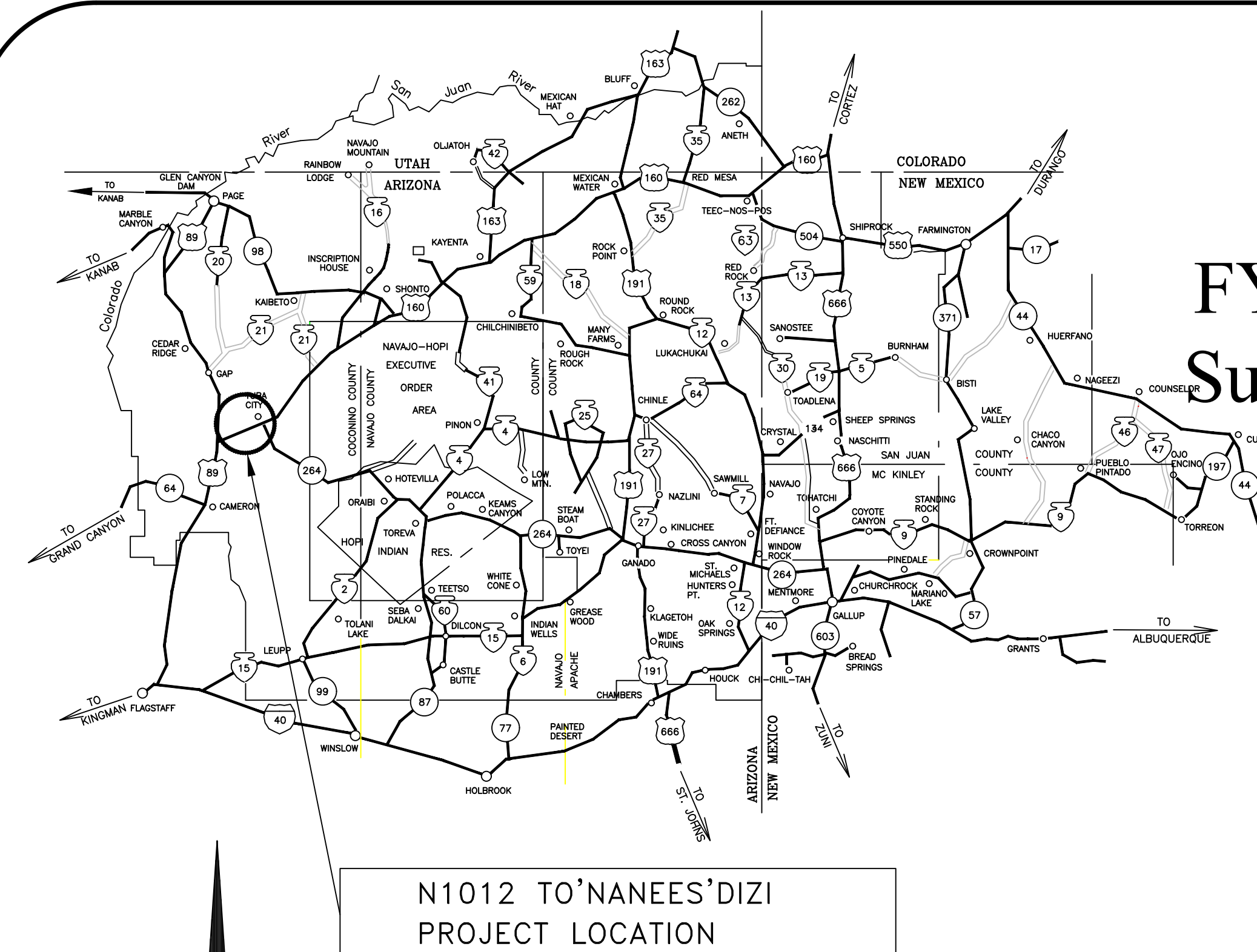




N6222 To'Nanees' Dizi Road Improvements-2 Mile To'Nanees' Dizi, Arizona FY 2020 Navajo Nation Road Fund-2 Mile Chapter Funded Subgrade Preparation, Place 4" Aggregate Base Course with Chemical Stabilizer

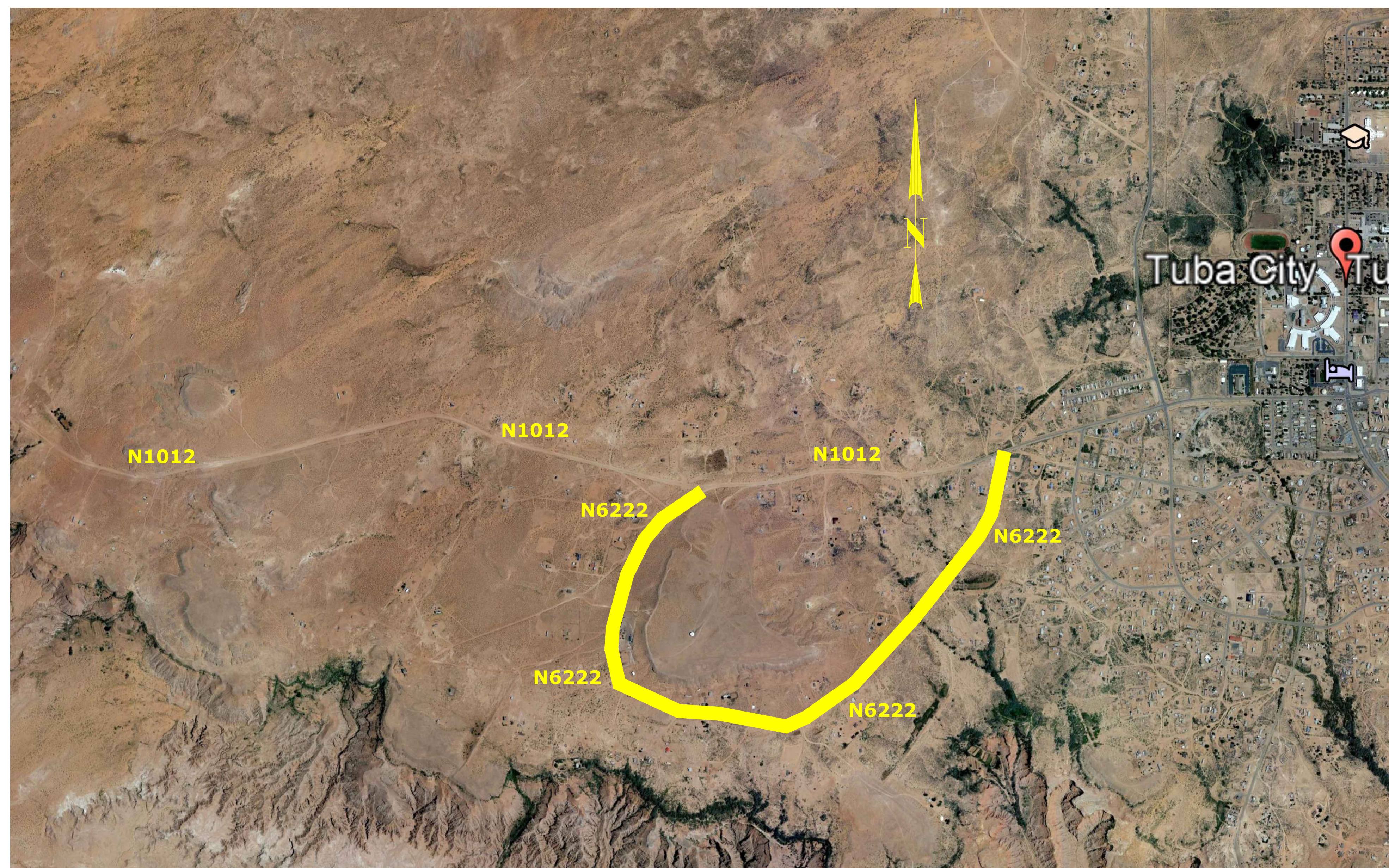


BID# 22-01-2689LE

Sheet Number	Sheet Index
1	Cover Sheet
2	General Construction Notes
3	Quantity Sheet
4	Typical Road Section
5-27	Site Plan (Sheets 5 -Sheet 27)
28	Culvert Bedding On Natural Ground

LEGEND

STATE LINE	-----
RESERVATION LINE	-----
COUNTY LINE	-----
TOWNSHIP or RANGE LINE	-----
SECTION LINE	-----
HIGHWAY RIGHT-OF-WAY LINE	-----
UNFENCED PROPERTY	-----
SECTION CORNER and 1/4 CORNER	-----
POWER LINE AND POLES	-----
TELEPHONE LINE AND POLES	-----
GUY WIRE OR ANCHOR	-----
TRAFFIC SIGN	-----
DELINEATORS	-----
BARBED WIRE FENCE	-----
CHAIN LINK FENCE	-----
CATTLE GUARD	-----
CULVERTS	-----
CONCRETE BOX CULVERTS	-----
GROUND LINE - EARTH	-----
GROUND LINE - ROCK	-----
EXISTING ROAD	-----
SIDE ROAD TURNOUT	-----
TREES and SHRUBS	-----
CHANNEL or DITCH	-----
DIKE or DITCH BLOCK	-----
RIP-RAP	-----
RAILROAD TRACK	-----
GAS LINE	-----
DWELLING	-----
RIGHT-OF-WAY MONUMENT	-----



NAVAJO DIVISION OF TRANSPORTATION

P.O. BOX 4620 WINDOW ROCK, AZ 86515

Project: N6222 To'Nanees'Dizi Chapter
Scale: NTS
Sheet: 1 of 28
Revised: December 30, 2021

To'Nanees'Dizi N6222
Road Improvements-1 Mile
To'Nanees'Dizi, Cocconino County, Arizona

GENERAL CONSTRUCTION NOTES:

1.

ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS, FP-14
2.

ALL PERMANENT AND TEMPORARY ROADSIDE SIGNS AND PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS" (CURRENT EDITION) AND IN ACCORDANCE WITH THE DETAILS ON THESE PLANS. PLACEMENT OF "STOP" BAR, PERMANENT TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE FIELD ADJUSTED AS DIRECTED BY THE CONTRACTING OFFICIAL(CO), AT NO ADDITIONAL COST TO THE NAVAJO DIVISION OF TRANSPORTATION.
3.

THE CONTRACTOR WILL KEEP EXISTING PROPERTIES/RESIDENCES AND INTERSECTING ROADS ACCESSIBLE AT ALL TIMES
CONTRACTOR WILL ALSO HAVE TO PLACE SIGNS AT ALL DRIVEWAYS AND TURNOUTS, FOLLOWING APPROVED TRAFFIC CONTROL PLAN.
4.

THE TEMPORARY TRAFFIC CONTROL DETAILS SHOWN REFLECTS GENERAL REQUIREMENTS FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THESE DETAILS, TAKING INTO ACCOUNT THE CONTRACTOR'S CONSTRUCTION SEQUENCING PLAN, MUTCD AND THE SUPPLEMENTAL SPECIFICATIONS FOR SECTION 635 - TEMPORARY TRAFFIC CONTROL. THE CONTRACTOR SHALL ALSO SUBMIT A COPY OF HIS TRAFFIC CONTROL PLAN TO THE NAVAJO DIVISION OF TRANSPORTATION (2) - WEEKS PRIOR TO START OF CONSTRUCTION.
5.

THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY AND EXPENSE FOR DISPOSAL AND/OR CONSTRUCTION DERIS IN ACCORDANCE WITH SECTIONS 107 AND 203 OF THE FR-14 AS WELL AS ANY AND ALL PERMIT REQUIREMENTS. THIS WORK SHALL BE INCIDENTAL OBLIGATIONS OF THE CONTRACTOR.
6.

THE CONTRACTOR IS HEREBY NOTIFIED THAT UNDER NO CIRCUMSTANCE SHALL ANY DRAINAGE STRUCTURE(S) BE INSTALLED BELOW THE NATURAL FLOW LINE OF THE WASH, CHANNEL, ARROYO OR DITCH LINE.
7.

