in (0.51 m)	50 lbs (22.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.4 lbs/ft' (39.0 kg/m')	100.0 lbs (45.4 kg) 5.0 lbs/ft (7.4 kg/m) 2.4 lbs/ft'(37.9 kg/m')	125.0 lbs (56.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.3 lbs/ft' (37.7 kg/m')

Table 2 -Netting

Fiber Composition: High Altitude Machine Curled Aspen Excelsior

Fiber Dimensions: 80% Greater than 6 in.

Netting: 0.50" x 0.50" Heavy Duty Synthetic

Configuration: Cylindrical with Closed Ends

End Closure: Hog Ring or Tied

*All values shown measured at the time of manufacture.

Document # WE_EXCEL_AEL_SPEC. This document has been developed to provide the characteristic properties of the product described and supersedes all previous versions. For question, to request performance data or installation recommendations, contact Western Excelsior at 1-866-540-9810 or wexcotech@westernexcelsior.com. Updated 8/19/2015.

4.3 Sediment Track-Out**Specific Track-Out Controls**

Description: CATTLE GUARDS ALONG N12	
Installation	EXISTING
Maintenance Requirements	Sediment that has been tracked-out from the site onto paved roads, or other paved areas outside the site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming cattle guard, or by using other similarly effective means of sediment removal. NECA is prohibited from hosing or sweeping tracked-out sediment into any storm water conveyance, storm drain inlet
Design Specifications	EXISTING N12 CATTLE GUARDS

4.4 Stockpiled Sediment or Soil

- STOCKPILE MANAGEMENT WILL OCCUR ALONG LINEAR PROJECT N6331 FROM BOP 33+920.00 TO EOP 37+564.614 LEFT AND RIGHT.
-

Specific Stockpile Controls

Description: TEMPORARY WATTLES /GRAVEL BAGS AROUND OR NEAR STOCKPILES	
Installation	12/3/2019
Maintenance Requirements	KEEP WATTLES/GRAVEL BAGS MAINTAIN AND FREE OF ANY CONSTRUCTION MATERIAL FROM STOCKPILES FROM GETTING INTO WASHES. INSPECT GRAVEL BAGS AFTER EACH RAINFALL AND WEEKLY THROUGHOUT THE RAINY SEASON. INSPECT WATTLES/GRAVEL BAGS FOR SEDIMENT ACCUMULATIONS AND REMOVE SEDIMENT WHEN IT REACHES ONE-HALF OF HEIGHT. THE REMOVED SEDIMENT WILL BE INCORPORATED INTO THE CONSTRUCTION ROW. REMOVE WATTLES/GRAVEL BAGS WHEN NO LONGER NEEDED. REMOVE SEDIMENT ACCUMULATIONS AND CLEAN, REGRADE, AND STABILIZE AREA

**Design
Specifications****MATERIAL PROPERTIES AND DIMENSIONS
WESTERN EXCELSIOR: ASPEN EXCELSIOR LOGS****Table 1 -Specified Expected Values**

Diameter	10 ft (3.0 m) Length	20 ft (6.0 m) Length	25 ft (7.6 m) Length
9 in (0.23 m)	25.0 lbs (11.3 kg) 2.5 lbs/ft (3.7 kg/m) 5.8 lbs/ft' (93.3 kg/m')	50.0 lbs (22.7 kg) 2.5 lbs/ft (3.7 kg/m) 5.7 lbs/ft' (92.2 kg/m')	62.5 lbs (28.4 kg) 2.5 lbs/ft (3.7 kg/m) 5.7 lbs/ft' (91.9 kg/m')
12 in (0.31 m)	30.0 lbs (13.6 kg) 3.0 lbs/ft (4.5 kg/m) 4.0 lbs/ft' (63.5 kg/m')	60.0 lbs (27.2 kg) 3.0 lbs/ft (4.5 kg/m) 3.9 lbs/ft' (62.5 kg/m')	75.0 lbs (34.0 kg) 3.0 lbs/ft (4.5 kg/m) 3.9 lbs/ft' (62.3 kg/m')
18 in (0.46 m)	50.0 lbs (22.7 kg) 5.0 lbs/ft (7.4 kg/m) 3.0 lbs/ft' (47.9 kg/m')	100.0 lbs (45.4 kg) 5.0 lbs/ft (7.4 kg/m) 2.9 lbs/ft' (46.7 kg/m')	125.0 lbs (56.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.9 lbs/ft' (46.4 kg/m')
20 in (0.51 m)	50 lbs (22.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.4 lbs/ft' (39.0 kg/m')	100.0 lbs (45.4 kg) 5.0 lbs/ft (7.4 kg/m) 2.4 lbs/ft'(37.9 kg/m')	125.0 lbs (56.7 kg) 5.0 lbs/ft (7.4 kg/m) 2.3 lbs/ft' (37.7 kg/m')

Table 2 -Netting

Fiber Composition: High Altitude Machine Curled Aspen Excelsior

Fiber Dimensions: 80% Greater than 6 in.

Netting: 0.50" x 0.50" Heavy Duty Synthetic

Configuration: Cylindrical with Closed Ends

End Closure: Hog Ring or Tied

***All values shown measured at the time of manufacture.**

Document # WE_EXCEL_AEL_SPEC. This document has been developed to provide the characteristic properties of the product described and supersedes all previous versions. For question, to request performance data or installation recommendations, contact Western Excelsior at 1-866-540-9810 or wexcotech@westernexcelsior.com. Updated 8/19/2015.

