

DEPARTMENT OF TRANSPORTATION

Rules Repealing Rules and Regulations
Relating to the Accommodation and Installation
of Utilities on State Highways and
Federal Aid Secondary Highways,
and Adopting Chapter 105, Title 19,
Administrative Rules

SUMMARY

1. Rules and Regulations Relating to the Accommodation and Installation of Utilities on State Highways and Federal Aid Secondary Highways are repealed.
2. Chapter 105 of title 19, entitled "Accommodation and Installation of Utilities on State Highways and Federal Aid County Highways", is adopted.

TITLE 19 DEPARTMENT OF TRANSPORTATION

SUBTITLE 4 HIGHWAYS DIVISION

CHAPTER 105

ACCOMMODATION AND INSTALLATION OF UTILITIES
ON STATE HIGHWAYS AND FEDERAL AID
COUNTY HIGHWAYS

Subchapter 1 General Provisions

- Sec. 19-105-1 Purpose
- Sec. 19-105-2 Policy statement
- Sec. 19-105-3 Application
- Sec. 19-105-4 Definitions

Subchapter 2 General Requirements

- Sec. 19-105-5 Permit requirements and coordination
- Sec. 19-105-6 Scenic areas
- Sec. 19-105-7 Joint-use utility
- Sec. 19-105-8 Specifications for installation
- Sec. 19-105-9 Deviations

Subchapter 3 Freeways

- Sec. 19-105-10 Requirements for freeways
- Sec. 19-105-11 Overhead utility crossings
- Sec. 19-105-12 Underground utility crossings
- Sec. 19-105-13 Utility crossings at highway structures

Subchapter 4 Highways Other than Freeways

- Sec. 19-105-14 Requirements for highways other than freeways
- Sec. 19-105-15 Overhead utility installations
- Sec. 19-105-16 Underground utility installations
- Sec. 19-105-17 Utility crossings at structures

Subchapter 5 Other Provisions

- Sec. 19-105-18 Review and approval
- Sec. 19-105-19 Use and occupancy agreements
- Sec. 19-105-20 Compliance with laws
- Sec. 19-105-21 Severability
- Sec. 19-105-22 Repeal

Historical note. This chapter is based substantially on the rules and regulations governing the accommodation and installation of utilities on state highways and federal-aid county highways. [Eff. 12/11/70; R **MAY 30 1981**

SUBCHAPTER 1

GENERAL PROVISIONS

Sec. 19-105-1 Purpose. This chapter:

- (1) Prescribes policies and procedures for accommodating and installing utility facilities on the rights-of-way of state highways and federal-aid county highways.
- (2) Regulates the location, design, and methods for the accommodation and installation of utility facilities on state highways and federal-aid county highways in the interest of safety and of protection, utilization and future development of the highways with due consideration given to public service afforded by adequate and economical utility installations.
- (3) Establishes the conditions governing the occupancy, use or reservation of utility facilities all to the end that the highway facilities shall be preserved. [Eff.

MAY 30 1981 (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)

Sec. 19-105-2 Policy statement. The department of transportation recognizes the utility's franchise to occupy the rights-of-way of state highways in providing essential services and commodities to the public. Therefore, utility facilities may be accommodated in the state highway rights-of-way provided that the use and occupancy do not interfere with the free and safe flow of traffic or otherwise impair the highway or its visual quality and does not conflict with the provisions of federal, state or local laws or regulations or the provisions of this chapter. [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)

Sec. 19-105-3 Application. (a) This chapter shall apply to:

- (1) New utility installations which are to cross or otherwise occupy the rights-of-way

of active or completed state highways and federal-aid county highway projects.

(2) Existing utility facilities which are to be retained, relocated or adjusted within the rights-of-way of active state and federal-aid county highway projects.

(b) This chapter shall not apply to a minor segment of an existing utility installation in such a manner as to result in misalignment of the installation or adjustment of the entire installation; however, in those cases where a hazardous condition exists, State shall initiate appropriate corrective measures to provide a safe traffic environment.

(c) Where existing installations are to remain in place within the rights-of-way without adjustment, the State and utility shall enter into an appropriate agreement as described under sections 19-105-7 and 19-105-19, or existing agreements in effect may be accepted or amended as appropriate.

(d) The application of this chapter on federal-aid county highways shall be limited to county highways within the designated federal-aid county system which were previously improved with federal-aid funds.

(e) Existing county highways within the designated federal-aid county system which have not yet been improved with federal-aid funds are exempt from this chapter; however, it would be desirable to apply this chapter to these highways.

(f) Section 19-105-6 shall apply only to lands described therein which are acquired or improved with federal-aid highway funds. [Eff. MAY 30 1981 (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)]

Sec. 19-105-4 Definitions. As used in this chapter, unless the context clearly indicates otherwise:

"Active state highway projects" means projects for which any phase of development has been programmed for federal-aid or state highway funds and the state or other highway authority has control of the highway rights-of-way. A project will be considered active until the date of its final acceptance by the Federal Highway Administration or State and thereafter will be considered completed.

"Arterial highway" means a highway used primarily for through traffic, usually on a continuous route.

"AASHTO" means American Association of State Highway and Transportation Officials.

"Auxiliary lane" means the portion of the roadway adjoining the traveled way for parking, speed-change, turning, weaving, truck climbing or for other purposes supplementary to through traffic movement.

"Cap" means a rigid structural element surmounting a pipe.

"Carrier" means a pipe directly enclosing a transmitted fluid (liquid or gas).

"Casing" or "sleeve" means a larger pipe enclosing a carrier pipe.

"Clear roadside policy" means a policy employed by a highway authority to increase safety and traffic operation and improve the appearance of highways by designing, constructing and maintaining highway roadsides as wide, flat and rounded as practical and as free as practical from physical obstructions above the ground such as trees, drainage structures, massive sign supports, highway lighting standards, utility poles and other ground-mounted obstructions. The policy is also directed at the removal of roadside obstacles which are likely to be associated with accident or injury to the highway user. Where such obstacles are essential, they must be constructed to yield under specified levels of impact or placed at a location which affords adequate protection to an out-of-control vehicle. In all cases full consideration shall be given to sound engineering principles and economic and environmental factors.

"Coating" means a material applied to or wrapped around a pipe.

"Control of access line" means a line indicating the restriction of access to the highway.

"Cradle" means a rigid structural element below and supporting a pipe.

"Director" means the director of the state department of transportation, or his duly authorized representative.

"Divided highway" means a highway with separated roadways for traffic in opposite directions.

"Duct line" means a structure or arrangement of one or more ducts, conduits, pipes, or other enclosed runways between two points designed to contain underground conductors or cables.

"Encasement" means a structural element surrounding a pipe.

"Exhibit 'A'" means exhibit entitled "Terminology for Encasement and Allied Protection" dated 10/1/80.

"Exhibit 'B'" means exhibit entitled "Pole Placement Details for Highways" dated 10/1/80.

"Exhibit 'C'" means exhibit entitled "Table for Pole Placement Criteria on Cut and Fill Sections" dated 10/1/80.

"Exhibit 'D'" means exhibit entitled "Pole Placement Details for Cut and Fill Sections (Sheet 1 of 3)" dated 10/1/80.

"Exhibit 'E'" means exhibit entitled "Pole Placement Details for Cut and Fill Sections (Sheet 2

of 3)" dated 10/1/80.

"Exhibit 'F'" means exhibit entitled "Pole Placement Details for Cut and Fill Sections (Sheet 3 of 3)" dated 10/1/80.

"Exhibit 'G'" means exhibit entitled "Pole Placement Details for Uncurbed Highways" dated 10/1/80.

"Exhibit 'H'" means exhibit entitled "Space Allocation of Carrier Pipes Within Shoulder Areas (Extreme hardship cases)" dated 10/1/80.

"Exhibit 'I'" means exhibit entitled "Space Allocation of Carrier Pipes on Highways (Extreme hardship cases)" dated 10/1/80.

"Exhibit 'J'" means exhibit entitled "Encased Carrier Pipe Under Divided Highway" dated 10/1/80.

"Exhibit 'K'" means exhibit entitled "Encased Carrier Pipe Under Undivided Highway" dated 10/1/80.

"Exhibit 'L'" means exhibit entitled "Typical Utility Installations on Highway Structures - Concrete Box Girder Bridge Structure (Sheet 1 of 3)" dated 10/1/80.

"Exhibit 'M'" means exhibit entitled "Typical Utility Installations on Highway Structures - Concrete Slab Bridge Structure (Sheet 2 of 3)" dated 10/1/80.

"Exhibit 'N'" means exhibit entitled "Typical Utility Installation on Highway Structures - At Prestressed or Tee-girder Bridge Structure (Sheet 3 of 3)" dated 10/1/80.

"Expressway" means a divided arterial highway for through traffic with full or partial control of access and generally with grade separations at major intersections.

"Federal-aid county highways" means all highways on the designated federal-aid secondary or urban county system.

"Freeway" means an expressway with full control of access. All interstate highways on the approved national system of interstate and defense highways are in this category.

"Frontage road" means a local street or road auxiliary to and located on the side of an arterial highway for service to abutting property and adjacent areas and for control of access.

"Gallery" means an underpass for two or more pipelines.

"Grout" means mortar or slurry pumped to backfill an untrenched pipe.

"Jacket" means encasement by concrete poured around a pipe.

"Highway" means any public way for vehicular travel, including the entire area within the rights-of-way and related facilities, constructed or improved in whole or in part with federal-aid or state highway funds.

"Highway utility encroachment committee" means a committee consisting of the state highways division construction and maintenance engineer (chairman), design engineer, traffic engineer and head of right-of-way branch.

"Median" means the portion of a divided highway separating the traveled ways for traffic in opposite directions.

"New utility installations" means the initial installations on the highway rights-of-way and the replacement of existing facilities with those of a different type, capacity, or design or replacement at a new location on the rights-of-way. Any replacement of an existing facility or portion thereof with another of the same type, capacity, and design at the same location is considered to be maintenance.

"Normal" means crossing at a right angle.

"Oblique" means crossing at an acute angle.

