

**HIGHWAY STANDARDS  
&  
DEVELOPMENT PROCEDURES  
for the  
ASSOCIATION OF  
CANYON COUNTY HIGHWAY DISTRICTS**

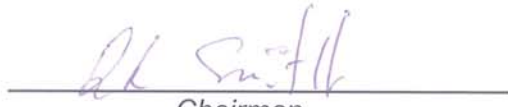





**2017 Edition**

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&  
DEVELOPMENT PROCEDURES  
for the  
ASSOCIATION OF  
CANYON COUNTY HIGHWAY DISTRICTS**

**2017 Edition**

ADOPTED BY:

Nampa Highway District No. 1	 Chairman	<u>1-19-17</u> Date
Notus Parma Highway District No. 2	 Chairman	<u>1-23-17</u> Date
Golden Gate Highway District No. 3	 Chairman	<u>1/19/17</u> Date
Canyon Highway District No. 4	 Chairman	<u>1/19/2017</u> Date

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2017 Edition

Signature Page

Per Idaho Code 54-1218, a licensed Professional Engineer must prepare the plans and specifications for public works projects as well as supervise or conduct construction observation. Therefore, it is the sole responsibility of the licensed Professional Engineer who is referencing or using these standards for a specific project to ensure that the specifications and drawings are appropriate for the specific use, used appropriately under all circumstances, and if appropriate, modified (with the approval of the District) as necessary in order to prepare final specifications, drawings, or plans.



## FORWARD

The four highway Districts in Canyon County, Idaho are members of the multi-jurisdiction transportation committee known as the Association of Canyon County Highway Districts (ACCHD). The members use the ACCHD as a forum for continual communication, to issue joint declarations, and to share in the use of special equipment between one another.

ACCHD has promulgated these Standards and Procedures (ACCHD Manual) for the construction by development of public roads within the Districts' respective boundaries. A public road constructed by a developer in accordance with the ACCHD Manual may be accepted into the District road system and will be eligible for permanent maintenance and repair.

Variance to the ACCHD Manual may be allowed where extraordinary circumstances exist by reason of terrain, safety, or other site characteristics. Each variance will be determined on its own merits by the District having jurisdiction over the road.

ACCHD has adopted the Idaho Standards for Public Works Construction (ISPWC), latest edition, as its basic construction standards, as modified in Section 4000 of the ACCHD Manual. Copies of the ISPWC may be purchased from the Local Highway Technical Assistance Council (LHTAC). The ACCHD Manual is to be used in conjunction with the ISPWC. In the event of conflict, the ACCHD Manual shall take precedence.

The 2017 Edition of the ACCHD Manual has been revised by the following committee:

- Eric R. Shannon, P.E. (*Chair*), Nampa Highway District No. 1
- Timothy A. Blair, P.E. (*J-U-B Engineers*), Notus Parma Highway District No. 2
- Gordon D. Bates, P.E., Golden Gate Highway District No. 3
- Timothy J. Richard, P.E., Canyon Highway District No. 4

This edition of the ACCHD Manual has been completed as part of the Districts' ongoing effort to apply best transportation standards and practices, and to coordinate with Canyon County requirements regarding planning, land use and development.

## HIGHWAY DISTRICT INFORMATION

### **Nampa Highway District No. 1**

4507 12<sup>th</sup> Avenue Road  
Nampa, Idaho 83686

Phone: (208) 465-6576

Web Address: [www.nampahighway1.com](http://www.nampahighway1.com)

### **Notus Parma Highway District No. 2**

106 S. Fourth St.  
P.O. Box 719  
Parma, Idaho 83660

Phone: (208) 722-5343

Web Address: [www.nphd.net](http://www.nphd.net)

### **Golden Gate Highway District No. 3**

500 Golden Gate Ave.  
Wilder, Idaho 83676

Phone: (208) 482-6267

Web Address: [www.gghd3.org](http://www.gghd3.org)

### **Canyon Highway District No. 4**

15435 Hwy 44  
Caldwell, Idaho 83607

Phone: (208) 454-8135

Web Address: [www.canyonhd4.org](http://www.canyonhd4.org)

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## SECTION 1000

### INTRODUCTION

#### 1010. Authority of Highway Districts

1010.010. The authority of Highway Districts within the State of Idaho is set forth in Chapter 13, Title 40 of the Idaho Code, as amended.

1010.020. The four Districts adopting these Highway Standards and Development Procedures (ACCHD Manual) are: Nampa Highway District No. 1, Notus Parma Highway District No. 2, Golden Gate Highway District No. 3, and Canyon Highway District No. 4.

Current maps are available from each District showing their jurisdictional boundaries and the highways under their jurisdiction.

1010.030. If any section, subsection, sentence, clause, phrase, or portion of the ACCHD Manual is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portions shall be deemed a separate, distinct and independent provision and such holdings shall not affect the validity of the remaining portions thereof.

#### 1020. Need for Control and Uniformity

1020.010. All roadways within Canyon County are classified under the Highway Functional Classification System developed for roadways in the United States. The function of each roadway in the system has been defined, and maps showing their Functional Classification are available for review at each Districts' office.

1020.020. The ACCHD Manual includes modifications to other standards, as identified in Sections 3010.040, 3010.050 and 4000.

1020.030. The intent of the ACCHD Manual is to provide consistent roadway standards and procedures for the construction of quality roads.

1020.040. Variation from the ACCHD Manual may be allowed by each District within that District. Nothing herein shall be construed to impose an obligation or duty upon the Districts to construct, reconstruct or improve existing roadways to comply with the ACCHD Manual. Districts may or may not



meet or exceed these standards on any new projects or maintenance activity depending on funding available, time or any other relevant constraints.

1020.050. The type of surfacing allowed for each roadway within subdivisions or other developments is specified in Section 3000 of these Standards.

### **1030. Forms and Fees**

1030.010. Each District has its own approved set of forms and fee schedule, which may be obtained by contacting the respective District office.

## SECTION 2000

### GENERAL PROCEDURES AND CONDITIONS

#### 2010. Subdivision and Development Process

**2010.010.** General: All proposed subdivisions and developments within the jurisdiction of a District shall receive approval from that District prior to construction of the Development or recording of the Final Subdivision Plat.

**2010.015.** Conditional Use, Rezone and Comprehensive Plan Amendment Requests: These requests are submitted to the District by Canyon County for the District's review and comment. At a minimum, a concept land use/traffic circulation plan shall be provided to the District showing proposed land uses(s), number of lots/units, acreage of commercial, industrial, etc. space and type, proposed access, anticipated traffic generation, and proposed traffic circulation. The District will respond to the County with the District requirements together with a recommendation to be included in the action taken by the County.

#### **2010.020.** Land Use Applications:

A. Pre-application Process: For projects which require a traffic impact study (TIS - per Section 3120), dedication of right-of-way, frontage improvements, or changes to the existing roadway(s), including access, the applicant shall request a pre-application meeting with the District to discuss the proposed concept plan and/or TIS parameters, prior to submitting a land use application to Canyon County.

If a TIS is required, the District shall review and accept the findings of the preliminary TIS prepared by the applicant prior to land use approval by Canyon County. Subsequent to land use approval by Canyon County, and prior to approval of construction plans by Canyon County and the District, the District shall review and accept the findings of the final TIS prepared by the applicant.

