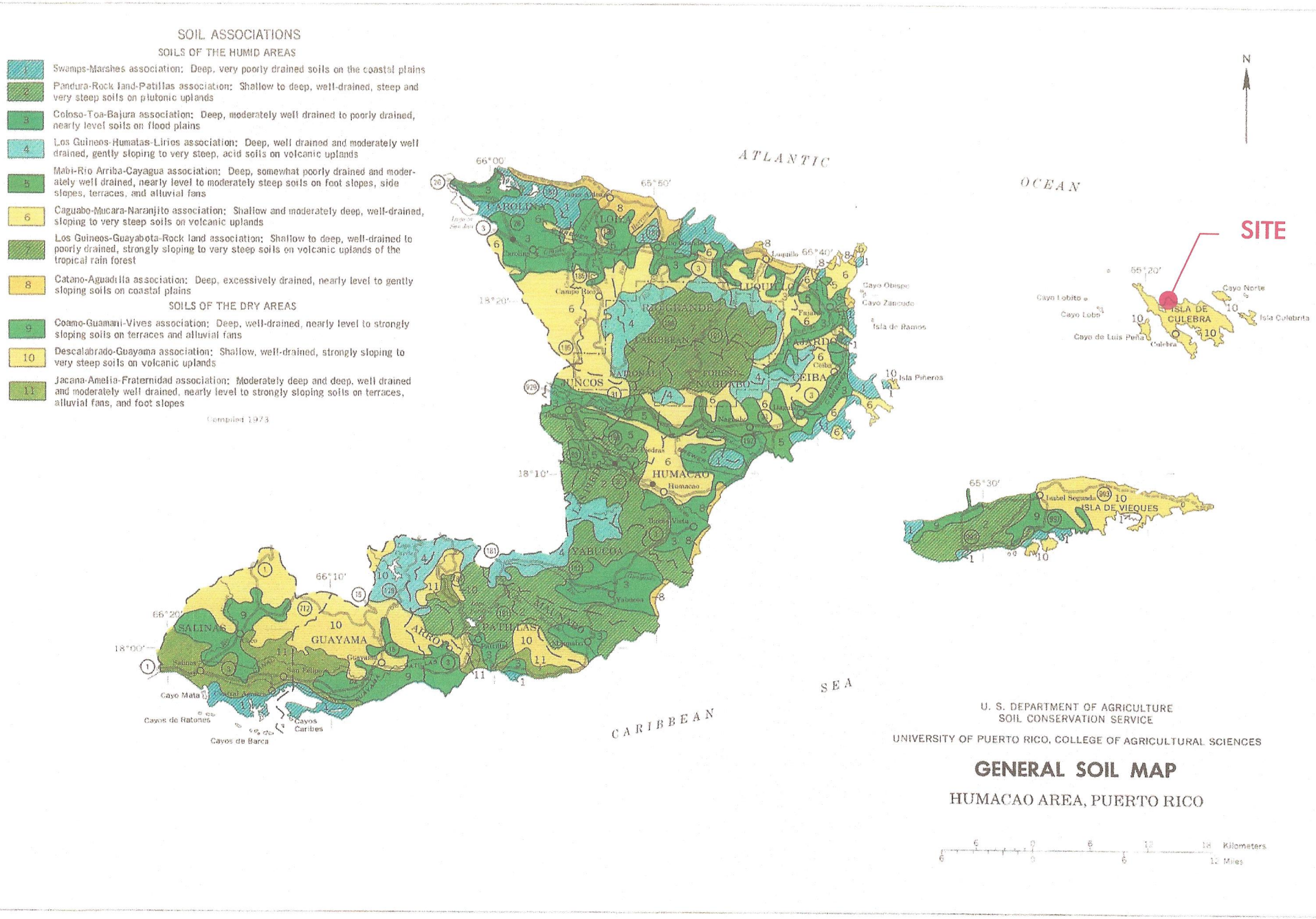
Figura VIII. Mapa de Suelos del Área del Proyecto


