I. PLANNED FACILITIES, CORRIDOR WIDTH REQUIREMENTS, AND RELATED PLANS

In order to develop a utility corridor plan, it is necessary to examine the location of both existing and planned utility systems, the engineering, environmental, and social factors affecting the development of these systems, and transmission corridor width requirements.

1. PLANNED UTILITY TRANSMISSION IMPROVEMENTS

Utility services--including electricity, gas, water, sewer, and communication services--are provided by various public and private companies throughout the municipality. A brief overview of how each utility system works is presented in Appendix A. As mentioned previously, because of the insufficiency of information related to planned utility improvements, and due to the impact of these systems within the more densely built-up areas of the community, this plan focuses on the Eagle River and Anchorage Bowl areas. The following discussion describes the existing and planned utility systems which will have significant easement and/or right-of-way needs in the next 10 to 15 years. Existing transmission facilities are shown on Maps 1-1 through 1-3. Maps 1-4 and 1-5 depict the improvements within the Anchorage Bowl area; Map 1-6 identifies water, gas, and electrical facility improvements within the north Anchorage area.

Anchorage Municipal Light and Power

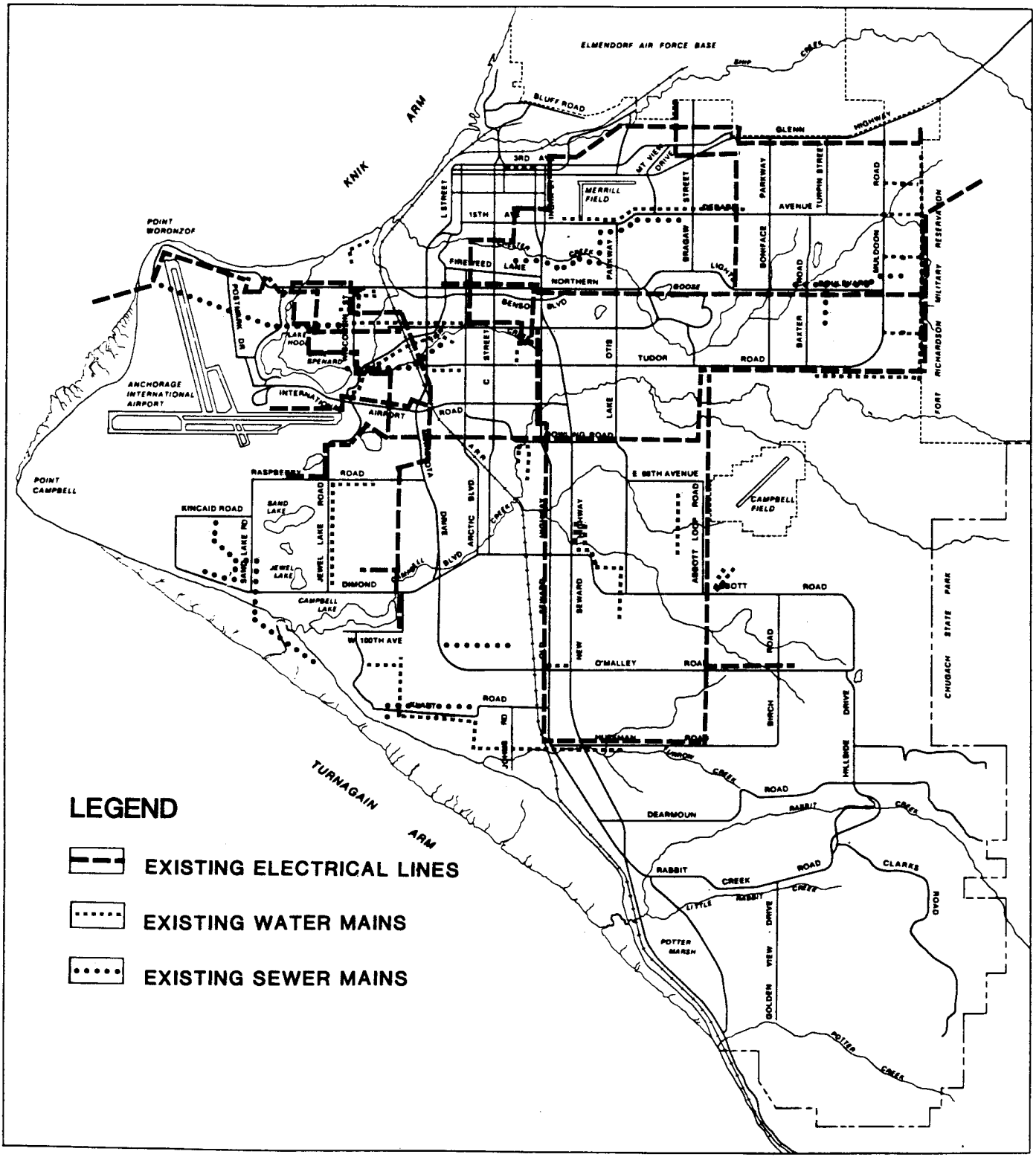
Anchorage Municipal Light and Power (ML&P) provides electricity to that portion of the Anchorage Bowl which generally coincides with the old Anchorage city limits. Most of the existing transmission system is at 115KV. ML&P is currently involved in a program to upgrade portions of its older 34.5KV transmission grid to 115KV. Table 1-1 identifies the various upgrading and new facility improvements. The facilities identified in this table are derived from an ML&P transmission corridor assessment.

Chugach Electric Association

The Chugach Electric Association (CEA) serves the remainder of the Anchorage Bowl not serviced by ML&P. It also serves Girdwood and parts of the Kenai Peninsula. CEA also provides wholesale power to the Homer Electric Association, the City of Seward for resale to their retail customers, and to the Matanuska Electric Association.