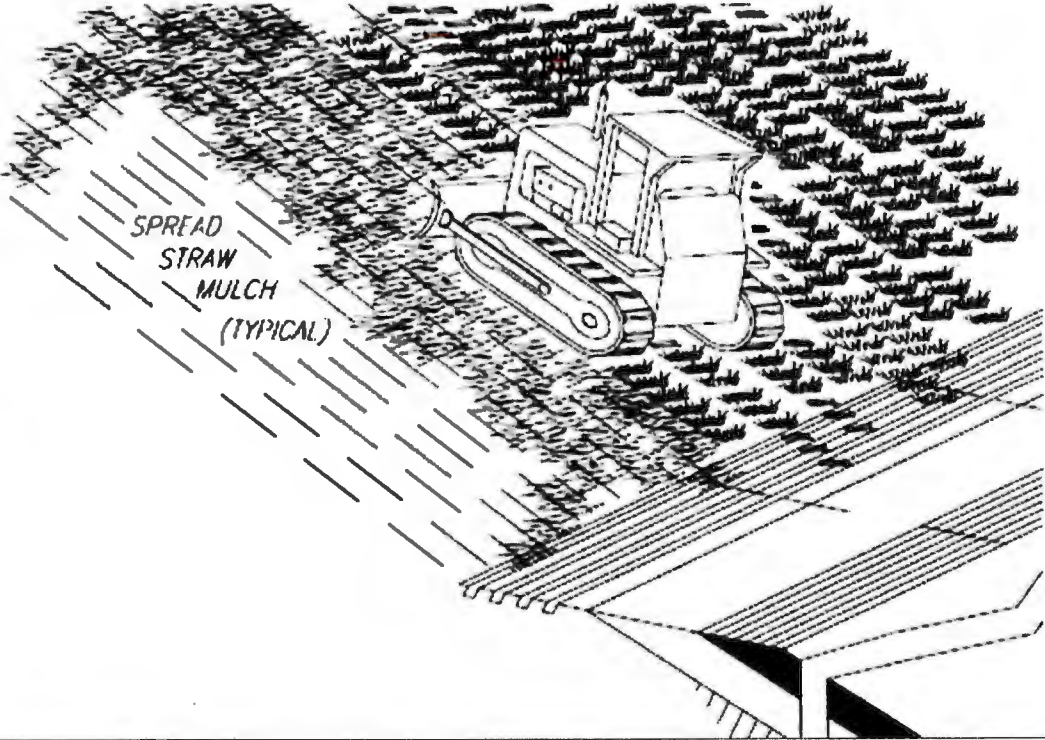
4.5 Minimize Dust

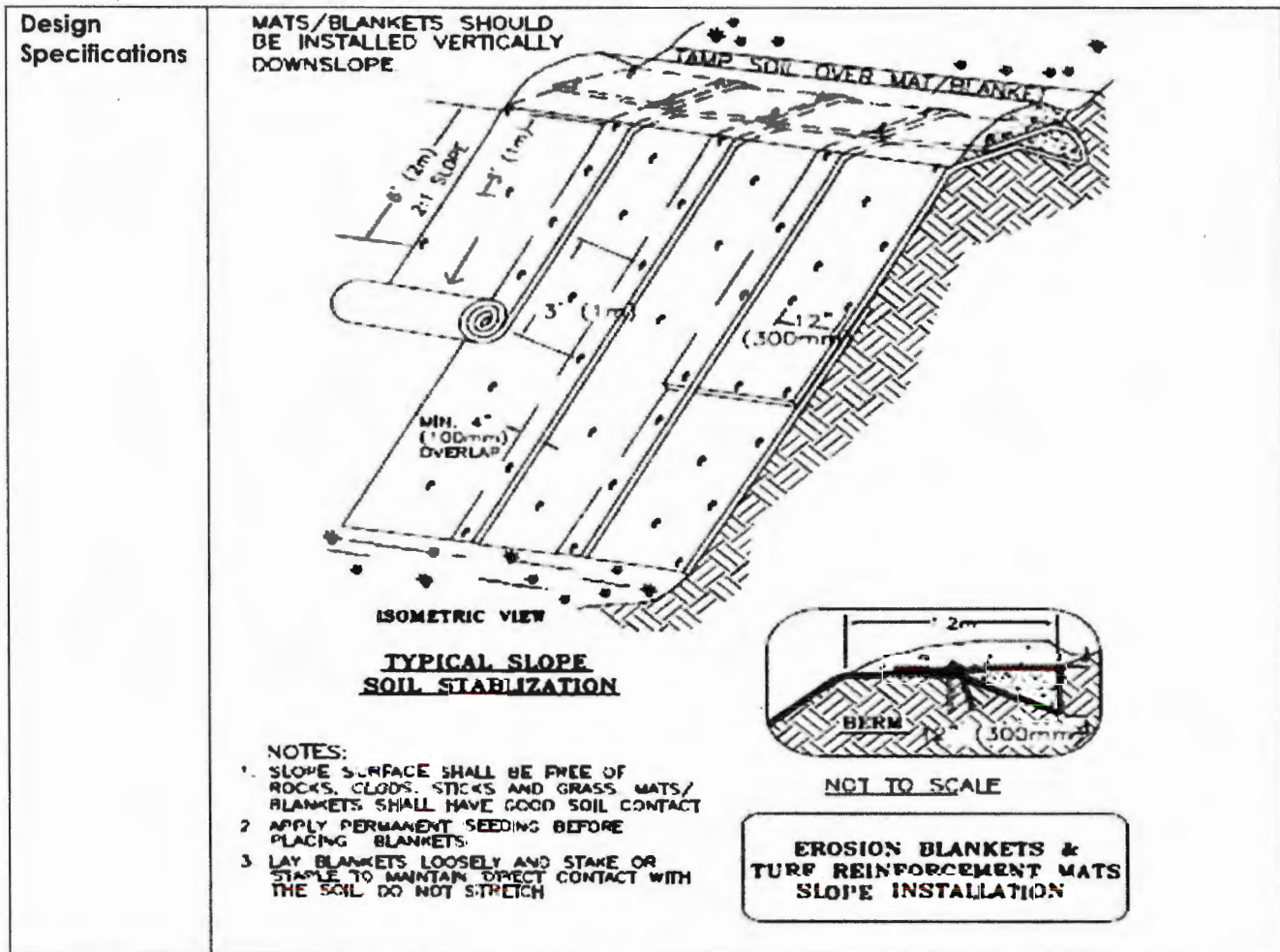
- USE OF WATER TRUCK FOR PROCESSING MATERIAL FOR COMPACTION AND FOR ROADWAY DUST CONTROL.

Specific Dust Controls

Description: WATER TRUCK	
Installation	3/2/2020
Maintenance Requirements	KEEP WATER FROM LEAVING ROW AND USE WATTLES OR OTHER BMPs TO PREVENT IT.
Design Specifications	NONE, STANDARD 1500 GALLON WATER TRUCK.

4.6 Minimize Steep Slope Disturbances**Specific Steep Slope Controls**

Description: SLOPE TRACK-WALKING OR MULCHING	
Installation	4/28/2020
Maintenance Requirements	EQUIPMENT BULLDOZER, HAND SPREAD MULCH EROSION CONTROL MATTING
Design Specifications	 SPREAD STRAW MULCH (TYPICAL)



4.7 Topsoil

Specific Topsoil Controls

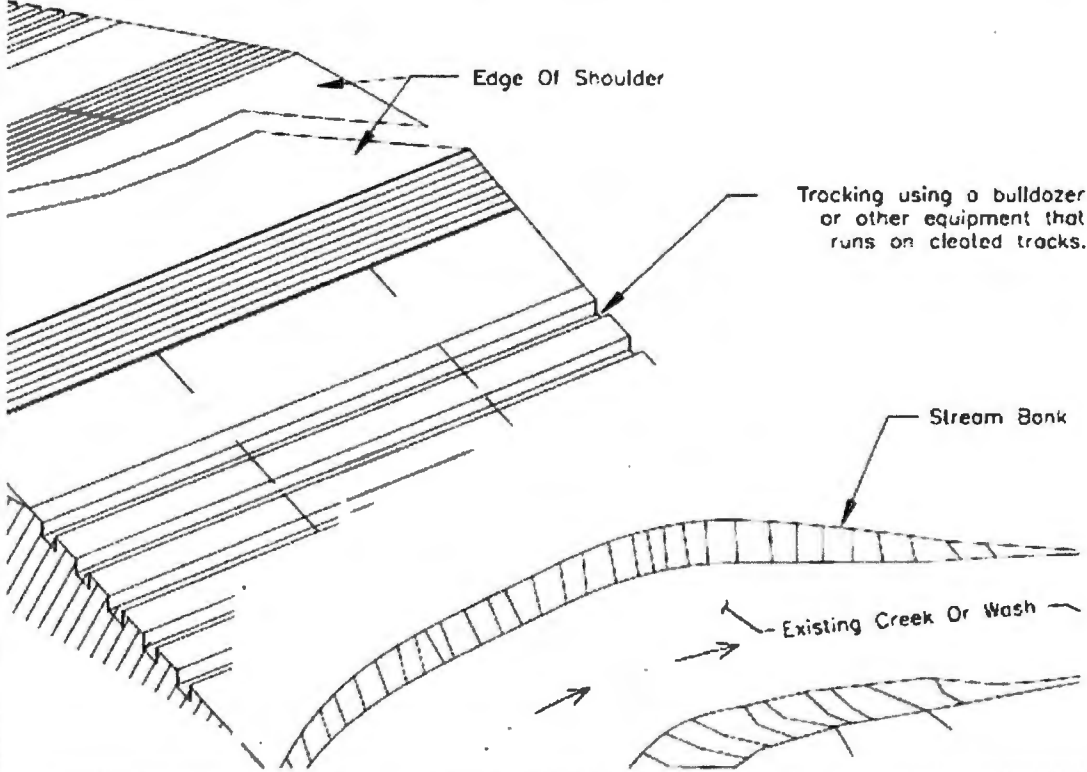
Description: WILL BE USING TOPSOIL FOR BACKFILL MATERIAL OF ROADWAY AND SIDE SLOPE AND FOR USE AS PIPE ZONE MATERIAL	
Installation	4/28/2020
Maintenance Requirements	COMPACTION AND PROCESSING OF MATERIAL
Design Specifications	PER FEDERAL PROJECTS (FP) 03 REQUIREMENTS