SOIL ASSOCIATIONS
SOILS OF THE HUMID AREAS
1 Swamps-Marshes association: Deep, very poorly drained soils on the coastal plains
2 Pandura-Rock land-Patillas association: Shallow to deep, well-drained, steep and very steep soils on plutonic uplands
3 Coloso-Toa-Bajura association: Deep, moderately well drained to poorly drained, nearly level soils on flood plains
4 Los Guineos-Humatas-Lirios association: Deep, well drained and moderately well drained, gently sloping to very steep, acid soils on volcanic uplands
5 Mabi-Rio Arriba-Cayagua association: Deep, somewhat poorly drained and moderately well drained, nearly level to moderately steep soils on foot slopes, side slopes, terraces, and alluvial fans
6 Caguabo-Mucara-Naranjito association: Shallow and moderately deep, well-drained, sloping to very steep soils on volcanic uplands
7 Los Guineos-Guayabota-Rock land association: Shallow to deep, well-drained to poorly drained, strongly sloping to very steep soils on volcanic uplands of the tropical rain forest
8 Catano-Aguadilla association: Deep, excessively drained, nearly level to gently sloping soils on coastal plains
SOILS OF THE DRY AREAS
9 Coamo-Guamani-Vives association: Deep, well-drained, nearly level to strongly sloping soils on terraces and alluvial fans
10 Descalabrado-Guayama association: Shallow, well-drained, strongly sloping to very steep soils on volcanic uplands
11 Jacana-Amelia-Fraternidad association: Moderately deep and deep, well drained and moderately well drained, nearly level to strongly sloping soils on terraces, alluvial fans, and foot slopes
Compiled 1973
ATLANTIC OCEAN
CARIBBEAN SEA
N
SITE
66°00'
65°50'
65°40'
65°20'
66°10'
66°20'
18°20'
18°10'
18°00'
LOIZA
CANOVANAS
LUQUILLO
RIO GRANDE
CAMPO RICO
CAROLINA
LOIZA
LUQUILLO
FAJARDO
CEIBA
NAGUABO
JUNCOS
HUMACAO
YABUCOA
MAUNABO
PATILLAS
ARROYO
GUAYAMA
SALINAS
Cayo Obispo
Cayo Zancudo
Isla de Ramos
Isla Piñeros
Cayo Lobito
Cayo Lobo
Cayo Norte
Isla Culebrita
Cayo de Luis Peña
Culebra
ISLA DE CULEBRA
Isabel Segunda
ISLA DE VIEQUES
Cayo Mata
Cayos de Ratones
Cayos Caribes
Cayos de Barca
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
UNIVERSITY OF PUERTO RICO, COLLEGE OF AGRICULTURAL SCIENCES
GENERAL SOIL MAP
HUMACAO AREA, PUERTO RICO
6 0 6 12 18 Kilometers
6 0 6 12 Miles

SOIL LEGEND

The first capital letter is the initial one of the soil name. A second capital letter, A, B, C, D, E, or F, shows the slope. Most symbols without a slope letter are those of nearly level soils, but some are for land types that have a considerable range of slope. A final number, 2, in the symbol shows that the soil is eroded.

SYMBOL	NAME
AcC	Aceitunas silty clay loam, 5 to 12 percent slopes
Ad	Aguadilla loamy sand
Ag	Aguadilla sandy loam, moderately wet
AmB	Amelia gravelly clay loam, 2 to 5 percent slopes
AmC2	Amelia gravelly clay loam, 5 to 12 percent slopes, eroded
An	Arenales sandy loam
Ar	Arenales sandy loam, gravelly substrotum
Ba	Bajura silty clay, saline
Bc	Bajura clay, frequently flooded
CbD2	Caguabo clay loam, 12 to 20 percent slopes, eroded
CbF2	Caguabo clay loam, 20 to 60 percent slopes, eroded
CdB	Candelero loam, 2 to 5 percent slopes
CdC2	Candelero loam, 5 to 12 percent slopes, eroded
Ce	Cartagena clay
Cf	Catano loamy sand
CgC2	Cayagua sandy loam, 5 to 12 percent slopes, eroded
CgD2	Cayagua sandy loam, 12 to 20 percent slopes, eroded
CIB	Coamo clay loam, 2 to 5 percent slopes
CIC	Coamo clay loam, 5 to 12 percent slopes
Cm	Coastal beaches
Cn	Cobbly alluvial land
Co	Coloso silty clay loam, occasionally flooded
Cr	Coloso silty clay
Cs	Corcega sandy loam
DaC	Daguao silty clay loam, deep variant, 2 to 12 percent slopes
DcE2	Daguao clay, 20 to 40 percent slopes, eroded
DeC2	Descalabrado clay loam, 5 to 12 percent slopes, eroded
DeE2	Descalabrado clay loam, 20 to 40 percent slopes, eroded
DgF2	Descalabrado and Guayama soils, 20 to 60 percent slopes, eroded
DrF	Descalabrado-Rock land complex, 40 to 60 percent slopes
FaC	Fajardo clay, 2 to 10 percent slopes
FaC2	Fajardo clay, 2 to 10 percent slopes, eroded
Fo	Fortuna clay
FrA	Fraternidad clay, 0 to 2 percent slopes
FrB	Fraternidad clay, 2 to 5 percent slopes