NO WORK SHALL BE PERFORMED OR GROUND DISTURBED OUTSIDE THE DESIGNATED CONSTRUCTION LIMITS IN ACCORDANCE WITHOUT WRITTEN APPROVAL BY THE NDOT MANAGER UNLESS OTHERWISE SHOWN AND LABELED ON THESE PLANS AS "CONSTRUCTION ZONE" . IN NO CASE SHALL ANY WORK BE PERFORMED OUTSIDE THE DESIGNATED RIGHTS-OF-WAY LIMITS WITHOUT WRITTEN APPROVAL FROM THE NDOT DIVISION MANAGER, UNLESS OTHERWISE SHOWN AND CALLED OUT ON THESE PLANS AS "CONSTRUCTION ZONE". THE CONSTRUCTION LIMIT IS THE CATCH POINT EARTHWORK LIMIT PLUS 9 FEET, NOT TO EXCEED THE RIGHT OF WAY LIMITS.
8.

THE QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSES ONLY AND TO COMPARE AND CANVAS BIDS. ACTUAL PAY QUANTITIES WILL BE DETERMINED IN THE FIELD.

9.

THE CONTRACTOR SHALL REMOVE, CLEAN, AND STOCKPILE ALL SALVAGEABLE EXISTING CULVERTS, GUARDRAIL, CATTLE GUARDS, FENCING MATERIALS, ETC., AS CALLED FOR ON THESE PLANS.
10.

THE COST FOR YARD/STORAGE SITE, THE CONTRACTOR IS NOTIFIED THAT ONE AREA HAS BEEN DESIGNATED FOR THE
11.

TO STORE ALL EQUIPMENT AND MATERIALS USED ON THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SITE, CLEARING AND GRUBBING AND REVEGETATION UPON COMPLETION OF THE PROJECT. COST FOR YARD/STORAGE SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND THE CONTRACTOR SHALL NOT RECEIVE ADDITIONAL COMPENSATION FOR THESE COSTS. THE CONTRACTOR SHALL CONTACT THE CO TO VERIFY THE LIMITS OF THE SITE IN THE FIELD. REQUIREMENTS AND PAYMENT FOR THE STORAGE ARE DESCRIBED IN THE RENTAL RESOURCE AGREEMENT, INCLUDED WITH THE PROJECT SPECIFICATIONS.
12.

THE CONTRACTOR SHALL BE REQUIRED TO REPAIR ALL DENTED, BENT OR OTHERWISE DAMAGED PIPE EDGES FOR THE SECTION AS CALLED FOR REPAIR WORK. THIS WORK SHALL MEET THE APPROVAL OF THE CO. AND IS EXPECTED TO INCLUDE STRAIGHTENING OF DENTED/BENT CULVERT EDGES, WELDING OF CUTS/TEARS IN THE EXISTING CULVERTS, TRIMMING BACK THE EXISTING CULVERT TO CREATE AN END SUITABLE FOR AN EXTENSION COLLAR, ETC. NO SEPARATE PAYMENT FOR THIS WORK WILL BE MADE.
13.

THE ROADWAY TYPICAL SECTION SHOWN IS A BASIC TEMPLATE TO WHICH THE PROJECT IS TO BE STAKED AND BUILT HOWEVER, THERE WILL BE LOCATIONS WHERE, DUE TO EXISTING GROUND SCHEDULE CONDITIONS, TURNOUTS, CULVERTS OR OTHER OTHER STRUCTURES, ETC. THE SHOWN TYPICAL SLOPES CANNOT BE CONSTRUCTION. IN THIS CASE, THE NDOT DIVISION MANAGER, THROUGH THE CO, SHALL BE CONSULTED FOR CHANGES IN THE TYPICAL SECTIONS, DESIGN SLOPES, AND/OR OTHER ADJUSTMENTS BEFORE PROCEEDING WITH THE WORK UNLESS NOTED OTHERWISE ON THE PLANS.
14.

ALL CONSTRUCTION ACTIVITIES & WORKERS SHALL STAY WITHIN THE RIGHT-OF-WAY AT ALL TIMES.
15.

ROADWAY SHALL BE OPENED TO FULL TWO WAY TRAFFIC AT THE END OF WORK DAY AND WEEKENDS. SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL REQUIREMENTS.
16.

THE FOLLOWING SHALL BE SUBMITTED AND APPROVED BY THE NDOT AND BIA, PRIOR TO ISSUANCE OF NTP: A QUALITY CONTROL PLAN, B. TRAFFIC CONTROL PLAN, C. SAFETY PLAN, D. CONSTRUCTION SCHEDULE.
17.

PROTECTION OF SURVEY CONTROL & MONUMENTS: CONTRACTOR SHALL REPLACE IF DAMAGED OR REMOVED. NO ADDITIONAL COMPENSATION SHALL BE MADE.

NAVAJO DIVISION OF TRANSPORTATION
P.O. BOX 4620 WINDOW ROCK, AZ 86515

Project: N6222 To'Nanees'Dizi Road Improvements
Scale: NTS
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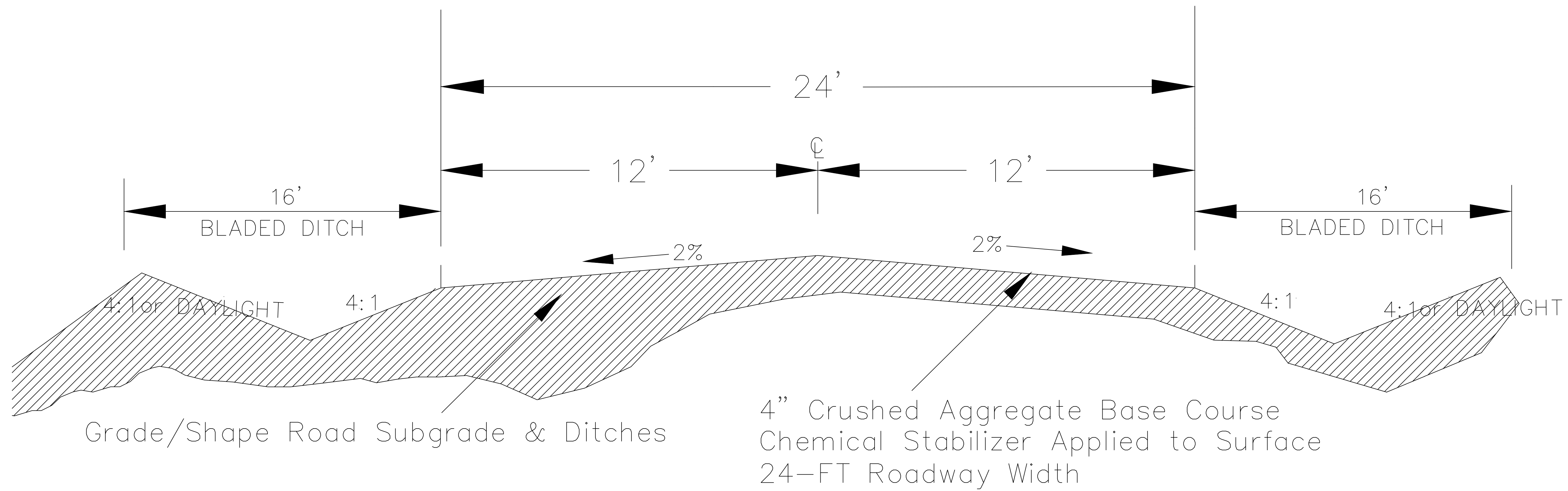
To'Nanees'Dizi N6222
Road Improvements-2 Miles
To'Nanees'Dizi, Cocconino County, Arizona

SUMMARY OF QUANTITIES			
FP-14 SPEC.	ITEM DESCRIPTION	UNIT	QUANTITY
SECT. 151	MOBILIZATION	LUMP SUM	1
SECT. 152	CONSTRUCTION STAKING BY CONTRACTOR	LUMP SUM	1
SECT. 154	CONTRACTOR SAMPLING AND TESTING	LUMP SUM	1
SECT. 635	TEMPORARY TRAFFIC CONTROL	LUMP SUM	1
SECT. 212	GRADING/SHAPING SUBGRADE & SIDE DITCHES TO TYPICAL ROAD SECTION	MILE	2
SECT. 311	PLACE AGGREGATE BASE COURSE, 4" DEPTH, GRADING D, 2 MILES	TON	5930
SECT. 311	AGGREGATE BASE COURSE, TURN OUTS, 39 TURN OUTS, 10 TONS PER TURN OUT	TON	390
SECT. 707	STA 16+95-REMOVE 2 EA 48"x40' CMP; REPLACE WITH 2 EA 48"X40' CMP W/END SECTIONS	LS	1
SECT. 707	STA 27+25-REMOVE 1 EA 48"X40' CMP; REPLACE WITH 1 EA 48"X40' CMP W/END SECTIONS	LS	1
SECT. 251	PLACE RIP RAP @ CMP INLET/OUTLETS, 2 LOCATIONS	CY	40
SECT. 725.02	CHEMICAL STABILIZATION OF AGGREGATE BASE COURSE-ROAD BOND (CALCIUM CHLORIDE OR MAGNESIUM CHLORIDE)	SY	28,160

NAVAJO DIVISION OF TRANSPORTATION
P.O. BOX 4620 WINDOW ROCK, AZ 86515

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TYPICAL ROAD SECTION
N6222 Road Improvements
To'Nanees'Dizi, Cocconino County, Arizona

