APPENDIX "B"

INFRASTRUCTURE PLANNING

Revised March, 1996

INFRASTRUCTURE PLANNING

I. Introduction

While the issuance of the Section 10(a) permit will provide a broad grant of authority to allow habitat conversions throughout the BCCP conservation area, there are nevertheless many public infrastructure projects and activities which must continue to operate and be expanded, in some cases inside or along the boundaries of designated preserves. To the extent possible, it is advantageous to all parties concerned to specify all likely CIP (Capital Improvements Program) construction, service extensions, routine operations and maintenance work, and the geographical extent of those operations, in and adjacent to preserves. Any opportunity for mitigating the impacts of infrastructure on species of concern should be planned and pursued. This section of the plan contains detailed definitions, guidelines, and tables which relate to the designation, construction, operation, and maintenance of utility and infrastructure corridors in or adjacent to the BCCP preserve system.

The intent of designing infrastructure corridors is to assure that new utility facilities and corridors that have the potential to impact designated habitat preserves adversely will be routed within specified "infrastructure corridors" which define the placement or alignment of utility facilities in the immediate vicinity of the preserves. Examples of facilities which will be constructed at specific site locations include water and wastewater treatment plants, pump stations, and substations. Examples of facilities which will be constructed along infrastructure corridors include easements and right-of-ways (ROWs) for roads and electric, gas, telephone, cable, water and wastewater transmission and distribution lines. Such easements and right-of-ways are limited to the legitimate needs of that utility or service provider and should not be transferred or used for non-utility purposes.

The principal objective is to provide future community services and facilities in a manner consistent with the objectives of habitat conservation, i.e., in a manner which minimizes habitat conversions and fragmentation. A second objective is to reduce the overall economic cost of providing public services to the area. Planning in advance for future infrastructure needs and delimiting the number and location of infrastructure corridors in and adjacent to preserve areas will aid in accomplishing these objectives.

Ultimate decisions on the locations, construction, operation, and maintenance of utilities within infrastructure corridors must remain with the responsible service provider or agency, after consultation with the BCCP Coordinating Committee. Access for repair and maintenance of facilities will be allowed, with reasonable restrictions to ensure plan compatibility.

Conflict Resolution Process.

Service providers and the Coordinating Committee Secretary shall negotiate mutually agreeable procedures, schedules and decisions to provide for the design, construction, operation and maintenance of facilities while attempting to minimize impacts on the BCCP preserves. If any issue cannot be satisfactorily resolved between these parties, then either the Coordinating Committee Secretary or any of the service providers may place the issue on the agenda of the BCCP Coordinating Committee for resolution and/or direction.

Any other party with an interest in the outcome of the procedures, schedules or decisions may, on their own initiative, request the BCCP Coordinating Committee to place a related item on their agenda.

II. Designation of Infrastructure Corridors

Infrastructure corridors are located within habitat preserves to provide for the essential and continuing public needs for utilities and roadways. New facilities will be routed outside of the habitat preserves, except as provided for by the plan. Where facilities cross habitat preserves or enter the preserves to serve customers, the guidelines of this section (including guidelines for new construction, operation and maintenance) will prevail. The Preserve Land Management Plans and the Land Management Guidelines shall accomodate corridors for existing and added facilities and designated new or expanded corridors. Changing conditions over the life of this permit may require the addition or realignment of corridors. In that event, the modification procedures of the BCCP and Interlocal Agreement will be followed. The Coordinating Committee shall approve expansions of existing corridors and construction of planned corridors before construction begins.

Definitions

The Coordinating Committee Secretary, within the context of the BCCP, is the entity responsible for meeting the 10(a) permit conditions with respect to preserve management; or an entity delegated those responsibilities by the Coordinating Committee Secretary.

Utility provider, service provider, and public and private utility, all within the appropriate context, refer to agencies or public companies that provide and maintain roadway, electric, water, wastewater, gas, cable TV, and/or communication facilities. These include those utilities which are associated with the Permit Holders/Managing Partners and are therefore automatically covered by the permit and those utilities which are not associated with the Permit Holders/Managing Partners and are therefore not covered by the permit.

The utilities associated with the Permit Holders/Managing Partners include the following: the Lower Colorado River Authority, City of Austin Electric Utility, Pedernales Electric Cooperative, City of Austin Water and Wastewater Utility, Travis County Transportation and Natural Resources Department, City of Austin Public Works and Transportation Department, and City of Austin Drainage Utility.

Other utilities which are not currently associated with the Permit Holders/Managing Partners include, but not limited to, the following: Travis County Water Control and Improvement District #17, Lost Creek Municipal Utility District, Texas Department of Transportation, Southwestern Bell Telephone Company, Southern Union Gas Company, and Austin CableVision, a division of Time Warner Cable, a division of Time Warner Entertainment Company, L.P. Consequently, references to utilities and services are also intended to include the facilities constructed by or maintained by any of the companies or agencies named above, for specific utility purposes.