* The composition of these units is more variable than that of the other units in the survey area but has been controlled well enough to interpret for the expected use of the soils.

SYMBOL	NAME
Gm	Guamani silty clay loam
GuE2	Guayabota silty clay loam, 20 to 40 percent slopes, eroded
GvF	Guayabota-Ciales-Picacho association, very steep *
GyC2	Guayama clay loam, moderately deep variant, 2 to 12 percent slopes, eroded
HmB	Humacao loam, 2 to 5 percent slopes
HtE2	Humatas clay, 20 to 40 percent slopes, eroded
HtF2	Humatas clay, 40 to 60 percent slopes, eroded
HuF	Humatas-Stony land complex, 40 to 60 percent slopes
InE2	Ingenio silty clay loam, 20 to 40 percent slopes, eroded
JaB	Jacana clay, 2 to 5 percent slopes
JaC2	Jacana clay, 5 to 12 percent slopes, eroded
JgE2	Jagueyes loam, 20 to 40 percent slopes, eroded
JuC	Junquitos gravelly clay loam, 5 to 12 percent slopes
Lc	Leveled clayey land
LeE2	Limones silty clay, 20 to 40 percent slopes, eroded
LoC2	Lirios clay loam, 3 to 10 percent slopes, eroded
LrE2	Lirios silty clay loam, 20 to 40 percent slopes, eroded
LsD	Los Guineos silty clay loam, 12 to 20 percent slopes
LsE2	Los Guineos silty clay loam, 20 to 40 percent slopes, eroded
LsF2	Los Guineos silty clay loam, 40 to 60 percent slopes, eroded
LyF	Los Guineos-Yunque-Stony rock land association, steep *
MaB	Mabi clay, 0 to 5 percent slopes
MaC2	Mabi clay, 5 to 12 percent slopes, eroded
MaD2	Mabi clay, 12 to 20 percent slopes, eroded
McA	Machete loam, 0 to 2 percent slopes
McB	Machete loam, 2 to 5 percent slopes
Md	Made land
Me	Maunabo clay
MIC	Mayo loam, 3 to 10 percent slopes
MrB	Meros sand, 1 to 6 percent slopes
MuD2	Mucara silty clay loam, 12 to 20 percent slopes, eroded
MuE2	Mucara silty clay loam, 20 to 40 percent slopes, eroded
NaE2	Naranjito silty clay loam, 20 to 40 percent slopes, eroded
NaF2	Naranjito silty clay loam, 40 to 60 percent slopes, eroded
PaE2	Pandura loam, 12 to 40 percent slopes, eroded
PaF2	Pandura loam, 40 to 60 percent slopes, eroded
PdF	Pandura-Very stony land complex, 40 to 60 percent slopes
PeC2	Parcelas clay, 5 to 12 percent slopes, eroded