4.8 Soil Compaction

General

- SLOPE MATTING ON SIDE OF ROADWAY AND WATTLES IF NEEDED

Specific Soil Compaction Controls

Description: COMPACTION OF SIDE SLOPE AND AT PRISM OF FILL PER THE REQUIREMENTS OF THE NDOT SPECIFICATIONS	
Installation	3/2/2020
Maintenance Requirements	USAGE OF TRACK-WALKING IF NEEDED AS THE FILL SLOPE RISES TO CATCH POINT
Design Specifications	

4.9 Storm Drain Inlets: N/A

4.10 Stormwater Conveyance Channels: N/A

4.11 Sediment Basins: N/A

4.12 Chemical Treatment: N/A

4.13 Dewatering Practices: N/A

4.14 Other Stormwater Controls

- GRAVEL BAGS AS NEEDED IN AREAS NOT ACCESSABLE TO WATTLES

Specific Stormwater Control Practices

Description: GRAVEL BAGS	
Installation	12/3/2019
Maintenance Requirements	REMOVE SEDIMENT BEFORE IT HAS ACCUMULATED TO ONE-HALF OF THE ABOVE-GROUND HEIGHT OF ANY PERIMETER CONTROL
Design Specifications	BAGS SHALL BE WOVEN POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE FABRIC, minimum unit weight 4 ounces per square yard; mullen burst strength exceeding 300 psi in conformance with the requirements in ASTM designation D3786; and ultraviolet stability exceeding 70 percent in conformance with the requirements in ASTM designation D4355. Gravel shall be between 0.4 and 0.8 inch in diameter and shall be clean and free from clay balls, organic matter, and other deleterious materials. The filled bags shall be between 28 and 48 pounds in mass.

4.15 Site Stabilization

Once NECA begins construction, consider using the Grading/Stabilization Activities log in Appendix H, of this SWPPP, to document the work compliance with the stabilization requirements in CGP Part 2.2.14.

Total Amount of Land Disturbance Occurring at Any One Time

- ☐ Two Hectares or less
☒ More than Two Hectares

GRADING AND TRACK-WALKING, ALSO THE USE OF EROSION MATTING AND SEEDING Arid, semi-arid, or drought-stricken area	
☐ Vegetative ☐ Non-Vegetative ☐ Temporary ☒ Permanent	
Description: - TRACK-WALKING, MATTING, AND SEEDING - Immediately initiate, and within 14 calendar days of a temporary or permanent cessation of work in any portion of the site complete, the installation of temporary non-vegetative stabilization measures to the extent necessary to prevent erosion; As soon as practicable, given conditions or circumstances on the site, complete all activities necessary to seed the area to be stabilized; and (iii) If construction is occurring during the seasonally dry period, indicate in the SWPPP.	
Dry Period	- Beginning date of seasonally dry period: 4/1/2019 - Ending date of seasonally dry period: 6/30/2019 - Site conditions during this period: DRY WITH INTERMITTING MONSOON RAINS, BY THEN GROUND CONDITIONS WILL BE MUDDY.
Installation and completion schedule	SITE PREPARATION, DRILL SEED APPLICATION. PLACEMENT OF MATTING IF NEEDED. - Approximate installation date: 2/17/2020 - Approximate completion date: 2/24/2020
Maintenance Requirements	Repair erosion and/or undermining at the top of the slope. Repair undermining beneath RECP(s), pull back the RECP(s), fill and compact eroded area, reseed and then secure RECP(s) firmly. Reposition or replace RECPs that have moved along the slope or channel and secure firmly. Replace damaged RECPs.

Design
Specifications**BIOMAC® CC 028.2**
DOUBLE NET COCONUT ROLLED EROSION CONTROL PRODUCT

BIOMAC® CC 028.2 is made with uniformly distributed 100% coconut fiber and two polypropylene net securely sewn together with UV stabilized thread. The lightly compressed blankets are wrapped and include a product label and code. The blankets are palletized for easy transportation. The BIOMAC® CC 028.2 has functional longevity of approximately 36 months, but will vary depending on soil and climatic conditions, and is suitable for slopes 1:1 and medium to high flow channels. The BIOMAC® CC 028.2 meets Type 4 specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-Q3 Section 713.17.

Property	1	2	
	100% Coconut		
Weight	Type		Net Color
Top	Medium weight UV Stabilized Polypropylene		Black
Middle	None		
Bottom	Medium weight UV Stabilized Polypropylene		
Net Type and	Top	Middle	Bottom
	0.5" X 0.5"		
Thread	Type		Color
	UV Stabilized Thread		
			Black
Roll Size	Standard	1/4 Size	Mini
Width	7.5 ft (2.3 m)	3.75 ft (1.1 m)	1.5 ft (.46 m)
Length	120 ft (36.6 m)	240 ft (73.2 m)	120 ft (36.6 m)
Weight +10%	57 lbs (25.9 kg)	57 lb (25.9 kg)	114 lb (51.7 kg)
Area	100 yd ² (83.6 m ²)	100 yd ² (83.6 m ²)	200 yd ² (167.2 m ²)
#/Pallet	20	9	16

In Situ Value Properties*

Property	Test Method	Typical
Mass Unit Area	ASTM D6415	9.25 oz/yd ² (313.2 g/m ²)
Thickness	ASTM D6525	0.26 in (6.6 mm)
Crush Strength (N)	ASTM D6818	310 lb (132 kN)
Compression (%)	ASTM D6818	20.5%
Tensile Strength (N)	ASTM D6818	150 lb (66.7 kN)
Elongation (%)	ASTM D6818	20.0%
Light Penetration	ASTM D6867	16%
Density / Specific Gravity	ASTM D1555	1.04
Water Absorbency	ASTM D1117	150%

*In Situ values dependent upon in situ material variations

Erosion Performance Design Values*

Property	Test Method	Value
C Factor	ASTM D6425	0.01
Slope Length (ft)	S 31	3:1-2:1
< 50 ft (15 m)	0.012	0.012
50 ft (15 m)	0.015	0.015
> 100 ft (30 m)	0.018	0.018

*Large Scale Results obtained by 3rd Party GAI Accredited Independent Laboratory

Erosion Control Testing (ASTM/ECTC)

Test Method	Parameters	Results
ECTC Method 2 (Field)	50 mm (2 in) x 30 mm	5.6% - 8.4%
	100 mm (4 in) x 30 mm	5.6% - 10.4%
	150 mm (6 in) x 30 mm	5.6% - 12.8%
ECTC Method 3 (Shear Parameters)	Shear Stress (lb/ft ²)	2.5-10.0
ECTC Method 4 (Seepage Test)	Seepage (inches/day)	7.2%

*Length scale tests should not be used for design purposes

**Soil Loss Ratio = Soil Loss Rate / Soil Loss Rate with R_{0.01} = 1.0, 1.0%

***The properties for data analysis were represented with the permission of ASTM. However, for design and construction use, approval of the product, materials and design by ASTM is required.

Channel Performance Design Values

Property	Test Method	Value
Unvegetated Shear Stress	ASTM D 6460	1.50 lb/ft ² (119.7 Pa)
Unvegetated Velocity	ASTM D 6460	12.0 ft/s (3.66 m/s)
Vegetated Shear Stress	N/A	N/A
Vegetated Velocity	N/A	N/A

Warning: N/A Value Represents a Range

*Large Scale Results obtained by 3rd Party GAI Accredited Independent Laboratory

SECTION 5: POLLUTION PREVENTION STANDARDS**5.1 Potential Sources of Pollution****Construction Site Pollutants**