"Pipe" means a cylindrical tube, any conduit including ducts and cellular blocks for conveying water, gas, etc.

"Private lines" means privately-owned facilities which convey or transmit the commodities outlined in this chapter, but are devoted exclusively to private use.

"Ramp" means an interconnection of roadway traffic interchange, or any connection between highway facilities of different levels, on which vehicles may enter or leave a designated roadway.

"Resurfacing" means the placing of one or more new courses on an existing surface.

"Right-of-way line" means the boundary of the highway right-of-way and adjacent property owner.

"Rights-of-way" means real property or interests therein, acquired, dedicated or reserved for the construction, operation and maintenance of a highway in which federal-aid or state highway funds are or may be involved in any stage of development. Land acquired under section 319(b), Title 23, United States Code, (scenic strips - 1965 Highway Beautification Act) shall be considered to be highway rights-of-way.

"Roadway" means the portion of a highway, including shoulders for vehicular use. A divided highway has two or more roadways.

"Shoulder" means the portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles for emergency use, and for lateral support of base and surface courses.

"Standard right-of-way line" means the line denoting the width necessary to accommodate all of the elements of a typical roadway cross-section to fulfill the design requirements of the highway. This

line does not generally encompass additional rights-of-way required for large cuts and fills.

"State highways" means all highways on the designated state highway system. The designated state highway system is composed of the following highways:

- (1) Federal-aid highways:
 - (A) Interstate and defense highways;
 - (B) Federal-aid primary state highways;
 - (C) Federal-aid secondary state highways; and
 - (D) Federal-aid urban state highways.
- (2) Nonfederal-aid state highways.

"State highway projects" means those projects administered by the State which involve the use of federal-aid or state highway funds for the construction or improvement of a state highway or related highway facilities or for the acquisition of rights-of-way for those projects, including highway beautification projects under section 319, Title 23, United States Code.

"Traveled way" means the portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

"Use and occupancy agreement" means the document by which the State, approves the use and occupancy of highway rights-of-way by utility facilities or private lines.

"Utility" means the utility company; i.e., any person or private or public entity owning or operating utility facilities, including any wholly owned or controlled subsidiary.

"Utility facilities" or "utilities" means all privately, publicly or cooperatively owned lines, facilities and systems for producing, transmitting or distributing communications, power, electricity, light heat, gas, oil, crude products, water, sewer, steam, waste, storm water not connected with highway drainage, and other similar commodities, including fire and police signal systems and street lighting and traffic signal systems, which directly or indirectly serve the public or any part thereof.

"Utility service connection" means a service connection from a utilities distribution or feeder line or main to the premises served.

"Visual quality" means those desirable characteristics of the appearance of the highway and its environment, such as harmony between or blending of natural and man-made objects in the environment, continuity of visual form without distracting interruptions, and simplicity of designs which are desirably functional in shape but without clutter.

"Walled" means a continuous concrete or cement-treated sidefill. (Eff. MAY 30 1981 (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23))

SUBCHAPTER 2

GENERAL REQUIREMENTS

Sec. 19-105-5 Permit requirements and coordination. (a) A permit from the highways division shall be required for the installation of any utility facility and private lines within the state highway rights-of-way except where work is to be performed under a utility agreement in conjunction with a highway project.

(b) New utility installations shall not conflict with existing or planned uses of highway rights-of-way for highway purposes. Proposed utility installations and future highway projects shall be coordinated to avoid, to the fullest extent possible, any conflict in location, construction, or method of installation. (Eff. MAY 30 1981 (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23))

Sec. 19-105-6 Scenic areas. The type and size of utility facilities and the manner and extent to which they are permitted within areas of scenic enhancement and natural beauty can materially alter the visual quality and view of highway roadsides and adjacent areas. These areas include scenic strips, overlooks, rest areas, recreation areas, the rights-of-way of highways adjacent thereto, and the rights-of-way of highways which pass through public parks and historic sites, as described under section 138, Title 23, United States Code.

- (1) New utility installations are not to be permitted within the foregoing described lands, when acquired or improved with federal-aid funds, except as follows:
 - (A) New underground utility installations may be permitted where they do not require extensive removal or alteration of trees visible to the highway user or impair the visual quality of the land being traversed.
 - (B) New aerial installations are to be avoided at such locations unless there is no feasible and prudent alternative to the use of such lands by the aerial facility and it is demonstrated to the

satisfaction of the division engineer that:

- (i) Other locations are not available or are unusually difficult and unreasonably costly, or are less desirable from the standpoint of visual quality;
 - (ii) Undergrounding is not technically feasible or is unreasonably costly; and
 - (iii) The proposed installation will be made at a location and will employ suitable designs and materials which give the greatest weight to the visual qualities of the area being traversed. Suitable designs will include, but are not limited to, self-supporting, armless, single-pole construction with vertical configuration of conductors and cable.
- (2) This section also applies to utility installations that are needed for a highway purpose, such as for highway lighting, or for serving a weigh station, rest or recreational area.
- (3) There may be cases of unusual hardship or other extenuating circumstances encountered involving some degree of variance with this chapter. These cases shall be subject to prior review and approval by the director.
 [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24)
 (Imp: HRS Sec. 264-23)]

Sec. 19-105-7 Joint-use facility. Where the utility has a compensable interest in the land occupied by its facilities and the land is to be jointly owned and used for highway and utility purposes, the responsible highway authority and utility shall agree in writing as to the obligations and responsibilities of each party. These agreements shall incorporate the conditions of occupancy for each party, including the rights vested in the highway authority and the rights and privileges retained by the utility. In any event, the interest to be acquired by or vested in the highway authority in any portion of the rights-of-way of a state highway project to be vacated, used or occupied by utilities or private lines shall be of a nature and extent adequate for the construction, safe operation and maintenance of the highway project. [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24)
 (Imp: HRS Sec. 264-23)]

Sec. 19-105-8 Specifications for installation.

(a) Construction of the utility facility and restoration of any disturbed existing highway facilities within the state right-of-way shall be done in accordance with all applicable sections of the "Standard Specifications for Road & Bridge Construction", dated 1976, and the "Specification for Installation of Miscellaneous Improvements within State Highways", dated April 1, 1974, highways division.

(b) During the installation and maintenance of the utility facilities, adequate traffic control shall be provided in accordance with the "Rules and Regulations Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways" of the State of Hawaii (Hawaii Administrative Rules, title 19, chapter 129) and with the Federal Highway Administration "Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI - Traffic Controls for Highway Construction and Maintenance Operations".

(c) Installation of private lines within the rights-of-way of state highways shall be limited to crossings only. [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)]

Sec. 19-105-9 Deviations. Any deviations from this chapter shall be subject to the approval of the director. [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)]

SUBCHAPTER 3

FREEWAYS

Sec. 19-105-10 Requirements for freeways.

(a) A utility will not be permitted to be installed longitudinally within the control of access lines of a freeway and any utilities located outside the control of access lines cannot be serviced by access from the through-traffic roadways or ramps.

(b) Utilities that are to cross or otherwise occupy the rights-of-way of freeways shall meet the requirements of the AASHO (now AASHTO) "Policy on the Accommodation of Utilities on Freeway Rights-of-Way" adopted February 15, 1969. [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)]

Sec. 19-105-11 Overhead utility crossings. (a) The supporting structures including guy poles, guys,

etc., of overhead utility lines crossing the freeway shall be located outside the outer edges of through-traffic roadway side slopes and preferably outside the control of access lines. In any case supporting poles shall be located at least 30 feet beyond the edge of shoulder. Where right-of-way lines and control of access lines are not one and the same, as where frontage roads are provided, supporting poles may be located in the area between them.

(b) Crossings of freeways by utility service connections shall not be permitted except where they qualify as an extreme case exception under section 2 of AASHO's "A Policy on the Accommodation of Utilities on Freeway Rights-of-Way", adopted February 15, 1969.

(c) Overhead utility lines crossing the freeway shall have a vertical clearance above the highway of 18 feet or greater for telephone lines and 20 feet or greater for electric lines in accordance with State of Hawaii "Public Utilities Commission's Amended General Order No. 6" (Hawaii Administrative Rules, title 6, chapter 66).

(d) Where a utility follows a crossroad or street which is carried over or under a freeway, provisions should be made for the utility to cross the freeway on the location of the crossroad or street in such a manner that the utility can be serviced without access from the freeway through-traffic roadways or ramps. Generally, the utilities are to be located within the standard right-of-way of the crossroad or street, existing or relocated, and may cross over or under the freeway, provided installation and servicing thereof can be accomplished without access from the freeway through-traffic roadways or ramps. [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)]

Sec. 19-105-12 Underground utility crossings.

(a) All new utility installations involving pressure pipelines shall comply with the American National Standards Institute (ANSI) code for pressure piping B31.1, B31.4 and B31.8. Installations for electric and communication systems shall comply with State of Hawaii "Public Utilities Commission's General Order No. 10" (Hawaii Administrative Rules, title 6, chapter 70).

(b) All utility installations carrying flammable and combustible products shall meet the requirements of the: Part 192, Title 49 Code of Federal Regulations, Minimum Safety Standards for Gas Lines; national fire code; State of Hawaii "Public Utilities Commission's General Order No. 9" (Hawaii Administrative Rules, title 6, chapter 69); and local county and state codes and requirements.

(c) Utilities crossing underground below the roadways of freeways shall be of durable materials and so installed as to virtually preclude any necessity for disturbing the roadways to perform maintenance or expansion operations. Utility lines shall be encased or jacketed. See exhibit "A" attached at the end of this chapter for terminology for encasement and other protection. Casing shall consist of a pipe or other separate structure around and outside of the carrier line or duct line and shall be designed to support the load of the highway and superimposed loads thereon, and shall equal or exceed structural requirements for drainage culverts. The casing shall be composed of materials of satisfactory durability under conditions to which they may be exposed.

(d) Upon the completion of a new freeway, all utility installations shall be installed by the boring, jacking or tunneling method.

(e) The minimum depth of utility lines shall be 3 feet from the finished grade of pavement to sleeve or concrete jacket in pavement areas. The director may reduce the 3-foot minimum clearance specified above to 2 feet if ground conditions are ascertained to be of rocky material, provided the utility lines do not encroach into the pavement structure.