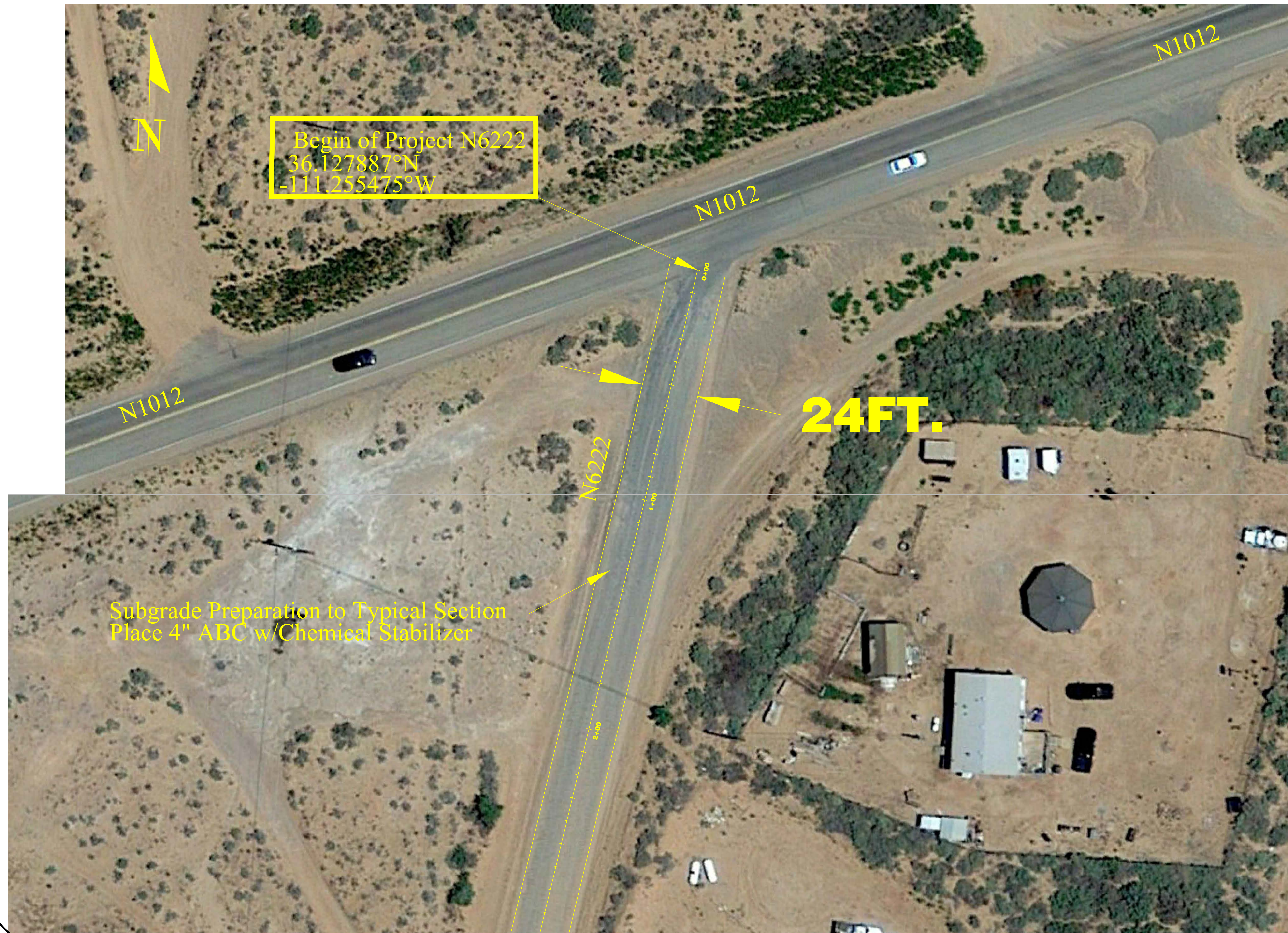


TYPICAL ROAD SECTION – TO'NANEES'DIZI N6222
NTS

NAVAJO DIVISION OF TRANSPORTATION
P.O. BOX 4620 WINDOW ROCK, AZ 86515

Project: N6222 To'Nanees'Dizi
Scale: NTS
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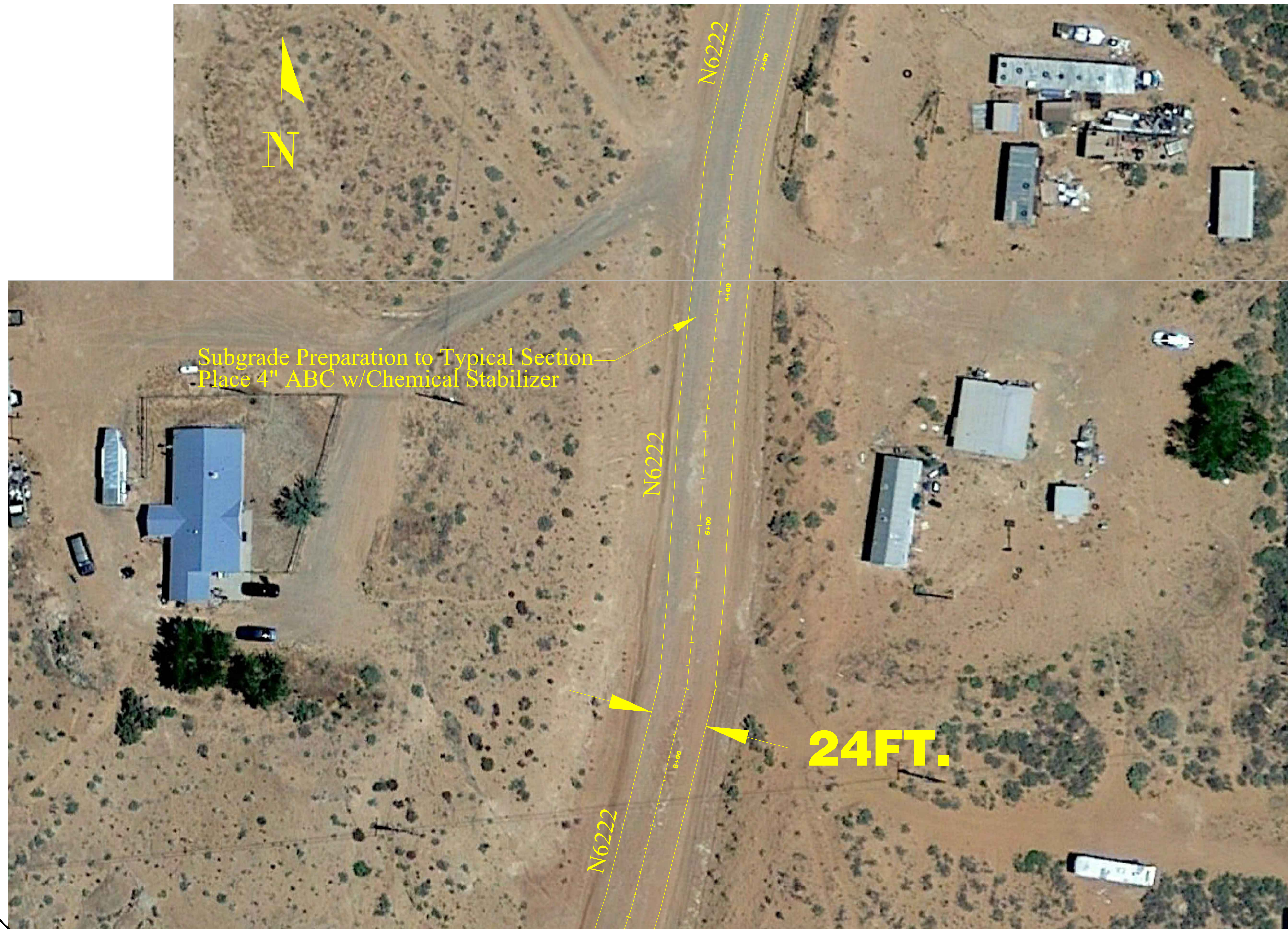
Site Plan
N6222 Road Improvements
To 'Nanees' Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To 'Nanees' Dizi
Scale: 1"=20'
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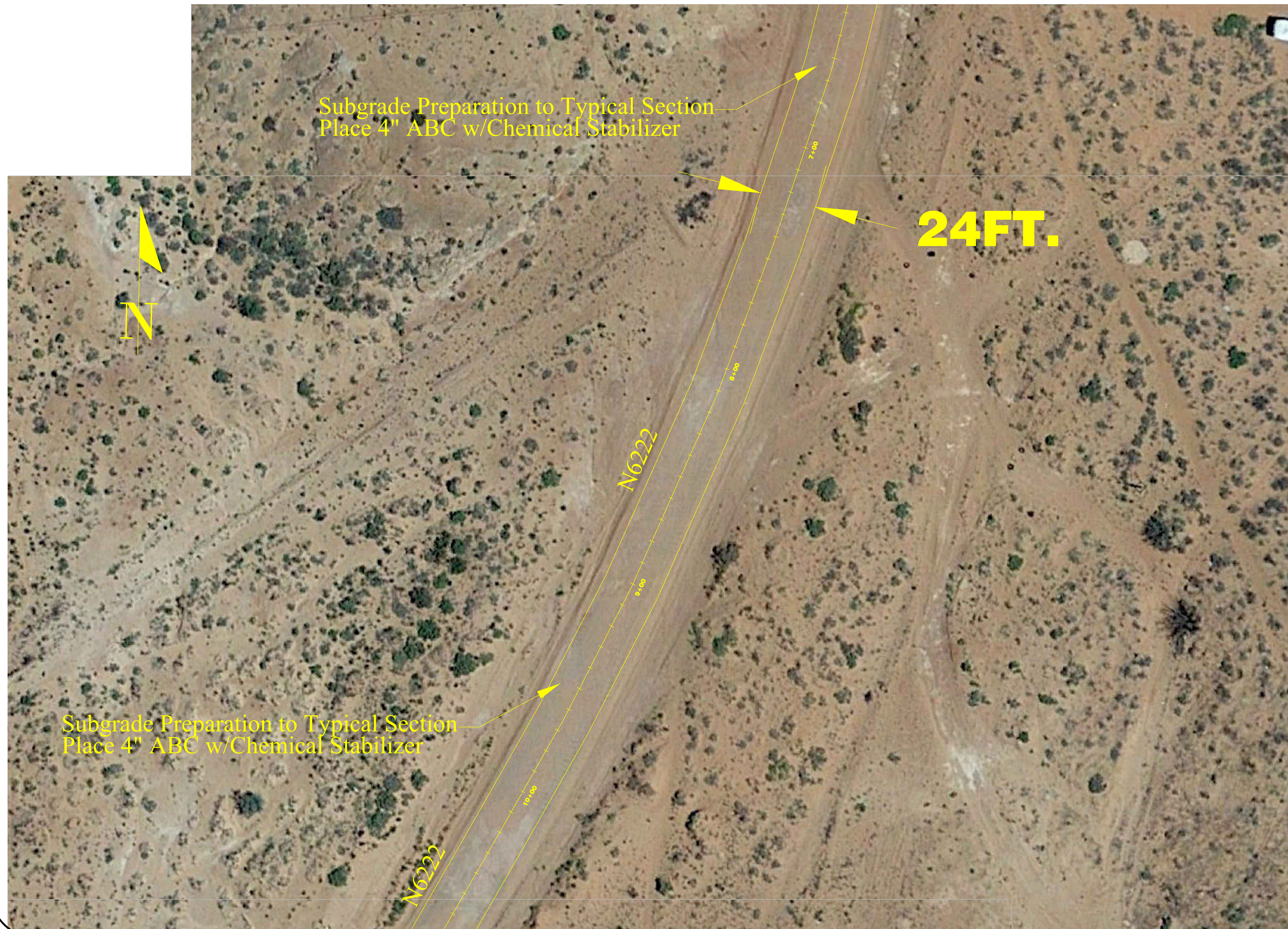
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N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
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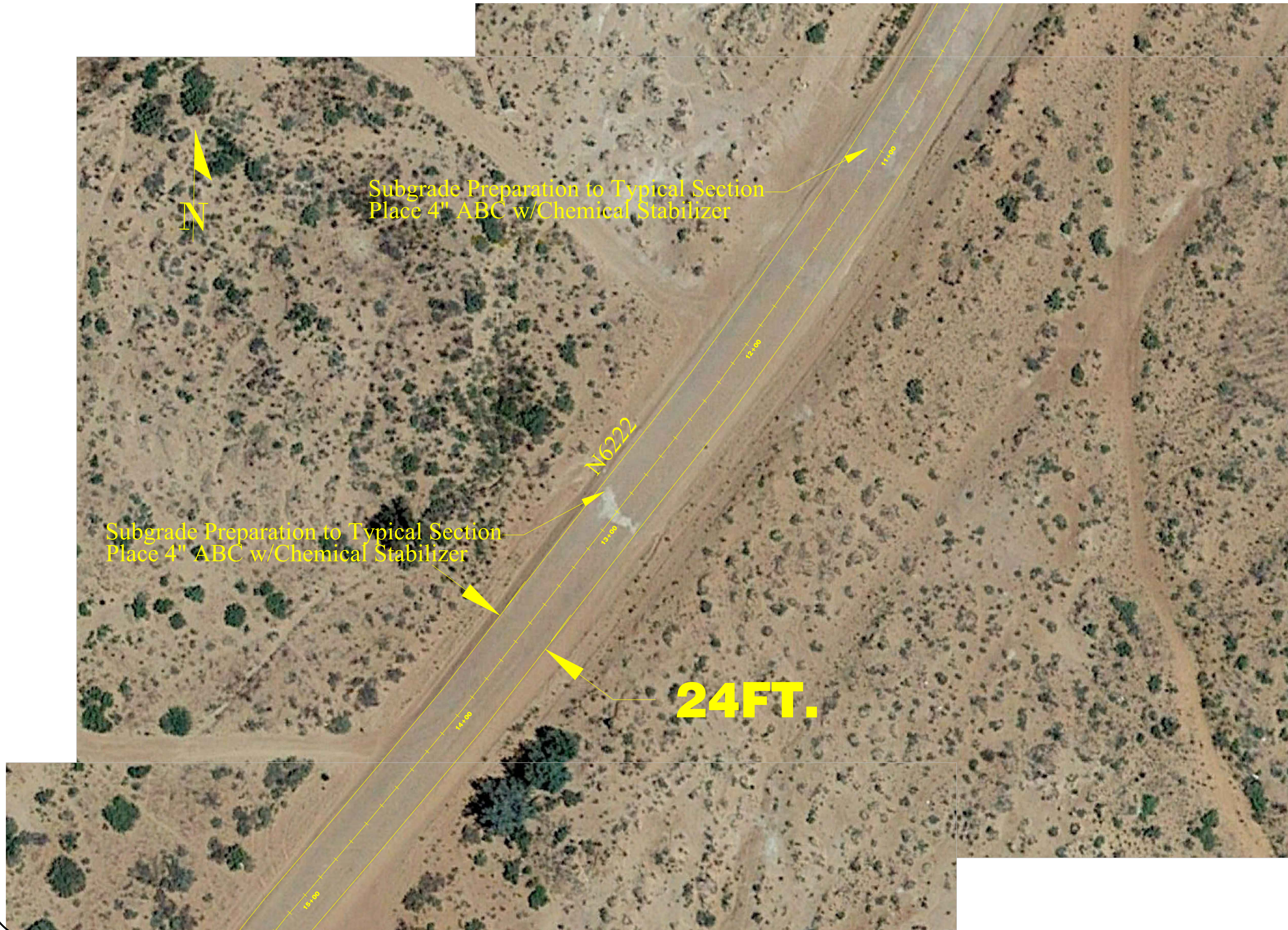
Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