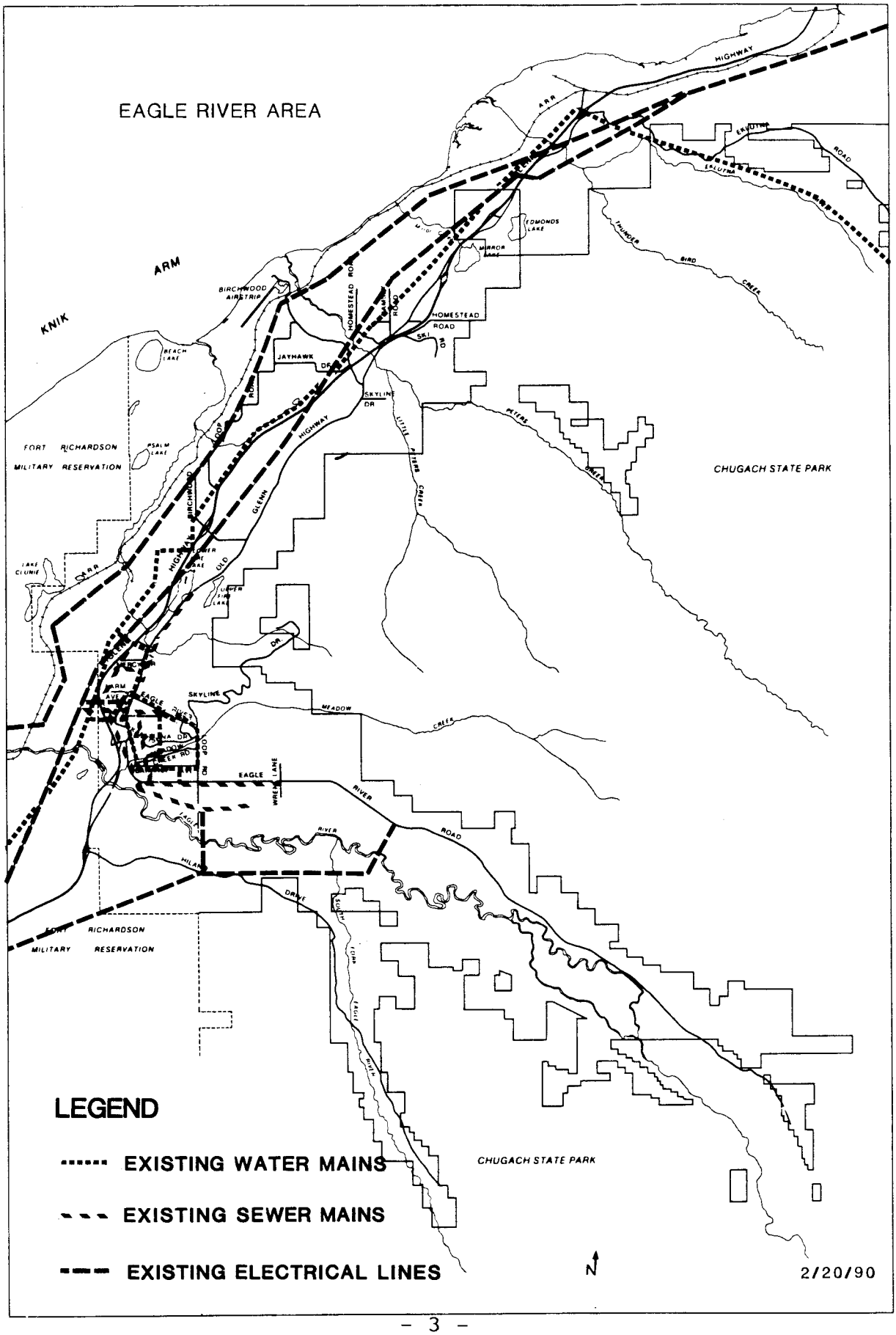
MAP 1-1

EXISTING UTILITY TRANSMISSION FACILITIES



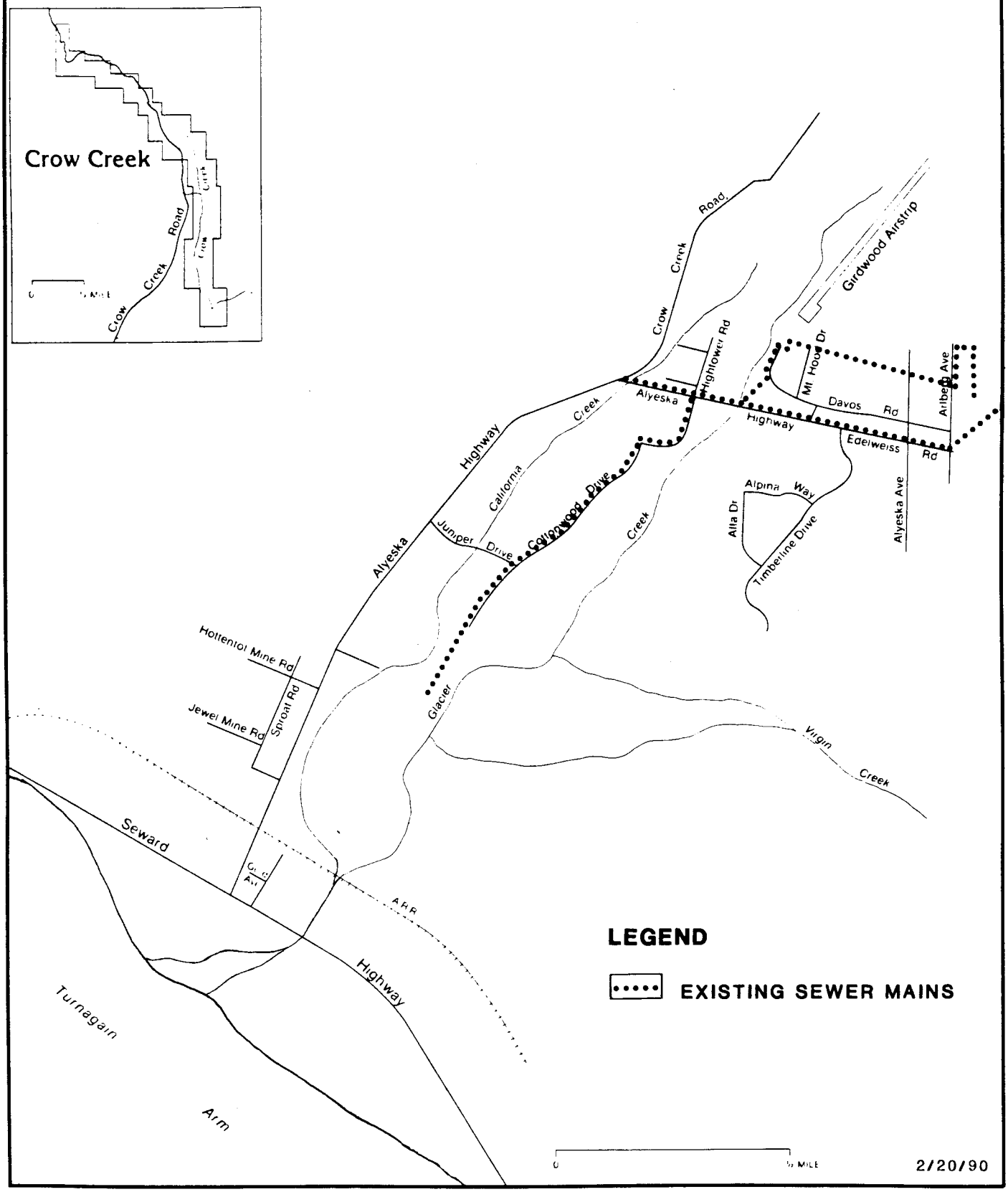
MAP 1-2

EXISTING UTILITY TRANSMISSION FACILITIES



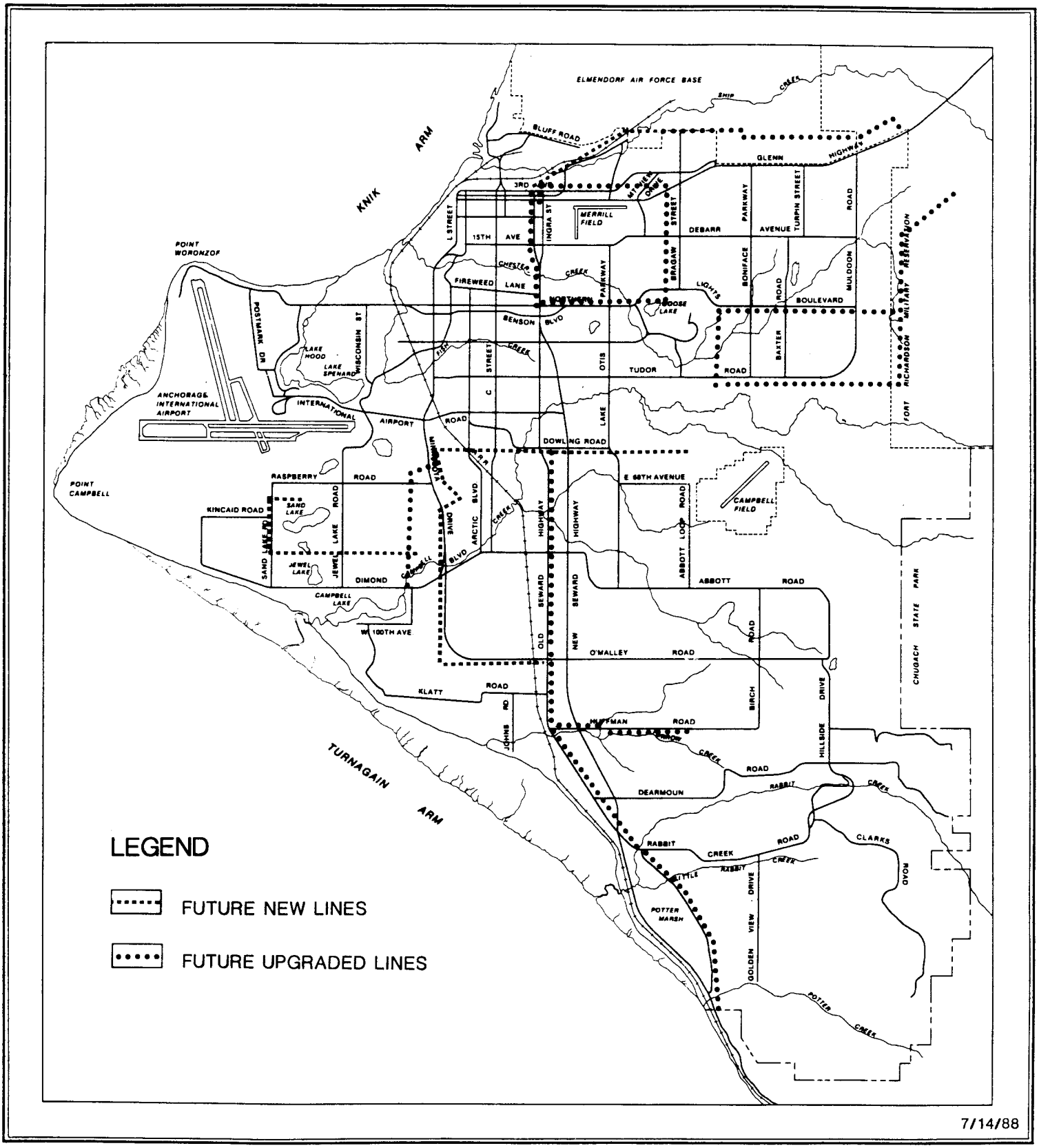
Girdwood

EXISTING SEWER TRANSMISSION FACILITIES



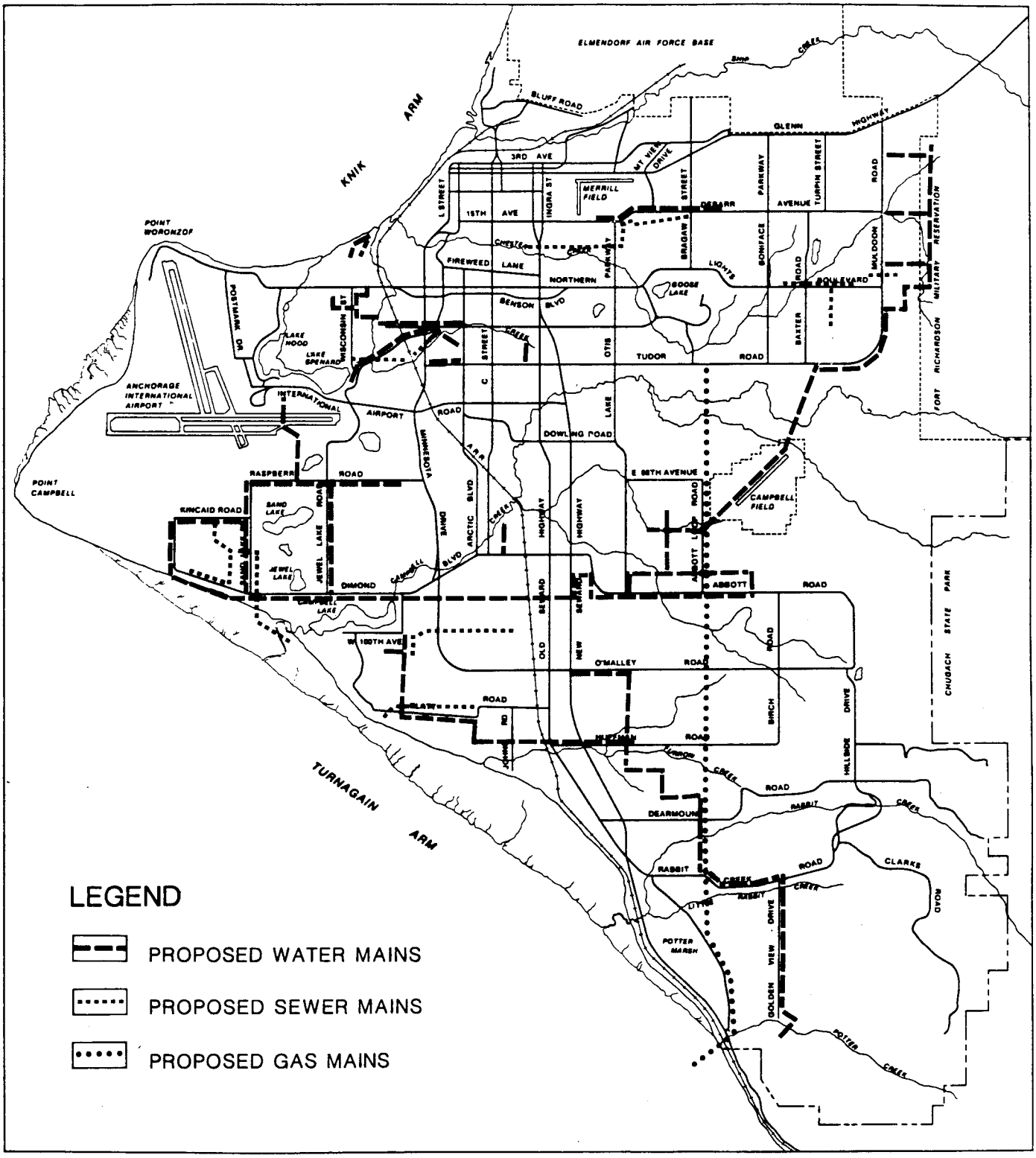
MAP 1-4

PROPOSED ELECTRIC TRANSMISSION FACILITIES



MAP 1-5

PROPOSED WATER, SEWER & GAS FACILITIES



MAP 1-6

PROPOSED ELECTRIC TRANSMISSION , WATER & SEWER FACILITIES

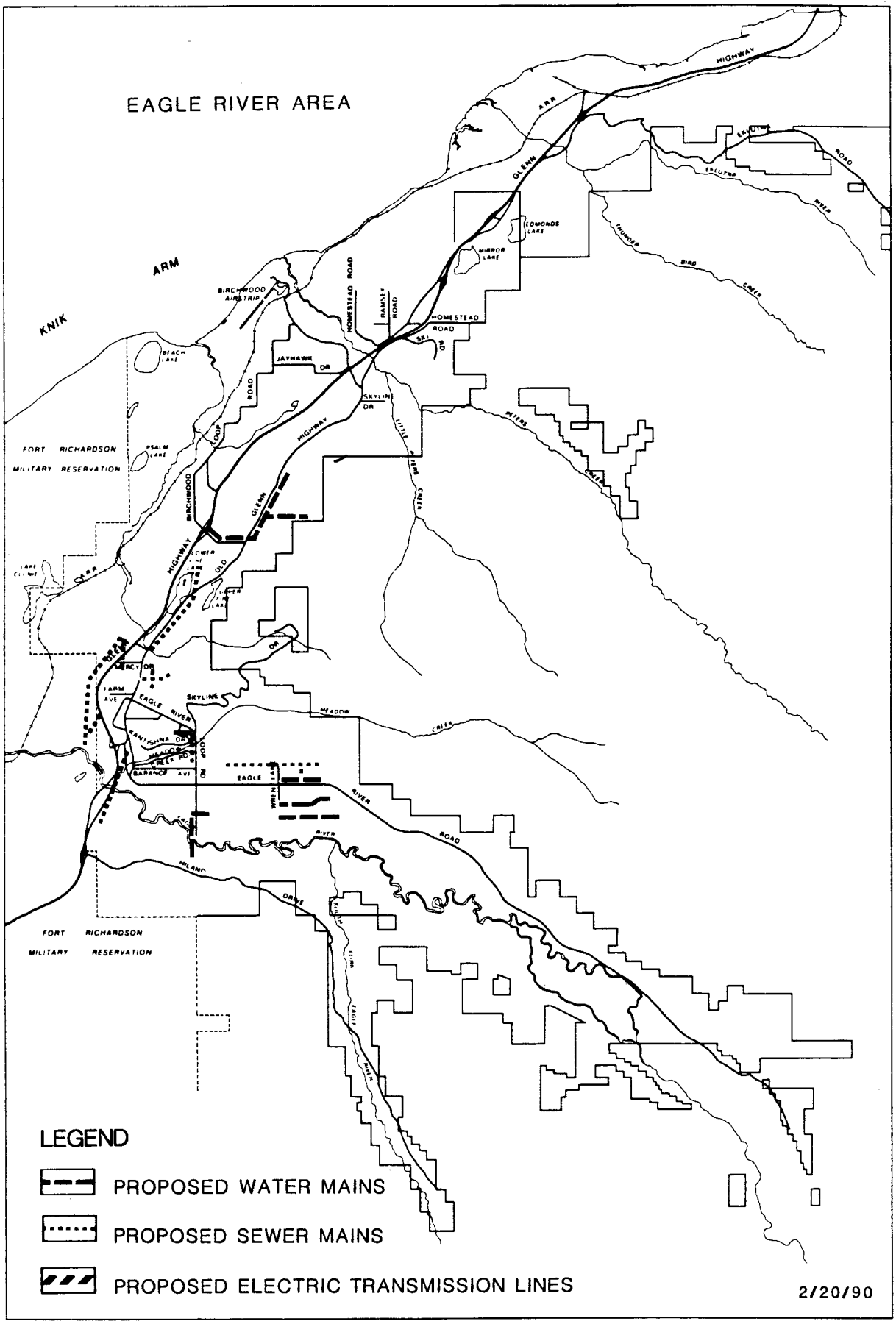


TABLE 1-1

PLANNED ELECTRIC TRANSMISSION FACILITIES: ANCHORAGE BOWL

Type of Improvement	Voltage (KV) Current	Future	Alignment (generally)	Termini Start	End	Entity
Upgrade	115	230	Oilwell Road	Taylor St.	Bartlett H.S.	ML&P
Upgrade	35	115	Alignment follows Bragaw, E. Northern Lights, Gambell, 1st Avenue			ML&P
Upgrade	115	230	Alignment follows along E. Northern Lights from Pine St. to Muldoon Rd.	APA Anchorage Substation	Military reservation	ML&P
New		230	Alignment generally follows Port Rd.	Reeve	Ingra	ML&P
Upgrade		138	Old Seward	E. Dowling	Huffman	CEA
New	138	Add 138KV	E. Dowling	Bragaw (extended)	International	CEA
Upgrade	115	230	Alignment follows current 230/115 KV transmission line within military reservation and Far North Park	University	--	CEA
New		138	Alignment follows Minnesota Bypass	Minnesota	Raspberry	CEA
New		Add 138KV	Huffman	Old Seward	Bragaw	CEA
New		138	Old Seward	Huffman	Turnagain Arm	CEA

The projects identified in Table 1-1 are derived from a recently completed utility transmission study prepared for CEA. Fairly extensive upgrading improvements, as well as new 138KV facilities, have been projected in order to provide operational redundancy and uniformity of coverage throughout their service area. In addition, certain 230KV major transmission facilities are identified to accommodate forecasted power needs for the Anchorage area and for utilities north of Anchorage.