(f) A utility shall make every effort to plan, coordinate, converge, and construct its installation in conjunction with the highway construction. A utility shall further give considerations to the construction of a joint utility tunnel with other utilities or sleeves at strategic locations to accommodate future utility crossings in conjunction with the highway construction. [Eff. MAY 30 1981
(Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)]

Sec. 19-105-13 Utility crossings at highway structures. (a) On active projects:

- (1) A utility may be supported by hangers or brackets attached to a structure and left exposed provided:
 - (A) It is shielded from public view and is not visible from the freeway;
 - (B) It can be accommodated without substantial increase in sections of the structure; and
 - (C) It can be serviced without access from the freeway through-traffic roadways or ramps. See exhibit "N" attached at the end of this chapter.
- (2) A utility may be carried within a structure or through a box girder provided:

- (A) It will not adversely affect the structure;
 - (B) An appropriate sleeve or concrete encasement is utilized;
 - (C) It can be serviced without access from the freeway through-traffic roadways or ramps; and
 - (D) That provisions for servicing the utility are incorporated in the design of the utility. See exhibits "L" and "M" attached at the end of this chapter.
- (3) Large utility lines or groups of lines may be supported on a separate utility structure provided provisions for servicing the utility are incorporated in the design of the structure. See exhibits "L" and "M" attached at the end of this chapter.
- (4) Liquid fuel lines other than fuel oil will not be permitted on structures.
- (b) On completed projects: On previously constructed state projects, a utility may be supported by hangers or brackets attached to a structure and left exposed provided they conform to the "active project" requirements specified in subsection (a) of this section. See exhibit "N" attached at the end of this chapter.
- (c) General requirements for utility crossings:
- (1) The encasing pipe shall be carried out for a minimum of 20 feet beyond the back of the bridge abutment.
 - (2) Support of utility lines on structure shall in no way interfere with free movements of structure.
 - (3) Location, size and number of utility lines permissible on bridge shall be determined by the State.
 - (4) Design and installation of utility pipe lines shall conform to the requirements of section 19-105-12 and the AASHTO policy specified in section 19-105-10.
- (d) Domestic gas lines:
- (1) For gas lines, casing shall be provided with vents near abutments.
 - (2) The maximum size of gas lines inside box girders shall be 6 inches.
 - (3) Maximum pressure allowed in gas lines on highway structures shall be 65 PSIG (pounds per square inch gauge).
 - (4) Gas lines and casings on structures shall be provided with cathodic protection where necessary. [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)]

SUBCHAPTER 4

HIGHWAYS OTHER THAN FREEWAYS

Sec. 19-105-14 Requirements for highways other than freeways. This section shall apply to highways other than freeways and to frontage roads of freeways.

- (1) Upon the completion of a new state highway other than a freeway including resurfacing projects, no underground utility installation with the exception of underground service connections and utility crossings by the boring, jacking or tunneling method, will be permitted for a period of one year thereof within the pavement, shoulder, swale or median areas.
- (2) Within this one-year period, an underground utility and overhead pole line may be permitted to be installed outside the improved pavement, shoulder and swale areas adjacent to the right-of-way line provided that it does not restrict the highway use and meets the lateral clearance outlined in section 19-105-15.
- (3) In this connection, a utility shall make every effort to plan, coordinate and construct their installation including crossings in conjunction with the highway construction. A utility shall further give considerations to the construction of a joint utility tunnel with other utilities or sleeves at strategic locations to accommodate future utility crossings in conjunction with the highway construction.
[Eff. MAY 30 1981 (Auth: HRS Sec. 264-24)
(Imp: HRS Sec. 264-23)]

Sec. 19-105-15 Overhead utility installations.

(a) On active state highway projects other than freeways on new and existing alignment, utility poles, guys and other ground-mounted utility appurtenances may be installed, retained or relocated within the highway right-of-way and they may be located within 5 feet from the standard right-of-way line provided:

- (1) In rural areas, they are located at least 30 feet or more from the normal edge of traveled way.
- (2) In cities, towns and urban areas, on curbed sections, they are located at least 2 feet back of the face of curb and, where feasible, at or near the right-of-way line

and outside of the sidewalk. See exhibit "B" attached at the end of this chapter. Where curbs are not provided, they shall be located at least 20 feet from the normal edge of the traveled way. Maps showing the boundaries of urban areas are on file at the highways division.

- (3) They are in compliance with clear roadside policies for the particular highway involved and they are in accordance with Federal Highway Administration Federal-aid Highway Program Manual (FHPM) 6-2-1-1 and the AASHTO "Highway Design and Operational Practices Related to Highway Safety" dated 1974.
- (4) Exceptions to the lateral clearances outlined in this chapter may be permitted provided such facilities are located behind guard rails, the top of cut banks, retaining walls, etc. See exhibits "C", "D", "E" and "F", attached at the end of this chapter, which show the various slope ratios and the corresponding cut heights which are considered to be natural barriers. Also, see exhibit "B" attached at the end of this chapter.

(b) On previously constructed state highway projects other than freeways, new utility poles, guys, and other ground-mounted utility appurtenances connected therewith, other than replacements, shall be located as provided for in this chapter or at the right-of-way line. See exhibit "G" attached at the end of this chapter. Placement of mid-span or additional poles for the purpose of correcting sub-standard vertical clearances to conform with clearances set forth in the State of Hawaii "Public Utilities Commission's Amended General Order No. 6" (Hawaii Administrative Rules, title 6, chapter 66) will be permitted.

(c) Where the highway shoulder areas are of minimum width, considerations shall be given to designs employing vertical alignment of wires and cables, cantilevered crossarms, added insulation or any other similar designs permitted under State of Hawaii "Public Utilities Commission's Amended General Order No. 6" (Hawaii Administrative Rules, title 6, chapter 66). Where it is not possible to meet such clearances, consideration should be given to alternate utility locations or designs, such as rerouting the facilities or converting them from aerial to underground installations.

(d) Where the lateral clearances outlined in this chapter cannot be made, and the new utility poles, guys, and other ground-mounted appurtenances

will constitute a serious and major hazard to traffic upon the determination of the director, guard rail protections shall be provided at the expense of the utility in accordance with current state standards and AASHTO "Guide for Selecting, Locating, and Designing Traffic Barriers." The state shall be responsible for the maintenance of these guard rails. Where existing utility facilities such as poles constitute a definite hazard to the traveling public, the state at its expense shall install protective guard rails to provide a safe traffic environment. The minimum lateral clearance between the face of pole and guard rail shall be 3 feet. See exhibit "F" attached at the end of this chapter.

(e) Utility poles may be permitted in the median of a divided highway provided they are located at least 30 feet from the edge of traveled way.

(f) All new utility installations involving communication or electric power facilities shall comply with the State of Hawaii "Public Utilities Commission's Amended General Order No. 6" (Hawaii Administrative Rules, title 6, chapter 66).

(g) Overhead lines shall have a vertical clearance above the highway of 18 feet or greater for telephone lines and 20 feet or greater for electric lines in accordance with State of Hawaii "Public Utilities Commission's Amended General Order No. 6" (Hawaii Administrative Rules, title 6, chapter 66).

(h) The bottom of the housing of signal faces and warning flashers suspended over roadways shall not be less than 17 feet above the pavement grade of the center of the roadway.

(i) Lighting standards shall not be permitted closer than 30 feet beyond the normal edge of traveled way unless the base is of a breakaway design or they are located behind a guard rail, but not closer than 2 feet outside the edge of shoulder. See exceptions specified above in this section. No standards shall be permitted in the shoulders.

(j) Traffic signal standards shall not be permitted closer than 2 feet beyond the face of curb on curbed highways or 2 feet outside the edge of shoulder on uncurbed highways. [Eff. MAY 30 1981
(Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)]

Sec. 19-105-16 Underground utility installations.

(a) All utility installations involving pressure pipelines shall comply with the American National Standards Institute (ANSI) code for pressure piping B31.1, B31.4 and B31.8. Installation for electric and communication systems shall comply with State of Hawaii "Public Utilities Commission's General Order No. 10" (Hawaii Administrative Rules, title 6, chapter 70).

(b) All utility installations carrying flammable and combustible products shall meet the requirements of the Part 192, Title 49, Code of Federal Regulations, Minimum Federal Safety Standards for Gas Lines; national fire code; State of Hawaii "Public Utilities Commission's General Order No. 9" (Hawaii Administrative Rules, title 6, chapter 69), and local county and state codes and requirements.

(c) The angle of utility crossing shall be generally normal to the highway and it shall not exceed 45 degrees from normal.

(d) Longitudinally, utilities shall be located on uniform alignment as near as practicable to the right-of-way line to provide space for future highway construction and for possible future utility installations consistent with good engineering judgment and economic considerations.

(e) In areas where the transverse slopes are gently rolling, cleared, graded and accessible to equipment, a utility shall be installed outside of the roadway cross-section (pavement, shoulder and cut or fill slopes).

(f) In areas where good engineering judgment and economic considerations indicate that it would not be practical to install the utility outside the roadway cross-section, (pavement, shoulder and cut or fill slopes) such as in high cut and fill sections not accessible to equipment, a utility, subject to the approval of the highway utility encroachment committee may be located within the shoulder and median (of a divided highway) areas as provided below:

(1) Shoulder area.

(A) They shall be located as close to the outer edge of shoulder as possible.

(B) In areas where the width of shoulder is 8 feet or less, no utility shall be permitted to be located within the shoulder for a distance of 2 feet from the normal edge of pavement to the inner edge of trench. See exhibit "H" attached at the end of this chapter.

(C) In areas where the width of shoulder is more than 8 feet, no utility shall be permitted to be located within the shoulder for a distance of 5 feet from the normal edge of pavement to the inner edge of trench. See exhibit "H" attached at the end of this chapter. In the event all available spaces on both shoulders are occupied, considerations may be given to permit a utility within the 5-foot restricted area - provided the 2-foot strip as outlined in this chapter is not disturbed.

(2) Median area.

