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Volume IV, Appendix 5 Errata

FINAL
ENVIRONMENTAL IMPACT STATEMENT

SUPERCONDUCTING SUPER COLLIDER

Appendix 5
Errata

December 1988

U.S. Department of Energy

UNITED STATES
DEPARTMENT OF ENERGY
WASHINGTON, D.C. 20545
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CONTENTS

ERRATA

APPENDIX 5

AFFECTED ENVIRONMENTS AT SITE ALTERNATIVES

INTRODUCTION

This book contains Errata for Volume IV, Appendix 5.

Paragraphs are counted from the top of the page, e.g., Par. 1 begins with the first line on the page, whether that line is the actual beginning of a paragraph or not.

Minor changes in tables and figures are described in the Errata sheets. Tables and figures that are new or corrected and republished are presented at the end of each appendix section.

ARIZONA

Page 6: Delete paragraphs 1 and 2 and replace with the following:

The Maricopa Mountains are composed primarily of Early Proterozoic (1,600-to 2,500-million-year-old) plutonic and metamorphic rocks. The oldest rock, Early Proterozoic Pinal Schist, occurs in the southern Maricopa Mountains. The schist has been intruded by Early Proterozoic granitic rocks, of which most of the mountains are composed. The plutonic rocks consist of two separate granitic plutons and a dioritic pluton. The Early Proterozoic granites consist of an older porphyritic granite which is intruded by dikes and irregular masses of leucocratic granite. Mafic and felsite dikes of presumed Tertiary (1.6- to 66.4-million-year) age locally intrude the crystalline rocks. A sequence of middle Tertiary (15.1- to 36.6-million-year-old) sedimentary and volcanic rocks overlies the Proterozoic basement in the southeastern corner of the range. This sequence consists of a gently southwest-dipping stack of rocks that form an asymmetric southeasterly plunging trough that disappears beneath younger sediments. From oldest to youngest the middle Tertiary rocks are lower conglomerate, basalt, middle conglomerate, welded tuff, and upper conglomerate. The alluvial basins surrounding the Maricopa Mountains contain Late Tertiary (1.6- to 15.1-million-year-old) and younger clastic sediments. Fanglomerate, variably indurated, locally conglomeratic alluvial fan sediments is the predominant lithology in the basins. Overlying the fanglomerate are unconsolidated and nonindurated sediments (alluvium) typically found as surface soils in the desert basins of the Southwest.

Par. 3, Line 4 should read: ... Welty et al. (1988c)

Par. 5, Line 4 should read: ... during Miocene time (5-24 million years ago) ...

Page 9: Table 5.1.1-2 source should read: ... Welty 1988a ...

Page 10: Delete third bulleted item

Page 11: Par. 2, Lines 4, 5, and 6 should read: fanglomerate. Younger fanglomerate is found at 18 shaft locations, four experimental halls, and the booster facilities. Older fanglomerate is expected at only one shaft location.

Page 11: (Cont) Par. 3, Line 1 should read: Basin fill sediments include cemented alluvium ...

Par. 3, Line 5 should read: ... moderately dense younger fanglomerate and hard, dense older fanglomerate ...

Par. 4, Line 7 should read: quartz diorite or granite may be found ...

Par. 5, first bullet, second line should read: ... in materials similar to the fanglomerate.

Last paragraph, first bullet, lines 2 and 3, delete: basin fill sediments and the

Page 12: Replace Table 5.1.1-3 with the corrected Table 5.1.1-3

Page 13: Table 5.1.1-4

Page 14: Second bullet, Line 5 should read: (Cummings et al. 1988). Therefore,...

Section 5.1.1.5, Par. 3, Line 6 should read: ... (Welty et al. 1988)....

Page 15: Par. 4, Lines 7 and 9, reference should read: (Schumman and Genualdi 1988)

Page 16: Section 5.1.1.6.A, Par. 1, Lines 3, 6, and 8 and Par. 2, Lines 4, 6, and 8, the reference should read: (Welty 1988b)

Page 17: Section C, Par. 1, Line 5 should read: (U.S. Department of the Interior 1987b)

Page 21: Figure 5.1.2-1 has three alterations: title should read Major Watershed - Arizona Site, rather than Major Watershed in Arizona; watershed area enclosed within dashed line should be labeled Gila River Basin; source should read: U.S. Army Corps of Engineers 1982.

Page 24: After Par. 5 insert Par. 3 of Section C from page 26 beginning: The Arizona Department of Transportation ...

Page 25: Table 5.1.2-1, Drainage Area in mi^2 of the Bender Wash near Gila Bend should read: 69

Page 26: See note for page 24

Page 27: Section 1, Par. 3, Line 8 should read: ... only 5 to 10% recharges the aquifer system....

Page 28: Table 5.1.2-2, source should read: Brooks, 1987; Hollett and Marie ...

Page 29: Par. 3, last line should read: (Wilson 1979).

Page 30: Par. 2, Line 1 should read: Depth-to-water in the Bosque basin ...

Page 39: Table 5.1.3-5, source should read: U.S. Environmental Science Services Administration 1968.

Page 42: Delete the second-to-the-last sentence

Page 43: Table 5.1.4-2, first heading should read: Direction*

Add note that reads: *Direction from which wind is blowing.

Page 44: Table 5.1.4-3, CO-1 hr Background Concentration should read: 13,752; CO-8 hr Background Concentration should read: 6,876. Point Measured At for both CO-1 hr and CO-8 hr should read: Sierra Estrella sailport, 1978

Page 45: Figure 5.1.4-1, insert after footnote: x = Air Pollutant Source (Sources are listed sequentially in Table 5.1.4-4).

Page 46: Section 5.1.4.3, Line 12 should read: ... the Cyprus Casa Grande copper facility ...

Section D, Par. 1, Line 4 should read: ... Superstition Wilderness, 45 mi northeast of the center of the ring.

Page 48: Section 5.1.5.2, Par. 2, last line should read: ... (Cluff 1988).

Page 50: Figure 5.1.5-1 title should be changed to: Residences

Page 51: Par. 2, Line 4, replace the number 100 with the number 125; replace the number 300 with the number 360

Second-to-the-last line should read: ... interaction points K5 and K6 ...

Page 53: Table 5.1.5-2, third and fifth column headings should read: Displacement
in**

Add note that reads: **Measurements recorded are peak to peak.

Page 59: Par. 3, Line 6, replace the number 50 with the number 30

Page 62: Last Par., replace semicolon in line 3 with a period and delete the rest of the sentence.

Page 64: Section 5.1.9.2A, Line 3, should read: ... the total, the immediate site footprint is approximately 70 percent Arizona Upland ...

Page 68: Table 5.1.9-2, Notation for F7 should read: North Maricopa Mtns., delete Notation for F4.

Page 71: Par. 1, Lines 4 and 5 should read: ... association (which includes mesquite and ironwood) is dominated by palo verde, shrubs, and cacti.

Par. 3, replace last sentence with: The annuals are diverse; plantain and Mediterranean grass are common, and dominant over portions of the site.

Par. 6, last line, reference should read: McMahan 1985

Page 72: Par. 1, Line 2 delete: (reference)

Page 73: Subsection 3 heading should read: 3. Mammals

Par. 3, Lines 4 and 5, delete MacMahon 1985 and Lowe 1964 from references

Par. 4, Line 3 should read: ... 5.1.9.4 (javelina and mule deer) and Section 5.1.9.5 (bighorn sheep).

Par. 5, Line 1 should read: ... spotted and common striped ...

Line 2, delete: ... and fewer porcupines ...; Line 5 insert after high mesas. Porcupines and badgers may occur on the SSC site.

Par. 6, Lines 3 and 4, reference should read: Drummer and Patten 1985

Page 75: Par. 2, Line 3 should read: ... bighorn sheep. Bobcat, coyote, and fox are trapped in the area.

Delete Par. 3 and replace with the following: Species within the SSC site vicinity of special cultural importance include raptor populations nesting and saguaro cactus, and some wild feral burros in the northwestern parts of the site.

Page 75: (Cont) Par. 7, replace last two sentences with the following: No nests or nesting attempts of this species have been recorded in the proposed SSC area. The closest area which could provide suitable nesting habitat (in grassland or desert-grassland associations) is in the upper Vekol Valley vicinity.

Page 76: Table 5.1.9-3, scientific names should read: Tumamoca macdougalii and Buteo swainsoni

Page 77: Par. 2, Line 1, correct spelling is: (Tumamoca macdougalii)

Par. 3, Line 1, correct spelling is: (Neolloydia erectocentra)

Par. 4, Line 1, correct spelling is: (Peniocereus greggii v. transmontanus)

(Par. 4, Lines 4 and 5 should read: ... During Arizona State University's reconnaissance of the proposed site,...

Page 78: Par. 1, Line 3, reference citation should read: ... Art 1, Sec 3-901) last two lines, reference should read: Button 1987

Par. 5, Line 5, reference should read: Cordery 1988

Last paragraph, Line 3 should read: ... 57 tortoises/mi^2

Page 80: Par. 4 and 5, replace all references to Schwalbe 1988 with Vaughan 1984

Page 81: Par. 6, Line 4, reference should read: Lowe 1964

Page 82: Par. 1, Line 2 should read: ... The Gila monsters ...

Par. 4, Line 4, reference should read: Turner and Brown 1982

Page 84: Par. 6, Line 2, replace ROI with: Maricopa Mountains area

Page 95: Section G, Par. 1, Line 6 should read: in-migration ...

Page 97: Par.4, Line 8, change Figure 5.1.9.5 to 5.1.10-3

Page 99: Delete Par. 3 and insert the following: Solitude: Some outstanding opportunities for solitude exist for a limited number of visitors, due to the study area's rugged mountainous terrain, variety of landscapes, and plant cover. Opportunities for solitude would be lessened if visitor use increases, as most recreation use occurs along the Butterfield Stage Coach Route and in the canyons and washes in

Page 99: (Cont) the eastern part of the study area. Visitor contacts are expected to increase due to the channelling and concentration of visitors in the study area's few washes and canyons.

Par. 6, Line 4, delete sentence beginning "The primary reasons ... " and insert the following: The BLM believed the Maricopa Mountains area should be managed to maintain the existing variety of dispersed and undeveloped recreation use, in a generally un-roaded and natural setting. The continuation of existing motorized and non-motorized recreation opportunities were considered by the BLM to be the highest and best use of the area.

Page 100: Par. 1 should read: Recreation. Semiprimitive nonmotorized recreational opportunities offered include settings for hunters, hikers, trappers, campers, and backpackers who frequent the Maricopa Mountain area during the cool-weather season between October and April. These recreationists share many of the same routes and trails used by off-road vehicle (ORV) users, such as those with 4WDs and dirt bikes. However, these visitors have the option of traveling into areas not accessible to vehicles, including many interior canyons and the sides and crests of the Maricopa Range.

Semiprimitive motorized recreational opportunities are available for vehicle-based recreationists seeking natural landscapes, sightseeing activities, picnic sites, camping areas, and ORV riding areas. There are many popular jeep trails and washes ...

Page 109: Subsection B., Insert the following before Par. 1: There is no prime and important farmland reported by the Soil Conservation Service at the proposed Arizona site.

Same subsection, Par. 2, delete last sentence; second sentence should read: Since at present no irrigated agriculture is practical, there is no prime farmland identified at the site.

Page 110: Replace Par. 2 with the following:

However, none of the land at the Arizona site is irrigated and performing as prime farmland.

Delete Table 5.1.10-6.

Page 113: Table 5.1.11-1, Arizona ROI, Earnings per worker for 1969, 1974, 1979, and 1984 should read: $22,041, $22,583, $21,517, and $20,362, respectively

Page 113: (Cont) Per capita personal income for 1969, 1974, 1979, and 1984 should read: $11,610, $12,887, $13,892, $14,557, respectively

Last column, Lines 4, 8, and 12 should read: NA

Page 114: Par. 3, Line 1 should read: ... Arizona ROI were lower than ...

Par. 3, Line 3 should read: ... $32,030 ...

Par. 3, Line 5 should read: ... $22,287.

Page 116: Par. 2 should read: In 1984, the Arizona per capita personal income level of $14,557 was slightly lower than the national average of $14,746. In the Arizona ROI, per capita personal income was consistently lower than the national average between 1969 and 1984.

Section 2, Par. 1, Line 2, delete: Between 1969 and 1984,

Section 2, Par. 1, Line 4 should read: within the ROI in 1984. Between 1969 and 1984, total employment growth ...

Page 117: Par. 2, Line 2 should read: higher than the average for the Arizona ROI but lower than the national average

Par 2, Line 6 should read: worker for the Arizona ROI. (The rest of Line 6 and Line 7 should be deleted.)

Section B.1, Par. 1, Line 6 should read: ... substantial in-migration to Maricopa County ...

Page 118: Par. 3, Line 1, delete: With regard to demographics,

Page 120: Par. 5, Line 7 should read: ... approximately 840,000 ...

Par. 5, Lines 7 and 8, reference should read: (Federal Home Loan Bank of San Francisco 1987)

Page 131: Table 5.1.11-6, Reference column should read across:

Length Miles	Lanes	Capacity pcph[1]	Peak Hour Volume pcph	LOS[2]

Same table, Sources should read: Arizona Department of Transportation 1987b.

Page 132: Par. 1, Line 3 should read: Phoenix.

Page 134: Par. 4, Line 2 should read: ... 5.1.11-7 (Arizona Department of Commerce).

Page 135: Par. 1, Line 3, delete: Arizona Public Service Company, The Salt River Project,

Par. 3, Line 4 should read: ... planned in-service date of 1997. This schedule could be advanced to accommodate the SSC project. Line 5 should read: ... and has obtained approval based on an ...

Page 138: Par. 2, Line 2 should read: ... 5.1.11-7 (Arizona Department of Commerce 1987).

Par. 8, Line 4 should read: ... there (U.S. DOI, Gila Bend).

Page 143: Par. 2, Line 4, should read: Portions of the ring to be constructed by cut-and-cover operations -- the campus areas A, B, and C, and the buried beam access areas -- were surveyed (Montero et al. 1988)

Page 151: Par. 2, Line 12 should read: ... Maricopa Mountains WSA. Should this area be ...

REFERENCES

Page 154: Delete twelfth and fourteenth references

Page 157: Delete fifth reference

Page 158: Delete second reference

Delete sixth reference

Page 166: Fifth reference should read: U.S. Geological Survey. Antelope Peak, AZ. 1:62,500 topographic map, 1963.

Twelfth reference should read: ... Arizona Bureau of Geology and Mineral Technology to Vahid Behmaram, ...

Thirteenth reference should read: ... Arizona Bureau of Geology and Mineral Technology to Kelly Bitner, ...

Insert the following references:

Arizona Game and Fish Commission (AGFC). "Threatened Native Wildlife in Arizona." Arizona Game and Fish Department. 1982.

Brook, R.A., Davidson, H.M., Simmons, A.H., and Stein, P.H. Archaeological Studies of the Liberty to Gila Bend 230 kV Transmission System. Research Paper No. 5, Museum of Northern Arizona. Flagstaff. 1977.

Brown, D.E. "Biotic Communities of the American Southwest - United States and Mexico." Desert Plants (Special Issue). 4(1-4)1-342(1982).

Burge, B.L. A Survey of the Present Distribution of the Desert Tortoise (Gopherus agassizi) in Arizona. Contract # YA-512-CT8-108. Denver, CO: USDI, BLM, 1980.

Button, C. [Letter to the Arizona SSC Project.] Phoenix, AZ: May 26, 1987.

Cordery, T. [Personal Communication to J. Stromberg-Wilkins, Center for Environmental Studies, Arizona State University, Tempe AZ.] Department of the Interior, Feb 17, 1988.

Cowardin, L.M., Carter, V., Golet, F.C., and LaRoe, E.T. Classification of Wetlands and Deepwater Habitats of the United States. FWS/OBS-79/31. Washington, DC: U.S. Dept of Interior. U.S. Fish and Wildlife Service, 1979.

Drummer, R.J. and Patten, D.T. "Ecological Assessment of Maricopa Site for Superconducting Super Collider." [Draft]. 1985.

Hinton, P.J. Architectural Section Engineer, North Carolina Department of Transportation. [Personal Communication.] May 6, 1988.

Hoffmeister, D.F. Mammals of Arizona. Tucson, AZ: University of Arizona Press, 1986.

Joynes, W.B. and Boose, P.M. "Peak Horizontal Acceleration and Velocity from Strong Motion Records including Records from 1979 Imperial Valley, California, Earthquake." Bulletin of the Seismological Society of America. 71(6)(1981).

Lowe, C.H. "The Amphibians and Reptiles of Arizona." In C.H. Lowe, ed. The Vertebrates of Arizona. Tucson: University of Arizona Press, 1964, pp. 153-174.

McMahan, C.A. et. al. The Animals of Arizona. Tucson, AZ: University of Arizona Press, 1985.

Monson, G. and Sumner, L. "The Desert Bighorn, its Life History." Ecology and Management. Tucson, AZ: University of Arizona Press, 1980.

Montero, L., Bostwick, T., Minnis, P., and Rice, G. An Archaeological Survey of the Maricopa SSC Site, Arizona. Office of Cultural Resource Management Report No. 72, Arizona State University, 1988.

Rea, A.M. Once a River: Bird Life and Habitat Changes on the Middle Gila. Tucson, AZ: University of Arizona Press, 1985.

Remington, R. "Arizona Game and Fish." [Personal communication to J.C. Stromberg-Wilkins, Center for Environmental Studies, Arizona State University.] Jun 29, 1987.

Shackley, M.S. and G.E. Rice. Assessment of Historical and Archaeological Resources for the Proposed Maricopa Superconducting Super Collider Site, Central Arizona. Tempe, AZ: Office of Cultural Resource Management, Department of Anthropology, Arizona State University, 1985.

State of Arizona. Arizona SSC Proposal, Maricopa Site. BQL Submission. Section 7: Archaeology, History, Sacred Sites, and Paleontology. 1988.

Turner, Raymond M. and Brown, David E. "Biotic Communities of the American Southwest - United States and Mexico." Desert Plants. 4(1-4)181-219(1982).

U.S. Department of the Interior. "Arizona Wilderness." AWC Report. Dec 1987.

U.S. Department of the Interior. Bureau of Land Management. Botanical Survey of Proposed Supercollider Site. [Personal Memorandum.] Sep 1988.

Vaughan, S.L. Home Range and Habitat Use of the Desert Tortoise (Gopherus agassizi) in the Picacho Mountains, Pinal County, Arizona. [MS Thesis.] Tempe, AZ: Arizona State University, Tempe, 1984.

Webb, R.H. and Wilshire, H.G. Environmental Effects of Off-Road Vehicles: Impacts and Management in Arid Regions. New York, NY: Springer Verl.

Werner, B. "Arizona Game and Fish." [Personal communication to J. Stromberg-Wilkins, Center for Environmental Studies, Arizona State University, Tempe, AZ., regarding site visit.] Jun 8, 1987.

COLORADO

Page 1: Section 5.2.1.1, Par. 2, last line should read: ... (U.S.G.S. 1973a and b;...).

Page 7: Figure 5.2.1-3, Legend right column, make the following changes: seventh item should read: Contact Between Geologic Units; last item, Scale, should have an indication that the units represented are feet.

Page 10: Table 5.2.1-3, Bulk Density unit of measurement should read: lb/ft^3

Page 16: Par. 1, Line 7 should read: ... in southwestern Nebraska....

Page 17: Figure 5.2.2-1 source should read: U.S. Army Corps of Engineers 1977.

Page 19: Par. 2, Line 10, end sentence with the word floodplains. Delete rest of sentence.

Page 21: Table 5.2.2.2, U.S.G.S. Gauge No. should read: for Bijou Creek near Wiggins (No. 0675400) and for Kiowa Creek at Kiowa (No. 0675820)

Page 22: Par. 1, Line 2, Delete the second sentence and insert the following: Waters of the South Platte River and its tributaries including those crossing the proposed SSC site have been classified to protect secondary recreational use, warm water fisheries, and agricultural water supply.

Par. 1, Line 8, replace adapted with adopted

Table 5.2.2-3, source should read: Source: Colorado Department of Health 1987 and McDanold 1988.

Table 5.2.2-3, blank entries under last four columns should read: NA

Page 24: Section 5.2.2.2.A., Par. 2, add reference at end of paragraph: (Colorado Geological Survey 1988).

Section 5.2.2.2.A., Par. 3, Lines 6 and 7 should read: ... In areas where a thin saturated thickness of sand is underlain by impermeable material, small reservoirs of accumulated water may yield ...

Page 28: Table 5.2.2-5 the sixth column head should read:

Hardness[1]
$CaCO_3$

Page 28: (Cont) Table 5.2.2-5, source should read: Bjorklund and Brown 1957; Driscoll 1986; McGovern 1964 ...

The following should be inserted above source: Notes: 1. Typical classifications of the hardness of water are as follows: 0-60 mg/l = soft to slightly hard; 60 - 120 mg/l = moderately hard; 120 - 180 mg/l = hard; >180 mg/l = very hard.

Page 29: Par. 2, Line 2 should read: ... with chloride and sulfate also present in ...

Page 31: Par. 3, Line 7 should read: ... 100 acre-ft/yr to a total of 900 acre-ft/yr ...

Page 39: Table 5.2.4-1, source should read: National Climatic Data Center, Weather Station No. 23062, Denver, CO (Period of Record 1/82 - 12/86)

Page 41: Table 5.2.4-2, first heading should read: Direction*

Add note that reads: *Direction from which wind is blowing.

Page 42: Table 5.2.4-3, Point Measured at for TSP-annual geo. mean should read: Brush Station, 1985

Page 47: Figure 5.2.5-1, title should be changed to: Residences

Page 49: Table 5.2.5-2, all data entries for Oil well (drilling) should be shifted one column to the right

Table 5.2.5-2, insert a double asterisk after columns heading that reads: Displacement in

Add note that reads: **Measurements recorded are peak.

Page 57: Par 2, Lines 2 and 3, delete the following sentence: These counties are within 50 mi of the SSC site.

Table 5.2.8-2, the Approximate Distance from the SSC Site for Adams County should read: 70; the Approximate Distance from the SSC Site for Morgan County should read: 30.

Page 58: See Corrected Figures section for correct Figure 5.2.8-2

Page 59: Section 5.2.8.3, Par. 2, after end of Line 4 rest of sentence should read: and will have capacities for 2.5 million yd^3 of solid and 224,000 gal of liquid wastes, with tanks for 1.5 million gal of on-site liquid storage and an interim storage facility for 600 drums."

Page 64: Table 5.2.9-1, scientific name of Buffalo grass should read: Buchloe dactyloides

Table 5.2.9-1, scientific name of Alkali sacaton should read: Sporobolus airoides

Par. 3, Line 2 should read: ... by bulrush,

Page 76: Par. 5, Lines 1 and 2 should read: Palustrine wetlands are frequent in the ROI. The small ones lack extensive emergent ...

Page 78: Section 5.2.9.5.A.1, Par 2, Line 1 should read: ... (Eustoma grandiflorum)

Section 5.2.9.5.A.2, Par 1, last two lines, reference should read: Opdyke 1988

Section 5.2.9.5.A.2, Par 1, third bulleted item should read: Bald eagle, Haliaeetus leucocephalus (endangered); Par. 3, Line 1 should read: ...(Tympanuchus cupido) ...

Page 81: Par. 4, last line, reference should read: Colorado Department of Highways 1985

Page 83: Last paragraph, fifth, sixth, and seventh bullets should read: Adams County Board of Commissioners; Morgan County Board of Commissioners; Washington County Board of Commissioners

Page 87: Par. 1, Line 4 should read: site near Last Chance in neighboring Adams County ...

Page 88: Figure 5.2.10-1, in the Legend, the units in the distance scale should be labeled as representing feet.

Page 95: Subsection B., Insert before Par. 1:

The Colorado Soil Conservation Service reported no prime and 4,198 acres of important farmland at the proposed site. An estimated 819 acres of important farmland would be permanently converted and 1,129 acres temporarily disturbed by the SSC project.

Page 97: Par. 2 should read: Table 5.2.10-3 presents a compilation of fair to good soils from Table 5.2.10-2. Soils listed in this table do not represent prime farmlands.

Delete Pars. 3 and 4.

Page 101: Section 5.2.11.1A.1, Par. 2, move the word average from the end of Line 1 to directly follow the word national at the beginning of Line 2

Same paragraph, Line 5, after the word were, insert the following: agricultural services, forestry, and fishing, which grew at an 8.6 percent annual rate, ...

Page 106: Section b, Par. 1, Line 2 should read: but it comprises only a small portion of the ROI's total employment ...

Section b, Par. 2, Line 9 should read: ... in 1984 was substantially different from that of the ROI.

Page 107: Par. 1, Lines 2, 3, and 4 should read: ... Morgan County's labor force increased during the 1975 to 1980 period from 9,862 to 12,282, but declined to slightly above 9,200 in 1987.

Section c, Par. 1, Line 1 should read: ... has both the lowest number of jobs and lowest total

Same paragraph, Line 4 should read: ... total employment in the three primary

Section c, Par. 2, Line 1, insert the word growth after the word employment

Section c, Par. 3, Line 4 should read: ... paying approximately $21,000 ... instead of reading: ... paying less than $22,000 ...

Page 108: Table 5.2.11-2, source should read: Historic data from U.S. Bureau of Census 1982b.

Page 109: Par. 3, Line 1, delete the abbreviation U.S. from the end of the line

Page 110: Par. 4, Line 5, delete the words and increased

Page 112: Section 2.a, Par. 3, Line 2 should read: ... 30 mi southwest ...

Page 114: Section c, Par. 1, Line 4 should read: ... regional centers and would likely need to serve ...

Page 126: Table 5.2.11-10, last data entry in Peak Hour Volume column should read: 30^3

Page 127: Par. 3, Line 5 should read: ... located 7 mi northeast ...

Page 128: Subsection 5.d, Lines 2 and 3 should read: ... transportation of seniors, disabled, and other persons ...

Par. 5, Line 2, should read: ... provided by the Morgan County ... ; Line 6, insert the following after the words works are: Public Service Company of Colorado (PSCo.), Tri-State Generation and Transmission Association, Inc. (Tri-State), ...

Page 129: Par. 6, delete and replace with the following: MCREA is a member of and distributes electric power purchased from Tri-State Generation and Transmission Association, Inc. (Morgan Country Rural Electric Association 1986).

Page 130: Par. 6, Line 2 insert the word unit after Station; Line 6 replace last sentence with the following: PSCo's Pawnee Generating Station Unit II is planned for operation in the late 1990's.

Page 131: Table 5.2.11-11, Tri-State System Generating Capability row should read: 899 for all years except 1982, which should read NA.

Table 5.2.11-11, Tri-State Peak Demand for 1982 should read: NA

Table 5.2.11-11, Tri-State Reserve Capacity row should read: -63, -23, -118, -69, -28, NA

Table 5.2.11-11 source should read: ... Tri-State 1987a.

Page 132: Figure 5.2.11-4, add to source: State of Colorado 1987a.

Page 135: Replace Par. 1 with: Telecommunications service within the vicinity of the Colorado site is provided by AT&T, U.S. West, Wiggins Telephone Association and Eastern Slope Rural Telephone Association.

Insert the following directly under subheading D.:
Wiggins Telephone Association is engaged in the business of furnishing telecommunications services in the Colorado counties of Morgan, Adams, Weld, and Logan (Morgan County 1988).

The service area for the Wiggins Telephone Association includes three separate areas. One encompasses central and northern Weld County and western Logan County. Another area encompasses the southwest corner of Morgan County. The service areas include the towns of Briggsdale, Grover, New Raymer, Wiggins, and Hoyt. The proposed Campus area of the Colorado site falls within the Wiggins Telephone Association service territory.

Page 136: Delete Par. 1.

Insert at the beginning of subsection c.: Wiggins Telephone is interconnected with U.S. West. U. S. West provides the link to interexchange carriers such as AT&T. Upon the completion of Wiggins Telephone Association switching upgrade in 1989, equal access capabilities will be provided to interexchange carriers such as U.S. Sprint, Teleconnect, M.C.I. and AT&T.
World wide communications from the Wiggins Telephone Association service are by means of links with U.S. West to existing facilities in the Denver area.

Insert at the beginning of subsection d.: Wiggins Telephone Association provides single party service to all of its subscribers. Fiber optic facilities could be provided through connection with U.S. West and AT&T.

Insert at the beginning of subsection e.: Wiggins Telephone Association is upgrading their current switching facilities to the advanced digital switching systems. This upgrade is scheduled to be complete in 1989. This upgrade will provide its customers with digital switching features such as Custom Calling and integrated Business Services.

Page 138: Par. 4, next-to-last line should read: ... Colorado area east of ...

Page 139: Section C, Par. 2, Line 10 should read: recorded prehistoric archaeological site, WN10, is recorded ...

Page 142: Section D, end of Par. 2, add reference: (Eigmy 1984)

Page 143: Subsection E, Par. 2, last line, add: A reburial policy negotiated by the Colorado Native American Heritage Council is in place.

REFERENCES

Page 149: Fifth reference, insert the following before Oct 1986: College of Engineering and Applied Science, University of Colorado, Boulder.

Delete ninth reference

Page 150: Second reference should read: Brown, R.W. "Paleocene ...

Delete third reference

Page 152: Delete eleventh reference

Page 153: Delete third reference

Page 154: Delete sixth reference

Page 156: Delete last reference

Page 157: Second reference, Line 2 should read: ... Colorado State Engineers Office ...

Page 158: Fourth reference, last line should read: 1988b.

Delete sixth, eighth, ninth, and tenth references

Page 159: Third reference, last two lines should read: ... Colorado SSC Proposal, Vol 3: Geology and Tunneling, Vol 5: Environment, and Appendix 5, Environment. 1987.

Fifth reference, Line 1 should read: Strategic Resource Assessment Study; last line should read: Strategic Resource Assessment Task Force.

Delete twelfth reference

Page 160: Last reference, insert 1987b at end

Page 162: Delete sixth reference

Insert in eleventh reference before Jan 1987: Civil Engineering Department, State University, Fort Collins, Colorado.

Insert the following references:

Bailey, R.G. "Descriptions of Ecoregions of the United States." Ogden, UT: U.S. Department of Agriculture. Forest Service, 1978.

Colorado Department of Highways. County Data Source Book. Vol. 2. Division of Transportation Planning. Oct 1985.

Colorado Division of Wildlife. Wildlife Resource Inventory System. 1987.

Colorado Division of Wildlife. Wildlife Resource Inventory System. 1980.

Costello, D.F. and Harrington, H.D. "Vegetation Zones in Colorado." Manual of the Plants of Colorado. Denver, CO: Safe Books, 1964.

Healy, J.H., et al. Geophysical and Geological Investigations Relating to Earthquakes in the Denver Area, Colorado. U.S. Geological Survey Open File Report 66-60. 1966.

Opdycke, J.D. "Threatened, Endangered and Proposed Species." [Letter to R. Selby, Department of Energy, Argone, IL.] Grand Junction, CO: U.S. Fish and Wildlife Service, May 17, 1988.

Probst, D.L. The Warmwater Fishes of the Platte River System, Colorado, 1978-1980. [Thesis.] Ft. Collins, CO: Colorado State University, 1982.

State of Colorado. Colorado - A Site Proposal in Full Compliance. State of Colorado SSC Proposal, Vol 8: Utilities. 1987a.

U.S. Department of Agriculture. Soil Conservation Service. Soil Conservation Service Soil Surveys. Adams County, CO (1974), Araphahoe County, CO (1971), Elbert County, CO, Eastern Part (1966), Morgan Count, CO (1968), Washington County, CO (1986).

U.S. Geological Survey. Woodrow NW, CO. 1:24,000 Topographic Map, 1973a.

U.S. Geological Survey, Woodrow, CO. 1:24,000 Topographic Map, 1973b.

U.S. Geological Survey. Woodlin School, CO. 1:24,000 Topographic Map, 1973c.

U.S. Geological Survey. Wetzel Creek, CO. 1:24,000 Topographic Map, 1973d.

U.S. Geological Survey, Shamrock SE, CO. 1:24,000 Topographic Map, 1973e.

U.S. Geological Survey. Shamrock, CO. 1:24,000 Topographic Map, 1973f.

U.S. Geological Survey. Rago, CO. 1:24,000 Topographic Map, 1973g.

U.S. Geological Survey. Dry Gulch, CO. 1:24,000 Topographic Map, 1973h.

U.S. Geological Survey. Antelope Creek West, CO. 1:24,000 Topographic Map, 1973i.

U.S. Geological Survey. Huey Ranch, CO. 1:24,000 Topographic Map, 1984a.

U.S. Geological Survey. Gary, CO. 1:24,000 Topographic Map, 1984b.

U.S. Geological Survey and Colorado Geological Survey. Energy Resources Map of Colorado. Miscellaneous Investigations Series, Map I-1039. 1977.

Yond, T.L. and Perkins, D.M. "Mapping Liquefaction-Induced Ground Failure Potential." Journal of the Geotechnical Engineering Division, American Society of Civil Engineers. Apr 1978, pp 433-446.

Yond, T.L. and Wieczarek, G.F. Liquefaction and Secondary Ground Failure, The Imperial Valley, California, Earthquake of October 15, 1979. U.S. Geological Survey Professional Paper 1254. 1982.

ILLINOIS

Page 1: Par. 3, Line 4, replace the words glacially deformed with the word complex

Pages 4-8: Table 5.3.1-1 has been revised and can be found in the Corrected Tables section.

Page 13: Table 5.3.1-2, thirds fault should read: Minor offset, and the location of that fault should read: Western Arc; source should read: Kolata et al. 1978; Vaiden 1988; Walker 1988.

Page 14: Table 5.3.1-3 has been revised and can be found in the Corrected Tables section.

Page 15: Table 5.3.1-4:

Second unit under Galena Group should read: Wise Lake Limestone

Unconfined Compressive Strength for Dolomite should read: ... (6,955-10,083)

Tensile Strength for Dolomite should read: ... (579-953)

Young's Modulus for Dolomite, add: ... (2.65-4.19)

Poisson's Ratio for Dolomite should read: 0.27

Triaxal Test/Cohesion ($lb/inch^2$) for Dolomite should read: 1,884

Page 16: First bullet, second line, replace the word veins with the word laminae; seventh bullet, last line, reference should read: (Haimson 1988)

Page 17: Par. 2, Lines 4 and 5, reference should read: (Kempton 1988)

Par. 2, Line 4 should read: ... No gas was encountered in 33 borings made for the SSC

Par. 2, Lines 11 and 12 should read: ... (age-dated at 24,000 to 50,000 years) is the likely ...

Par. 3, last line, reference should read: (Haimson, 1988)

Page 18: Figure 5.3.1-6, delete the symbol for past coal producers from the legend

Page 19: Par. 5, Lines 3 and 4 should read: ... Sulfide mineralization (primarily pyrite) in fractures and joints was noted in ...

Page 22: Figure 5.3.2-1, change Illinois River to DuPage River; source should read: U.S. Army Corps of Engineers 1984.

Page 24: Table 5.3.2-1, the first column of data (under Drainage Area) should read: 10, 12, 14, 37, 65, 1738, 20, 18, 13, 10, 10, 12, 1592

Page 27: Section B, end of Par. 1, reference should read: (Illinois Environmental Protection Agency 1987); Replace third bulleted item with the following:

During the months May through October, based on a minimum of five samples taken over not more than a 30 day period, fecal coliform (STORET number 31616) shall not exceed a geometric mean of 200/100 ml, nor shall more than 10 percent of the samples during any 30 day period exceed 400/100 ml in protected waters. Protected waters are defined as waters which, due to natural characteristics, aesthetic value, or environmental significance, are deserving of protection from pathogenic organisms.

Page 29: Table 5.3.2-3, source should read: Budd 1988; Illinois EPA 1987.

Page 31: Par. 2, Line 1, replace unconsolidated with unlithified

Last paragraph, reference citation should read: ... (Booth and Vagt 1986; ...

Page 32: In column for Hydraulic Properties, for Maquoketa dolomites, insert < in front of 10^{-6} cm/s in both places.

Page 33: Par. 3, replace lines 2 and 3 with: to 10^{-5} cm/s in the eastern and southern portions of the site (primarily Silurian dolomites) and from 10^{-4} to less than 10^{-6} in the western and northern portions of the site.

Last par., last 2 lines, replace: 300 to 350 ft (Woller and Sanderson 1978) with: 300 to 380 ft (Graese et al. 1988)

Page 34: Last par. replace first sentence with: The Cambrian-Odovician Aquifer is recharged vertically downward through the overlying Maquoketa and Galena-Platteville units and laterally from the west where the St. Peter Sandstone subcrops along floors of the deep bedrock aquifer (e.g., the Troy Bedrock Valley near De Kalb, Illinois). There may also be significant recharge along the Sandwich Fault Zone.

Page 35: Par. 1, Line 4 should read: ... in the Glenwood-St. Peter sandstones ...

Page 35: (Cont) Par. 2, Line 2, change: In Kane County, this aquifer ... to: In Kane County, the top of this aquifer ...

Page 36: Table 5.3.2-5, first column third entry should read: Upper bedrock aquifer.

The fourth entry should read: ... bedrock aquifer.

Page 37: Section C, Par. 1, Line 1 should read: ... Illinois SSC site....; Line 4 should read: ... in this area of Illinois....

Page 47: Table 5.3.4-1, source should read: National Climatic Data Center, Weather Station No. 94846, Chicago, IL (Period of Record 1/82 - 12/86)

Page 48: Table 5.3.4-2, first column heading should read: Direction*; add note: *Direction from which wind is blowing.

Same table, source should read: National Climatic Data Center, Weather Station No. 94846 (Chicago, IL), Period of Record 1/82-12/86

Page 57: Figure 5.3.5-1, title should be changed to: Residences; reference to the the location of the town of Kaneville that appears between E6 and F6 is incorrect and should be deleted

Figure 5.3.5-1, the reference to the location of the town of Kaneville between E6 and F6 is incorrect and should be deleted

Page 61: Table 5.3.5-4, third column heading should read: Displacement in**; add note: **Measurements recorded are peak.

Page 68: Delete Par. 2, which begins: The aforementioned licensed facilities ... ; insert the following:

Although the aforementioned nuclear facilities release radioactive materials to the atmosphere during normal operation, the short half lives of those materials and the distance from the proposed SSC site--at least 25 miles--preclude any significant contribution to background radiation at the proposed Illinois site.

Page 72: Section 5.3.7.1, Par. 2, Line 3 should read: 18 sites that are within 5 mi of the proposed SSC ring location are shown in Figure 5.3.7-1....

Page 72: (Cont) Section 5.3.7.1, facilities 3. through 9. listed after Par. 4 should be in the following order:

3. Camsco Produce Co.--West Chicago
4. Lear Siegler, Inc.--West Chicago
5. Pride Petroleum Co.--Maple Park
6. Valley Maid Ice Cream Corp.--Aurora
7. Griffin Wheel Co.--West Chicago
8. James River/Handi-Kup--West Chicago
9. No Sag Products Corp.--West Chicago

Page 73: Figure 5.3.7-1, the reference to the location of the town of Kaneville between E6 and F6 is incorrect and should be deleted

Page 80: Par. 2, Line 3, delete reference

Par. 2, Lines 5 and 6, reference should read: U.S. Army Corps of Engineers 1976

Page 82: Section 5.3.9.2, Par. 1, Line 1, reference should read: White 1978; delete Par. 4 of same section

Page 84: Table 5.3.9-1, sources should read: White 1978; U.S. Department of the Interior, Fish and Wildlife Service 1986

Page 85: Table 5.3.9-2, source should read: U.S. Department of the Interior, Fish and Wildlife Service 1986

Page 86: Table 5.3.9-3, title should read: Agricultural Trends at Proposed Illinois SSC Site

Par. 3, Line 3, delete the words: grazed or

Page 88: Replace Par. 1 with the following: Marshes are successional communities that are dominated by emergent wetland species and located near waterways or in isolated upland areas. These include areas that have been degraded by drainage, siltation, dredging, or filling as well as high quality marshes such as that on the south side of the Burlington Northern Railroad in Eola. Characteristic marsh plants include common cattail, swamp milkweed, softsteam bulrush, river bulrush, and rice cutgrass.

Par. 2, replace Sedge meadow with Wet meadow.

Table 5.3.9-4, source should read: U.S. Department of the Interior, Fish and Wildlife Service 1986

Page 89: Table 5.3.9-5, subtitle should read: Number of Head by County

Page 90: Table 5.3.9-6: Delete: Weasel; Brown bat (caves)

Insert: Franklin's ground squirrel; Beaver;

Replace: the word (caves) with the word (trees) that appears after: Big Brown bat

Source should read: U.S. Department of the Interior, Fish and Wildlife Service 1986

Page 91: Table 5.3.9-7, delete Wild Turkey from the end of the Winter Residents Column; source should read: U.S. Department of the Interior, Fish and Wildlife Service 1986

Page 94: Table 5.3.9-8 source should read: U.S. Department of the Interior, Fish and Wildlife Service 1986

Page 95: Table 5.3.9-9, the 1st Game Bird should read: Canada goose; the 14th should read: Ring-necked duck; add the following: Northern bobwhite (Habitat--Agriculture and Prairie), and the Bufflehead, Sora, Common goldeneye, Common snipe, and Ruddy duck, all of whose Habitat is Wetlands

Pied-billed grebe is not a game bird in Illinois

Source should read: U.S. Department of the Interior, Fish and Wildlife Service 1986

Page 96: Table 5.3.9-11, delete the word Migratory from the title; delete the heading Migratory Fishes; source should read: U.S. Department of the Interior, Fish and Wildlife Service 1986

Page 98: Table 5.3.9-12, Common name of Clonophis kirtlandi should read: Kirtland's Water Snake; Scientific name of Bald eagle should read: Haliaeetus leucocephalus; Habitat of Myotis sodalis should read: Caves, Forests, Wetlands

Page 100: Table 5.3.9-13, Scientific name of Bald eagle should read: Haliaeetus leucocephalus

Page 101: Table 5.3.9-13, Scientific name of Swainson's Hawk should read: Buteo ...; Scientific name of Indiana bat should read: Myotis sodalis

Page 102: Par. 4, after first bullet add new bullet:
o Agricultural/Wetlands transition

Page 106: Section E.1. last line on page should read: the privately endowed not-for-profit,...

Page 107: Par. 3, Line 2, after the word preserves, add the following: and parks linked by the Fox River Bike Trail

Par. 4, Line 3 should read: ... 16-acre Gunnar Anderson ...

Par. 5, Line 2, replace the word Elgin with the word Elburn; Line 4 should read: ... Johnson's Mound,...; Line 8 should read: ... District 1986 ...

Par. 6, Line 1 should read: ... in the SSC project area include the restored prairie portions of Fermilab itself which makes ...; Line 3 should be deleted

Last paragraph, Line 6, replace the number 25 with the number 35

Page 111: Figure 5.3.10-1, the reference to the location of the town of Kaneville between E6 and F6 is incorrect and should be deleted

Page 114: Par. 2, Lines 7 and 8, delete: eliminating the agricultural uses. Insert: and a planned 954-acre Naperville/Bigwoods Forest Preserve located south of Fermilab and north of I-88.

Page 118: Par. 4, Line 5 should read: ... prime farmland agricultural use ...

Par. 4, Line 7 should read: ... in Kendall County call for ...

Page 120: Par. 5, the word are should read: area; delete: (approximately 25 percent of the site)

Page 122: Add the following to the end of Par. 2: The farmers in this region have installed subsurface drainage systems to prevent the wetness problem from interfering with row crop production.

Page 124a: Subsection C., insert before Par. 1:

The Illinois Soil Conservation Service reported 3,076 acres of prime and 212 acres of important farmland at the proposed site. An estimated 197 acres of prime and important farmland would be permanently converted and 231 acres would be temporarily disturbed by the SSC project. No prime and important farmland would be converted by spoils disposal since use of quarries and recycling is the proposed disposition for these tunnel excavations.

Page 124c: Par. 2, beginning with Line 6, delete the section of the paragraph that begins with: By using this general rule ...

Page 125: Par. 5, Line 6 should read: ... but the percentage of losses ...

Par. 5, Line 7 should read: ... the national average losses...

Page 130: Par. 6, Line 4 should read: ... a rate of 7.2 percent,...

Page 131: Par. 6, last line should read: ... services (13.5 percent), retail trade (9.1 percent), and government (8.9 percent).

Page 132: Par. 2, last line should read: ... amounted to about 18,000 ...

Page 133: Par. 3, last line should read: ... (1.15 million) ...

Page 135: Par. 1, first line should read: ... 660,000 persons ...

Par. 1, Line 3 should read: ... 720,000 representing ...

Page 153: Table 5.3.11-10 (Cont), Sources should read: Illinois Department of Transportation 1985a, 1985b, 1986; Sherman 1988.

Page 157: Add the following to the end of Par. 2: A ride-sharing program is currently available to serve Fermilab and other nearby employers.

Par. 4, Line 4 should read: ... including 70 percent of ...

Page 158: Figure 5.3.11-5 source should read: Zessin 1988.

Page 159: Par. 4 insert the following on Line 4: ... for the period 1981-1985. The 1988-1992 budget includes costs for the completion of Braidwood Unit 2, a 1,120MW unit which was declared in-service on August 5, 1988. The Braidwood Unit 2 in this EIS is treated as future generating capacity. No new generating stations, other than the Braidwood Unit 2 are ...

Page 160: Table 5.3.11-1 source should read: Zessin 1988.

Page 162: Par. 3, Line 4 should read: ... office (Miller, 1988).

Page 166: Par. 2, Line 8 should read: ..., two within the near cluster, ...

Par. 4, Line 1 should read: Seven additional prehistoric archaeological sites ...

Page 166: (Cont) Par. 5, Line 3 should read: ... within the far cluster ... and Line 4 should read: ... the near cluster "candy stripe";...

Page 167: Table 5.3.12-1:

Delete 22* from Corridor 5 data for Campus/Injector.

Comments column, Abort Beam Access J1 row should read: No access.

Add: Source: State of Illinois 1988

Page 169: Table 5.3.12-2, add: Source: State of Illinois 1988

Page 171: Insert at end of first paragraph: The Robein Silt and Peddicord Formation are units that generally are buried by younger tills and/or outwash. The units frequently contain pollen, mollusks, and potentially, vertebrate remains.

Par. 2, end of paragraph, add reference: (McGimsey et al. 1986)

Page 173: Section C, Par. 2, Line 2 should read: ... Cahokia alluvium ...

Section C, Par. 4, last line, reference should read: (McGimsey et al. 1986)

Delete paragraphs 5 and 6

Page 175: Par. 2, Line 1, delete reservoirs.

Page 176: Section 5.3.13.3, add to the end of Par. 1: Other roads of concern are those secondarily serving as access to highly sensitive areas. Views from these roads would be moderately sensitive. Such roads include Empire Road, Randall Road and Red Gate Road, Denker Road, and Country Club Road, where they pass near F7, F8, E8 and E9, respectively.