Matanuska Electric Association

The Matanuska-Susitna Borough and Eagle River area receive electric power from Matanuska Electric Association (MEA). This rural electric cooperative purchases approximately 94% of its power from CEA and 6% of its power from the Alaska Power Administration.

Table 1-2 shows planned new facilities and upgrades in the Chugiak/Eagle River area. A 115KV transmission line has recently been extended from the AEA line up the Eagle River Valley to the Briggs Substation in the Eagle River Valley. According to MEA staff, extensions of the current transmission system are anticipated within their service area, corresponding to the rate and location of service area growth. However, the alignments of these transmission facilities are not yet known, although a long-range transmission and distribution plan is being developed. This plan is intended to identify the approximate locations of future electrical transmission facilities in the Eagle River/Chugiak/Birchwood areas.

Alaska Power Administration

The Alaska Power Administration (APA), a federal agency, operates the Eklutna power plant and wholesales electricity to ML&P, CEA, and MEA. Power from the Eklutna plant is transmitted to Anchorage via a 115KV line which generally parallels the Glenn Highway to a point one mile east of Muldoon Road. From this point, it turns south until reaching what would be the east extension of Northern Lights Boulevard, where it turns west to the substation near Northern Lights Boulevard and Wesleyan Drive.

The APA and the electric utilities in Anchorage are in agreement that the APA Anchorage substation site is a major and essential consideration in any future bulk-power substation and/or switchyard planned in future years. This substation site is the termination and junction point of several major transmission circuits in the north Anchorage area.