- (A) They shall be located as far away from the edge of pavement and as close to the centerline of median as possible, but away from the median ditch.
- (B) In areas where the width of median is 16 feet or less, no utility shall be permitted to be located within the median for a distance of 2 feet from the normal edge of pavement to the inner edge of trench. See exhibit "I" attached at the end of this chapter.
- (C) In areas where the width of median is more than 16 feet, no utility shall be permitted to be located within the median for a distance of 5 feet from the normal edge of pavement to the inner edge of trench. See exhibit "I" attached at the end of this chapter. In the event all available spaces in the median are occupied, considerations may be given to permit a utility within the 5-foot restricted area provided the 2-foot strip as outlined in this chapter is not disturbed.

(g) Considerations shall be given to the hydraulic gradient factor of a transmission main in determining the location of its occupancy within the highway right-of-way.

(h) In heavily traveled highways, the director may require utility crossings under the roadway to be installed by boring, jacking or tunneling when ground conditions are ascertained to permit economic application of such installation technique.

(i) Utility lines shall be encased or jacketed when deemed necessary by the director. Casing shall consist of a pipe or other separate structure around and outside of the carrier line or duct line and shall be designed to support the load of the highway and superimposed loads thereon, and shall equal or exceed structural requirements for drainage culverts. The casing shall be composed of materials of satisfactory durability under conditions to which they may be exposed. See exhibit "A" attached at the end of this chapter for terminology for encasement and other protection.

(j) All utility lines carrying flammable or explosive materials at a pressure greater than 65 PSIG (pressure per square inch gauge) within the roadway prism shall be provided protective measures as deemed necessary by the highway utility encroachment committee.

(k) A utility, including manholes, shall generally not be permitted to be installed longitudinally within the pavement area of the main

traveled way. However, in extreme cases where the entire rights-of-way excluding the pavement areas are fully occupied and the utility has explored other alternative alignment such as rerouting the utility through county streets, considerations will be given to permit the utility to be installed within the pavement area of the main traveled way.

(l) All manholes, handholes, etc., shall be flush with finished grade of roadway including pavement and shoulder.

(m) Fire hydrants, and other ground-mounted utility appurtenances shall meet the lateral clearances outlined in this chapter. The hydrants shall be located so as to be conveniently accessible to firefighting equipment or personnel.

(1) Breakaway type fire hydrants may be left unprotected and delineated with RM-3 hazard markers.

(2) Fire hydrants may be placed within a cut slope just above the ditch line.

(3) In cities, towns and urban areas, on curbed sections, fire hydrants may be located back of the face of curb provided they are of the breakaway type.

(n) No utility shall be permitted in a highway drainage culvert.

(o) The minimum depth of utility lines shall be as follows:

(1) Pavement areas: minimum 3 feet from finished grade of pavement to top of pipe, sleeve or concrete jacket. See exhibits "H", "I", "J", and "K" attached at the end of this chapter.

(2) Under ditches: minimum 2 feet, 1 foot if paved.

(3) All other areas: minimum 3-foot cover.

(4) The highway utility encroachment committee may reduce the 3-foot minimum clearance specified above to 2 feet if ground conditions are ascertained to be of rocky material, provided the utility lines do not encroach into the pavement structure.

(5) The minimum cover of utility service lines under sidewalk areas and areas adjacent to the right-of-way (outside of shoulder and pavement areas) shall be 1 foot 6 inches.

[Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24)
(Imp: HRS Sec. 264-23)]

Sec. 19-105-17 Utility crossings at structures.
Utility crossings at structures shall conform to the applicable provisions of this chapter. [Eff. **MAY 30 1981**
(Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)]

SUBCHAPTER 5

OTHER PROVISIONS

Sec. 19-105-18 Review and approval. (a) The highways division is entrusted with the responsibility to maintain or cause to be maintained all completed state highways as necessary to preserve the integrity, scenic quality, operational safety, and function of the highway facility.

(b) The division shall review and approve the location and design of all utility and private lines installations with due considerations given to such features as disturbance of highway facilities and interference with their operations and detracton from its appearance--all to the end that the difficulty of or cost of maintenance of the highway facility will not be increased nor the service to the public jeopardized.

(c) Adequate plans of proposed utility installation shall be submitted to the director for his review and approval before a permit is issued.
[Eff. MAY 30 1981 (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)]

Sec. 19-105-19 Use and occupancy agreements.

(a) On active and completed state highway projects, the use and occupancy of the highway rights-of-way by utility facilities shall be in accordance with the prescribed policies and procedures of the Federal Highway Administration Federal-aid Highway Program Manual (FHPM) 1-4-4 and 6-6-3-2.

(b) Where utility facilities are to cross, or otherwise occupy, the right-of-way of an active or completed state highway project, the state and the utility shall agree in writing as to the terms of such use and occupancy, and the manner in which such facilities are to be accommodated thereon.

(c) The cost of any future removal, relocation, replacement, reconstruction or adjustment of utility facilities shall be in accordance with the provisions of section 264-33, Hawaii Revised Statutes.

(d) Where the utility proposes to install its utility facilities within any right-of-way of an active state highway project prior to the completion of final plans for the highway project, it is the policy of the department of transportation to deny the issuance of the permit required to be taken by the utility company or in the alternative require the utility company to await the completion of final plans for the project; unless the utility company shall agree in writing to bear the entire cost of the later relocation of any utility facility installed in

the right-of-way if the relocation should become necessary during the initial construction of the highway project and waive any and all right to participation for such future relocation under existing or subsequent statutes as a result of the initial construction of the highway project. [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)

Sec. 19-105-20 Compliance with laws. The utilities shall comply with all federal, state and county laws, rules, orders, ordinances, policies and procedures that are applicable to this chapter. [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)

Sec. 19-105-21 Severability. If any section of this chapter is held invalid for any reason whatsoever, such invalidity shall not affect the validity of the remaining sections of this chapter. [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)

Sec. 19-105-22 Repeal. All rules and regulations governing the accommodation and installation of utilities on state highways and federal aid county highways in effect prior to the effective date of this chapter are repealed. [Eff. **MAY 30 1981** (Auth: HRS Sec. 264-24) (Imp: HRS Sec. 264-23)

DEPARTMENT OF TRANSPORTATION

I, RYOKICHI HIGASHIONNA, in my capacity as the Director of Transportation of the State of Hawaii, pursuant to the authority vested in me by law, do hereby adopt the foregoing Chapter 105 of Title 19 which contains rules relating to the Accommodation and Installation of Utilities on State Highways and Federal Aid County Highways.


The rules in this chapter are being adopted following public hearings held on March 31, April 1, 2, and 3, 1981, notice of which was duly published on March 2, 1981 in the Honolulu Advertiser, Honolulu Star-Bulletin, Hawaii Tribune Herald, Maui News and Garden Island News.

These rules shall take effect ten days after filing with the Office of the Lieutenant Governor.


RYOKICHI HIGASHIONNA
Director of Transportation

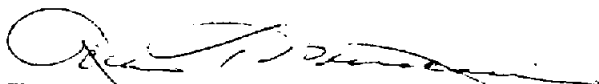
Date: May 13, 81

APPROVED:


GEORGE B. ARIYOSHI
Governor
State of Hawaii

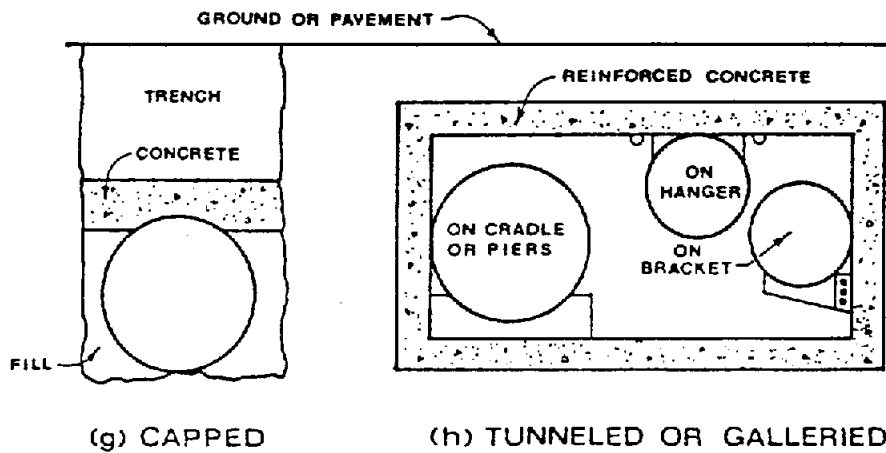
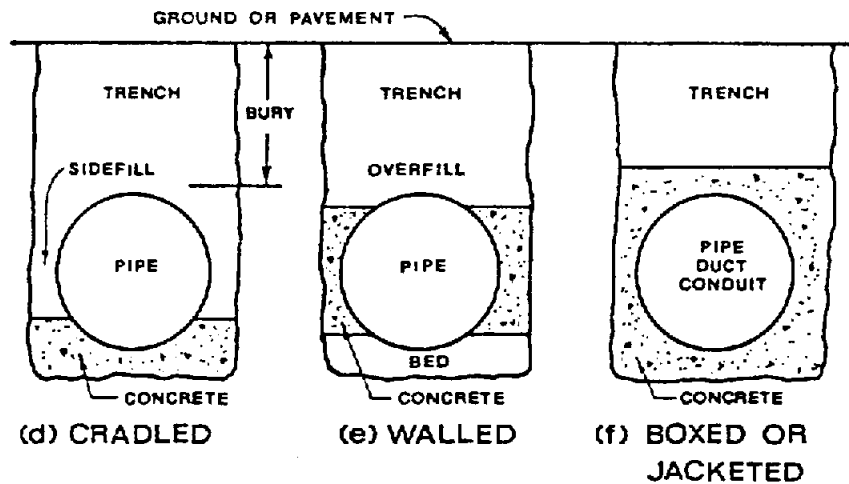
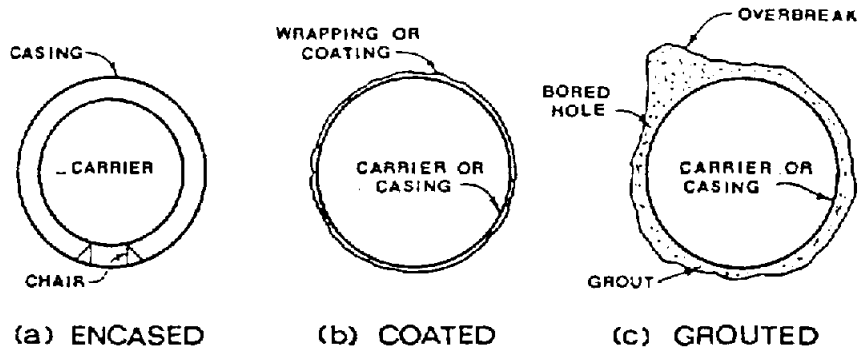
Date: May 18, 1981