B. Application Review Process: When an application is submitted to Canyon County Development Services Department requesting a conditional use permit, rezone, comprehensive plan amendment, or other land use approval within the District's boundary, the District shall be given the opportunity to review and comment on the proposed development's impact on the District transportation system, including roadway maintenance and Capital Improvement Programs. The District may

recommend conditions for approval to the Canyon County Planning & Zoning Commission and/or Board of County Commissioners (whichever is applicable).

**2010.030. Preliminary Subdivision Plat:** The District shall be given the opportunity to review and comment on all Preliminary Subdivision Plats submitted to the Canyon County Planning and Zoning Commission. The District shall review such preliminary plats for general compliance with these Standards and may recommend conditions for approval to the Commission.

**2010.040. Final Subdivision Plat:** All Final Subdivision Plats within the District's jurisdiction shall be submitted to the appropriate District for review and consideration. The authorized signature of the District Commissioners shall appear on all accepted Final Subdivision Plats prior to presentation for recording with the Canyon County Recorder. Such signature shall signify the District's acceptance of the Final Plat and does not constitute acceptance of any roadway depicted on the Plat.

**2010.050. Improvement Drawings:** Improvement drawings shall be submitted for review of compliance with these standards on all developments within the District's jurisdiction requiring roadway improvements. The District shall outline conditions for acceptance of the improvement plans and any construction requirements for acceptance of improvements into the District's System. Acceptance of improvement drawings for construction shall expire two (2) years from the date of acceptance. The Applicant may request an extension of the improvement plans acceptance from the District if the improvements have not been completed within two (2) years. If the extension is not granted by the District or the expiration date has passed, the Applicant shall be required to resubmit the improvement drawings to the District for review.

**2010.060. Construction:** The District requires construction of all roadways and drainage improvements within the development, as well as improvements to the roadway and drainage system contiguous to the frontage of the Development in accordance with these standards. At the District's discretion, the applicant of any development may deposit the cost (as estimated by the applicant and approved by the District) of the frontage improvements with the District for the District's use in completing the frontage improvements at a later date. Developments along section or quarter section lines shall be required to construct arterial and/or collector roadways within or contiguous to the frontage of the development, unless otherwise determined by the District. Where there is no existing public road along a section or quarter section line within or contiguous to the frontage of the development, the development shall be responsible for constructing one-half the roadway width, but in no case less than a 20-foot plant mix pavement width.

## 2010.070. Submittal and Time Requirements:

A. Application Review Schedule: The deadline for any application for consideration by the Commission is 30 calendar days before the regularly scheduled Commission meeting, when the application will be considered. The deadline for Final Plat consideration shall also be 30 calendar days before the Commission meeting, provided there is no change from the preliminary plat and all conditions of the preliminary plat approval have been met, as determined by the District.

If an application is received that is deemed by the District to have an inordinate impact on the existing transportation system, the District may defer consideration of the application in order to obtain and review additional information or to provide sufficient time to conduct an adequate review.

The District reserves the right to delay Commission action, on those requests that differ from established policy.

B. Checklists: All applications shall be accompanied by the appropriate submittal checklist. Incomplete submittals will not be accepted by staff for review or action by the Commission.

### C. Improvement Plans:

1. Time of Review: Construction plan review will normally be completed in approximately 30 calendar days from the date all required materials, as determined by the District, are submitted to the District. Complex developments, and those which differ from established policy, may take longer. The District may assign construction plan review to an on-call consulting Engineer.

If the District expects the review time to exceed 30 calendar days, staff will estimate a completion date and inform the developer or Engineer, as soon as practical after receiving the plans.

The time required for acceptance of improvement plans may vary due to required changes or corrections to the plans. If changes or corrections are required, the District will normally review the revised plans within 30 calendar days after re-submittal.

2. Responsibility of Design Engineer: The Registered Engineer who signs and stamps the improvement plans is responsible for the proper design and function of the improvements.

Acceptance of the improvement plans by the District does not relieve the design Engineer of this responsibility.

D. Conflicts between Manual versions & updates: The applicant shall be required to follow the land use application, preliminary platting and final platting requirement under the current ACCHD Manual at the time of preliminary plat submittal to the County or Municipality. All construction of the infrastructure shall be accomplished in accordance with the current Manual at the time of constructions.

**2010.080. Irrigation Entities:** An irrigation entity or owner must approve or accept all irrigation conveyance system alterations including, but not limited to, design, construction, piping, moving of structures and/or the discharge of drainage into the irrigation system before District acceptance of the improvement drawings. The developer shall follow the requirements of the affected irrigation entity and make a reasonable effort to obtain an approval letter from the entity. If the irrigation entity is not responsive to the developer's requests for review and approval of the development, the developer shall provide the District with a detailed submittal and correspondence log documenting the efforts put forth to achieve irrigation entity review and approval.

#### **2020. Right-of-Way Dedication**

**2020.010. By Subdivision Plat:** All rights-of-way intended for use by the public and maintenance by the District as set forth by the criteria in these Standards shall be dedicated to the public in accordance with provisions set forth by Idaho State Code and District Standards.

**2020.015. Certificate of Owner:** Where public right-of-way dedication is intended by Subdivision Plat, the Certificate of Owner shall include the following statement: "The public streets and rights-of-ways shown on this plat are dedicated to the public forever."

**2020.020. Other Than by Subdivision Plat:** Any public rights-of-way to be created which are not within a recorded subdivision plat may be transferred to the District by deed in a form acceptable to the District. Acceptable roadway improvement drawings, all right-of-way instrument recording fees and the required Financial Guarantee Agreement shall be provided when new roads or other improvements are to be constructed by persons other than the District. A statement of acceptance of such right-of-way dedication must appear in the official records of the District prior to any obligation by the District to maintain the new road or other improvement. Upon acceptance of a deed for a public right-of-way, such instrument shall be submitted by the District to the County for recording.

**2020.030.** Approach Permits: Issuance of an approach permit providing ingress-egress to an existing roadway shall not be granted unless additional right-of-way adjacent to the existing roadway is transferred to the District as may be needed to satisfy the classification of the roadway under Section 3030.010. Dedication shall be in the form as outlined in Section 2020.010 or 2020.020. Changes in land use of an existing parcel or through development that alters the use or character of an existing approach are required to obtain an approach permit under this section, 2020.030.

**2020.040.** Private Roads: Some Subdivisions are developed with private roads as authorized by Idaho Code 50-1309. A private road may become a public road provided it can be documented to have been constructed in accordance with these Standards, or after improvements to bring the roadway into compliance with these Standards have been completed and appropriate right-of-way is dedicated to the District in a form as outlined in Section 2020.010 or 2020.020. New private roads shall not have direct access to any roadway designated as arterials or major collectors, or local roads within platted subdivisions, as provided for in Section 3000.

**2020.050.** Temporary Access Requirements: The District acknowledges that ownership and timing issues may impact the developer's ability to fully comply with the roadway spacing policy identified in section 3000. Therefore, the district may permit temporary accesses for a development under the following conditions:

- A. The developer demonstrates that he has contacted the adjacent property owner(s) and has been unable to obtain the necessary access to a public road.
- B. Any adjacent public road development is scheduled for completion at least one (1) year later than the development's proposed completion date.
- C. The development's roadway network is designed so that future developments can connect to the network and provide local area continuity.
- D. The temporary access can be removed by the developer or owner(s) without affecting the continuity of the roadway network and without damage to adjoining properties or improvements in the District's right-of-way.
- E. There is a note on the face of the plat indicating that the access is temporary and will be removed by the developer or owner(s) once an adjacent public road connection is made.