Pollutant-Generating Activity	Pollutants or Pollutant Constituents (that could be discharged if exposed to stormwater)	Location on Site (or reference SWPPP site map where this is shown)
Concrete Curb and Gutter	Concrete waste, sediment, form oil	CBC and Crossing
Sidewalks	Concrete waste, sediment, form oil	CBC and Crossing
Concrete Slope Paving Concrete Spillway	Concrete waste, sediment, form oil	CBC and Crossing
Guardrails	Oil, sediment	Roadway Fill areas
Cattle guard/Fencing	Concrete waste	ROW
Fence Removal	sediment	ROW and other areas
ROW markers	Concrete waste, sediment	ROW
Erosion BMPs and Seeding	sediment	B.O.P. to E.O.P., Hot Plant and Borrow pits
Sign and Delineators installation	sediment	Linear roadway
Rumble strips	Asphalt waste	Hot plant
Pavement markings	Paint waste	Roadway
Temporary Traffic Control	sediment	Roadway/alternate roadway
Remove existing CMP	sediment	wash crossing
Stockpile Material	sediment	wash crossing
Equipment Work	petroleum-based material	Throughout site, maintaining
Non-Discharge Watering of site with Water truck	sediment	wash crossing
Form slope blankets, Rebar	waste concrete, form-oil, iron oxides, sediment	wash crossing
Pour Concrete, admixtures	sediment,	wash crossing
Material backfilling	sediment	wash crossing
Roadway construction	sediment	wash crossing
Erosion control matting/seeding	sediment	wash crossing

5.2 Spill Prevention and Response

Copy of SPCC Plan to be included in this SWPPP

5.3 Fueling and Maintenance of Equipment or Vehicles

- **FUELING IN AREAS OF THE PROJECT SO AS IT WILL NOT COME IN CONTACT OR GO BEYOND THE RIGHT OF WAY TO TSAILE CREEK, WHEATFIELDS CREEK, AQUA SAL CREEK AND BLACK PINNALE SPRING.**

Specific Pollution Prevention Practices

GATOR SOCKS OR LINED AREA	
Description: DRIP PAN OR ABSORBENTS SUCH AS GATOR SOCKS FOR LEAKS AND SPILLS IF THEY OCCUR.	
Installation	11/19/2019
Maintenance Requirements	Absorbents will take on the properties of whatever is absorbed; measures must taken as if it was the chemical or liquid itself. Minimize the dust generation and accumulation of these absorbents dispose of as non-hazardous material, depending on material absorbed.
Design Specifications	Fluid Absorbed: Oils, Coolants, Solvents, Water – Universal Color: Gray Dimensions: ext. dia. 3" x 42" L Recycled Content: 99% Pre-Consumer Recycled Cellulose Filler Absorbency: Up to 10 gal. per box Absorbency: per Up to 64 oz. per sock Configuration: Sock Filler: Corn Cob Skin/Outer Mesh: Skin - Polypropylene Weight: 20.1 lbs. Application: Leaks & Drips, Maintenance

5.4 Washing of Equipment and Vehicles**General**

- POLLUTION PREVENTION OF WASHING

Specific Pollution Prevention Practices

POLLUTION PREVENTION OF WASHING	
Description: SEDIMENT WATTLES OR GATOR SOCKS	
Installation	11/19/2019
Maintenance Requirements	WATTLES AND GATOR SOCKS AROUND EQUIPMENT OR VEHICLE.

5.5 Storage, Handling, and Disposal of Building Products, Materials, and Wastes

Per requirements listed below, USEPA CGP Parts 5.5.1, 5.5.2, 5.5.3, 5.5.4, 5.5.5, and 5.5.6

5.5.1 Building Products

- PRODUCTS WILL BE COVERED TO MINIMIZE EXPOSURE FROM STORMWATER THAT MAY OCCUR DURING THE WORK PERIOD.

Specific Pollution Prevention Practices

INSERT NAME OF POLLUTION PREVENTION PRACTICE	
Description: CONSTRUCTION MATERIALS	
Installation	11/19/2019
Maintenance Requirements	Locate storage of materials away from waterways. Supply Safety Data Sheets (SDS) for all materials stored. Store materials in a covered area during the wet season. Do not store materials directly on the ground.

5.5.2 Pesticides, Herbicides, Insecticides, Fertilizers: N/A**General**

- Landscape Materials:** MINIMIZE EXPOSURE TO STORMWATER UNTIL INSTALLED PER CONSTRUCTION PLANS. *see below*

Specific Pollution Prevention Practices

Description: EROSION CONTROL MATTING ON SIDE FILL SLOPES.	
Installation	10/28/2020
Maintenance Requirements	Manually unroll blankets down the slope to prevent stretching or pulling out of the anchor trench. Do not walk on the installed blanket. Follow the manufacturer's recommendations for overlapping and stapling. Prepare slopes (smooth, uniform surface) prior to blanket installation so the blanket makes contact with the entire soil surface when secured.

5.5.3 Diesel Fuel, Oil, Hydraulic Fluids, Other Petroleum Products, and Other Chemicals**General**

- Products will be stored in water-tight container and visqueses will be used to minimize exposure from stormwater. Any spills will be cleaned up immediately using dry cleaning methods and dispose of properly and possibly using a secondary containment, such as absorbent socks

Specific Pollution Prevention Practices

Description: SPCC REQUIREMENTS AT PROJECT SITE	
Installation	11/18/2019
Maintenance Requirements	Handle all pollutants in a manner that does not cause contamination of storm water. Covers, contains, and protects all materials from vandalism so that, if spilled, the materials would not pose an immediate risk to the wash near-by. Maintain and repair heavy equipment using spill prevention measures such as drip pans and, if necessary, cover. Mobile fuel truck and the pick-up truck with tanks will be parked in a lined area, which is locked when they are not in use.

5.5.4 Hazardous or Toxic Waste

(Note: Examples include paints, solvents, petroleum-based products, wood preservatives, additives, curing compounds, acids.)

General

- DISPOSAL OF SCRAP CONSTRUCTION MATERIAL, CONCRETE DEBRIS AND OTHER TRASH MATERIALS.

Specific Pollution Prevention Practices

INSERT NAME OF POLLUTION PREVENTION PRACTICE	
Description: STORE WASTE IN COVERED CONTAINERS AND DISPOSE IN ACCORDANCE TO LOCAL REQUIREMENTS	
Installation	11/18/2019
Maintenance Requirements	clean up and removal from site for proper disposal by outside contractor

5.5.5 Construction and Domestic Waste**General**

- PROVIDE DUMPSTER TO CONTAIN CONSTRUCTION WASTE. THE DUMPSTER NEEDS TO BE COVERED SO AS MATERIAL WILL NOT GET INTO NEARBY WASHES OR WATERWAYS.

Specific Pollution Prevention Practices

Description: TRASH DUMPSTER	
Installation	11/18/2019
Maintenance Requirements	empty dumpster in a timely manner to assure no overflow of construction waste.

5.5.6 Sanitary Waste**General**

- PORTABLE TOILETS

Specific Pollution Prevention Practices

Description: PORTA-A-JOHN FOR EMPLOYEES	
Installation	11/18/2019
Maintenance Requirements	Position portable toilets so as it will not be tipped over and is located far away from wash. Clean out according to subcontractor schedule.

5.6 Washing of Containers used for Concrete or Other Materials

- Do not wash out concrete trucks onto the ground. Wash out concrete trucks in designated concrete washout area.
- Do not allow wash-down from concrete aggregate areas to drain directly to surface waters or natural or constructed storm water conveyances.
- Use forms or solid barriers, such as pilings, for concrete pours within 15 feet of surface waters.
- When feasible, schedule larger concrete pours for the dry season.
- Use BMPs whenever feasible to prevent storm water from coming into contact with freshly poured concrete and concrete waste.
- Always monitor for elevating pH levels in storm water runoff, prevent high-pH storm water from discharging.

Specific Pollution Prevention Practices

CONCRETE WASTE DUMP	
Description: LINED CONCRETE WASTE DUMP	
Installation	6/1/2020
Maintenance Requirements	Cleanout waste concrete for disposal outside ROW. Keep any form oil or like material in designated areas. Cleanout concrete washout in a timely matter so as it does not overflow.
Design Specifications	WASHOUT CAN USE STACKED WATTLES COVER WITH HEAVY LINER.