Types of Corridors

1. Primary: Existing corridors that already have utility or roadway structures within them and that should receive the major share of new structure development and service activity in the future. There are two sub-types of primary corridors:

A. Those corridors of critical importance into which considerable new activity will be channeled. These corridors may be widened up to the maximum width specified. Additional preserve acreage was included in the final total 30,428 acres of the BCCP preserves in order to mitigate (at a ratio of 5:1) in advance for the potential widening of existing corridors within the preserves by those utilities associated with the Permit Holders/Managing Partners. But the anticipated loss of preserve due to this future expansion will need to be offset by those service providers undertaking the action who are not associated with the Permit Holders/Managing Partners. Compensation for impacts on the preserve will be negotiated between the Coordinating Committee Secretary and the utility and may take the form of impact assessments, annual licensing agreements, and/or Utility Participation Certificates. Also, compensation will be required by certain COA utilities which have not specifically dedicated land within the preserves.

B. Major corridors of high importance, which may need at some time in the future to be widened in whole or in part. Widening may take place both by those utilities associated with the Permit Holders/Managing Partners and by those utilities not associated with the Permit Holders/Managing Partners, according to the conditions described above in paragraph 1.A.

2. Secondary: Existing corridors that already have utility or roadway structures within them and for which no widening is to occur. There are two sub-types of secondary corridors.

A. Corridors that should not receive additional development that would contribute to loss of habitat outside of the corridor.

B. Corridors that should be phased out if and when possible.

3. Planned: Corridors in which facilities have not yet been constructed. These have been reduced to a limited number and are listed individually in Table 1 ("BCCP Planned Corridors"). Additional preserve acreage was included in the final total 30,428 acres of the BCCP preserves in order to mitigate (at a ratio of 5:1) in advance for the potential future use of planned corridors within the preserves by those utilities associated with the Permit Holders/Managing Partners. However, any anticipated future loss of habitat will need to be offset by those service providers undertaking the action who are not associated with the Permit Holders/Managing Partners. Compensation for impacts on the preserve will be negotiated between the Coordinating Committee Secretary and the utility and may take the form of impact assessments, annual licensing agreements, and/or Utility Participation Certificates. Also, compensation will be required by certain COA utilities which have not specifically dedicated land within the preserves.

Existing Facilities

An inventory of existing facilities reveals that several hundred already cross or intrude in the area designated for purchase and/or dedication of habitat preserve. However, some providers did not participate and not all records were located. Furthermore, at the time these guidelines were formulated, the precise boundaries of the habitat preserves were unknown.

Unless otherwise designated, all existing easements, rights-of-way and sites of all existing facilities shall be designated as Secondary A type infrastructure corridors, whether or not they are located or shown on maps prior to BCCP approval. However, existing service lines (feeds) to individual structures shall be designated as Secondary B type corridors. The Coordinating Committee Secretary shall recognize the rights that accompany the existing easements, rights-of-way (ROW) and sites, subject to the new construction and operation and maintenance (O&M) guidelines in this section.

For the purposes of the BCCP application documents, no attempt has been made to document the precise locations or characteristics of existing facilities and their corridors. This will be done in the Preserve Land Management Plans.

As individual properties are acquired and/or dedicated for habitat, the existing infrastructure easements, ROW and sites shall be precisely located (previous survey documents may be adequate). As the Preserve Management Plans are created for each preserve unit, these plans shall document the existing easements, ROW and sites, and show each of them as infrastructure corridors.

Opportunities will be sought in the future to eliminate the existing corridors that are no longer needed. However, the corridor designation of existing easements, ROW and sites can be removed only with the consent of all service providers owning an interest in the easement, ROW or facilities.

Replacement facilities and new facilities may be placed in existing corridors in accordance with the guidelines for new construction and O&M, and in compliance with the restrictions associated with the type of corridor. Any utility provider may negotiate an agreement with the owner of the easement or ROW to share the use of such easement or ROW, subject to the new construction and O&M guidelines in this section.

Roadway Corridors

Table 2 ("BCCP Roadway Corridors") lists the public roadways that cross or border the designated preserve areas, and it lists the corridor type that each is designated. For Primary type corridors, the table also provides the maximum widths anticipated to be needed for future expansion (or alteration) of the existing corridors. The Primary type corridors usually provide for the travel needs of broader areas. In virtually all roadway corridors, other service providers are involved. In some cases, these corridors bordering designated habitat face difficult space and alignment constraints.

In some cases, a negotiated realignment of a portion of the roadway corridor may be necessary to overcome constraints. In such cases, the corridor realignment shall be negotiated between the preserve landowner, the service provider seeking the realignment, the Coordinating Committee Secretary, and the Coordinating Committee. The acquisition of new easements and ROW shall be negotiated between the preserve landowner and the service provider seeking the easements or ROW.