Alaska Energy Authority

The Alaska Energy Authority (AEA) is a state agency which finances and develops power projects. There are no AEA pro-

TABLE 1-2

PLANNED NEW FACILITIES AND UPGRADES: CHUGIAK/EAGLE RIVER
Water Transmission Facilities

Improvement Type	Facility	Diameter	Alignment	Terminus		Entity
				Begin	End	
Transmission Main	New	12"	Ptarmigan Blvd.	Eagle River Lane	Frary Homestead	AWWU
Transmission Main	New	12"	Raven Drive	Eagle River Lane	Melody Lane	AWWU
Transmission Main	New	12"	Eagle River Loop Rd.	Parkview Terrace	Eagle River	AWWU
Transmission Main	New	24" & 12"	N. Eagle River Access	N. Eagle River Access	Lower Fire Lake	AWWU
Transmission Main	New	16" & 12"	Birchwood Loop	Birchwood Loop	Old Glenn Hwy.	AWWU
Transmission Main	New	12"	Birchwood Loop	Birchwood Loop at Glenn Hwy.	Old Birchwood Lp.	AWWU
Transmission Main	New	12"	Birchwood Loop	Birchwood Loop	Sabo Drive	AWWU
Transmission Main	New	12"	Blue Spruce Lane	Hillcrest Drive	James Way	AWWU
Transmission Main	New	16"	Eagle River Road	Eagle River Road	Parkview Terrace	AWWU

Sewer Facilities

Improvement Type	Facility	Diameter	Alignment	Terminus		Entity
				Begin	End	
Interceptor	New	24" & 16"	N. Eagle River Access	N. Eagle River Access	New Birchwood Lp.	AWWU
Trunk	New	12"	Glenn Highway	S. Eagle River Access	Eagle River	AWWU
Trunk	New	16"	Citation Road	Eagle River Loop	Eagle River Lane	AWWU
Trunk	New	12"	Eaglewood Subd.	Eaglewood Subd.	Frary Homestead	AWWU

Electrical Transmission Facilities

Improvement Type	Voltage (KV)		Alignment	Terminus		Entity
	Current	Future		Begin	End	
Existing	115KV	115KV	So. Eagle River Lp.	Parkview Terrace	Briggs 115KV	MEA
Existing	115KV	115KV	Southside Eagle River	Glenn Highway	Eagle River Rd.	MEA
Existing	115KV	230KV	W. Glenn Highway	Eklutna Project	Anchorage	APA
Existing	115KV	230KV	W. Glenn Highway	Anchorage	Palmer (MEA)	MEA

jects currently serving the municipality. According to AEA staff, an Anchorage to Soldotna transmission line will probably be constructed within the next ten years. It is possible that this transmission line may be terminated at either the Chugach substation, at the International station, or at the Chugach substation on Huffman Road.

Enstar

Enstar provides natural gas directly to customers and to electric companies for power generation. Service is provided to the Anchorage Bowl via transmission facilities from the Kenai Peninsula across Turnagain Arm to Potter. The transmission line splits at Potter and serves Anchorage via Hillside Drive, Abbott Loop/Bragaw, and a line that roughly follows the Alaska Railroad right-of-way. Service to Eagle River is currently provided by a distribution-size line. Continued growth in the current service area will eventually require the construction of two additional transmission lines: a 16-inch pipeline from Potter to the City Gate station at Tudor and Bragaw, and a line to increase the capacity to Eagle River and to the Mat-Su Borough boundary. Map 1-5 depicts planned improvements.

Water and Sewer

Water and sewer transmission lines are usually located within the paved portion of the municipal street right-of-way, according to local design specifications. However, certain major lines may be located outside these locations, particularly if road right-of-way is state owned, unavailable, or if severe topographic constraints exist. The majority of the planned water and sewer improvements do not coincide with other existing/proposed utility extensions, and therefore do not lend themselves to the utility corridor concept. Table 1-3 lists these improvements; planned projects are depicted on Map 1-5. The sewerage and water master plans of the Anchorage Water and Wastewater Utility (AWWU) formed the basis for the alignment recommendations contained in this plan.

Telecommunications

Telephone and cable television transmissions occur through facilities (cables) that are considerably smaller than other transmission facilities. The installation of these systems usually takes place in combination with other types of utility systems, especially underground electric. While having the option to use utility corridors, these facilities are normally coordinated with other utilities and are not further considered in this plan.

TABLE 1-3

PLANNED NEW FACILITIES AND UPGRADES: ANCHORAGE BOWL
WATER TRANSMISSION FACILITIES

Improvement Type	Facility	Diameter	Alignment	Terminus Begin	Terminus End	Entity
Transmission Main	New	48"	military boundary/ Muldoon	Ship Creek ERS	Tudor	AWWU
Transmission Main	New	42"	Campbell Field Rd.	Tudor	Abbott	AWWU
Transmission Main	New	16"	Abbott Road	Service High	Lake Otis	AWWU
Transmission Main	New	36"	92nd Ave.	N. Seward Hwy.	King Street	AWWU
Transmission Main	New	30"	92nd Ave.	King Street	Sand Lake Rd.	AWWU
Transmission Main	New	30"	Sand Lake Gravel Pits	Sand Lake Rd.	Raspberry Rd.	AWWU
Transmission Main	New	16"	Sand Lake Rd.	Dimond Blvd.	Raspberry Rd.	AWWU
Transmission Main	New	12" 24"	Jewel Lake Rd.	Dimond Blvd.	Int'l Arpt. Rd.	AWWU
Transmission Main	New	16"	Klatt/Victor Rds.	Huffman Rd.	Bayshore Dr. Gebhart Dr.	AWWU
Transmission Main	New	16"	O'Malley Rd.	Lake Otis	Old Seward	AWWU
Transmission Main	New	16" 24"	Bragaw/Rabbit Creek/ Potter Valley	Huffman Rd.	Potter Valley	AWWU
Transmission Main	New	24"	Spenard Rd.	36th/Arctic	Spenard/Jewel Lake Rds.	AWWU

SEWER TRANSMISSION FACILITIES

Improvement Type	Facility	Diameter	Alignment	Terminus Begin	Terminus End	Entity
Interceptor	New	24"	Campbell Cr. Tide Flats	Campbell Cr.	Dimond	AWWU
Interceptor	New	30"	Sand Lake Gravel Pits	Dimond Blvd.	Kincaid Rd.	AWWU
Trunk	New	24"	104th Ave.	Coronado Rd.	Minnesota	AWWU
Trunk	New	16"	DeBarr/Chester Cr.	Columbine St.	21st Ave.	AWWU
Fish Creek Trunk	New	30"	Tudor Rd.	36th Ave.	Lakeshore Dr.	AWWU

2. TRANSMISSION CORRIDOR WIDTHS

Definition of Transmission Corridor and Typical Corridor Widths

A transmission corridor is defined as a right-of-way or easement, of a varied width, set aside for the placement of facilities for the conveyance of high-voltage electric energy, natural gas, petroleum products, water, wastewater, and communication signals. The general right-of-way requirements for such facilities are described in Table 1-4. These dimensions are applied in this plan in order to establish the required width of transmission corridors.

As indicated in this table, right-of-way (ROW) widths vary by type of facility and are dependent on specific site characteristics.[1,2]

The right-of-way for each utility, given in Table 1-4, reflects the needs of utilities to initially construct and subsequently maintain installed facilities. The widths necessary for electric transmission facilities reflect somewhat different requirements. Their right-of-way widths are designed to ensure that maintenance activities are permitted and, should the conductors break or structures fail, that no buildings are positioned underneath.

Where possible, and not in conflict with major road improvements identified in adopted plans, it is typical for each of these types of utilities to use portions or all of the available road right-of-way for these easements. Underground facilities may typically locate within or at the edge of the road right-of-way. Overhead electric facilities are often positioned at the outer edge of the road right-of-way. As depicted in Figure 1-1, these features may occur within the area reserved for slope easements, landscaping, and utilities. This diagram is taken from municipal road design standards. The effect of inclusion within the road right-of-way is to reduce the need for exclusive easements for utilities

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1 Electric utilities will sometimes encounter unique situations which may require right-of-way or easement widths which are not necessarily identical to those given in Table 1-4. Changes in the National Electric Safety Code, OSHA, and state statutes may also require different right-of-way or easement requirements in the future. These changes will be reflected in future revisions of this plan, should they occur.