Page 177: Replace Par. 1 with the following: Surface facilities would be close to several residential areas and areas currently undergoing residential development. For instance, E1, F2, and F8 are sited in the midst, or close to, land currently undergoing subdivision improvements, or flagged for such construction. It is assumed that people subsequently buying newly constructed homes in those areas will be doing so after the proposed SSC facilities have been built or with the knowledge that SSC facilities may be built nearby. The SSC project siting has been public

Page 177: (Cont) knowledge since January of 1988. In either case, people living in the new subdivisions are assumed not to be sensitive to the visual character change of the SSC structures.

Par. 2, Line 2 should read: E3, F4, F5, F7, E8 and E9 proposed ...

REFERENCES:

Page 179: Delete second, third, and fourth references

Fifth reference, the name Vaught should read Vagt.

Page 181: Delete third reference

Page 183: Delete seventh reference

Page 184: Ninth reference should read: Haimson, B.C. ... Unpublished report. Illinois State Geological Survey, 1988.

Page 186: Fifteenth reference should read: ... 1985a.

Sixteenth reference should read: ... 1985b.

Page 190: Delete ninth reference

Page 192: Tenth reference should read: ... Illinois. Vol 3: Geology and Tunneling and Vol 5: Environment. 1987.

Page 195: Delete tenth, twelfth, and thirteenth references

Insert the following references:

Cowardin, L.M., Carter, V., Golet, F.C., and La Roe, E.T. Classification of Wetlands and Deepwater Habitats of the U.S. FWS/OBS-79/31. Washington, DC: U.S. DOE. FWS, 1979

Illinois Department of Agriculture. Illinois Agricultural Statistics, 1986 Annual Summary. Springfield, IL: IL Dept of Agriculture, 1986.

Illinois Department of Conservation. Division of Land Acquisition. Land and Water Report. Springfield, IL: IL Dept of Conservation. Div of Land Acquisition, 1982, p. 16.

Miller, F.R. [Letter from Frank R. Miller, Illinois Bell, to Mr. Mack Riddle, RTK.] Aug 9, 1988.

Sherman, K.M. [Letter from Keith M. Sherman, Illinois Department of Transportation, to R. Schenker, RTK]. May 6, 1988.

Smith, P.W. The Fishes of Illinois. Champaign IL: University of Illinois Press, 1979, pp. 314.

Tichacek, G.J. and Wright, H.L. DeKalb County Surface Water Resources. [Springfield, IL]: IL Dept of Conservation. Div of Fisheries, 1971, p. 72.

U.S. Army Corps of Engineers. Chicago District. Plan of Study, Fox River and Tributaries. 1976.

U.S. Department of the Interior. Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants. U.S. Department of the Interior Report 50 CFR17.11-17.12. Jan 1, 1986.

Vidal, P.J. DuPage County Surface Water Resources. [Springfield, IL]: IL Dept of Conservation, Div of Fisheries, 1969, p. 161.

Vidal, P.J. Kane County Surface Water Resources. [Springfield, IL]: IL Dept of Conservation, Div of Fisheries, 1968, p. 138.

White, J. and Madany, M.H. Classification of Natural Communities in Illinois. Illinois Natural Areas Inventory Technical Report, Survey Methods and Results. Vol. i, pp. 309-405. Urbana, IL: 1978.

MICHIGAN

Title Page: Upper peninsula of Michigan was omitted from drawing insert at bottom; while drawing was intended to denote only contiguous area of state, for comparability with other state maps, upper peninsula should be added.

Page 1: Section 5.4.1.1, Par. 3, Line 8, reference should read: (U.S.G.S. 1970d, 1973b)

Page 6: Table 5.4.1-1, source should read: ... Michigan Department of Natural Resources 1964; ...

Page 8: Figure 5.4.1-3, Legend, the Scale units should be indicated as in feet

Page 9: Figure 5.4.1-4, the following changes should be made in the Legend, right column: first item should read: Medium-Textured Till; fourth item should read: Coarse-Textured Till; last item, scale should be identified as representing feet.

Page 13: Table 5.4.1-4, Unconfined Compressive Strength of Sandstone should read: 3,300 (1,550-5,760); of Mudstone/siltstone/shale should read: 2,700 (1,100-4,600); of limestone should read: 5,600 (3,393-6,737)

Unit of measurement for Bulk Density should read: lb/ft^3

Delete * footnote

Page 14: Delete fourth bullet

Page 19: Par. 1, Line 4 and Lines 7 and 8 and Par. 2, last line, delete: Michigan Geological Survey 1987;

Page 22: Figure 5.4.2-1, change title to: Major Watershed-Michigan Site; change source to: Miller et al. 1987.

Page 24: Table 5.4.2-1, first heading first entry should read: Grand River at Lansing (No. 04113000) Average flow for Deer Creek near Dansville should read: 11

Source should read: Miller et al. 1987; Michigan Water Resources Commission 1961.

Page 26: Par. 4, Line 3: delete "5" in constituents; the word change should read: "s" is; delete the word mercury

Par. 4, Line 4: delete: and

Par. 4, Line 5: insert period after the word oxygen and delete next two words

Page 27: Table 5.4.2-3, third stream entry (Orchard Creek near Fitchburg) fourth column (maximum) should have all data eliminated. Last column's (average) data should read: ---, 6.9, ---, ---, 298. In first and second stream entries, change $\leq$ 0.2 to .006 in last lines (Mercury) and standard for Dissolved Oxygen from $\geq$ 7.0 to $\geq$ 5.0 in first, second, and third stream entries.

Page 28: Table 5.4.2-3 (Cont):

Standard for mercury in all three sections should read: .0006

Maximum values for Orchard Creek should be eliminated. Average column should read: ---, 3, 78, 17, ---, ---.

Fourth stream entry (Sycamore Creek in Mason ...) and fifth stream entry (Dear Creek near Dansville ...) the data of the fourth column (maximum) should be moved to the last column (average). The data of fifth column (minimum) should be moved to the fourth column (maximum). The data of the last column (average) should be moved to the fifth column (minimum). Second and third stream entries, change standard for Dissolved Oxygen to 25.0.

Source should read: U.S. Environmental Protection Agency 1988, ...

Page 30: Table 5.4.2.4, sources should read: ... Bedel 1982; Bartholic et al. 1982.

Page 32: Table 5.4.2-5, source should read: U.S. Army Corps of Engineers 1970; ...

Page 33: Par. 1, Line 5 should read: ... 80 gal/min/ft of drawdown ...

Page 36: Table 5.4.2-6, source should read: U.S. Army Corps of Engineers 1970; ...

Page 46: Table 5.4.4-1, source should read: National Climatic Data Center, Weather Station No. 14836, (Lansing, MI) Period of Record 1/82 - 12/86

Page 48: Table 5.4.4-2, insert an asterisk after the heading that reads: Direction

Insert a note that reads: * Direction from which wind is blowing.

Page 54: Figure 5.4.5-1, title should be changed to: Residences

Page 57: Table 5.4.5-1, insert double asterisk after the word inches under the Horizontal Displacement and Vertical Displacement headings

Insert a note that reads: ** Measurements recorded are peak to peak

Page 69: Section 5.4.9.2, Par. 1, replace first sentence with the following: Approximately 15 percent of the project area is forested, half of which is upland forest, and the remainder is lowland forest.

Page 73: Table 5.4.9-3, source should read: U.S. Department of Agriculture, Forest Service 1982

Page 74: Par. 3, Line 2 should read: Many of the wetlands present in the site vicinity ...

Heading a. Forested Wetlands should read: Forested and Shrub Wetlands

Par. 5, Line 1 should read: Wooded wetlands are dominated by two types of flora ...

Page 76: Delete Table 5.4.9-5

Page 77: Par. 3, Line 6, replace the word boles with the word voles; Line 11 should read: Table 5.4.9-6 contains a partial list of mammals ...

Page 78: Table 5.4.9-6, Scientific Name for Sharptailed grouse should read: Pedioecetes phasianellus; the word phasianellus should be deleted from the Common Name column; Scientific Name of Opposum should read: Didelphis ...; Scientific Name of Woodchuck should read: Marmota ...; Scientific Name for American bittern should read: Botaurus lentiginosus; Scientific Name for Least bittern should read: Ixobrychus exilis; delete: Martin, A.C. 1951 from sources

Page 80: Par. 1, Line 1 should read: There are no streams in the site area ...

Page 81: Table 5.4.9-8, the second entry should read: Northern pike ... Esox cucius ...; sixth entry should read: Channel catfish

Table 5.4.9-8, the second Common Name should read: Northern pickeral; the sixth Common Name should read: Channel catfish

Page 82: Replace Par.2 with the following: Bird watching, wildlife observation, and nature photography are import activities in the Dansville State Game Area, Waterloo Recreation Area, and the Haehnle Wildlife Sanctuary. Waterfowl nesting habitats are common in these protected areas; the observation of sandhill cranes and blue heron rookeries is especially popular.

Par. 5, last line, reference should read: Michigan Department of Natural Resources 1987a

Par. 6, Line 4 should read: plover, northern bald eagle, peregrine falcon, and ...

Par. 6, last line, reference should read: Michigan Department of Natural Resources 1987a

Page 84: Par. 1, Line 6 should read: duquesnei) ...

Par. 6, Line 3 should read: the Michigan Audubon ...

Page 90: Figure 5.4.10-1, in the Legend, the units on the distance scale should be labeled as representing feet.

Page 101: Last par., Lines 1 and 2, delete: ... approximately 400 ft south ... and replace with: ... 0.6 mi east of Meridian Road and 0.1 mi north ...

Page 107b: Subsection C., insert the following before Par. 1:

The Michigan Soil Conservation Service reported 4,002 acres of prime and 2,658 acres of important farmland at the proposed site. An estimated 341 acres of prime and important farmland would be permanently converted and 576 acres temporarily disturbed by the SSC project.

Page 107c: Delete: the last sentence of Par. 1 and all of Par. 2.

Page 111: Par. 1, Line 3, insert the word percentage before the word losses

Par. 1, Line 4, transpose the words average and national

Page 113: Par. 3, Line 2, should read: ... peaking in 1975 at 12.0% and in 1982 at 11.9% ...

Par. 3, last line, replace 1987 with 1986

Page 113: (Cont) Par. 4, Line 2 should read: ... national average each year since 1974, except 1981....

Par. 4, delete last sentence

Page 114: Par. 4, Line 3 should read: ... 1972-73 ... instead of ... 1971-72....

Par. 4, Line 4 should read 1978 ... instead of 1977....

Page 115: Table 5.4.11-2, source should read: Historic data by U.S. Bureau of the Census 1982b.

Page 117: Par. 1, last line, reference should read: U.S. Bureau of the Census 1982b.

Page 139: Par. 1, Line 2, add (Marvin 1988) to end of line

Par. 2, Line 2, add (Marvin 1988) to end of line

Page 142: Par. 2, end of paragraph, add reference: (Clifton 1978)

Par. 3, Line 10, add reference after farmstead development: (State of Michigan 1988)

Page 153: Par. 1, Line 5, should read: ... the Dansville State Game Area....

REFERENCES

Page 154: Delete twelfth reference

Page 156: Delete third and fourteenth references

Page 161: Delete eleventh reference

Page 163: First reference should read: Ott, S.A. ... June 23, 1988

Delete second reference

Page 164: Third reference should read: State of Michigan.... Vol 3: Geology and Tunneling and Vol 5: Environment. 1987.

Page 167: Twelfth reference should read: U.S. Geological Survey.... 1973b.

Delete thirteenth and fifteenth references

Page 169: Delete fifth reference

Insert the following references:

Federal Emergency Management Agency. Flood Insurance Rate Maps, Blackman Township, Michigan. Panel 260714-0001-0010, 260714-0005B, 260714-0010B. 1984.

Hobrla, "Revised Water Quality Standards." Letter from Rick Hobrla, to Mack Riddle, RTK. Lansing, MI: Michigan Dept. of Natural Resources, Nov. 7, 1988.

Menerey, [Letter to Bob Schenker, RTK, concerning Michigan site flood-prone area.] Lansing, MI: Michigan Department of Natural Resources, Land and Water Protection Section, Flood Hazard Mitigation, Sep 19, 1988.

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Michigan Department of Natural Resources. Waterloo Recreation Area Master Plan 1977-1987. Lansing, MI: MI DNR, 1988b.

Nelson, D.D. and Smith, D.W. Rotenone Fisheries Survey of the Grand River. Fisheries Division Technical Report No. 81-3. Lansing, MI: MI DNR, 1981.

U.S. Department of Agriculture. Forest Service. North Central Forest Experiment Station. Michigan Forest Statistics, 1988. St. Paul, MN: US DOE. USFWS. NCFES, 1983.

U.S. Department of Agriculture. Forest Service. North Central Forest Experiment Station. Timber Resources of Michigan's Southern Lower Peninsula. St. Paul, MN: US DOE. USFWS. NCFES, 1982.

U.S. Department of the Interior. Geological Survey. Water Resources Data - Michigan Water Year 1985. USGS Water Data Report. MI-85-1. Lansing, MI: USGS, 1986.

NORTH CAROLINA

Page 1: Section 5.5.1.1, Par. 2, Line 2, reference should read: (U.S.G.S. 1974)

Section 5.5.1.1, Par. 3, Line 4, reference should read: (U.S.G.S. 1974, 1977, 1981b)

Section 5.5.1.1, Par. 3, Line 5, reference should read: (U.S.G.S. 1974, 1981c)

Page 6: Table 5.5.1-1 (Cont), delete last source reference, which reads: Bates and Jackson 1980.

Page 7: Section 5.5.1.3, Par. 2, Line 6 should read: ... 1988b)....

Page 10: Table 5.5.1-2, source should read: Reid 1988b.

Page 11: Section 5.5.1.4, Par. 2, Lines 15 and 16, reference should read: (Law Engineering and Testing Company 1987)

Section 5.5.1.4, Par. 1, Line 18, the reference should read: (Sowers and Richardson 1983)

Page 23: Table 5.5.2.2., Note below table should read: Drainage areas were measured from U.S.G.S. topographic maps, and channel widths and depths were estimated during site visits in 1988. Floodplain widths were measured from floodplain maps (Federal Emergency Management Agency 1978a, 1978b, and 1979).

Page 24: Last paragraph, second-to-last line, delete the word both; last line, delete the words: and the turbidity levels

Insert the following new paragraph before the last paragraph on the page:

In addition, the entire Neuse Basin is also classified as nutrient sensitive waters (NSW). For NSW waters, no increase in nutrients over background levels is allowed unless the increase: (1) is due to natural variation or (2) will not endanger human health, safety, or welfare and that preventing the increase would cause a serious economic hardship without equal or greater benefit to the public.

Section 5.5.2.1.B, insert the following new paragraphs before the last sentence of the first paragraph:

The significance of these classifications are described below:

Page 24: (Cont)

Class C Waters:

The water quality standards for Class C waters are the basic standards applicable to all fresh surface waters.

(1) All fresh surface waters are designated for fishing, secondary recreation, agricultural, and any other usage except for primary recreation or as a source of water supply for drinking, culinary, or food-processing purposes; and

(2) The waters will be suitable for fishing and for fish and wildlife propagation.

Class WS-I Waters:

(1) These waters are designated as sources of water supply for drinking, culinary, or food-processing purposes for those users desiring maximum protection of their water supplies, and any usage specified for Class C waters; and

(2) These waters are protected water supplies within natural and uninhabited or predominantly undeveloped watershed with no permitted point source discharges; must be relatively unimpaired by nonpoint sources of pollution.

Class WS-II Waters:

(1) These waters are designated as sources of water supply for drinking, culinary, or food-processing purposes for those users desiring maximum protection of their water supplies where a WS-I classification is not attainable, and any usage specified for Class C waters; this classification may also be used to protect critical portions of the watershed of Class WS-III waters;

(2) Waters of this class are protected as water supplies which are in low-to-moderately developed watersheds; only domestic wastewater discharges and industrial nonprocess discharges approved by the State Environmental Management Commission are permitted.

Class WS-III Waters:

These waters are designated as sources of water supply for drinking, culinary, or food-processing purposes for those users where more protected sources are not available and any other usage specified for Class C waters;

Page 24: (Cont) Class B Waters:

(1) These waters are designated for primary recreation and any other usage specified for Class C waters;

(2) The waters will meet accepted standards of water quality for outdoor bathing and will be of sufficient size and depth for primary recreation purposes.

Furthermore, for waters in any of the three water supply classifications, after treatment, will meet the maximum contaminant levels considered safe for drinking, culinary, or food-processing purposes which are specified in the national drinking water regulations and in the North Carolina rules governing public water supplies.

Page 25: Table 5.5.2-3, under Grassy Creek, sixth Parameter should read: Turbidity NTU; delete the Standard Turbidity entry for both streams

Page 26: Table 5.5.2-3 (Cont), delete the Standard Turbidity entry for both streams

Page 27: Table 5.5.2-3, the first character in the Tar River Station No. should be read as the letter O. Sources should read: U.S. Environmental Protection Agency 1988; North Carolina Administrative Code 1988.

Page 29: Table 5.5.2-4 has been revised and can be found in the Corrected Tables section.

Page 33: Section 3, Par. 3, delete first sentence

Section 3, Par. 3, Line 4 should read: ... about 95 ft ...

Section B, Par. 1, Line 1 should read: ... in the project area does not show ...

Page 36: Section 5.5.3.3, Par. 1, delete the first sentence.

Page 43: Table 5.5.4-1, source should read: National Climatic Data Center, Weather Station No. 13722, (Raleigh-Durham, NC) Period of Record 1/82 - 12/86

Page 44: Table 5.5.4-2, first heading should read: Direction*

Table 5.5.4-2, add note: *Direction from which wind is blowing.

Table 5.5.4-2, source should read: National Climatic Data Center, Weather Station 13722 (Raleigh-Durham, NC), Period of Record 1/82-12/86

Page 45: Par. 2, insert the following after the first sentence: In addition, they still enforce the former annual NAAQS for TSP and a limit of 150 $\mu g/m^3$ 24-h average for TSP as State Standards.

Page 51: Figure 5.5.5-1, title should be changed to: Residences

Page 55: Pars. 1, 2, 3, and 4, replace the reference citation (NC 1988a) with (Fong 1988)

Par. 6, change the reference citation (NURE 1979) to (LKB 1979)

Page 61: Table 5.5.8-1, for Durham-Eno River Plant, Design Flow should read: 2.0 million gal/d, and Available Capacity should read: 0.2 million gal/d

Delete Par. 3; add to end of page: According to Mr. John Dorney (Engineering Supervisor, Water Quality Planning Branch, Division of Environmental Management, Department of Natural Resources and Community Development, Raleigh), the proposed expansion of the Eno River Wastewater Treatment Plant to 10 million gal/d is pending subject to the Federal EIS, which is now being done.

Page 66: Last paragraph, add reference after first sentence: Cowardin et al. 1979

Page 68: Par. 2, Line 2, add reference: Schafale and Weakley 1985

Page 71: Par. 5, last line, add reference: North Carolina Department of Agriculture 1977

Page 74: Par. 2, third sentence should read: Little vegetation occurs in flowing waters, but animal life is diverse and abundant. Fifth sentence should read: These rivers are inhabited by many mollusk species with four species, rare in North Carolina, present in the rivers and larger creeks. Add the following sixth sentence: The area is, in fact, an important refugium for a large percentage of North Carolina's freshwater mussel species.

Par. 6, Line 2 should read: ... Lake Michie; Line 4 should read: ... unaffected ...

Page 75: Par. 1, Line 2, reference should read: U.S. Fish and Wildlife Service 1986

Par. 4, delete the last sentence.

Page 76: Section 5.5.9.6.C, the first sentence should read: The proposed SSC site in North Carolina is located in the middle of the Piedmont physiographic province, and thus no transition zones between physiographic provinces are present. Delete the last sentence and insert: The headwaters of the three streams are underlain by basalt rocks in a region generally underlain by granitic formations. The underlying rock affects stream chemistry and supports flora and fauna different from adjacent areas.

Page 77: Table 5.5.9-3, Neuse River dog should read: Neuse River water dog

Page 80: Par. 1, Line 2 should read: ... Jervis 1988)....

Par. 1, Line 7 should read: ... and COE ...

Page 82: Par. 1, delete paragraph from Line 3: Person County is currently reviewing a zoning ... to the end of the paragraph. Insert: Person County and Granville County are currently reviewing zoning ordinances that will be applicable county-wide (Person County, Granville County, 1988). Person County commissioner approval is expected to occur in early 1989; Granville County commissioner approval is anticipated in November, 1988. Durham, Granville, and Person Counties have subdivision regulations in effect. Several municipalities located in the SSC project study area have prepared land use plans and have zoning ordinances and/or subdivision regulations in effect. The community of Butner has recently prepared a land use plan update (1987). The plan, as well as new subdivisions regulations and a new zoning ordinance were approved in August, 1988. The cities of Oxford, Roxboro, and Creedmoor have zoning and subdivision regulations in effect.

Page 88: Figure 5.5.11-1, in the Legend, the units on the distance scale should be labeled as representing feet.

Page 91: Par. 1, delete the last sentence and add the following: A land use plan and zoning ordinance are currently under consideration for adoption by Granville County.

Par. 4, delete Line 9 and add the following: The southwestern portion lies within the planning and zoning jurisdiction of the community of Butner, and is classified as a rural watershed area. The northern and southeastern portions lie within the planning jurisdiction of Granville County and is designated as rural watershed in the land use plan and zoning ordinance presently under consideration.

Page 92: Par. 7, delete Line 11, add the following: A land use plan and zoning ordinance are currently under consideration for adoption by Granville County. The proposed classification for this area is rural watershed.

Page 93: Par. 1, delete Line 6, add the following: The land use plan and zoning ordinance currently under consideration for adoption by Granville County proposes a rural watershed classification for this area.

Par. 2, delete Line 4 and add the following: The site is privately owned and Granville County is currently considering for adoption a land use plan and zoning ordinance that would classify this area as rural watershed.

Page 94: Par. 3, delete Line 5, add the following: The land use plan and zoning ordinance currently under consideration for adoption by Granville County would classify this area as rural watershed.

Par. 4, Line 5, delete last sentence and add the following: The land use plan and zoning ordinance currently under consideration for adoption by Granville County would classify this area as rural watershed.

Par. 5, Line 6, delete last sentence and add the following: The land use plan and zoning ordinance now under consideration for adoption by Granville County would classify this area as rural watershed.

Par. 6, Line 8, delete the last two sentences and add the following: Both Person and Granville Counties presently are considering adoption of zoning ordinances for these areas. The Person County Development Plan and draft Granville County Land Use Plan classify the area as rural. Areas scattered throughout the quadrant are designated as prime farmland, and the area is expected to maintain its rural character due to a lack of development pressure.

Page 95: Par 2, delete Line 5, add the following: A zoning ordinance for this area is currently being considered by Person County. The Person County Development Plan proposes no changes in use.

Par. 3, Line 4, delete sentence beginning: The area ...; replace with the following: The area is designated as prime farmland and is privately owned. A zoning ordinance for this area is currently being considered by Person County....

Par. 3, Line 6 should read: ... Person County ...

Page 95: (Cont)

Par. 4, Line 8, place a period after farmland and replace remainder of sentence with the following: A zoning ordinance for this area is currently being considered by Person County. The Person County Development Plan proposes no changes in use.

Par. 5, Line 6, delete last sentence and replace with the following: A land use plan and zoning ordinance are currently under consideration for adoption by Granville County. The proposed classification for this area is rural.

Par. 6, Line 6, delete last sentence and replace with the following: The land use plan and zoning ordinance currently under consideration for adoption by Granville County would classify this area as rural.

Page 96:

Par. 1, Line 12, delete sentence beginning: Land use ... and replace with the following: A county-wide zoning ordinance is currently under consideration by Person County.

Par. 2, Line 6, delete sentence beginning: The area ... and replace with the following: The area is privately owned and zoning restrictions for the area are currently under consideration by Person County.

Par. 3, Line 5, delete sentence beginning: The land ... and replace with the following: The land is privately owned and designated as prime farmland. Zoning for the area is currently under consideration by Person County.

Page 97:

Par. 1, Line 1, replace with the following: A small portion of the area is designated as prime farmland, and zoning for the area is currently under consideration by Person County.

Par. 4, delete last sentence and replace with the following: The Person County Development Plan proposes no land use changes and zoning for this area as it is currently under consideration by Person County.

Par. 5, delete last sentence and replace with the following: A land use plan and zoning ordinance are currently under consideration for adoption by Granville County.

Page 98:

Par. 1, delete last sentence and replace with the following: Portions of the site and surrounding area are designated as prime farmland, and a land use plan and zoning ordinance are currently under consideration for adoption by Granville County.

Page 98: (Cont) Par. 2, delete last sentence and replace with the following: The northeast portion of this area is designated as prime farmland, and a land use plan and zoning ordinance are currently under consideration for adoption by Granville County.

Par. 3, delete last sentence and replace with the following: A land use plan and zoning ordinance are currently under consideration for adoption by Granville County.

Par. 4, delete last sentence and replace with the following: The site is designated as prime farmland, and a land use plan and zoning ordinance are currently under consideration by Granville County.

Par. 5, delete last sentence and replace with the following: A land use plan and zoning ordinance are currently under consideration for adoption by Granville County.

Par. 6, Line 5, delete sentence beginning: There are ... and replace with the following: A land use plan and zoning ordinance are currently under consideration for adoption by Granville County.

Page 103: Subsection C., insert the following before Par. 1: The North Carolina Soil Conservation Service reported 4,374 acres of prime and 2,265 acres of important farmland at the proposed site. An estimated 955 acres of prime and important farmland would be permanently converted and 696 acres temporarily disturbed by the SSC project.

Page 111: Par. 5, Line 4 should read: ... was greater than the ...

Page 112: Par. 3, Lines 2-3 should read: ... yet have been consistently greater than those of the ROI....

Page 113: Par. 1, Line 3 should read: ... services (12.6 percent), farming (11.7 percent), and government (11.5 percent)

Par. 4, Line 4 should read: ... ROI average ($13,565) ...

Par. 6, Line 5, delete 1988b

Page 114: Table 5.5.11-2, 1980 Population figure should be 1.56

Table 5.5.11-2, source should read: Historic data from U.S. Bureau ...

Page 116: Par. 4, Line 6 should read: ... Census, 1982c)....

Page 131: Table 5.5.11-9, Peak Hour Volume (pcph) for U.S. Route 501: I-85 to South of Picks should be: 800

Page 135: Par. 4, Lines 2 and 3 should read ... approximately 10,092 MW (Carolina Power and Light 1988).

Par. 5, last line should read: ... 4,000 MW (State of North Carolina, 1987a).

Page 137: Subsection c., delete text and insert the following:

Central Telephone Company has its point of presence with AT&T in Greensboro, North Carolina. Roxboro's office of Central Telephone is located in the Greensboro LATA. Toll traffic ties into the point of connect at the Prospect Hill/Burlington exchange boundary. Central Telephone provides interconnections with six long distance carriers to provide interLATA service. Among these carriers are AT&T, MCI, and U.S. Sprint (Minter 1988).

Page 141: Par. 1, add the following reference citation of the end of the first sentence: (Sheffield 1988)

Par. 2, Line 1 should read: Essentially no intensive archaeological survey ...

Par. 2, add the following after the first sentence: Extensive historic structures surveys have been undertaken in Granville and Durham Counties.

REFERENCES

Page 147: Delete tenth reference

Page 148: Delete first reference

Page 149: Eleventh reference should read: Colorado School of Mines. "Chercher Abrasivity Index." Colorado School of Mines Earth Mechanics Institute Report....

Page 150: Delete last reference

Page 151: Ninth reference should read: ... The Regional Extent of the Circa 600 MA Virgilina Deformation:...

Page 152: Ninth reference should read: Law Engineering and Testing Company....

Page 154: Delete eighth reference

Page 156: Delete fifth reference

Eleventh reference should read: State of North Carolina.... Vol 3: Geology and Tunneling and Vol 5: Environment. 1987.

Page 159: Delete fourteenth and sixteenth references

Page 160: Delete third reference

Insert the following references:

Adams, W.F. A Checklist of the Freshwater Mollusks of North Carolina with Notation of Their Statuses in the State. [Working Draft.] 1988.

Clark, M.K. [Personal Communication.] North Carolina Museum of Natural Sciences, 1988.

Cowardin, L.M. et. al. Classification of Wetlands and Deepwater Habitats of the United States. FWS/OBS-79/31. Washington, DC: U.S. DOI. FWS, 1979.

Hinton, P.J., Architectural Section Engineer, North Carolina Department of Transportation. [Personal Communication.] May 6, 1988.

Minter J. R. [Letter to Dr. Mack Riddle, RTK, trasmitting summary information on Central Telephone Company.] Sept 1988.

North Carolina Department of Agriculture. North Carolina Farm Statistics, 1974-75 Annual. Statistical Bulletin 132. Raleigh, NC: Federal-State Crop and Livestock Reporting Service, 1977.

North Carolina Department of Water and Air Resources. Neuse River Basin-1 (Headwaters to Kinston Area). Map scale 1:250,000. File No.: 09-1. No date.

Schafale, M.P. and Weakley, A.S. Classification of the Natural Communities of North Carolina. Second Approximation. Raleigh, NC: North Carolina Natural Heritage Program, 1985.

Sheffield, J. The Durham County Historic Properties Inventory, 1987-1988. [Draft.] [Durham, NC]: Durham County, 1988.

State of North Carolina. Site Proposal for the Superconducting Super Collider. Vol 8: Utilities. 1987a.

Stuckey, J.L. Pyrophyllite Deposits in North Carolina. North Carolina Department of Conservation and Development. Division of Mineral Resources. Bulletin 80. 1967.

U.S. Bureau of the Census. Estimates of the Population of Virginia Counties and Metropolitan Areas: July 1, 1981, to 1985. Data from forthcoming publication provided by Division for County Population Estimates.] Washington, DC: U.S. Bureau of the Census, 1988c.

U.S. Department of the Interior. Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants. USDOI Report 50 CFR17.11-17.12. Jan 1, 1986.

U.S. Department of the Interior. Fish and Wildlife Service. Endangered Species Act. 1973.

TENNESSEE

Page 1: Par. 2, Line 3, reference should read: (U.S.G.S. 1981b)

Page 5: Table 5.6.1-1, Lithology Column, Data Entry 6, last line should read: thin shale beds

Page 7: Figure 5.6.1-3, Legend should be changed as follows: 3rd item should read: BIGBY-CANNON LS.; 12th item should read: MASCOT (KNOX GRP); last item, Scale should be identified as representing feet

Page 9: Par. 2, last line, reference should read: (Manhardt 1988a)

Page 11: Table 5.6.1-3, source should read: Manhardt, 1988a

Page 12: Section 5.6.1.5, Par. 2, reference should read: (Howard et al. 1978)

Par. 3 reference should read: (Howard et al. 1978)

Par. 5, delete the last sentence: Seven caves are known within the site area, as follows (Matthews 1987; Barr 1972): ...; Also delete all five bulleted items

Par. 5, Line 6 should read: disappearing streams. Known caves in the vicinity of the site are listed in Table 5.6.1-4, which can be found in the Corrected and New Tables section.

Page 13: Delete the three bulleted items at the top of the page

Page 16: Subsection B, Par. 2, last line, reference should read: (McCary 1963)

Section B, Par. 3, Line 3, reference should read: (McCary 1963)

Page 22: Table 5.6.2-1, fifth column (Minimum flow*), first data entry should read: 0.2; last data entry should read: 5.0

Last five columns (Flow Duration) should read: NA; add note below that reads: NA-data not available

Page 23: Par. 4, add to end of paragraph: However, the booster excavations may intersect one or more caves. Potential impacts to the cave hydrology and ecology are discussed in Appendices 7 and 11, respectively.

Page 23: (Cont) Par. 5, Line 5, insert the following: If the topographic depressions are determined to be sinkholes whose hydrologic integrity may be impacted by changes to the surface drainage, the potential for spoils pile-related impacts will be mitigated by relocating the piles to flat bottomland areas.

Page 25: Table 5.6.2-3, Columbia Dam Head Waters Duck River Basin, Dissolved Solids data should read (left to right): <500, 215, 104, 148.9

Page 27: Section C, Par. 2, Line 3 should read: to meet the current average expected use of water,...

Page 29: Par. 1, add the following sentence to end of paragraph: The State reports water levels ranging from 50 to 250 ft.

Par. 6, delete the last sentence and insert: The average well yield is about 16 gal/min; about 20 percent of the wells yield more than 20 gal/min, and about 1 percent yield 100 gal/min or more (Wilson and Kernodle 1972, Brahana and Bradley 1986).

Page 30: Table 5.6.2-5, last column for Ridley Limestone, add: , average yield about 16 gal/min

Page 31: Par. 3, add the following to the end of the third sentence: , but at depth, the Murfreesboro does not yield water to wells (Wilson and Kernodle 1972).

Page 34: Table 5.6.2-7, groundwater public supply for Marshall County should read: 90*

Page 35: Par. 1, Line 2, sentence should read: (Topography ... minor roles ... 1974.)

Page 42: Table 5.6.4-1, source should read: National Climatic Data Center, Weather Station No. 13897, (Nashville, TN) Period of Record 1/82 - 12/86

Page 43: Table 5.6.4-2, first heading should read: Direction*

Table 5.6.4-2, add note: * Direction from which wind is blowing.

Table 5.6.4-2, source should read: National Climatic Data Center, Weather Station no. 13897 (Nashville, TN), Period of Record 1/82-12/86.

Page 44: Par. 4, Line 4 should read: ... is Mammoth Cave National Park ...

Page 49: Figure 5.6.5-1, title should be changed to: Residences

Page 53: Par. 2, Lines 1 and 3, reference citation (TN Radon 1987) should read: (Tennessee Department of Health and Environment 1987)

Par. 4, the last sentence should read: The last core sample from the approximate tunnel level in the Murfreesboro Limestone had concentrations of 0.38 pCi/g Ra-226, 1.1 μg/g total U and 0.35 pCi/g total thorium.

Par. 4 and 6, reference citation (TN 1987) should read: (Tennessee Division of Radiological Health 1988)

Page 55: Par. 2, Line 3 should read: ... ranged from less ...

Par. 3, delete the last line and replace with the following: While these samples are limited, the results are expected to be representative.

Par. 4, Line 4, delete the word by and replace with the following: , according to the State profile analysis for

Par. 4, Line 5, replace the word Searchers with the Word Directors; insert the following after the sentence ending (CRCPD 1987): In addition to Division of Radiological Health and Nuclear Regulatory Commission licensees, the DOE operates three large facilities in the eastern portion of the State. These facilities include a uranium enrichment plant, a nuclear weapons component fabrication plant, and a national laboratory heavily involved in nuclear research.

Page 64: Par. 1, Line 5, reference should read: Tennessee Valley Authority 1987

Par. 2, last line, reference should read: Pearsal et al. 1985

Page 66: Par. 4, Line 5 should read: ... emergent wetlands (Cowardin et al. 1979)....

Page 69: Table 5.6.9-2, Scientific name for carp should read: ... carpio ...

Table 5.6.9-2, Scientific name for catfish should read: Ictaluris ...

Page 71: Under the heading 2. Status Review Species, the scientific name for Cumberland rosinweed should read: Silphium brachiatum

Page 73: Table 5.6.9-3, the scientific name for Carolina anemone should read: (Anemone caroliniana); the scientific name for Birdwing pearly mussel should read: (Conradilla caelata)

Page 74: Par. 1, Line 3 should read: ... covering unincorporated ...

Page 79: Par. 3, Line 9 should read: ... National Guard ...

Page 87: Par. 5, Line 9 should read: ... Christiana ...

Page 90: Delete last sentence

Page 94: Subsection C., insert the following before Par. 1:

The Tennessee Soil Conservation Service reported 4,000 acres of prime farmland at the proposed site. Information on important farmland was not provided; an estimate was calculated at 1,839 acres using soil maps available for two-thirds of the counties affected. Based on this rough calculation, an estimated 606 acres of prime and important farmland would be permanently converted and 498 acres temporarily disturbed by the SSC project.

Page 96: Delete last paragraph

Page 99: Par. 3, Line 3 should read: ... The rate of expansion ...

Page 101: Table 5.6.11-1, Tennessee ROI earnings per worker should read: $18,083, $18,436, $19,077, $18,897, NA, 0.3%

Table 5.6.11-1, Tennessee ROI per capita income should read: $10,443, $11,719, $12,595, $13,216, NA, 1.6%

Page 102: Par. 2, Line 1 should read: ... $18,897, which was ...

Par. 2, Line 3 should read: ... ($30,009) and mining ($27,049) ...

Par. 3, Line 2 should read: ... except from 1981 to 1983....

Par. 4, Line 1 should read: ... $13,216....

Par. 5, Line 2 should read: ... 0.7 million jobs to 0.8 million....

Par. 6, Lines 1 and 2 should read: ... highest number of jobs and total income ...

Page 104: Par. 3, Line 4 should read: ... ($13,216) and the national ...

Page 105: Par. 2, Line 4 should read: ... 9.9 percent, in ...

Par. 2, Line 5 should read: ... 12.7 percent, and again in 1985 at 10.3 percent ...

Page 105: (Cont)

Par. 2, Line 6 should read: ... force, which ...

Par. 2, Line 8 should read: ... 1.6 percent to approximately ...

Par. 3, Line 4 should read: ... ($13,216) ...

Par. 4, Line 2 should read: ... a relatively small role ...

Par. 5, Lines 2 and 3 should read: rates exceeding the national and ROI average rates in eight ...

Par. 6, last line should read: ... $24,493.

Page 106: Par. 2, Lines 5 should read: ... ROI average ($13,216) ...

Page 107: Table 5.6.11-2 source should read: ... 1982b.

Page 108: Par. 1, last line should read: ... 1985;...

Page 109: Par. 2, Lines 1 and 2 should read: ... numbered 10,800 and 7,600 ...

Page 110: Par. 6, Line 6 should read: ... (15.25 and ...

Par. 6, Lines 7 and 8 should read: ... respectively) but below that ...

Page 125: Table 5.6.11-10, second data column should read: Lanes; third data column should read: Capacity

Sources should read: TDOT 1986-b; TRB 1985.

Page 126: Section 3, Par. 2, Line 6, reference should read: (Metropolitan Nashville Airport Authority 1984)

Section 3, Par. 2, Line 10, reference should read: (Miller 1979)

Section 3, Par. 2, last line, reference should read: (Tennessee Aeronautics Commission; J.R. Wauford 1977)

Section 4, last line, reference should read: (Nashville-Davidson 1987)

Page 127: Section 5.b, Line 6, reference should read: (Tennessee Technology Foundation 1987)

Section 5.c, last line, reference should read: (Flight Guide 1988)

Page 128: Par. 1, last line, reference should read: (Nashville-Davidson 1987)

Page 130: Delete subsection 2.a. and add the following:

2. Natural Gas

a. Ownership

Natural gas service is provided to the vicinity of the Tennessee site by United Cities Gas Company (Price 1988).

b. Delineation of Service Territory

United Cities Gas Company services the middle Tennessee counties where the proposed site is located (Price 1988).

c. Interrelationship with Other Natural Gas Utilities

United Cities Gas Company is interconnected with Texas Eastern Transmission System in Smyrna and Franklin, Tennessee. There is an interconnect with the East Tennessee Natural Gas System in Shelbyville and Columbia, Tennessee (Price 1988).

d. Planned Future Upgrades/Additions

United Cities Gas Company is currently planning an interconnection with the Columbia Gulf Transmission System in the near future to be made in Franklin, Tennessee (Price 1988).

Page 131: Subsection c., delete text and insert the following:

South Central Bell provides interconnections with ten long-distance carriers to provide interLATA service. Among these carriers are AT&T, MCI, and U.S. Sprint (Imorde 1988).

Page 132: Par. 1, Line 2 should read: ... cites in the Wells Creek site...

Page 133: Par. 3, last line, reference citation should read: ... Jones 1876;...

REFERENCES

Page 144: Delete last reference

Page 145: Delete ninth reference

Page 147: Delete fifth and seventh references

Eighth reference, last line should read: 1963.

Page 151: Eighth reference, add: 1986b.

Page 155: Delete fifth, sixth, tenth, and twelfth references

Page 156: Delete ninth reference

Insert the following references:

Baker, R. Discussion of Aquatic Communities and Water Quality of Surface Waters Associated with the Proposed Site for the Superconducting Super Collider. Nashville, TN: TN Dept of Health and Environment. Div of Water Pollution Control, 1988.

Coffee, Bedford, Marshall, Maury, Hickman, and Lewis Soil Conservation Districts and A.S.C. County Committees. Land and Water Resources of the Duck River Management Area. Apr 1984.

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Tennessee Valley Authority. Regional Natural Heritage Project Database. Division of Land and Economic Resources. 1987.

TEXAS

Replace the Table of Contents with the following pages:

CONTENTS

CONTENTS (Cont)

CONTENTS (Cont)

TABLES

TABLES (Cont)

TABLES (Cont)

FIGURES

FIGURES (Cont)

Page 1: Par. 4, Line 6 should read: ... The time scale used

Par. 5, Line 3 should read: ... 103 million ...

Page 4: Table 5.7.1.1, Entry 5, Column 2, Lithology for Taylor marl should read: only the two lowermost members--Wolf City Formation and Ozan Formation--are recognized at the site.

Page 5: Table 5.7.1.1 (Cont) Entry 1, last column, add: Local aquifer

Page 9: Table 5.7.1-2, add: Source: Texas Bureau of Economic Geology 1987; Reaser 1961.

Page 11: Table 5.7.1-3, Last Column, unit should be; $lb/inch^2$

Page 12: Table 5.7.1-4, unit for Young's Modulus should read: $lb/inch^2 \times 10^6$

Table 5.7.1-4, Unconfirmed Compressive Strength for Eagle Ford shale should read: 301

Page 18: Par. 3, delete the last sentence and insert: Waxahachie Creek joins Chambers Creek 4.9 mi downstream from Bardwell Dam (Buckner et al. 1987).

Page 19: Figure 5.7.2-1, source should read: Trinity River Authority of Texas.

Page 22: Par. 2, delete the last sentence and insert: The lake is used for recreation and water supply (Texas Water Commission 1986) as well as flood control.

Par. 3, delete the last sentence and insert: Its drainage area is 30 mi^2; the reservoir is used primarily for recreation (Texas Water Commission 1986) and water supply (Dowell and Petty 1973).

Page 24: Delete the last paragraph and insert the following:

Water quality standards and requirements in Texas were first developed by the Texas Water Quality Board staff in 1967. In compliance with the Federal Water Pollution Control Act Amendments of 1972, the early standards were reviewed and approved by the Environmental Protection Agency in 1973. On September 1, 1985, the responsibility for the application and development of water quality standards in Texas was assumed by the Texas Water Commission. Since 1973, the water quality standards have been amended on six subsequent occasions. The most recent revision to Texas water quality standards were

Page 24: (Cont) adopted on April 29, 1988 (corrected on May 6, 1988) under Texas Administrative Code, Title 31, Natural Resources and Conservation, Water Commission, Chapter 307 - Surface Water Quality Standards (State of Texas 1988).

Page 25: Replace Pars. 2, 3, 4, and 5 with the following:

General water quality criteria were developed to support the State policy to preserve water quality for public health and enjoyment, propagation and protection of terrestrial and aquatic life, operation of existing industries, and economic development of the State (State of Texas 1988).

The numerical water quality criteria along with specific water uses have been developed for designated segments of certain river basins in Texas. In the Trinity River Basin, 40 segments have been designated, and numerical water quality criteria have been established for each. Designated segments in the vicinity of the project site include Chambers Creek above Richland-Chambers Reservoir (Segment 0814), Bardwell Reservoir (Segment 0815), and Lake Waxahachie (Segment 0816). The segment of Waxahachie Creek near Waxahachie is currently not classified. The Chambers Creek above Richland-Chambers Reservoir segment is from a point 2.5 mi downstream of Tupelo Branch in Navarro County to the confluence of North Fork Chambers Creek and South Fork Chambers Creek. The Bardwell Reservoir segment is from Bardwell Dam in Ellis County up to the normal pool elevation of 421 ft impounding Waxahachie Creek. The Lake Waxahachie segment is from South Prong Dam in Ellis County up to the normal pool elevation of 531.5 ft impounding South Prong Creek. The designated uses of these segments include contact recreation, high-quality aquatics, and public water supply (State of Texas 1988).

The U.S.G.S. has collected water quality data for the streams and reservoirs in the project area since 1975. Data for Waxahachie Creek near Waxahachie, Lake Bardwell, and Chambers Creek above Richland-Chambers reservoir are shown in Table 5.7.2-3, along with the numerical water quality standards adopted for the classified uses and designated segments. The U.S.G.S. does not have any recent water quality data for Lake Waxahachie (segment 0816). Water use of the lake is classified for contact recreation, high-quality aquatic habitat, and public water supply; water quality criteria are 200/100 ml for fecal coliform (30-day geometric mean not to exceed), 6.5-9.0 for pH, 32.8°C for temperature, 5.0 mg/L for dissolved oxygen, 300 mg/L for total dissolved solids (annual average not to exceed), 50 mg/L for chloride (annual average not to exceed), and 50 mg/L for sulfate (annual average not to exceed) (State of Texas 1988).

The standards for chloride, sulfate, and total dissolved solids shown in Table 5.7.2-3 are annual average not-to-exceed limits. Direct comparison of the water quality data to these standards is not strictly valid, but may serve to provide a general impression of the water quality patterns in the project area.

Page 26: Table 5.7.2-3, make the following corrections:

For Waxahachie Creek near Waxahachie 1980 to 1982, change "Classified for Contact Recreation, High Quality Aquatic Habitat, Public Water Supply" to "Unclassified" and change standards for pH, Temperature, Dissolved Solids, Chloride, and Sulfate to "N/A"; add superscript 1 to "Standard" headings.

Page 27: Add the following footnote under Table 5.7.2-3:

1 Standards are annual average, not-to-exceed limits; direct comparisons of these standards with either the instantaneous values, or with the average values listed in the table above are not strictly valid, but may be applied for a general assessment of water quality patterns.

N/A Not applicable; Waxahachie Creek is unclassified. Only the standards for fecal coliform and dissolved oxygen apply.

Page 28: Last paragraph, Lines 3 and 4 should read: ... alluvium near the larger streams is a local groundwater source....

Page 30: Par. 4, Line 1 should read: Thick sequences of the Taylor Marl, Austin Chalk, and ...

Line 3 of same paragraph should read: ... and generally only yield water ...

Move Par. 6 describing the Taylor Marl ahead of Par. 5 describing the Austin Chalk entry

Page 31: Table 5.7.2-5: move the entry on Taylor Marl ahead of the Austin Chalk entry

Page 36: Section C., Par. 3, insert at beginning: The Twin Mountains and Woodbine formations are presently overdrafted. Locally, this is a significant water resource issue. Consequently, groundwater use ...

Page 45: Table 5.7.4-2, first heading should read: Direction*

Table 5.7.4-2, add note: * Direction from which wind is blowing.

Page 47: Table 5.7.4-3, sources, Line 1 should read: ... Texas Air Control Board ...

