TURQUOISE TRAIL REGIONAL WATER SYSTEM PROJECT

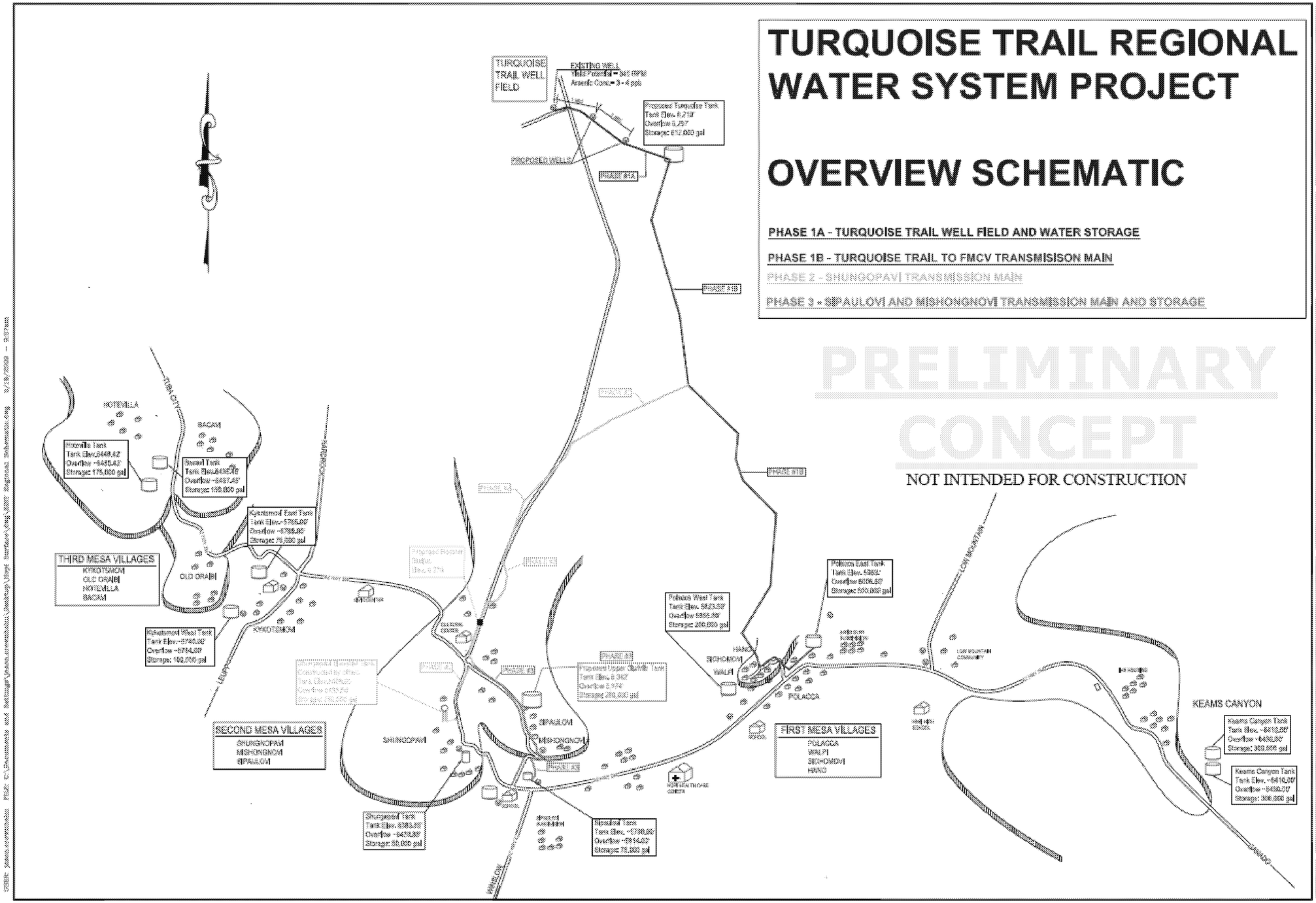
OVERVIEW SCHEMATIC

PHASE 1A - TURQUOISE TRAIL WELL FIELD AND WATER STORAGE

PHASE 1B - TURQUOISE TRAIL TO FMCV TRANSMISISON MAIN

PHASE 2 - SHUNGOPAVI TRANSMISSION MAIN