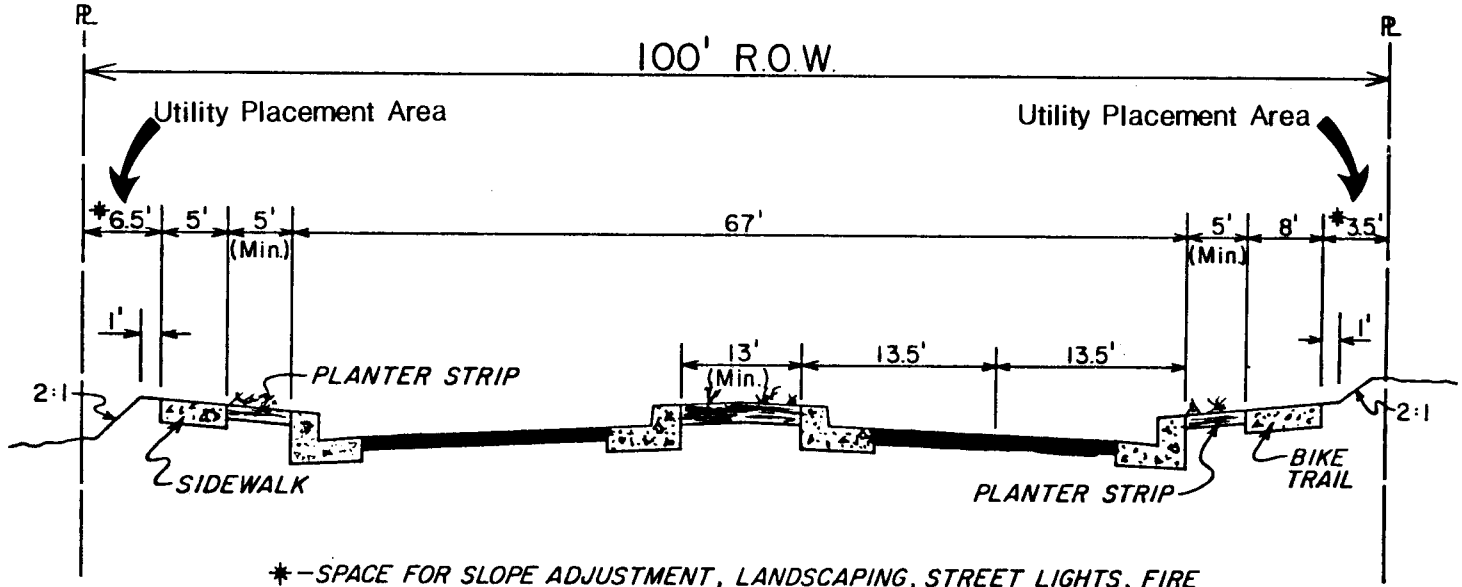
2 It should also be emphasized that these dimensions are minimum widths. Somewhat greater widths may be necessary in order to provide sufficient clearance of wooded areas.

TABLE 1-4

Right-of-Way and Easement Widths
Transmission Corridors

Facility Type	Facility Characteristics	Dimension Surface	Dimension Aerial
Electrical	115kv - 138kv single and double circuit	30 feet	30 feet**
	230kv - 345kv* single and double circuit	50 feet	30 feet**
	(* rural areas only)		
	(** beyond each outside boundary of the surface easement)		
Natural Gas	4" dia. to 20" dia. high pressure (single main)	30 feet	
	4" dia. to 20" dia. high pressure (double main)	50 feet	
Sewers (Trunk and Interceptors)	12" dia. - 72" dia.	30 feet	
	72' dia. - 96" dia.	50 feet	
Petroleum Products	4" dia. - 20" dia.	20 feet	
	>20" dia.	50 feet	
Water (Transmission)	12" dia. - 54" dia.	30 feet	
	>54" dia.	50 feet	

FIGURE: 1-1



*—SPACE FOR SLOPE ADJUSTMENT, LANDSCAPING, STREET LIGHTS, FIRE HYDRANTS, CLUSTER MAILBOXES, BUS TURNOUTS, UTILITIES, AND RETAINING WALLS. ADDITIONAL EASEMENTS GENERALLY REQUIRED FOR BUS TURNOUTS, INTERSECTION WIDENING, SLOPE ADJUSTMENT, AND OFFSET SIDEWALKS AND BIKE TRAILS.

MAJOR URBAN ARTERIAL - CLASS III (DIVIDED)

4 LANES, NO PARKING

SOURCE: Municipal Road Design Standands

7/14/88

on adjacent private property. In the case of electric utilities, almost one-half of the required easement width can be reduced by positioning the electrical utility at the edge of the road right-of-way.

The variety of ways that electrical facilities are installed can be best described through a series of diagrams.[1] Figure 1-2 depicts where utility facilities may be sited for a typical residential collector. If right-of-way is sufficient, the electric transmission utility (138KV) may be positioned at the outer edge of the road right-of-way, while cantilever construction design is often used where right-of-way is insufficient. In the latter situation, the utility is positioned over the road right-of-way rather than using an area within private property. Figure 1-3 shows an example of the placement of utilities along a major arterial. It also shows what a double circuit looks like as well as a single circuit associated with an underbuilt distribution line, which in this case is 12.5KV. Finally, Figure 1-4 shows a somewhat unusual situation where the amount of road right-of-way is extensive. The utility is located in this diagram at the outer edge of the road right-of-way, which is the preferred siting of electrical transmission facilities. A large, high-voltage 230KV facility is also depicted in this figure.

Where conditions permit, the practice of developing a shared road/utility use area is an effective way to develop an integrated utility/transportation system and to significantly reduce overall (utility) easement requirements. In fact, public use easements which establish right-of-way are often designed for public services such as roads and utility lines.

The actual positioning of electrical utility lines vis-a-vis roads is, however, a complicated process. It involves:

- considerations of whether future road widenings will occur and, if so, to what extent;

- conflicting municipal and state statutes that may or may not provide for the reimbursement of utility relocations with road widenings; and

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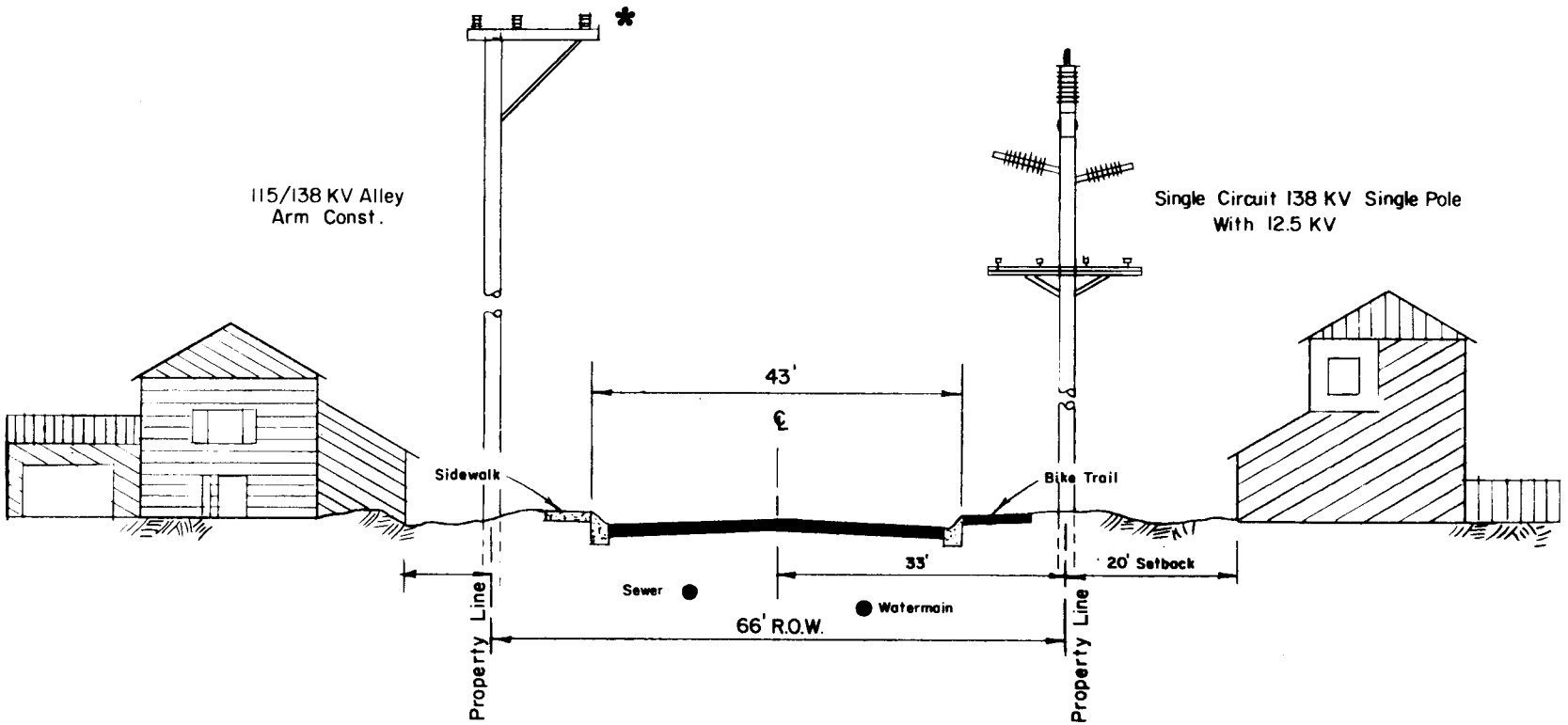
[1] It should be noted that these diagrams do not necessarily reflect preferred design requirements. The actual utility-corridor design must be determined on a case-by-case basis, reflecting national technical standards, available easements and rights-of-way, planned road improvements, and other safety and design standards. These diagrams reflect municipal road design standards; they do not represent state or federal standards.