Page 50: Table 5.7.4-5, Header Unit should read: Permitted or Actual Emissions (lbs/h)

Page 51: Last Par., last line should read: ... below are tabulated in Figure 5.7.5-2....

Page 52: Figure 5.7.5-1, title should be changed to: Residences

Page 55: Table 5.7.5-1, fourth heading should read: Displacement inches **

Table 5.7.5-1, add second note: ** Measurements recorded are peak.

Page 57: Table 5.7.6-1, Number of Samples for Ellis County should read: NA

Page 59: Par. 2, Line 4 should read: ... to 0.48 pCi/l ...

Page 61: Insert the following after Par. 1:

A total of 13 oil and gas pipelines cross the proposed SSC footprint at various locations. These pipelines are closed systems that will present no hazard unless subjected to catastrophic failure.

Page 62: Section 5.7.8.3, fifth bullet should read: Ellis County Disposal Company, Ennis, Texas ...

Page 64: Table 5.7.8-1, delete all Red Oak Treatment Plant entries

Page 82: Par. 2, Line 2, reference should read: U.S. Department of the Interior, Fish and Wildlife Service 1984

Page 85: Subsection C., Line 1, reference should read: Gould 1975

Subsection D., delete second sentence and replace with the following:

Lakes Bardwell and Waxahachie are used primarily for recreational activities, and are also managed for water supply and flood control.

Page 87: Par. 3, Line 10, year should be: 1978

Page 89: Par. 1, next-to-last line should read: ... five cities have zoning ...

Page 90: Par 2, Line 4, year should be: 1978

Page 91: Figure 5.7.10-1, Legend, the units on the distance scale should be labeled as representing feet

Page 96: Par. 7, Lines 7 and 8 should read: ... in the extraterritorial jurisdiction ...; Lines 9 and 10 should read: ... Burlington Northern rail lines that cross here.

Page 97: Par. 1, Lines 2 and 3 should read: ... Burlington Northern rail lines ...

Page 105: Delete last sentence

Insert the following before the paragraph:

The Texas Soil Conservation Service reported 3,389 acres of prime farmland and 1,287 acres of important farmland at the proposed site. An estimated 588 acres of prime and important farmland would be permanently converted and 406 acres temporarily disturbed by the SSC project.

Page 109: Par. 2, Line 3 should read: ... trade ($32,170),...

Par. 3, Line 3 should read: ... (6.6 percent),...

Par. 3, Line 5 should read: ... the ROI was approximately 1,900,000 ...

Page 111: Par. 5, last line should read: ... 1987a).

Page 112: Table 5.7.11-2, source should read: Historic data from U.S. Bureau ...

Page 114: Par. 2, Line 6 should read: ... in 1988 ...

Par. 2, Line 7 should read: ... levels (North Central Texas Council of Governments 1988)....

Page 120: Table 5.7.11-5, delete: (in thousands) from amount heading

Page 129: Par. 8, Line 2, following Ft. Worth, sentence should read: Midland, Odessa, Wichita Falls, Arlington, Irving, Plano, Waco, Tyler, and Killeen (TU 1986).

Page 130: Par. 4, Line 4, following generator add the following: of which 1,250 MW, which constitutes Unit One of the South Texas Nuclear Project, went into commercial operation on August 25, 1988.

Page 135: Par. 5, date of reference citation should read: 1987

Delete last paragraph starting: The oil industry ...

Page 138: Table 5.7.12-1, add: Source: State of Texas 1987.

REFERENCES

Page 145: Delete seventh reference

Page 146: Third reference: replace 1985 with 1987

Page 147: Delete seventh reference

Page 148: Delete thirteenth reference

Page 149: Delete fourteenth reference

Page 150: Delete thirteenth reference

Page 151: Third reference should read: ... Geological Society of America Memoir III. 1969.

Page 153: Fifth reference should read: ... Nov 1986a.

Page 155: Eighth reference should read: ... 1980 Census of Population: Volume I, Characteristics of the Population, Part 45, Texas....

Page 157: Delete ninth and fifteenth references

Page 158: Twelfth reference should read: William F. Guyton ...

Insert the following references:

Behler, J.L. and King, F.W. The Audubon Society Field Guide to North American Reptiles and Amphibians. New York: Alfred A. Knopf, 1979.

Bruseth, J.E. and Moir, R.W., Eds. Introduction to the Richland Creek Archeological Project: Environmental Background and Cultural Setting. Dallas, TX: Southern Methodist Univ. Institute for the Study of Earth and Man. Archeological Research Program, 1987.

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Oberholser, H.C. The Bird Life of Texas. Austin, TX: University of Texas Press, 1974.

Peterson, R.T. A Field Guide to the Birds of Texas and Adjacent States. Boston, MA: Houghton-Mifflin Co, 1963.

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U.S. Department of the Interior. Fish and Wildlife Service. Endangered Species of Texas and Oklahoma. Albuquerque, NM: US DOI. FWS, 1984.

Whitaker, J.O., Jr. The Audubon Society Field Guide to North American Mammals. New York: Alfred A. Knopf, 1980.

NEW AND CORRECTED TABLES

NEW AND CORRECTED TABLES

Table 5.1.1-3

GEOENGINEERING PROPERTIES OF SOILS

Deposit	Soil Type USCS	Density lb/ft^3 Dry	Moisture Content %	Liquid Limit/ Plasticity Index	Unconfined Compressive Strength lb/inch^2	Cohesion lb/inch^2	Friction Angle Degrees	Remarks
Recent Alluvium SM, SC, ML		ND	(2-4)	(21-22/2-13)	15 (14-17)	11 (3-18)	(32)	
Basin-fill various borings*	SM, SC	ND	5 (1-13)	31/9 (19-54/1-29)	(15-18)	(7.6-8.7)	(36-40)	
Borehole MA-12		97 (89-105)	10 (3-17)	22-37/13	ND	(15)	(32)	Direct shear tests
Borehole MD-12		116 (102-120)	12 (7-28)	ND	ND	(63)	(27)	Direct shear tests
						(14-79)	(26-39)	Triaxial tests

Notes:

Data values are averages with ranges shown in parenthesis.

* Five borings drilled and sampled for the SSC proposal preparation.

SM - Silty sand

SC - Clayey sand

ML - Low plasticity silt

Sources: Nowatzki et al. 1988; DeNatale et al. 1987.

USCS Soil Designations

Table 5.3.1-1

LITHOLOGIC DESCRIPTIONS

Formation	Lithology	Other Characteristics
Cahokia Alluvium	Silt loam to silty clay loam, to poorly sorted sand, silt or clay, with discontinuous sand and gravel lenses, deposited in modern floodplains and stream and river channels.	
Grayslake Peat Formation	Dominantly organic deposits (peat, sandy and silty peat, muck, and marl) interbedded locally with silt and clay.	Occurs principally as a filling of ponds and poorly drained areas.
Richland Loess Formation	Massive tan silt, locally calcareous and fossiliferous.	Equivalent to the upper Peoria loess. Mantles over much of the site area are characterized by gentle slopes.
Equality Formation	Laminated fine-grained silt and clay with minor sand.	Typically overlies sand and gravel.
Henry Gravel	Glacial outwash of sand with local, thin beds of silt. May vary from thin, well-sorted, sandy, sheetlike deposits to poorly sorted silt, sand, and gravel.	Extensive deposits formation located in eastern and southern portions of site area.
Wedron Formation	Thick sequence of chiefly till with interbedded outwash sand and gravel and lacustrine silt and clay. Subdivided into five distinct members of varying degrees of heterogeneity. General constituents include loam to clay loam, discontinuous to thick layers of gravel, sand, clay, and silt, and thick sequences of bouldery and cobbly sand and gravel.	The individual members of the Wedron cover most of the site area.

Table 5.3.1-1 (Cont)

LITHOLOGIC DESCRIPTIONS

Formation	Lithology	Other Characteristics
Peddicord Formation	Gray and pinkish tan, calcareous, lacustrine silts.	Overlain by the Robein Silt or Wedron Formation.
Robein Silt Formation	Brown, gray, dark gray to black, leached silt, with abundant organic material. Silt is derived principally from loess and deposited by colluviation.	Considered a likely source of methane in drift gas.
Glasford Formation	Brown to pink silty or sandy clay, locally with boulders	
Kankakee Formation	Greenish to pinkish gray, fine- to medium-grained, slightly cherty, dolomite, commonly in thin beds separated by green clay.	Missing or partly eroded in large portions of the site area.
Elwood Formation	Slightly argillaceous, massive light brownish gray, fine-grained dolomite with nodules and layers of dense, white chert in upper portions of unit.	
Maquoketa Group	Interbedded shale, dolomite, and limestone. The shales, which are dominant in the basal portions of the unit, are dolomitic (hard) to friable, olive gray to dark greenish gray and silty. The carbonates are dominantly dolomitic, fossiliferous, medium-bedded, fine- to coarse-grained, and pure to argillaceous. The dolomite beds also contain some silty laminae and pyrite, and are locally calcitic, and vuggy and porous.	Lithologies are highly variable laterally within the site area.

Table 5.3.1-1 (Cont)

LITHOLOGIC DESCRIPTIONS

Formation	Lithology	Other Characteristics
Galena Group	Divided into the following three formations in the site area:	
Wise Lake Formation	Relatively pure, light brown, medium- to thick-bedded, stylolitic and slightly vuggy dolomite. Beds separated by wispy, slightly argillaceous partings and contain some secondary pyrite. Grades laterally to a very fine- to coarse-grained limestone.	Slightly oil stained in upper parts; upper most unit potentially encountered in tunnel.
Dunleith Formation	Medium-grained, vuggy (more than Wise Lake), thick-bedded dolomite. Relatively pure except for upper 5 - 10 ft which are cherty, and for thin slightly clayey laminae between beds.	
Guttenberg Formation	Medium-grained, vuggy, pure dolomite beds separated by reddish brown silty laminae.	Sometimes absent in the site area. Otherwise, about 2 ft thick beneath Dunleith.
Platteville Group	Divided into the following three general formational groupings:	
Quimbys Mill-Nachusa Formation	Fine- to medium-grained, light tan, dense to locally vuggy, variably cherty, pure to argillaceous, dolomite with well-defined beds separated by thin shalely calcareous partings.	

Table 5.3.1-1 (Cont)

LITHOLOGIC DESCRIPTIONS

Formation	Lithology	Other Characteristics
Grand Detour-Mifflin Formation	Gray to light tan, predominantly fine-grained dolomite, in moderately thin and wavy beds separated by green to dark gray calcareous shale partings.	
Pecatonica Formation	Brown, fine- to medium-grained, relatively pure, medium-bedded dolomite. Locally cherty and either dense or finely vesicular.	Lowest formation potentially encountered in experimental hall. Regional aquifer.
Ancell Group		
Glenwood Formation	Poorly sorted sandstone with interbedded shale and silty dolomite. Highly variable in composition.	
St. Peter Sandstone	Fine- to medium-grained, white, friable sandstone.	
Prairie du Chien Group	Cherty dolomite with some interbedded sandstone.	
Eminence Formation	Light gray to pink or brown, fine- to medium-grained, sandy dolomite with oolitic chert and thin beds of sandstone.	
Potosi Dolomite	Pure to slightly argillaceous, brown to pinkish gray, finely crystalline dolomite.	
Franconia Formation	Glauconitic, argillaceous sandstone and dolomite.	

Table 5.3.1-1 (Cont)

LITHOLOGIC DESCRIPTIONS

Formation	Lithology	Other Characteristics
Ironton-Galesville Sandstone	Poorly sorted, fossiliferous sandstone overlying clean, unfossiliferous sandstone.	Regional aquifer
Eau Claire Formation	Dolomite, dolomitic sandstone, siltstone, and shale.	
Mt. Simon Sandstone	Coarse-grained, partly conglomeratic sandstone.	Basal bedrock aquifer

Sources: Graese et al. 1988; Hansel et al. 1986; Lineback 1979; Quaternary Formations - Glasford-Banner through Cahokia; Willman et al. 1975; Willman and Frye 1970; Willman and Kolata 1978; and Kolata and Graese 1983.

Table 5.3.1-3

GEOTECHNICAL PROPERTIES OF OVERBURDEN SOILS

Deposit	Soil Type USCS	Dry Density lb/ft^3	Moisture Content %	Liquid Limit Plasticity Index	Unconfined Compressive Strength* $lb/inch^2$
Till	CL, Rare SM	137 (136-172)	12	30/14 (12-48/1-29)	47 (<11->62)
Peat	OH and OL	52	112	ND	ND
Outwash	GW, SW, SP, Rare CL, ML	ND	17	ND	33 (8->62)
Lacustrine deposits	CL, ML, SM, Rare CH, MH	125	18	ND	62 (4->62)
Loess	MH and ML	94 (83-114)	24	41/22 (22-70/4-50)	ND
Buried organic-rich sediment	CH and CL, Rare MH, ML	ND	29	ND	≥62 (21->62)

Notes: Data are presented as averages with range in parentheses.
ND = No data
* Based on pocket penetrometer

USCS Soil Designations:

GW - Well-graded gravels, gravel-sand mixtures, little or no fines.
SW - Well-graded sands, gravelly sands, little or no fines.
SP - Poorly graded sands, gravelly sands, little or no fines.
SM - Silty sands, sand-silt mixtures.
ML - Low plasticity inorganic silt.
CL - Inorganic clays of low to medium plasticity.
OL - Organic silts and organic silt-clays of low plasticity.
MH - Elastic inorganic silts.
CH - Inorganic clays of high plasticity.
OH - Organic clays of medium to high plasticity.

Source: Curry 1988; Kempton et al. 1987a,b

Table 5.5.2-4

SURFACE WATER USE IN PROJECT VICINITY

Water Source	Use	Quantity 1987-88 acre-ft	Quantity yr. 2000 acre-ft
Neuse River Basin			
1. Lake Butner-Knap of Reeds Creek			
Butner, including	Residential	--	--
Cozart Sanitary District	Comm/Indus	4	--
Lyons Station Sanitary District	Comm/Indus	220	--
Umstead State Hospital	Residential	--	--
Total		2,460	3,140
2. Lake Michie-Flat River			
Durham	Residential	25,800	41,900
3. Lake Rogers-Ledge Creek			
Creedmoor	Residential	308	400
4. Irrigators, general			
15 ponds, wells, streams	Irrigation	1,400	--
Roanoke River Basin			
1. Isaac Walton Lake-Satterfield Creek	Indus/Comm	2,690	3,360
Roxboro	Residential	1,790	1,960
Total		4,480	5,320
2. Kerr Reservoir-Roanoke River			
Oxford	Residential	897	1,120
Oxford	Comm/Indus	448	560
Total		1,345	1,680
3. Mayo Reservoir-Mayo Creek			
CP & L Electric Generating Plant	Cooling	8,200	16,400
4. Irrigators & General 20 ponds	Irrigation	727	--
Tar River Basin			
1. Irrigators & General 75 Ponds & Wells	Irrigation	4,016	--

Sources: North Carolina Department of Natural Resources and Community Development 1988a and 1988b; Carolina Power and Light Company 1977.

Table 5.5.4-4

REGIONAL AIR POLLUTANT SOURCES
NORTH CAROLINA SSC SITE

Source	Location	Actual Emissions (ton/yr) SO_2	BP	NO_x	CO	VOC
CP&L	Mayo	19,596	674	17,018	486	56
Cogentrix Carolina Leasing	Roxboro	3,018	75	1,161	45	6
Allied-Signal	Monane	<1	244	<1	<1	<1
Collins & Aikman	Siler City	<1	128	<1	<1	<1
General Electric	Research Triangle Park	6	6	<1	<1	10
Centainted (?)	Oxford	14	23	46	35	15
Martin Marietta	Timberlake	<1	44	<1	<1	<1
Ajinomoto	Raleigh	799	66	12	<1	<1
Burlington	Wake Forest	<1	37	<1	<1	<1
Mallenckodt	Raleigh	<1	<1	<1	<1	117
Martin Marietta	Raleigh	<1	34	<1	<1	<1
Wake Stone	Knightdale	<1	31	<1	<1	<1
CP&L	Roxboro	88,763	2251	52,085	1494	174
Golden Belt Manufacturing	Durham	<1	<1	<1	<1	1088
Legett & Myers	Durham	259	21	90	30	<1
Duke University	Durham	602	115	210	71	<1
Burlington Industries	Oxford	178	16	74	8	11
Athol Manufacturing	Butner	16	5	353	<1	329
Mt Hope Finishing Co.	Butner	32	8	116	24	<1
Murdoch Center	Butner	128	4	21	2	<1
John Umpstead Hospital	Butner	241	8	44	3	<1
Southern Foundry	Raleigh	<1	7	<1	679	<1

Table 5.5.4-4 (Cont)

REGIONAL AIR POLLUTANT SOURCES
NORTH CAROLINA SSC SITE

Source	Location	Actual Emissions (ton/yr) SO_2	BP	NO_x	CO	VOC		
Ralston Purina	Raleigh	<1		<1		<1	<1	99
Richard Grauvre	Raleigh	<1		<1		<1	<1	97
Kemp (Wenco) Furniture Co.	Wendell	<1		<1		<1	<1	73
North Carolina Central Heating Plant	Raleigh	126		6		30	3	<1
Rea Construction	Garner	45		162		7	1	26
News and Observer	Raleigh	<1		<1		<1	<1	201

Sources: North Carolina Division of Environmental Management, 1988

Table 5.6.1-4

KNOWN CAVES NEAR THE PROPOSED TENNESSEE SSC SITE

Cave Name (location)	Length (ft)	Depth (ft)	Width/Height (ft)	Wet
Almaville cave (near Almaville)	53	5	/6?	yes
Animal hole	300	10		no
Asbury Pike karst window (near Murfreesboro)				yes
Bell well	30	75		no
Big Woo cave	70	10	3/6?	yes
Bluesink cave	50	20		yes
Bluewater pit	6	55		no
Bo Jack's cave	150	15		no
Cedar Glade plunge	30	40		no
Center pit	10	30		no
Cherry Grove karst window (area A)	25	15	4/	yes
Chicken Wire cave	100	35		no
Chunka Trunk cave (near Murfreesboro)	350	20	/6?	yes
Creepy Crawl cave	55	5		no
Deer Hunter cave (area B)	50	10	/1	?
Dry Socket cave	20	42		no
Duck River cave	467	13		no
Echo cave (near Rockvalle)	*	*	15/20	yes
First cave	1,055	15	/6?	no
Hawk hole	63	30		no
Haynes cave	270	40	10/20	yes
Johnson Factor cave	50	20		yes
Kingwood cave	52	5		no
Log cave	50	5		no
Mad Bat well	50	50		no
Marshall Knob pit	25	40		no
McDonald cave (Begsley Lane)	100	40		yes
Mebone cave (medium energy booster)	50	10	20/3	no
Military Spring cave (near Blackman)	100	15	15/25	yes
Nanna cave (near Rockvalle)	19,504	116	70/20	yes
Patterson cave (near Patterson)	450	25	12/10	yes
Phoney fissure	50	35		no

Table 5.6.1-4 (Cont)

KNOWN CAVES NEAR THE PROPOSED TENNESSEE SSC SITE

Cave Name (location)	Length (ft)	Depth (ft)	Width/Height (ft)	Wet
Pike karst window (area B)				yes
Plunge Creek pit (near Fosterville)	70	105	10/	no
Rebel Yell well (Stones River Battlefield)	35	40	30/	yes
Rockvale cave	200	10		?
Rowland pit	50	50		yes
Shinbuster Crawl cave	60	5		no
Sidewinder cave	150	10		?
Sims Didn't Map cave	270	7		no
Smyre's well #1 (near Windrow)	15	95		no
Smyre's well #2 (near Windrow)	30	110		yes
Snail Shell cave (near Windrow)	47,895	144	80/20	yes
Squeeze to Snail Shell cave	75	40		no
Swag hole	65	5		yes
Tea Kettle well	10	30		no
The Gulf (near Jackson Ridge)	400	30	18/25	yes
The Kitchen sink (near area B)	60	30	8/20	yes
The Tiger's Eye	10	35		no
Thin well	25	55		?
Three Bridges plunge (near Begsley Lane)	100	25	25/	yes
Tiger Hill cave	50	10		no
Turtle Shell rift	50	50		no
Vanderford Spring caves #1,2,3, and 4	50	5		yes
various sinks and swallets (south of booster area)				
Wagon Wheel sink	80	40		yes
West Fork cave (near Murfreesboro)	1,800	25	/20+	yes
Windrow rift	70	30	/10	yes
Windrow Stick cave	124	30	/10	yes
Yankee hole	60	115		no

* included with Snail Shell cave
Sources: Matthews 1987; Barr 1972; Nashville Grotto 1988

Table 5.7.2-3

**SURFACE WATER QUALITY DATA
IN PROJECT VICINITY**

Parameter	Unit	Standard[1]	Maximum	Minimum	Average
Stream: Waxahachie Creek near Waxahachie 1980 to 1982 Unclassified					
Flow	cfs	---	80	2.1	26.6
Fecal Coliform	#/100ml	<200	---	---	---
pH		---	8.2	7.8	8.1
Temperature	°C	---	26	7	19.5
Dissolved Oxygen	mg/l	>3.0	13.6	5.8	7.8
Dissolved Solids	mg/l	---	363	150	278
Turbidity	FTU	---	---	---	---
Chloride	mg/l	---	78	10	26.6
Sulfate	mg/l	---	70	18	41.6
Nitrate	mg/l	---	---	---	---
Lead	mg/l	---	---	---	---
Mercury	mg/l	---	---	---	---
Stream: Lake Bardwell 1976 to 1982 Classified for Contact Recreation, High-Quality Aquatic Habitat, Public Water Supply.					
Storage	cfs		68,880	42,010	51,328
Fecal Coliform	#/100ml	<200	---	---	---
pH		6.5-9	8.2	7.3	7.8
Temperature	°C	<32.8	28.5	6.0	18.9
Dissolved Oxygen	mg/l	>5.0	11.3	5.2	8.0
Dissolved Solids	mg/l	<300	193	159	171.0
Turbidity	FTU	---	---	---	---
Chloride	mg/l	<50	18	8.6	13.9
Sulfate	mg/l	<50	33	18	26.2
Nitrate	mg/l	---	---	---	---
Lead	mg/l	---	---	---	---
Mercury	mg/l	---	---	---	---

Table 5.7.2-3 (Cont)

**SURFACE WATER QUALITY DATA
IN PROJECT VICINITY**

Parameter	Unit	Standard[1]	Maximum	Minimum	Average
Stream: Chambers Creek above Richland-Chambers Reservoir, 1975 to 1981 Classified for Contact Recreation, High-Quality Aquatic Habitat, Public Water Supply.					
Flow	cfs	---	9,440	0.2	600
Fecal Coliform	#/100ml	<200	---	---	---
pH		6.5-9.0	8.6	7.4	7.8
Temperature	°C	<32.2	31.0	4.5	19.6
Dissolved Oxygen	mg/l	>5.0	---	---	---
Dissolved Solids	mg/l	<500	581	161	336
Turbidity	FTU	---	---	---	---
Chloride	mg/l	<90	100.0	4.9	42.6
Sulfate	mg/l	<160	170.0	25.0	79.2
Nitrate	mg/l	---	---	---	---
Lead	mg/l	---	---	---	---
Mercury	mg/l	---	---	---	---

Source: State of Texas, 1988; Gancarz 1988.

1. Standard is annual average not-to-exceed limit.

NEW AND CORRECTED FIGURES

NEW AND CORRECTED FIGURES

ARIZONA

COLORADO

NEW AND CORRECTED FIGURES

COLORADO (Cont)

ILLINOIS

NEW AND CORRECTED FIGURES

ILLINOIS (Cont)

MICHIGAN

NEW AND CORRECTED FIGURES

NORTH CAROLINA

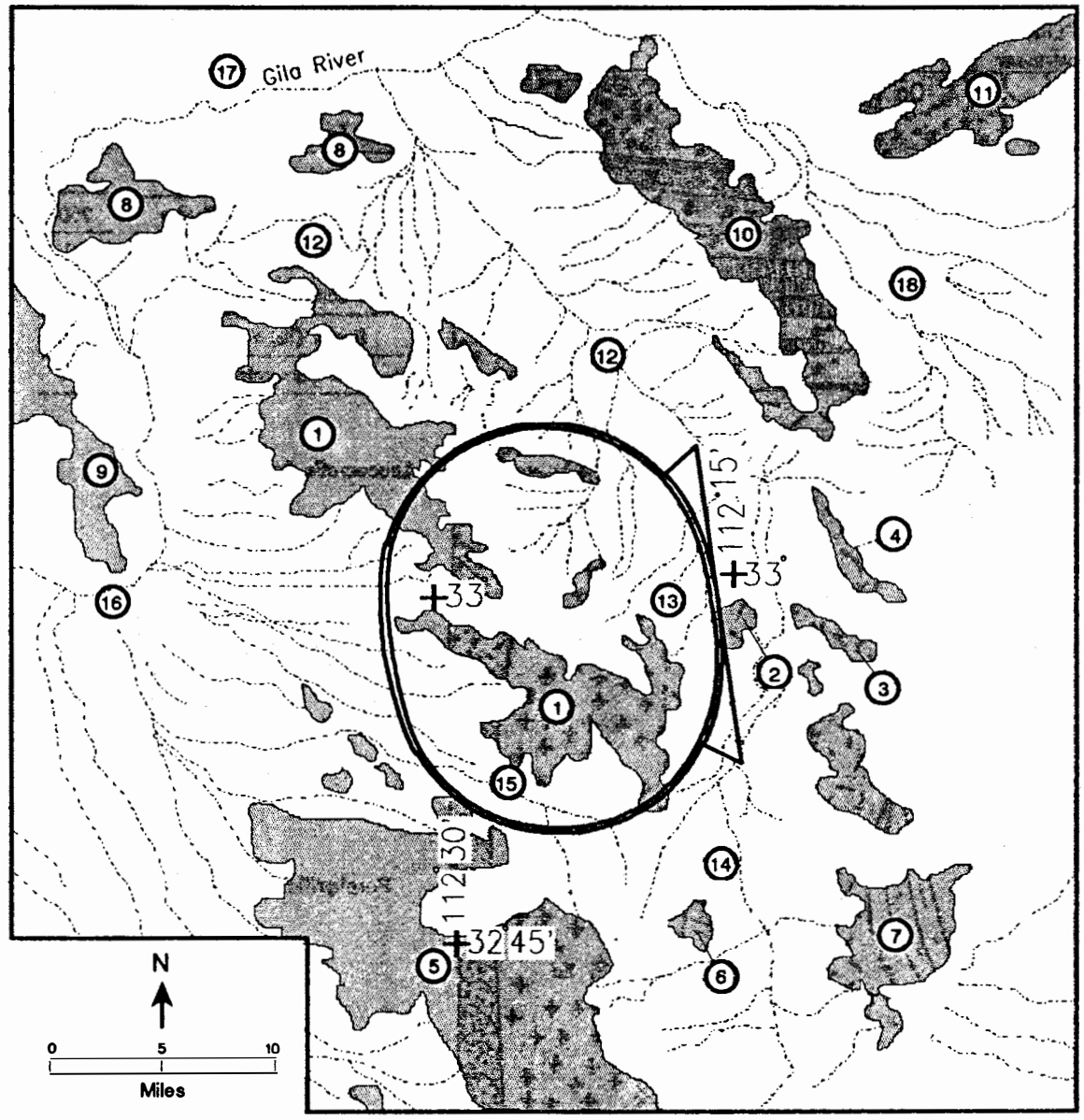
NEW AND CORRECTED FIGURES

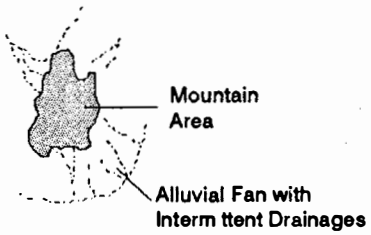
TENNESSEE

TEXAS

Figure 5.1.1-1

TOPOGRAPHIC SETTING OF ARIZONA SITE



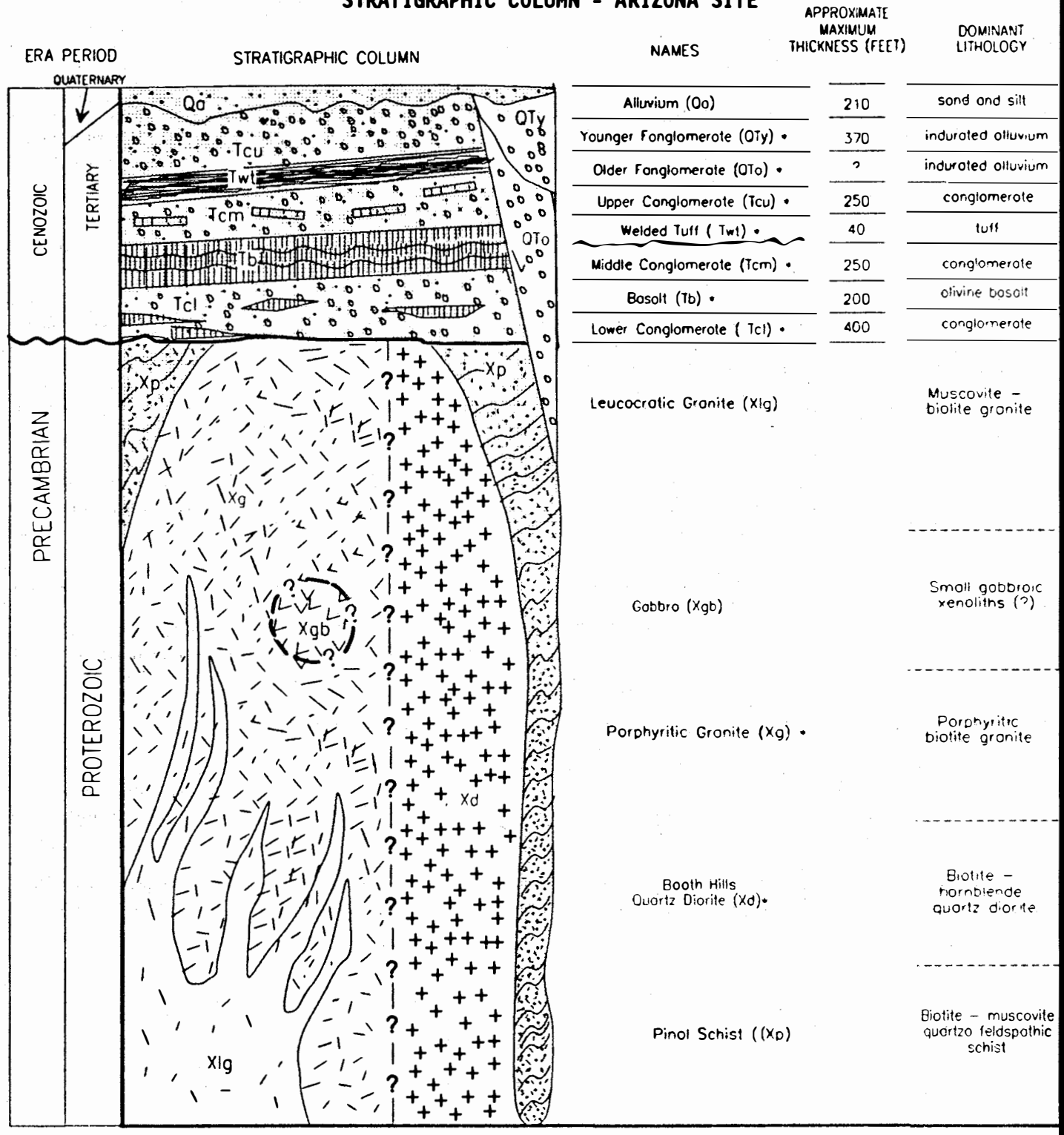


Mountains
1. Maricopa Mts.
2. Booth Hills
3. Haley Hills
4. Palo Verde Mts.
5. Sand Tank Mts.
6. White Hills
7. Table Top Mts.
8. Buckeye Hills
9. Gila Bend Mts.
10. Sierra Estrella
11. South Mts.

Valleys
12. Little Rainbow V.
13. Mobile V.
14. Vekol V.
15. Bender Wash
16. Gila Bend
17. Buckeye V.
18. Santa Cruz Wash

Figure 5.1.1-2

STRATIGRAPHIC COLUMN - ARIZONA SITE



Source: Welty et.al. (1988)

•Unit penetroted by collider tunnel

Figure 5.1.1-3

SURFICIAL GEOLOGY OF ARIZONA SITE

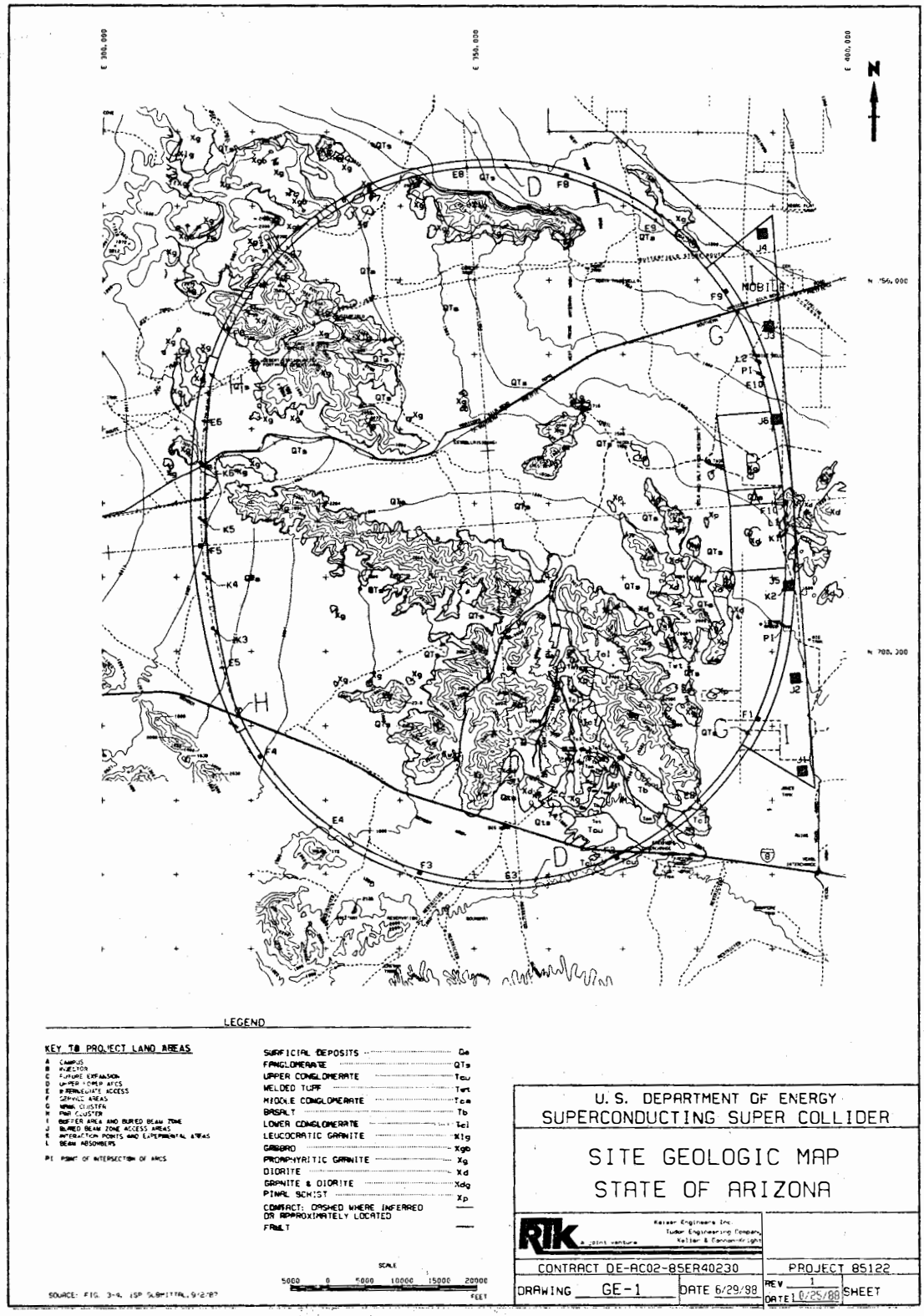


Figure 5.1.1-4

GEOLOGIC PROFILE ALONG SSC RING - ARIZONA SITE

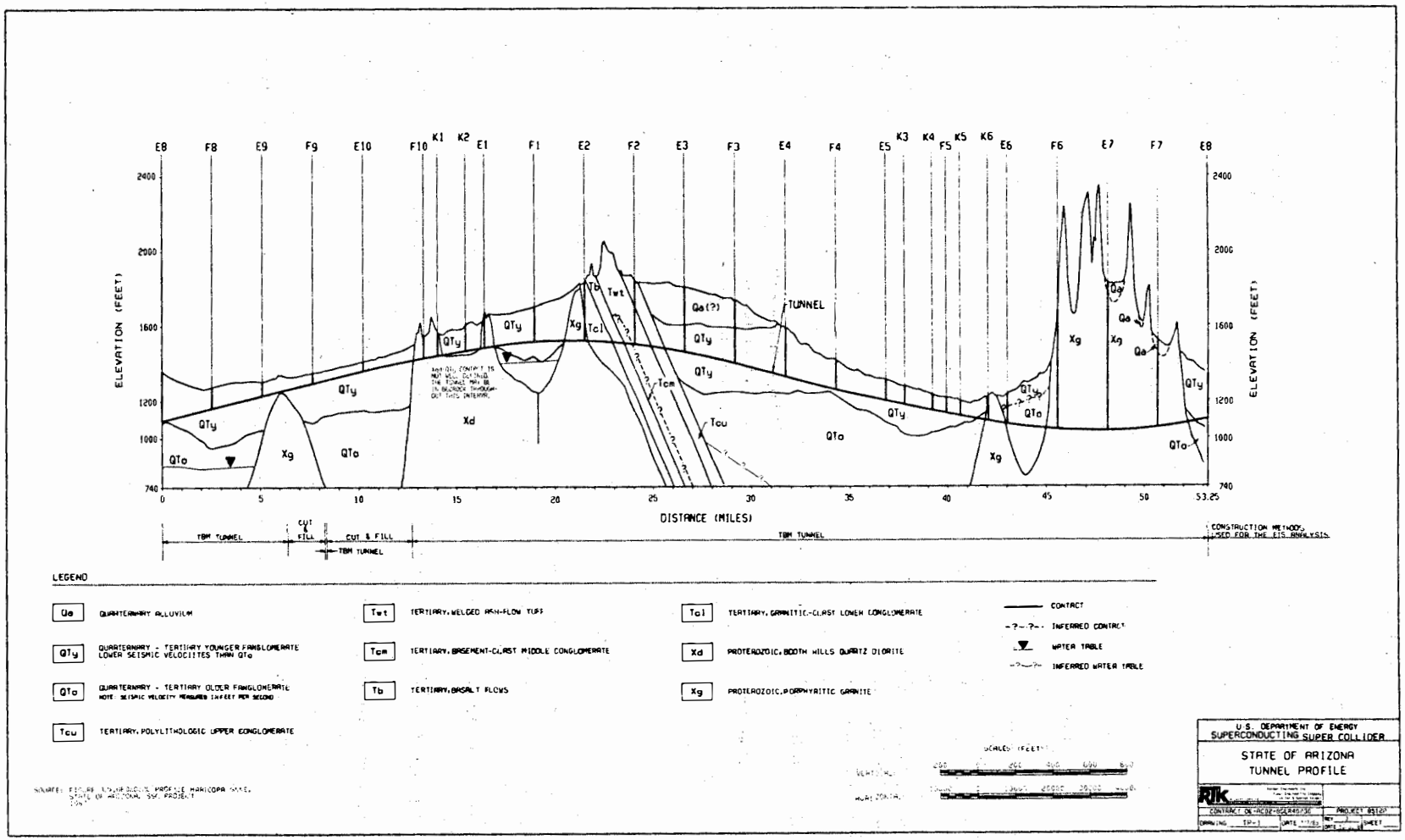


Figure 5.1.1-5

ECONOMIC GEOLOGIC RESOURCES - ARIZONA SITE

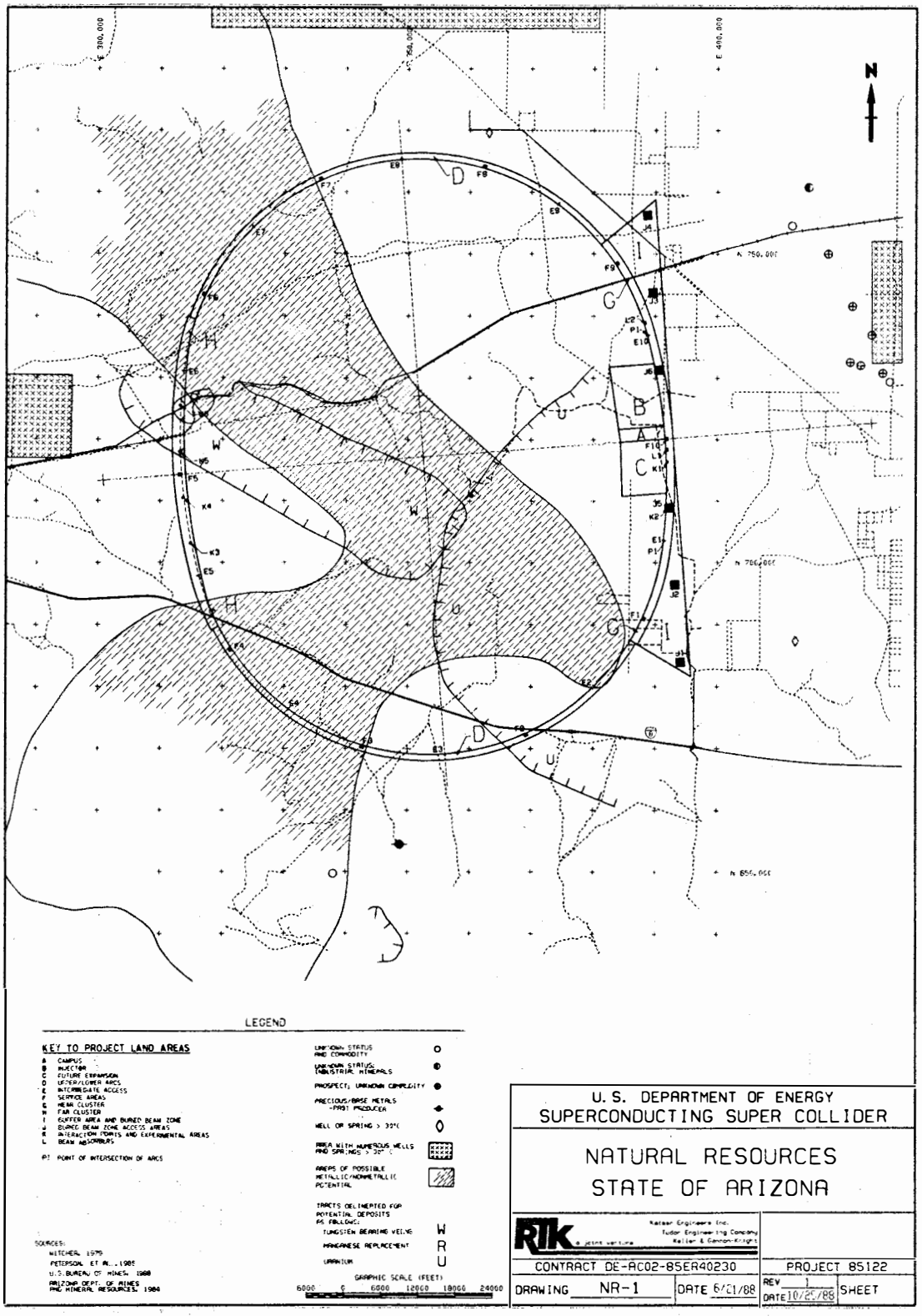
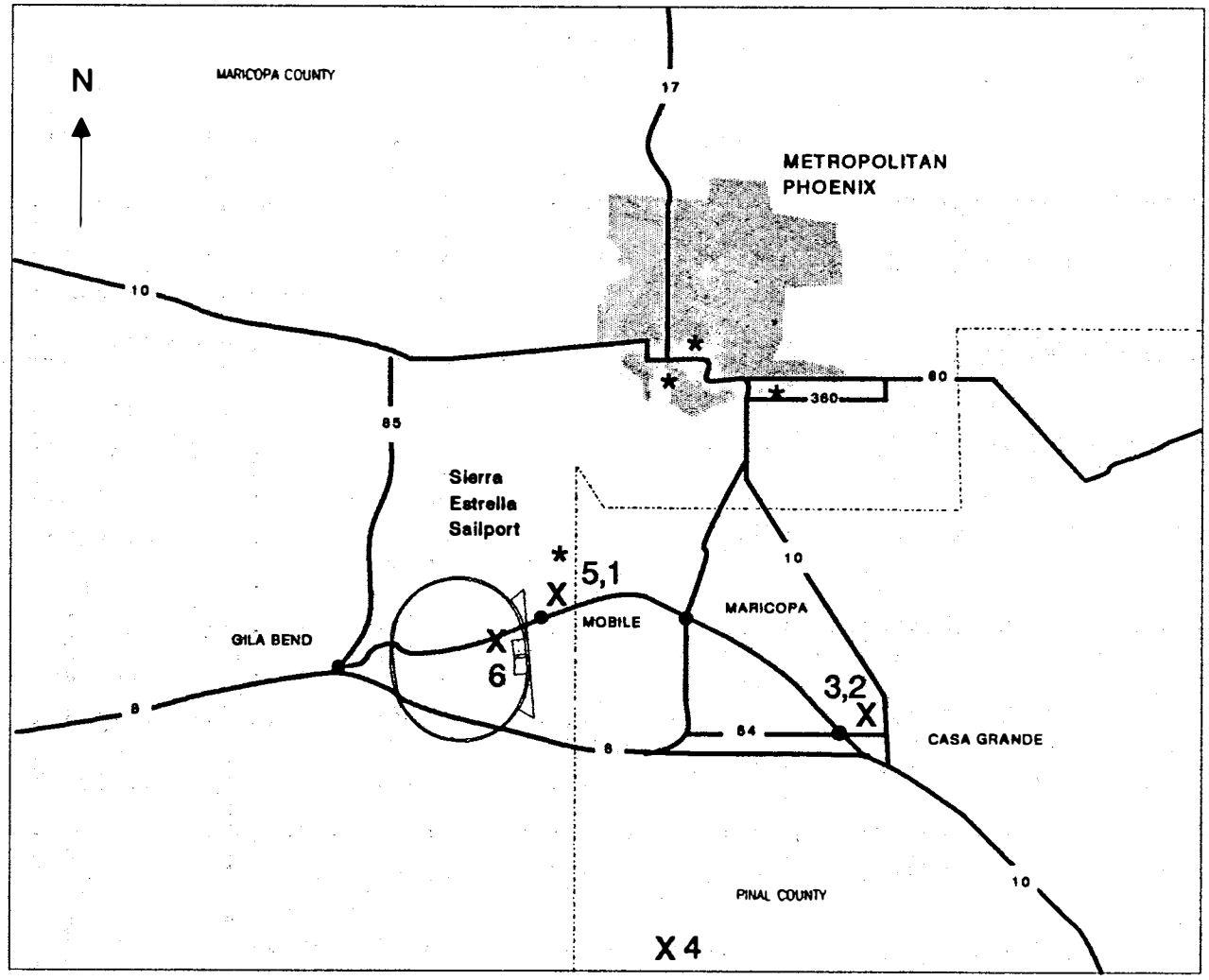