PHASE 3 - SIPAULOVI AND MISHONGNOVI TRANSMISSION MAIN AND STORAGE



PRELIMINARY CONCEPT

NOT INTENDED FOR CONSTRUCTION

DATE	REVISIONS	BY

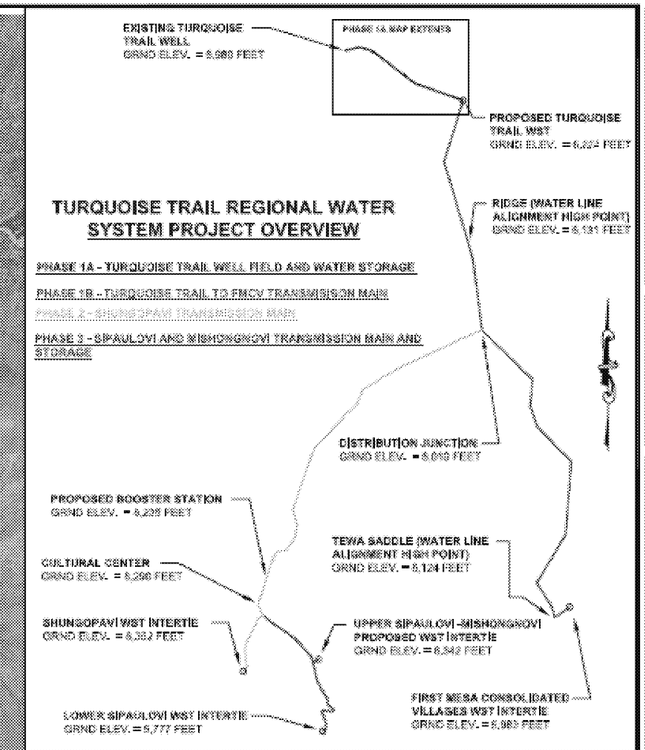
INDIAN HEALTH SERVICE
OFFICE OF ENVIRONMENTAL HEALTH & ENGINEERING
PHOENIX AREA OFFICE
9009 E. CORRIGAN DR.
SCOTTSDALE, AZ 85258
(480) 363-5678