FIGURE: 1-2



COLLECTOR - CLASS I C
W/ PARKING BOTH SIDES

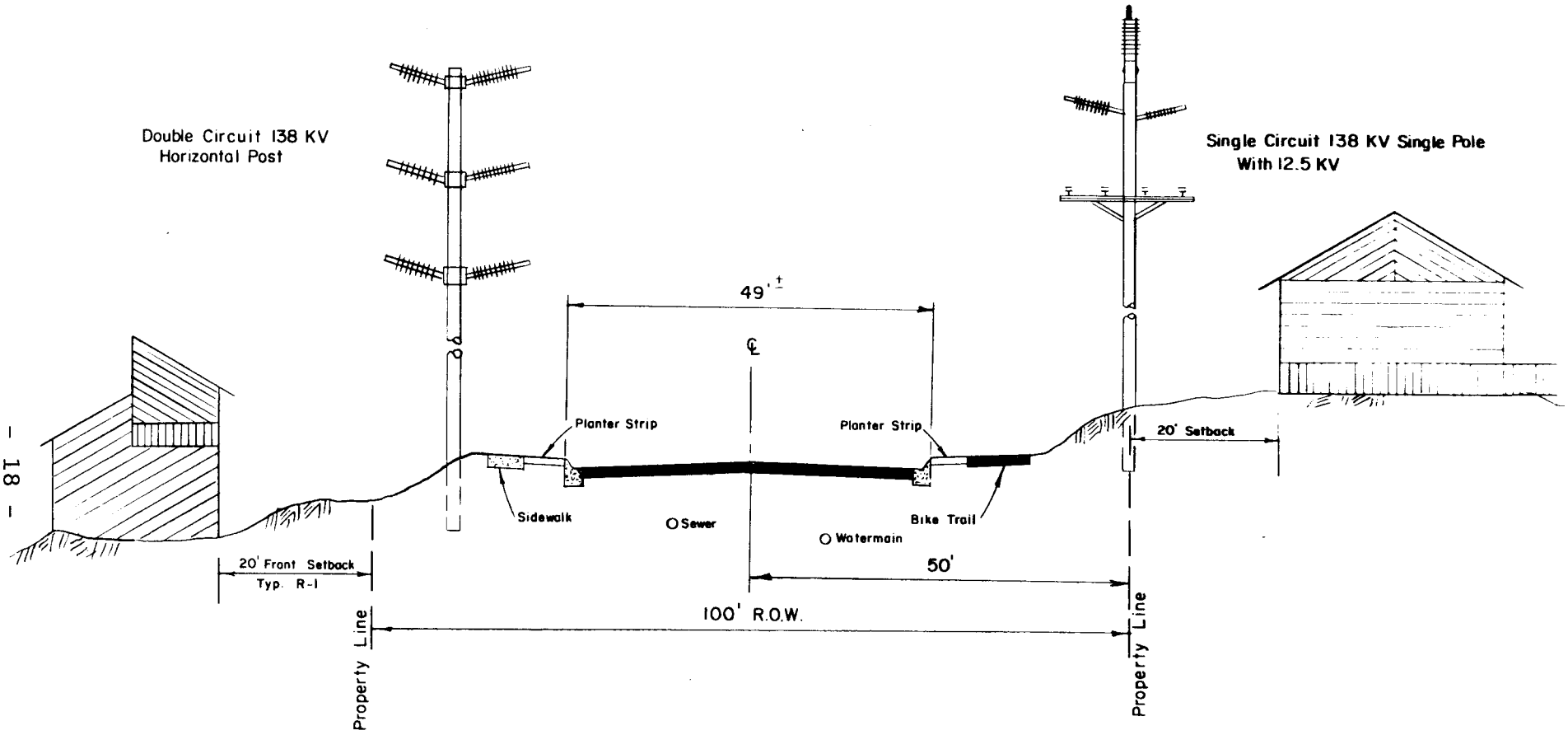
NOTE: Poles 50' to 70' tall

*Alley arm not a preferred structure type.

SOURCE: Municipal Road Design Standards

2/20/90

FIGURE: 1-3



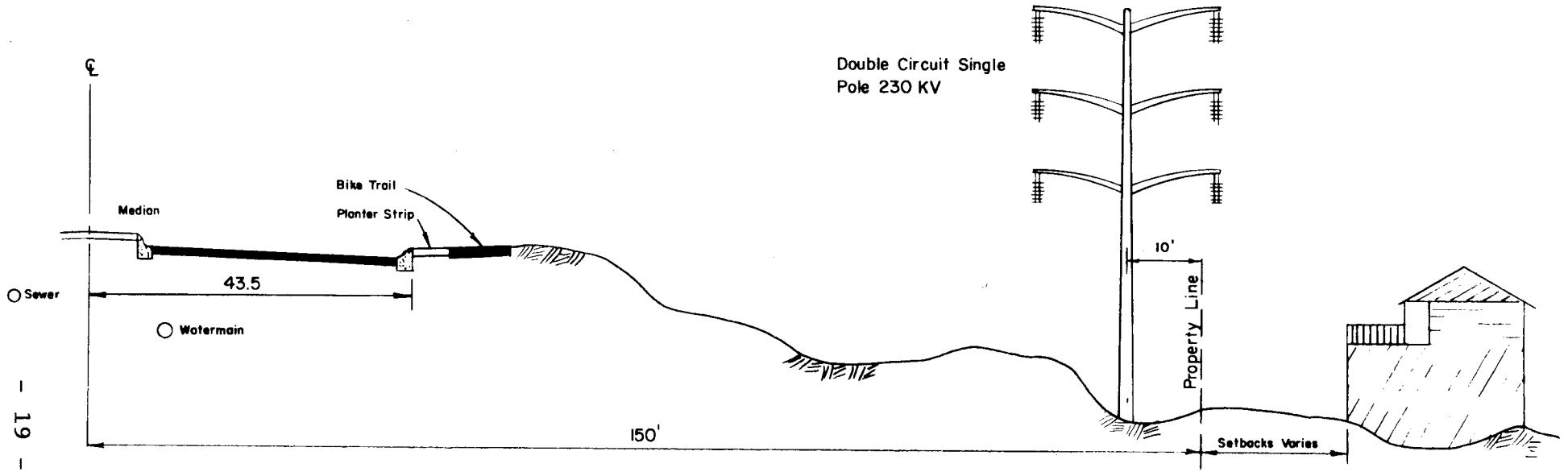
MAJOR ARTERIAL - CLASS III B (UNDIVIDED)
4 LANES, NO PARKING

NOTE: Poles 50' to 70' tall

SOURCE: Municipal Road Design Standards.

2/20/90

FIGURE: 1-4



MAJOR ARTERIAL - CLASS III A (DIVIDED)
6 LANES NO PARKING

NOTES: 1. Poles 50' to70' tall
2. 1/2 of 300' R.O.W. shown

SOURCE: Municipal Road Design Standands

2/20/90

- the effects of Anchorage Municipal Code 21.90, which requires the undergrounding of utility distribution lines under certain conditions as part of a road improvement project.

The recommendations in the report attempt to develop a balance between the desire to develop corridors, or areas, of compatible road/utility development, while reflecting the oftentimes conflicting legal, engineering, and cost considerations of road and electrical utility agencies.

Specialized Easement Types and Reduction in Right-of-Way Requirements: Electric Transmission Facilities

Although the other utilities have fairly uniform, non-varying requirements for rights-of-way (depending on the type and size of facility), electrical transmission facilities are not so standardized. Aerial easements (as opposed to ground easements) may be utilized and corridor right-of-way requirements may be reduced through the use of both aerial easements and certain design techniques.

1. Aerial Easements

   Aerial easements can be used in association with or separate from surface easements for electrical transmission lines. An aerial easement is described as a rectangular (or other shaped) block of airspace above real property that encompasses the electrical transmission facility. It is designed to ensure that private permanent or temporary structures do not physically extend into this airspace zone, and thereby avoid contact with energized electrical transmission or distribution lines. Aerial easements are utilized where it is not necessary to obtain surface easements because physical installation of the pole and conductors can be accommodated through the use of existing rights-of-way or existing easements. They are typically used in densely built-up areas where platting has already occurred and the ground easement has not been secured at the time of platting.[1] When used in that fashion, they may be incorporated within a road improvement so that one-half of the required right-of-way

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[1] Airspace permits for aerial easements over state rights-of-way must be obtained from the Alaska Department of Transportation and Public Facilities (ADOT/PF). Generally, air space permits will not be granted if roadway facilities are not fully constructed in accordance with planned transportation improvements.

lies within the public easement while one-half occurs within private property, but at some distance above ground level. This tends to be an effective design technique since most non-residental sites are developed with the parking area adjacent to the public right-of-way, while structures that could interfere with electrical facilities are usually located between the parking area and the rear property line. An example of an aerial easement is depicted in Figure 1-5.