Figure 5.1.4-1

**AMBIENT AIR QUALITY MONITORING STATIONS
AND REGIONAL AIR POLLUTANT SOURCES
ARIZONA SSC SITE**

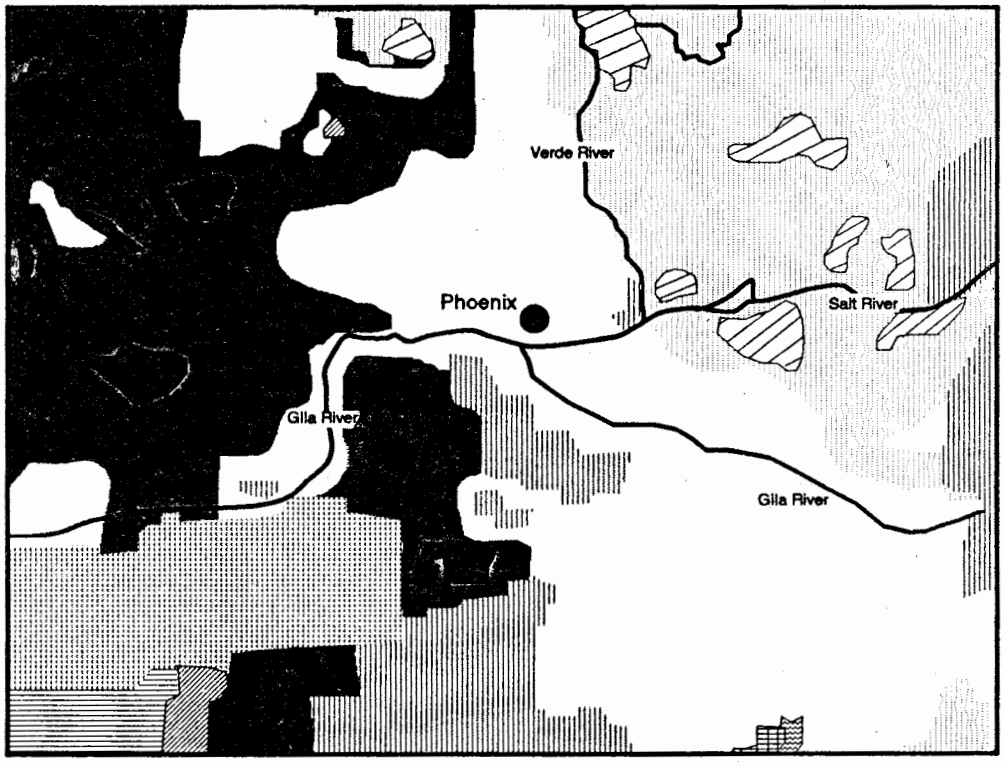


X = Air Pollutant Source

* = Ambient Air Quality Monitoring Station

Figure 5.1.9-4

DESIGNATED AND PROPOSED WILDERNESS AND PARK AREAS WITHIN THE ARIZONA SSC SITE VICINITY



- National Parks, National Monuments, and National Recreation Areas
- National Forests
- National Wildlife Refuges
- Indian Reservations
- Military Reservations
- Bureau of Land Management Lands
- Designated National Park, National Monument, and National Recreation Area Wilderness
- Designated National Forest Wilderness
- Wildlife Refuge Wilderness Proposed by U.S. Fish and Wildlife Service
- Additions Proposed by Bureau of Land Management

Revised from map by Leander Skagg and Cindy Mogan-Jaffe in David Brown's 'A Gift to the Young'.
WILDERNESS SPRING 1988, Volume 51 (180); pp 51-60

Figure 5.1.10-3

THE PROPOSED ARIZONA SSC SITE REGION

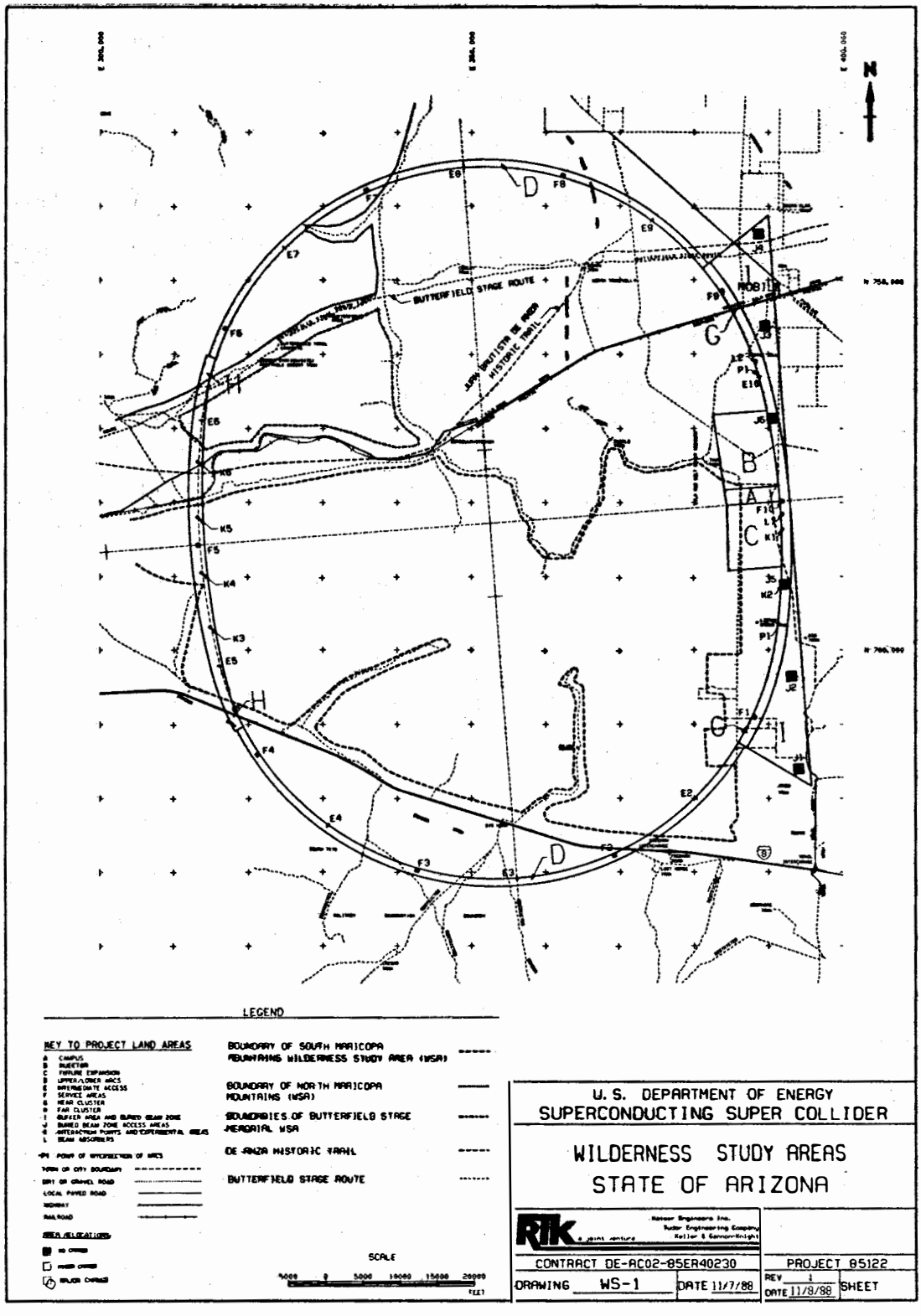
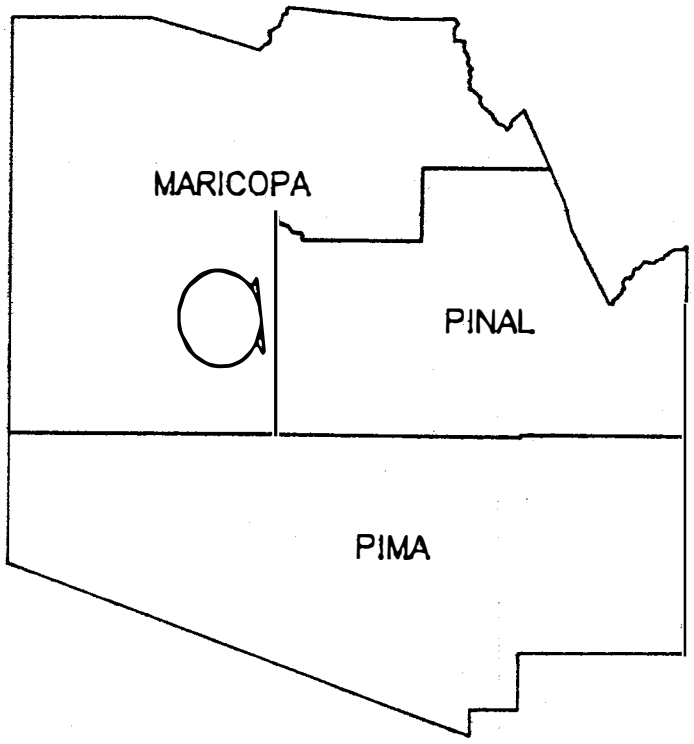


Figure 5.1.11-1

**COUNTIES FOR SOCIOECONOMIC ANALYSIS
ARIZONA ROI**



Area Mapped

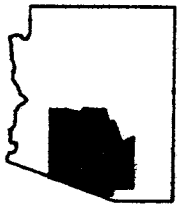
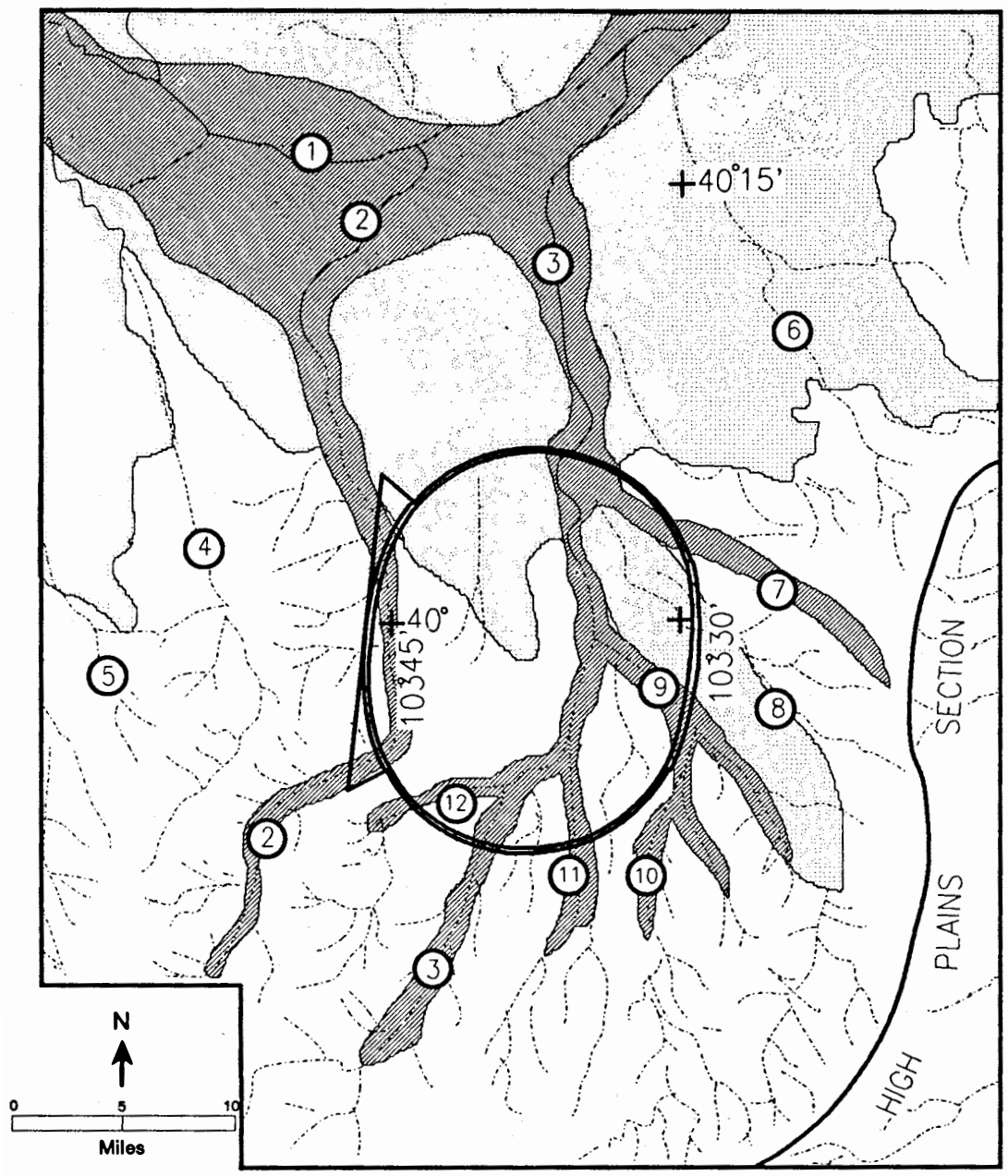


Figure 5.2.1-1

TOPOGRAPHIC SETTING OF COLORADO SITE



Rolling, elevated plain

Sand dunes, sand hills

Alluvial plain

Perennial stream

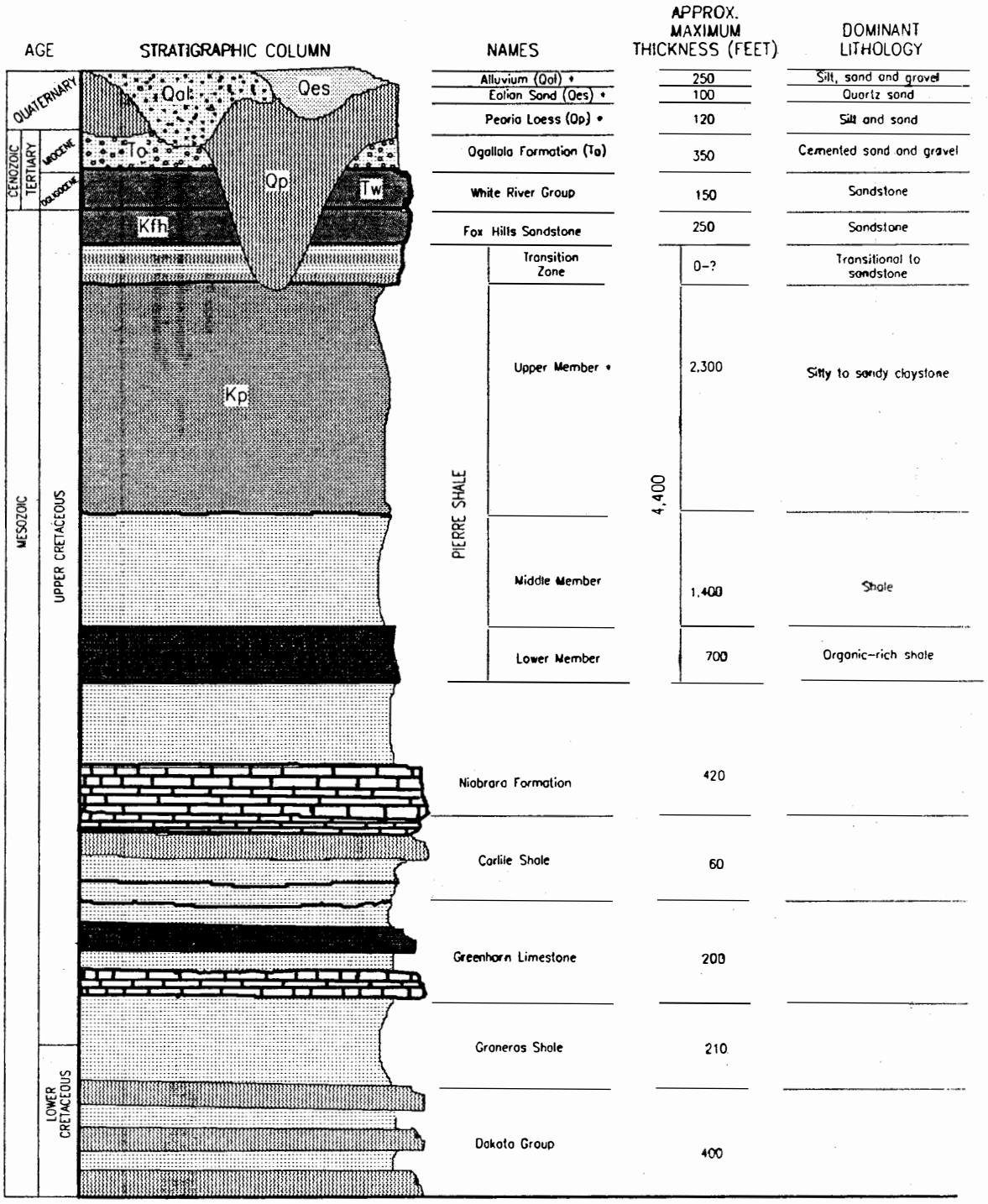
Intermittent stream

Drainages

1. South Platte River
2. Badger Creek
3. Beaver Creek
4. San Arroyo Creek
5. Potty Brown Creek
6. Camp Creek
7. Bock Creek
8. Antelope Creek
9. Sand Creek
10. Dry Gulch
11. Plum Bush Creek
12. Wetzel Creek

Figure 5.2.1-2

STRATIGRAPHIC COLUMN - COLORADO SITE



Sources: RMAG Research Committee 1977, Sharps, 1980, Rogers et. al. 1985

* Unit penetrated by collider tunnel and shafts

Figure 5.2.1-4

GEOLOGIC PROFILE ALONG SSC RING - COLORADO SITE

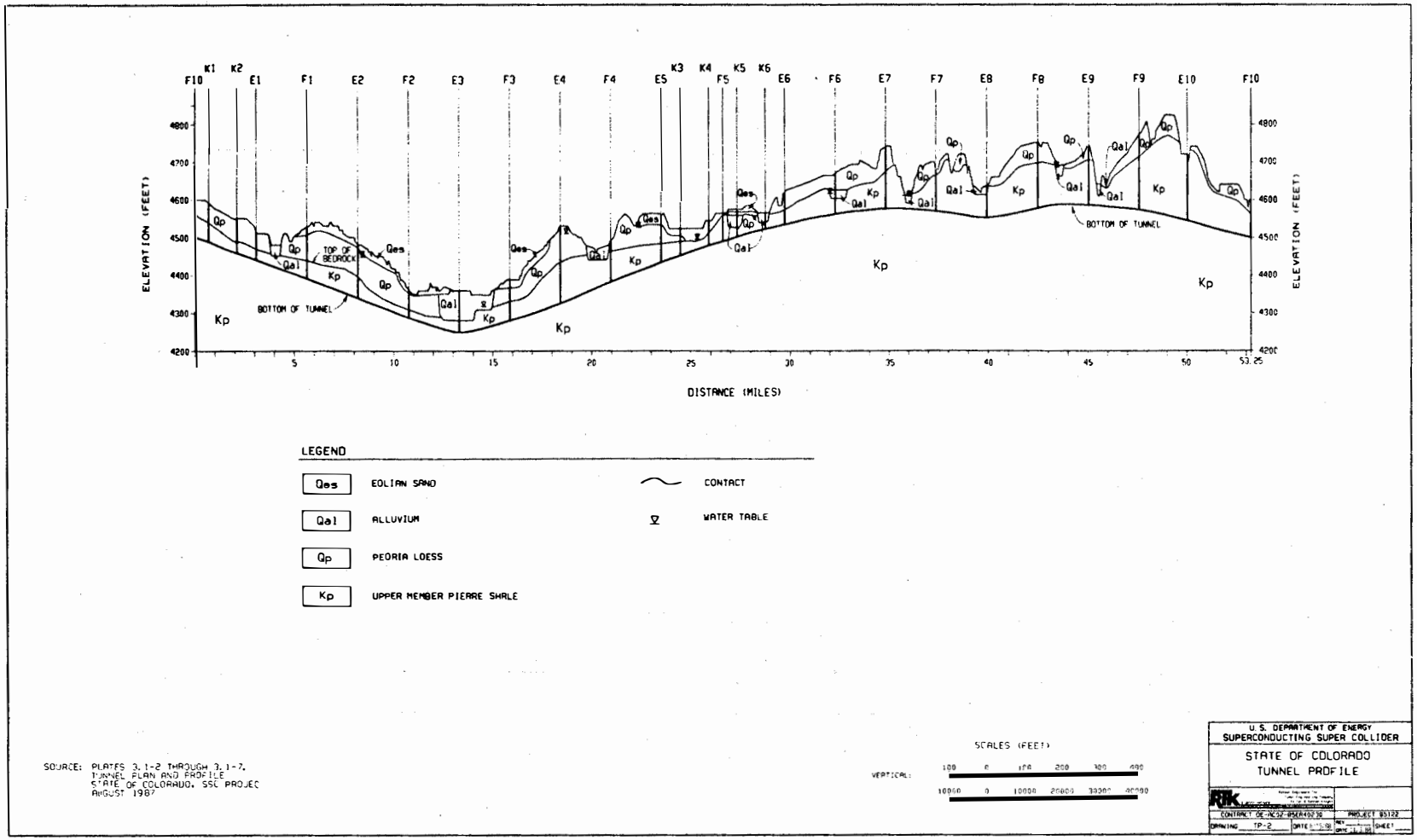


Figure 5.2.1-5

OIL AND GAS WELLS IN VICINITY - COLORADO SITE

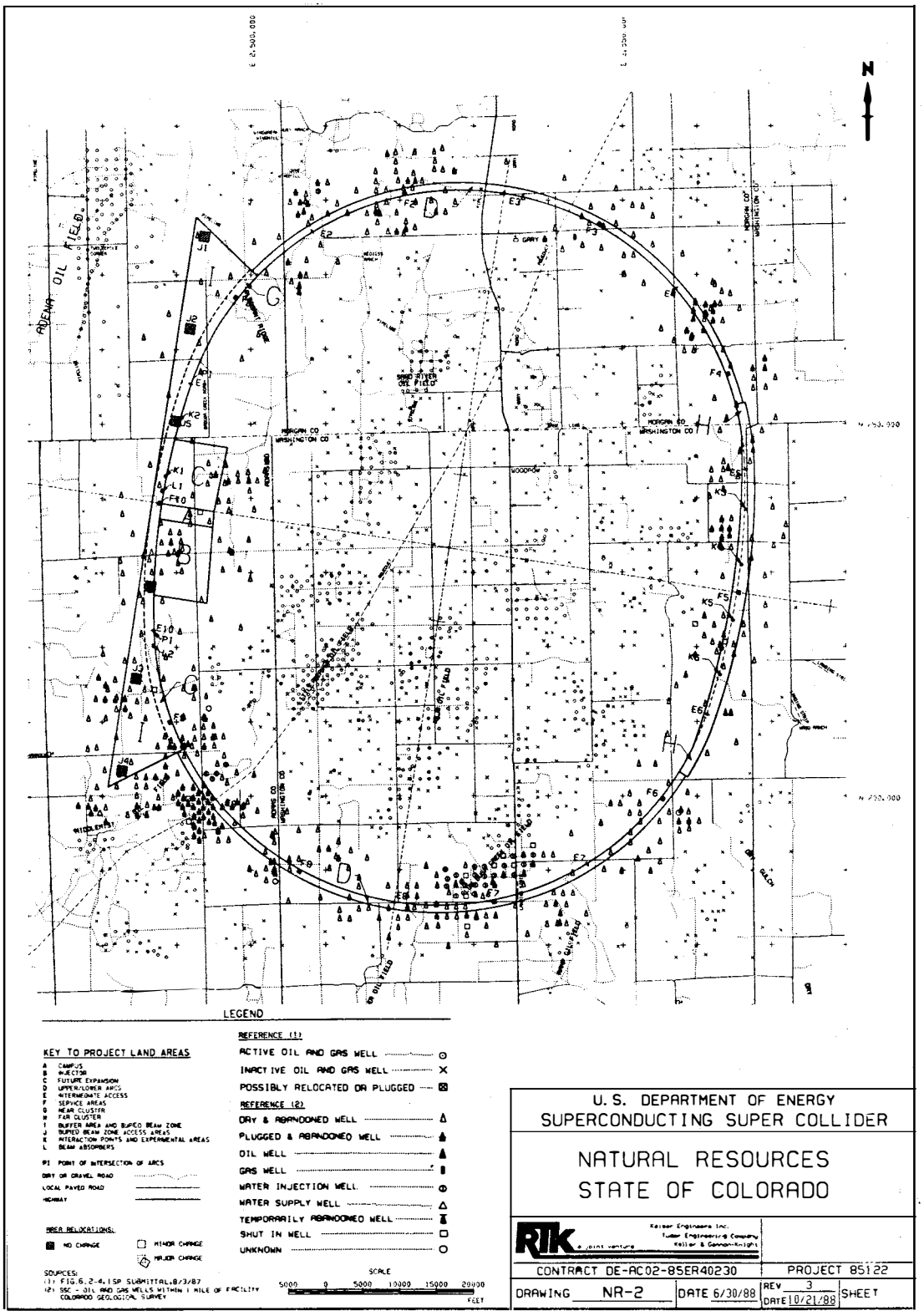
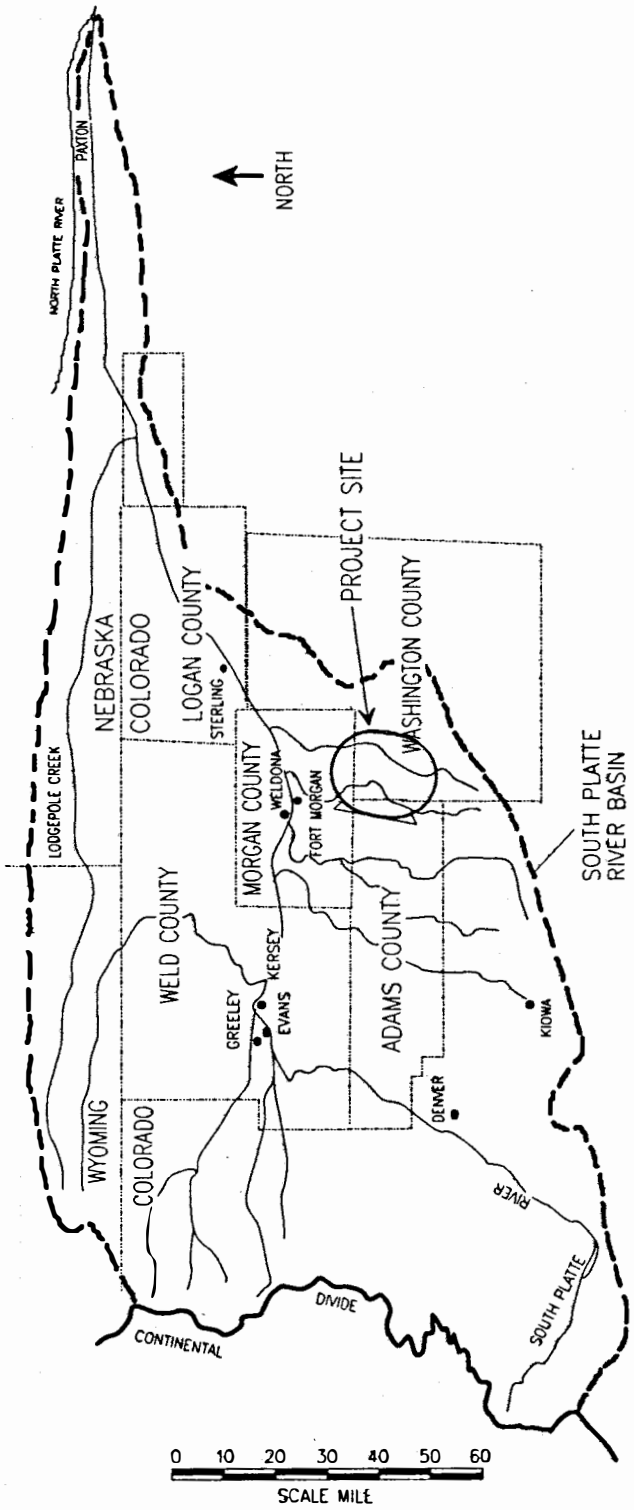


Figure 5.2.2-1

MAJOR WATERSHED - COLORADO SITE



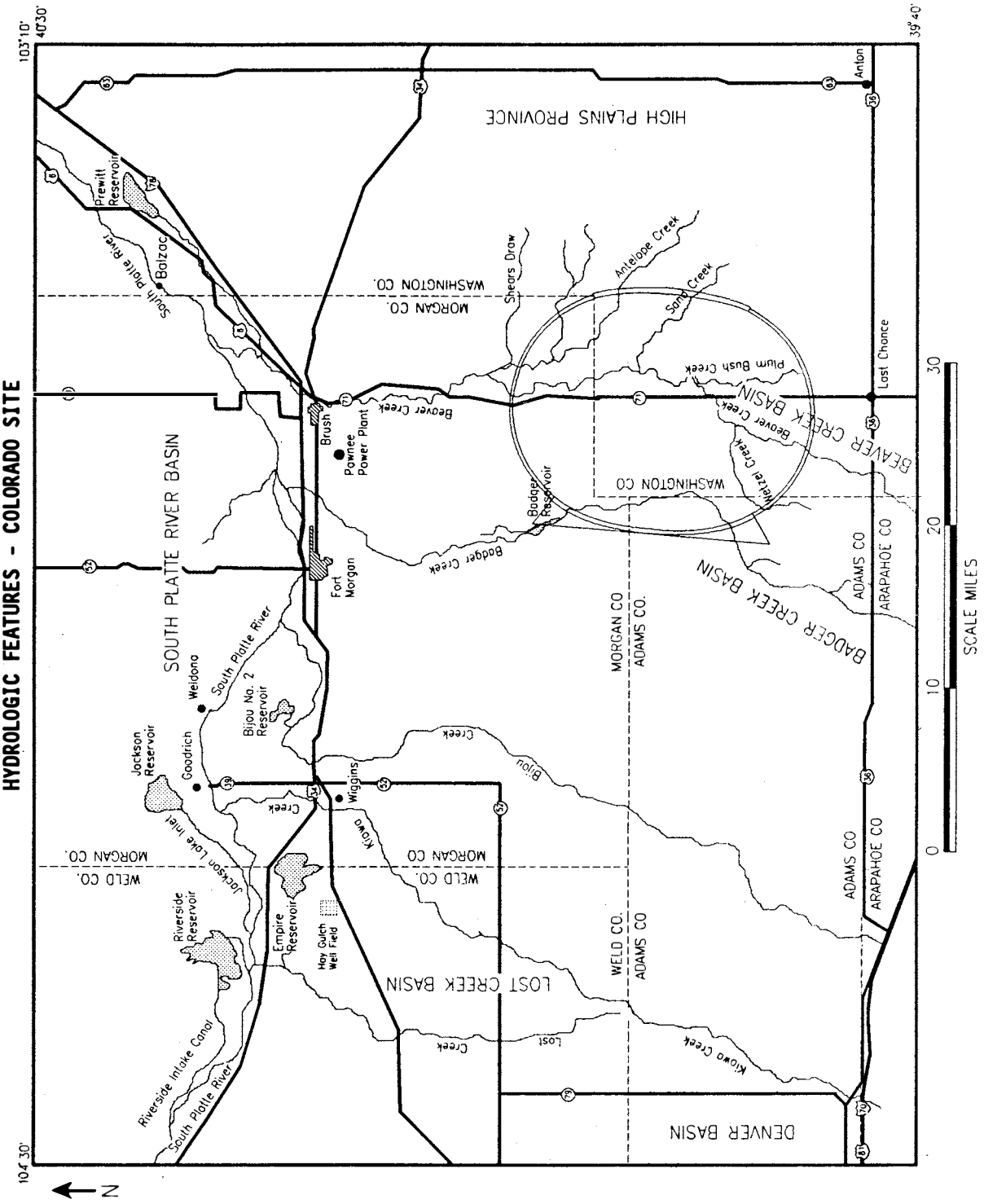
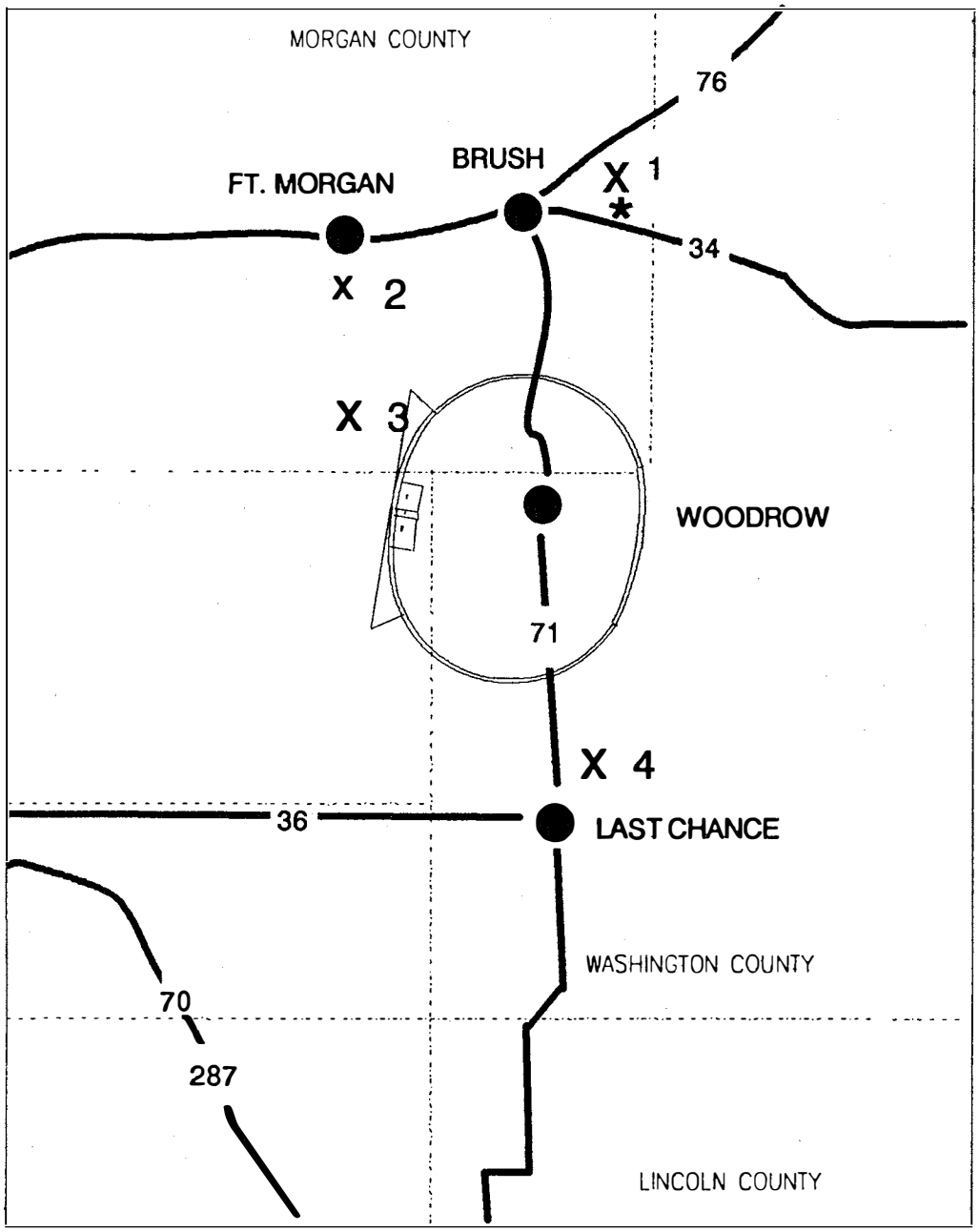


Figure 5.2.2-2

HYDROLOGIC FEATURES - COLORADO SITE

Figure 5.2.4-1

**AMBIENT AIR QUALITY MONITORING STATIONS
AND REGIONAL AIR POLLUTANT SOURCES
COLORADO SSC SITE**

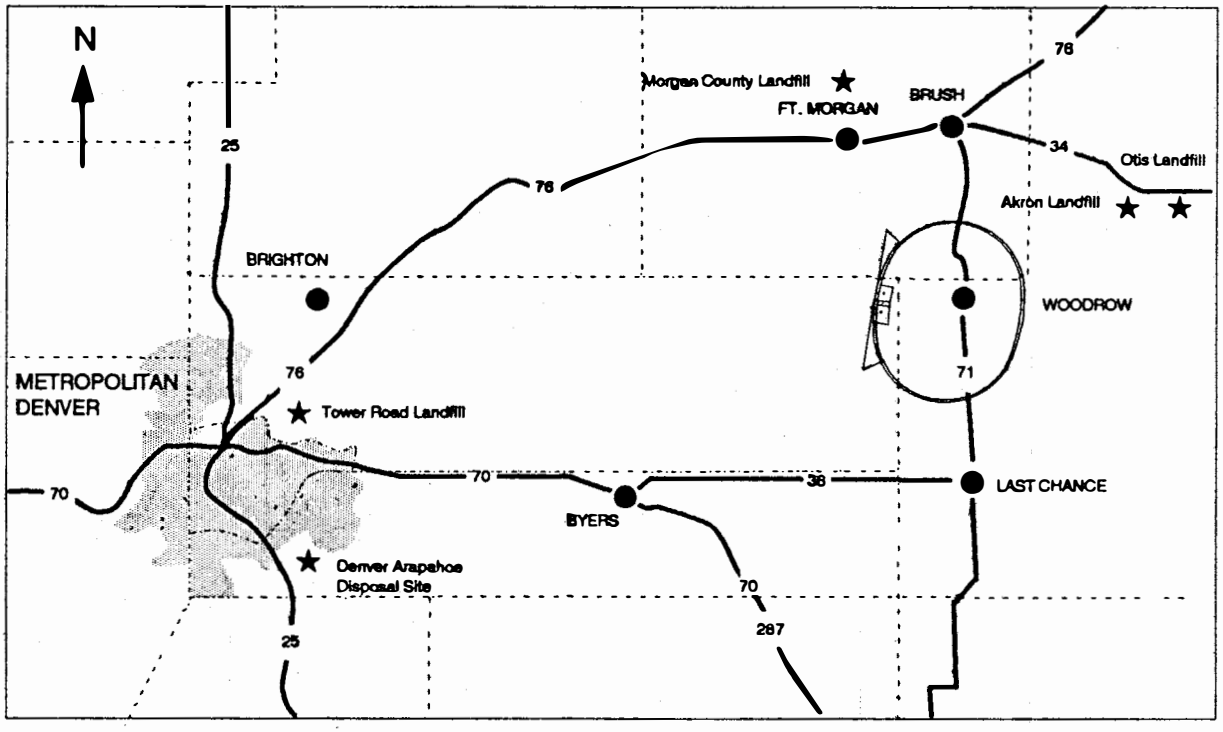


X = Air Pollutant Source

* = Ambient Air Quality Monitoring Station

Figure 5.2.8-2

SANITARY LANDFILL LOCATIONS IN ADAMS, ARAPAHOE, MORGAN, AND WASHINGTON COUNTIES - COLORADO SITE



★ Approximate Location of Existing Solid Waste Facilities for Colorado SSC Site

Figure 5.2.9-1

DRAINAGE BASINS OF THE COLORADO SITE

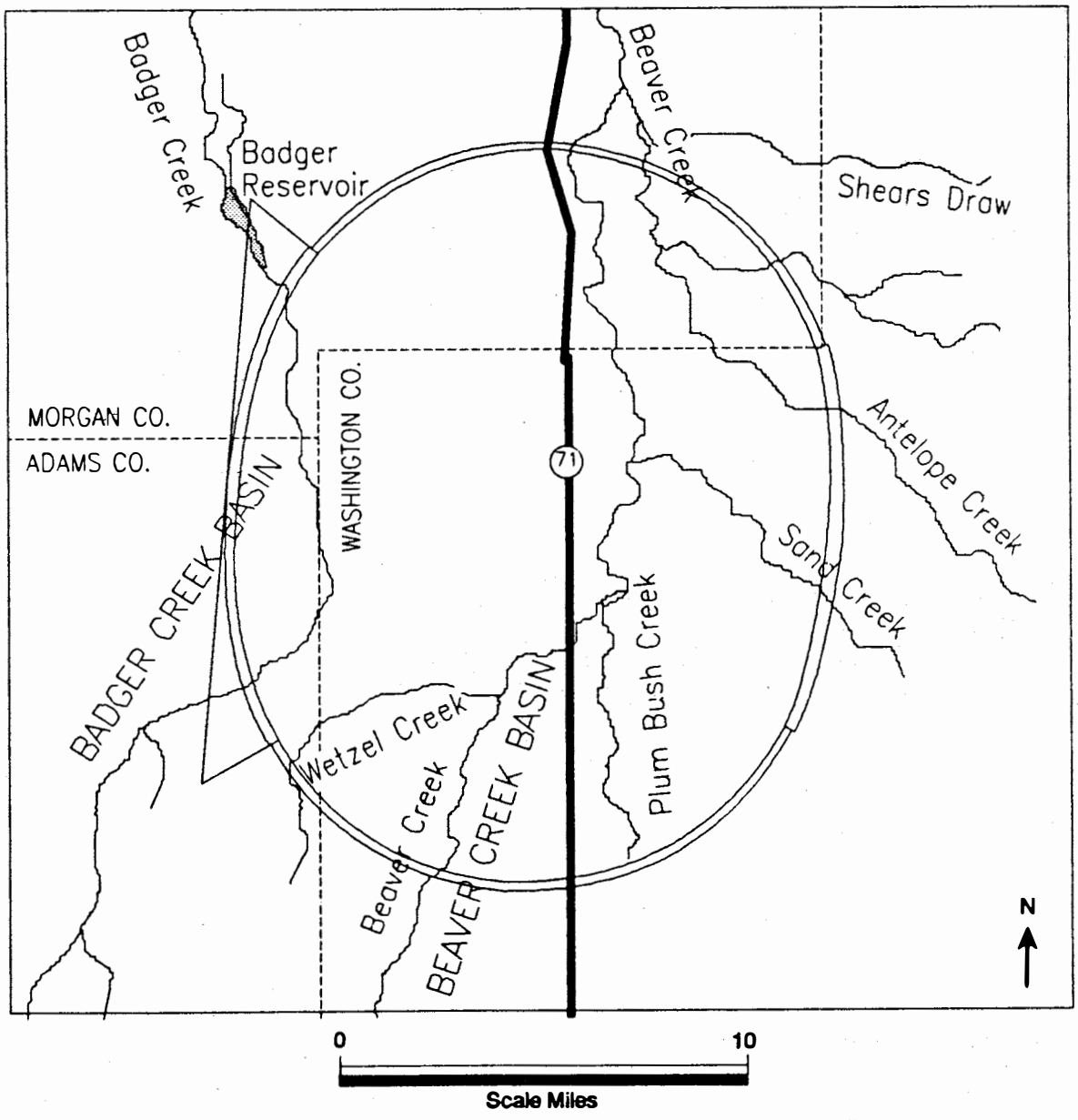


Figure 5.2.11-1

**COUNTIES FOR SOCIOECONOMIC ANALYSIS
COLORADO ROI**

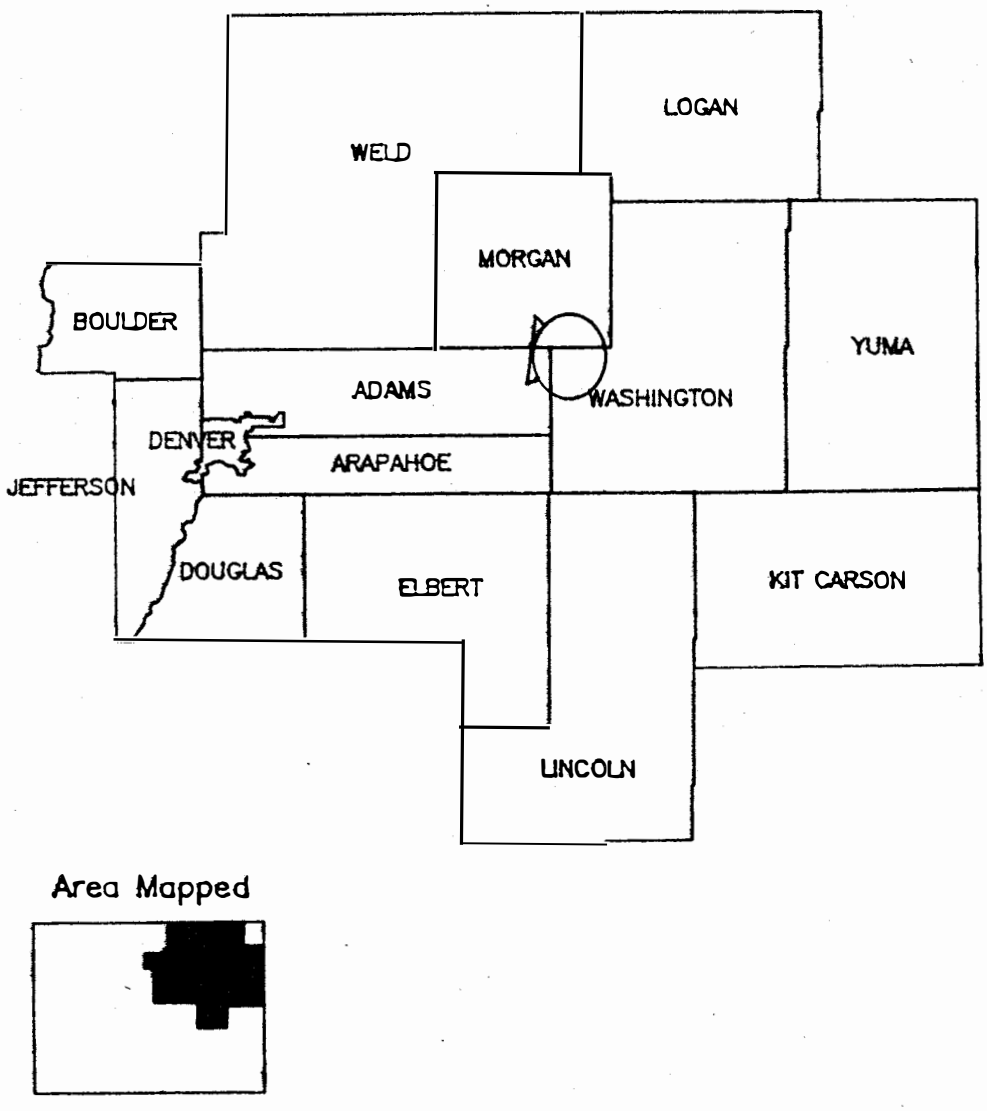
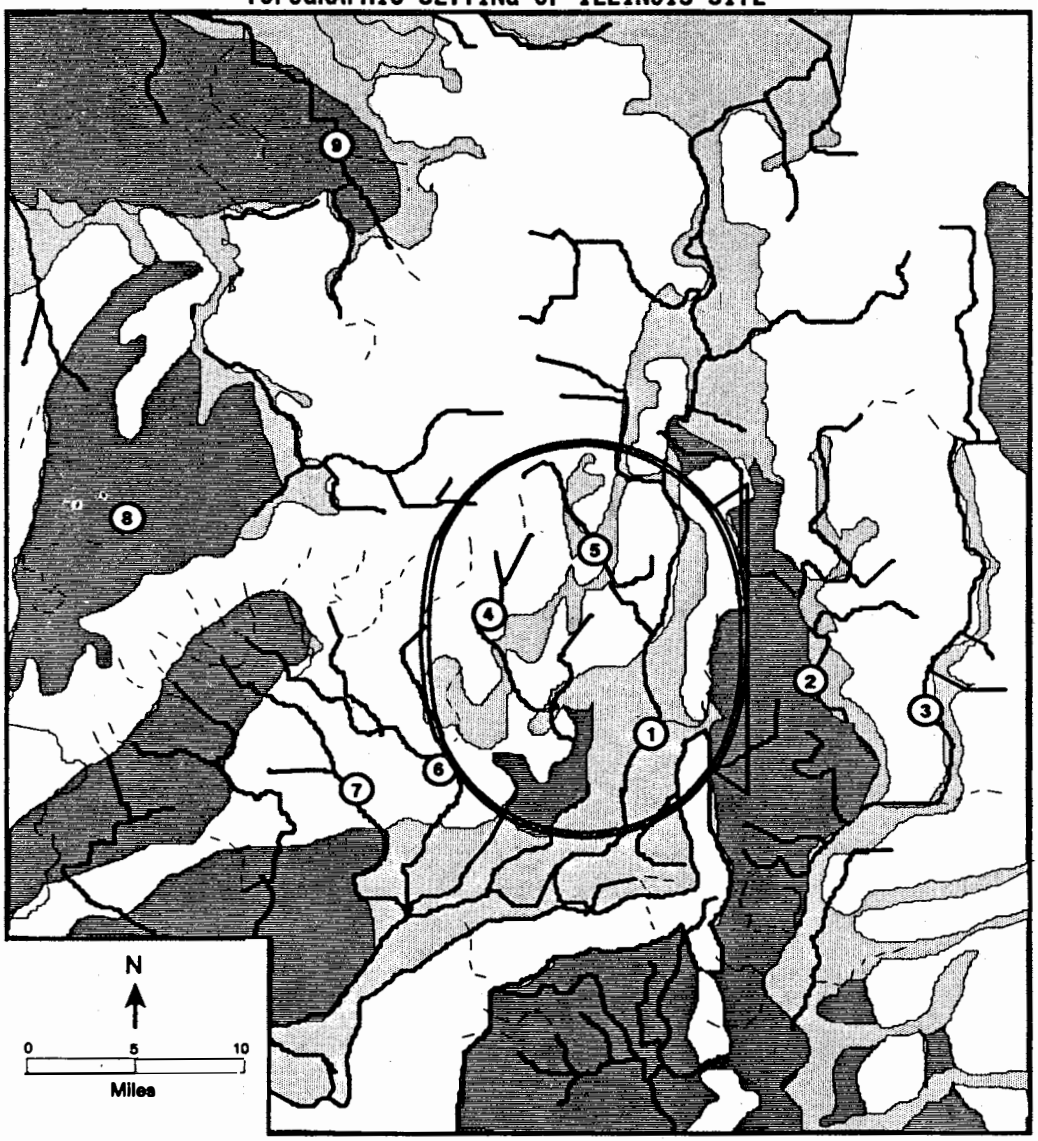