SYMBOL	NAME
PIB	Paso Seco clay, 0 to 5 percent slopes
PmD2	Patillas clay loam, 12 to 20 percent slopes, eroded
PmE2	Patillas clay loam, 20 to 40 percent slopes, eroded
Pn	Pinones silty clay
Po	Poncena clay
PrC2	Pozo Blanco clay loam, 5 to 12 percent slopes, eroded
Re	Reilly soils
Rp	Reparada clay
RrB	Rio Arriba clay, 2 to 5 percent slopes
RrC2	Rio Arriba clay, 5 to 12 percent slopes, eroded
Rs	Rock land
Ru	Rough stony land
SaE2	Sabana silty clay loam, 20 to 40 percent slopes, eroded
SaF2	Sabana silty clay loam, 40 to 60 percent slopes, eroded
Sm	Salt water marsh
Ta	Talante soils
TeE	Teja gravelly sandy loam, 12 to 40 percent slopes
Tf	Tidal flats
Ts	Tidal swamp
Tt	Toa silty clay loam
UpF	Utuado-Picacho-Stony rock land association, very steep *
Va	Vayas silty clay loam, occasionally flooded
Vc	Vayas silty clay, frequently flooded
VeB	Vega Alta silty clay loam, 2 to 5 percent slopes
VeC	Vega Alta silty clay loam, 5 to 12 percent slopes
VgA	Vega Baja silty clay loam, 0 to 3 percent slopes
VIC	Vio silty clay loam, 3 to 10 percent slopes
VmC	Vieques loam, 5 to 12 percent slopes
VmE2	Vieques loam, 12 to 40 percent slopes, eroded
Vs	Vives silty clay loam, high bottom
VvA	Vives clay, 0 to 2 percent slopes
VvB	Vives clay, 2 to 7 percent slopes
Vw	Vivi loam
Wa	Wet alluvial land
YuF2	Yunes silty clay loam, 20 to 60 percent slopes, eroded