**2020.060.** Plat Notes: Plats requiring acceptance of the District will have one of the following notes, as determined by the District, on the face of the Plat, which note shall be followed by a signature line for the District Chairman and date:

A. Plats with only public road right(s)-of-way dedication(s):

\_\_\_\_\_ Highway District No. \_\_\_\_ does hereby accept this plat, and the dedicated public streets, highways and rights-of-way as are depicted on this plat, in accordance with the provisions of I.C. § 50-1312.

B. Plats with private roads and public road right(s)-of-way dedication(s):

\_\_\_\_\_ Highway District No. \_\_\_\_ does hereby accept this plat, and the dedicated public streets, highways and rights-of-way as are depicted on this plat, in accordance with the provisions of I.C. § 50-1312. Private streets depicted on this plat are not maintained by or under the jurisdiction of the Highway District. There is no legal obligation or assurances that the private streets will be accepted as public streets in the future.

C. Plats with private roads and no public road right(s)-of-way dedication(s):

\_\_\_\_\_ Highway District No. \_\_\_\_ does hereby accept this plat in accordance with the provisions of I.C. § 50-1312. Private streets depicted on this plat are not maintained by or under the jurisdiction of the Highway District. There is no legal obligation or assurances that the private streets will be accepted as public streets in the future.

**2030. Application Requirements and Content**

**2030.010.** Preliminary Plats: The content and drafting of a preliminary plat shall provide enough information to properly evaluate the proposed development.

Staff may review the proposed street layout for continuity and adequate connection with existing and proposed streets next to the proposed development. They may also check conformity with the current Functional Street Classification Plan.

Staff may review the drainage system for its impact on adjacent property (both upstream and downstream). They may also check the design details of the system proposed for the development and assure conformity with applicable drainage master plans. See Section 3000 and the following.

If land included in a preliminary plat is to be developed in phases, approval of the phasing plan, by the District, is required. Approval of the preliminary plat shall be interpreted as approval of a master plan of streets for the entire project. The requirements of the approved master plan must be followed for each

intermediate phase of the development. The developer shall provide a copy of the development drainage master plan at the same time the developer submits said plans to District with the preliminary plat.

The District will return, without action, any preliminary plat submitted for review that does not contain adequate information or is not complete.

The District will send a letter to the applicant advising the applicant about the Commission action. The conditions of approval will be included if it is approved. If not approved, the reason(s) for disapproval will be stated.

**2030.011. Preliminary Plat Contents:** The content and drafting of the preliminary plat shall be consistent with the requirements of Canyon County and Idaho law. All Preliminary Plat applications shall include a vicinity map, a preliminary plat map and attachments. In addition to the requirements of the Canyon County Zoning Ordinance, the following additional information shall be provided:

**A. Vicinity Map.**

1. The vicinity map shall extend a minimum distance of one (1) mile beyond all boundaries of the proposed development.

**B. Preliminary Plat Map.**

1. Name, seal and signature of person preparing plat.
2. In areas where street grades may not conform with the required minimum or maximum slope requirements of the District, show approximate grades of existing and proposed streets and private roads within and immediately next to the proposed development (Note: Additional information may be required by the District after initial review of plat map).
3. Centerline radii of all curves on public or private roadways and alleys.
4. Location and identification of known potentially dangerous areas. Include geologic hazard areas, areas subject to inundation or flood, and areas of high groundwater. High groundwater is deemed to be an area where the groundwater is less than 4-feet below natural ground level.
5. Proposed locations of facilities to be used by alternative transportation forms, such as bus stops, park and ride lots, bike paths, etc.

**C. Special Requirements.** Where the proposed development may have significant adverse impact, the following additional information may be required.

1. Location of any areas of fill or excavation and estimated volume of material to be moved.



2. For multi-phase developments, the proposed boundaries of each phase and the sequence of phases to be developed. The phasing sequence should use consistent lot and block numbering patterns.
3. Secondary access.
4. Traffic impact studies, special intersection studies and/or master plans. Traffic impact studies will be required as provided for in Section 3120 of this Policy and shall be submitted with or prior to the preliminary plat, unless otherwise required by the District.

D. Attachments

1. An 8-1/2"x11" photo-reduction of the vicinity map suitable for public presentation.
2. An 8-1/2"x11" photo-reduction of the preliminary plat suitable for public presentation.  
Note: If either the vicinity map or the preliminary plat is so large that it does not fit conveniently on a single 8-1/2"x11" photo-reduction, the developer should work with the District to attain approval on alternatives such as, multiple sheets; single sheet of different dimensions, etc.).
3. An electronic file of the preliminary plat and vicinity map. The preliminary plat will not be processed until an acceptable electronic file is submitted to the District.

**2030.012. Name Changes:** If the name of a subdivision is changed after submittal to the County, the developer shall notify the District staff of the name change in writing within seven (7) days of the name change.

**2030.013. Time Limitations:** A preliminary plat shall be voided if the final plat is not recorded within twenty-four (24) months of the County approval, and the developer shall be required to resubmit the preliminary plat or start a new platting process with the District. Twelve (12) month extensions are permitted, subject to the following conditions:

- A. Each extension shall be for twelve (12) months from the date of preliminary final plat approval by the County.
- B. With each request for extension new conditions may be added by the District.
- C. A written request for the time extension must be submitted and all required fees paid before the expiration date of the most recent preliminary plat approval or extension period.

**2030.020. Final Plats.** The content and drafting of the final plat shall be consistent with the requirements of Canyon County, and Idaho law. The developer shall submit with the Final Plat a current Title Report to demonstrate that the parcel(s) being subdivided, along with any right-of-way to be

dedicated to the public is unencumbered and that all those having interest in title to the subject parcel(s) are signatories to the subdivision plat and certificate of right-of-way dedication.

The final plat will be scheduled for Commission consideration consistent with the schedule outlined in Section 2010.

If the final plat conforms to all requirements established by the District at the time of approval of the preliminary plat, and all conditions of approval of the preliminary plat have been met, the Commission may accept, or conditionally accept said plat. The Commission may refuse to accept the final plat for reasons including, but not limited to, the following:

- A. Federal, State or local laws affecting the approved preliminary plat have changed.
- B. Final engineering requirements differ from those used in the preliminary plat.
- C. Changes made by the developer between preliminary plat and final plat require modification in order to maintain integrity with current laws and policies. Changes that might invoke this provision include, but are not limited to phasing, lot density, street layout and drainage.
- D. The required approval of any other agency or jurisdiction is contingent upon changing the plat.

**2030.021. Limitations on Time of Recording.** The District will not accept roads into the Highway System for maintenance until the applicable final plat has been accepted by the District, approved by Canyon County, and recorded with the Canyon County Recorder. When the District accepts the final plat, the developer shall record it within twelve (12) months or a lesser time as specified by the District. Otherwise, the District's acceptance of the final plat and roads becomes void, and the developer shall be required to resubmit the final plat for District approval or start a new platting process.

**2030.030. Out-Parcels.** Out-parcels are created when a land development is constructed around a remnant parcel of land. The lack of dedicated right-of-way and improvements along the frontage of the out-parcel creates gaps in widened roadway sections, as well as curbs and sidewalks that can take years to complete, often at public expense.