Figure 5.3.1-1

TOPOGRAPHIC SETTING OF ILLINOIS SITE



Glacial moraine with elevated hummocky topography

Ground moraine area of low relief

Glacial outwash channels

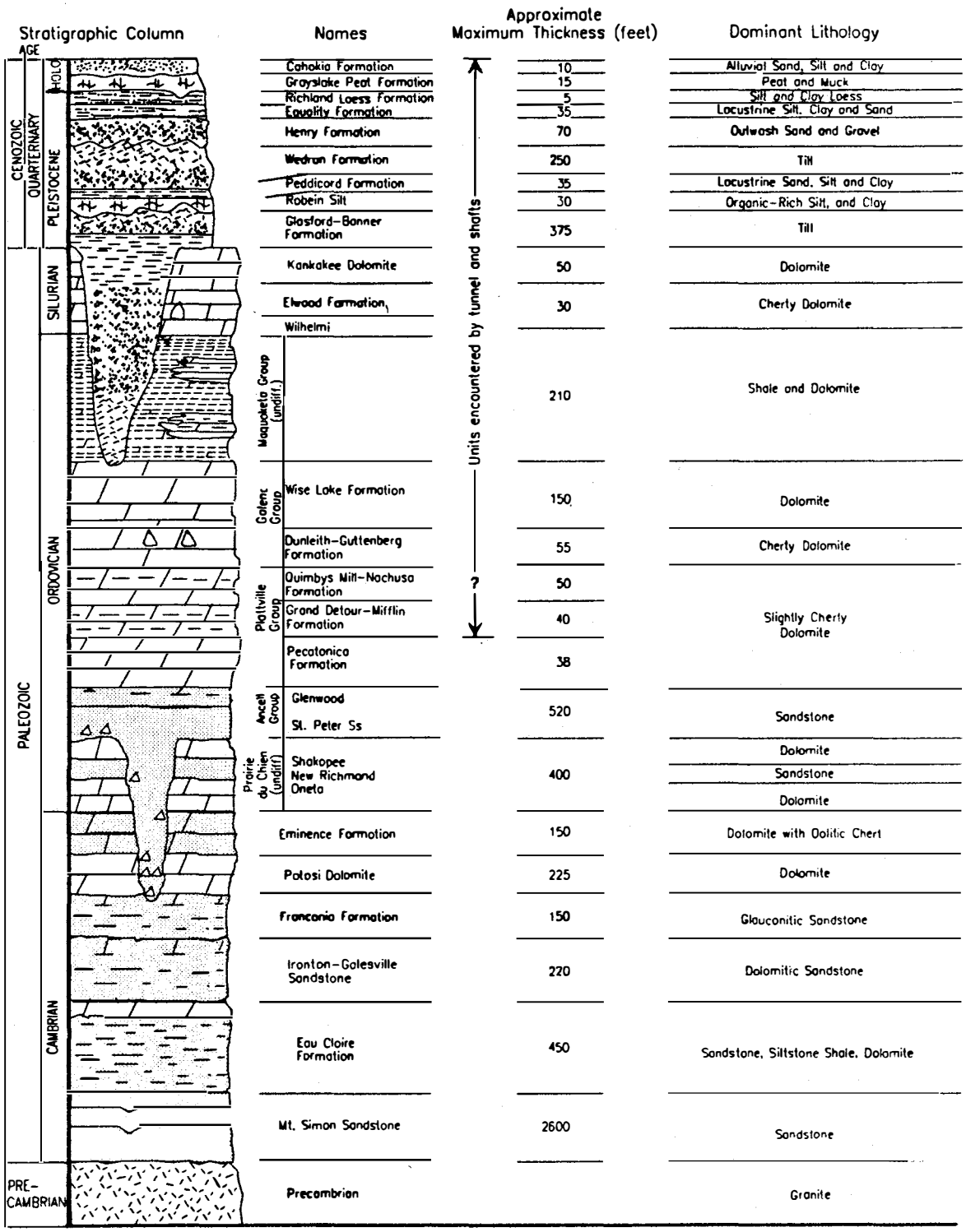
Stream; intermittent flow where dashed

Drainages

1. Fox River
2. West Branch Dupage River
3. East Branch Dupage River
4. Blackberry Creek
5. Mill Creek
6. Big Rock Creek
7. Little Rock Creek
8. Kishwaukee River South Branch
9. Coon Creek

Figure 5.3.1-2

STRATIGRAPHIC COLUMN - ILLINOIS SITE



Sources: Graese et al. (1988). Willman et al. (1975).

Figure 5.3.1-3

BEDROCK GEOLOGY - ILLINOIS SITE

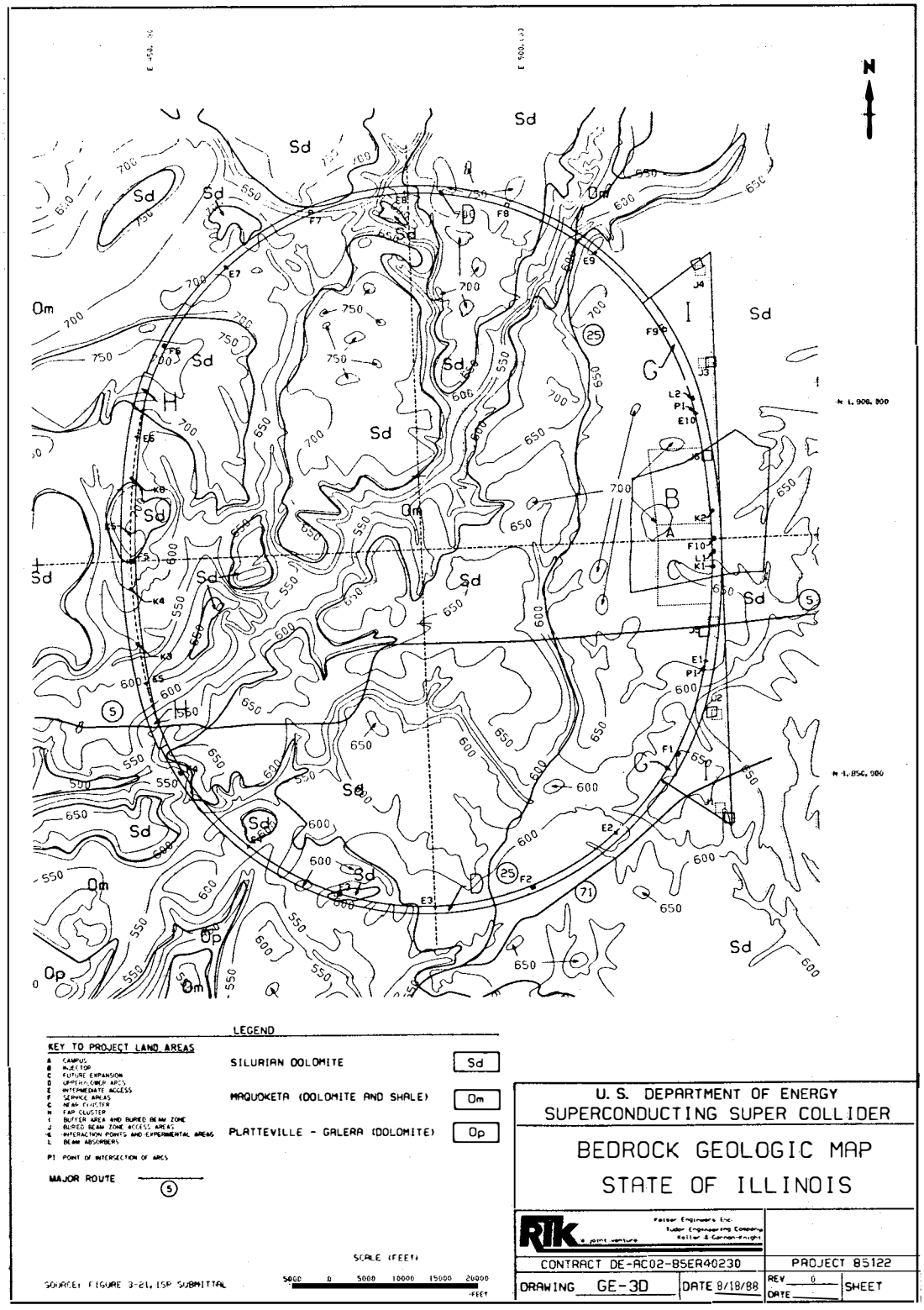


Figure 5.3.1-4

SURFACE DISTRIBUTION OF GLACIAL MATERIALS OVER THE AREA SURROUNDING THE PROPOSED SITE

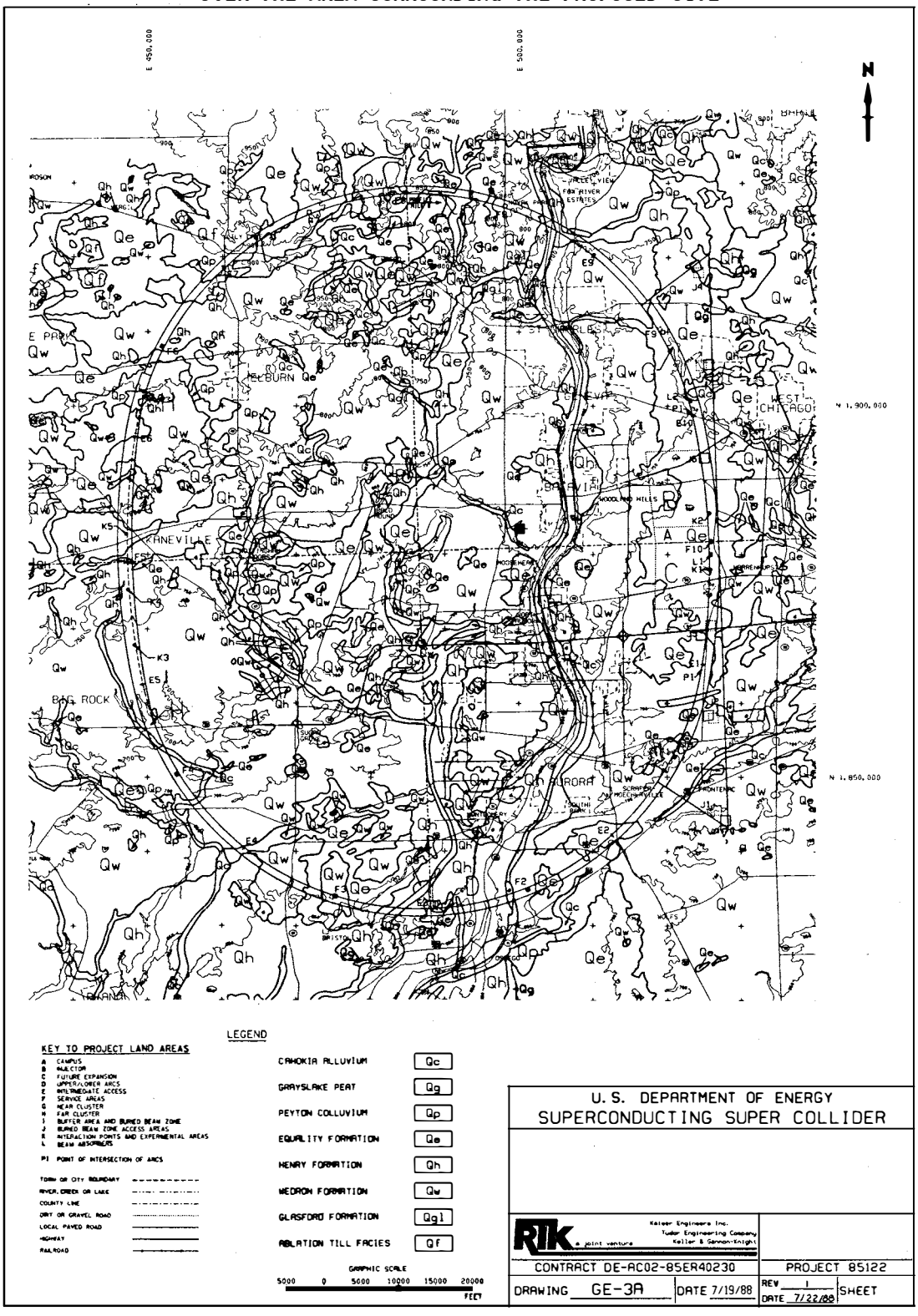


Figure 5.3.1-5

GEOLOGIC PROFILE ALONG SSC RING - ILLINOIS SITE

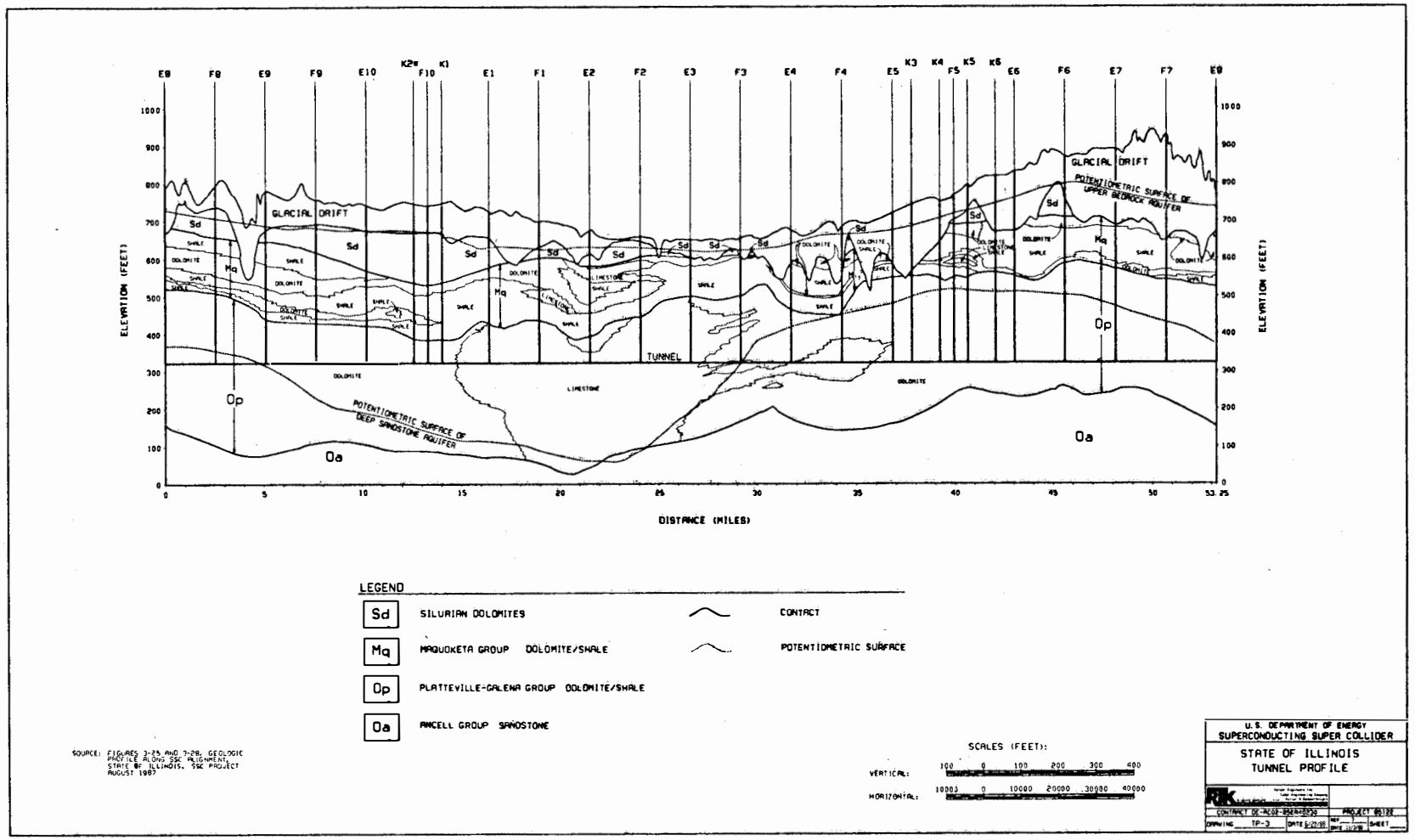


Figure 5.3.1-6

MINES AND PROSPECTS IN THE PROPOSED SITE

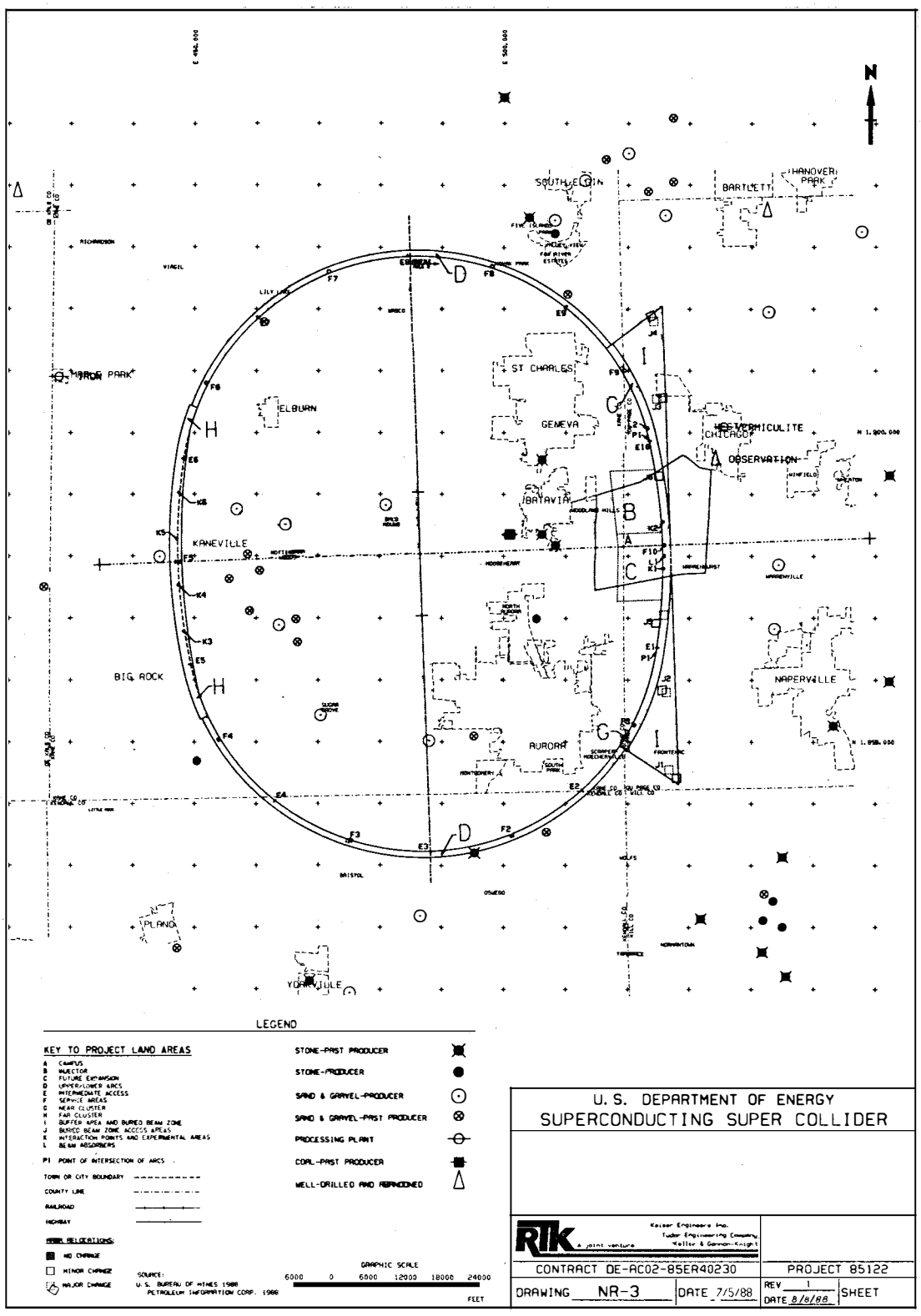
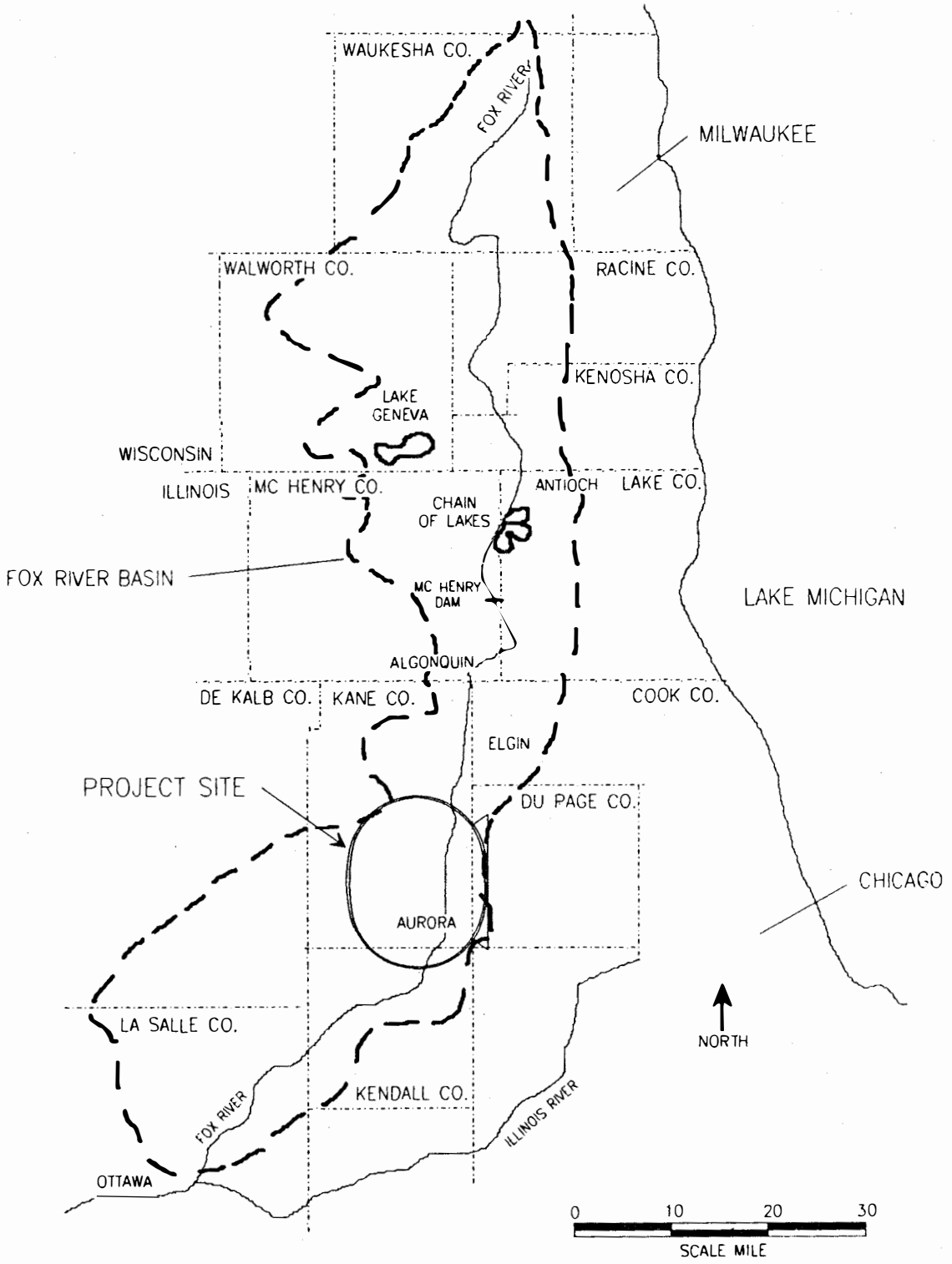


Figure 5.3.2-1

MAJOR WATERSHED - ILLINOIS SITE



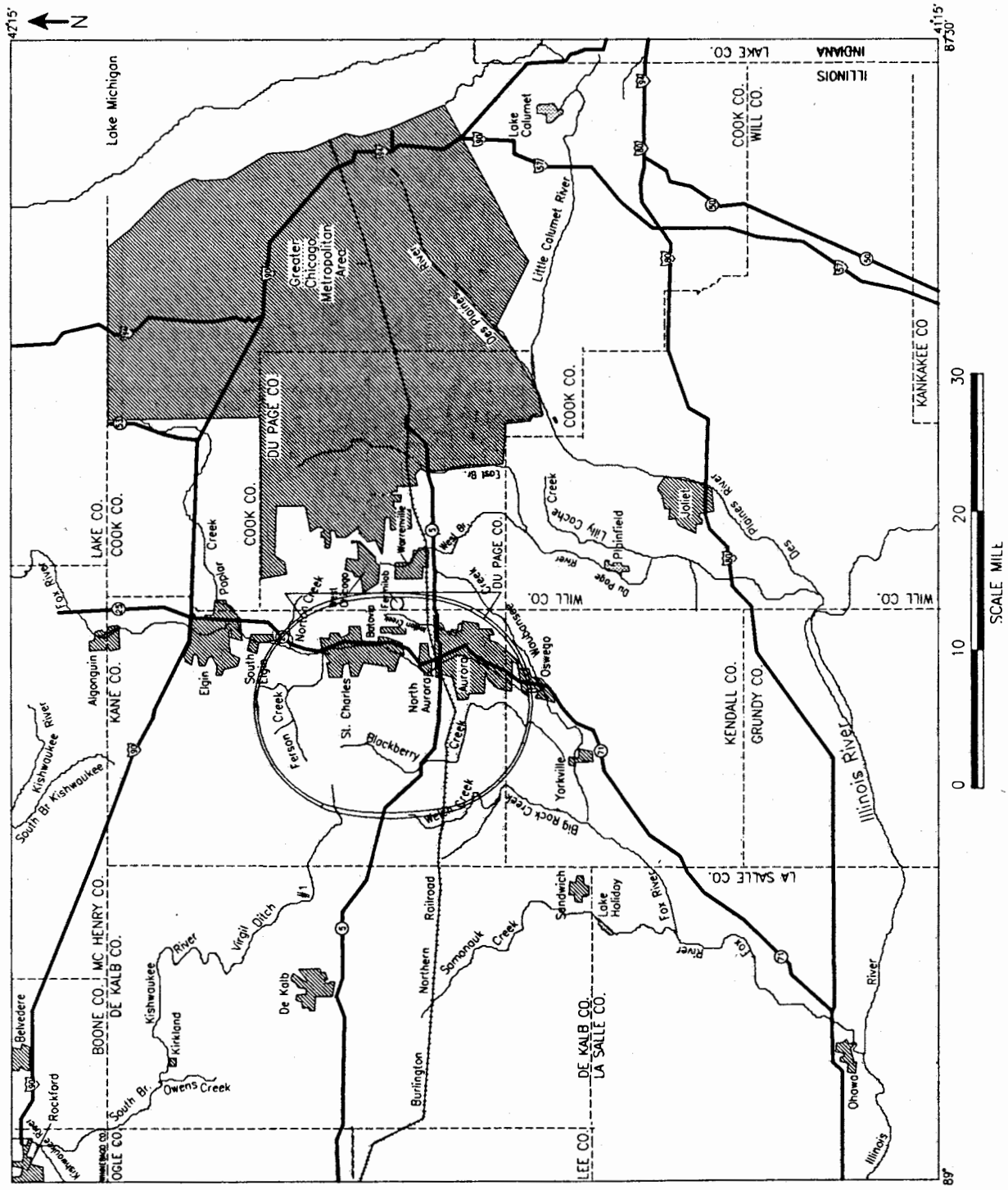


Figure 5.3.2-2

HYDROLOGIC FEATURES - ILLINOIS SITE

Figure 5.3.7-1

LOCATIONS OF TSD FACILITIES AND POTENTIAL CHEMICAL RELEASES

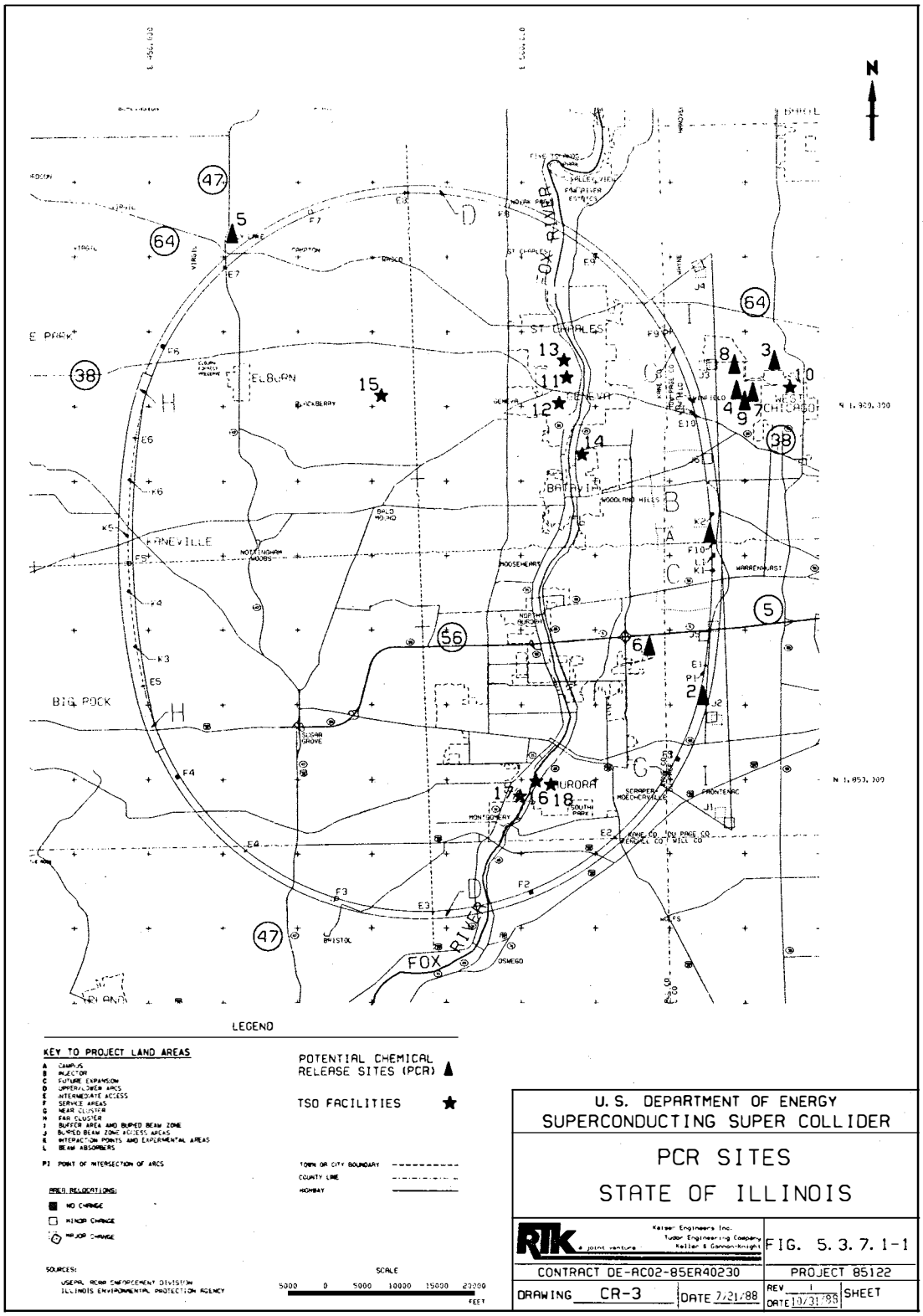


Figure 5.3.9-1

RIVER BASINS OF ILLINOIS SITE VICINITY

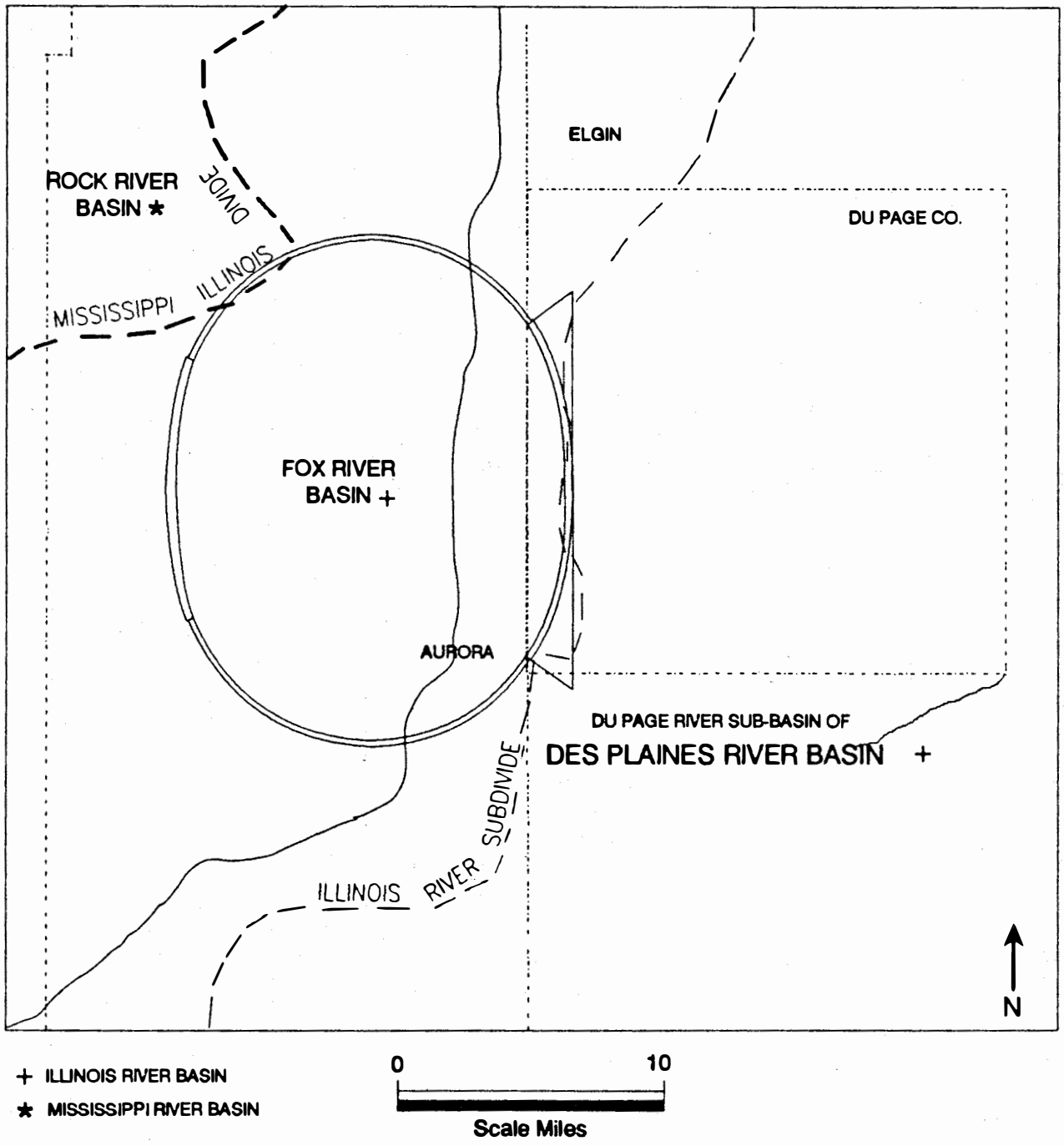


Figure 5.3.9-3

LOCATIONS OF WETLANDS IN THE PROPOSED ILLINOIS SSC SITE

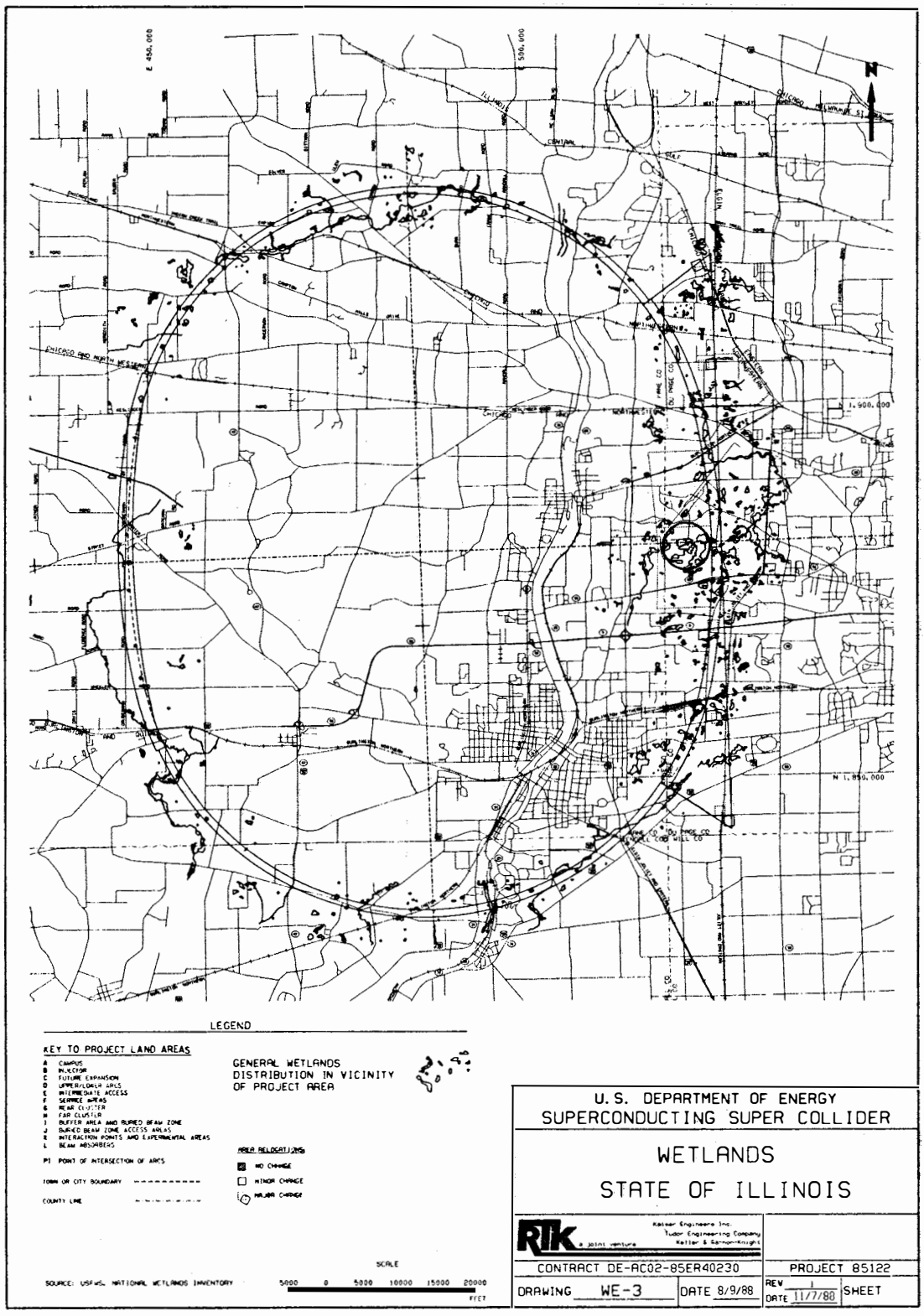
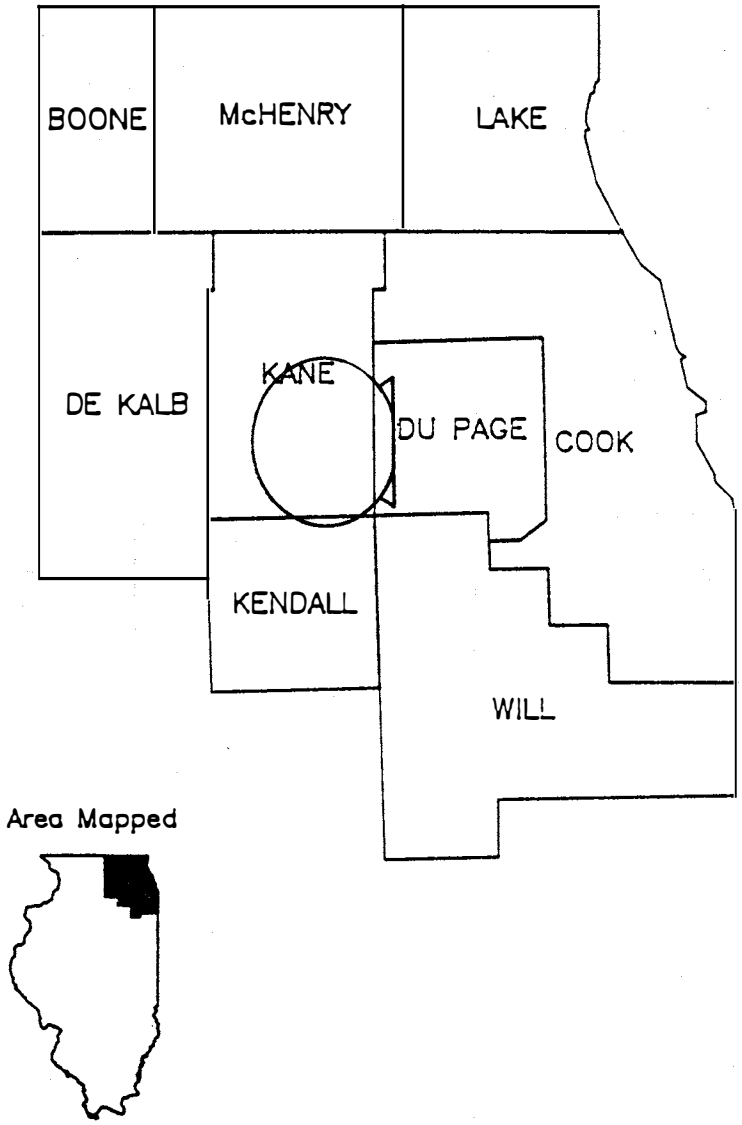
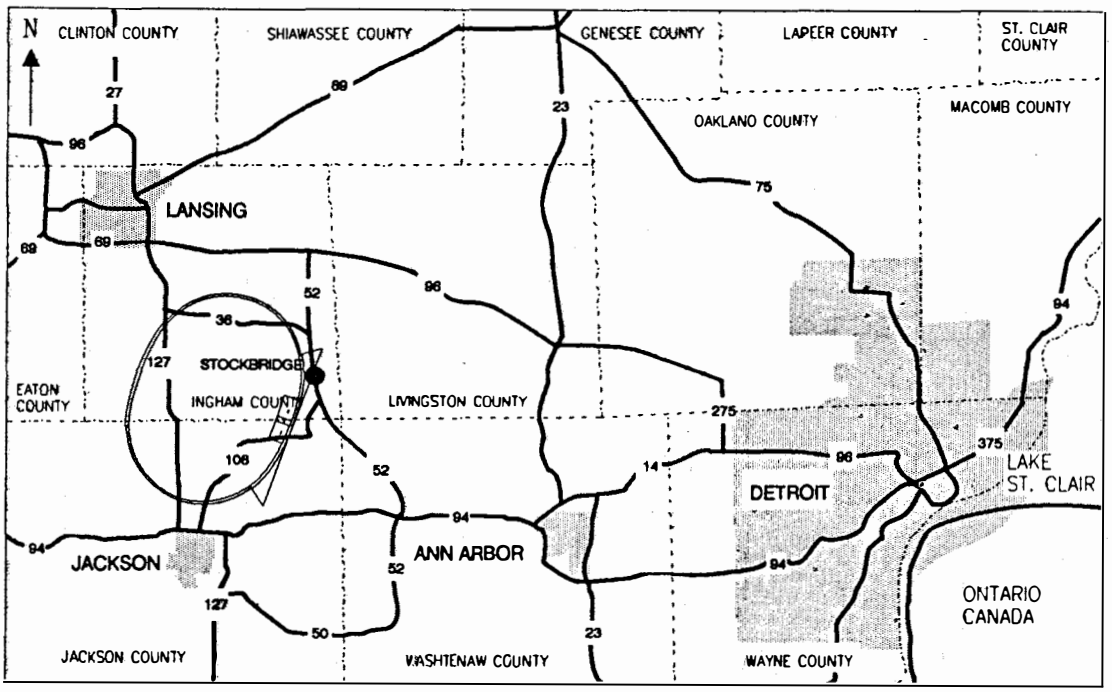