Electric Corridors

Electric transmission corridors contain higher voltage electrical lines, the purpose of which is to transport electricity around the system to various substation locations. Transformers at the substation locations "step down" the voltage to a distribution voltage level.

Distribution lines are routed to the individual commercial and residential customers to provide service. Electric distribution corridors do not contain transmission lines.

Transmission lines have wider easement requirements and clearances from the ground and other objects due to the higher voltages and design code requirements. These lines can be built with steel mono-pole structures, steel lattice towers, or wood poles. These lines are typically accessed for purposes of routine maintenance or emergency situations such as storm-related outages.

Distribution lines are typically seen as the smaller wood structures built parallel to roadways, and which also have telephone and cable service lines attached. Distribution lines are sometimes laid underground.

Electric transmission lines shall be designated as Primary B type corridors. Distribution lines will be designated as Secondary A type corridors, unless located within roadways of higher designation or transmission line corridors.

Planned Corridors

The need for a limited number of new corridors is anticipated. Planned corridors should be restricted to the absolute minimum required to insure public safety and essential service. Every effort will be made by the service providers to design these new corridors so that the impact on habitat will be minimized. Table 1 provides summary information on each planned corridor. These corridors shall be incorporated in the Preserve Land Management Plans. The preserve landowner shall allow for the acquisition of easements for approved corridors. The planning and implementation of the new corridors shall be negotiated between the preserve landowner, the service provider or designated entity seeking the easements, the Coordinating Committee Secretary and the Coordinating Committee.

Special Use Tracts

A few tracts within the designated acquisition areas must be distinguished from the preserve tracts. Most of these sites contain some habitat for species of concern. Consequently, separate management plans will be developed for each individual tract to accomodate its special uses and to protect the species of concern.

1. Zilker Park and the Lower Barton Creek Greenbelt from Gus Fruh District Park at the horseshoe bend to Town Lake. This area is heavily congested with existing facilities and there will probably be a need for an unknown number of new facilities in the future. The park is heavily used for public recreational activities and contains numerous paved roads and parking lots. More access and parking may be added. The Fish and Wildlife Service gave no credit for Zilker Park as habitat preserve, nor has it been included in the tally of City of Austin preserve acreages. While Barton Springs pool does contain a species of concern, other management strategies shall be employed rather than habitat management of the park. The Lower Barton Creek Greenbelt from Gus Fruh District Part to Zilker Park has been included in the tally of City of Austin preserve acreages. Consequently, this section of the Greenbelt is to be designated a special BCCP recreational area with an individual management plan to be implemented by the City of Austin.

2. The L.C.R.A. Mansfield Dam Resource Area and County Recreational Area. Some portions of this tract resemble Zilker Park with respect to facilities and public recreational use, existing and future. No habitat credit was given for this acreage, nor was it included in the tally of LCRA preserve acreages.

3. Sandy Creek Park, McGregor (Hippie Hollow) Park, and Tom Hughes Park. These three Travis County/LCRA parks are also existing well-used recreational areas. No habitat credit was given for their acreages, nor were they included in the tally of LCRA preserve acreages.

4. The Water Treatment Plant No. 4 site. This 240.4-acre tract was purchased with utility revenue bond funds and reserved for the City's next major water treatment plant, a facility that will be critical to serving the future needs of Austin and to utilizing Austin's full state-appropriated water rights. The site is to contain a proposed City of Austin fire/EMS station, and the Lake Travis electric substation, the latter of which will be required for reliable service to the water treatment plant. In addition, a regional stormwater detention pond may be located on the site rather than downstream in the preserve. The Fish and Wildlife Service did not give habitat credit for the acreage of the site to be occupied by public facilities. An individual site management plan shall be developed for this tract that benefits the preserve while providing the public functions noted above. The property will be managed by the City of Austin, and those portions shown on the site plan to be used intensively for public facilities shall be removed from the area designated for preserve acquisition.

5. The isolated area within the designated preserve that comprises the portion of the Ullrich Water Treatment Plant site north of Red Bud Trail, and associated electrical facilities (including a substation), as well as an adjacent tract owned by the University of Texas near Tom Miller Dam. Once again, no habitat credit was given for this land. It is too small and isolated for effective management by the preserve authority. Although most of the Ullrich WTP site will be used for future facility expansion, the sloped areas near Bee Creek will be managed by the City to protect the areas of occurrence of species of concern. The site management plan shall retain this area (estimated to be about 24 acres) in the designated preserve system. The remainder of the two properties are to be removed from the area designated for preserve acquisition.

6. The Forest Ridge Water Reservoir and Pump Station Site is fenced and used exclusively for its water system functions. These facilities are critical today in providing water service to portions of NWA and NWB pressure zones. This 2.2-acre site is to be removed from the area designated for preserve acquisition.

7. The approximately 2-acre site for the WTP #4 raw water intake gate shaft facilities is to be removed from the area designated for preserve acquisition. A temporary construction easement of up to four acres will be needed adjacent to this site. The temporary easement can be used for habitat both before and after plant construction.