5.7 Fertilizers: N/A**5.8 Other Pollution Prevention Practices: N/A**

SECTION 6: INSPECTION, MAINTENANCE, AND CORRECTIVE ACTION**6.1 Inspection Personnel and Procedures****Personnel Responsible for Inspections****MICHAEL REDHORSE****JAMIE SAGG**

and OTHER ASSIGNED EMPLOYEES AS PROJECT PROGRESSES

Inspection Schedule

Standard Frequency:
☒ Every 7 days ☐ Every 14 days and within 24 hours of 0.43 inches, per contract requirements , rain or the occurrence of runoff from snowmelt sufficient to cause a discharge
Reduced Frequency
For stabilized areas on "linear construction sites" ☒ Twice during first month, no more than 14 calendar days apart; then once more within 24 hours of 0.43 inches, per contract requirements , rain. ▪ ALONG LINEAR PROJECT N6331 FROM BOP 33+920.00 TO EOP 37+564.614 LEFT AND RIGHT. ▪ 3/9/2020 END DATE OF AREAS TO BE COMPLETED
For arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought ☒ Once per month and within 24 hours of 0.43 inches, per contract requirements , rain. Insert beginning and ending dates of the seasonally-defined dry period for your area or the valid period of drought: ▪ Beginning date of seasonally dry period: 4/1/2019 ▪ Ending date of seasonally dry period: 6/30/2019
For frozen conditions where earth-disturbing activities are being conducted ☒ Once per month Insert beginning and ending dates of frozen conditions on your site: ▪ Beginning date of frozen conditions: 11/12/2018 Ending date of frozen conditions: 3/1/2019 ▪ Beginning date of frozen conditions: 11/11/2019 Ending date of frozen conditions: 3/3/2020

Rain Gauge Location:

1. Tsalle Arizona Project Office/Material Yard
2. Wheatfields Arizona N12 Borrow Pit
3. Tsalle Arizona N12 Hot Plant Site

Inspection Report Forms:

COPY OF INSPECTION REPORT FORMS IN APPENDIX D IN THIS SWPPP

6.2 Corrective Action

Personnel Responsible for Corrective Actions

Michael Redhorse, Area Project Superintendent

Jamie Sagg, Project Engineer

Other Assigned Employees As Project Progresses

Corrective Action Forms

COPY OF CORRECTIVE ACTION FORMS IN APPENDIX E IN THIS SWPPP

6.3 Delegation of Authority

Duly Authorized Representative

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY

Herman Patterson

Construction Manager

P.O. Box 969

Shiprock, New Mexico 87420

505-701-1379

Herman@navajo.net

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY

Michael Redhorse

Area Project Superintendent

P.O. Box 969

Shiprock, New Mexico 87420

505-406-7489

Michael@navajo.net

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY

Jamie Sagg

Project Field Coordinator/Engineer

P.O. Box 969

Shiprock, New Mexico 87420

928-209-2028

jamie@navajo.net

SECTION 7: TRAINING**Table 7-1: Documentation for Completion of Training**

Name	Describe Training	Date Training Completed
CALVERT OWEN	CGP 2008/BMPs	5/15/2009
CHRISTINE PADILLA	CGP 2017/BMPs	9/8/2017
LEE B. ROY	CGP 2017/BMPs	7/14/2017
MICHAEL REDHORSE	CGP 2017/BMPs	7/14/2017
Other Assigned Employees As Project Progresses		

SECTION 8: CERTIFICATION AND NOTIFICATION**Navajo Nation Enterprise's Certification**

NECA certify under penalty of law that this document and all attachments were prepared in accordance with the **2017 General Construction Permit of the USEPA / NPDES regulations**. This certification is designed to assure that qualified personnel properly gathered and evaluated the information submitted, based on the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. NECA is aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

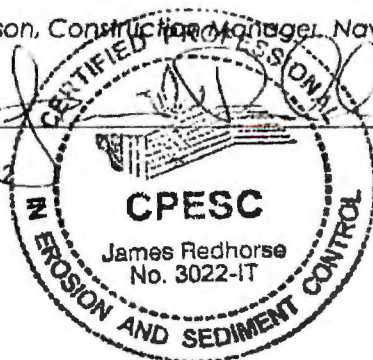
Signed: _____

Date: 10-29-19

Herman Patterson, Construction Manager, Navajo Engineering and Construction Authority

Prepared by: _____

CPESC-IT #3022

**Owner's Certification**

The Owner, under the penalty of the law that the Owner understands the terms and conditions of the general **National Pollutant Discharge Elimination System (NPDES)** permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signed: _____

Date: 11/20/19

(NDOT) Representative, *Darryl Bradley, Principal Civil Engineer*
Navajo Department of Transportation
P.O. Box 4620, Window Rock, Arizona 86515

SECTION 625 -TURF ESTABLISHMENT

This section 625 supplements Article 6 of Exhibit A.

625.01 **General.** Add the following to this section.

The Contractor shall not do seeding or mulching when the wind is in excess of 5mph.

625.02 **Material.**

Add the following:

The seed shall be delivered to the project site in standard, sealed, undamaged containers. Each container shall be labeled in accordance with the U.S. Department of Agriculture rules and regulations under the Federal Seed Act. Labels shall indicate the variety or strain of seed, the percentage of germination, purity and weed content, and the date of analysis which shall not be more than nine (9) months prior to the delivery date.

Seed shall consist of the type shown in section 625.07 below. Application rates of seed as specified are for Pure Live Seed (PLS). PLS is determined by multiplying the sum of the germination and hard or dormant seed by the purity.

Seeds must be WEED Free.

625.03 **Turf Establishment Season.**

Add the following:

Seeding and mulching shall be performed immediately following final slope grading to the fullest extent possible. If seeding cannot be performed at final grading, then refer to section 157.04, subparagraph (H.2) for further requirements. In no case shall permanent non-dormant seeding and mulching be performed during the months of November 15 through March 15. Dormant seeding may take place during November 1st to December 15th.

625.04 **Preparing Seedbed.**

The second sentence of the first paragraph is superseded with the following:

Remove all weeds, sticks, high stone concentration areas with stones of 75mm in size or larger, and other debris detrimental to application, growth, or maintenance of the turf. If there is a substantial amount of rock/stone larger than 75mm in size that requires removal

prior to seeding, then this additional work shall be compensable in accordance with section 109.02(m).

Add the following:

Seedbed preparation shall be accomplished with a disc harrow, chiseling tool or with other equipment, which will provide an even mixture of fertilizer into the soil.

Tillage will not be required on slopes of 2:1 or steeper. However, such slopes shall be fertilized, seeded and mulched as required. Tillage operation shall be performed so as to produce a soil surface that is rough, firm and free of clods.

Tillage shall be performed across the slope when practical. No work shall be done when the moisture content of the soil is unfavorable.

In areas, which in the opinion of the Construction Manager, are too rocky for tilling without drastically disturbing the completed roadway sections, the Construction Manager will adjust the area of tilling accordingly.

625.05 Watering.

This section is superseded with the following:

If watering is called for under other sections of the contract, it shall be paid for under the development of water bid items shown in the bid schedule. Otherwise watering for dry method seeding is not required for work under this section.

625.06 Fertilizing.

Add the following:

All areas to be seeded shall have ammonium phosphate, at a rate of 56 kg per Ha, uniformly applied to the surfaces to be seeded and tilled into a minimum of 76mm of the surface.

625.07 Seeding.

Add the following:

Seeding shall be accomplished by the Dry Method.

After the tillage is completed and accepted by the Construction Manager, seed shall be planted by drill, except that on slopes too steep or rocky, seed may be broadcast provided that it is covered by dragging, hand raking or other approved methods. The type of seed and pure live seed rate is as follows:

Grassland Vegetation Type (Sagebrush Draws) – slightly modified from Seed Mix IM (see below)				
Common Name	Scientific Name	Variety	Drilled Rate	Broadcast Rate
Alkali Sacaton	<i>Sporobolus airoides</i>	Salado	0.5	1
Western Wheatgrass	<i>Pascopyrum smithii</i>	Arriba	4	8
Galleta	<i>Pleuraphis jamesii</i>	Viva	4	8
Blue Grama	<i>Bouteloua gracilis</i>	Alma	1	2
Scarlet Globemallow	<i>Sphaeralcea coccinea</i>	VNS	1	2
Four-wing Saltbush	<i>Atriplex canescens</i>	Rincon	3	6
Total			13.5#/Acre	27#/Acre
Metric:			14.57kg/Ha	30.26kg/Ha

Seed shall be planted approximately 6mm deep, with a maximum depth of 13mm. The distance between the drilled furrows shall not be more than 203mm. If the furrow openers on the drill exceed 203 mm, the area shall be drilled twice. Seeding shall be done with grass seeding equipment with double disc openers, depth bands, packer wheels or drag chains, rate control attachments, seed boxes with agitators and separate boxes for small seed.