The following policy applies to right-of-way dedication and improvements in front of out-parcels that are contiguous with development. If five (5) or more of the following conditions are present, right-of-way dedication and improvements will not be required in front of any out-parcel.

- A. The out-parcel was created legally, as a one-time split of the original parcel as defined by the Zoning Ordinance of the County, except when a condition is noted, in the letter of acknowledgement provided by the District at the time of the lot split, that requires the right-of-way dedication at the time any portion of the original parcel is subdivided.
- B. The out-parcel was created more than twelve (12) months previous to the application.
- C. The applicant is not the original purchaser of the land being developed.
- D. There is no other curb and sidewalk on the fronting street or intersecting streets within 1,400 feet of the out-parcel.
- E. There is not an elementary school within one mile measured along streets by the most direct route.
- F. The installation of improvements will cause a blockage of street drainage.
- G. There will be major utility relocation costs (as determined by the District) involved with the improvements.
- H. Dedication of right-of-way would reduce existing dwelling setbacks from the street to less than required by the zoning ordinance of the County.
- I. The number of dwellings in the proposed project, if residential, is three (3) or fewer.

**2030.040.** Improvement Plans: The District requires complete and clear plans for proper review and/or understanding of proposed construction.

**2030.041.** Roadway Improvement Plan Requirements. Since accepted improvement plans become permanent public record, the following information is required.

- A. General Layout. The general layout of acceptable plan sheets shall include a detailed plan view and profile view of the proposed improvements along with detail sheets necessary to adequately show the proposed development construction.
- B. Data to be Included on Drawings. Each drawing shall have a north arrow, appropriate horizontal and vertical graphic scale, curve data, station, bearings, angles, monument ties with descriptions, and reference sheet numbers.

C. Preparation of Plans. An Engineer registered in the State of Idaho shall prepare and seal all improvement plans.

D. Submittals. The developer shall contact the District to determine the acceptable routing of submittals (copies of submittals may be required to the District as well as to the District's Engineer or other location as determined by the District). The developer shall submit the following information:

1. One (1) complete set of improvement plans on 11" x 17" sheets
2. Two (2) complete sets on 22"x34" sheets
3. One (1) copy of the plat
4. One (1) copy of the soils report from an accredited laboratory showing the "R" value and appropriate calculations for all structures, loads, sizing and quantities
5. One (1) copy of a list of quantities for the various items of work pertinent to District facilities in the proposed development.

E. The Improvement Plans shall show

1. Existing ground elevations and elevations of proposed improvements at enough locations to permit adequate review.
2. A roadway profile showing existing ground; final centerline grade; existing and proposed underground facilities; and, where applicable, the final grade of the flow line on both sides of the street. The profile and grading information shall show elevations at a maximum of 50-foot intervals; at all grade breaks; points of vertical curve; structures; and other points necessary to show clearly the intent of the improvements. The profile shall include dimensions showing length of vertical curves, distance between structures and other pertinent design data. Where existing roadways are being widened, the elevations at existing centerline and edge of pavement, and proposed edge of pavement/curb at 50-foot intervals, along with corresponding pavement cross-slopes.
3. Existing and proposed drainage and irrigation structures, including size and type of structure.
4. The catch points of all slopes, showing limits of cut and fill areas and the proposed method of slope stabilization.
5. Typical street sections to be constructed, including the structural section design. The structural section shall be according to Section 3060.070 using the design traffic index in accordance with that section of the manual.
6. Details of structures, traffic control devices, medians, landscaping, street signs, pavement striping and other special facilities in the right-of-way not included in the standard drawings. All encroachments into the public right-of-way must be submitted to the District for approval before construction.

7. Details showing the connection of any private facility to a public facility including, but not limited to, private roads or alleys, drainage facilities, sidewalks, bike paths, parking areas and traffic control devices.
8. A drainage plan prepared by a Professional Engineer registered in the State of Idaho. The plan shall include an overall map delineating and labeling drainage basins within, and contributing to, the development, a description of the drainage system and facilities, assumptions and methodologies used and all calculations. The report shall be in an organized, easy to follow format, following the procedures identified in Section 3070.
9. Roadway plan and layout showing centerline radii, tangent lengths, intersection edge or pavement/curb radii and cul-de-sac diameters.
10. The District requires cross-sections when the configuration of the land and improvements create cut or fill back-slopes over three (3) feet in height. Cross-sections shall be submitted on standard cross-section sheets or on computer cross-section printouts. Cross-sections shall be at 50-foot intervals or less. They shall extend to the limits of cut or fill slopes, or 15-feet outside the right-of-way line, whichever is greater. Include cross-sections at crests, sags or any unusual feature, in addition to the 50-foot interval requirement.

**2030.050. Electronic Submittal Requirements.** Electronic submittals of preliminary plats, final plats, improvement drawings, and record drawings shall meet the requirements of this section.

A. Electronic submittals shall be on CD or DVD media, or other media acceptable to the District. The CD/DVD shall be clearly labeled with the name of the subdivision/development, name and/or company that prepared the drawings, and the date of preparation.

B. Drawing files shall be in ACAD (.dwg) format. The ACAD release/version shall be acceptable to the District. Layers shall comply with the requirements of Canyon County Assessor's Office for GIS mapping. In addition to the ACAD file format, all files shall also be submitted in a Adobe Acrobat (pdf) file format.

C. All drawing files shall be referenced to a minimum of two public land corners.

#### **2040. Coordination With Utilities and the District**

**2040.010. Arrangements and Location of Utilities.** The developer is responsible for notifying all utilities, including municipal-owned utilities, about utility work needed to serve a proposed development. This applies to on-site and off-site work.

Private utilities that are not controlled by the PUC shall be located in a ten (10) foot easement adjacent to the public right-of-way unless otherwise approved by the District. For development within a mile of a city's limits, utilities may be located in accordance with the city's utility corridor.

All affected utilities shall be moved at the direction of the owner of the facility.

No utility facilities shall be installed on or above the top of bridge or culvert structures. Utilities may only be attached to the side of or underneath of bridge or culvert structures with special permission from the District.

**2040.020. Responsibility for Relocation.** The developer is responsible for relocating existing utilities and District facilities according to applicable sections of these standards.

#### **2050. Financial Guarantee Agreements**

**2050.010.** Prior to acceptance by the District of new roadways, the Applicant shall enter into a Financial Guarantee Agreement, approved by the District, of either form as prescribed in the Appendix. After the acceptance of the roadway by the District, the agreement shall extend for one (1) year and be in an amount equal to 50 percent of the construction costs.

**2050.020.** The District will not sign a final plat unless the public roads are acceptable for maintenance in accordance with these standards.

#### **2060. Construction**

**2060.010.** All construction for improvements intended for acceptance by the District shall be completed in accordance with the latest edition of the Idaho Standards for Public Works Construction (ISPWC) as supplemented by these standards, unless otherwise approved by the District.

**2060.020.** Failure to follow the procedure as outlined in Section 2060.010 may result in non-acceptance of the completed roadway facility for maintenance by the District and may further result in corrective action by the District under the terms of the Financial Guarantee Agreement.

#### **2070. Construction Observation**

**2070.010.** Observation of all construction completed within the District's jurisdiction for facilities which will be maintained by the District and constructed by persons other than the District and/or its designated representatives shall be the responsibility of the Applicant.