8. The Travis County Water Control and Improvement District (WCID) #17 water reservoir and pump station site, which will include the proposed Travis County Rural Fire Prevention District (RFPD) #5 fire station, is to be removed from the area designated for preserve acquisition.

9. If the small Guildford Cove Reservoir and pump station site is found to be within the area designated for preserve acquisition, then it also is to be removed from this designation.

10. The Uplands Water Treatment Plant site is currently about three and a half acres in size. It is proposed to be purchased by LCRA along with an additional five acres to accomodate plant expansion. This 8 1/2 acre site is also to be removed from the area designated for preserve acquisition.

Access Routes. Not all sections of infrastructure corridors can be accessed by routes within the corridors themselves. Some corridors and sites require access routes outside the corridors. The Preserve Land Management Plans and the Coordinating Committee Secretary shall allow access

routes to new and existing corridors, for utility employees and designated contractors, although alternative alignments of similar serviceability may be negotiated to replace existing routes in accordance with the guidelines for new construction and O&M. Access routes that lie outside infrastructure corridors shall be designated as Secondary B type corridors.

Preserve Land Management Plans will identify access routes to utility facilities and easements. Applicabale security precautions along private access routes may be necessary to ensure that unauthorized public access to preserve lands from such routes is not facilitated. Changes in access needs for utility activities should be negotiated with the Coordinating Committee Secretary. Utilities shall not allow non-utility related activities within their easements or access routes that might threaten preserve integrity.

III. Guidelines for New Construction in Approved Corridors

The purpose of these guidelines is to ensure that construction activity in approved infrastructure corridors will be conducted in the most environmentally sound, time saving and cost effective means possible. Coordinating Committee Secretary review and approval for construction activity within these approved corridors will be required (unless it is pre-approved by the Coordinating Committee Secretary).

Accidental Disturbance of Habitat

During project implementation, there may be times when habitat of species of concern is accidentally disturbed. Accidental disturbance shall mean the following:

1. Damaging, destroying, or removal of active nesting habitat;

2. Exposure of any significant karst features during excavation which have potential to be cave invertebrate habitat not yet designated by the Coordinating Committee Secretary.

In the event of such disturbance, the activity shall stop and the Coordinating Committee Secretary shall be notified within 24 hours of the disturbance. Construction cannot be reinitiated until written approval has been received by the Coordinating Committee Secretary.

Preliminary Engineering and Surveying

During the preliminary phase of a project it may be necessary to obtain data from the field in order to begin the design process. To obtain this data, it may be necessary to survey the proposed construction site and or corridors, obtain soil borings, dig test holes or use other means of acquiring information necessary to begin design and conduct environmental impact or other studies. Such activities have the potential of disturbing species of concern within their designated habitat areas within the corridors.

Notice shall consist of written communication with the Coordinating Committee Secretary at least three (3) working days in advance of the proposed activities during the nesting season (March 1 to September 1).

Any drilling, boring and digging within areas designated as potential cave invertebrate habitat shall be defined as minor construction.

Design

The design phase of a project is one of the most critical components in making a project successful. Proper planning is essential on any construction project in order to have a minimal effect on species of concern or their habitat. Therefore, the following guidelines have been developed to ensure accurate exchange of information and proper coordination during the design process, thus resulting in a comprehensive environmental review during the design phase prior to construction.

A. Minor Construction

Minor construction shall be defined as construction that will only require disturbance of an area no more than 3,000 square feet. If the proposed construction meets this criteria, the following will be required:

1. Construction plans or a sketch outlining the proposed construction activity shall be submitted to the Coordinating Committee Secretary ten (10) working days prior to construction.

2. The Coordinating Committee Secretary shall have five (5) working days from receipt of the construction plans submitted by the governmental agency or utility to approve, disapprove, or approve with modifications.

3. If the submitting utility provider or governmental agency has a proposed disturbance exceeding 3,000 square feet that may be considered minor, a written request may be submitted to the Coordinating Committee Secretary. The Coordinating Committee Secretary shall grant or deny the request within ten (10) working days of receipt. If the request is denied, major construction guidelines shall apply.

B. Major Construction

Major construction shall be defined as construction that requires the disturbance of an area greater than 3,000 square feet. If the proposed construction meets this criteria, the following will be required:

1. The Austin Area Utility Coordinating Council (AAUCC) has been established in the Austin area to foster an open exchange of information among private and public utilities, governmental agencies and construction related organizations and to promote cooperation among said groups. Construction plans shall be submitted to the Coordinating Committee Secretary and the AAUCC sixty (60) calendar days prior to the proposed construction activity. The AAUCC shall have no authority to approve or disapprove the proposed construction, but shall serve as a coordinating body between governmental entities and utility companies sharing corridors.

2. The Coordinating Committee Secretary shall have thirty (30) calendar days from receipt of the construction plans submitted by the governmental agency or utility to approve, disapprove, or approve with modifications.