Figure 5.3.11-1

**COUNTIES FOR SOCIOECONOMIC ANALYSIS
ILLINOIS ROI**



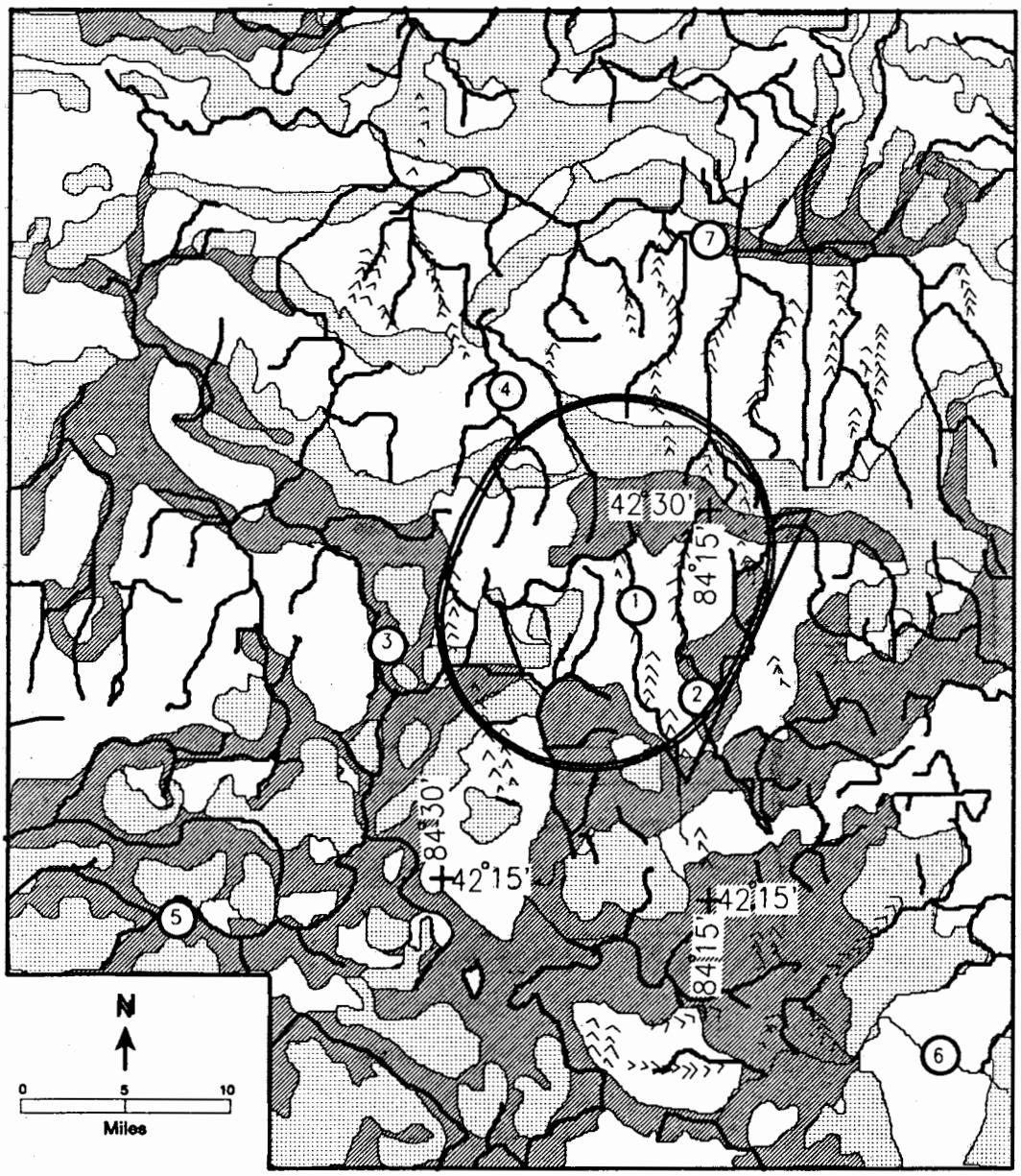
M I C H I G A N



Michigan- **The proposed site is located approximately 35 miles northwest of Ann Arbor in the southern portion of Michigan. It includes portions of Ingham and Jackson Counties. The entire tunnel would be constructed by tunneling techniques thru shales, limestone, dolomites, and sandstone below the water table.**

Figure 5.4.1-1

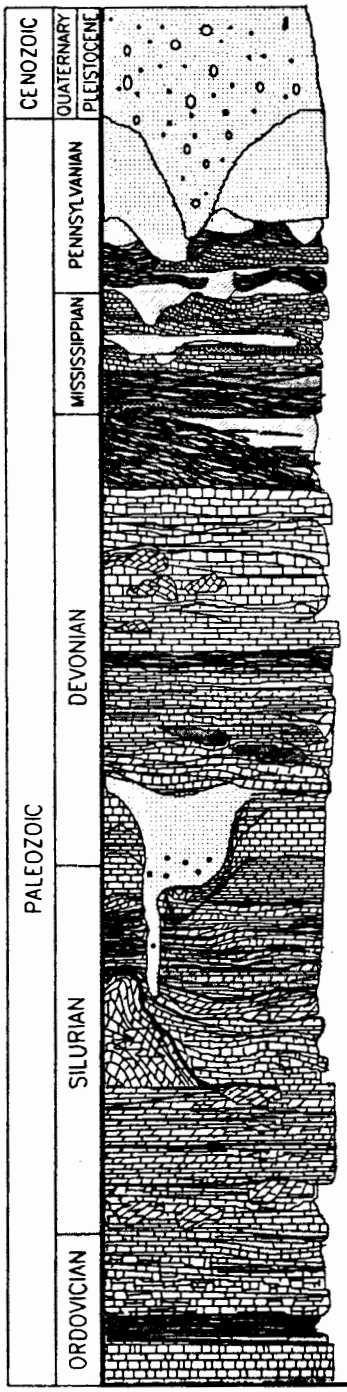
TOPOGRAPHIC SETTING - MICHIGAN SITE



ER4-6F3198843

Figure 5.4.1-2

STRATIGRAPHIC COLUMN - MICHIGAN SITE



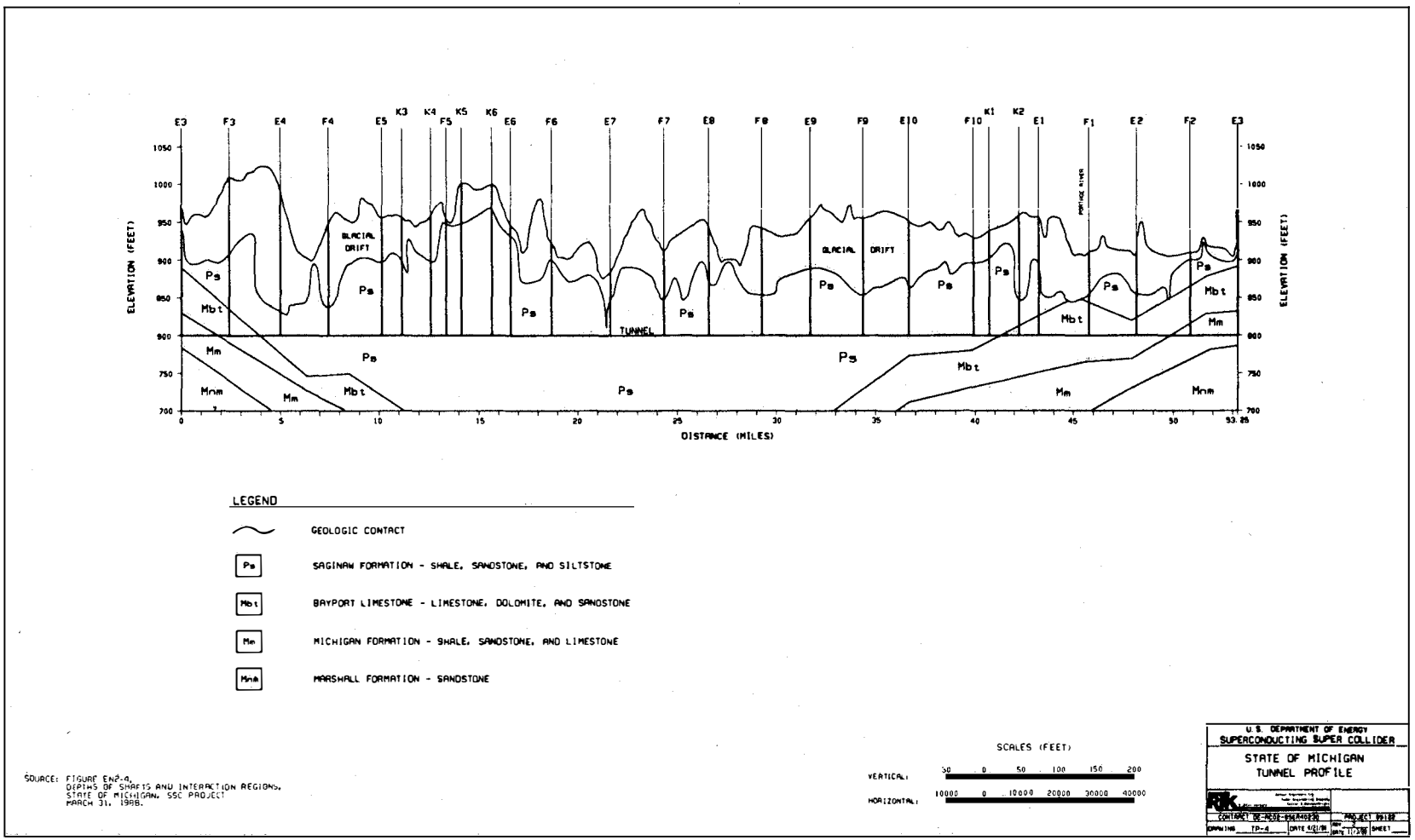
NAMES	APPROXIMATE MAXIMUM THICKNESS (FEET)	DOMINANT LITHOLOGY
Undifferentiated Glacial Drift • (Predominantly Wisconsinon)	130	Cloy, silt, sond, gravel cobbles, ond boulders
Grand River Formation	95	Sandstone ond conglomerate
Saginaw Formation*	400	Shale, sandstone, and siltstone
Grand Rapids Group — Bayport Limestone*	50	Limestone, delomite, and sandstone
Grand Rapids Group — Michigan Formation*		Shale, sandstone, and limestone
Marshall Sandstone	300	Sandstone
Coldwater Shale	1300	Shale and dolomite
Ellsworth Shale	1320	Shale, limestone, and dolomite
Traverse Group	830	Limestone with minor shale
Rogers City/Dundee Limestone	475	Limestone
Detroit River Group	1450	Dolomite, limestone, and halite
Bois Blanc Formation	800	Dolomite
Garden Islands Group	100	Dolomite
Bass Islands Group	700	Dolomite
Salina Group	3150	Shale, dolomite, and halite
Niagra Group	980	Dolomite
Cataract Group	200(?)	Shale and dolomite
Richmond Group	950	Limestone and shale
Trenton Group	1100	Limestone with minor shale

Sources: Michigan Department of Natural Resources, 1964

• Unit penetrated by collider tunnel and shafts

Figure 5.4.1-5

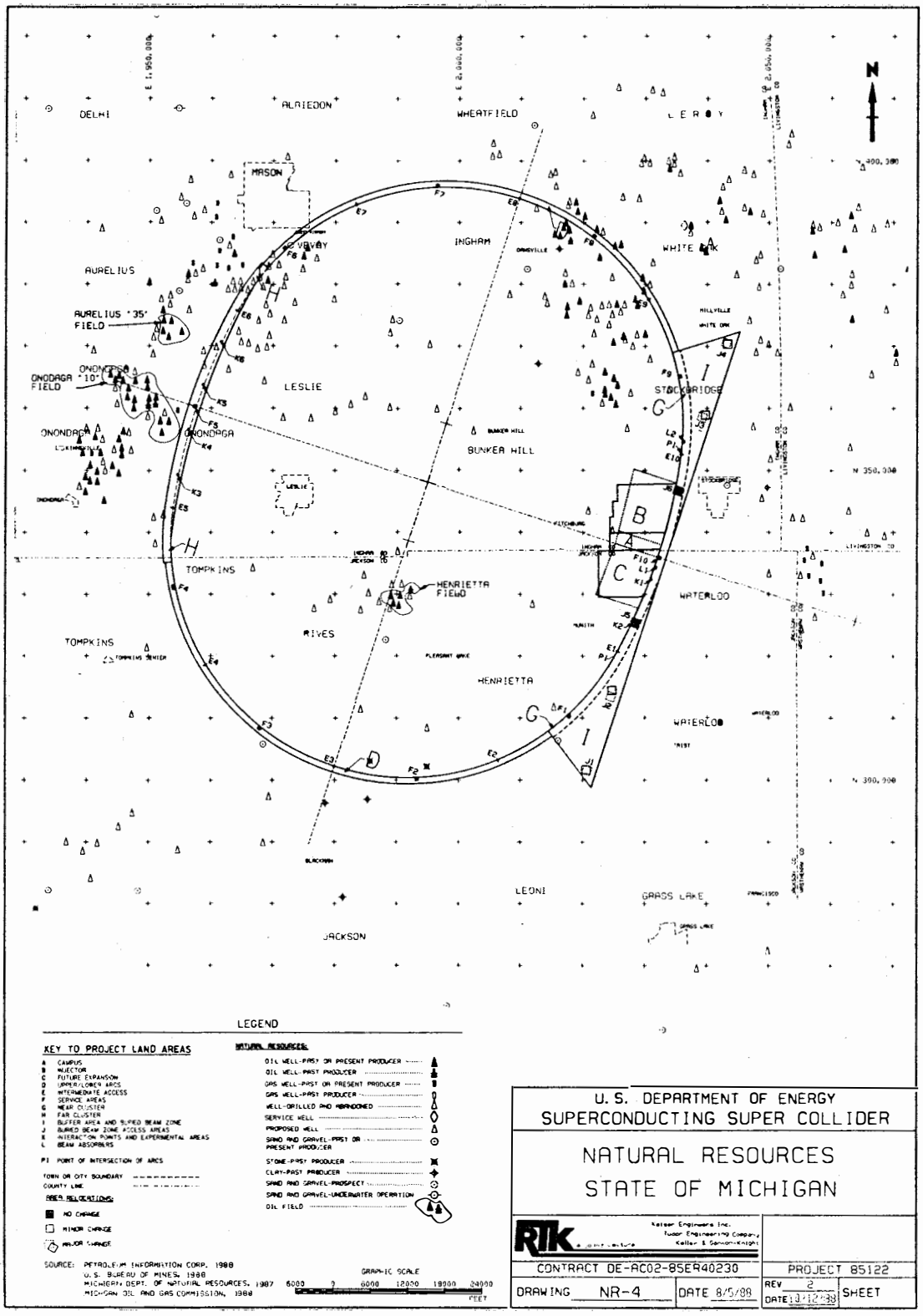
GEOLOGIC PROFILE ALONG SSC RING - MICHIGAN SITE



SOURCE: FIGURE EN2-9,
DEPTHS OF SHAFTS AND INTERACTION REGIONS,
STATE OF MICHIGAN, SSC PROJECT
MARCH 31, 1988.

Figure 5.4.1-6

ECONOMIC GEOLOGIC RESOURCES - MICHIGAN SITE



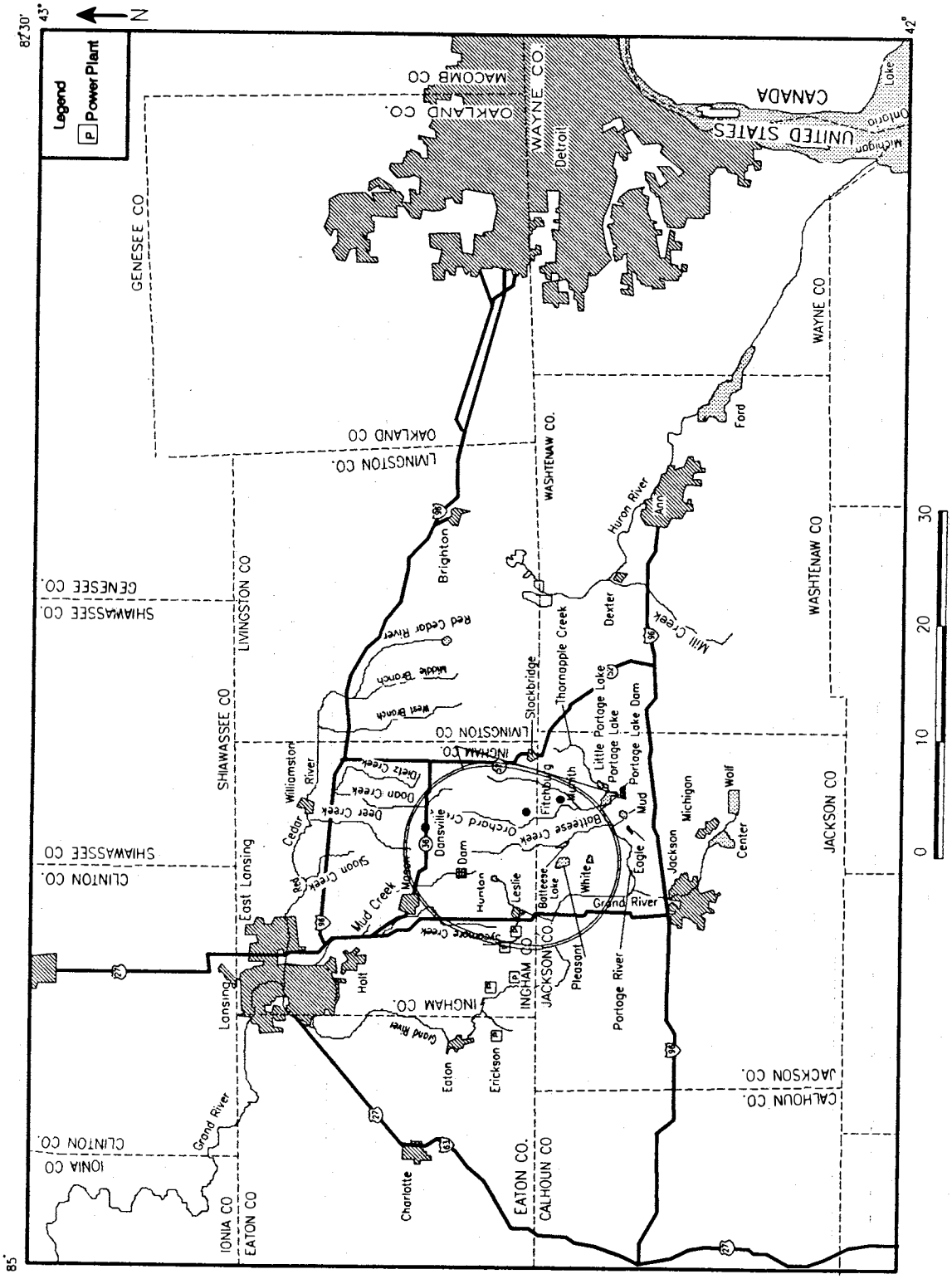


Figure 5.4.2-2

HYDROLOGIC FEATURES - MICHIGAN SITE

Figure 5.4.7-1

LOCATIONS OF KNOWN AND SUSPECTED CONTAMINATED SITES MICHIGAN SITE

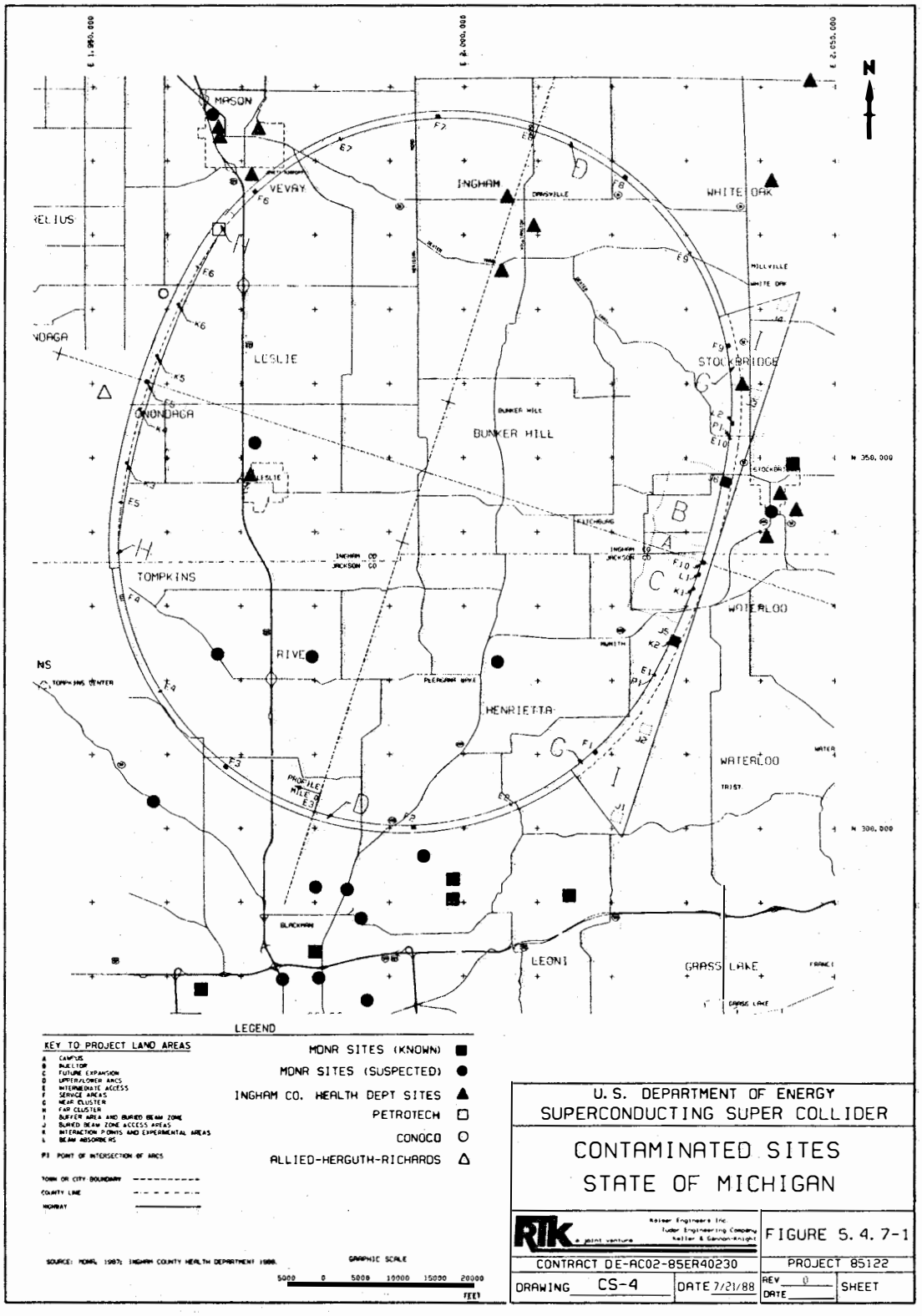


Figure 5.4.9-1

SIGNIFICANT FORESTED TRACTS AT THE PROPOSED MICHIGAN SITE

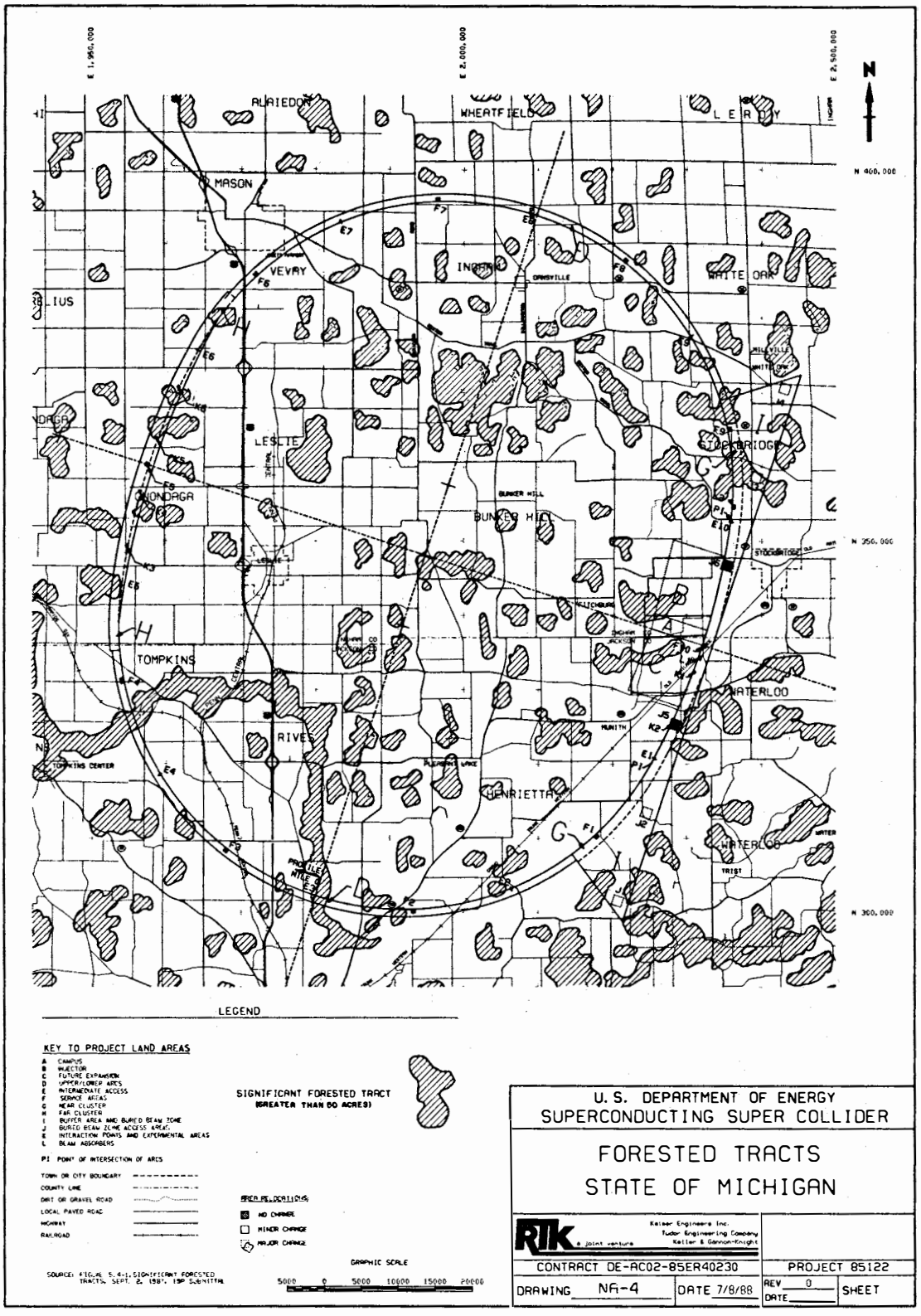


Figure 5.4.9-2

GENERAL DISTRIBUTION OF WETLANDS IN THE MICHIGAN SITE VICINITY

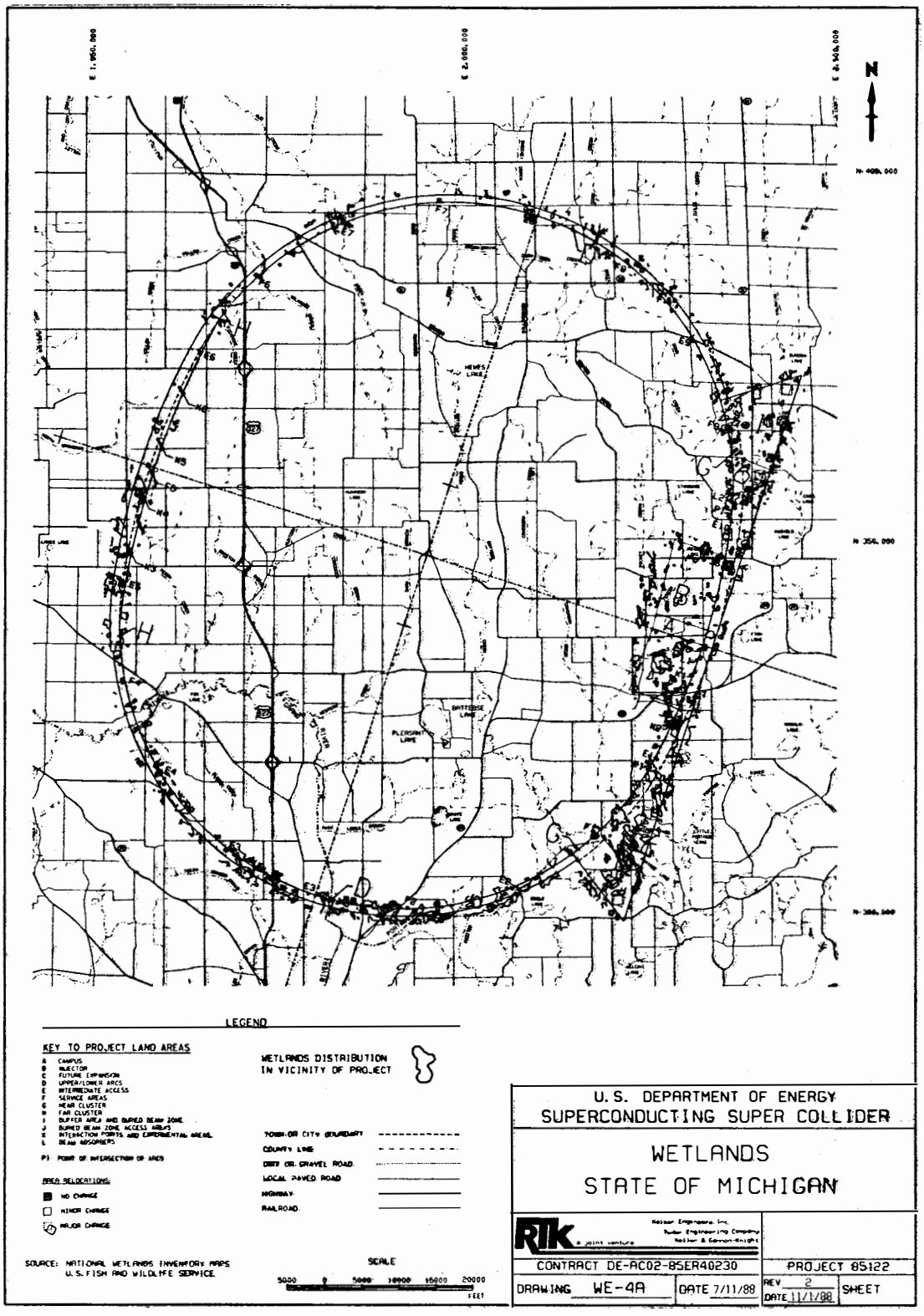
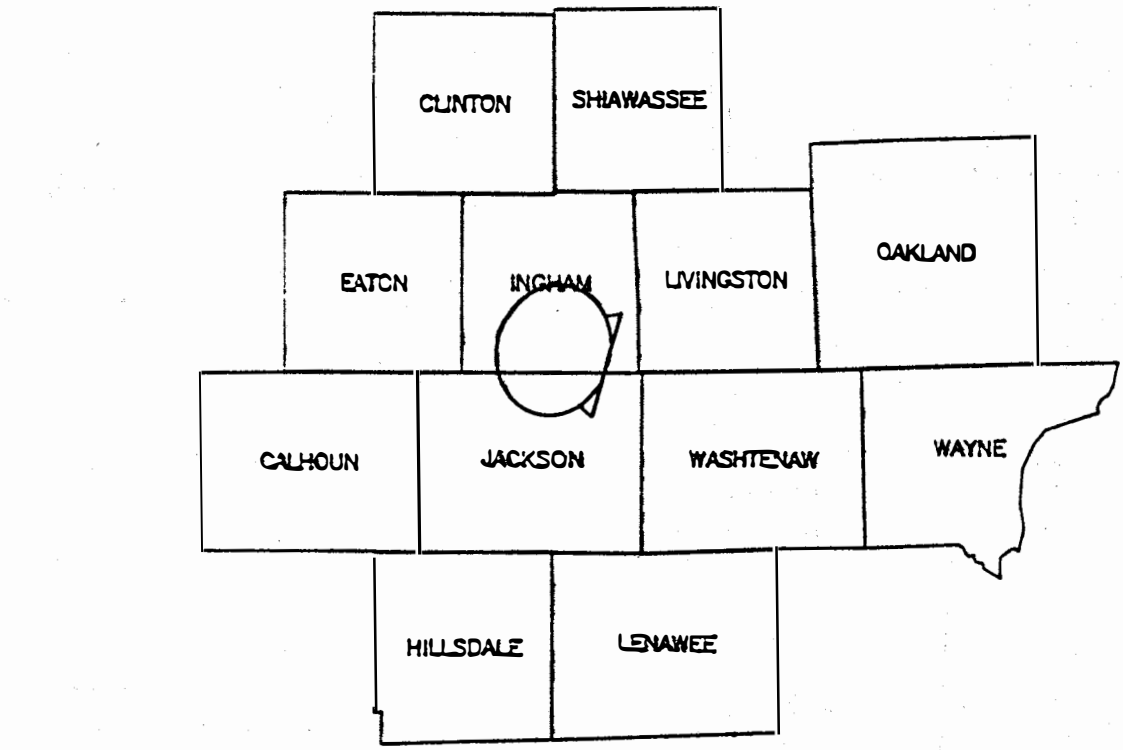


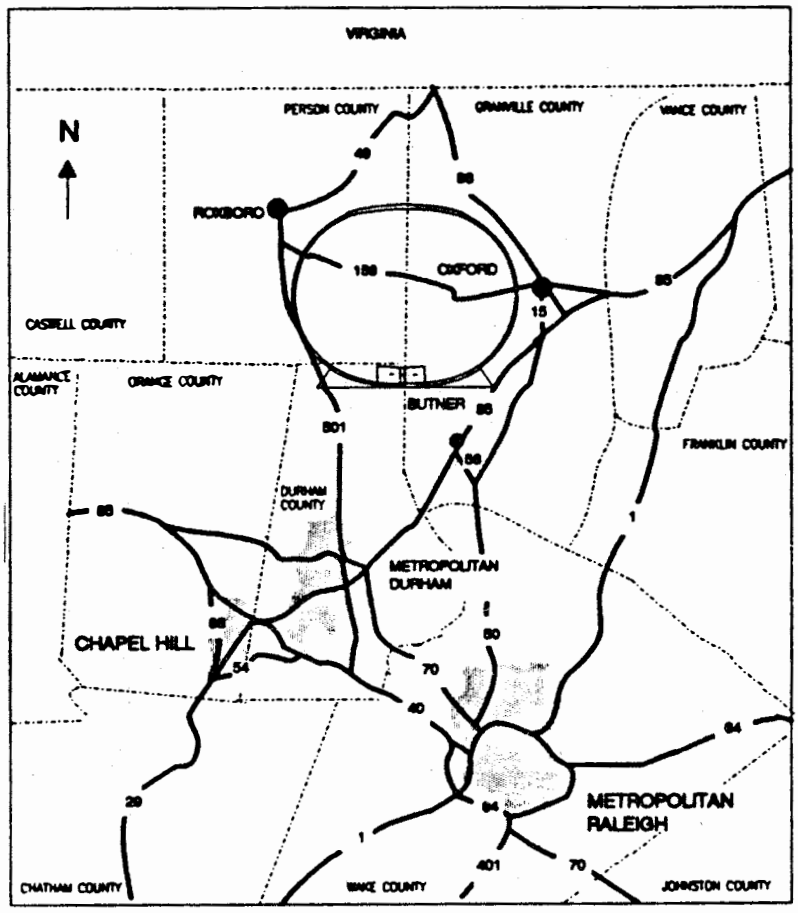
Figure 5.4.11-1

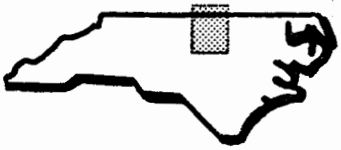
**COUNTIES FOR SOCIOECONOMICS ANALYSIS
MICHIGAN ROI**



Mapped Area

NORTH CAROLINA SITE AREA

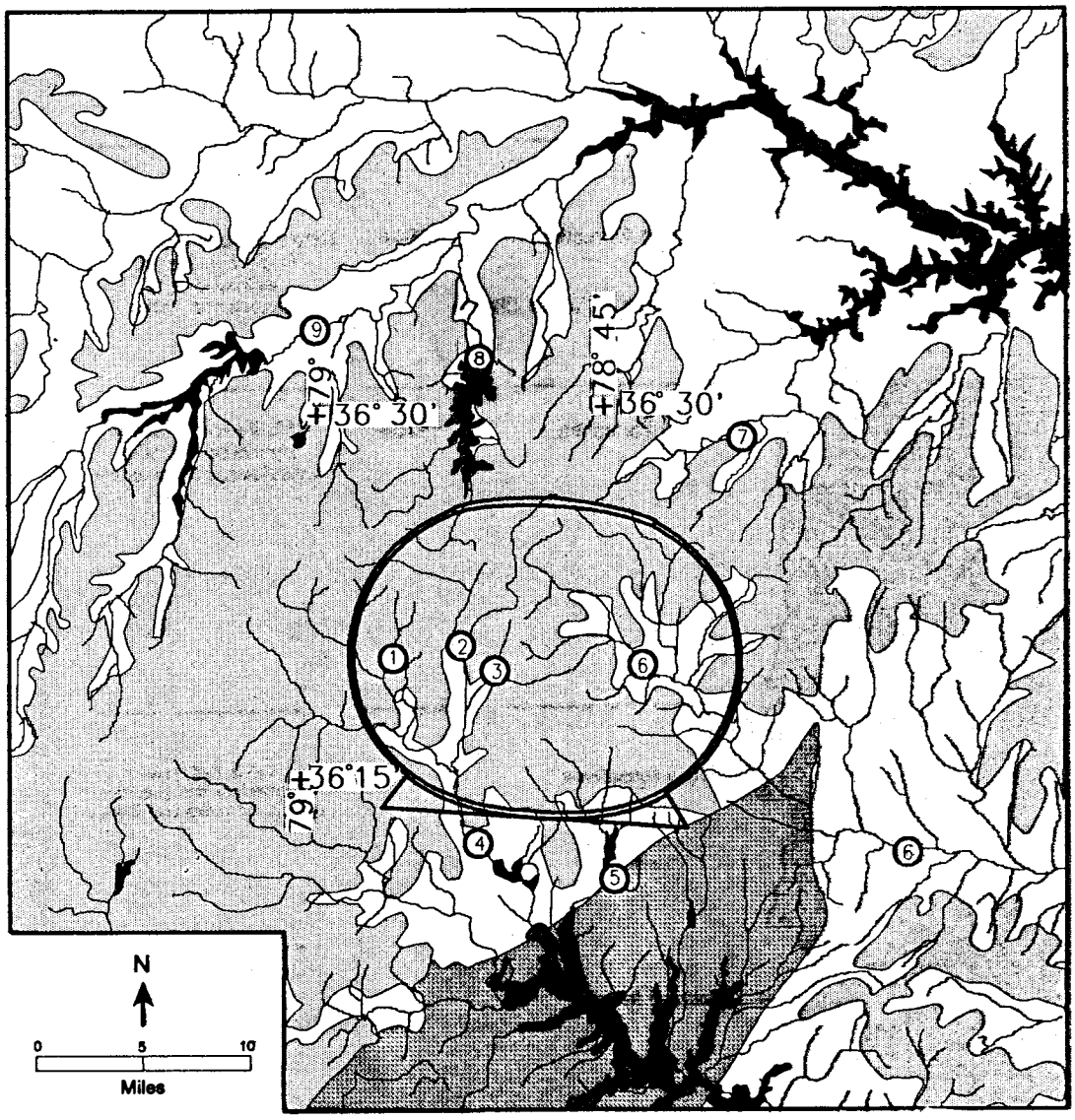




North Carolina - The proposed site is located in the north central portion of North Carolina, approximately 10 miles north of Durham. It includes portions of Person, Granville and Durham Counties. The entire tunnel would be constructed by tunneling techniques in the interlayered metamorphosed volcanic and sedimentary rocks below the water table.

Figure 5.5.1-1

TOPOGRAPHIC SETTING OF NORTH CAROLINA SITE



Flat to slightly rolling little disected uplands.

Rolling, disected uplands.

Triassic lowlands.