Figura IX. Mapa de Calificacion Municipal del Proyecto

Figura X. Mapa de Zonificacion del Area del Proyecto

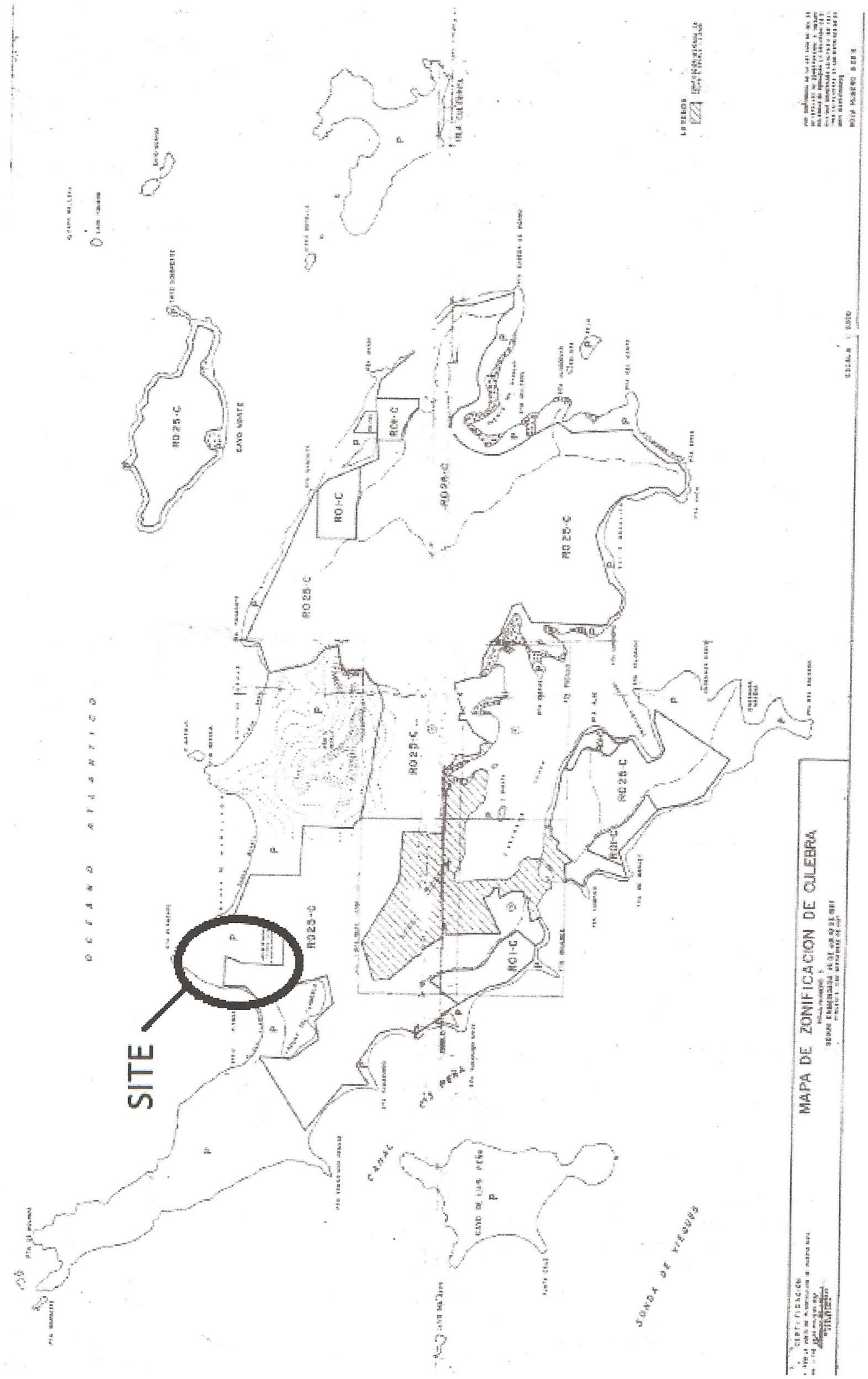


Figura XI. Plano de Controles de Erosión (Plan CES)