3. The approval of construction plans by the Coordinating Committee Secretary does not relieve the engineer from the responsibility of securing approvals required by federal, state and local laws and ordinances.

Construction

In order to ensure the protection of the endangered species and habitat, the following guidelines have been established and require strict compliance during the construction phase:

A. Notification. Prior to any construction activity defined as major construction within the preserve corridor, the party responsible for construction shall conduct a pre-construction conference with all parties affected by and involved in the construction of the project. The Coordinating Committee Secretary or their representative shall be notified in writing five (5) working days in advance of the meeting. The conference will be held to discuss detailed information concerning the project to ensure maximum protection of the species and preserve.

B. Limits of Construction. Construction activity shall be confined to the areas designated as approved infrastructure corridors. The use of areas other than approved corridors for staging areas and access roads, shall require prior approval of the Coordinating Committee Secretary and/or USFWS.

C. Timing of Construction. Construction activity may occur during the nesting season (between March 1 and September 1) only with the approval of the Coordinating Committee Secretary, and only if site clearing to remove potential nest sites of endangered species has occurred prior to the nesting season. No nests of endangered species will be allowed to be disturbed once they become occupied during nesting season. The Coordinating Committee Secretary shall allow the continuation of construction activities for major projects that cannot be started and completed outside of the nesting season, and for which the costs of starting and stopping construction are excessive.

D. Erosion, Sedimentation Controls and Surface/Ground Water Quality Protection Systems. Erosion and sedimentation controls and water quality protection system items if required, shall meet guidelines established by the responsible governmental authority, and be installed prior to starting construction. Prior to adoption of guidelines by the responsible governmental authority such installation shall be made in accordance with the rules and regulations of the City of Austin, LCRA, Travis County or Texas Department of Transportation, whichever may apply. The erosion and sedimentation controls and water quality protection systems shall be maintained until revegetation is established and restoration is accepted by the Coordinating Committee Secretary.

E. Location of Facilities Within Approved Corridors. New construction of facilities will only be allowed at locations shown on the approved construction plans. If there is the possibility that a change in the vertical or horizontal location of facilities might have an impact on the endangered species habitat, the change shall require prior notification of the Coordinating Committee Secretary. The Coordinating Committee Secretary shall respond within three (3) working days.

F. Storage of Materials. Any hazardous chemicals and or materials shall be contained in a safe place with the person or entity performing the work taking whatever precautions are necessary to reduce the risk of such materials being accidentally released into the environment. In all cases, the use of these products shall be minimized and there shall be compliance with all laws and ordinances concerning the storage and use of these materials. The person or entity performing the work shall have an emergency response plan in place in case a spill should occur.

G. Restoration. Restoration will require revegetation of all disturbed areas using native grasses, forbs, and shrubs to ensure compatibility with the surrounding habitat, as detailed in the approved construction plans. All disturbed areas shall be monitored until revegetation is established and restoration is accepted by the Coordinating Committee Secretary.

H. Final Acceptance. When all construction activity is complete, the party responsible for the construction activity shall notify all entities affected by the construction, including the Coordinating Committee Secretary for final acceptance of restoration. The Coordinating Committee Secretary shall have 2 weeks from notification to give written final acceptance of restoration or define what additional measures are necessary to obtain final acceptance of restoration.

IV. Guidelines for the Operation and Maintenance of Facilities Within BCCP Preserves

The Coordinating Committee Secretary shall be notified of any planned maintenance within preserves by the various service providers or their contractors. The notification shall contain a brief description of planned work and approximate dates the work will be performed.

Some maintenance activities are required by Federal, State, County, or City laws and ordinances. The Coordinating Committee Secretary must make provisions that enable the service providers to abide by these legal requirements. The Coordinating Committee Secretary and the service providers will seek resolution of any conflicts associated with maintenance of the preserves and legally required facility maintenance activities.

Pre-Approved Maintenance

Service providers shall work with the Coordinating Committee Secretary to define and secure pre-approval for operation and maintenance activities that may occur within a given corridor. Where such maintenance activities are repetitive, mutually agreeable schedules shall be established, and notification shall not be required for every entry.
Problems identified during pre-approved operation and maintenance activity shall be scheduled with the Coordinating Committee Secretary for repair. Structural, facility, or equipment problems that threaten reliability or safety must be handled immediately. See "EMERGENCY MAINTENANCE."

Emergency Maintenance

For the purposes of this section, an emergency shall involve an existing condition of, or imminent threat to, public health, safety, property damage, or loss of service.

The various service providers may need to perform emergency maintenance within the preserves due to such conditions as equipment failure, pending equipment failure, storm damage, downed tree removal, culvert clean-out, emergency facility repair and maintenance, or other circumstances beyond the service provider's control. The equipment used during the emergency can vary widely and is dependent upon the circumstances surrounding the emergency. Work done under these circumstances may impact species of concern; however, it shall be done in such manner as to minimize disruption.