2070.020. The Applicant shall retain a Professional Engineer, licensed by the State of Idaho, who shall supervise construction observation and verify, by submission of the Engineer's Statement (included in Section 5000), that all improvements were constructed in accordance with the District accepted improvement drawings and adopted Standards. All deviations from said improvement drawings and standards shall be duly noted and accepted by the District prior to District acceptance of the roadway and improvements for maintenance.

2070.030. All construction observation shall be in accordance with Section 5000 of this Manual.

2070.040. Record Drawings/Electronic Record. A set of reproducible record drawings and an electronic copy of those record drawings shall be submitted to the District following completion of the construction of all public improvements and prior to final acceptance of the improvements and release of any surety agreements and letters of credit held by the District. Record submittals shall include the subdivision plat as filed for recording with the Canyon County Recorder.

#### **2080. Fees for Plan Review and Construction Observation**

2080.010. The Applicant will be charged for all costs incurred by the District in reviewing the improvement drawings and providing construction observation. All charges will be based on the District's actual costs or reasonable fees adopted by the District. The charges will include the District's Engineer's fees, the District's Agent's hourly wage rate and any other costs associated directly with the Applicant's project. The fees shall be payable when billed to the Applicant, and final acceptance of the roadway and improvements into the District system will not be granted until all fees are paid in full.

#### **2090. Testing**

2090.010. All testing required by the District shall be the responsibility of the Applicant and/or his Agent.

2090.020. Any testing required by the District (other than "Supplemental Tests") but not provided by the Applicant may be completed by the District, and all costs associated therewith shall be paid by the Applicant.

2090.030. If the minimum testing requirements have been met by the Applicant, but the District feels "Supplemental Tests" need to be taken, the Applicant shall make such additional tests. The cost for the "Supplemental Tests" shall be borne by the Applicant for all failing tests, and by the District for passing tests.

## **2100. Area of City Impact**

**2100.010.** When construction of a new roadway or modification to an existing roadway occurs within the area of city impact, the District may apply the standards and specifications of the City at the Highway District's discretion and shall afford the appropriate City an opportunity to provide comments on the Subdivision or Development and may incorporate any City comments into the District's Approval Requirements.

**2100.020.** Developments in an area of city impact may be required to include city utilities (i.e. sewer, water, pressure irrigation, etc.), either "active" or "dry" lines, along with Urban Street Sections, as part of the construction improvements. Inspection and testing of utility lines shall not be the responsibility of the District. Trench backfill and compaction within the public road right-of-way shall meet the requirements of the District and testing and inspection shall conform to the requirements of this Policy. These utilities, unless maintained under a separate permit/license agreement with the City requiring the utilities, shall be the responsibility of the Developer/Homeowner's Association under a permit/license agreement entered into with the District.

Waterline, sewer line or other utility construction proposed for a development, outside of a city's area of impact and/or not accepted for maintenance by a City or public utility company shall be located in a ten foot easement adjacent to the public right-of-way unless otherwise approved by the District. All utility crossings require a license agreement for construction within public right-of-way and the specific construction requirements will be identified in the license agreement.

## **2110. Acceptance into District System**

**2110.010.** No roadway or other improvements will be built on an existing public right-of-way without a License Agreement or FCO to build the road to District standards for acceptance by the District for continuous maintenance. An FCO is a Finding of Fact, Conclusion of Law, and Order of Decision.

**2110.020.** No roadway will be accepted into the District system for continuous maintenance until the conditions of Section 2110.030 have been met, or a variance granted thereto.

**2110.030.** A request for acceptance of a roadway shall be filed with the District and must establish that the request meets the following requirements and/or is accompanied by the following:

- A. Payment of all fees.



B. An Engineer's Statement of roadway completion with required submittals (test results, record drawings, construction diary) establishing that the roadway has been constructed in accordance with the specifications, and Standards of the District.

1. Except subdivisions approved by the Canyon County Commissioners and recorded on or before August 8, 1991, with dedicated roadways therein that were constructed on or before January 1, 1997, but have not been accepted for maintenance by the District; the Engineer's Statement of completion shall establish that the roadway has been constructed in accordance with the specifications, and Standards of the District, less paving, and in accordance with the standards for width to the extent allowable within the dedicated right-of-way.

C. Final review and acceptance by the District.

D. Financial Guarantee Agreement.

#### **2120. Special Permits**

**2120.010.** Since the Districts have the administrative responsibility for use of public road rights-of-way, any use of the rights-of-way for purposes other than vehicular travel along the main roadway shall be by permit only, obtained from the District. Such uses will include, but not be limited to, driveways, non-public approach roads, buried utilities, signs, utility poles, conduits, landscaping, etc. The use of right-of-way for other than vehicular travel shall be in accordance with the State of Idaho Transportation Department's latest edition of A Policy for The Accommodation of Utilities Within The Right-of-Way of The State Highway System in The State of Idaho and Standard Drawing, ACCHD-110.

**2120.020.** Fees for special permits shall be in accordance with the Fee Schedule established by resolution of the District's Board.

**2120.050.** Roadway related improvements and private utilities may be located in the public road right-of-way at the discretion of the District. Roadway related improvements include sidewalk, street lights, or other facilities as determined by the District. Utilities include pressure irrigation crossings, domestic water system crossings, and sanitary sewers. If permitted by the District, the uses provided for herein shall meet the conditions set forth by the District, be maintained by the Developer, Homeowners, or Homeowner's Association under a License/Permit to Use Right-of-Way entered into and approved by the District, and subject to the General Provisions of the Application and Permit to Use Right-of-Way Approaches and Other included herein.

2120.060 The following uses of the public highway right-of-way may be allowed, subject to the General Provisions of the Application and Permit to Use Right-of-Way Approaches and Other included herein, without a Special Permit:

A. Landscaping. Landscaping meeting the following requirements:

1. Landscaping rock, drain rock or perma-bark, three (3) inches or smaller in size (passing a three (3) inch screen or sieve), up to the shoulder of the roadway or two (2) feet from the edge of pavement, whichever is greater. Use of wood bark for landscaping is not allowed.
2. Lawn, up to the shoulder of the roadway or two (2) feet from the edge of pavement, whichever is greater.
3. Ground cover plants, not exceeding six (6) inches in height, located beyond the bottom of the borrow ditch or eight (8) feet from the edge of the pavement, whichever is greater.
4. Irrigation sprinklers placed outside the right-of-way may spray into the right-of-way to irrigate turf or ground cover; however, the spray may not extend onto the roadway shoulder or pavement. No irrigation piping, sprinklers or related components shall be permitted within the right-of-way.
5. Any landscaping located within the right-of-way not complying with these requirements or otherwise creating a safety or maintenance concern may be removed by the Highway District without notice.