APPROVED AS TO FORM:

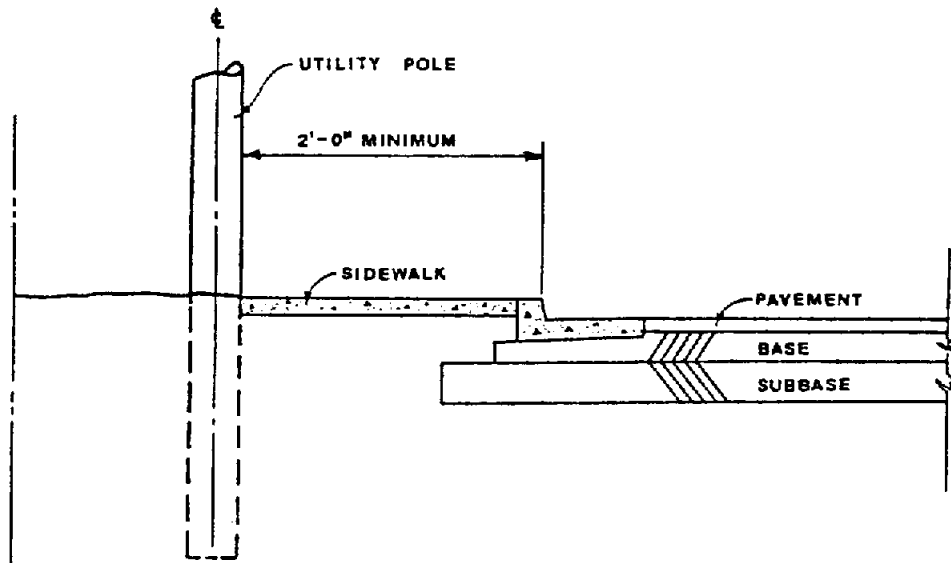
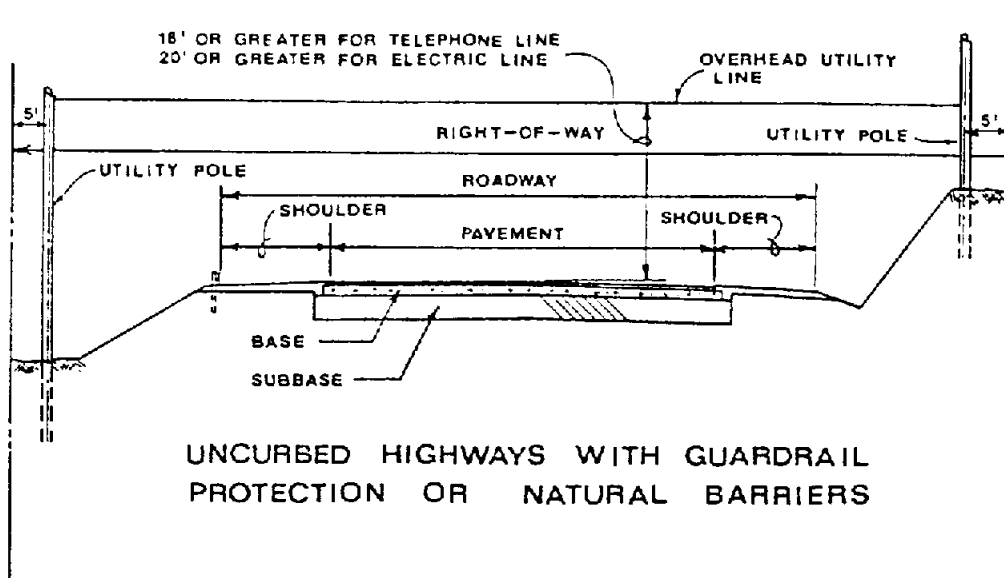

Deputy Attorney General

RECEIVED

TERMINOLOGY FOR ENCASEMENT
& ALLIED PROTECTION



POLE PLACEMENT DETAILS FOR HIGHWAYS



CURBED HIGHWAYS

TABLE FOR POLE PLACEMENT CRITERIA
ON CUT AND FILL SECTIONS

Cut Slopes	Offset From Edge of Pavement		Minimum Horizontal Offset From Bottom of Cut Slope	
	Height Less Than	Offset	Height Equal To or Greater Than	Offset
0 - 3/4:1	* 2 Feet	30 Feet	2 Feet	4 Feet
1:1	* 4 Feet	30 Feet	4 Feet	6 Feet
1-1/2:1	* 4 Feet	30 Feet	4 Feet	8 Feet
2:1	* 6 Feet	30 Feet	6 Feet	14 Feet
4:1 or Flatter	* --	30 Feet	--	--

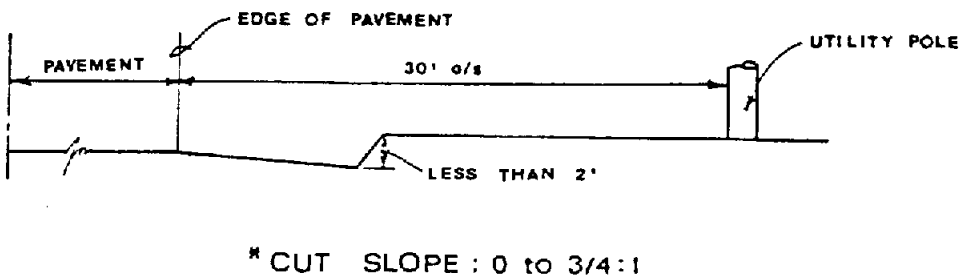
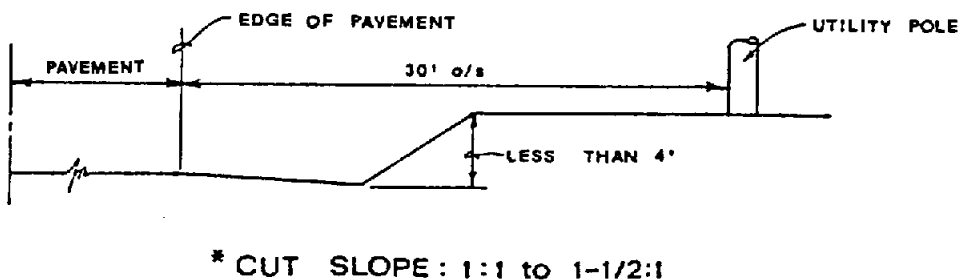
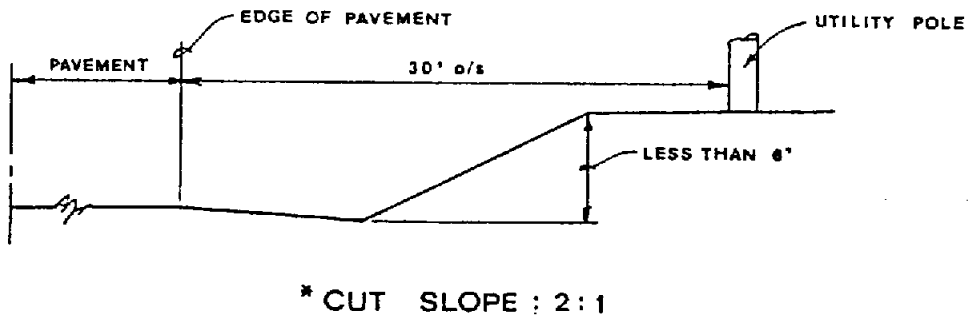
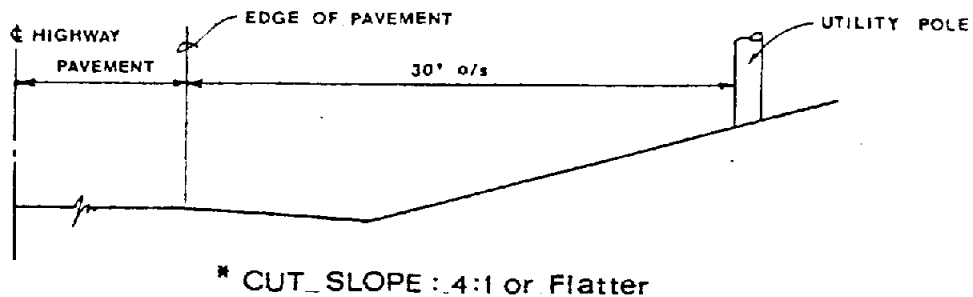
* Alternate - See Detail "A", Exhibit "F".

Fill Slopes - 30 Feet offset from edge of pavement or
guard rail protection. See Detail "B",
Exhibit "F".