Efforts shall be made to contact the Coordinating Committee Secretary for advice and guidance during emergency maintenance work. However, the service providers must and will move quickly to eliminate the emergency condition. Written notification describing the emergency maintenance work done shall be sent to the Coordinating Committee Secretary within five (5) working days after any such work is completed.

Scheduled Maintenance

The Coordinating Committee Secretary shall be notified in advance of any maintenance activities not covered under "Pre-Approved Maintenance" and "Emergency Maintenance." The planned work and schedule shall be submitted in writing to the Coordinating Committee Secretary for review and comment, and the work shall proceed under the terms negotiated between Coordinating Committee Secretary and service providers. This type of scheduled work could consist of major facility replacement, repair and maintenance, installation of cross and driveway culverts, grading and re-shaping of ditches, and clearing of right-of-way.

Maintenance of Corridors

1. Access to all facilities shall be established and maintained. As the management plan for each preserve tract is developed, the Coordinating Committee Secretary shall work closely with the service providers to designate specific access routes to all structures and facilities, consolidating access routes where possible and minimizing impact on the species of concern.

   The access routes may require some clearing at the time access is needed. The maximum width of these access routes shall be twenty feet (20'), except that they may be wider in any curve to allow for clearance of truck booms.

2. Existing cleared areas near structure sites shall be used where possible to reduce clearing requirements. Existing low-lying vegetation at structure sites shall be preserved to the maximum extent possible. If needed, additional clearing at structure sites shall be limited. Service providers shall work closely with the Coordinating Committee Secretary whenever manipulation of vegetation is required to ensure minimal impact on species of concern.

3. Clearing and trimming along the corridors shall be limited to the following:

   a. Minimum clearing for surveying purposes (typically a four foot [4'] line of sight).

   b. Mechanical removal or trimming of vegetation detrimental to the operation and maintenance of facilities. Chemicals for vegetation control may be used only within the guidelines approved by the Coordinating Committee Secretary. Requests to use chemicals may be approved on a case-by-case basis.

   c. Removal of all fast growing trees -- such as Chinese Tallow, Chinaberry, Cottonwood, Mulberry, and Hackberry trees -- directly under electric transmission line conductors, and trimming of tree limbs to provide at least twenty (20') feet of clearance from transmission conductors.

   d. Trimming of trees or limbs to provide at least six feet (6') of clearance from electric distribution conductors for span lengths up to two hundred feet (200'). If span

lengths exceed two hundred feet (200'), an additional one foot (1') of clearance will be required for each one hundred fifty feet (150') length.

e. Clearing and trimming guidelines for roadway rights-of- way are stated in the Travis County Roadway Clear Zone Criteria (Table 3).

4. All trees and limbs cleared from the corridors shall be shredded, chipped, or hauled from the site. With the approval of the Coordinating Committee Secretary, trees and limbs or shredded mulch cleared from a corridor may be left in piles outside the corridor for use in remediation projects. Special handling for oak trees exhibiting oak wilt mya be necessary.

5. Sedimentation control measures will be installed and maintained in accordance with guidelines established by the Coordinating Committee Secretary. Prior to adoption of uniform guidelines by the Coordinating Committee Secretary, such installation shall be made in accordance with the rules and regulations of the City of Austin, LCRA, Travis County or Texas Department of Transportation, whichever may apply.

6. All excavated materials requiring disposal shall be removed from the corridor to an approved dump or fill area.

7. Any cleared land areas shall be re-vegetated with native grasses, forbs, and/or shrubs to re-stabilize vegetative cover within the approved time period.

8. The Coordinating Committee Secretary and the service providers may develop and agree to clearing guidelines on a site-by-site basis that may modify and/or supplement the guidelines stated in this section.

TABLE 1 BCCP PLANNED CORRIDORS

No.	MacroSite & USGS Quad	Primary User	Description
2	Lake Travis Bee Cave Quad	COA Electric*	This corridor is established to provide 12.47 KV overhead electric feeder ties with existing electric distribution facilites. These feeder ties are necessary to provide new electric service to property adjacent to the preserve. In addition, these corridors are necessary due to the limited availability of feeder tie routes due to the development of the BCCP. The BCCP, as proposed, creates limits for electric line extensions and isolates existing feeders and substations, reducing the reliability of the distribution system without the corridors. Corridor width -- 15 feet.
3	Lake Travis Bee Cave Quad	COA Electric	Same as #2 above.
5	S. Lake Austin Bee Cave Quad	COA Electric	Proposed 138 KV transmission circuit from the Lakeway substation to the Trading Post substation appears to run near or alongside a habitat area. This circuit would integrate proposed substations and provide increased overall system reliability by completing a loop in the COA electric transmission and substation system. Will probably require 100-ft. wide ROW, none of which is to actually be inside the habitat preserve.
7	N. Lake Austin Bee Cave Quad	COA Electric	Same as #2 above.
9	Barton Creek Bee Cave Quad	COA Electric	Same as #2 above.
10	Barton Creek Bee Cave & Austin W. Quads	COA Electric	Same as #2 above.
16	Barton Creek Austin W. Quad	COA Electric	This distribution line will be utilized to tie existing 12.47 KV overhead feeders to ensure the reliability of the electric distribution system in the area and to prevent extended outages. 15-ft. width.
21	Barton Creek Austin W. Quad	COA Electric	Same as #16 above.
22	Barton Creek Austin W. Quad	COA Electric	Same as #16 above.
27	N. Lake Austin Austin W. Quad	COA Electric	This distribution line, with the others listed here, will provide ties between existing 12.47 KV overhead electric feeders. The Electric Utility has attempted to complete a number of these ties in the past. Property owners have been reluctant to grant easements due to development plans being unresolved or the property potentially going on the market. Routes along City Park Road and other roads have met with resistance from residents of the area due to the scenic views from the road. The route of this specific facility is expected to be along an existing road and telephone lines. 15-ft. width.