B. Signs.

1. Political signs and real estate signs meeting the following requirements:
  - a. Political Signs shall be erected no more than three (3) weeks prior to the date of the election and/or ballot measure and shall be removed not more than one (1) week after the date of the election and/or ballot measure. Political signs shall only indicate a candidate, position sought, date of election, slogan or voting preference on a ballot issue.
  - b. Shall not exceed twenty-four (24) inches in height by thirty-six (36) inches in width.
  - c. Shall be constructed of paper, wood, plastic or similar material and supported by a single four (4) inch by four (4) inch wood post or two (2) metal posts or rods not exceeding one (1) inch diameter.
  - d. Shall be located beyond the bottom of the borrow ditch or eight (8) feet from the edge of the pavement, whichever is greater and shall not be located in the sight triangle for intersecting highways, roads, streets, or approaches determined in accordance with the currently adopted Highway Standards and Development Procedures.
  - e. Any sign located within the right-of-way not complying with these requirements or otherwise creating a safety or maintenance concern may be removed by the District without notice. Removed signs shall be held at the Highway District Administrative Offices or other location determined by the Board of Commissioners for a period of not less than

thirty (30) days, after which time the District may dispose of the signs in a manner determined by the Highway District.

2. Traffic signs installed on the approach of a private road or commercial approach as required by the District or in accordance with the currently adopted Highway Standards and Development Procedures.

C. Mailboxes. Mailboxes shall be installed in accordance with the following:

1. For Local Roads, the nearest face of the mailbox shall be located 6" - 8" behind the face of curb or road shoulder, or other greater distance required by the U.S. Postal Service. The height to the bottom of the mailbox from the road or shoulder surface shall be 41" - 45". For Collector and Arterial Roads, the mailbox and mailbox turnout shall be as shown on ISPWC Standard Drawing SD-808.

2. Mailboxes shall be installed on a four (4) inch by four (4) inch wood post, two (2) inch diameter steel pipe with a maximum wall thickness of 0.095 inches, a support meeting the requirements of the Local Highway Technical Assistance Council's Manual For The Location, Support, and Mounting of Mailboxes, Current Edition, or equivalent support system approved by the District. Mailboxes installed on mounting or support systems determined unacceptable by the District, including, but not limited to, brick, masonry, concrete, rock or heavy gauge metal, shall be relocated outside the right-of-way at the owner's expense.

3. Any mailbox located within the right-of-way not complying with these requirements or otherwise creating a safety or maintenance concern may be removed by the Highway District without notice.

**2120.070** The following uses of the public highway right-of-way may be allowed, subject to the following:

A. General. Uses provided for in this section shall only be permitted when the following criteria is satisfied:

1. Roadway Criteria

a. Uses shall only be permitted on subdivision roads and streets which are defined as:

- i. Local roads or streets that primarily provide access to adjacent lots or parcels
- ii. Do not serve as rural collector roads or urban arterial roads
- iii. Have posted speeds of 25 mph or less
- iv. Have rolled or vertical concrete curb along the street

b. Uses shall be located outside the sight triangle requirements set forth in Standard Drawings ACCHD-107, ACCHD-107A and ACCHD-107B applicable to any intersection or approach.

## 2. Permit/License Agreement

- a. Uses provided for herein shall be maintained by the Developer, Homeowners, or Homeowner's Association under a License/Permit to Use Right-of-Way entered into and approved by the District, and subject to the General Provisions of the Application and Permit to Use Right-of-Way Approaches and Other included herein.
- b. Any use within the right-of-way not complying with these conditions, the provisions of the Permit/License Agreement, or otherwise creating a safety or maintenance concern may be removed by the Highway District without notice.

## B. Trees. Tree planting meeting the following requirements and Standard Drawing ACCHD-110 included herein:

### 1. Tree Species

- a. The most current edition of Tree Selection Guide for Street and Landscapes Throughout Idaho, Boise Parks & Recreation Department, is adopted as the District's reference for tree species, tree classes, and street tree suitability. Only trees listed in the Tree Selection Guide and meeting the requirements set forth herein shall be used in the right-of-way.
- b. Trees used within the right-of-way must be designated as "Street Tree" in the Tree Selection Guide.

### 2. Placement of Trees

#### a. Offset

- i. Class I, II, and III trees shall be placed to provide a minimum five (5) foot offset from the edge of curb and/or sidewalk when the sidewalk is attached or non-existent.

#### b. Planter Widths

- i. No tree planting is allowed in planters less than six (6) feet wide.
- ii. Minimum planter width of six (6) feet is for Class II trees only with the installation of root barriers installed on both the curb side and the sidewalk side. Root barriers are required to extend at least eighteen (18) inches below the sub grade on the sidewalk side and twenty-four (24) inches below the sub grade on the curb side. Root barriers shall extend two (2) inches above the ground and key into the road feature that they are designed to protect on both the curb and sidewalk side. Root barrier product shall be approved by the District.
- iii. Class II trees shall be allowed within planters with a minimum width of eight (8) feet.
- iv. Class I and III trees shall be allowed in planters with a minimum width of ten (10) feet.

#### c. Other Placement Requirements

- i. Only Class I trees may be planted under or within ten (10) lateral feet of any

overhead utility wire.

ii. Tree planting of any type shall be prohibited within ten (10) feet of a drain inlet, fire hydrant, and/or utility box.

C. Landscaping Features. Landscaping features, including water falls, fountains, columns, signs, landscaping rocks, or other similar features as determined by the District, meeting the following requirements:

1. All landscape features located within the public right-of-way shall be a minimum of 1.5 feet behind the face of curb or the minimum clear zone distance measured from the traveled way in accordance with the American Association of State Highway and Transportation Official's (AASHTO) Roadside Design Guide 2002 (Table 3.1), whichever is greater.
2. Six (6) inch vertical curb shall be used at all locations where landscape features are permitted.

#### **2130. Road Names and Signs**

2130.010. All names for new roads constructed within the District shall be approved by the Board of Canyon County Commissioners.

2130.020. Road name signs shall be installed at all new road intersections by the Applicant. All signs shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), latest edition, as adopted by the State of Idaho or as modified by the District, and shall conform to Section 4000 of these specifications.

2130.030. Stop signs and other traffic control devices required by the Design Engineer shall be installed by the Applicant and shall be in accordance with the MUTCD, and as specified in section 3090 of this manual.

2130.040. Private road intersections with public roads shall be signed in accordance with Sections 2130.020 and 2130.030.

#### **2140. Variances**

2140.010. Purpose: The District may grant variances in order to prevent or to lessen such practical difficulties and unnecessary physical hardships as would result from a literal interpretation and enforcement in certain of the regulations prescribed by these Standards.

A variance shall not be considered a right or special privilege, but may be granted to an applicant only upon showing 1) undue hardship because of special characteristics applicable to the site, and 2) the variance is not in conflict with public interest. Hardships must result from special site characteristics, from geographic, topographic or other physical conditions, or from population densities, existing street locations or traffic conditions.

The purpose of a variance is to provide fair treatment and to see that individuals are not penalized because of site characteristics beyond their control.

**2140.020. Findings Required for Variance:**

A. The District may grant a variance if, on the basis of application, investigation and evidence submitted, the District makes the following findings:

1. That literal interpretation and enforcement of the regulation would result in practical difficulty or unnecessary physical hardship inconsistent with the objectives of these Standards.
2. That there are extraordinary site characteristics applicable to the property involved or to the intended use of the property, which do not apply generally to other properties.
3. That literal interpretation and enforcement of the regulation would deprive the applicant of privileges enjoyed by the owners of other properties.
4. That the granting of the variance will not constitute a grant of special privilege inconsistent with the limitations on other properties.
5. That the granting of the variance will not be detrimental to the public health, safety or welfare or be materially injurious to properties or improvements in the vicinity.