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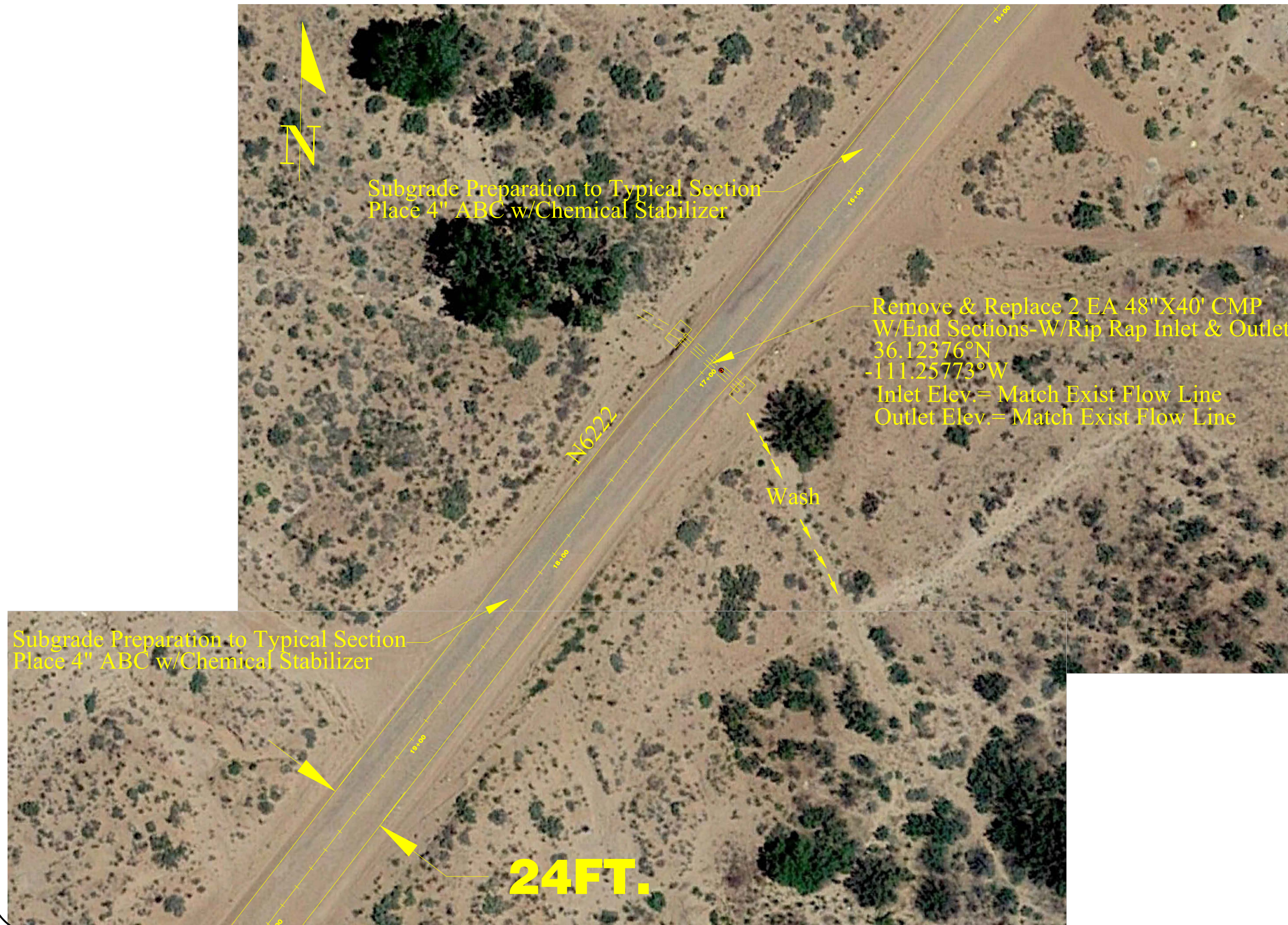
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N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



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Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Cocconino County, Arizona



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Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