BCCP PLANNED CORRIDORS

No.	MacroSite & USGS Quad	Primary User	Description
31	N. Lake Austin Austin W. Quad	COA Electric	This distribution line will provide a tie between existing 12.47 KV overhead electric feeders.
33	N. Lake Austin Jollyville Quad	COA Electric	Same as #31 above.
38	Cypress Creek Jollyville & Mansfield Quads	COA Water/WW	Intake tunnel shafts for WTP #4 raw water supply.
41	Cypress Crk & Bull Creek Jollyville Quad	COA Water/WW	Raw water tunnel -- gate shaft to WTP #4.
43	Bull Creek Jollyville Quad	COA Electric	Proposed transmission line to connect the Lake Travis substation to the existing transmission system. Two separate transmission corridors provide required reliability for the treatment plant. ROW widths of up to 50 feet may be required.
44	Bull Creek Jollyville Quad	COA Electric	Same as #43 above except that it parallels the existing River Place Blvd. Directly ties together the River Place and Lake Travis substations.
46	Bull Creek Jollyville Quad	COA Water/WW	Route of a 48-in. water main from WTP #4 to the existing 48-in. Forest Ridge NWB main. This was anticipated to be open cut construction. Minimum 25-ft. width.
51	Bull Creek Jollyville Quad	COA Electric	Necessary to provide a route for 12.47 KV overhead distribution feeders from the new Angus Valley substation to areas near Forest Ridge.
54	Bull Creek Jollyville Quad	COA Water/WW	Route of a very large transmission main from WTP #4 to the NWA pressure zone. The route through the habitat preserve is to be tunnelled.
101A	Barton Creek Bee Cave Quad	COA Electric	Proposed 138-KV transmission circuit from the existing Patton Substation to the proposed Hwy 71 and Trading Post Substations. This circuit would integrate proposed substations and provide increased overall system reliability by completing a loop in the City electric transmission and substation system. 50 feet of additional easement parallel to Hwy 71 ROW will be required.
119	Cypress Creek Jollyville & Mansfield Quads	Cedar Park Water/WW	This is a proposed expansion of an existing corridor. A raw water intake main from Lake Travis to the City of Cedar Park is within a 30 ft.-wide easement. The proposal is to expand the easement another 25 feet (to 55 feet total) and place a second raw water intake line within it.

* Electric corridors listed here may be used by other service providers, such as Southwestern Bell and Austin CableVision.

TABLE 2 BCCP ROADWAY CORRIDORS

NO.	CORRIDOR DESCRIPTION	DESIGNATION	EXISTING R.O.W.	MAX WIDTH NEEDED
101*	**SH 71 (W)****	**Primary A**		
	RM620 - US290 (W)		120-180 (MAU4)	350
102	**RM 2244 (Bee Cave Rd.)/SH45**	**Primary B**		
	SH71(W) - 1 mile east (SH45)		130-200 (MAD4)	450
	1 mile east - Crystal Creek Dr.***		200-250 (MAD4)	450
	Crystal Creek Dr. - Barton Cr. Bl.***		155-400 (MAD4)	450
103	**Southwest Parkway**	**Secondary A**		
	SH45 - SH71 (W)		---	
	SH71 (W) - Wm. Cannon		150 (MAD6)	
104	**Travis Cook Rd/Barton Creek Blvd.**			
	S.W. Pkwy - Lost Creek Blvd.	**Primary A**	60 - 80 (MNR2)	120
105	**Old Bee Cave Rd/Arterial #12**			
	Hwy 71 - S.W. Parkway	**Secondary A**	60 (MNR2)	
106	**Catholic Diocese (private drive)**	**Secondary A**	?	
107	**Intersection Modifications at**			
	SH71/RM 2244/SH45	**Primary A**	?	500
108	**Loop 360**	**Primary A**		
	US 290 (W) - Walsh Tarlton		240-450 (MAD4)	500
	Walsh Tarlton - Westlake		240-325 (MAD4)	450
	FM 2244 - Lake Austin		290-630 (MAD4)	680
	RM 2222 - US 183		250-635 (MAD4)	685
109	**Loop 1 (MoPac Blvd)**	**Primary B**		
	US 290(W) - Loop 360		540-1200 (PKY4)	(Add. 100)
110	**Lost Creek Blvd.**	**Primary B**		
	Loop 360 - Travis Cook Rd.		80 (MNR2)	110
111	**City Park Road**	**Secondary A**		
	City Park - RM 2222		(70MNR2)	