B. The District may grant variances for location of fences, walls or hedges, based on a substitute plan, which provides equal safety or aesthetic qualities by other means. The substitute plan must:

1. Provide adequate vision clearance for vehicles, both those passing on the street and those leaving the development site.
2. Not be detrimental to the public health, safety or welfare, or be materially injurious to properties or improvements in the vicinity.

**2140.030. Duration of Approval:** The use or construction permit under the terms of any variance shall be commenced within a twelve (12) month period. If such use or construction has not commenced within such time period, the variance shall no longer be valid. Prior to the expiration of the twelve (12) month period, the District, upon request of the applicant, may extend the variance for up to an additional six (6) months from the original date of approval. No additional extensions will be allowed.

**2140.040.** Application: Application for a variance shall be filed with the District on a form prescribed by the District which shall include any information the District deems necessary.

The application shall be accompanied by an accurate scale drawing of the site and all adjacent property affected, showing all existing and proposed locations of streets, property lines, uses, structures, driveways, pedestrian walks, off-street parking, off-street loading facilities and landscaped areas.

The application shall be accompanied by the appropriate fee, which is established by District resolution and is nonrefundable.

#### **2150. Vacation of Public Right-of-Way**

**2150.010.** Vacation of any public right-of-way within the boundaries of the District shall be in accordance with procedures set forth in Idaho Code 40-203.

**2150.020.** Application for vacation shall be filed with the District. An accurate scale drawing of the area and adjacent property affected showing all property lines and methods of access to other properties should the vacation be granted, shall be required by the District. The application shall be accompanied by the appropriate fee, which is established by District resolution and is nonrefundable.

**2150.030.** A public hearing on the vacation request will be held in accordance with Idaho Code. Such hearing will be scheduled with reasonable promptness by the District. The cost of the Public Hearing shall be borne by the Applicant regardless of the outcome.

#### **2160. Surface Restoration**

**2160.010.** Any disturbed area within the public right-of-way shall be restored in accordance with these standards within 24 hours (or as otherwise stated on the Permit) of completion of surface disturbing activities. Prior to surface disturbing activities, a surface restoration schedule must be submitted and approved by the District.

When utility work is being performed, surface restoration shall occur within 24 hours of completing construction on any pipe or cable run. A run shall be considered placement of pipe or cable between structures, valves or boxes, but in any case not more than 500 feet in length.

When existing roadway pavement is disturbed, the disturbed areas open to local traffic, or providing access to properties or emergency services vehicles, shall be suitable to support the vehicle loads and maintained in a smooth, drivable condition.

When weather conditions do not permit plant mix pavement restoration within twenty-four (24) hours, a minimum two (2) inch thickness of cold mix or Class IV Hot Mix patch shall be temporarily provided until weather conditions permit restoration. The temporary patch shall be maintained in a smooth, drivable condition.



## SECTION 3000

### DESIGN CRITERIA

#### 3010. General Design Criteria

3010.010. General: These standards provide guidance for the development and preparation of roadway, bridge, storm drain and other development improvements. Developers and their engineers are expected to have enough flexibility, within these requirements, to develop cost effective, efficient and safe projects that are compatible with the terrain and adjacent developments.

3010.020. Design Function: These standards coordinate County-wide planning, design and construction activities, aid in resolving conflicts, design exceptions and assures that District, Local, State and AASHTO standards have been met.

3010.030. Design Standards and Specifications: The design policies and standards serve as the basic District guide in design and construction. The standards represent minimum values and are not a substitute for engineering knowledge, experience or judgment.

3010.040. Roadway Design Standards: Roadway planning and design for the public road system shall conform to the following guidelines and referenced specifications. Use the most current edition, unless otherwise specified.

A. American Association of State Highway Transportation Officials Policy on Geometric Design of Highways and Streets (AASHTO Greenbook).

B. AASHTO Roadside Design Guide.

C. Idaho Transportation Department Standard Drawings, Specifications and Current Supplemental (only where applicable).

D. Idaho Standards for Public Works Construction (ISPWC).

E. AASHTO Materials Testing and Sampling Methods.

F. American Society for Testing and Materials (ASTM) Specifications.

G. Traffic Engineering Hand Book from Institute of Transportation Engineers.

H. Manual on Uniform Traffic Control Devices (MUTCD)

3010.050. Bridge Design Standards: Bridge and structure planning and design for the public road system shall conform to the following guidelines and referenced specifications. Use the most current edition, unless otherwise specified.

A. AASHTO Bridge Design

B. Idaho Transportation Department Standard Drawings, Specifications and Current Supplemental (only where applicable)

C. Idaho Transportation Department Bridge Design LRFD Manual

### 3011. Survey

3011.010. General: All plans shall reference at least two Section/Quarter corners and vertical control shall be tied to an NAVD 88 Bench Mark. The project coordinates and elevations of these points shall be listed on the plans.

Subdivisions with 25 or more lots shall set two or more, depending on size, control monuments (aluminum/brass caps) within the subdivision with NAVD 88 elevations. The project coordinates and elevations of these points shall be listed on the plans.

### 3020. Roadway Classification

3020.010. Functional Classification: All roadways within each District are classified in accordance with the Surface Transportation and Uniform Relocation Assistance Act of 1987. All roads are classified as Expressways, Arterials, Collectors, Local Roads or Low-Volume Local Roads. It shall be the prerogative of each District having jurisdiction over the area to be developed to define the roads within subdivisions and their classification as Expressways, Arterials, Collectors, Local Roads or Low-Volume Local Roads. Functional Classification shall be based on the Planning Functional Classification Map adopted by the District or, when such map has not been adopted by the District, the Planning Functional Classification Map for Canyon County. The developer shall request the most recent version of the Functional Classification Map from the District.

3020.020. All arterials and collectors designated as urban roadways shall meet the urban roadway requirements in these standards. The District may administratively waive the urban roadway requirements for local roads at the District's sole discretion and may consider the following criteria in making such determination:

- A. The use of rural road criteria is consistent with existing developments abutting or within ½ mile of the proposed development.
- B. Lot sizes are 1 acre or greater and plat provisions prohibit re-subdivision.
- C. The anticipated traffic volumes on the roadway are very low volume.
- D. Water and sewer utilities are not available to the site and dry lines are not required and the future construction of these utilities would be more costly and disruptive in an urban roadway section.
- E. The right-of-way is sufficient for the rural and potential future urban roadway sections.
- F. Use of rural section encourages public roads.

### 3030. Right-of-Way

3030.010. The required width of right-of-way is as follows:

Type of Roadway	Minimum Right-of-Way <sup>1</sup>
Expressway	200 ft.
Arterial <sup>2,3</sup>	100 ft.
Collector <sup>2,3</sup>	80 ft.
Local Rural Road <sup>4</sup>	60 ft.
Local Urban Road	56 ft.
Low Volume Local Rural Road	56 ft.
Low Volume Local Urban Road	50 ft.

<sup>1</sup> Additional widths may be required for accommodation of extreme cut or fill sections, turn bays or other site characteristics. Where identified on the District's Planning Functional Classification Map or Transportation Plan, additional right-of-way may be required at intersections for turn lanes or roundabouts.

<sup>2</sup> Arterial/Collector intersections shall have 100 feet of right-of-way in all directions for a distance of 600 feet from the centerline of the intersection.