2. Reduction of Right-of-Way Requirements

The right-of-way requirements of electrical transmission facilities may be reduced through the use of cantilever or "alley-arm" tower construction. The typical wooden or metal single-pole construction requires space on both sides of the pole, to encompass the area underneath the transmission conductors. Cantilever construction can preclude or greatly minimize the need to acquire easements on private land by using a single span for the transmission lines; these are positioned over the public right-of-way (see Figure 1-2). This technique is used in densely built-up areas where acquisition costs are excessive or where structures are presently located within an area where a ground or aerial easement would have otherwise been required. The cantilever construction technique is, however, more expensive and structurally less desirable than the normal tower construction method(s).[1]

Because of the various means that electrical transmission facilities can be designed or accommodated by either surface or aerial easements, specific right-of-way requirements cannot be said to exist. Rather, the type of technique utilized will depend on whether the area (affected by a new electrical facility) is vacant, unplatted land; vacant, platted land; or built-up platted land. It will also depend on whether available road right-of-way exists or not. Within built-up areas, transmission facilities use road rights-of-way whenever

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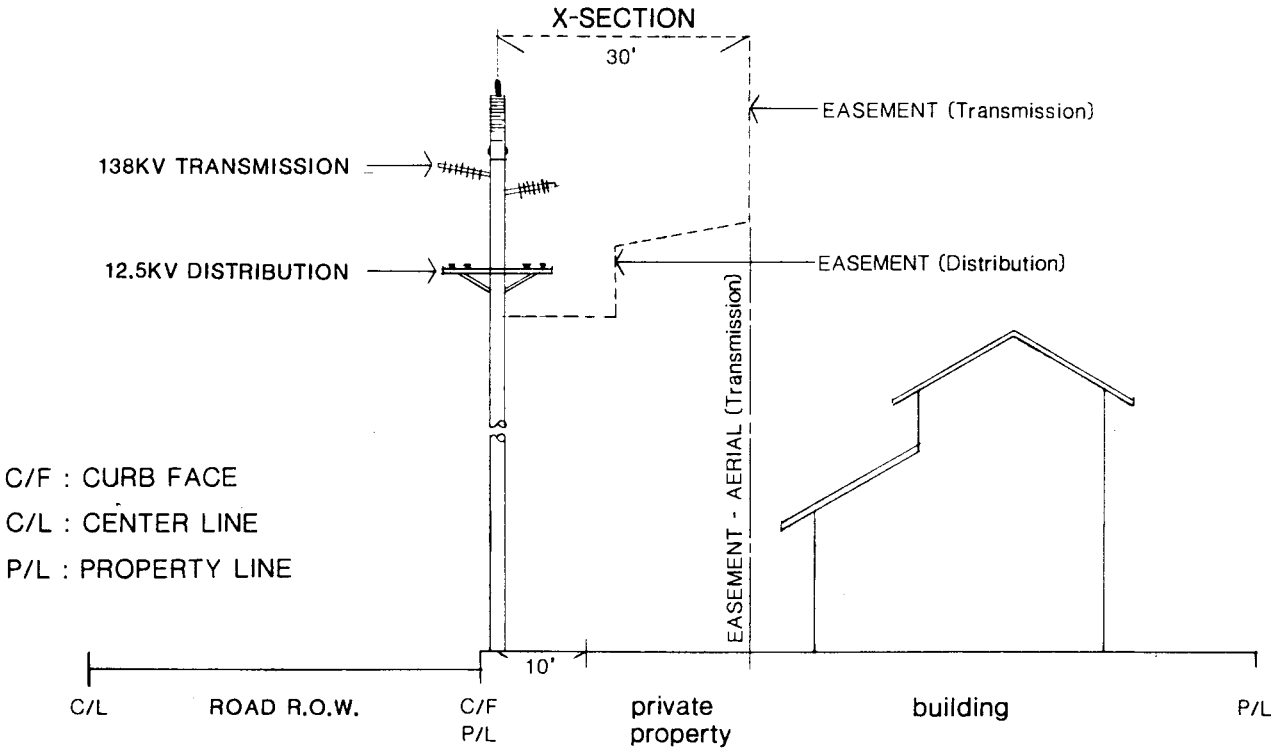
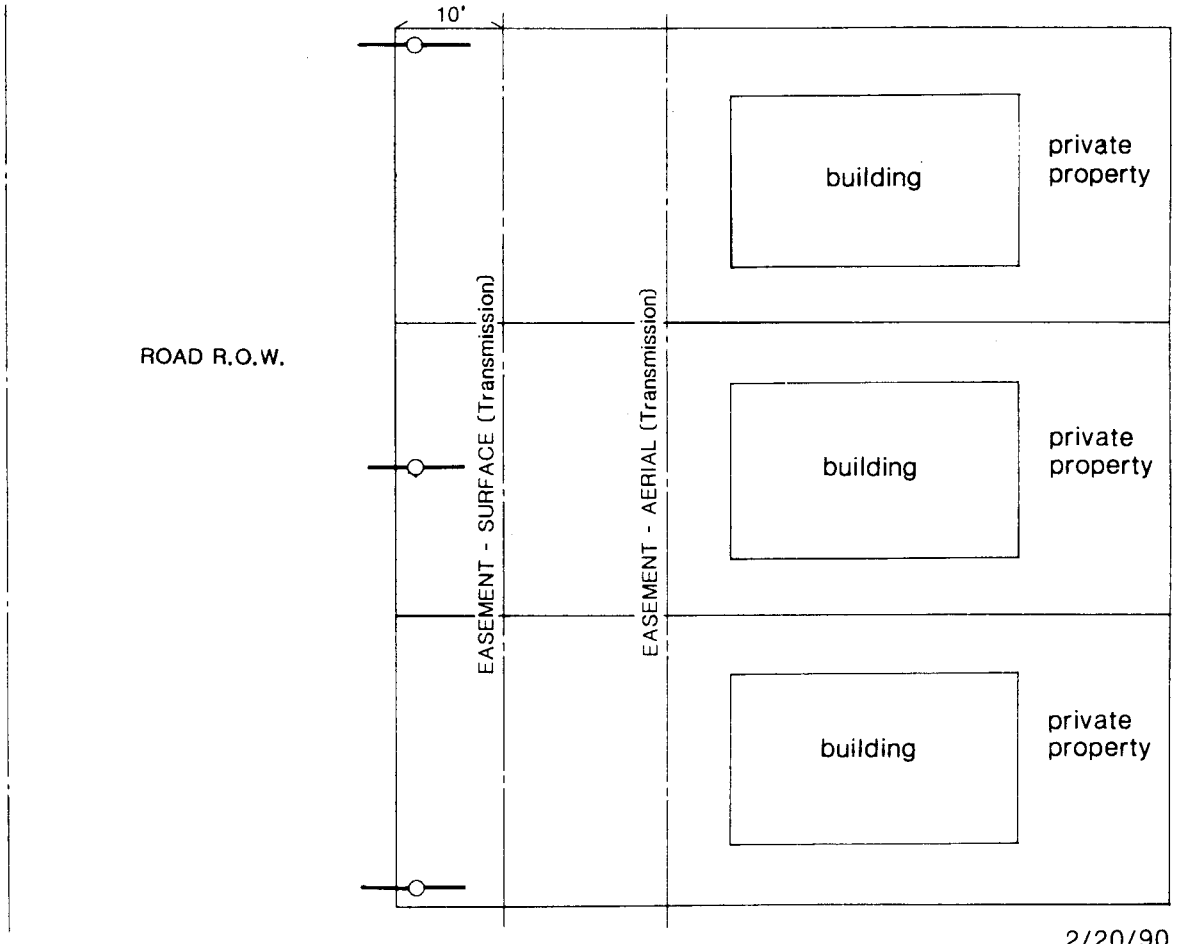
[1] It should be noted that it is not the practice of any of the three Anchorage-area electric utilities to use "alley-arm" construction techniques for transmission circuits. Additionally, the use of cantilevered construction for wood pole installations is considered appropriate for only certain situations.

FIGURE: 1-5

AERIAL EASEMENT





2/20/90

possible because of the absence of practicable or economically justifiable alternatives.[1] The alternative ways that electrical transmission lines can be positioned are described in Figure 1-6.

3. RELATED PLANS

Official Streets and Highways Plan

The Official Streets and Highways Plan (OSHP) describes the existing and proposed vehicular transportation system for the municipality. The OSHP identifies the location and design width of those major streets and highways required to accommodate the needs of the community in years to come. Because it establishes specific right-of-way and structure setback requirements, and identifies future road improvements, this plan can, in part, be used as a basis for the siting and design of new utility transmission facilities. To the extent practicable, new utilities should follow the roadway alignments of this plan. It should be noted that utilities located along specific roadways under state jurisdiction which are controlled access (such as a freeway) must be placed outside the controlled access right-of-way. The widths of the various classifications of collector and arterial streets are given in Table 1-5, and increase with the level of functional classification. The outer edge of this right-of-way is often used for slope easements, landscaping, and utilities. A cross-section of an urban major arterial, corresponding to municipal design specifications, is included in Figure 1-1, and shows this outer easement area.

Long Range Transportation Plan

The Long Range Transportation Plan is that document within the Anchorage Bowl and Eagle River areas that specifies necessary transportation improvements, including roads, needed to accommodate the expected transportation needs through the year 2010. This plan identifies the principal arterial, expressway, and freeway facilities to serve the Anchorage and Eagle River areas, and identifies the general development requirements of these facilities. The Utility

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1 In instances where the road construction agency is required by statute to relocate existing utility lines, the inclusion of the utility line as part of the road project increases the size of the right-of-way, often resulting in considerably greater road construction costs.

TABLE 1-5

Right-of-Way Standards

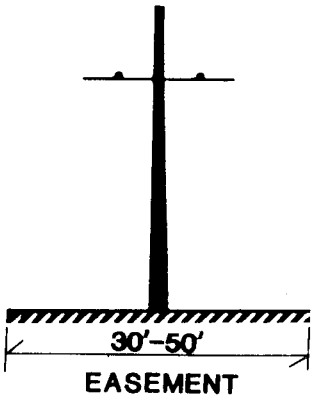
Facility Type	Street Class	Number of Lanes	Minimum R-O-W Width	Average Daily Traffic (a)
Freeway	V	Variable	150'(b)	Over 40,000
Expressway	IV	4-6	130'	Over 20,000
Major Arterial				
Divided (c)	III	4	100'	Over 20,000
	IIIA	4-6	130'	Over 20,000
Undivided	IIIB	4	100'	Over 20,000
	IIIC(d)	4	60'	Over 20,000
Minor Arterial	II	2-4	80'	10,000-20,000
	IIA(d)	2-4	60'	10,000-10,000
Collector				
Residential	I	2	80'	2,000-10,000
Industrial/Commercial	IA	2-4	80'	2,000-10,000
Neighborhood	IB(e)	2	70'	2,000-10,000
Neighborhood	IC	2	60'	2,000-10,000
Local (f)	--	2	50'-60'	Less than 2,000

(a) Average number of vehicle trips per day.
(b) Does not include right-of-way required for frontage roads or interchanges.
(c) Width of divider strip may vary.
(d) Classification applicable only in area bounded by and including L Street, 3rd Avenue, Karluk Street, and 15th Avenue.
(e) Minimum 70' right-of-way required if direct driveway access is permitted.
(f) Includes Country Lanes. See also Title 21, Subdivision Street Standards.