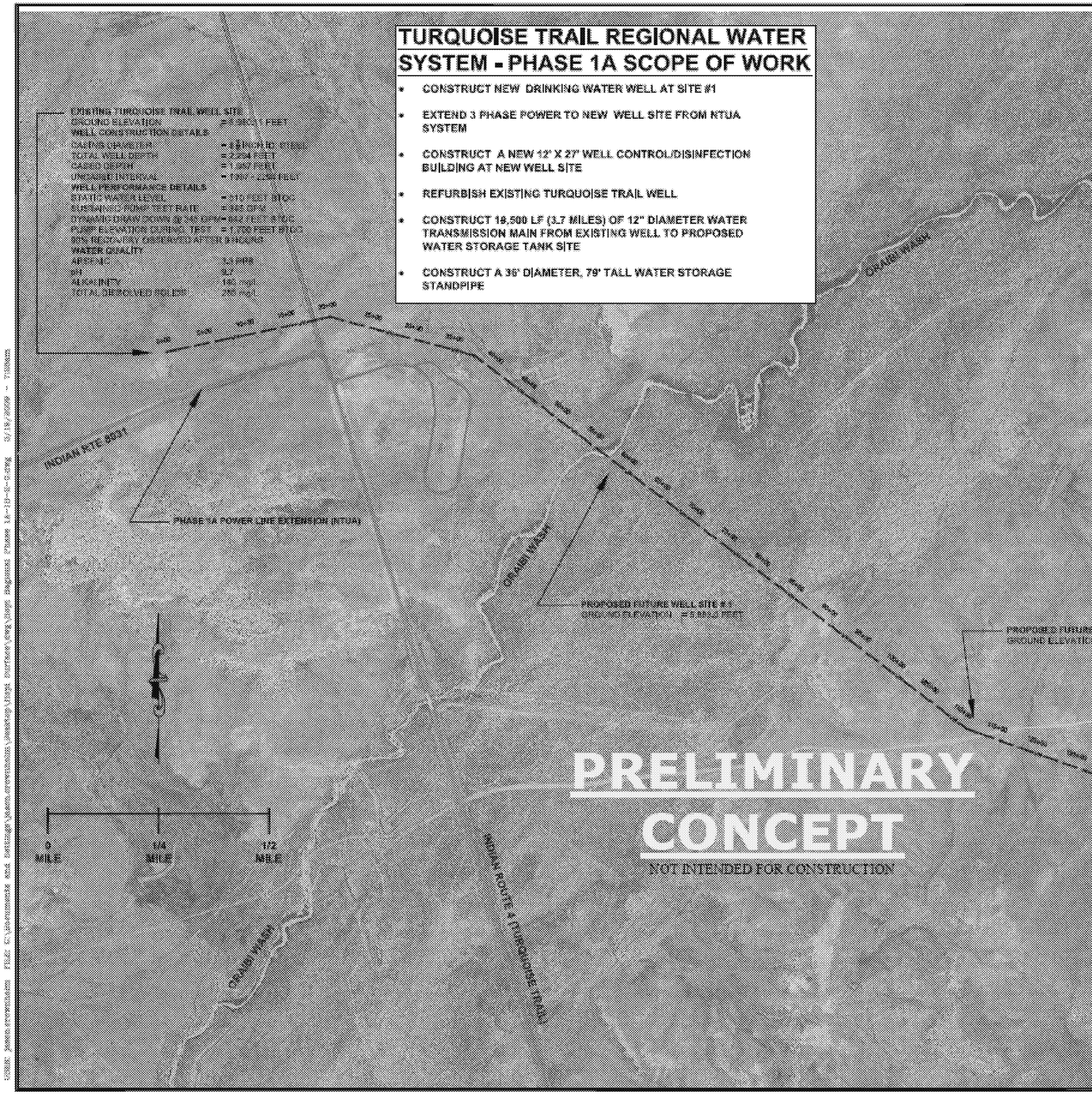
HOPI TRIBE
STATE AND COUNTY
PRELIMINARY WATER SYSTEM CONCEPT

TURQUOISE TRAIL REGIONAL WATER SYSTEM - PHASE 1A SCOPE OF WORK

- CONSTRUCT NEW DRINKING WATER WELL AT SITE #1
- EXTEND 3 PHASE POWER TO NEW WELL SITE FROM NTUA SYSTEM
- CONSTRUCT A NEW 12' X 27' WELL CONTROL/DISINFECTION BUILDING AT NEW WELL SITE
- REFURBISH EXISTING TURQUOISE TRAIL WELL
- CONSTRUCT 18,500 LF (3.7 MILES) OF 12" DIAMETER WATER TRANSMISSION MAIN FROM EXISTING WELL TO PROPOSED WATER STORAGE TANK SITE
- CONSTRUCT A 36' DIAMETER, 79' TALL WATER STORAGE STANDPIPE