Seed of different sizes shall be sowed from at least two separate boxes adjusted or set to provide the seeding rate specified above.

625.08

Mulching:

The first sentence is superseded with the following:

Apply straw mulch at a rate of 4500kg/Ha after seeding by the following methods:

625.11 Method of Measurement.

The first sentence is superseded with the following:

Measure the seeding by the hectare, on the ground surface, or by the slurry. Fertilizer and mulching shall not be measured for payment but shall be considered a subsidiary obligation of the Contractor covered under the work for this section.

rev: 04-23-17

NO FUEL STORED IN WHEATFIELDS BORROW PIT



STATEMENT OF PURPOSE

Wheatfields Borrow Pit

Navajo Engineering and Construction Authority

Navajo Engineering and Construction Authority (NECA) is applying for a borrow pit lease to operate a borrow pit located in Wheatfields. The term of the borrow lease will be for a period of five-years.

The proposed Wheatfield Borrow Pit of the Navajo Nation Trust Land located Wheatfields, Arizona in section 28 of Township 33 North, Range 30 East of the Gila Salt River Meridian. This property is on the north alignment to Navajo Route N12. Upon completion, the site, including the previous excavated areas, will be reclaimed and reseeded with a native seed mix.

Wheatfield Borrow Pit is on an alluvial terrace, approximately 4.98-acres for pit the access into pit is aligned with the N12 project right of way located within the Tsaille / Wheatfields Chapter management area in Apache County, Arizona. See map in Section 6 of borrow pit lease permit package.

NECA's reclamation and reseeding of the land upon completion will result in equal or better vegetation than what presently exists.

Temporary erosion controls will be installed and maintained in accordance with the stormwater pollution prevention plan for the site. A stormwater permit will be obtained from the USEPA for the site. Stripping and stockpiling of the topsoil will be performed as needed before extracting borrow operations begin, when the need for borrow is determined. We expect that the borrow and stockpiling operations will be intermittent over the 5-year term of the borrow lease. In general, we expect that hours of operation will be sunup to sundown, Monday through Friday, with the normal shift being 10-hours per day.

From visual observations at the location and the depth of the borrow and gravel layers from the previously mined area, we estimate that there could be as much as 200,000-tons of recoverable borrow material on the site. We expect the depth to vary as we move across the site. We doubt that the borrow material on site will be excavated out over the 5-year term of the borrow lease; however, this is subject to the demand for borrow material products in the area.

During excavation of the borrow material production activities, dust control will be provided by water trucks for excavation operations, stockpile and traffic areas within the lease area. When hauling occurs, the entrance of the borrow pit will be watered as need to control dust. Water for dust control will come from the Tsaille or Wheatfields Lake, an approved source by the Navajo Nation Department of Water Resources. NECA will ensure the operator will comply with air quality requirements of the Navajo Nation during all operations of the Wheatfield borrow pit.

Traffic signs will be posted on the existing roads and on Navajo Route N12 warning of truck traffic when hauling is taking place. The turn-out will be maintained when the borrow pit is in operation. Truckers will be instructed to be considerate of local traffic.

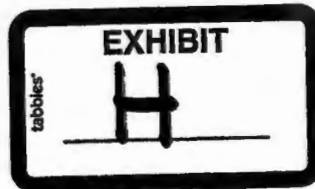
Solid waste will be placed in dumpsters to be disposed of at licensed landfill by a qualified waste hauler. No hazardous materials will be used on the site.

Fuel, petroleum products and waste oil will not be stored on site. A standard spill kit containing absorbent materials, empty containers, and a shovel will be maintained at the site. Spills of petroleum products will be handled according to NECA's standard policies regarding cleanup and disposal of contaminated soils, which require that contaminated soils be removed and transported to a licensed disposal facility, Envirotech of Farmington.

Upon completion of mining and removal of borrow material from the area, NECA will reclaim and reseed the site with native vegetation. Reclamation will be in accordance with NECA's reclamation plan for the Wheatfield Borrow pit, which will be reviewed and approved by the Navajo Nation EPA. Prior to topsoil replacement and seeding, the disturbed areas will be graded to minimize erosion, with no slopes steeper than 3-to-1.



Tsaile/Wheatfields Chapter
Post Office Box C18
Tsaile, Arizona 86556
Phone: (928) 724-2220 Fax: (928) 724-2223



Tsééhilí

TóDzís'á

Tsézhine

Zane P. James, President
Charles R. Chee, Grazing Committee

Devon Begay, Vice President

Kuhyonre E. Nata'ani, Secretary/Treasurer
Nelson Begaye, Council Delegate

TW FY19- 115

**RESOLUTION OF THE
TSAILE/WHEATFIELDS CHAPTER #038**

RECOMMENDING AND REQUESTING THE RESOURCES AND DEVELOPMENT COMMITTEE OF THE NAVAJO NATION COUNCIL TO MATERIAL BORROW MINING LEASE FOR THE NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY ON NAVAJO NATION TRUST LANDS IN THE VICINITY OF THE TSAILE/WHEATFIELDS CHAPTER, NAVAJO NATION, APACHE COUNTY, ARIZONA.

WHEREAS:

1. Pursuant to Navajo Nation Council Resolution No. CJ-20-55, dated December 2, 1955, the Tsaile/Wheatfields Chapter is vested with authority and charged with the responsibility to promote, protect and preserve the interest and general welfare, including the health and safety of its community people; and
2. The Indian Self-Determination Act (P.L. 93-638) of the U. S. Congress and Local Governance Initiatives entitles and support us, Navajo Indians, in initiating plans making decisions, recommendation, request, etc., according to our actual needs and desires; and
3. The Navajo Engineering and Construction Authority, P.O. Box 969, Shiprock, New Mexico 87420, wishes to submit an application for a *Material Borrow* Lease to establish, operate, and maintain a material borrow pit along Navajo Route 12 within the Tsaile/Wheatfields Chapter, Navajo Nation, Apache County, Arizona. The application is attached hereto as Exhibit "A" and made a part hereof; and
4. The *proposed* mining site lease will consist of approximately 4.98 acres, more or less, of Navajo Nation Trust Land located within Tsaile/Wheatfields, Navajo Nation, Apache County, Arizona. The location is shown on the location map attached hereto as Exhibit "B" and made a part of hereof; and
5. Pursuant to Title 18 Navajo Nation Code Section 1007 Royalty Rate, the President of the Navajo Nation, with the approval of the Secretary of Interior or his or her authorized representative, shall fix a reasonable royalty rate on all materials extracted pursuant to any permit, except that a royalty may be waived on any materials extracted for use in public projects on Navajo Nation land.

NOW THEREFORE BE IT RESOLVED THAT:

1. The Tsaile/Wheatfields Chapter hereby approves the requests and recommends the Resources and Development Committee of the Navajo Nation Council to material borrow mining lease for the Navajo Engineering and

RECOMMENDING AND REQUESTING THE RESOURCES AND DEVELOPMENT COMMITTEE OF THE NAVAJO NATION COUNCIL TO MATERIAL BORROW MINING LEASE FOR THE NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY ON NAVAJO NATION TRUST LANDS IN THE VICINITY OF THE TSAILE/WHEATFIELDS CHAPTER, NAVAJO NATION, APACHE COUNTY, ARIZONA.

Construction Authority on Navajo Nation Trust Lands in the vicinity of the Tsaille/Wheatfields Chapter, Navajo Nation, Apache County, Arizona.

