GEOLOGIC LEGEND
(GENERALIZED DESCRIPTION OF ROCK TYPES)

MARINE SEDIMENTARY ROCKS

CENOZOIC — QUATERNARY — Holocene/Pleistocene

Qs — Extensive marine and nonmarine sand deposits, generally near the coast or desert playas.

Q — Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated. Mostly nonmarine, but includes marine deposits near the coast.

CENOZOIC — TERTIARY — Pliocene

P — Sandstone, siltstone, shale, and conglomerate; mostly moderately consolidated.

CENOZOIC — TERTIARY — Miocene

M — Sandstone, shale, siltstone, conglomerate, and breccia; moderately to well consolidated.

CENOZOIC — TERTIARY — Oligocene

O — Sandstone, shale, conglomerate; mostly well consolidated.

CENOZOIC — TERTIARY — Eocene

E — Shale, sandstone, conglomerate, minor limestone; mostly well consolidated.

CENOZOIC — TERTIARY — Paleocene

Tp — Sandstone, shale, and conglomerate; mostly well consolidated.

NONMARINE (CONTINENTAL) SEDIMENTARY ROCKS

Qh — Selected large landslides, such as Blackhawk Slide on north side of San Gabriel Mountains; early to late Quaternary.

Qg — Glacial till and moraines. Found at high elevations mostly in the Sierra Nevada and Klamath Mountains.

QPc — Pliocene and/or Pleistocene sandstone, shale, and gravel deposits; mostly loosely consolidated.

Mc — Sandstone, shale, conglomerate, and fanglomerate; moderately to well consolidated.

Oc — Sandstone, shale, and conglomerate; mostly well consolidated.

Ec — Sandstone, shale, conglomerate; moderately to well consolidated.

Tc — Undivided Tertiary sandstone, shale, conglomerate, breccia, and ancient lake deposits.

VOLCANIC ROCKS

Qrv — Recent (Holocene) volcanic flow rocks; minor pyroclastic deposits.

Qrvp — Recent (Holocene) pyroclastic and volcanic redeposits.

Qv — Quaternary volcanic flow rocks; minor pyroclastic deposits.

Qvp — Quaternary pyroclastic and volcanic redeposits.

Tv — Tertiary volcanic flow rocks; minor pyroclastic deposits.

Tvp — Tertiary pyroclastic and volcanic redeposits.

Ti — Tertiary intrusive rocks; mostly shallow dry polygonal plugs and dikes.

PLUTONIC ROCKS

gCT — Cretaceous (Tertiary) granitic rocks—granite, monzonite, quartz latite, and minor syenite, granodiorite, and granite. Found in the Emporia, Paramount, Antelope, and Greenwater Ranges in southeastern California.

MARINE SEDIMENTARY AND METASEDIMENTARY ROCKS

MESOZOIC — CRETACEOUS — Upper Cretaceous

TK — Sandstone, shale, and minor conglomerate in coastal belt of northwestern California; included by some in Franciscan Complex. Previously considered Cretaceous, but now known to contain early Tertiary microfossils in places.

Ku — Upper Cretaceous sandstone, shale, and conglomerate.

Kl — Lower Cretaceous sandstone, shale, and conglomerate.

K — Undivided Cretaceous sandstone, shale, and conglomerate; minor nonmarine rocks in Peninsular Ranges.

MESOZOIC — JURASSIC

J — Shale, sandstone, minor conglomerate, chert, slate, limestone; minor pyroclastic rocks.

MESOZOIC — TRIASSIC

Tr — Shale, conglomerate, limestone and dolomite, sandstone, slate, hornfels, quartzite; minor pyroclastic rocks.

PALEOZOIC — PERMIAN

Pm — Shale, conglomerate, limestone and dolomite, sandstone, slate, hornfels, quartzite; minor pyroclastic rocks.

PALEOZOIC — CARBONIFEROUS

C — Shale, sandstone, conglomerate, limestone, dolomite, chert, hornfels, marble, quartzite; in part pyroclastic rocks.

PALEOZOIC — DEVONIAN

D — Limestone and dolomite, sandstone and shale; in part tuffaceous.

PALEOZOIC — SILURIAN-ORDOVICIAN

SO — Sandstone, shale, conglomerate, chert, slate, quartzite, hornfels, marble, dolomite, phyllite, some pumiceous.

PALEOZOIC — CAMBRIAN

Ca — Sandstone, shale, limestone, dolomite, chert, quartzite, and phyllite; includes some rocks that are possibly Precambrian.

PRECAMBRIAN

pC — Conglomerate, shale, sandstone, limestone, dolomite, marble, gneiss, hornfels, and quartzite; may be Paleozoic in part.

KJt — Franciscan Complex: Cretaceous and Jurassic sandstone with smaller amounts of shale, chert, limestone, and conglomerate. Includes Franciscan melange, except where separated into Kllm.

Kllm — Melange of fragmented and sheared Franciscan Complex rocks.

KJfs — Blueschist and semi-schist of Franciscan Complex.

KJt / Kllm / KJfs

schi — Schists of various types; mostly Paleozoic or Mesozoic age; some Precambrian.

ls — Limestone, dolomite, and marble whose age is uncertain but probably Paleozoic or Mesozoic.

Pz — Undivided Paleozoic metasedimentary rocks. Includes shale, sandstone, shale, chert, conglomerate, limestone, dolomite, marble, phyllite, schist, hornfels, and quartzite.

MIXED ROCKS

pGmf — Granite and metamorphic rocks, mostly gneiss and other metamorphic rocks injected by granitic rocks. Mesozoic to Precambrian.

m — Undivided pre-Cenozoic metasedimentary and metavolcanic rocks of great variety. Mostly slate, quartzite, hornfels, chert, phyllite, mylonite, schist, gneiss, and minor marble.

pGc — Complex of Precambrian gneisses and metamorphic rocks. Mostly gneiss and schist intruded by igneous rocks; may be Mesozoic in part.

METAVOLCANIC ROCKS

MZv — Undivided Mesozoic volcanic and metavolcanic rocks. Andesite and rhyolite flow rocks, pumiceous volcanic breccia and other pyroclastic rocks; in part strongly metamorphosed. Includes volcanic rocks of Franciscan Complex: basaltic pillow lava, diabase, greenstone, and minor pyroclastic rocks.

pzv — Undivided pre-Cenozoic metavolcanic rocks. Includes basic, dacitic, tuff, and greenstone, commonly schistose.

Pzv — Undivided Paleozoic metavolcanic rocks. Mostly flows, breccia, and tuff, including greenstone, diabase and pillow lavas; minor interbedded sedimentary rocks.

PLUTONIC ROCKS

gMz — Mesozoic granite, quartz monzonite, granodiorite, and quartz diorite.

um — Ultramafic rocks, mostly serpentine. Minor peridotite, gabbro, and diabase. Chiefly Mesozoic.

gb — Gabbro and dark diorite rocks; chiefly Mesozoic.

gr — Undated granitic rocks.

grPz — Paleozoic and Permo-Triassic granitic rocks in the San Gabriel and Klamath Mountains.

gX — Precambrian granite, syenite, anorthosite, and gabbroic rocks in the San Gabriel Mountains; also various Precambrian plutonic rocks distributed in southeastern California.

Geology Legend

FIGURE 3.5-1b

Desert Southwest Transmission Project