NO.	CORRIDOR DESCRIPTION	DESIGNATION	EXISTING R.O.W.	MAX WIDTH NEEDED
112	**RM 2222 ****	**Primary A**		
	Riverplace Blvd. - Tumbleweed		100-180 (MAU4)	400
	Tumbleweed - Jester Blvd.		100-240 (MAU4)	400
113	**Spicewood Springs Road**	**Primary B**		
	Loop 360 - Old Lampasas Trail		70 (MNR2)	120
114	**RM620/SH 45**	**Primary A**		
	SH 71 (W) - Debba Ln.		120-250 (MAD4)	300
	Debba Ln. - Quinlan Park Rd.		120-250 (MAU2)	300
	Quinlan Park Rd. - RM 2222 (SH45)**		100-250 (MAU2)	450
	RM 2222 - US 183(SH45)**		100-150 (MAD4)	450
115	**Commanche Trail**	**Secondary A**		
	RM 620 - Oasis Bluff		50 (MAU2)	
	Oasis Bluff - Terminus		50 (MAU2)	
116	**Bullick Hollow Road**	**Secondary A**		
	RM 620 - Oasis Bluff		50 (MNR2)	
	Oasis Bluff - FM 2769		50 (MNR2)	
118	**RM2769 (Volente Rd.)**	**Primary B**		
	Anderson Mill Rd. - RM620		100-120 (MNR2)	
121	**Lime Creek Road**	**Secondary A**		
	Volente - Bullick Hollow Rd.		80 (MNR2)	
	Bullick Hollow Rd. - RM 620		100-120 (MNR2)	
124	**Oasis Bluff**	**Secondary A**		
	Commanche Trail - Bullick Hollow		30	
125	**Four Points Drive**	**Secondary A**	100	
NA	All other dedicated public roadways that may cross or infringe on designated preserve, including Greenshores Drive, Oak Shores Drive, Pearce Road, Murfin Road, Kollmeyer Drive, Two Coves Drive, Westcliff Place., etc.	**Secondary A**	---	

KEY TO ROADWAY CLASSIFICATIONS:

FWY	Freeway
PKY	Parkway
EXP	Expressway
MAD****	Major Arterial - Divided
MAU	Major Arterial - Undivided
MNR	Minor
COL	Primary Collector

NOTES:

* Need additional utility easement for electric transmission facilities: 50 feet in addition to widths listed along this section of State Highway 71.

** SH71, RM 620 and RM2222 are to be mitigated at a 5 acre to 1 acre ratio where preserves abutt the roadways on both sides.

*** No offsets or mitigation necessary for the "lobed" preserve acquisition areas east of Creeks Edge Parkway.

**** A "MAD" designates a roadway divided either by a raised median, flush center left turn lane, or a central drainage ditch. The choice of one or the other is to be made in the roadway design and construction process.

TABLE 3

TRAVIS COUNTY ROADWAY CLEAR ZONE CRITERIA

	DESIGN SPEED	CLEAR ZONE WIDTH
With roadside drainage (Rural section)	45 MPH or greater 40 MPH or less	30' min.* 16' min.*
With curb & gutter (Urban section)	ALL	6' min.**
Access roads within County-owned or leased property (parks, detention center, etc.)	ALL	6' desirable

* May be reduced to an absolute minimum of 10' when the average daily traffic volume is less than 750. May also be reduced in limited cases consistent with AASHTO criteria.

** Trees may be planted in the center of medians measuring at least 14' face-of-curb to face-of-curb if the trees do not restrict vehicle sight lines.

NOTES:

1. The clear zone is the area adjacent to the roadway that allows an errant vehicle to recover without striking an unyielding object. It is measured from the edge of the traveled lane (typically the outside edge line or face-of-curb).

2. Trees growing to a diameter of 6" or less at maturity are considered YIELDING OBJECTS; trees growing to a diameter of greater than 6" at maturity are considered UNYIELDING OBJECTS.

3. Unyielding trees may remain in the clear zone if protected with guardrail installed consistent with accepted engineering practice. This typically requires a minimum of 2' from the tree to the back of the guardrail. Yielding trees typically should be set back a minimum of 3' from the edge of the traveled lane.

4. Vertical clearance from roadway surface to overhanging tree branches shall be a minimum of 14'6" on arterial roadways. Lesser clearances are acceptable on lower classes of roadways.