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Project: N6222 To'Nanees'Dizi
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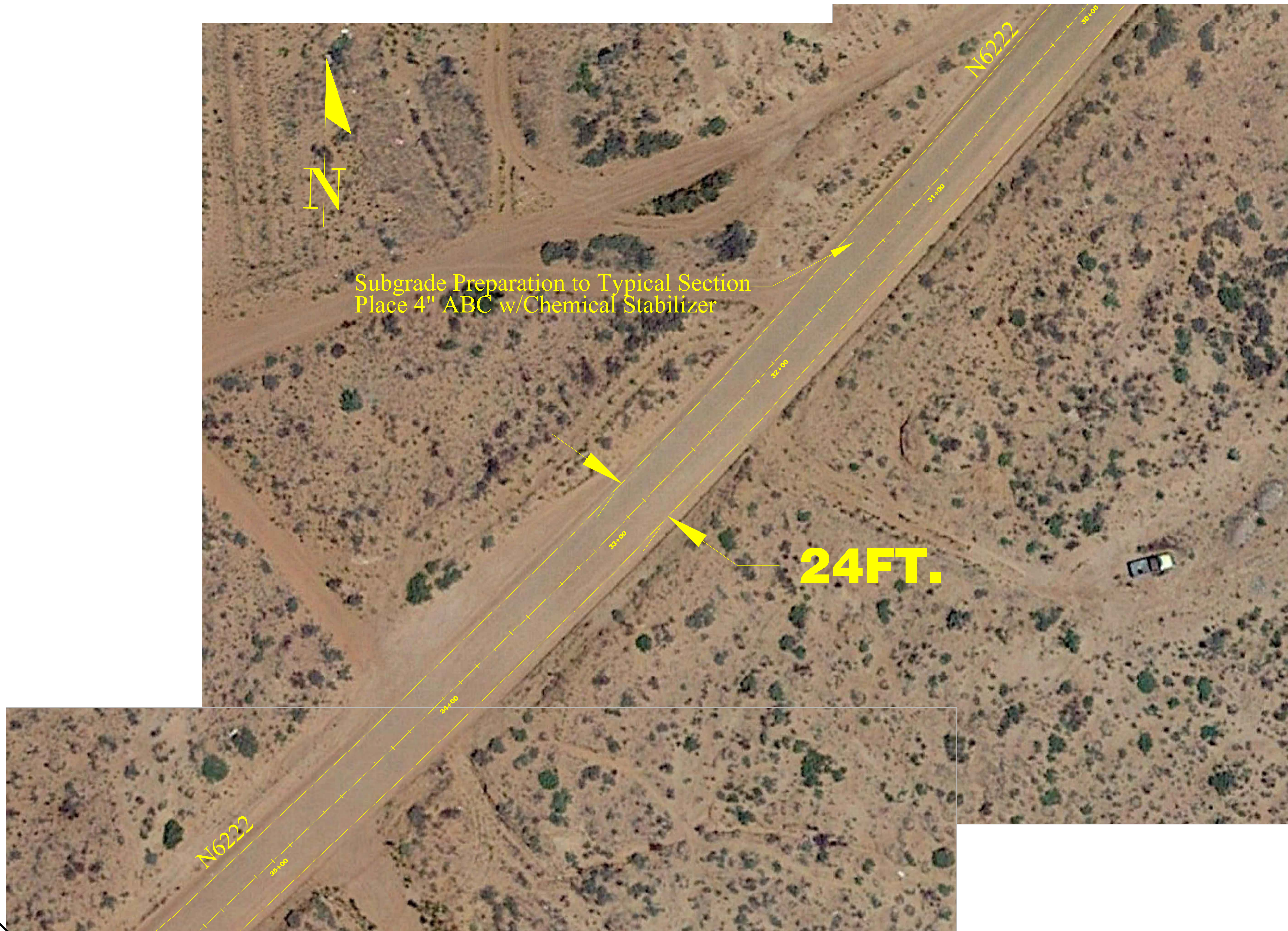
Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
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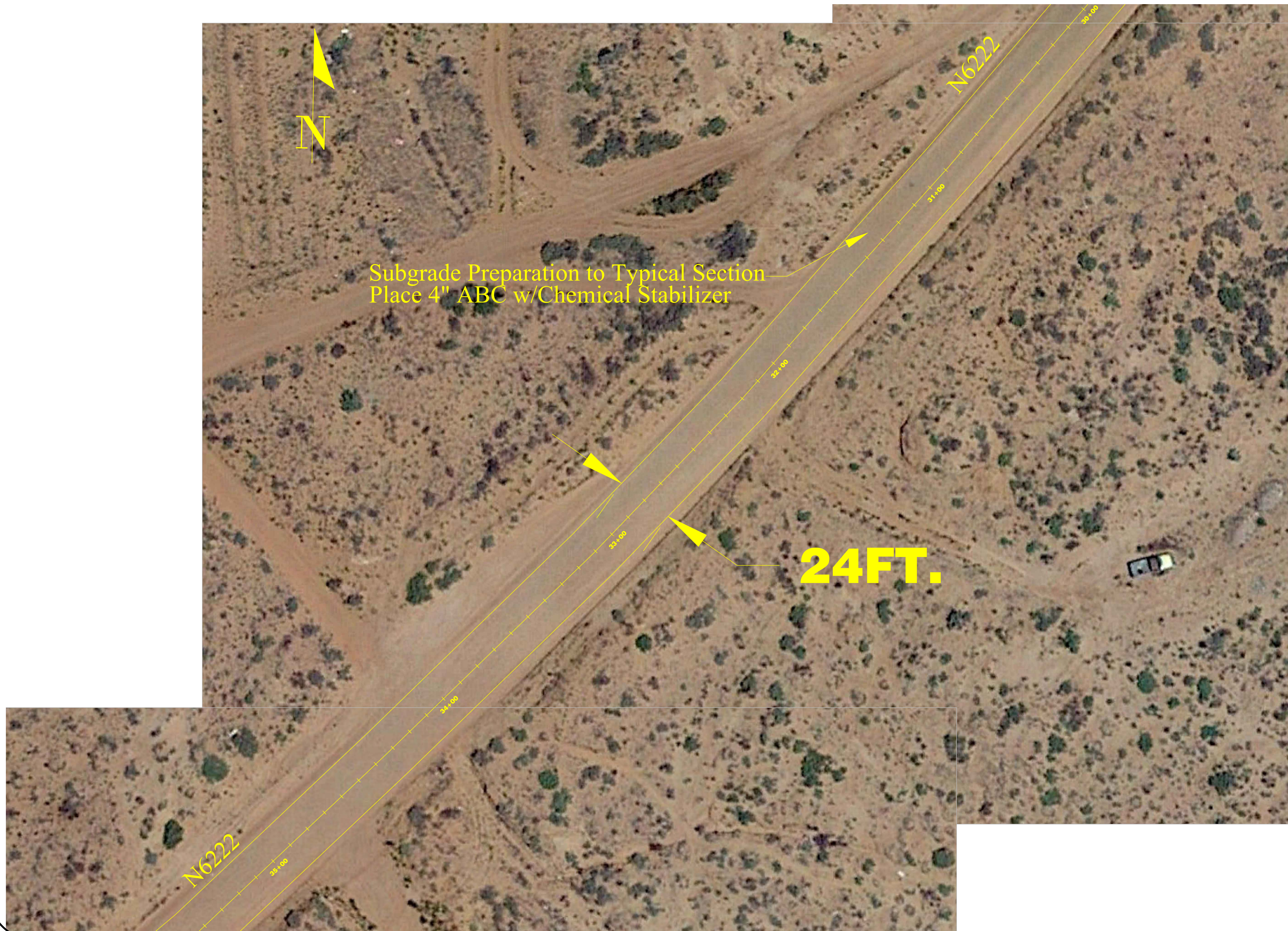
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N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
Scale: 1"=20'
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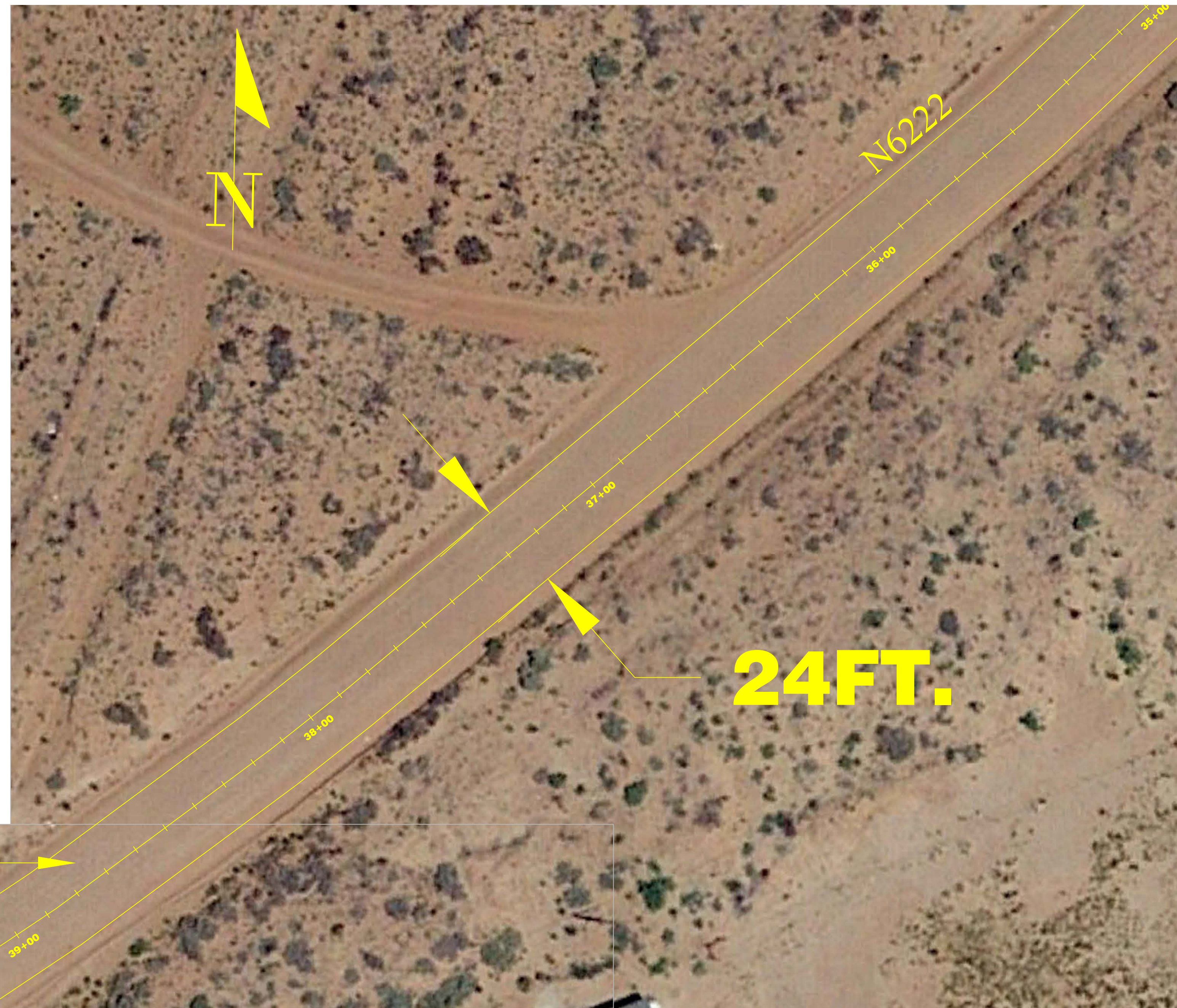
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N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
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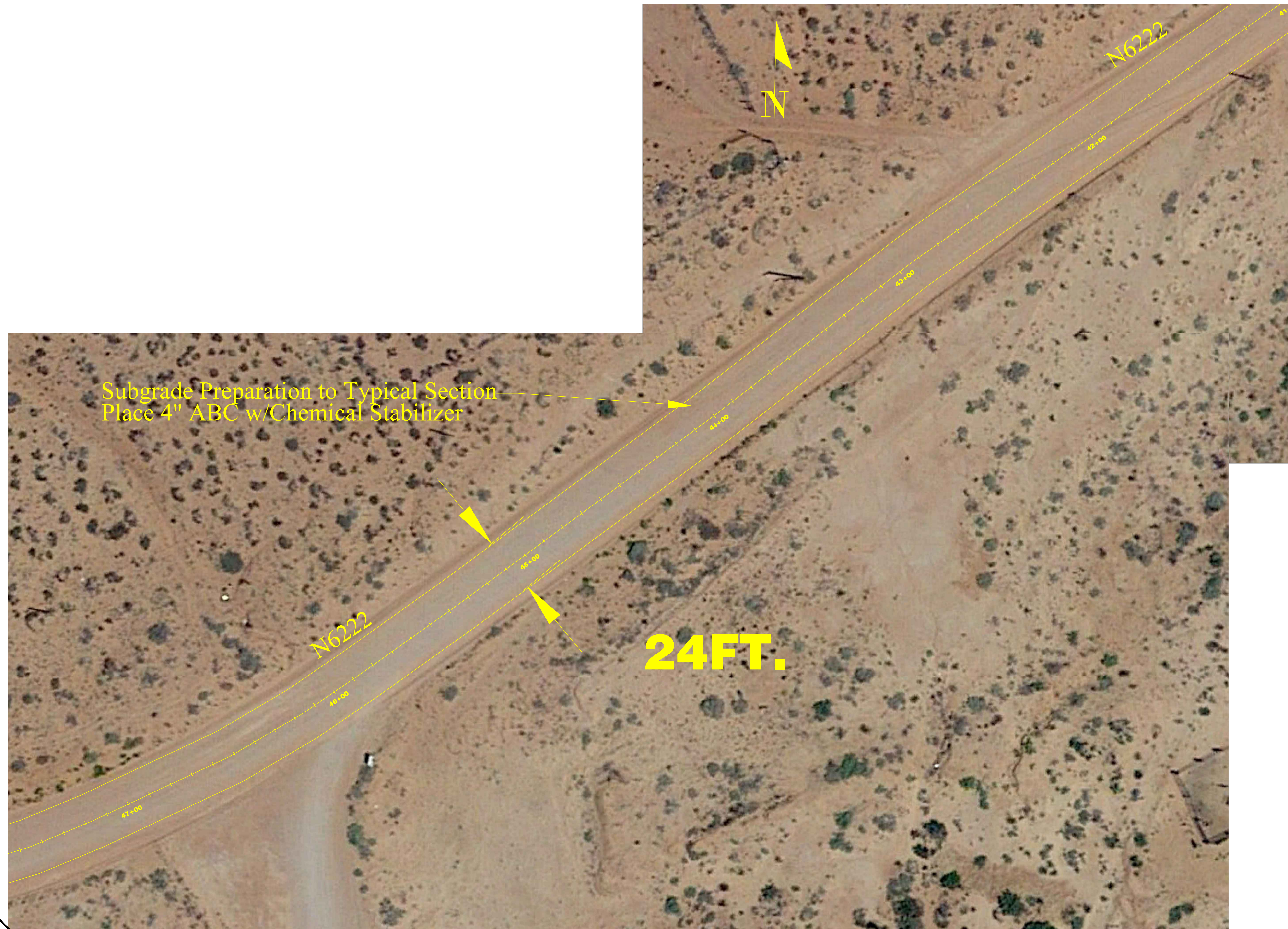
Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
Scale: 1"=20'
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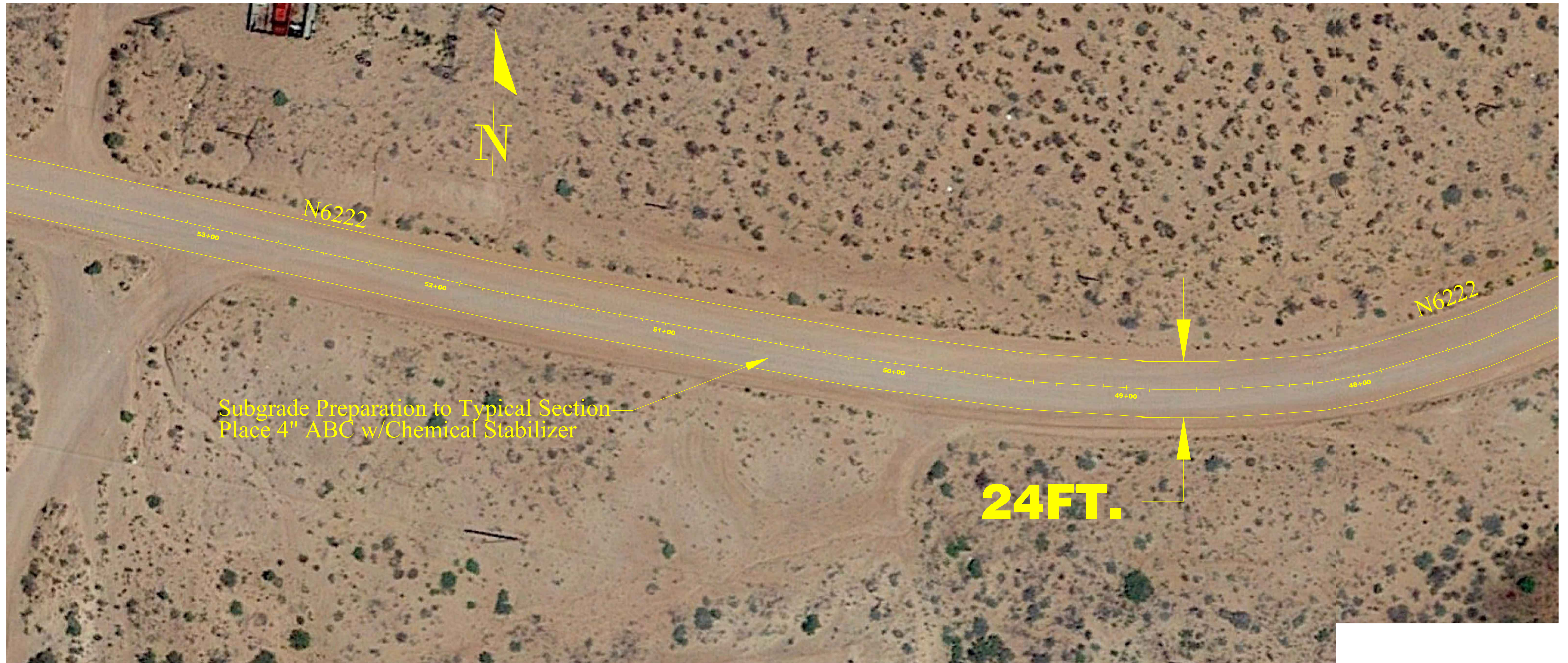
Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Cocconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
Scale: 1"=20'
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Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