Lake

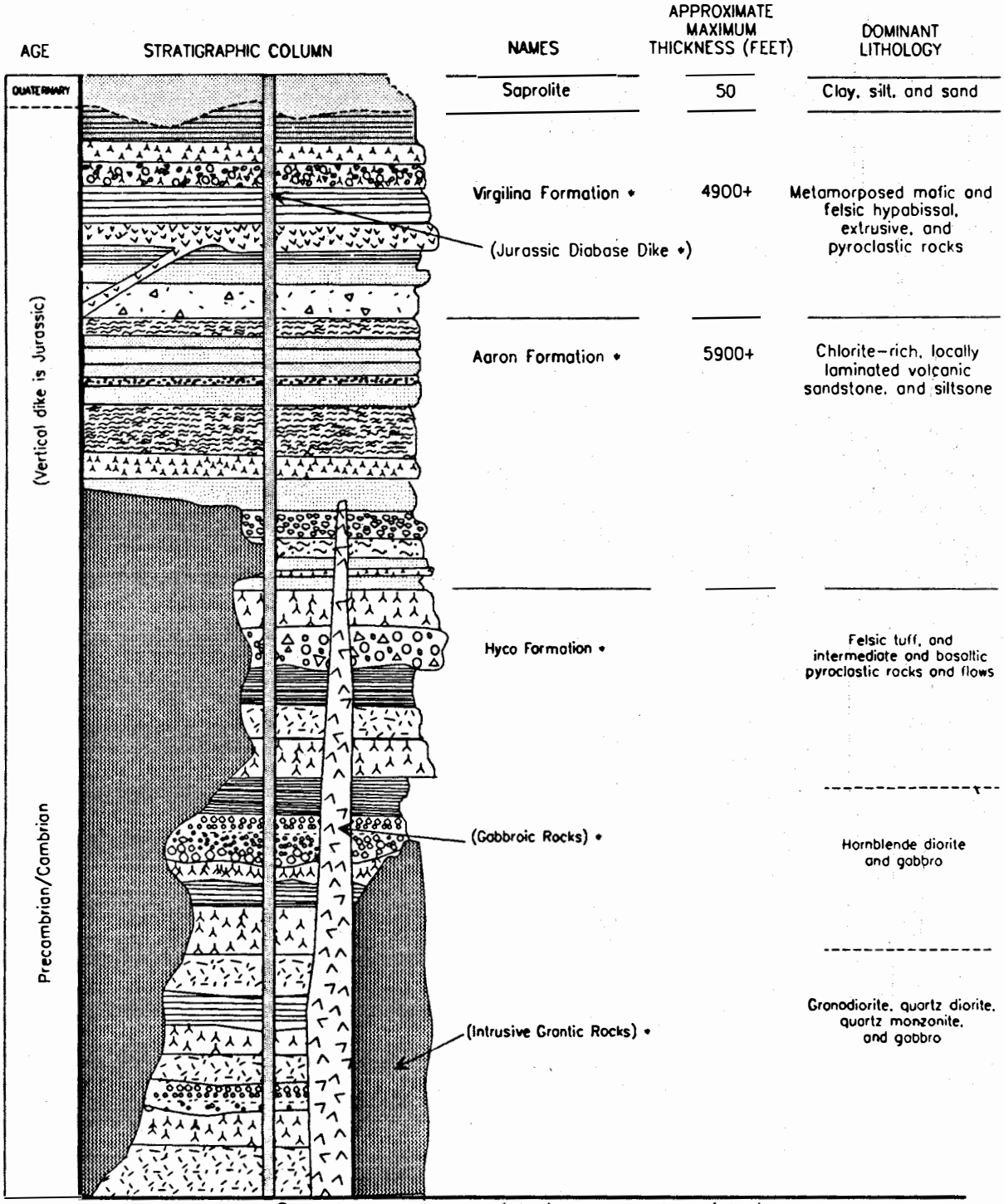
Stream

DRAINAGES

1. Chappels Creek
2. Deep Creek
3. Fock Fork Branch
4. Flat River
5. Knap of Reeds Creek
6. Tar River
7. Grassy Creek
8. Mayo Creek
9. Hyco River

Figure 5.5.1-2

STRATIGRAPHIC COLUMN - NORTH CAROLINA SITE



Sources: Harris and Glover (1988), Glover and Sinha (1973), and Stucky and Conrad (1958)

• Unit penetrated by collider tunnel

Figure 5.5.1-3

GEOLOGIC MAP OF THE VICINITY OF THE NORTH CAROLINA SITE

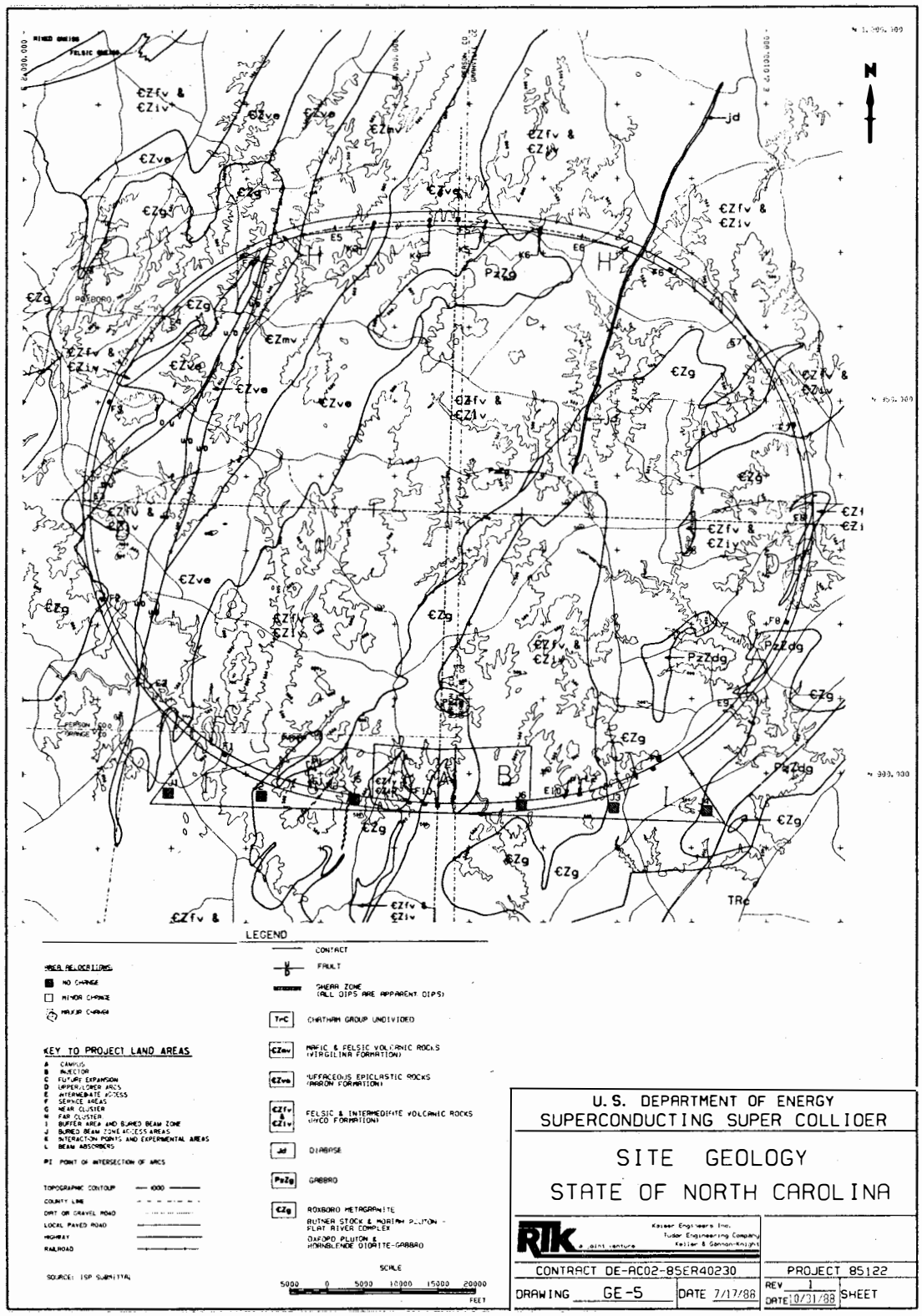
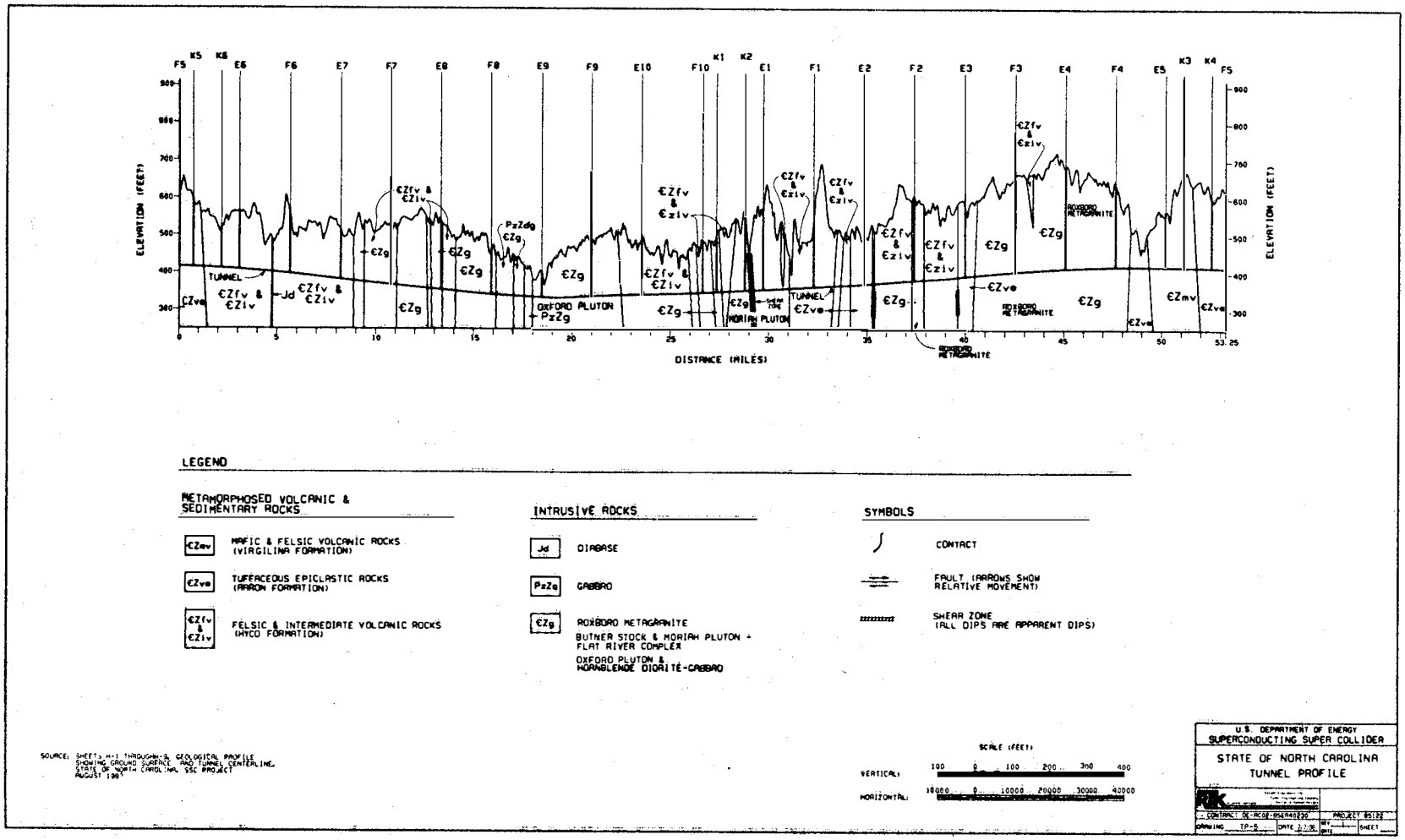


Figure 5.5.1-4

GEOLOGIC PROFILE ALONG SSC RING - NORTH CAROLINA SITE



SOURCE: SHEETS M-1 THROUGH M-3, GEOLOGICAL PROFILE SHOWING GROUND SURFACE AND TUNNEL CENTERLINE, STATE OF NORTH CAROLINA, SSC PROJECT, AUGUST 1989

Figure 5.5.1-5

LOCATIONS OF KNOWN PROSPECTS AND MINES IN THE NORTH CAROLINA SITE AREA

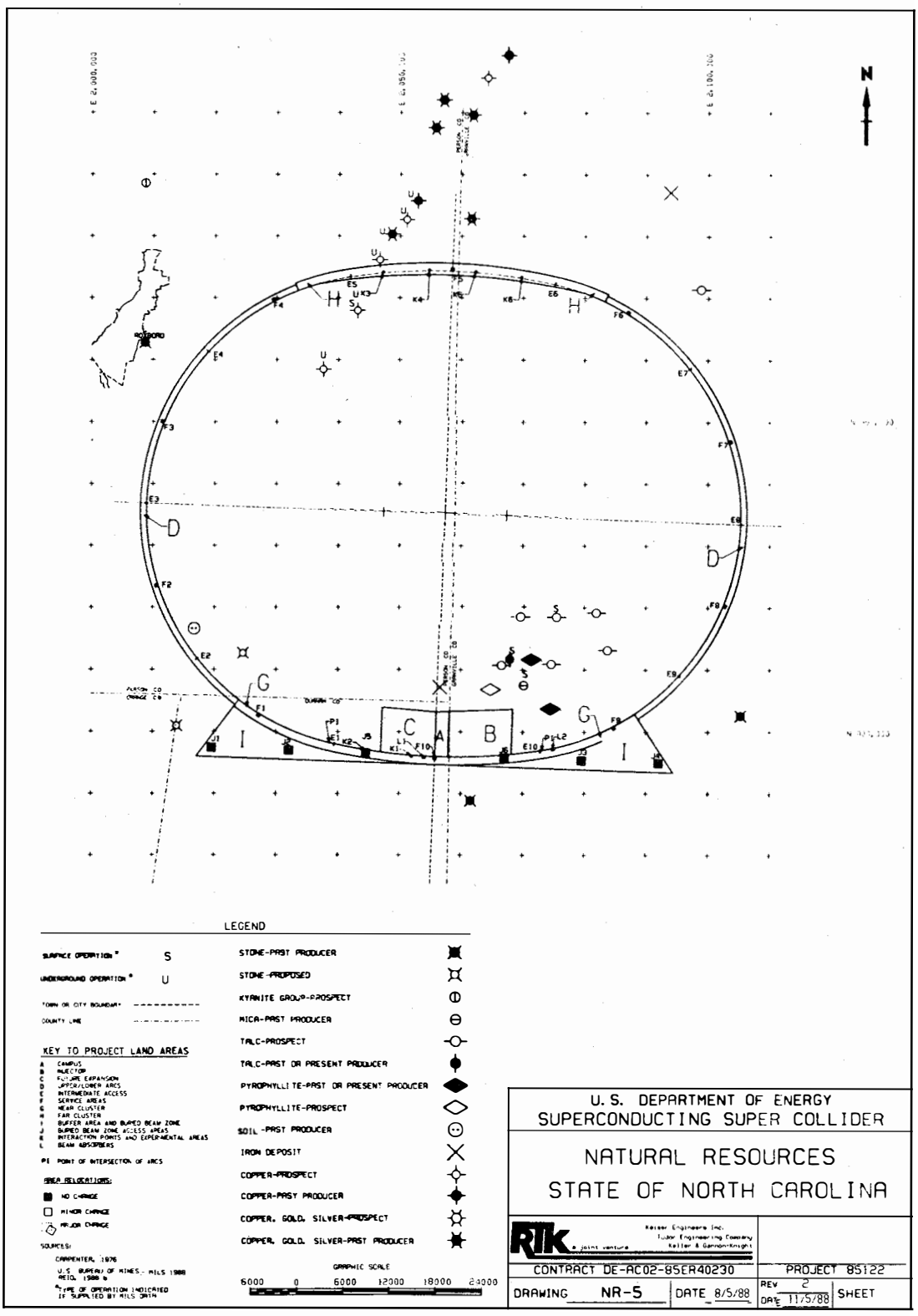
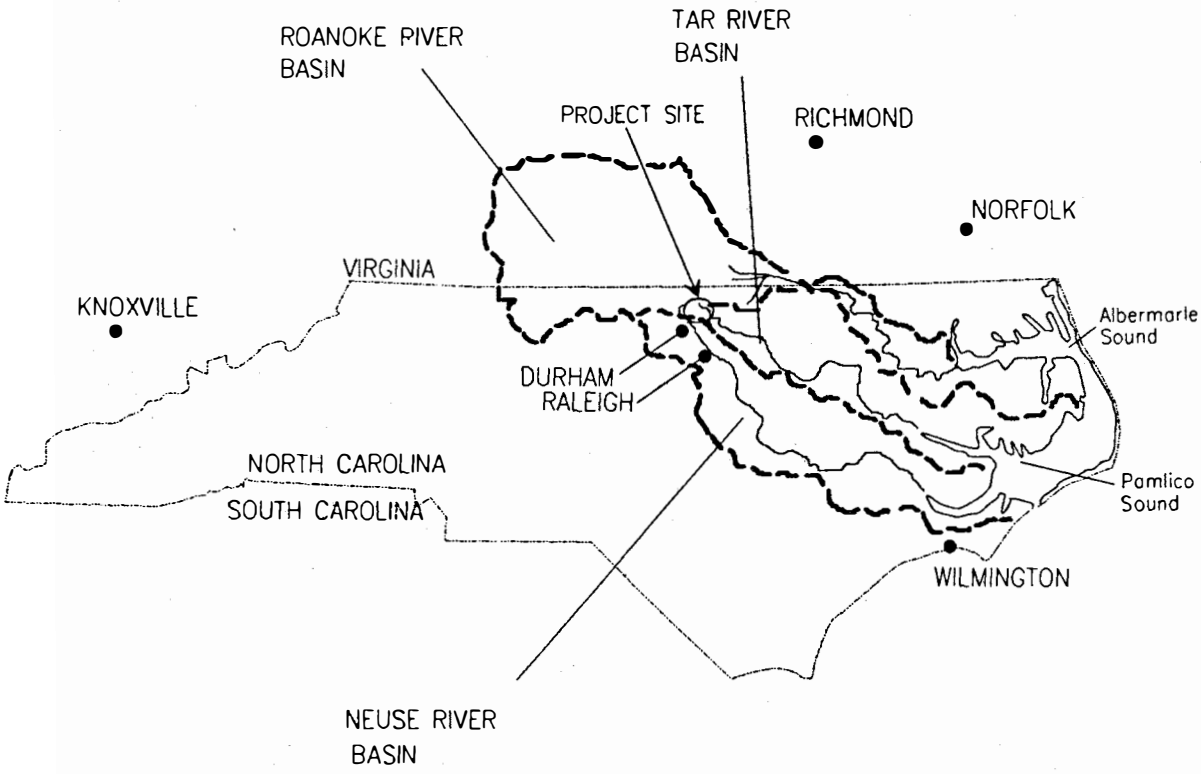


Figure 5.5.2-1

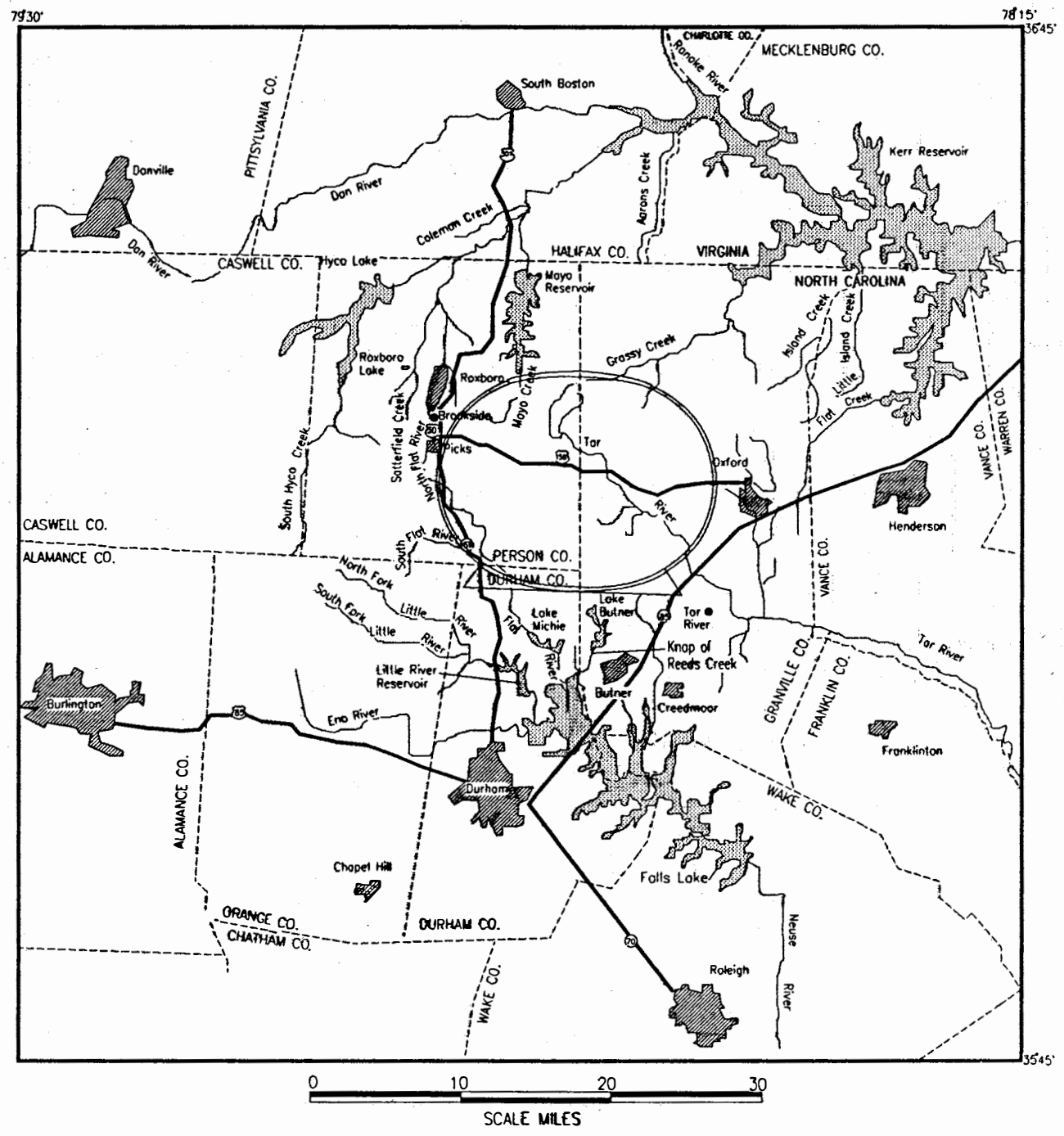
MAJOR WATERSHEDS - NORTH CAROLINA SITE



Source: North Carolina Department of Water and Air Resources.

Figure 5.5.2-2

HYDROLOGIC FEATURES - NORTH CAROLINA SITE

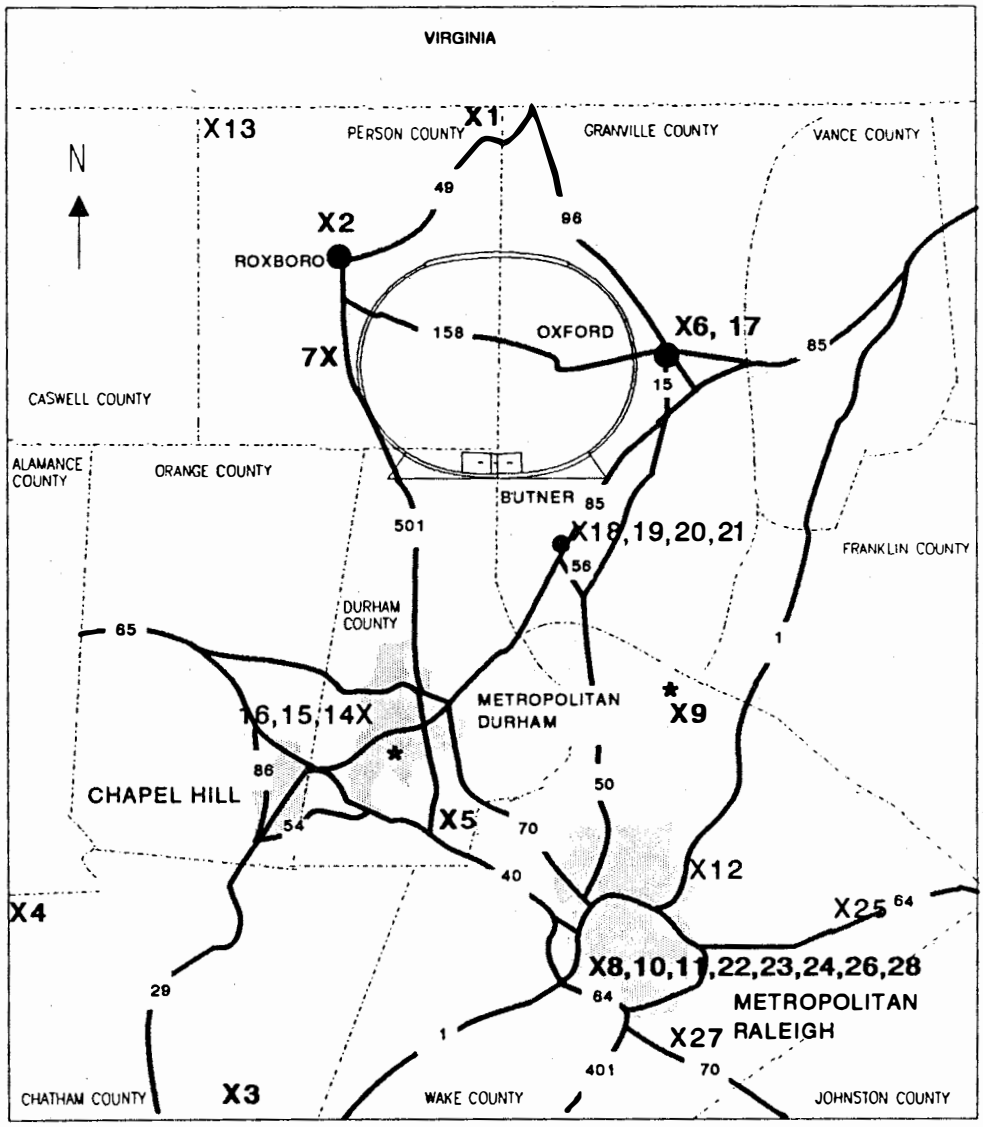


ER4-6F3198862

FEIS Volume IV Appendix 5

Figure 5.5.4-1

**AMBIENT AIR QUALITY MONITORING STATIONS
AND REGIONAL AIR POLLUTION SOURCES
NORTH CAROLINA SITE**



X = Regional Air Pollutant Source

* = Ambient Air Monitoring Station

Figure 5.5.5-2

REGIONAL VIBRATION SOURCES
NORTH CAROLINA SITE

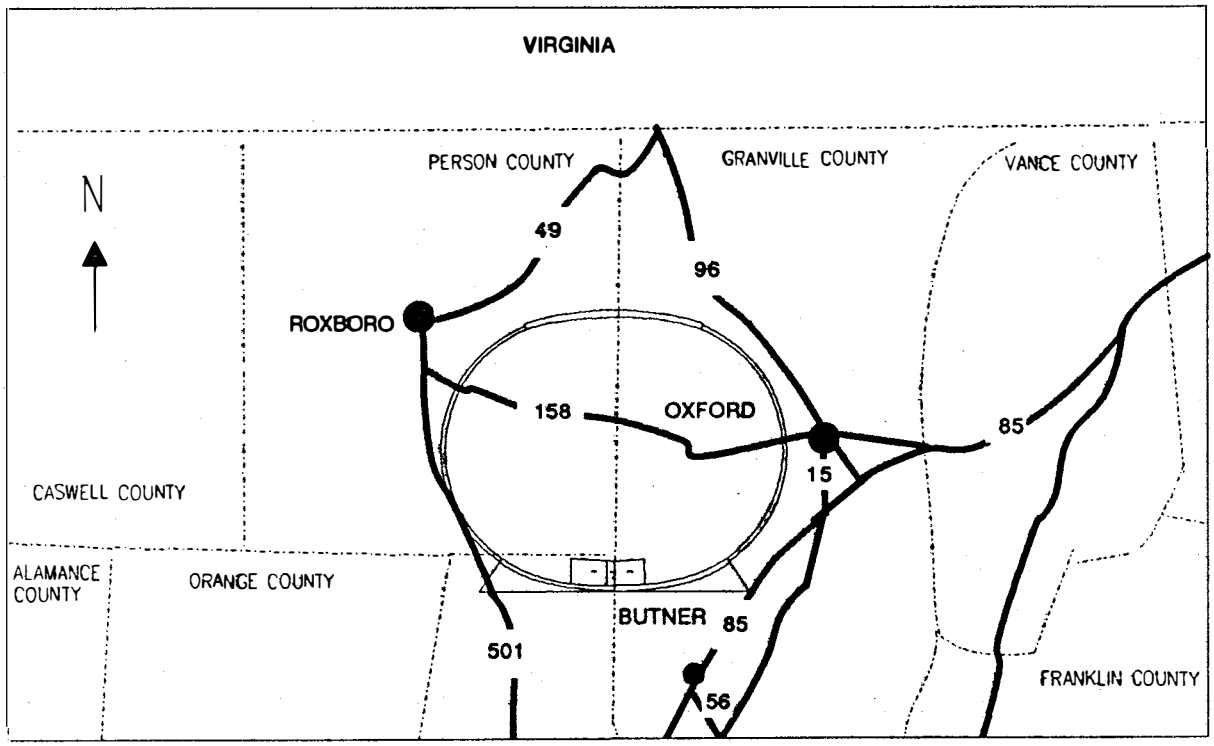
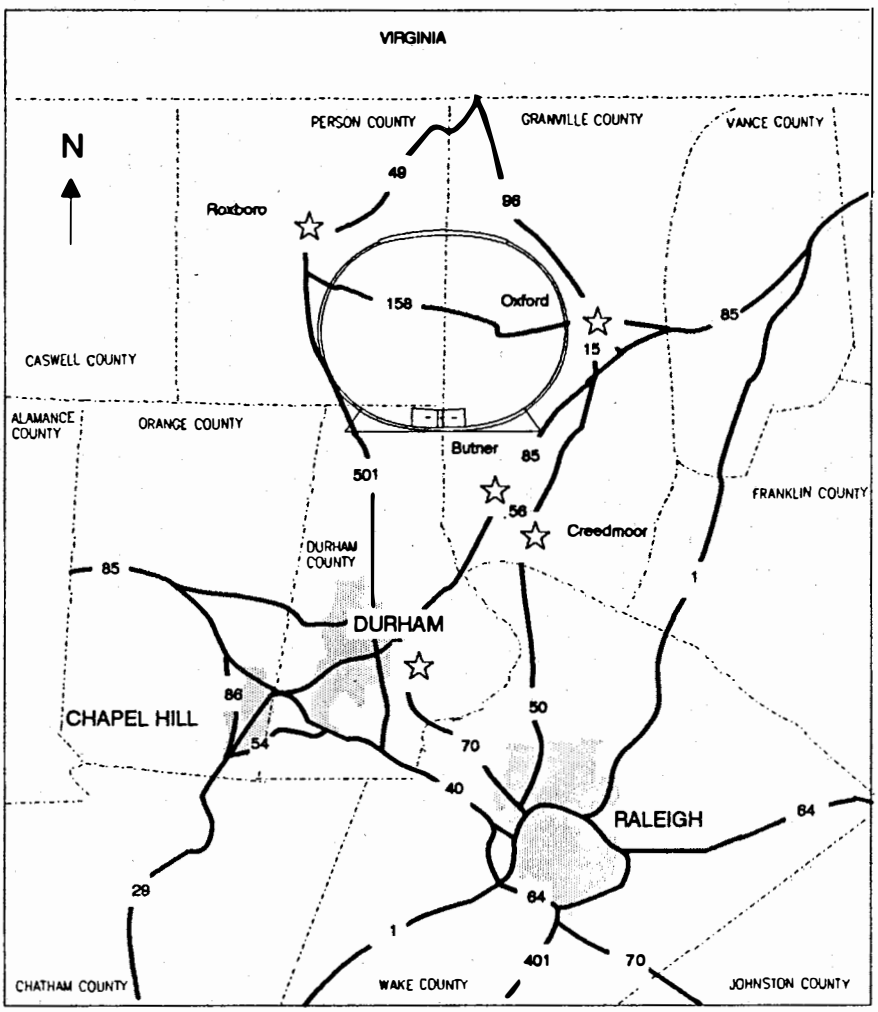


Figure 5.5.8-1

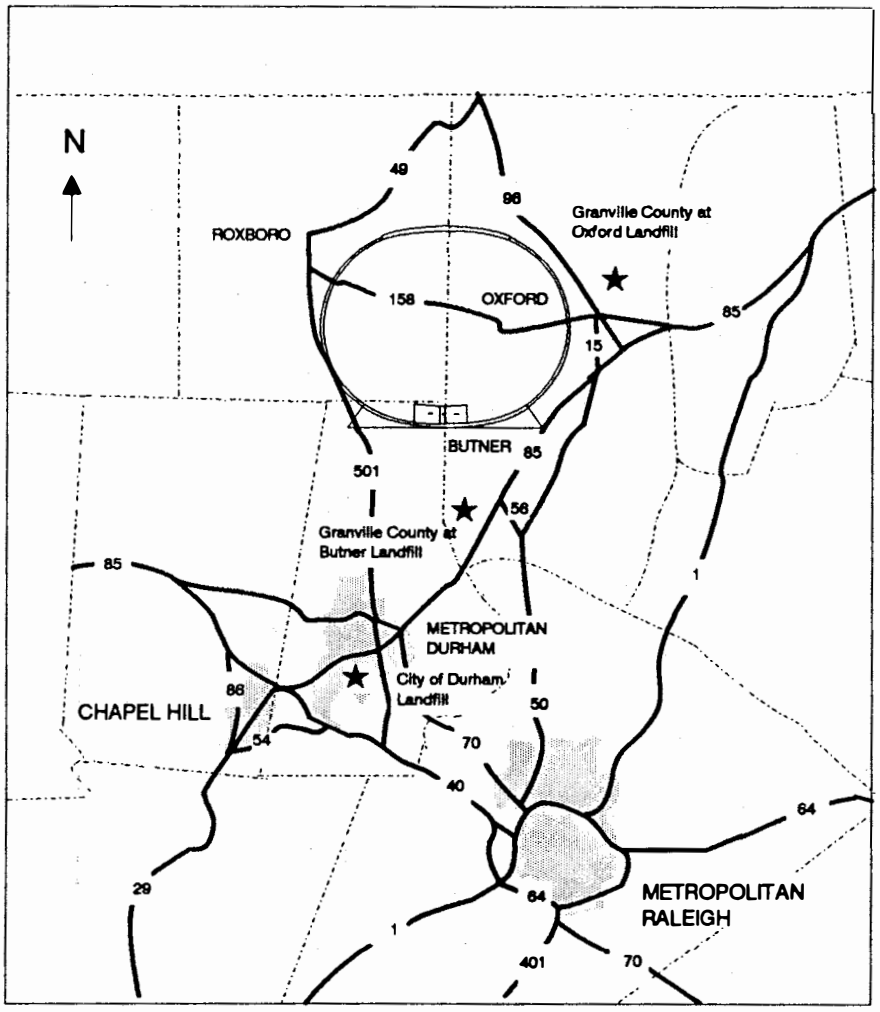
EXISTING SEWAGE TREATMENT FACILITIES - NORTH CAROLINA SITE



☆ Approximate Location of Existing Sewage Treatment Facilities in the North Carolina SSC Area

Figure 5.5.8-2

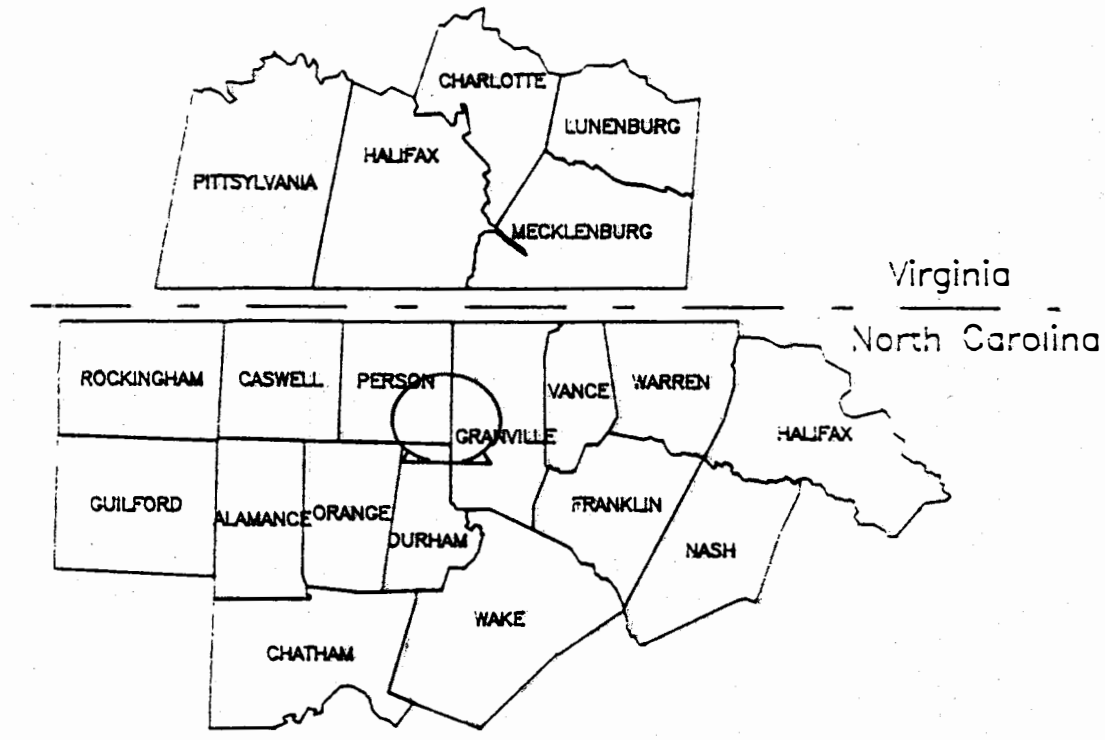
EXISTING SANITARY LANDFILLS - NORTH CAROLINA SITE



★ Approximate Location of Existing Sanitary Landfills in the North Carolina SSC Area

Figure 5.5.11-1

**COUNTIES FOR SOCIOECONOMIC ANALYSIS
NORTH CAROLINA ROI**



Area Mapped

Figure 5.5.11-3

MAJOR TRANSPORTATION SYSTEMS SERVING THE NORTH CAROLINA SITE

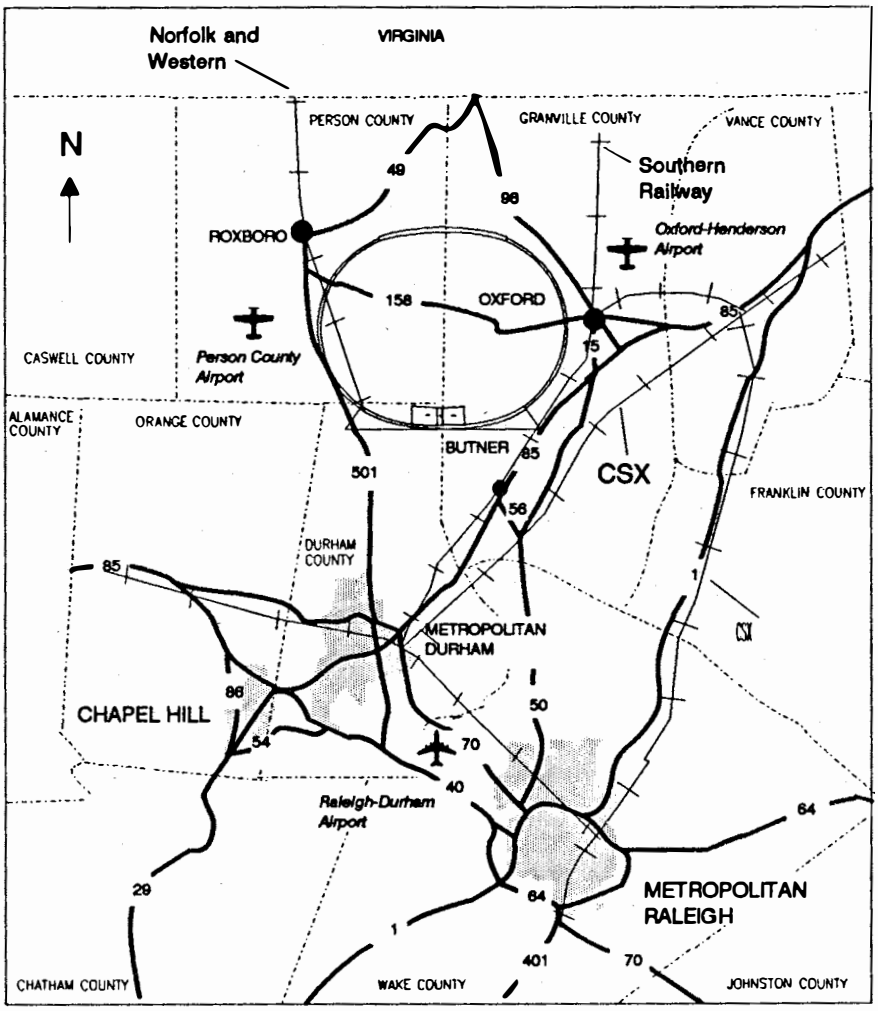
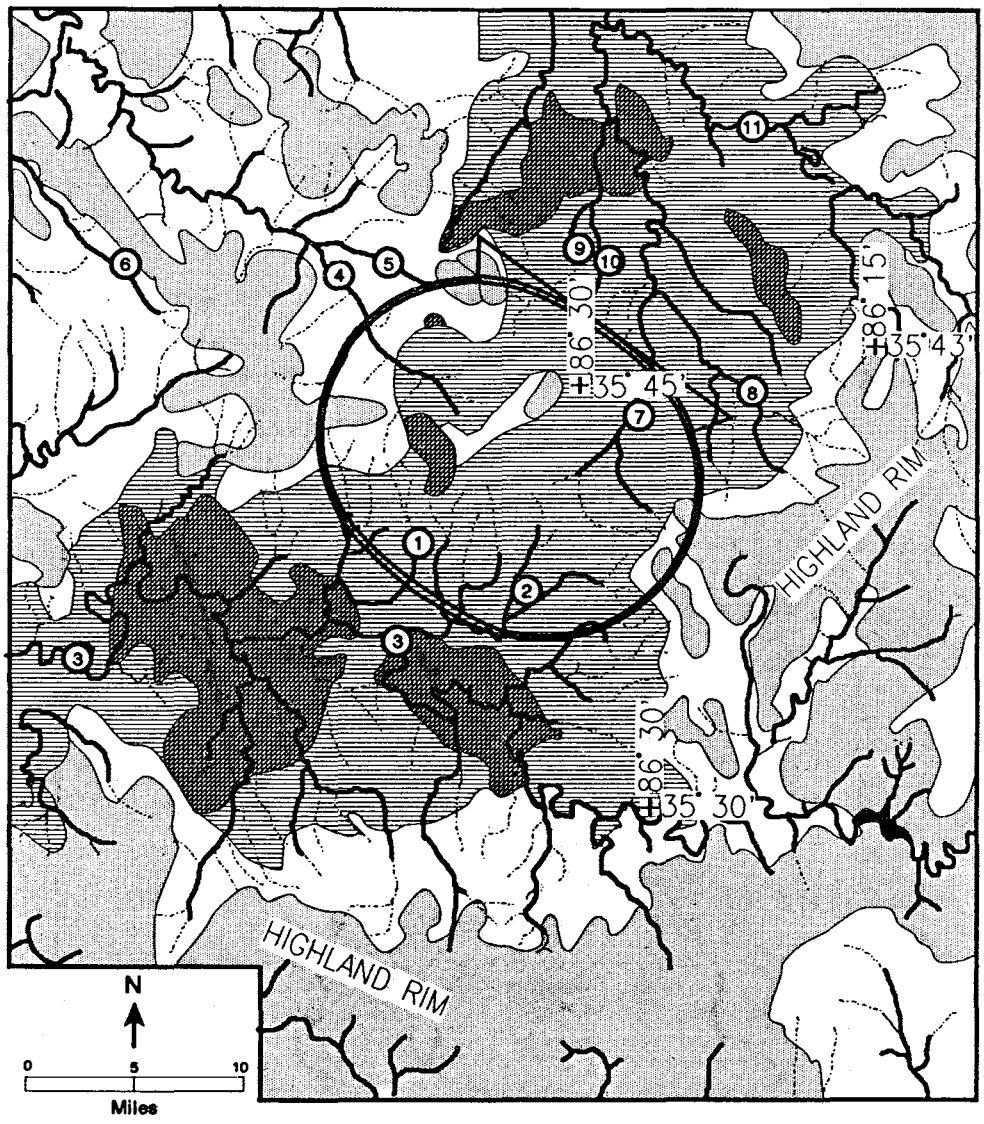


Figure 5.6.1-1

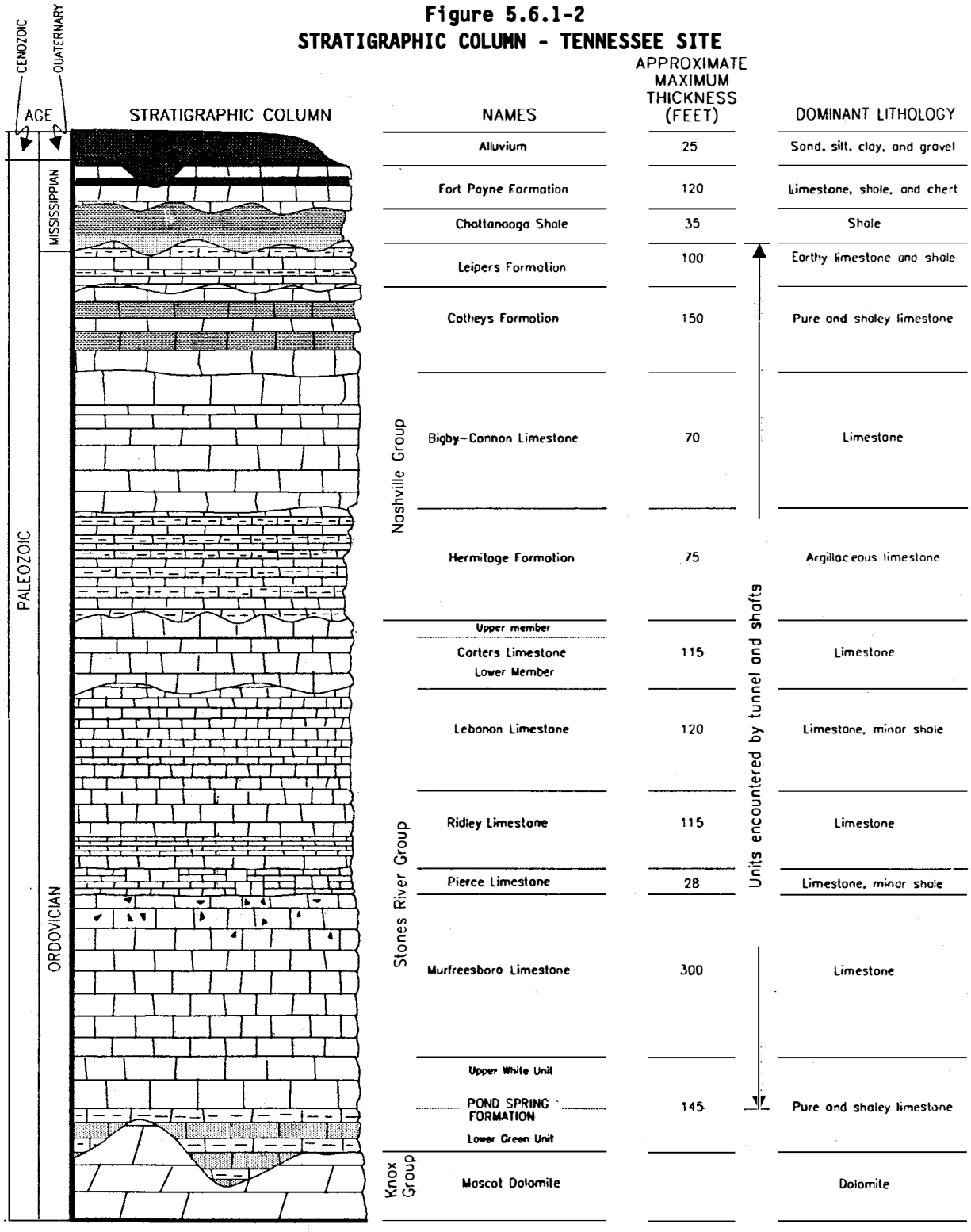
TOPOGRAPHIC SETTING - TENNESSEE SITE



Knobs and hilly highlands
Rolling lowlands
Karst areas with caves, sinkholes and disappearing streams
Areas with high density of karst features
Stream, intermittent flow where dot-dashed

Drainages
1. Wilson Creek
2. Alexander Creek
3. Duck River
4. Harpeth River
5. Nelson Creek
6. West Harpeth Creek
7. West Fork Stones River
8. Middle Fork Stones River
9. Overall Creek
10. Armstrong Creek
11. East Fork Stones River

Figure 5.6.1-2
STRATIGRAPHIC COLUMN - TENNESSEE SITE



Sources: Wilson (1949), Milici and Smith (1969), Galloway (1919), Miller et al. (1966)