EXHIBIT "C"

10/1/80

POLE PLACEMENT DETAILS
FOR CUT & FILL SECTIONS
(Sheet 1 of 3)

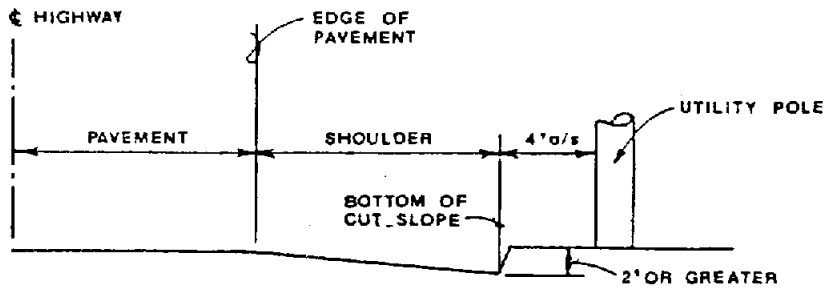


* Alternate - See Detail A, Exhibit "F"

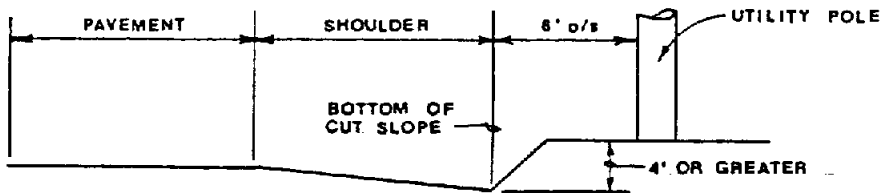
Exhibit "D"

10/1/80

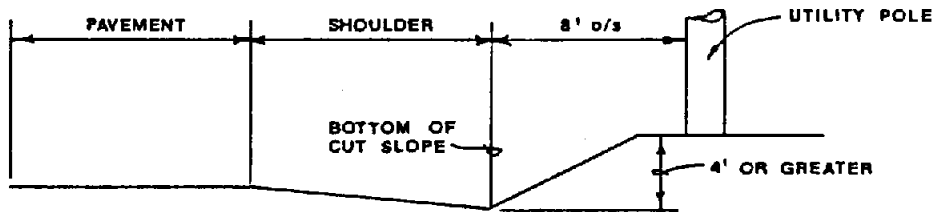
POLE PLACEMENT DETAILS
 FOR CUT & FILL SECTIONS
 (Sheet 2 of 3)



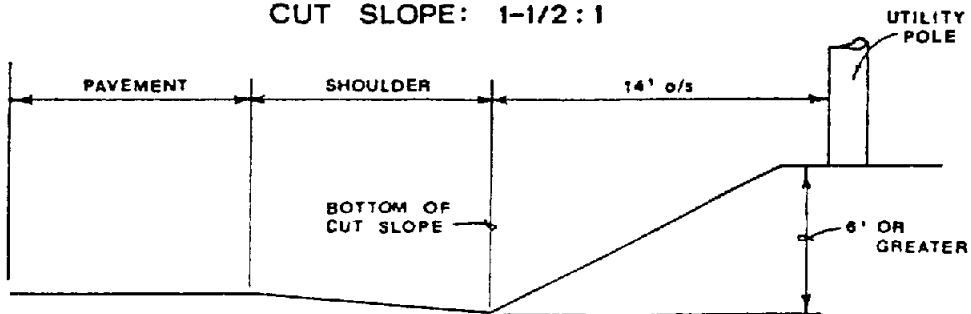
CUT SLOPE: 0 to 3/4:1



CUT SLOPE: 1:1

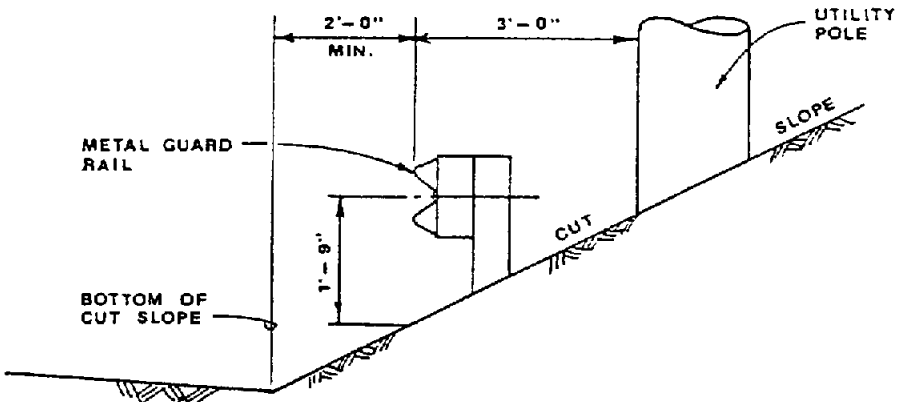


CUT SLOPE: 1-1/2:1

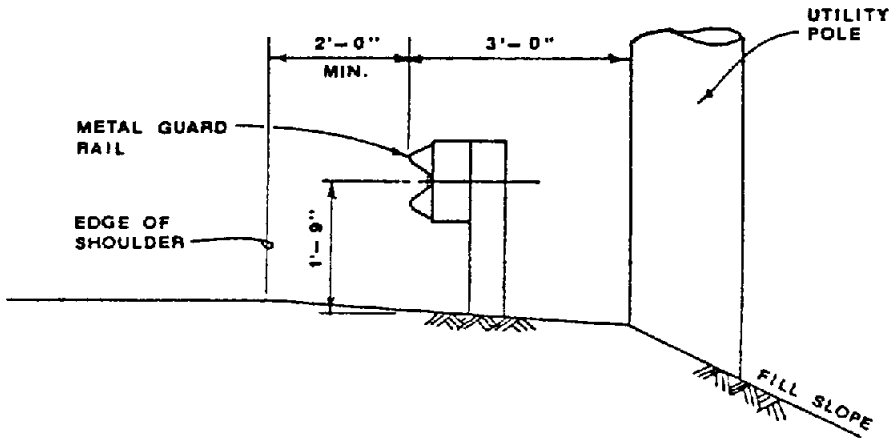


CUT SLOPE: 2:1
 Exhibit "E"

POLE PLACEMENT DETAILS
FOR CUT & FILL SECTIONS
(Sheet 3 of 3)



DETAIL "A"



DETAIL "B"

POLE PLACEMENT DETAILS FOR UNCURBED HIGHWAYS

WITHOUT GUARD RAIL
PROTECTION OR NATURAL BARRIERS
(DOES NOT APPLY IF ADEQUATE
CLEAR AREA IS PROVIDED)

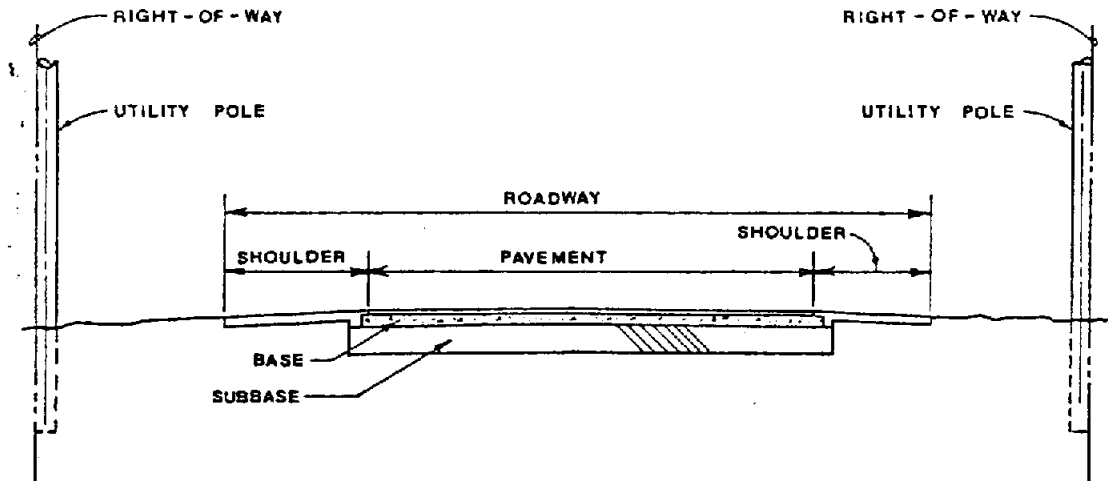
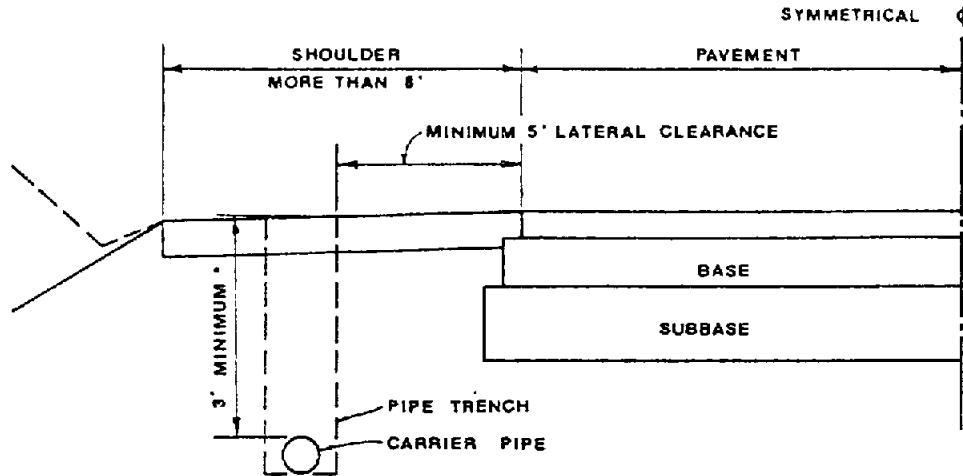


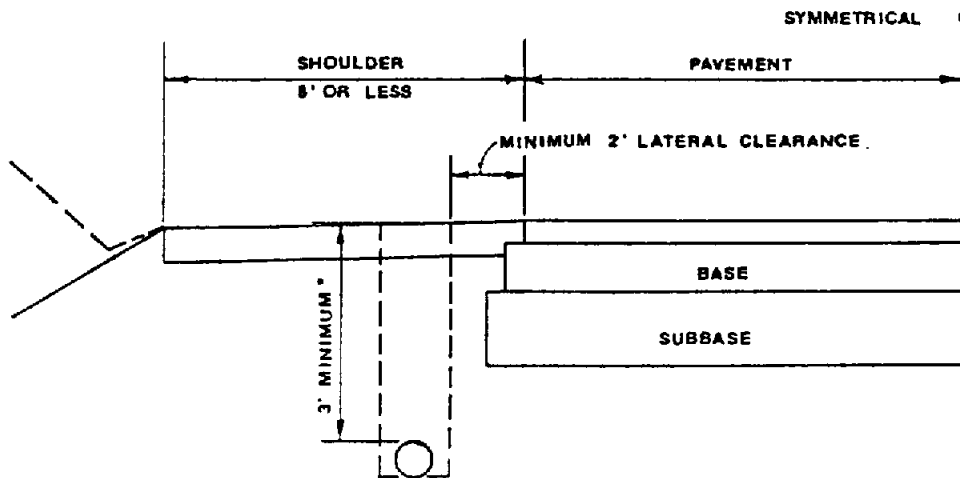
Exhibit "G"