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Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
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Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
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Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
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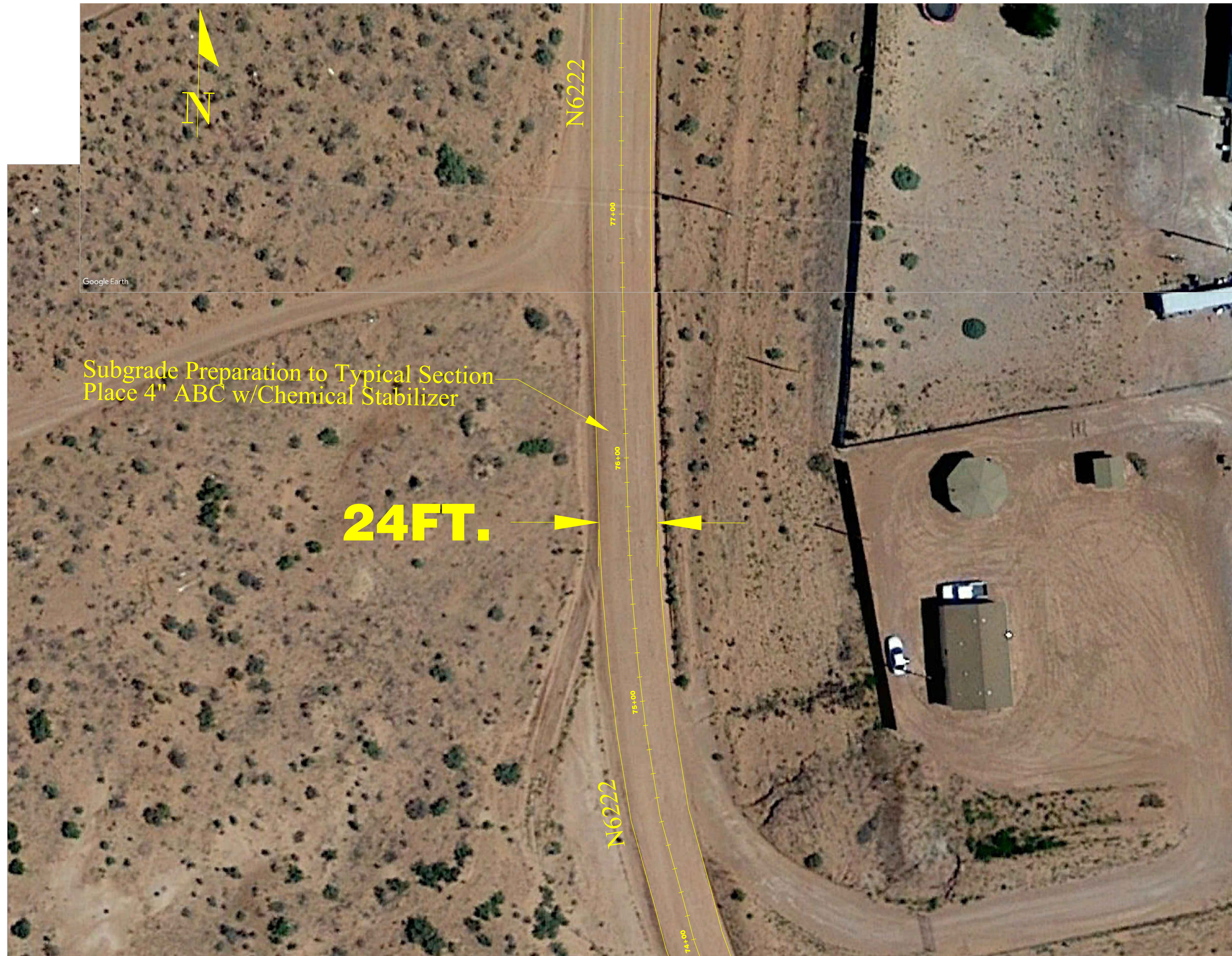
Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
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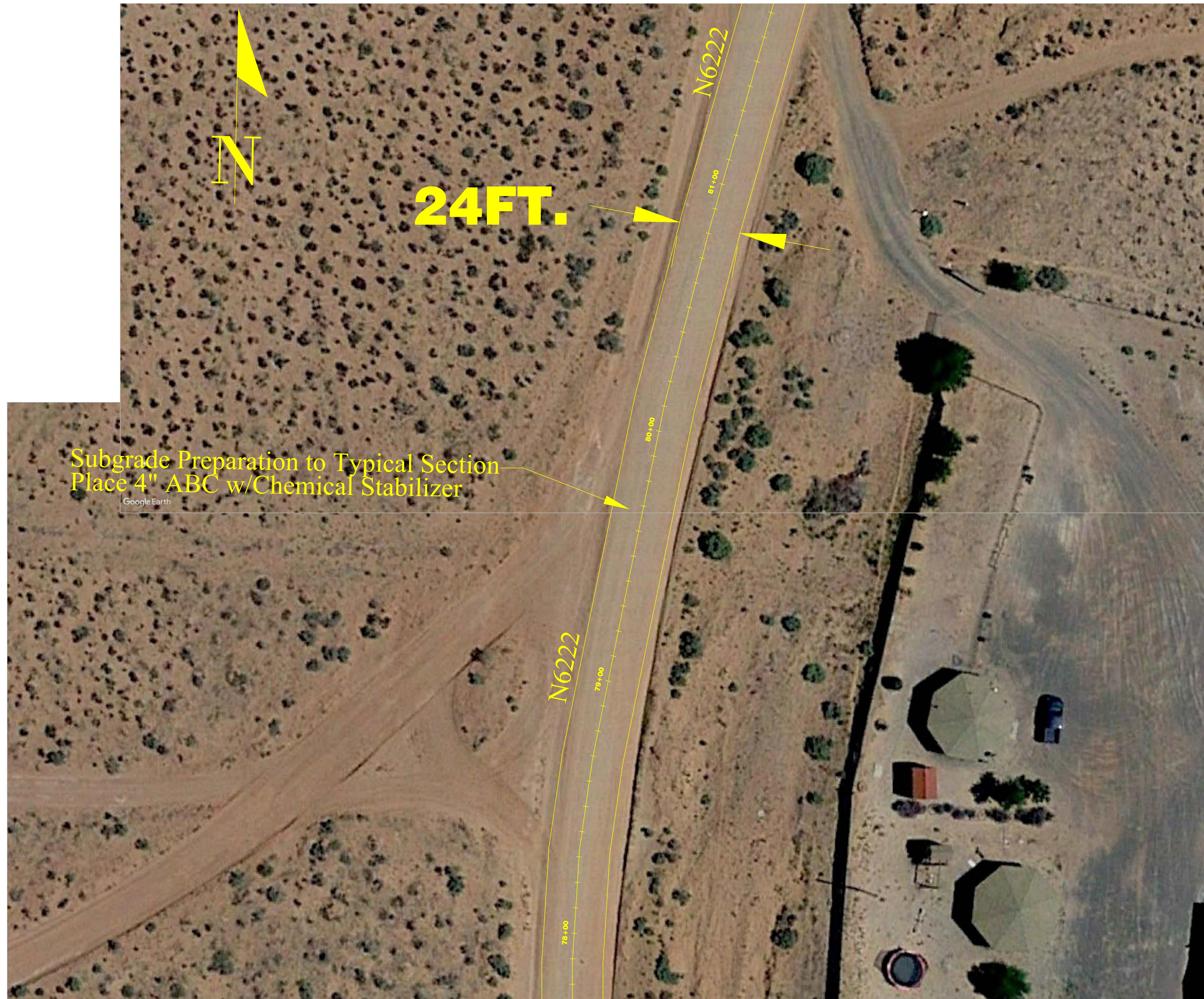
Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
Scale: 1"=20'
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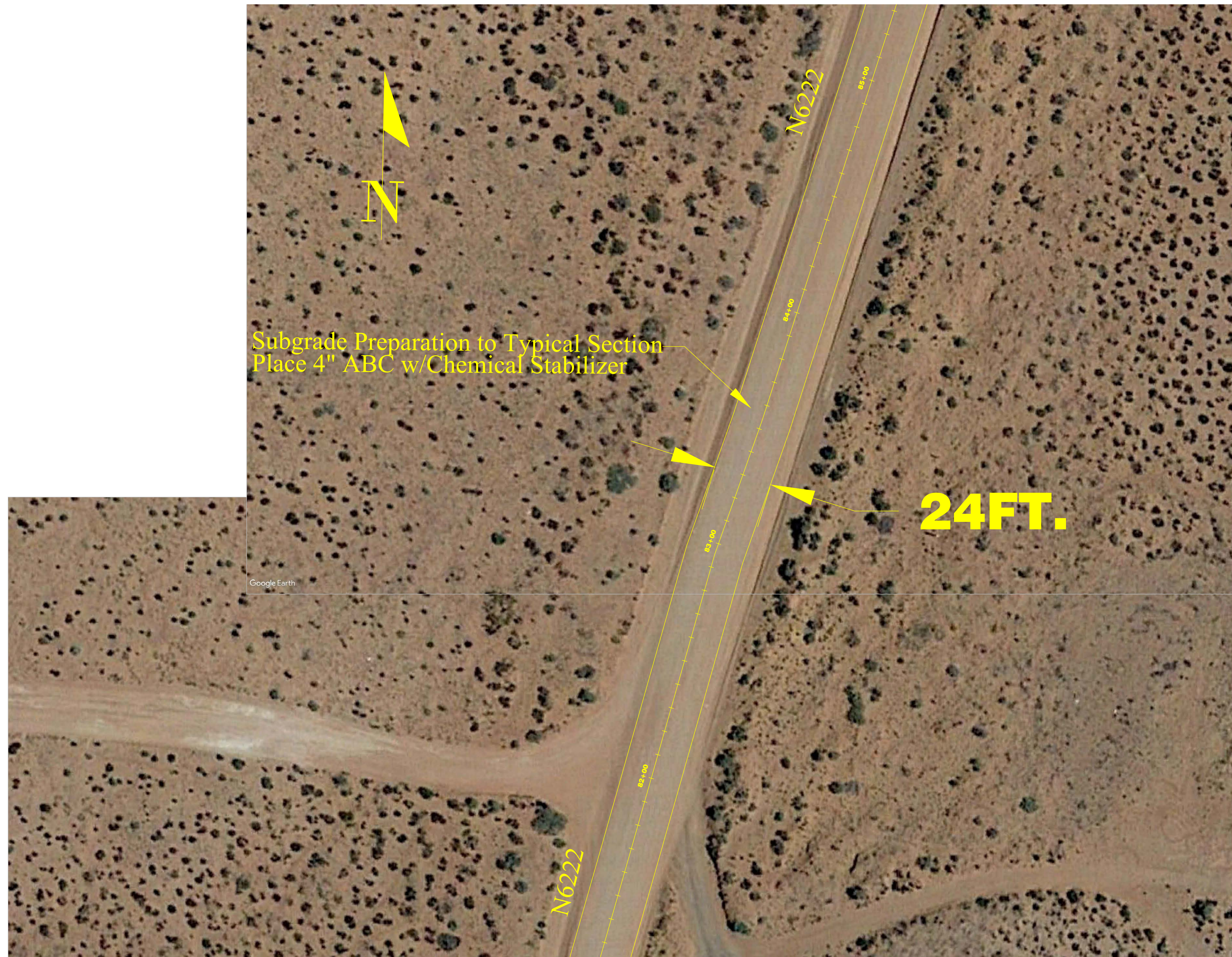
Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Cocconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
Scale: 1"=20'
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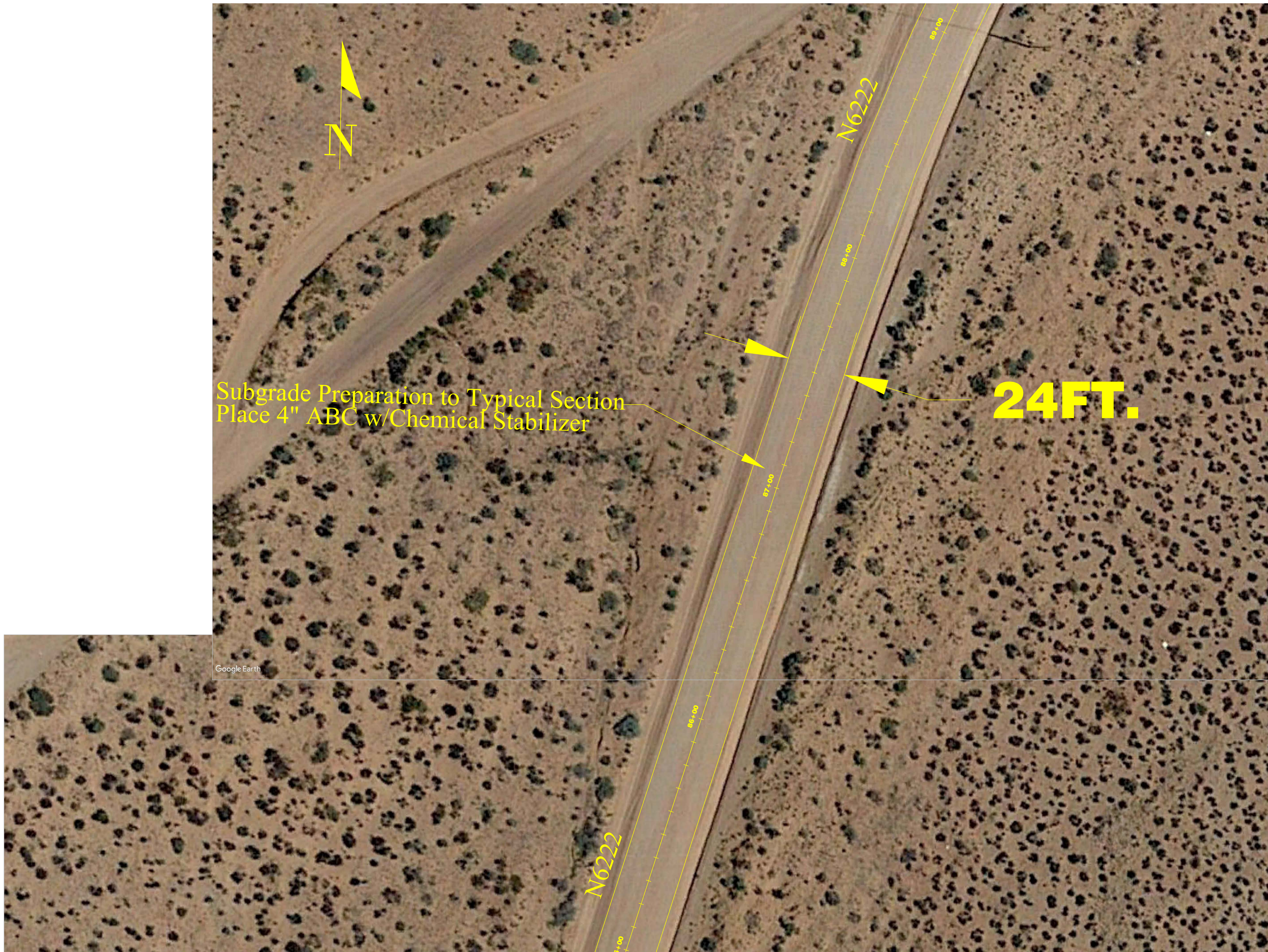
Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
Scale: 1"=20'
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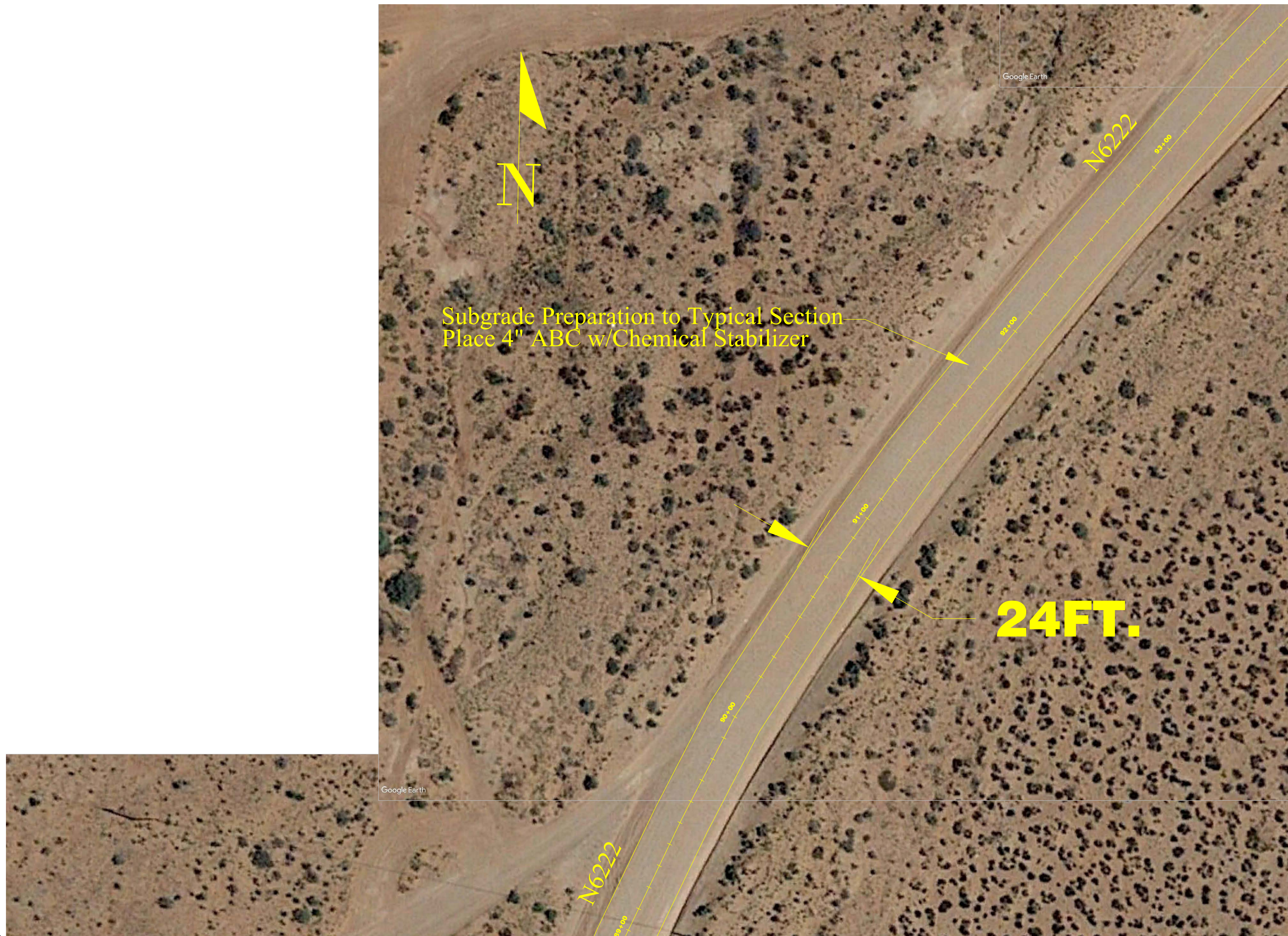
Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