Figure 5.6.1-4

GEOLOGIC PROFILE ALONG SSC RING - TENNESSEE SITE

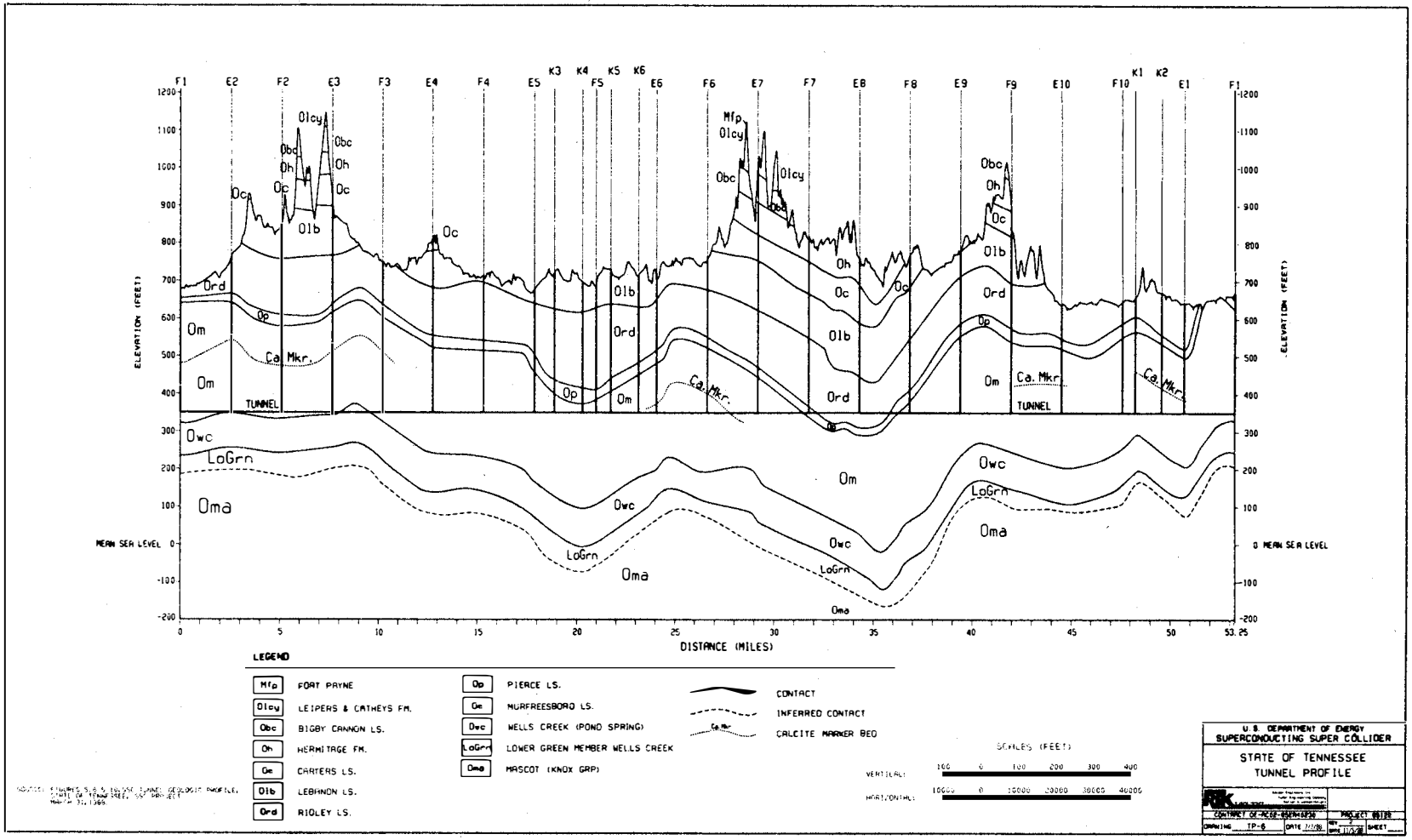


Figure 5.6.1-5

ECONOMIC GEOLOGIC RESOURCES - TENNESSEE SITE

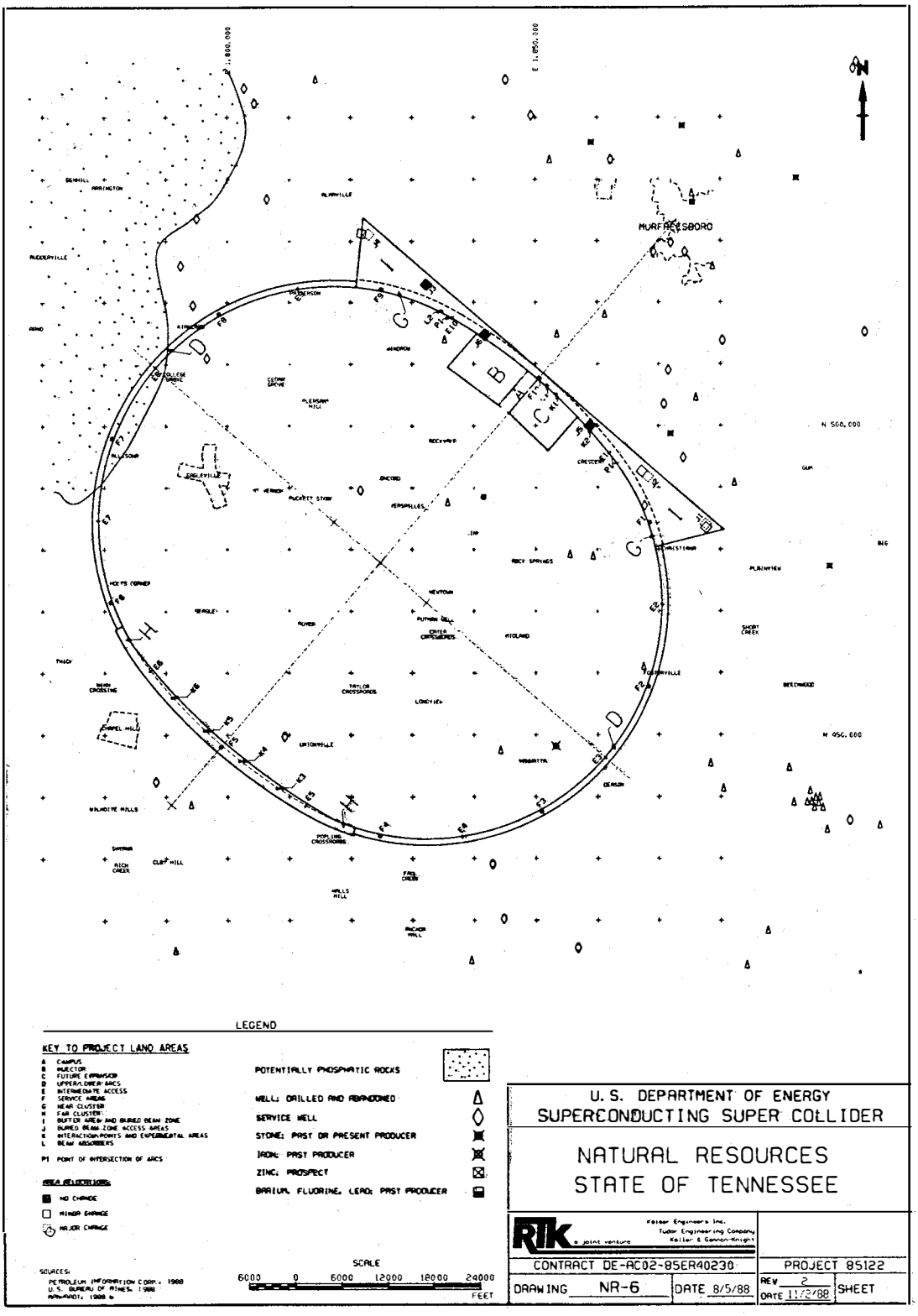
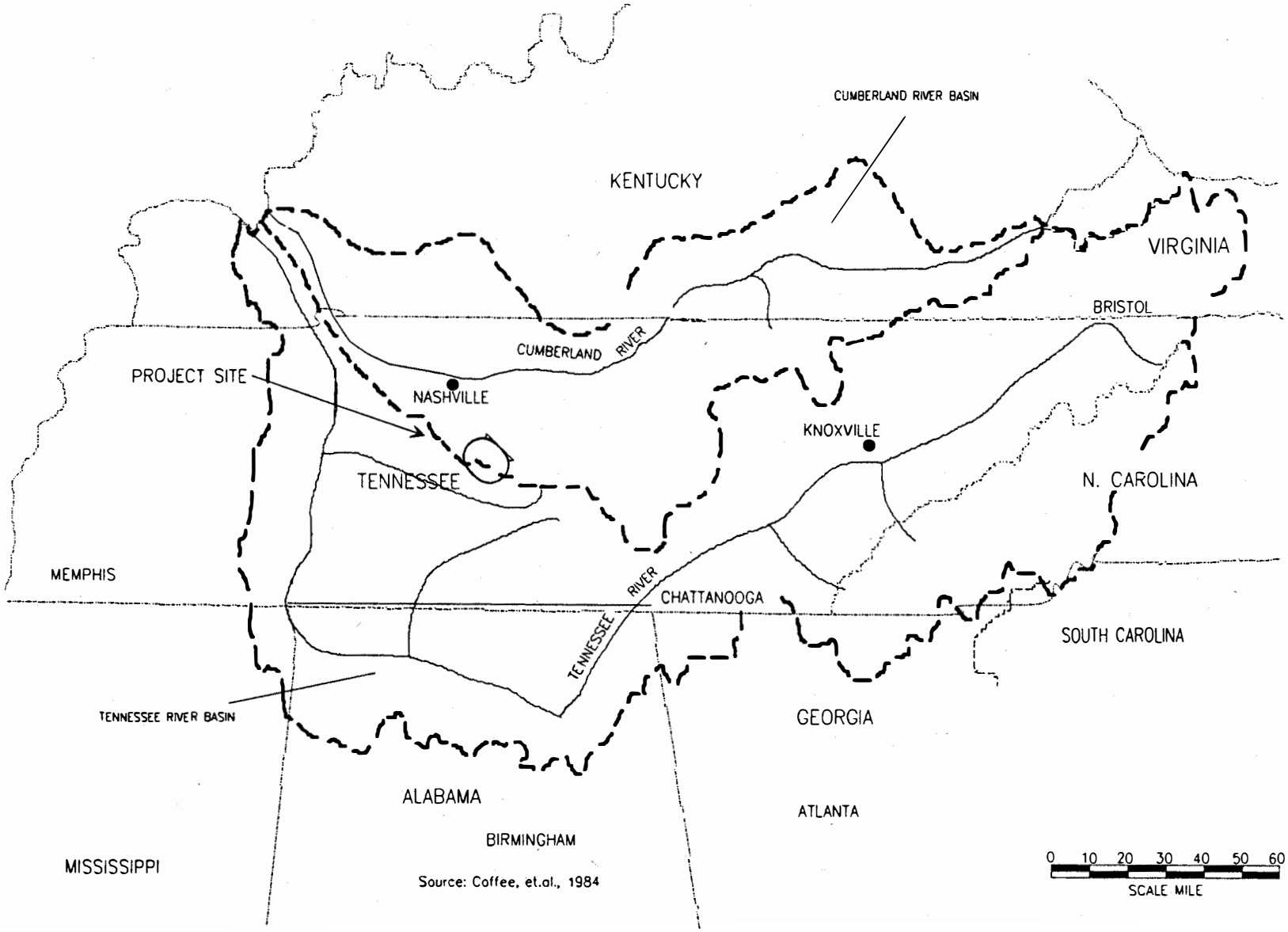


Figure 5.6.2-1

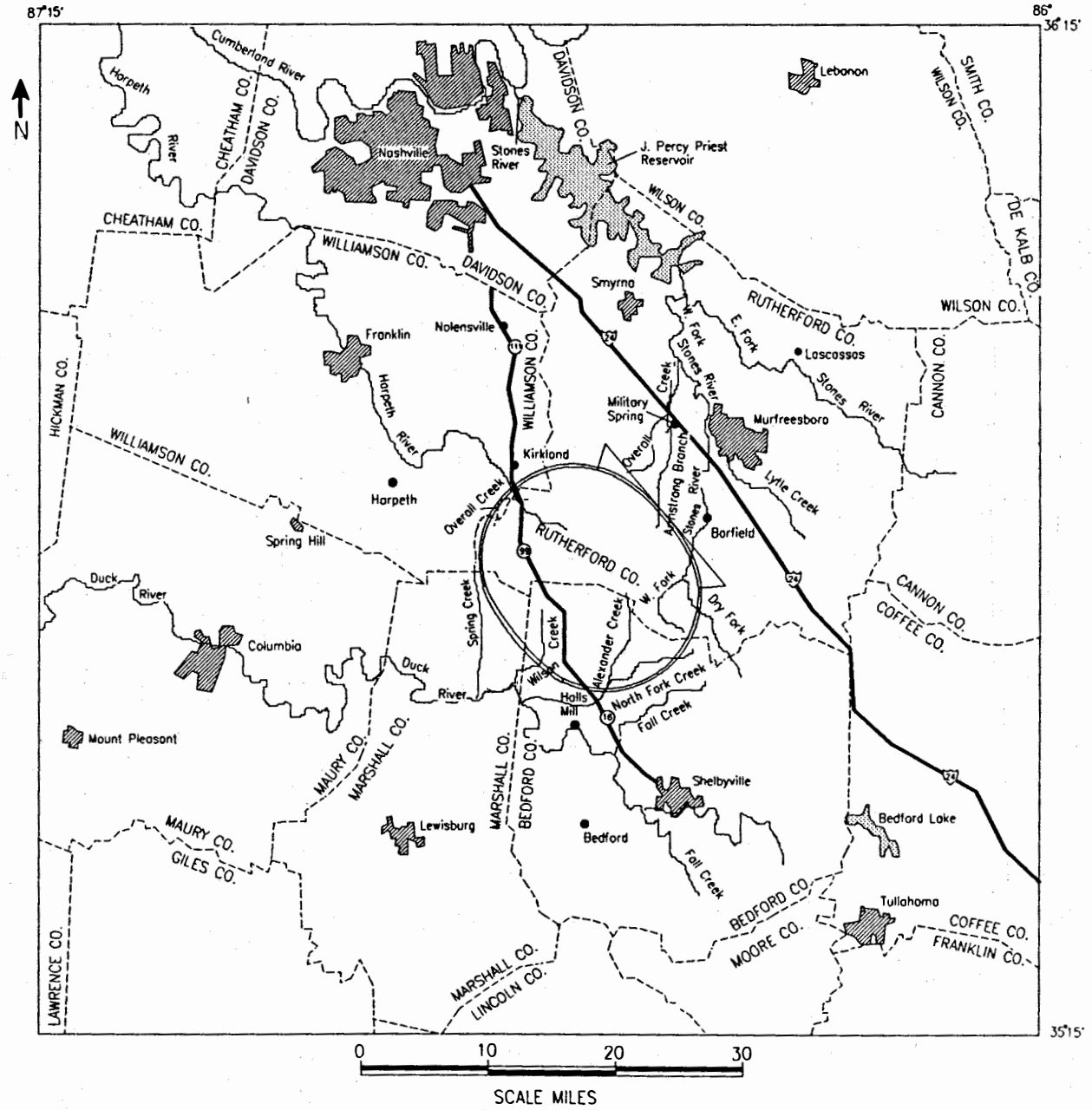
MAJOR WATERSHEDS - TENNESSEE SITE



Source: Coffee, et.al., 1984

Figure 5.6.2-2

HYDROLOGIC FEATURES - TENNESSEE SITE

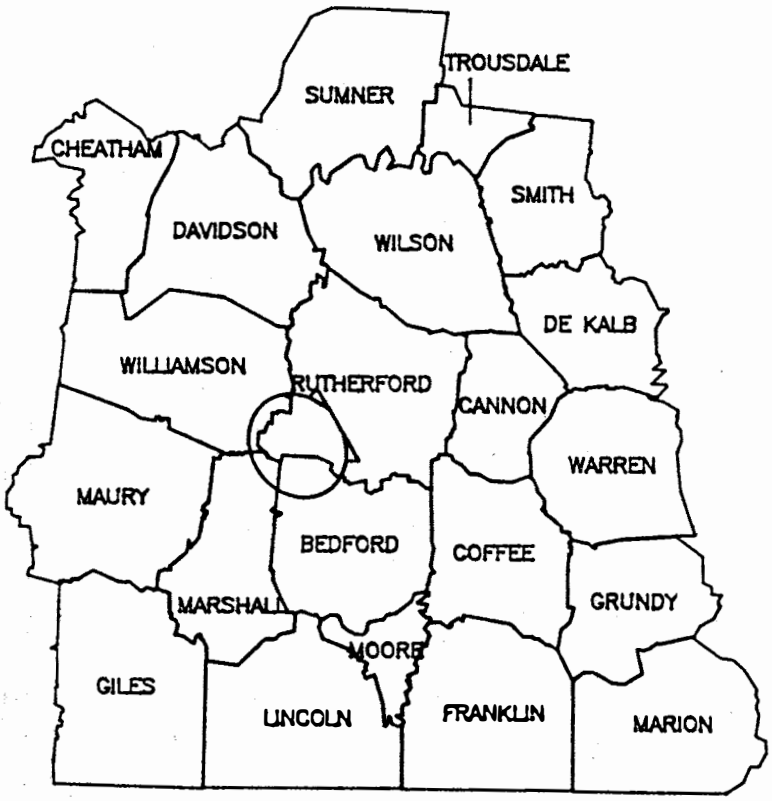


ER4-6F3198876

FEIS Volume IV Appendix 5

Figure 5.6.11-1

**COUNTIES FOR SOCIOECONOMIC ANALYSIS
TENNESSEE ROI**



Area Mapped

Figure 5.7.1-1

TOPOGRAPHIC SETTING - TEXAS SITE

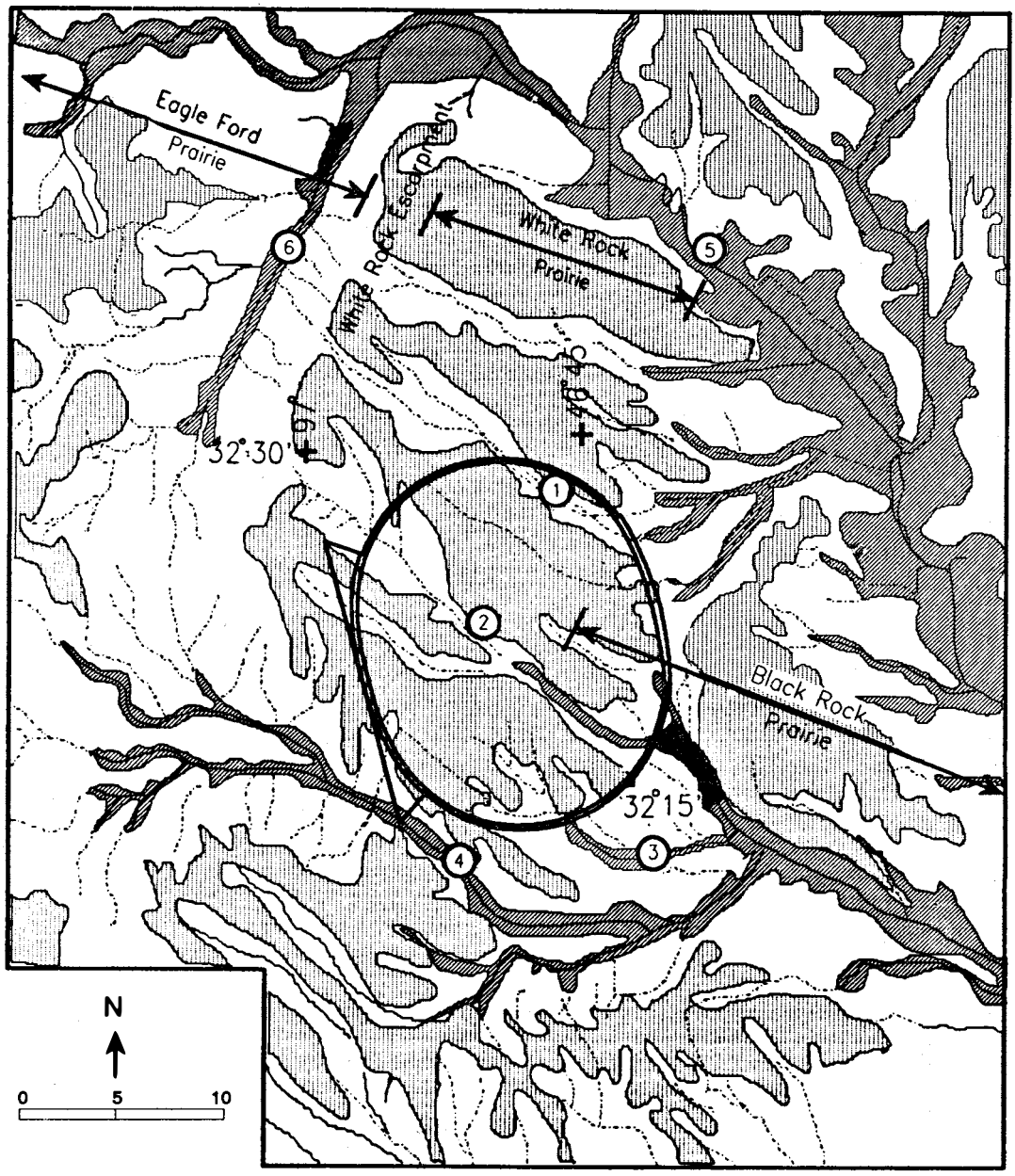
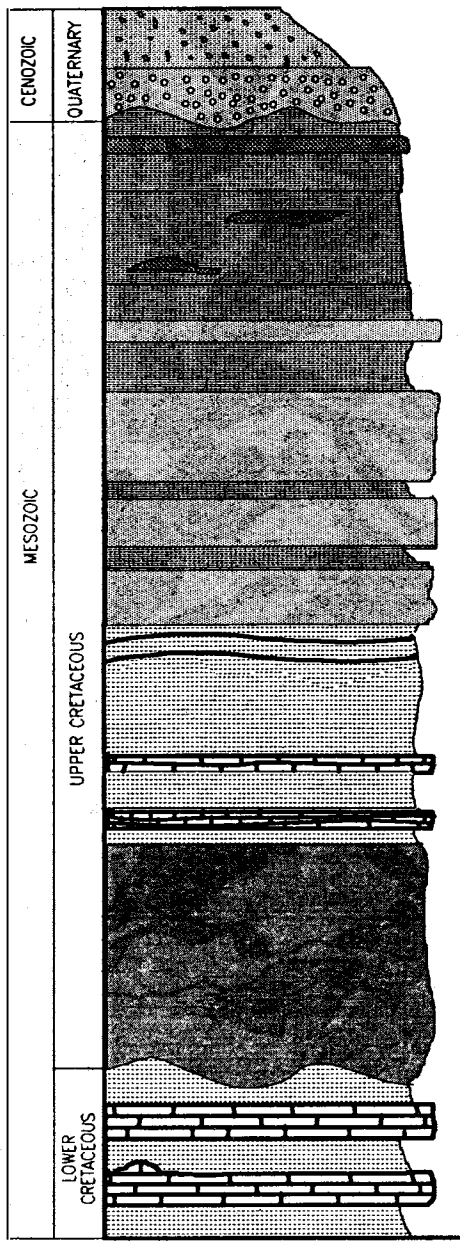


Figure 5.7.1-2

STRATIGRAPHIC COLUMN - TEXAS SITE



NAMES		APPROXIMATE MAXIMUM THICKNESS (FEET)	DOMINANT LITHOLOGY
Recent Alluvium •		20	Gravel, sand, and silt
Terrace Deposits •		50	Gravel, sand, silt, and clay
Navarro Group		490	Marl with interbedded sandstone
Taylor Marl	Wolf City Formation	80	Claystone with sandstone lenses
	Ozan Formation •	500	Claystone with interbedded chalk
Austin Chalk •		500	Chalk with interbedded claystone
South Bosque Formation (Eagle Ford Shale)		470	Shale with bentonite seams and limestone beds
Woodbine Sands		405	Sandstone with some clay and shale
Washita Group		540	Limestone and shale

Sources: Thompson, 1967; Texas Bureau of Economic Geology, 1972; Pessagno, 1969; Shuler, 1918; Peckham et al., 1963; Reaser, 1957.

Figure 5.7.1-3

SURFICIAL GEOLOGY OF TEXAS SITE

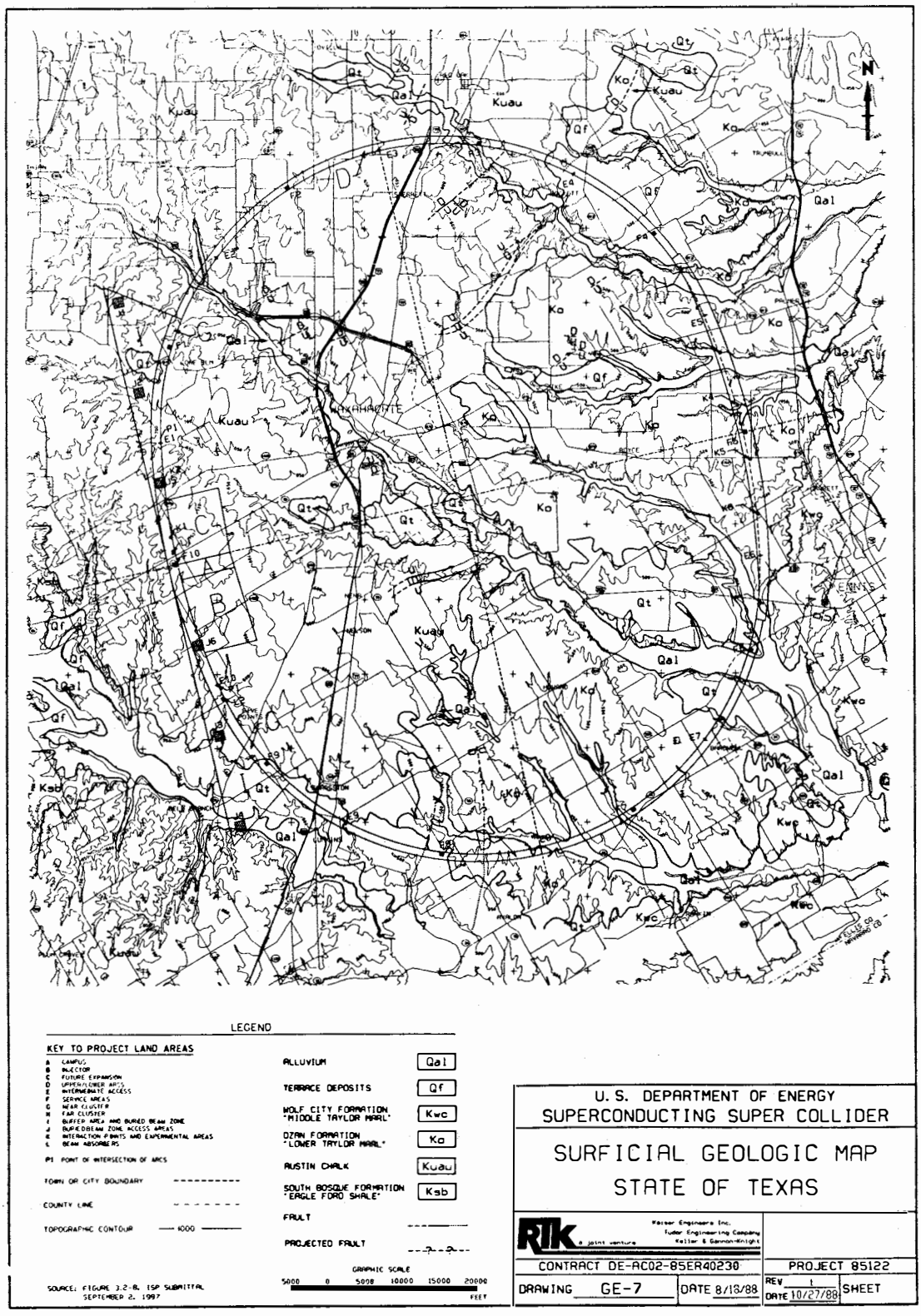


Figure 5.7.1-4

GEOLOGIC PROFILE ALONG SSC RING - TEXAS SITE

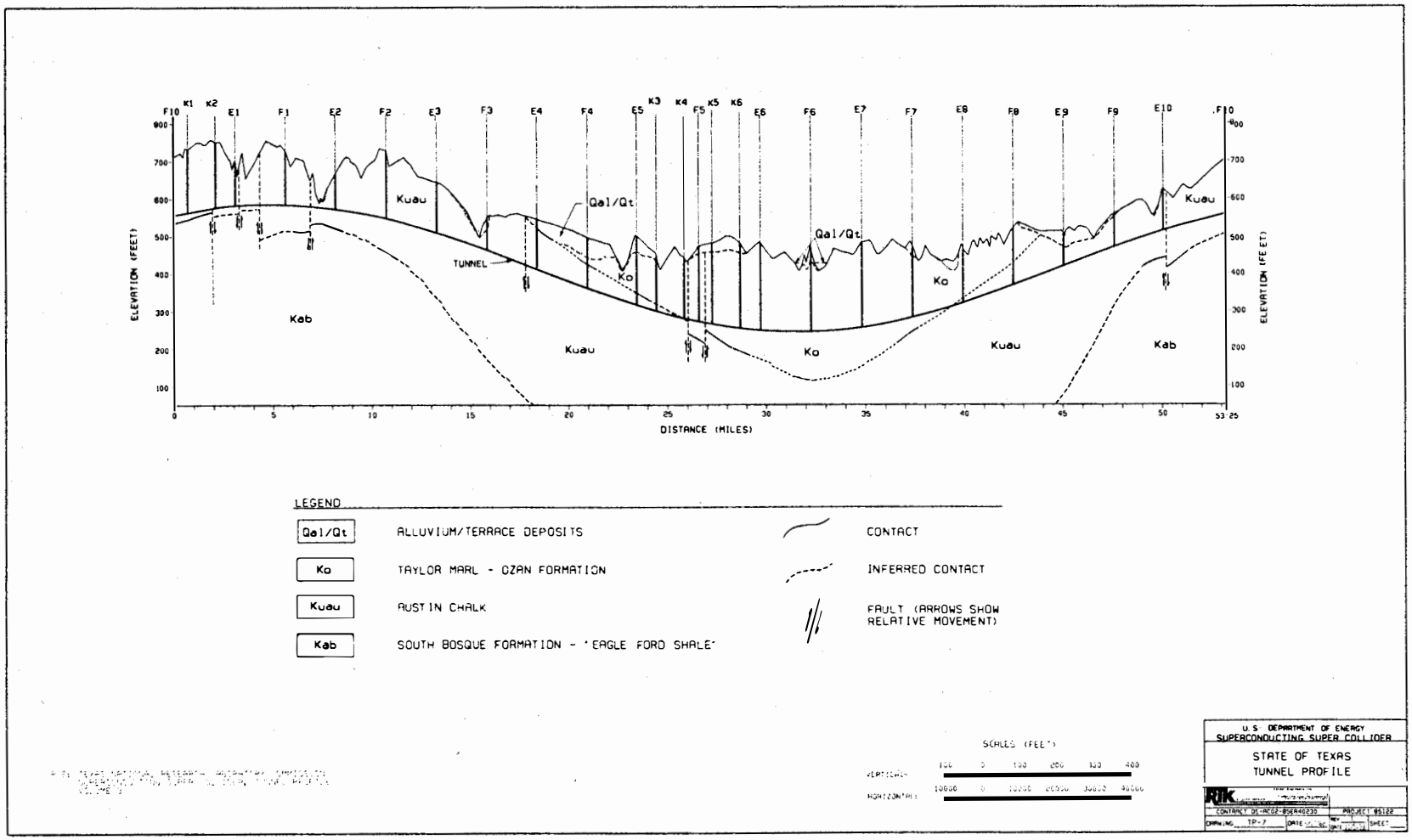


Figure 5.7.1-5

ECONOMIC GEOLOGIC RESOURCES
TEXAS SITE

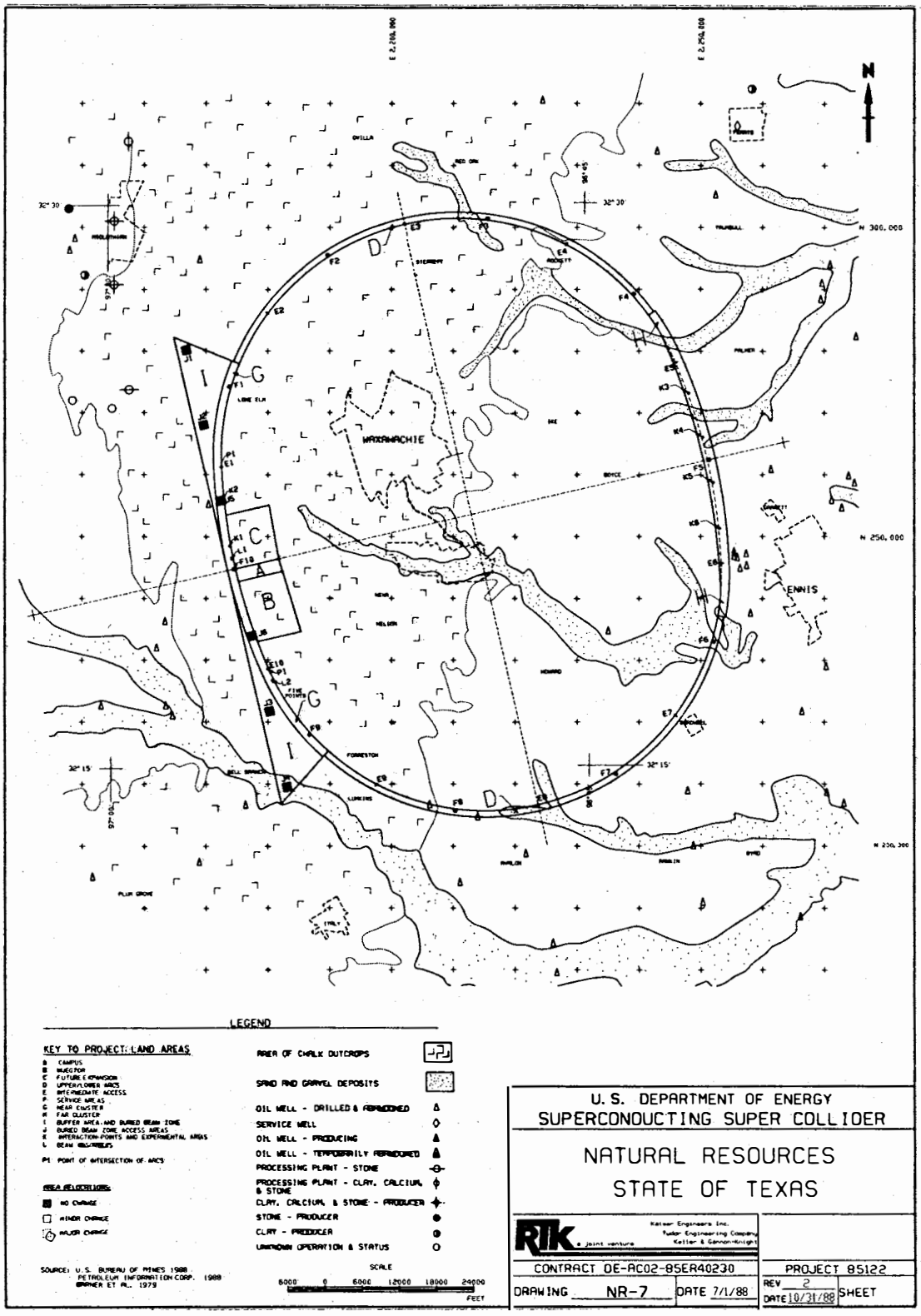


Figure 5.7.2-1

MAJOR WATERSHED - TEXAS SITE

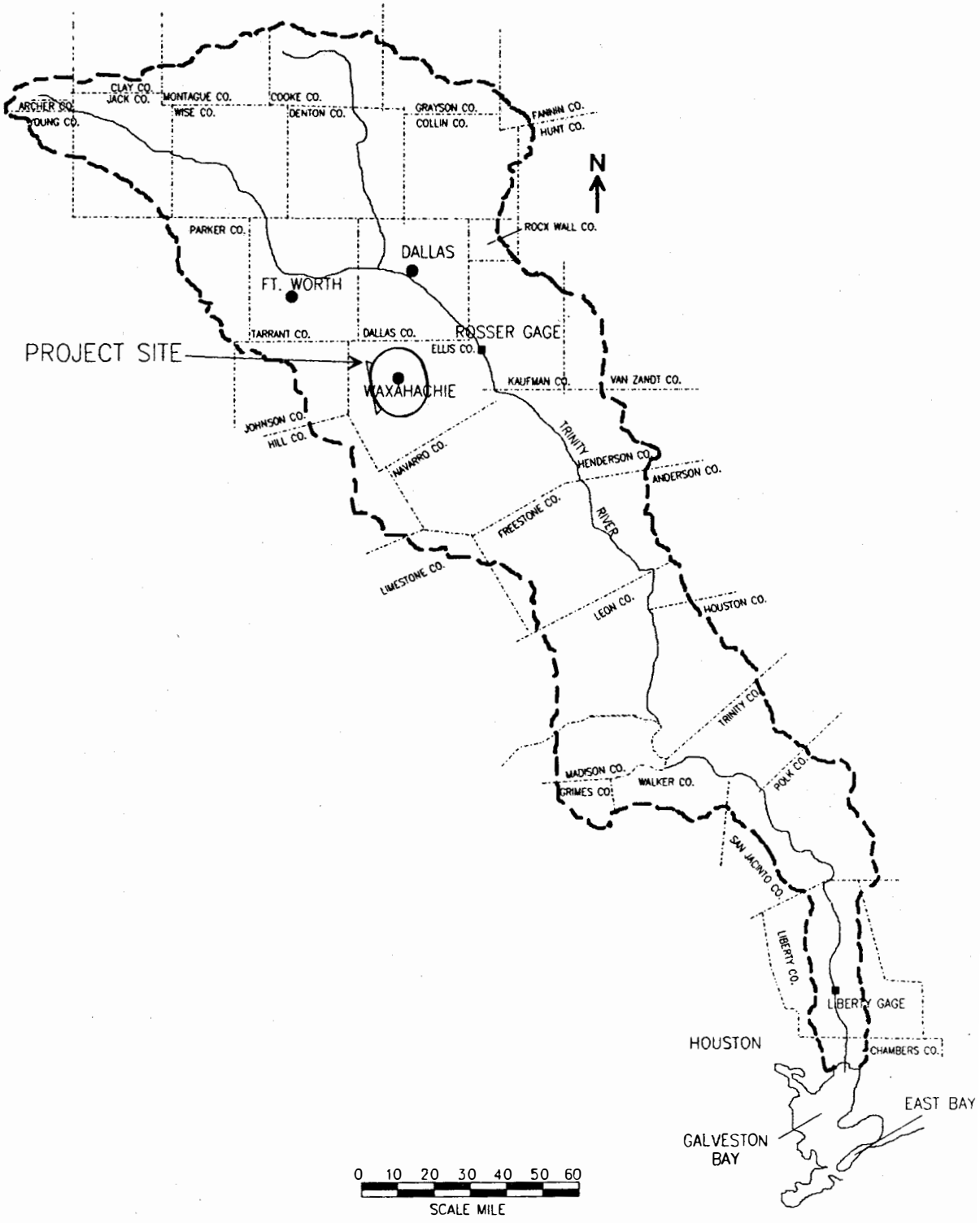


Figure 5.7.2-2

HYDROLOGIC FEATURES - TEXAS SITE

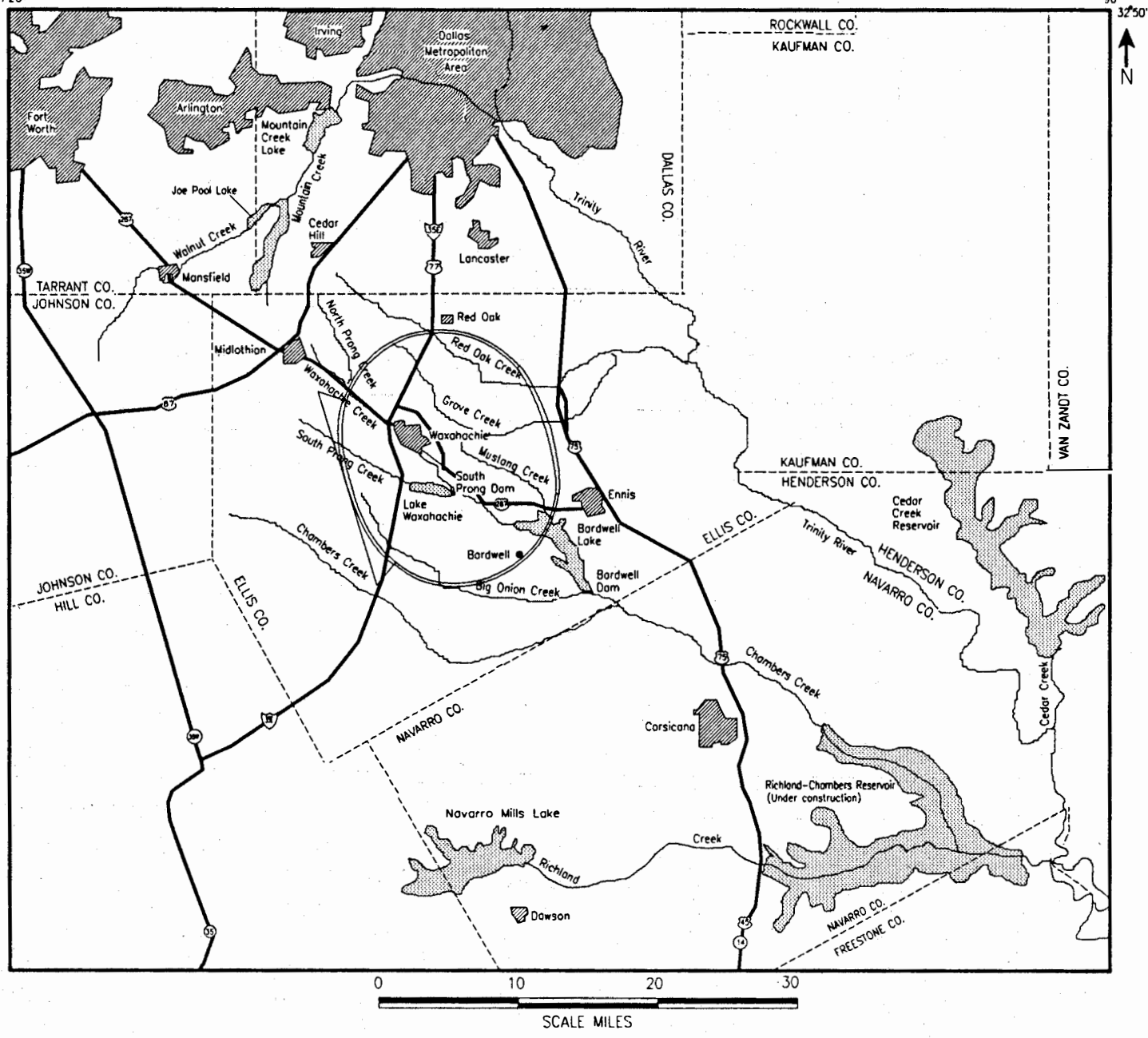


Figure 5.7.9-1

RIVER BASINS AT TEXAS SSC SITE

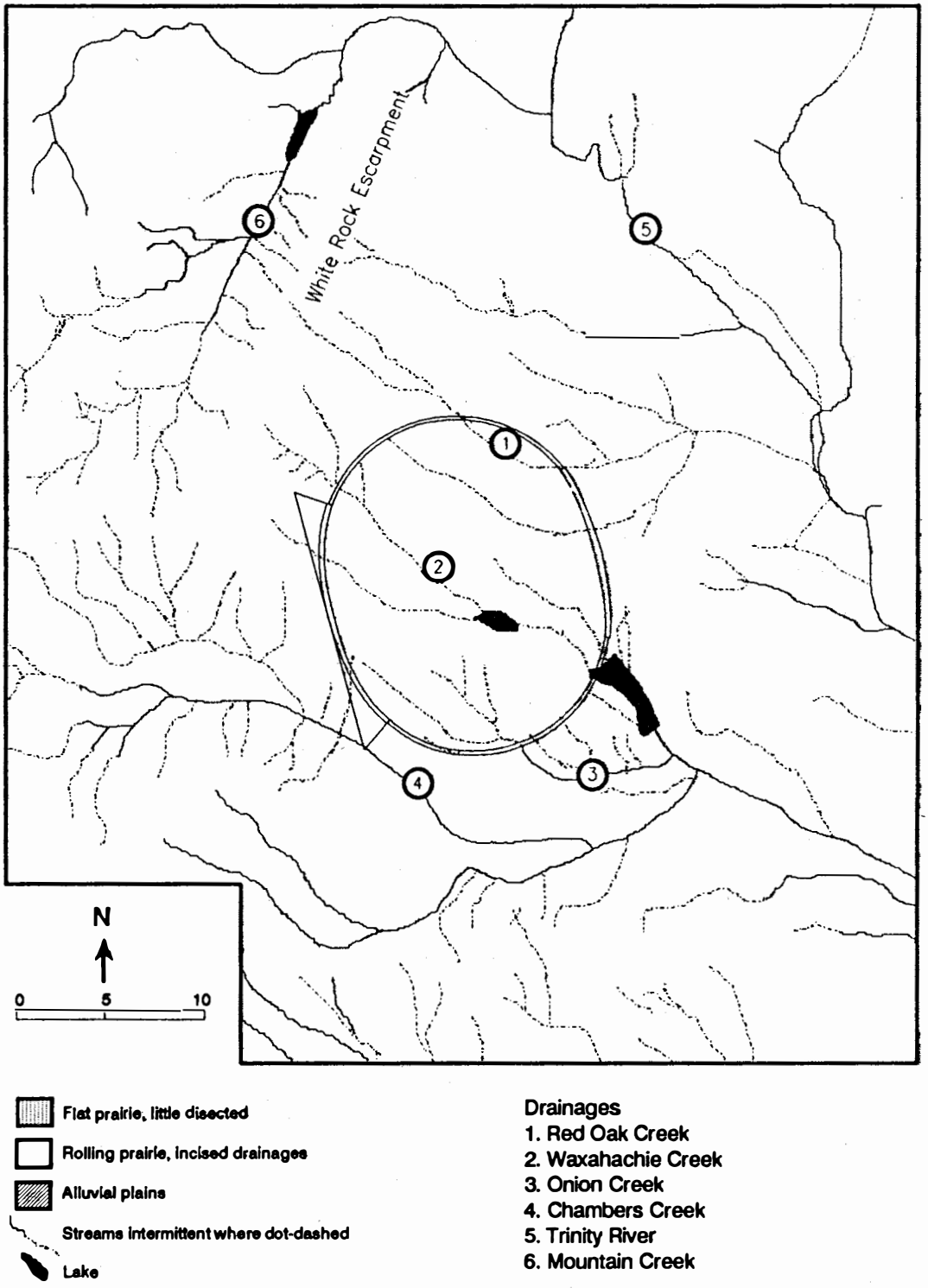
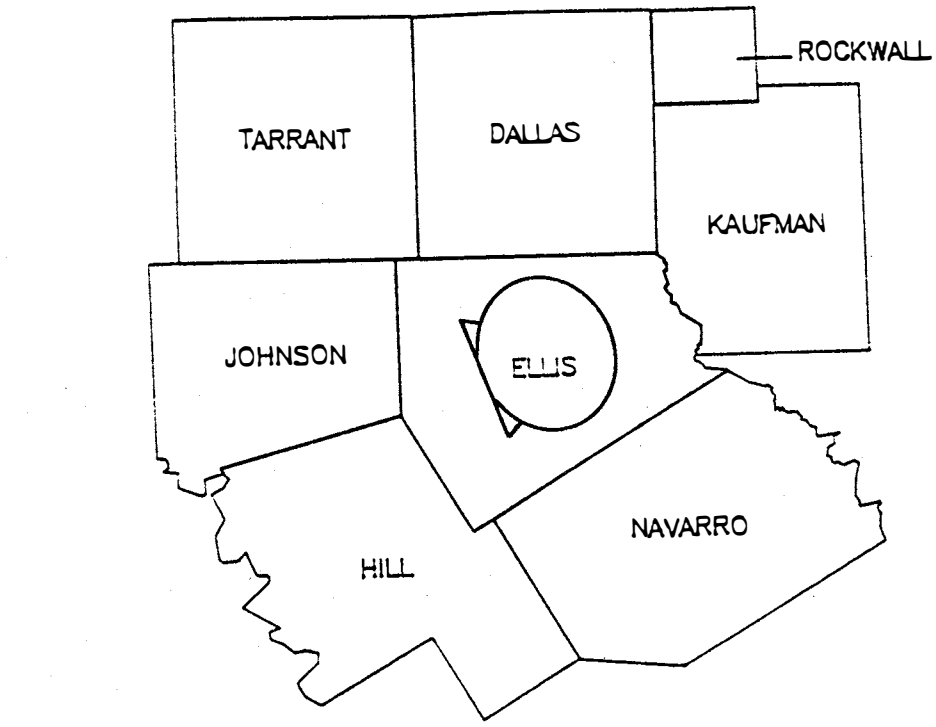
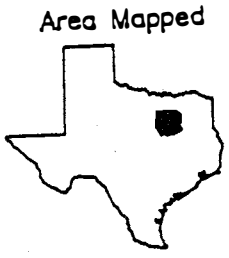


Figure 5.7.11-1

**COUNTIES FOR SOCIOECONOMIC ANALYSIS
TEXAS ROI**





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Final Environmental Impact Statement
Superconducting Super Collider

Volume IV,
Appendix 5
Errata

December 1988