EXISTING TURQUOISE TRAIL WELL SITE
GROUND ELEVATION = [illegible] FEET
WELL CONSTRUCTION DETAILS
CASING DIAMETER = [illegible] INCHES
TOTAL WELL DEPTH = [illegible] FEET
CASED DEPTH = [illegible] FEET
UNCASED INTERVAL = [illegible] FEET
WELL PERFORMANCE DETAILS
STATIC WATER LEVEL = [illegible] FEET BTOC
SUSTAINED PUMP TEST RATE = [illegible] GPM
DYNAMIC DRAWDOWN @ [illegible] GPM = [illegible] FEET BTOC
PUMP ELEVATION DURING TEST = [illegible] FEET BTOC
80% RECOVERY DESIRED AFTER [illegible] HOURS
WATER QUALITY
ARSENIC [illegible] PPB
pH [illegible]
ALKALINITY [illegible] mg/l
TOTAL DISSOLVED SOLIDS [illegible] mg/l





NO.	DATE	REVISIONS

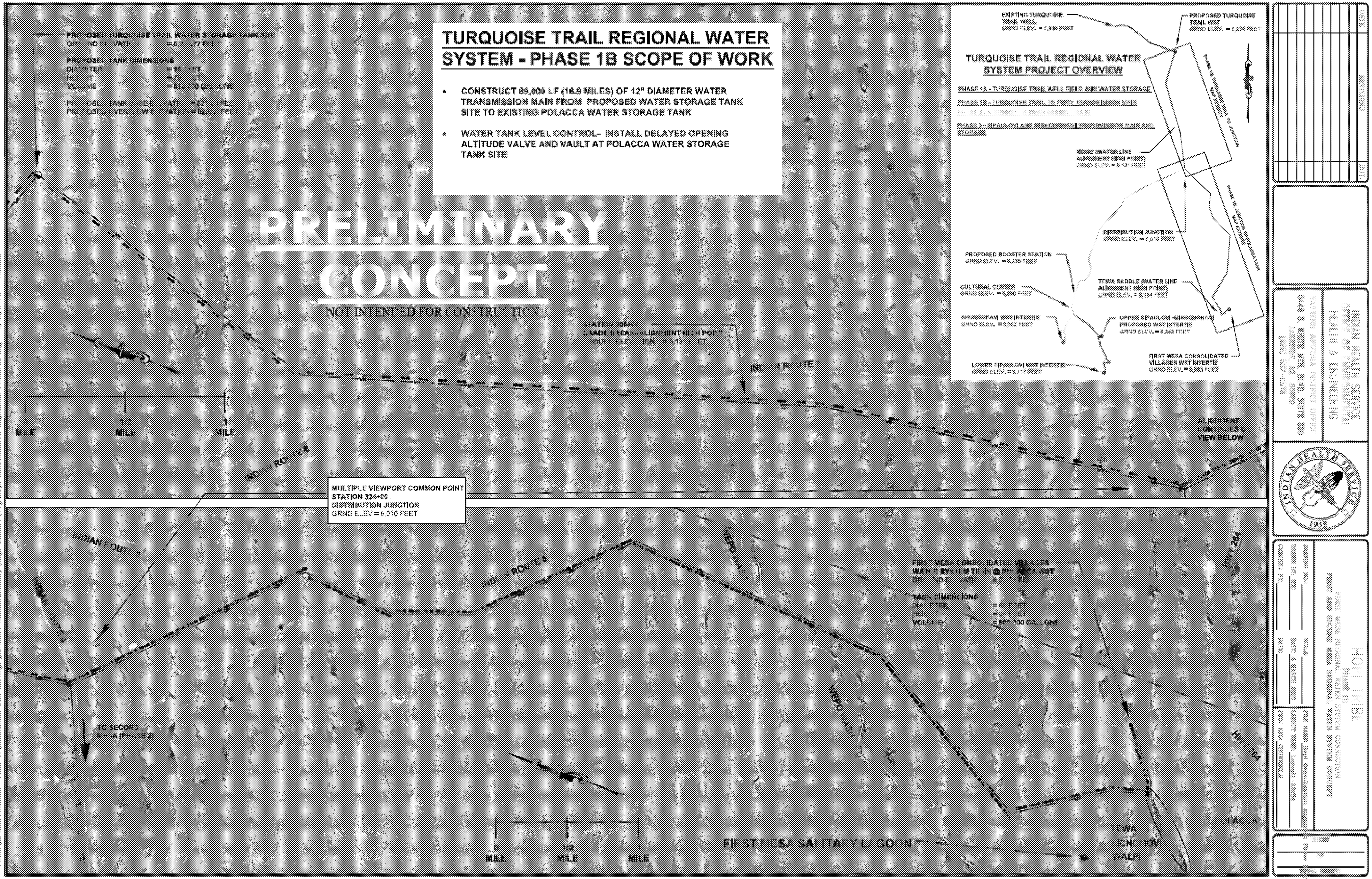
INDIAN HEALTH SERVICE
OFFICE OF ENVIRONMENTAL HEALTH & ENGINEERING
EASTERN ARIZONA DISTRICT OFFICE
9449 S. KEARNY VILLA ROAD
CARSON, AZ 85609
(928) 207-0610