Project: N6222 To'Nanees'Dizi
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Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona



NAVAJO DIVISION OF TRANSPORTATION

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Google Earth

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98+00

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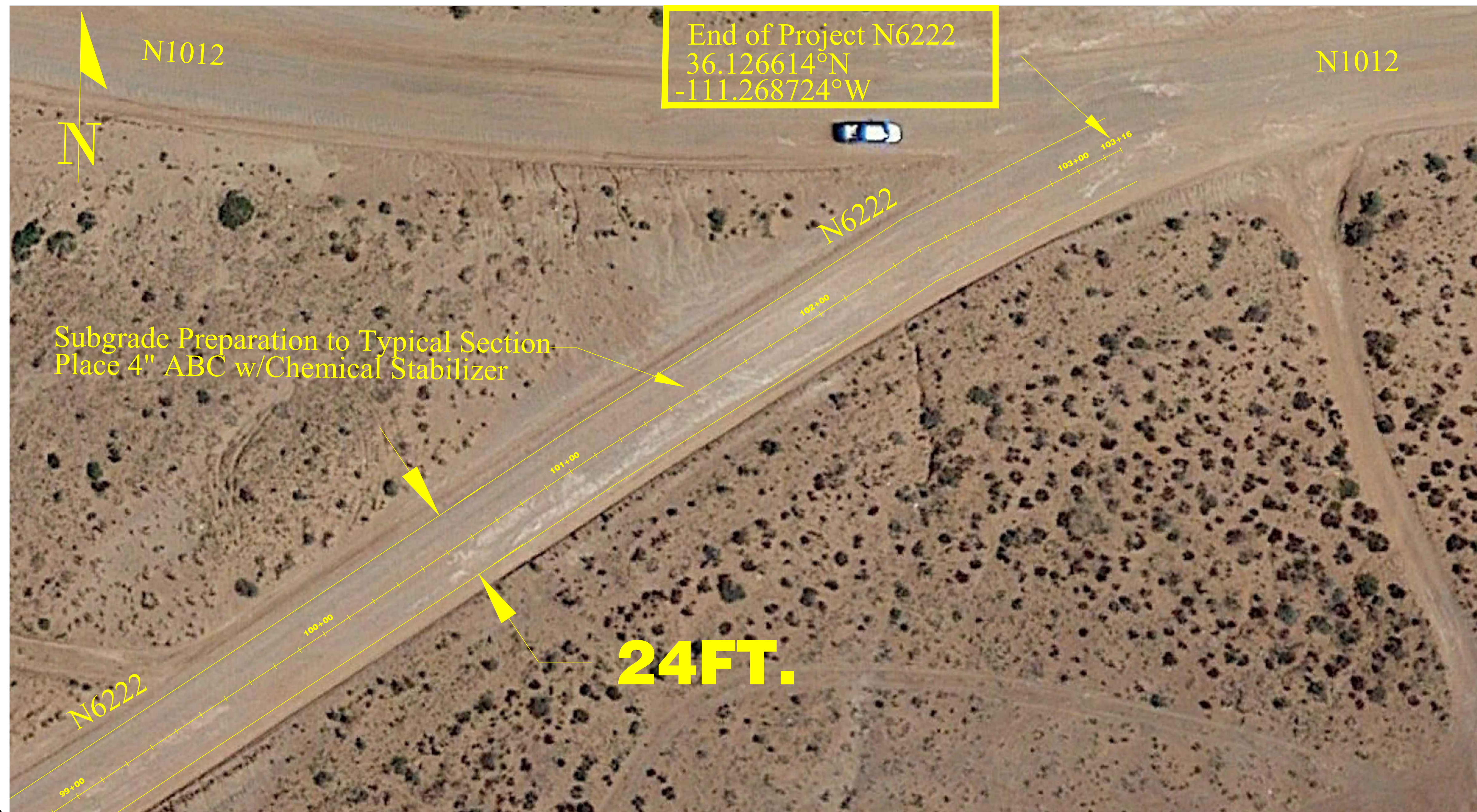
N6222

24FT.