10/1/80

SPACE ALLOCATION OF
CARRIER PIPES WITHIN SHOULDER AREAS
(EXTREME HARDSHIP CASES)

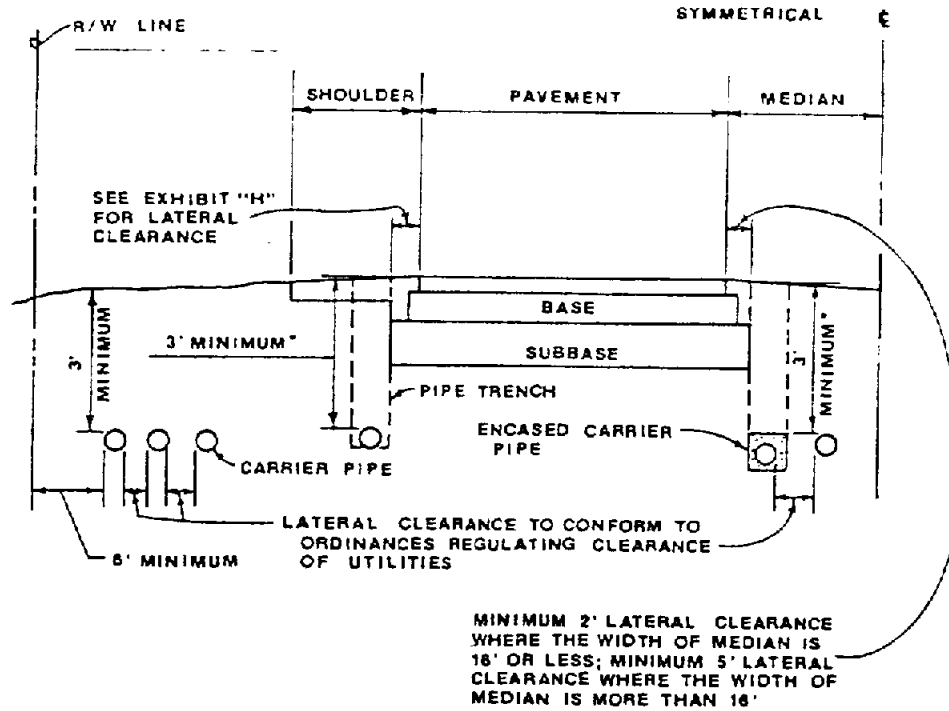


NOTE: CONSIDERATIONS MAY BE GIVEN TO PERMIT AN INSTALLATION WITHIN THE 5-FOOT RESTRICTED AREA IF ALL AVAILABLE SPACE WITHIN THE SHOULDER AREA ARE OCCUPIED. PROVIDED THE 2-FOOT LATERAL CLEARANCE SPECIFIED BELOW IS NOT DISTURBED.

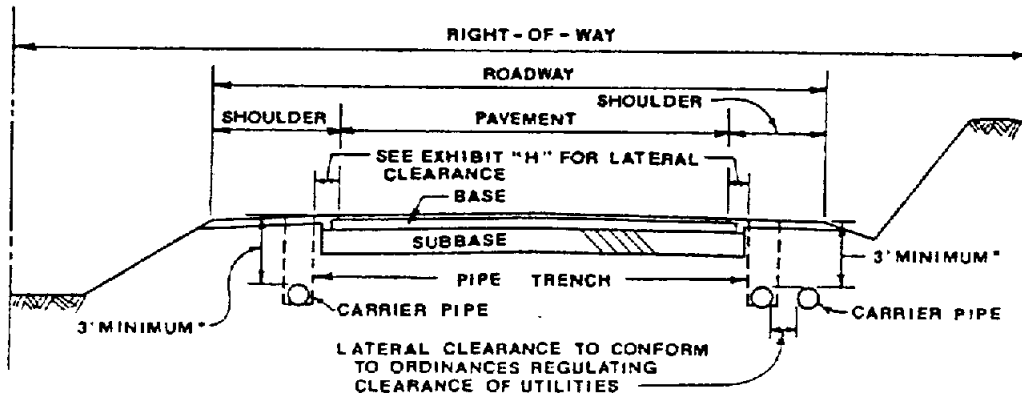


* See Note - Exhibits "J" & "K"

SPACE ALLOCATION OF CARRIER PIPES ON HIGHWAYS (EXTREME HARDSHIP CASES)



DIVIDED HIGHWAYS



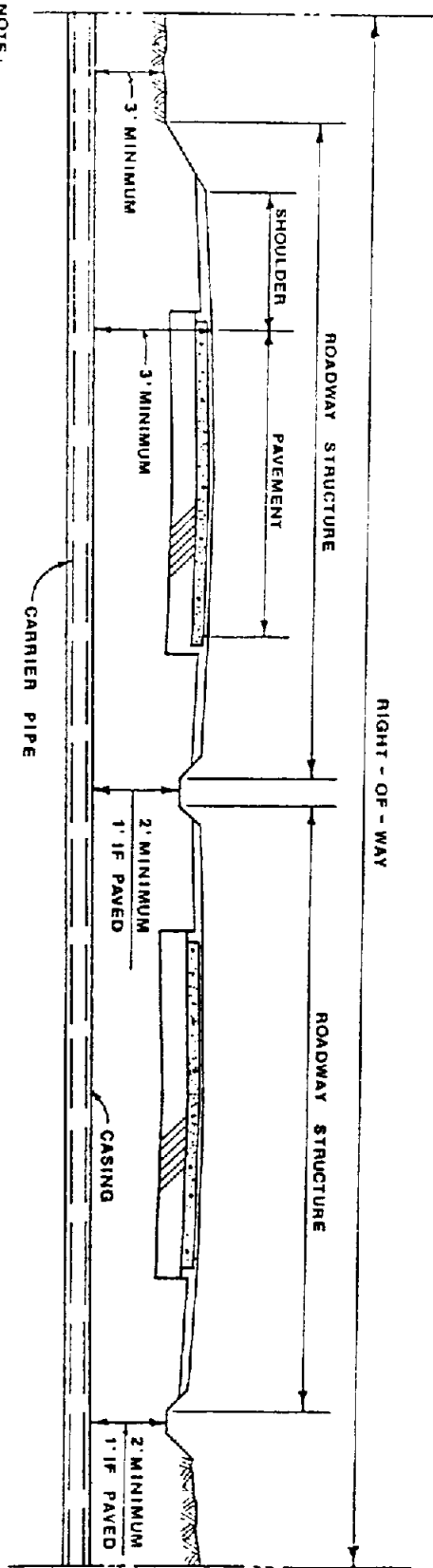
* See Note - Exhibits "J" & "K"

UNDIVIDED HIGHWAYS

Exhibit "I"

10/1/80

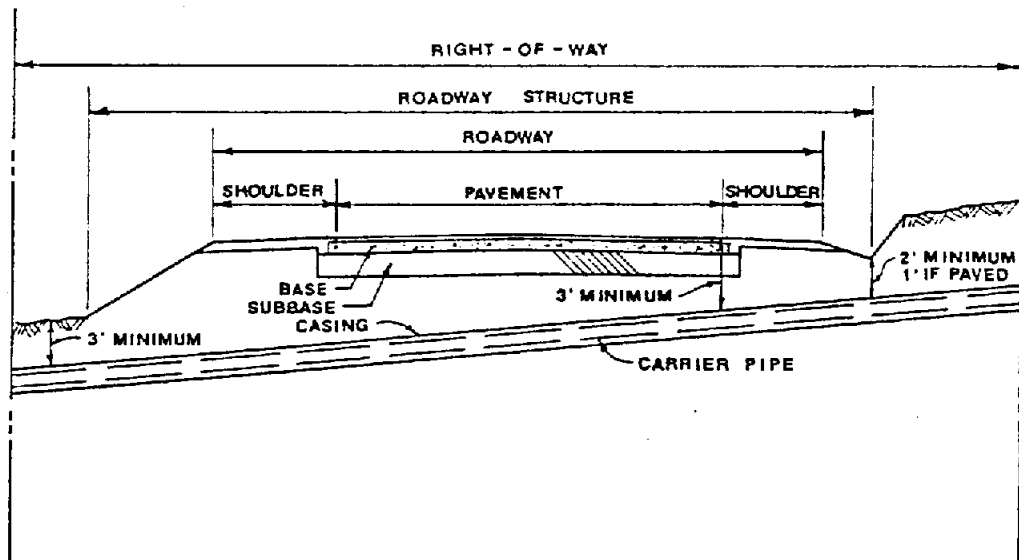
ENCASED CARRIER PIPE UNDER DIVIDED HIGHWAY



NOTE:
THE HIGHWAY UTILITY ENCROACHMENT COMMITTEE MAY REDUCE THE 3 FEET MINIMUM CLEARANCE SPECIFIED ABOVE TO 2 FEET IF GROUND CONDITIONS ARE ASCERTAINED TO BE OF ROCKY MATERIAL PROVIDED THE UTILITY LINES DO NOT ENCROACH INTO THE PAVEMENT STRUCTURE.