INDIAN HEALTH SERVICE 1955

HOPI TRIBE

ADVANCED MULTIPLE WATER TRANSFER WORK CONCEPTS, CONT. AMWTC
PHASE 1A
REVISIONS ON ADDITIONAL WATER SYSTEMS

[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]


TURQUOISE TRAIL REGIONAL WATER SYSTEM - PHASE 1B SCOPE OF WORK
CONSTRUCT 89,000 LF (16.9 MILES) OF 12" DIAMETER WATER TRANSMISSION MAIN FROM PROPOSED WATER STORAGE TANK SITE TO EXISTING POLACCA WATER STORAGE TANK
WATER TANK LEVEL CONTROL- INSTALL DELAYED OPENING ALTITUDE VALVE AND VAULT AT POLACCA WATER STORAGE TANK SITE
PRELIMINARY CONCEPT
NOT INTENDED FOR CONSTRUCTION
PROPOSED TURQUOISE TRAIL WATER STORAGE TANK SITE
PROPOSED TANK DIMENSIONS
STATION 205+00
INDIAN ROUTE 8
0 MILE
1/2 MILE
1 MILE
MULTIPLE VIEWPORT COMMON POINT
STATION 324+05
DISTRIBUTION JUNCTION
GRND ELEV = 6,010 FEET
ALIGNMENT CONTINUES ON VIEW BELOW
TURQUOISE TRAIL REGIONAL WATER SYSTEM PROJECT OVERVIEW
INDIAN ROUTE 4
TO SECOND MESA (PHASE 2)
WEPO WASH
FIRST MESA CONSOLIDATED VILLAGES
TANK DIMENSIONS
HWY 264
FIRST MESA SANITARY LAGOON
TEWA
SICHOMOVI
WALPI
POLACCA
INDIAN HEALTH SERVICE
1955
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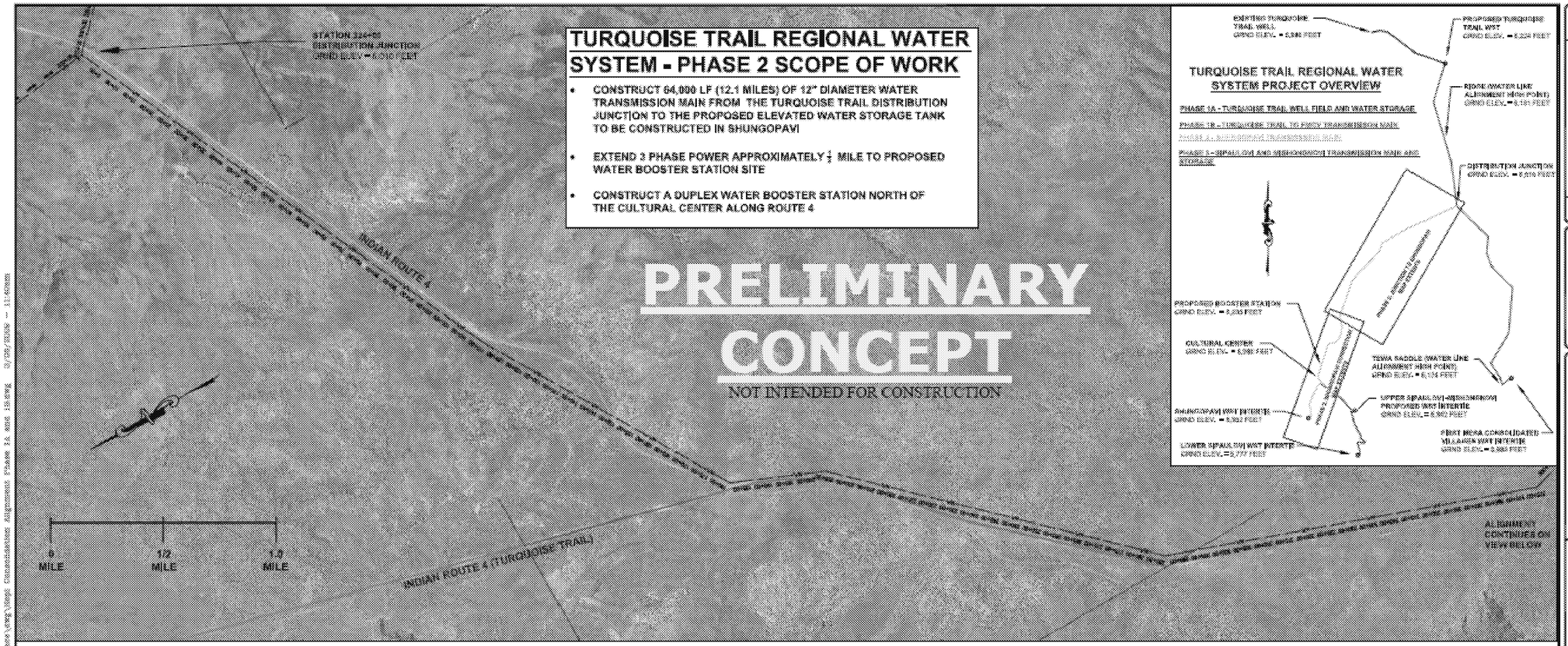
TURQUOISE TRAIL REGIONAL WATER SYSTEM - PHASE 2 SCOPE OF WORK