Subgrade Preparation to Typical Section
Place 4" ABC w/Chemical Stabilizer

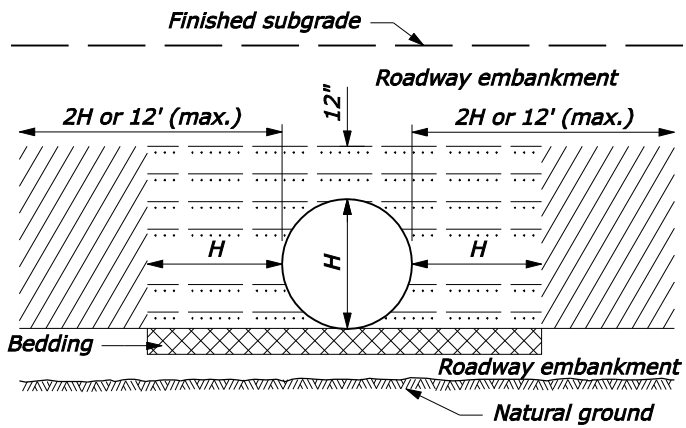
Project: N6222 To'Nanees'Dizi
Scale: 1"=20'
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Site Plan
N6222 Road Improvements
To'Nanees'Dizi, Coconino County, Arizona

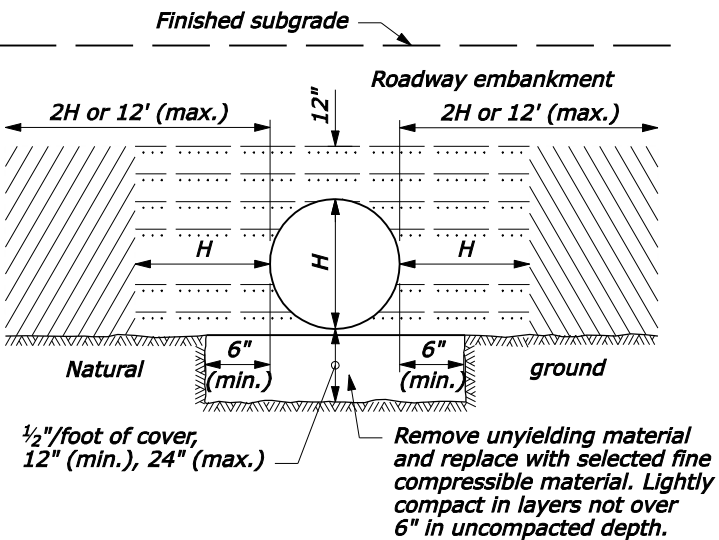


NAVAJO DIVISION OF TRANSPORTATION

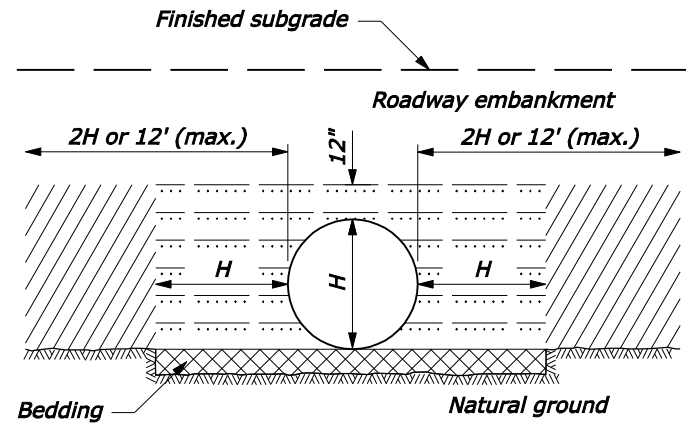
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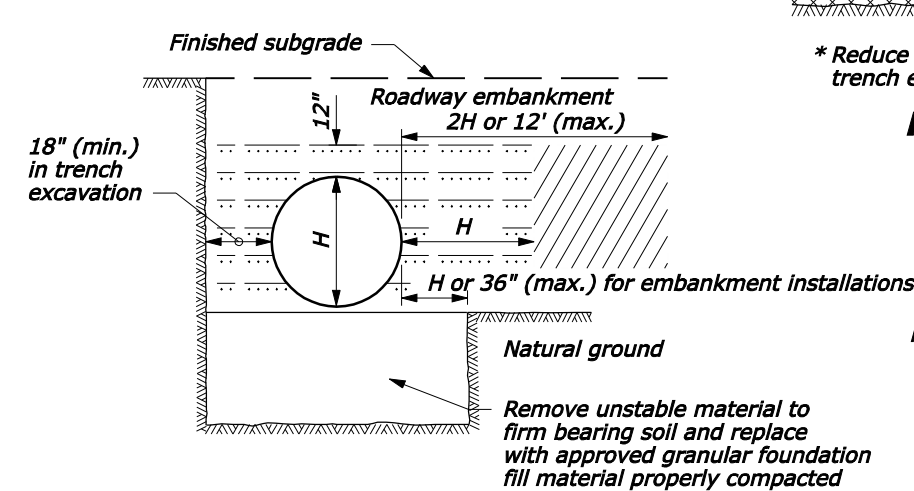
ABOVE NATURAL GROUND



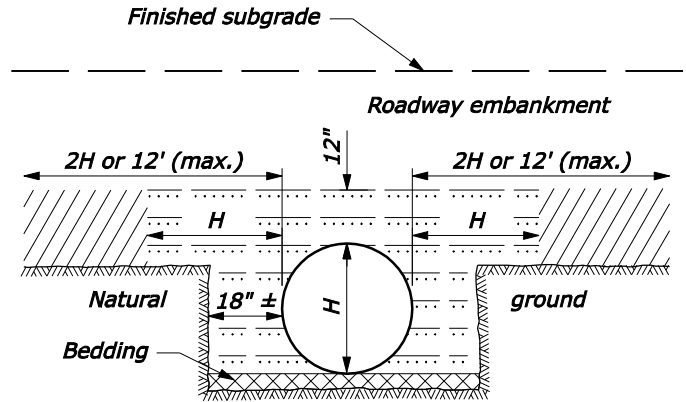
ON UNYIELDING MATERIAL



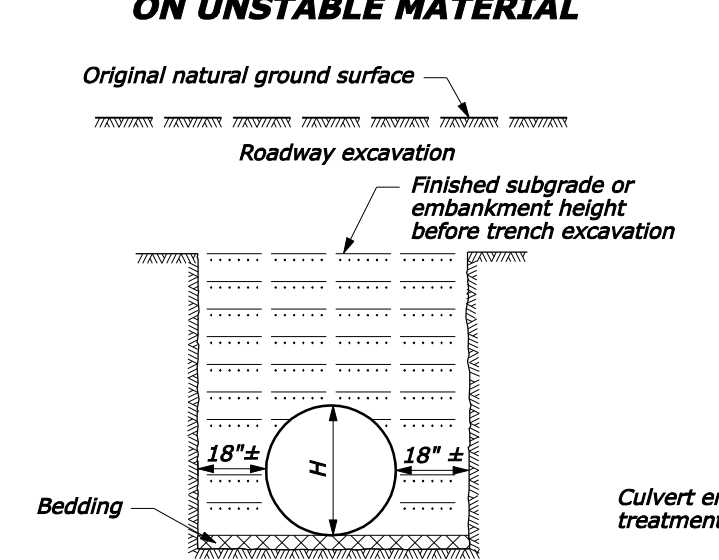
ON NATURAL GROUND



ON UNSTABLE MATERIAL

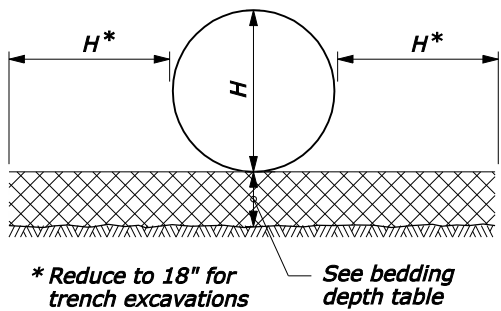


ABOVE AND BELOW
NATURAL GROUND



BELOW NATURAL GROUND OR
TRENCH EXCAVATION IN EMBANKMENT

BEDDING DEPTH	
PIPE SIZE (H)	DEPTH
12" to 54"	4"
> 54"	6"

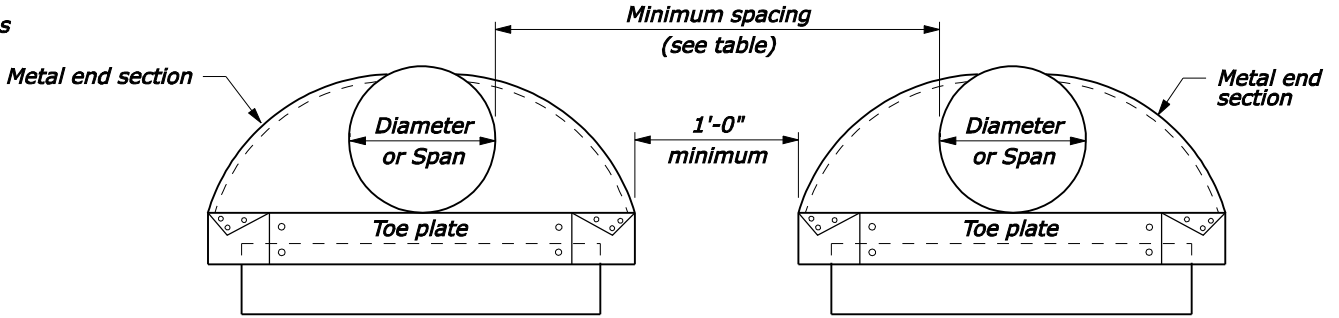


PIPE BEDDING

NOTE:

1. When directed, camber pipe culverts upward from a chord through the inlet and outlet inverts an ordinate amount equal to 1% of the pipe length. Develop camber on a parabolic curve. If the midpoint elevation on the parabolic curve as designed exceeds the elevation of the inlet invert, reduce the amount of camber or increase the pipe culvert gradient.
2. H equals the diameter of all round pipe culverts or the rise dimension of all pipe arch culverts.

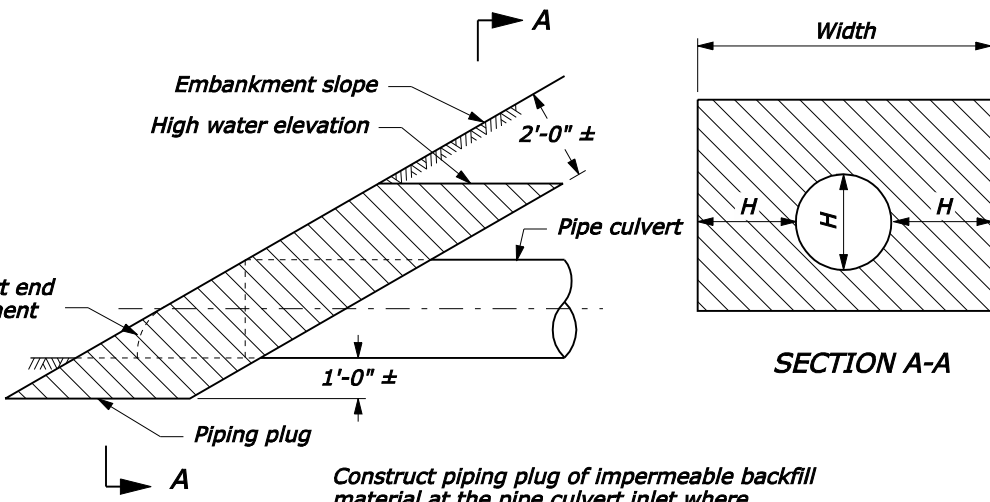
MINIMUM SPACING	
DIAMETER or SPAN	SPACING
UP to 48"	24"
48" and UP	Half diameter or span OR 36" whichever is less



ELEVATION

MULTIPLE PIPE INSTALLATION

- Bedding material (uncompacted)
- Embankment material placed in layers not exceeding 6" compacted depth.
- Compacted backfill material placed in layers not exceeding 6" compacted depth meeting the following:
 - Metal Pipe: Maximum particle size = 3"
 - Soil classification: A-1, A-2, or A-3
 - Plastic Pipe: Maximum particle size: 1 1/2"
 - Soil classification: A-1, A-2-4, A-2-5, or A-3
 - Or lean concrete backfill in accordance with Section 614.



PIPING PLUG

NO SCALE