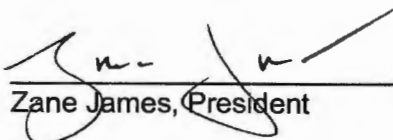
2. The Tsaille/Wheatfields Chapter approves a material aggregate borrow Lease on Navajo Nation Trust Land for the Navajo Engineering and Construction Authority, to establish, operate, and maintain a material aggregate borrow Lease within the Tsaille/Wheatfields Chapter Area, Apache County, Arizona. The location is shown on the location map attached hereto as Exhibit "B".
3. The Tsaille/Wheatfields Chapter hereby requests that the disturbed area, including the previously mined area, be reseeded with a native seed mix upon completion of the project.
4. The Tsaille/Wheatfields Chapter requests of the President of the Navajo Nation and the Secretary of Interior to approve a request for the waiver of royalty rate because the material extracted will be used in a public project on Navajo Nation Land to benefit the Navajo people.

CERTIFICATION

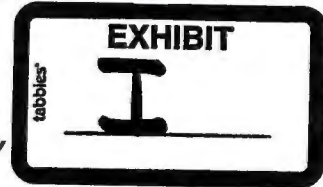
I, hereby certify the foregoing resolution was duly considered by the Tsaille/Wheatfields Chapter at a duly called meeting at Wheatfields, Arizona at which a quorum was present and the same was passed by a vote of 21 in favor, 0 opposed, and 7 abstained on this 19th day of August, 2019.

Motion by: Willis Becenti

Second by: Herman Largo



Zane James, President



**RESOLUTION OF THE
NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY
BOARD OF DIRECTORS**

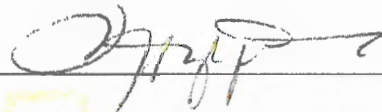
Requesting the Resources and Development Committee of The Navajo Nation to Approve a Unclassified Borrow Material Mining Lease for Navajo Engineering and Construction Authority (NECA) for a Material Borrow Pit, in the Vicinity of the Tsaille/Wheatfields Chapter, Navajo Nation, Apache County, Arizona; and to Waive the Minerals Royalty Rate

WHEREAS:

1. The Navajo Engineering and Construction Authority (NECA) was created as a wholly-owned enterprise of the Navajo Nation pursuant to 5 N.N.C., 1971, for the purpose of engaging in the general engineering and construction business for and on behalf of the Navajo Nation, and to provide employment and training opportunities for members of the Navajo Nation, 5 N.N.C., 1972(a), as amended; and
2. The NECA Board of Directors has authority and responsibility for the management and operation of NECA, 5 N.N.C., 1972(b)(1), as amended; and
3. NECA has applied to The Navajo Nation and the Bureau of Indian Affairs for a Unclassified Borrow Material Mining Lease in the vicinity of Wheatfields, Navajo Nation, Apache County, Arizona; and
4. The proposed Unclassified Borrow Material Mining Lease is for 4.98-acres, more or less, of Navajo Nation Trust Land as described in the metes and bound and contained in the Unclassified Borrow Material Mining Lease application; and
5. The Tsaille/Wheatfields Chapter passed resolution number TWFY19-115 supporting the Unclassified Borrow Material Mining Lease; and
6. The Navajo Nation has required that the lessee provide a performance and reclamation bond to assure that reclamation requirements contained in the Unclassified Borrow Material Mining Lease are carried out; and
7. The requirement to provide a performance and reclamation bond results in the Navajo Nation furnishing a bond to itself, and results in additional cost to NECA and the Navajo Nation; and
8. NECA as a Tribal Enterprise will continue to conduct business within the boundaries of the Navajo Nation in accordance with all laws and regulations, thereby assuring that reclamation of the Unclassified Borrow Material Mining Lease area will be carried out; and

CERTIFICATION

I hereby certify that the foregoing resolution was duly considered by the Board of Directors of the Navajo Engineering and Construction Authority, at a duly called meeting at Albuquerque, New Mexico at which a quorum was present and that same was passed by a vote of 4 in favor, 0 opposed, and 0 abstention this 31st day of October 2019.



Stanley Yazzie, President
Board of Directors
Navajo Engineering and Construction Authority

MOTION: Ernest Hubbell

SECOND: Wallace McGilbert

VOTE: 4 IN FAVOR, 0 OPPOSED, 0 ABSTENTION



☐ RESUBMITTAL

NAVAJO NATION DEPARTMENT OF JUSTICE

DOCUMENT REVIEW REQUEST FORM



DOJ
08/18/2020 @ 5:08 PM
DATE / TIME
☐ 7 Day Deadline
DOC #: 014743
SAS #:
UNIT: N/A

*** FOR NNDJ USE ONLY - DO NOT CHANGE OR REVISE FORM. VARIATIONS OF THIS FORM WILL NOT BE ACCEPTED. ***

CLIENT TO COMPLETE

DATE OF REQUEST: 8/18/2020 DIVISION: NATURAL RESOURCES
CONTACT NAME: Michelle Hoskie DEPARTMENT: GENERAL LAND DEVELOPMENT DEPARTMENT
PHONE NUMBER: x 6447 or x 6423 E-MAIL: michellehoskie@navajo-nsn.gov

TITLE OF DOCUMENT: EOR# 14743 NECA Borrow Pit @ Tsaille/Wheatfields

DOJ SECRETARY TO COMPLETE

DATE/TIME IN UNIT: 8/19/20 8:00 AM REVIEWING ATTORNEY/ADVOCATE: Imin Chee

DATE TIME OUT OF UNIT: 8/20/20 3:55 PM

DOJ ATTORNEY / ADVOCATE COMMENTS

- Document is legally sufficient. According to GLDD, after DOJ process the packet as legally sufficient 3.

REVIEWED BY: (Print) Date / Time SURNAMED BY: (Print) Date / Time
Terrence Miller 8-20-20 V Blackhat 8/20/20 3:25 pm

DOJ Secretary Called: Jermaine for Document Pick Up on 8/20/20 at 3:55 By: CJ

PICKED UP BY: (Print) DATE / TIME:

NNDJ/DRRF-July 2013

approved by RDC, it will then be processed & routed to BIA for their review & for their final approval.

Thx - ic

- GLDD -

Document No. 014743Date Issued: 07/27/2020**EXECUTIVE OFFICIAL REVIEW**Title of Document: NECA Borrow Pit @ Tsaille/Wheatfields Contact Name: YAZZIE, ELERINA BProgram/Division: DIVISION OF NATURAL RESOURCESEmail: e_yazzie@navajo-nsn.gov Phone Number: 928-871-6447☐ **Business Site Lease** Sufficient Insufficient

- | | | | |
|---|-------------|---|---|
| 1. Division: _____ | Date: _____ | □ | □ |
| 2. Office of the Controller: _____ | Date: _____ | □ | □ |
| (only if Procurement Clearance is not issued within 30 days of the initiation of the E.O. review) | | | |
| 3. Office of the Attorney General: _____ | Date: _____ | □ | □ |

☐ **Business and Industrial Development Financing, Veteran Loans, (i.e. Loan, Loan Guarantee and Investment) or Delegation of Approving and/or Management Authority of Leasing transactions**

- | | | | |
|--|-------------|---|---|
| 1. Division: _____ | Date: _____ | □ | □ |
| 2. Office of the Attorney General: _____ | Date: _____ | □ | □ |

☐ **Fund Management Plan, Expenditure Plans, Carry Over Requests, Budget Modifications**

- | | | | |
|---|-------------|---|---|
| 1. Office of Management and Budget: _____ | Date: _____ | □ | □ |
| 2. Office of the Controller: _____ | Date: _____ | □ | □ |
| 3. Office of the Attorney General: _____ | Date: _____ | □ | □ |

☐ **Navajo Housing Authority Request for Release of Funds**

- | | | | |
|--|-------------|---|---|
| 1. NNEPA: _____ | Date: _____ | □ | □ |
| 2. Office of the Attorney General: _____ | Date: _____ | □ | □ |

☐ **Lease Purchase Agreements**

- | | | | |
|--|-------------|---|---|
| 1. Office of the Controller: _____ | Date: _____ | □ | □ |
| (recommendation only) | | | |
| 2. Office of the Attorney General: _____ | Date: _____ | □ | □ |