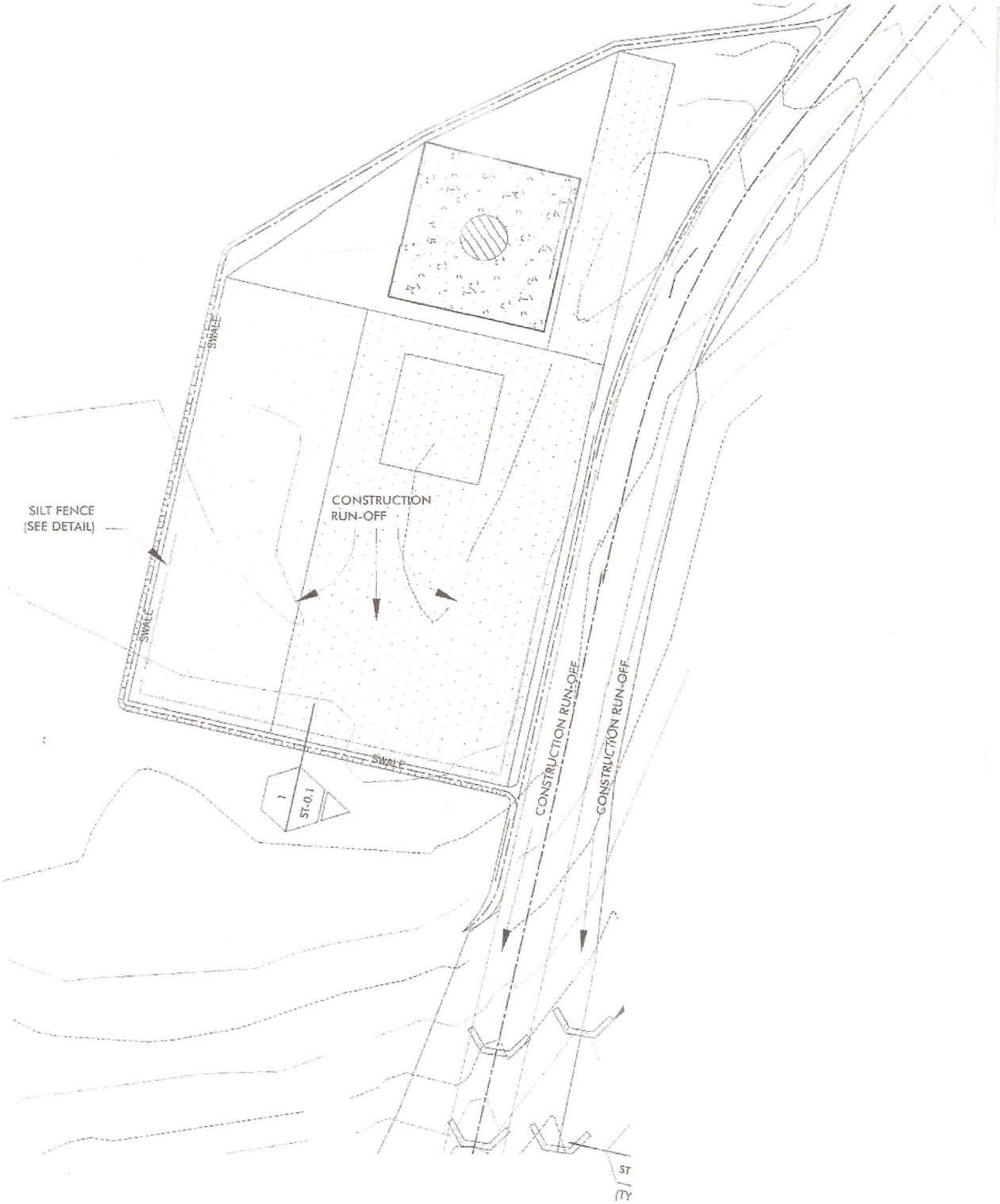
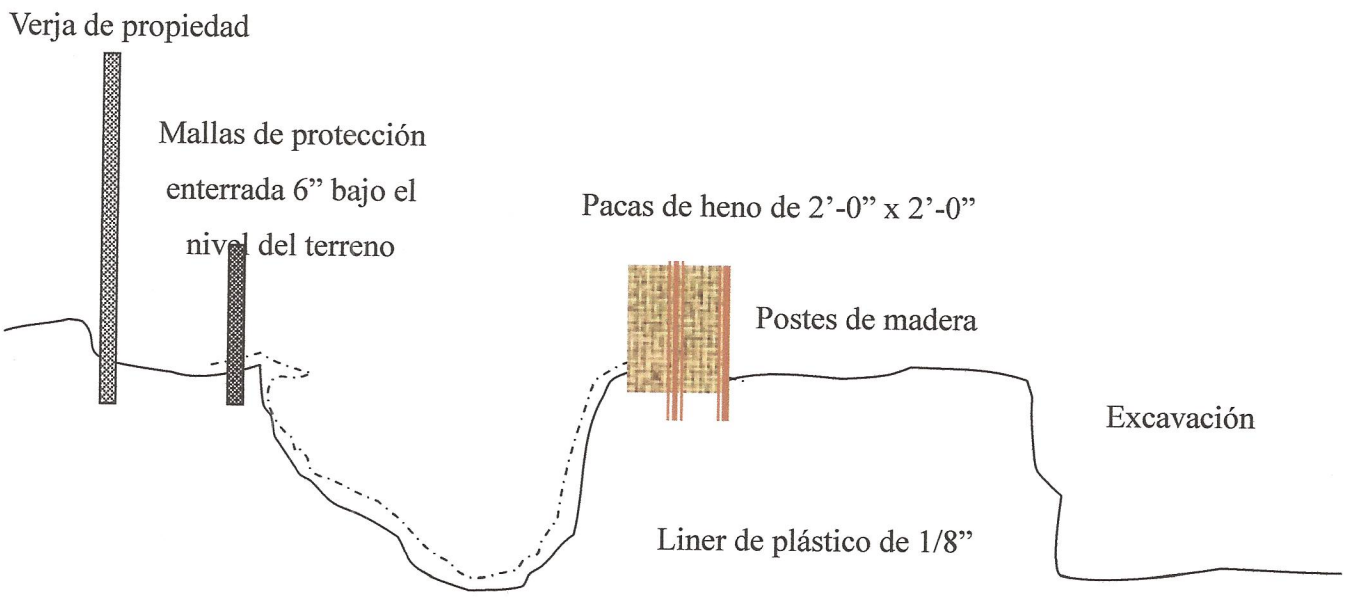


Figura XII. Plano con Detalles Típicos de Controles de Erosión

Detalles Típicos de Controles de Erosión



Detalle de Trinchera de drenaje (si alguna) con liner de plástico, mallas y pacas de heno (de ser necesario)