- CONSTRUCT 64,000 LF (12.1 MILES) OF 12" DIAMETER WATER TRANSMISSION MAIN FROM THE TURQUOISE TRAIL DISTRIBUTION JUNCTION TO THE PROPOSED ELEVATED WATER STORAGE TANK TO BE CONSTRUCTED IN SHUNGOPAVI
- EXTEND 3 PHASE POWER APPROXIMATELY ¼ MILE TO PROPOSED WATER BOOSTER STATION SITE
- CONSTRUCT A DUPLEX WATER BOOSTER STATION NORTH OF THE CULTURAL CENTER ALONG ROUTE 4

PRELIMINARY CONCEPT

NOT INTENDED FOR CONSTRUCTION



REVISIONS		
NO.	DATE	DESCRIPTION

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EASTERN APACHE DISTRICT OFFICE
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TURQUOISE TRAIL REGIONAL WATER SYSTEM PHASE 2
ALBUQUERQUE, SANDOVAL, SANTA FE COUNTIES, NEW MEXICO

PHASE 2 - SHUNGOPAVI

DATE	
DRAWN BY	
CHECKED BY	
SCALE	
PROJECT NO.	
DRAWING NO.	

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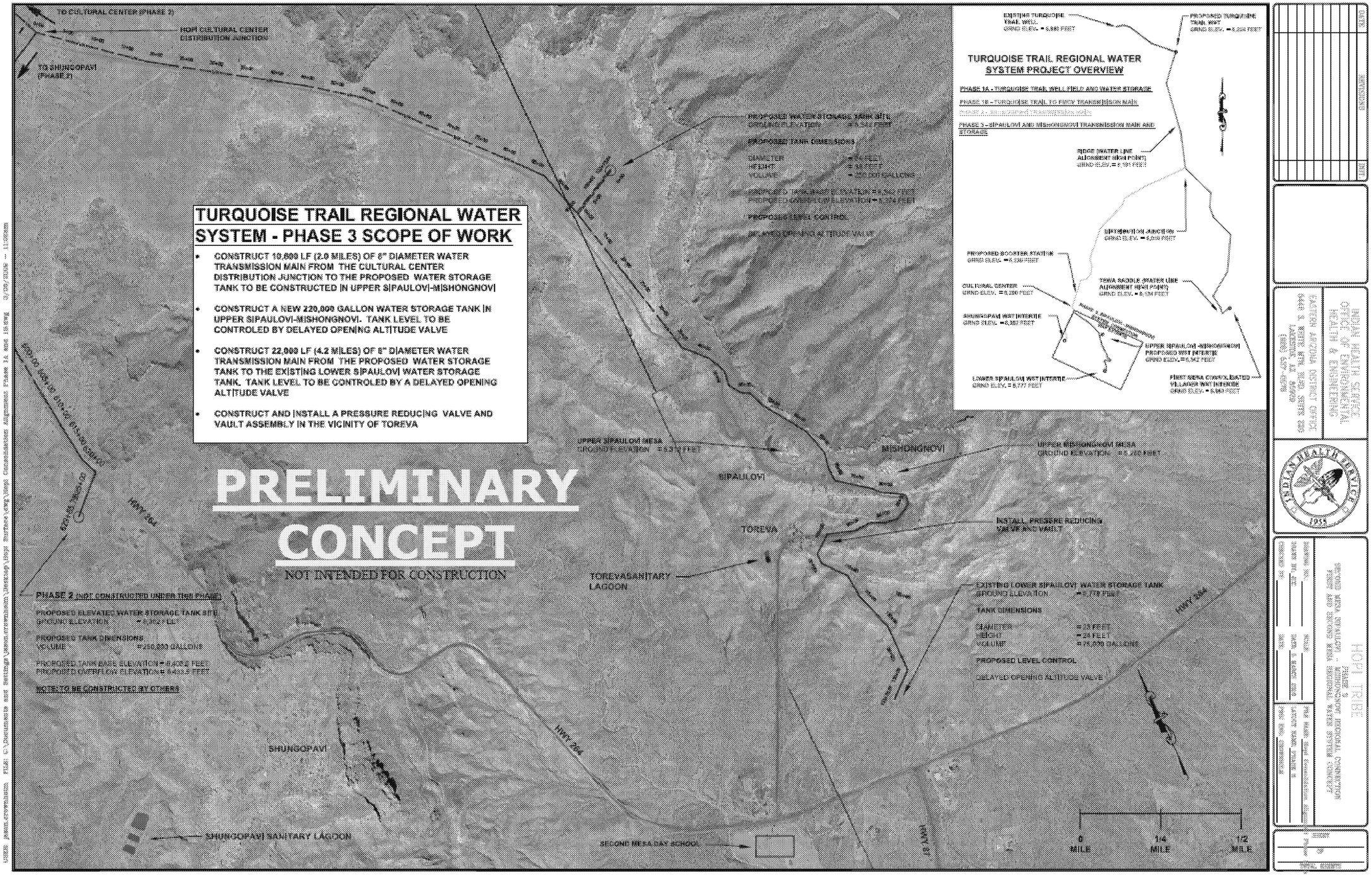
TO CULTURAL CENTER (PHASE 2)
HOPI CULTURAL CENTER DISTRIBUTION JUNCTION
TO SHUNGOPAVI (PHASE 2)
PROPOSED WATER STORAGE TANK SITE
GROUND ELEVATION = 5,342 FEET
PROPOSED TANK DIMENSIONS
DIAMETER = 100 FEET
HEIGHT = 30 FEET
VOLUME = 220,000 GALLONS