☐ **Grant Applications**

- | | | | |
|---|-------------|---|---|
| 1. Office of Management and Budget: _____ | Date: _____ | □ | □ |
| 2. Office of the Controller: _____ | Date: _____ | □ | □ |
| 3. Office of the Attorney General: _____ | Date: _____ | □ | □ |

☐ **Five Management Plan of the Local Governance Act, Delegation of an Approving Authority from a Standing Committee, Local Ordinances (Local Government Units), or Plans of Operation/Division Policies Requiring Committee Approval**

- | | | | |
|--|-------------|---|---|
| 1. Division: _____ | Date: _____ | □ | □ |
| 2. Office of the Attorney General: _____ | Date: _____ | □ | □ |

☐ **Relinquishment of Navajo Membership**

- | | | | |
|--|-------------|---|---|
| 1. Land Department: _____ | Date: _____ | □ | □ |
| 2. Elections: _____ | Date: _____ | □ | □ |
| 3. Office of the Attorney General: _____ | Date: _____ | □ | □ |

☐ **Land Withdrawal or Relinquishment for Commercial Purposes**

Sufficient Insufficient

1. Division: _____ Date: _____ ☐ ☐
2. Office of the Attorney General: _____ Date: _____ ☐ ☐

☐ **Land Withdrawals for Non-Commercial Purposes, General Land Leases and Resource Leases**

1. NLD _____ Date: _____ ☐ ☐
2. F&W _____ Date: _____ ☐ ☐
3. HPD _____ Date: _____ ☐ ☐
4. Minerals _____ Date: _____ ☐ ☐
5. NNEPA _____ Date: _____ ☐ ☐
6. DNR _____ Date: _____ ☐ ☐
7. DOJ _____ Date: _____ ☐ ☐

☐ **Rights of Way**

1. NLD _____ Date: _____ ☐ ☐
2. F&W _____ Date: _____ ☐ ☐
3. HPD _____ Date: _____ ☐ ☐
4. Minerals _____ Date: _____ ☐ ☐
5. NNEPA _____ Date: _____ ☐ ☐
6. Office of the Attorney General: _____ Date: _____ ☐ ☐
7. OPVP _____ Date: _____ ☐ ☐

☐ **Oil and Gas Prospecting Permits, Drilling and Exploration Permits, Mining Permit, Mining Lease**

1. Minerals _____ Date: _____ ☐ ☐
2. OPVP _____ Date: _____ ☐ ☐
3. NLD _____ Date: _____ ☐ ☐

☐ **Assignment of Mineral Lease**

1. Minerals _____ Date: _____ ☐ ☐
2. DNR _____ Date: _____ ☐ ☐
3. DOJ _____ Date: _____ ☐ ☐

☐ **ROW (where there has been no delegation of authority to the Navajo Land Department to grant the Nation's consent to a ROW)**

1. NLD _____ Date: _____ ☐ ☐
2. F&W _____ Date: _____ ☐ ☐
3. HPD _____ Date: _____ ☐ ☐
4. Minerals _____ Date: _____ ☐ ☐
5. NNEPA _____ Date: _____ ☐ ☐
6. DNR _____ Date: _____ ☐ ☐
7. DOJ _____ Date: _____ ☐ ☐
8. OPVP _____ Date: _____ ☐ ☐

☒ **OTHER: Sand and Gravel / Borrow Pit**

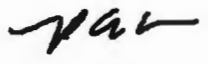
1. Navajo Land Dept _____ Date: _____ ☐ ☐
2. Minerals _____ Date: _____ ☐ ☐
3. HPD _____ Date: _____ ☐ ☐
4. F&W _____ Date: _____ ☐ ☐
5. DNR _____ Date: _____ ☐ ☐
6. DNR _____ Date: _____ ☐ ☐
7. NNEPA _____ Date: _____ ☐ ☐
8. DOJ - (ic) _____ Date: 8/20/20 ☒ ☐
9. OPVP _____ Date: 8-25-20 ☒ ☐
[Signature]

Windowrock
AZ)

Tier 2 Document Voting Results

User Name (Facility)	Job Title	Department	Vote Cast	Comments	Replies	Vote Date	Signiture
Leanna Begay (Navajo Land Title Data System - Windowrock AZ)	Technical Review	Fish and Wildlife	Approved	<i>no comments</i>	<i>No Reply</i>	07-Aug-2020	
Richard Begay NNHP (Navajo Land Title Data System - Windowrock AZ)	Navajo Nation Historic Preservation Officer	Historic Preservation Department	Approved	<i>no comments</i>	<i>No Reply</i>	07-Aug-2020	<i>Roll MB</i>
Robert Allan DNR (Navajo Land Title Data System - Windowrock AZ)	Deputy Director DNR	DNR Administration	Approved	<i>no comments</i>	<i>No Reply</i>	18-Aug-2020	<i>Robert O. Gu</i>
Steven Prince MIN (Navajo Land Title Data System - Windowrock AZ)	Technical Reviewer	Navajo Nation Minerals Management	Approved	<i>no comments</i>	<i>No Reply</i>	10-Aug-2020	<i>Steven L</i>

Tier 1 Document Voting Results

User Name (Facility)	Job Title	Department	Vote Cast	Comments	Replies	Vote Date	Signature
Najamh Tariq (Navajo Land Title Data System - Windowrock AZ)	Approver	Department of Water Resources	Approved	<i>no comments</i>	<i>No Reply</i>	20-Jul-2020	
Pam Kyselka F&W (Navajo Land Title Data System - Windowrock AZ)	Technical Review	Fish and Wildlife	Approved	<i>no comments</i>	<i>No Reply</i>	14-Jul-2020	
Rebecca Gilchrist MIN (Navajo Land Title Data System - Windowrock AZ)	Technical Reviewer	Navajo Nation Minerals Management	Approved	1. This vote is contingent upon the uploaded Terms and Conditions, dated 08/07/2020, permanently being included in the application approval package. rkg	1. <i>No Reply</i>	07-Aug-2020	
Tamara Billie (Navajo Land Title Data System -)	HPD Reviewer	Historic Preservation Department	Approved	1. HPD-19-760	1. <i>No Reply</i>	21-Jul-2020	

W. Mike NLD NLD
Halona Department
(NLTDS - Manager III
Admin)

Approved *no*
comments

No
Reply

07-Aug

RESOURCES AND DEVELOPMENT COMMITTEE
24th Navajo Nation Council

SECOND YEAR 2020

ROLL CALL
VOTE TALLY SHEET:

Legislation # 0244-20: An Action Relating to Resources and Development; Approving a Sand and Gravel Lease to Navajo Engineering and Construction Authority to Extract Sand and Gravel from 4.98 Acres, More or Less, of Navajo Nation Trust Lands Located within the Tsaile/Wheatfields Chapter Vicinity, Navajo Nation (Apache County, Arizona). *Sponsor: Honorable Carl Slater*

Date: October 14, 2020 - Regular Meeting (Teleconference)
Meeting Location: (RDC members called in via teleconference from their location within the boundary of the Navajo Nation.)

Main Motion:

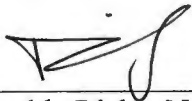
Motion: Kee Allen Begay, Jr. S: Wilson C. Stewart, Jr. Vote: 4-0-1 (CNV)

In Favor: Wilson C. Stewart, Jr., Herman M. Daniels, Kee Allen Begay, Jr., and Thomas Walker, Jr.

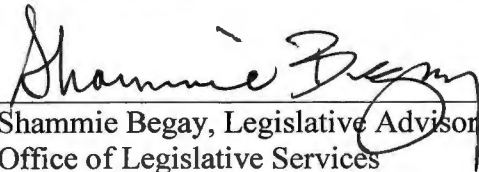
Oppose: NONE

Excuse: Mark A. Freeland

Not Voting: Presiding Chairperson Rickie Nez



Honorable Rickie Nez, Presiding Chairperson
Resources and Development Committee


Shammie Begay, Legislative Advisor
Office of Legislative Services