SOURCE: Official Streets and Highways Plan.

FIGURE: 1-6

ALTERNATE EASEMENTS & DESIGN CONFIGURATIONS

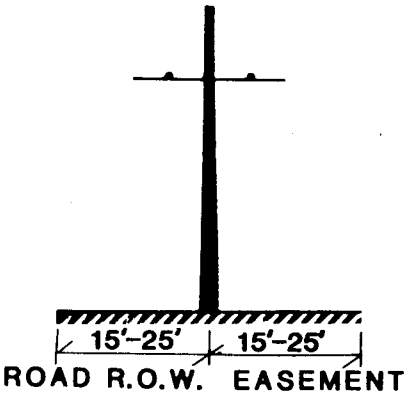


EXAMPLE A:

VACANT, UNPLATTED - WITHOUT ROAD R.O.W.

230KV: 50'

115-138KV: 30'



EXAMPLE D:

VACANT, PLATTED - WITH ROAD R.O.W.

230KV: 25'

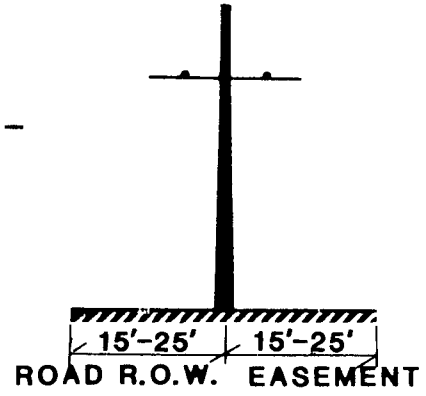
115-138KV: 15'

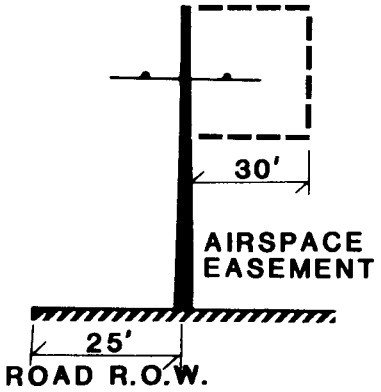
EXAMPLE B:

VACANT, UNPLATTED - WITH ROAD R.O.W.

230KV: 25'

115-138KV: 15'



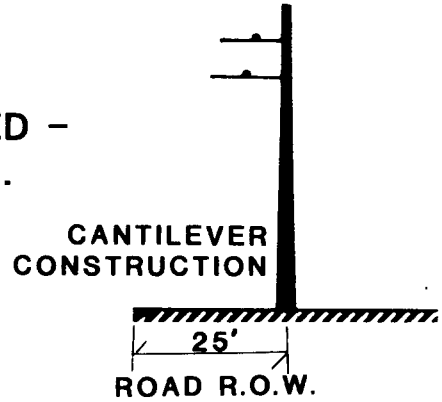


EXAMPLE C:

VACANT, PLATTED - WITH ROAD R.O.W.

EXAMPLE E:

BUILD-UP, PLATTED - WITH ROAD R.O.W.



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Corridor Plan and Long Range Transportation Plan are important, interrelated documents, with the Long Range Transportation Plan identifying the major areas of road improvements and the Utility Corridor Plan identifying the locations of future utility transmission facilities. The siting of utility transmission facilities within or adjacent to road rights-of-way vary depending on municipal or state jurisdiction and with engineering road design standards. Considerations affecting this siting are described within the UCP, Chapter 4.

Transportation Improvement Plan

This document programs the expenditure of federal and state funds for road improvements as well as other transportation improvements within the Anchorage area. It is recommended that the Transportation Improvement Plan be reviewed by the utilities on an annual basis in order to increase the understanding of forthcoming road projects and to ensure improved design and timing issues between the utilities, the municipality, and the Alaska Department of Transportation and Public Facilities.

Areawide Trails Plan

The Areawide Trails Plan identifies a trail system for the municipality. The joint use of rights-of-way for bike trails and utility lines is advantageous for both in some areas. This is particularly true when bike trails, utility lines, and roads coincide. Opportunities for trail extensions and greenbelt connections may be offered in certain instances by transmission corridors beyond roadways as well. Any joint use of trail with utility systems requires meeting certain industry safety considerations. Any joint use of trail with utility systems requires meeting certain industry safety considerations.

The joint use of rights-of-way for utilities and trails other than bikeways is not identified in this plan. Other trails, including dog sled trails, nature trails, and others are usually developed in parks, but may also be developed within the easement/right-of-way of facilities described in this plan.

The types of bike trails appropriate for use within a shared right-of-way with utility lines include the following:

Type I Trail: trails separated from the main stream of motorized traffic by a minimum of 12 feet, including independent trails through greenbelts and parks;

Type III Trail: trails that use part of the roadway (i.e., bike lanes on road shoulders).

Figures 1-7 and 1-8 show how a bikeway and a subtransmission line could possibly be accommodated in the same right-of-way. Since Figure 1-7 would result in the requirement for an additional 20 feet of air easement or right-of-way into private property from the position of the existing structure, Figure 1-8 is most compatible with the joint use corridor concept.

FIGURE: 1-7

Joint Use Corridor -
Utility Line/Road/Class II Bikeway

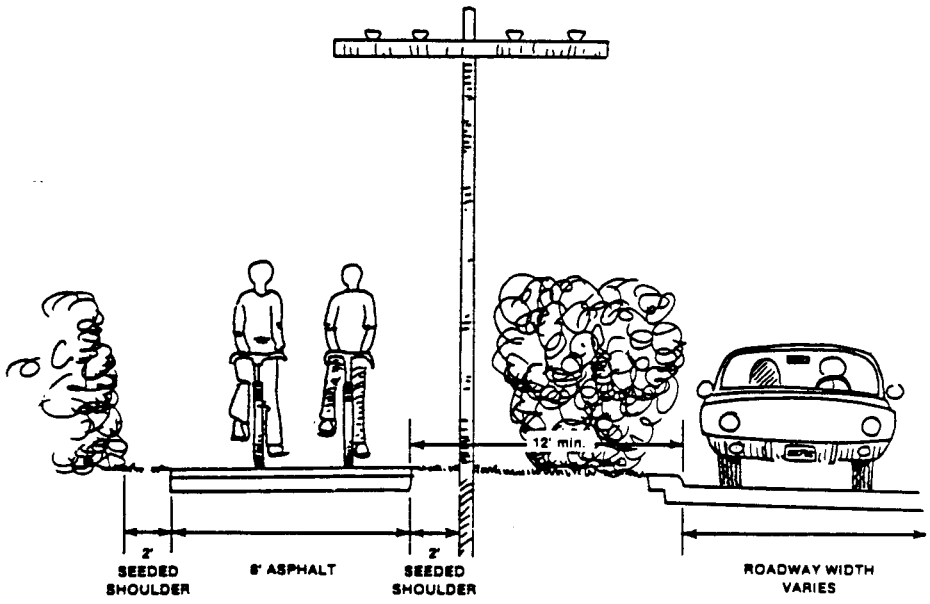
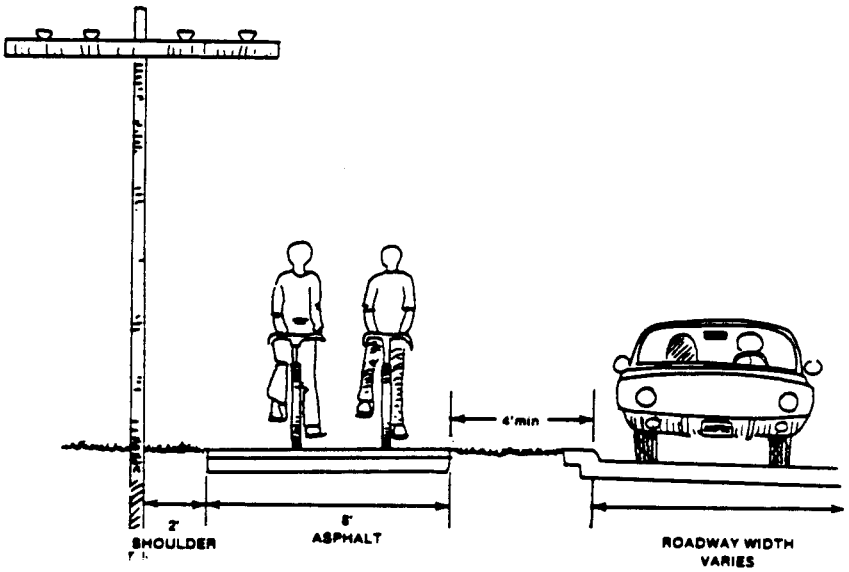


FIGURE: 1-8

Joint Use Corridor
Utility Line/Road/Class I Bikeway



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