PROPOSED TANK BASE ELEVATION = 5,342 FEET
PROPOSED OVERFLOW ELEVATION = 5,372 FEET
PROPOSED LEVEL CONTROL
DELAYED OPENING ALTITUDE VALVE
TURQUOISE TRAIL REGIONAL WATER SYSTEM - PHASE 3 SCOPE OF WORK
• CONSTRUCT 10,600 LF (2.0 MILES) OF 8" DIAMETER WATER TRANSMISSION MAIN FROM THE CULTURAL CENTER DISTRIBUTION JUNCTION TO THE PROPOSED WATER STORAGE TANK TO BE CONSTRUCTED IN UPPER SIPAULOVI-MISHONGNOVI
• CONSTRUCT A NEW 220,000 GALLON WATER STORAGE TANK IN UPPER SIPAULOVI-MISHONGNOVI. TANK LEVEL TO BE CONTROLED BY DELAYED OPENING ALTITUDE VALVE
• CONSTRUCT 22,000 LF (4.2 MILES) OF 8" DIAMETER WATER TRANSMISSION MAIN FROM THE PROPOSED WATER STORAGE TANK TO THE EXISTING LOWER SIPAULOVI WATER STORAGE TANK. TANK LEVEL TO BE CONTROLED BY A DELAYED OPENING ALTITUDE VALVE
• CONSTRUCT AND INSTALL A PRESSURE REDUCING VALVE AND VAULT ASSEMBLY IN THE VICINITY OF TOREVA
PRELIMINARY CONCEPT
NOT INTENDED FOR CONSTRUCTION
UPPER SIPAULOVI MESA
GROUND ELEVATION = 5,317 FEET
MISHONGNOVI
UPPER MISHONGNOVI MESA
GROUND ELEVATION = 5,400 FEET
SIPAULOVI
TOREVA
INSTALL PRESSURE REDUCING VALVE AND VAULT
TOREVA SANITARY LAGOON
PHASE 2 (NOT CONSTRUCTED UNDER THIS PHASE)