Exhibit "j"

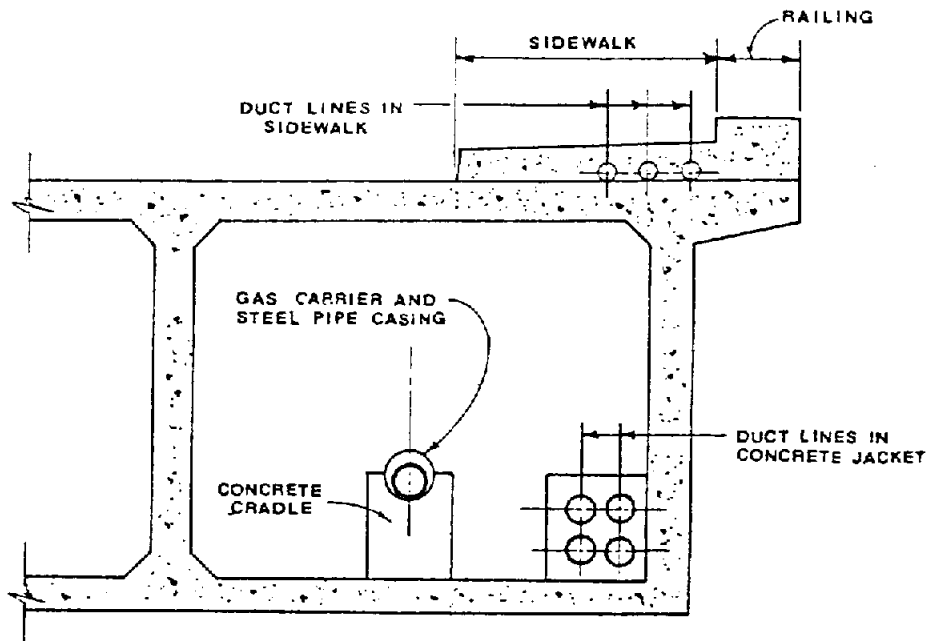
ENCASED CARRIER PIPE
UNDER UNDIVIDED HIGHWAY



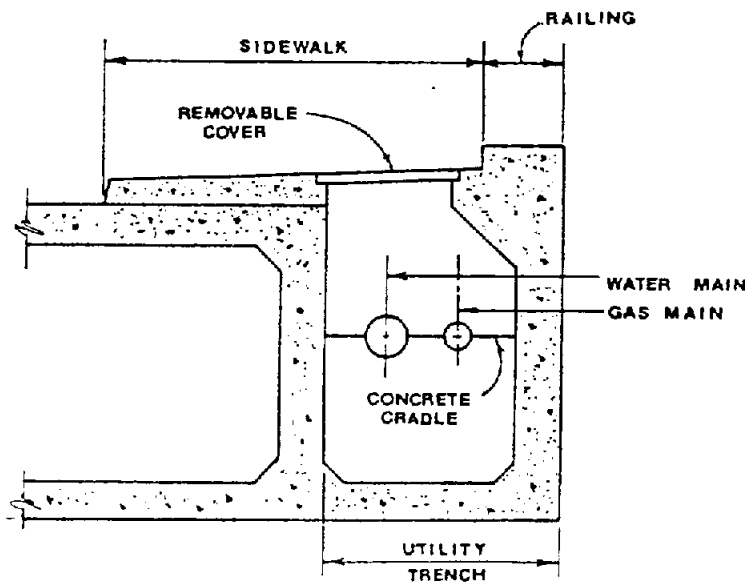
NOTE:

THE HIGHWAY UTILITY ENCROACHMENT COMMITTEE MAY REDUCE THE 3 FEET MINIMUM CLEARANCE SPECIFIED ABOVE TO 2 FEET IF GROUND CONDITIONS ARE ASCERTAINED TO BE OF ROCKY MATERIAL PROVIDED THE UTILITY LINES DO NOT ENCROACH INTO THE PAVEMENT STRUCTURE.

TYPICAL UTILITY INSTALLATIONS ON HIGHWAY
STRUCTURES - CONCRETE BOX GIRDER BRIDGE
STRUCTURES (Sheet 1 of 3)

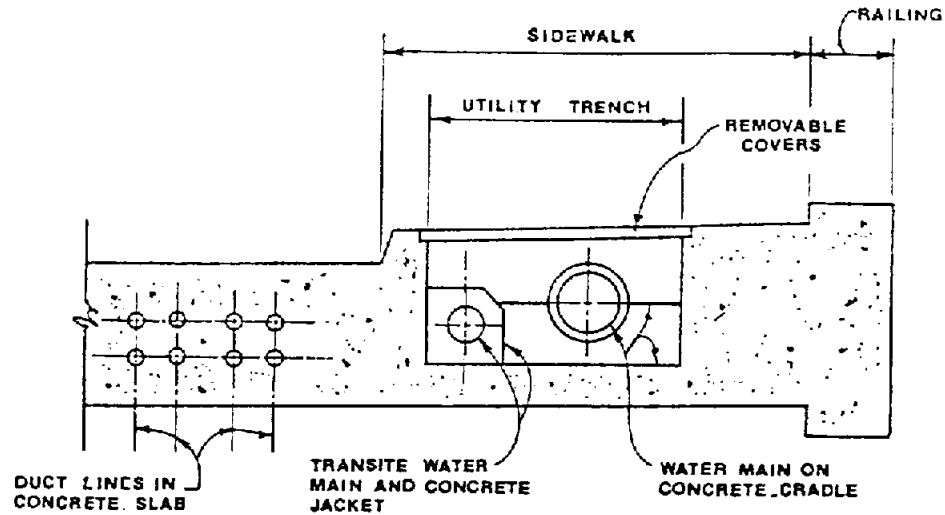


TYPICAL

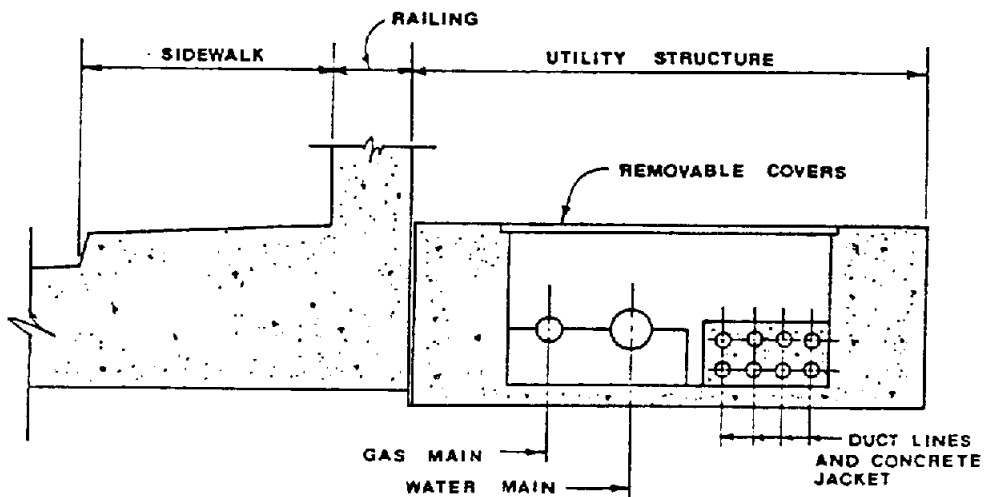


AT UTILITY TRENCH

TYPICAL UTILITY INSTALLATIONS ON HIGHWAY
STRUCTURES - CONCRETE SLAB BRIDGE STRUC-
TURE (Sheet 2 of 3)



WITH UTILITY TRENCH



WITH UTILITY STRUCTURE

TYPICAL UTILITY INSTALLATIONS ON HIGHWAY
STRUCTURES - AT PRESTRESSED OR TEE-GIRDER
BRIDGE STRUCTURE (Sheet 3 of 3)

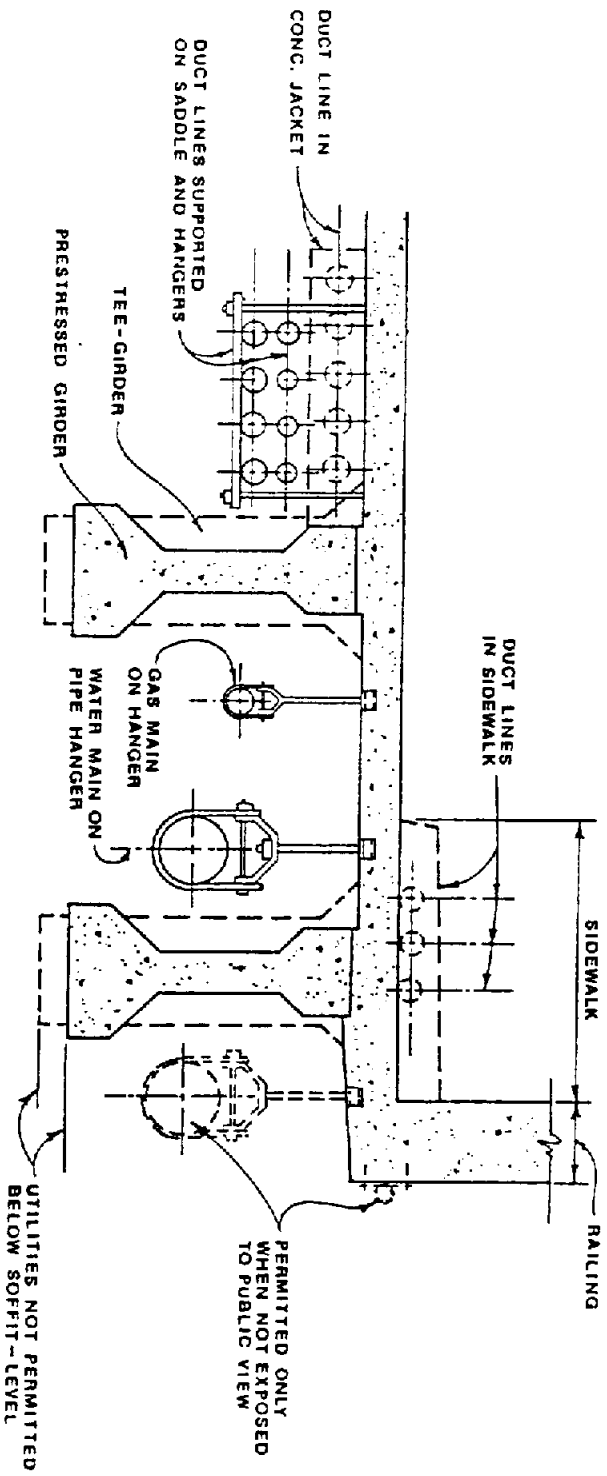


Exhibit "N"

10/1/80