PROPOSED ELEVATED WATER STORAGE TANK SITE
GROUND ELEVATION = 5,352.1 FEET
PROPOSED TANK DIMENSIONS
VOLUME = 250,000 GALLONS
PROPOSED TANK BASE ELEVATION = 5,402 FEET
PROPOSED OVERFLOW ELEVATION = 5,433.5 FEET
NOT TO BE CONSTRUCTED BY OTHERS
EXISTING LOWER SIPAULOVI WATER STORAGE TANK
GROUND ELEVATION = 5,178 FEET
TANK DIMENSIONS
DIAMETER = 28 FEET
HEIGHT = 24 FEET
VOLUME = 75,000 GALLONS
PROPOSED LEVEL CONTROL
DELAYED OPENING ALTITUDE VALVE
HWY 264
SHUNGOPAVI
SHUNGOPAVI SANITARY LAGOON
SECOND MESA DAY SCHOOL
0 MILE
1/4 MILE
1/2 MILE
TURQUOISE TRAIL REGIONAL WATER SYSTEM PROJECT OVERVIEW
PHASE 1A - TURQUOISE TRAIL WELL FIELD AND WATER STORAGE
PHASE 1B - TURQUOISE TRAIL TO FIRST TRANSMISSION MAIN
PHASE 2 - SIPAULOVI AND MISHONGNOVI TRANSMISSION MAIN AND STORAGE
RIDGE WATER LINE ALIGNMENT HIGH POINT
SIPAULOVI JUNCTION
PROPOSED BOOSTER STATION
CULTURAL CENTER
TOWA SADDLE (WATER LINE ALIGNMENT HIGH POINT)
SHUNGOPAVI WST INTERTIE
UPPER SIPAULOVI -MISHONGNOVI PROPOSED WST INTERTIE
LOWER SIPAULOVI WST INTERTIE
FIRST MESA CONSOLIDATED VILLAGES WST INTERTIE
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