<sup>3</sup> For the purpose of future planning, all section and quarter section line roads or boundaries may be considered as potential arterials or collector highways. Section line and quarter section line road right-of-way widths shall correspond to the functional classification shown on the Planning Functional Classification Map. Where not designated on the Planning Functional Classification Map, section line roads shall require Arterial right-of-way widths (except where waived by variance) and quarter section line roads shall require Collector right-of-way widths. Some other roads may also be similarly designated. Presently these roads, where established, serve as farm-to-market and/or commuter routes. The District desires to preserve the integrity of these routes by designating them as potential arterials or collectors, and for this reason it is also deemed advisable to restrict the number of access points (driveways, etc.) in order to reduce safety problems and allow traffic to flow expeditiously and unimpeded.

<sup>4</sup> Where public road right-of-way or property boundaries existed prior to August 8, 1991 and are necessary for a public road access to a parcel(s), the minimum width of right-of-way for a local road may be 56 feet with District Approval.

3030.020. Right-of-Way shall be dedicated from either the centerline of the road or the Section / Quarter Section Line, whichever is greater.

3030.030. A cul-de-sac is required at the terminus of all public roads, except where stubbed for future road extension. Stub streets for future road extension shall be limited in length from a cross street or cul-de-sac to the depth of a single lot. Cul-de-sacs shall have a minimum right-of-way of a 65-foot radius with additional right-of-way as needed to accommodate unusual cut and fill sections. Cul-de-sacs of a temporary nature may be allowed, providing each right-of-way is shown on the plat and approved by the District. A standard cul-de-sac layout is shown in standard drawing ACCHD-104 in the Appendix. The maximum length of a cul-de-sac on a rural roadway is 1320 feet and servicing no more than 20 lots while the maximum cul-de-sac length on an urban roadway is 660 feet and servicing no more than 20 lots. Dead end streets longer than the specified maximum length may be allowed upon approval of the District, provided that intermediate cul-de-sacs are provided at no more than 1320 feet for rural roadways and 660 feet for urban roadways.

3030.040. All intersecting rights-of-way lines and edges of pavement at low-volume (AADT<400 vpd) local road intersections and at cul-de-sac bulbs shall be connected by a curve having a minimum radius of 20 feet. Local Roads shall have a minimum 30-foot radius curve connecting intersecting right-of-way lines and edges of pavement. All intersecting right-of-way lines and edges of pavement at arterial and collector intersections shall be connected by a curve having a minimum radius of 40 feet.

#### 3040. Alignment

3040.010. Horizontal and vertical alignment should compliment each other and be considered in combination to achieve appropriate safety, capacity and appearance. Topography, traffic volume and right-of-way are controlling features.

3040.020. Horizontal and vertical alignments shall conform to the AASHTO Green Book latest edition. Design speed shall conform to Section 3040.060, be listed on the plans and be approved by the Highway District. The alignment shall take into consideration the turning movements of the design vehicle, and volumes for the development.

3040.030. Vertical grades shall be a minimum of 0.35 percent for rural and urban roadways. The maximum vertical grade for local and local low-volume roads is 8 percent, and for all other roadway classifications is 6 percent. If roadway grades in excess of 6 percent are allowed by the District, mitigation measures shall be required, including but not limited to chip sealing the roadway and providing permanent erosion control in the borrow ditches.

3040.040. Crest and sag vertical curves shall have sufficient lengths to conform to the AASHTO Green Book for the designated design speed. Vertical curves are required when the algebraic difference in grade on grade breaks is greater than 1.0 percent.

3040.050. For horizontal curvature the minimum radius (R), measured on the roadway centerline, shall conform to the AASHTO Green Book, latest edition.

3040.060. The minimum tangent length between curves shall be in accordance with AASHTO green book but in no case less than 50 feet for local roads and 100 feet for arterial and collector roads.

3040.070. The following tables show the values for design speed and superelevation for the five classes of roads to be designed. Modification by each District on an individual project by project basis may be accomplished under the appropriate procedures outlined in Section 2000 of these Standards.

A. Rural Roadways:

Classification	Design Speed	Maximum Superelevation
Expressway *	65 mph	6%
Arterials	55 mph	6%
Collectors	45 mph	4%
Local Roads	35 mph	2%
Low Volume Local Roads	25 mph	N/A

\* For illustrative purposes only, developers are not required to construct, expressways, only dedicate the appropriate right-of-way for an Arterial classification and adhere to the Expressway setback requirements of the County.

B. Urban Roadways:

Classification	Design Speed	Maximum Superelevation
Expressway *	65 mph	6%
Arterials	45 mph	4%
Collectors	35 mph	2%
Local Roads	25 mph	N/A
Low Volume Local Roads	15 mph	N/A

Notes for 3040.070.A Table also apply to this Table.

### 3050. Sight Distance

3050.010. All aspects of sight distance; 1) stopping sight distance, 2) passing sight distance, 3) decision sight distance and 4) measuring sight distance; shall be designed in accordance with the AASHTO Green Book, latest edition.

### 3060. Roadway Cross Section

3060.010. The Standard Roadway Details are included in the Appendix of these Standards. These details show the cross section characteristics required for roadways within the District.

3060.020. For industrial type subdivisions, the typical curb and gutter section as shown on Standard Drawing ACCHD-102 shall be used with a 40 foot minimum face to face of curb. The asphalt thickness for all industrial developments shall be designed by a Professional Engineer, in accordance with Section 3060.070, to meet the projected traffic level of the development.

3060.030. The typical curb and gutter section shown on the Standard Roadway Details is required on subdivisions within one mile of a city limit, or where requested by the District.

3060.040. The roadway cross section outside the paved area and inside the remaining right-of-way on roads with design speeds over 40 mph shall conform in all aspects with the AASHTO Roadside Design Guide, latest edition. This Guide will be used to determine safety characteristics for any appurtenances such as signing, rock outcrops or general hazards to the traveling public. Conformance thereto will be based on a project by project basis.

3060.050. When compliance with State and local platting laws is possible, the District may allow the use of raised medians (islands). Said medians may be platted as a lot to remain under the ownership of a property owners association or other acceptable dues-paying organization. The Highway District shall be provided with a hold harmless agreement and/or rider to the dues-paying organization's liability policy which names the District as co-insured. Where a raised median is allowed by the District in the center of a cul-de-sac, the median shall have a radius of 15 feet to the face of the curb or as required by the District. Vertical curbs are required around the perimeter of all raised medians. Gutters shall slope away from the curb to prevent ponding. Intersection street lighting shall be provided at all raised medians. The lighting shall conform to ISPWC Section 1102. The property owners association or other acceptable dues paying organization shall be responsible for the electrical service charges and for maintenance of the lighting in good working order. Type 1 object markers shall be installed at both ends of all raised

medians. Raised medians at intersections shall be constructed in accordance with Standard Drawing ACCHD-108 in the appendix.

3060.060. The structural section of a Roadway shall be designed based on the soil characteristics as determined in the geotechnical report or with the minimum section thickness as indicated in these standards. Structural Section Design Calculations shall follow the ITD Method contained in the ITD Materials Manual Section 510, as modified in the following table.

Roadway Classifications	TI <sup>1</sup>	Minimum Thickness			Maximum R-Value		
		Pavement	Base	Subbase <sup>2</sup>	Base	Subbase	Subgrade <sup>3</sup>
Expressway	See Note 4	See Note 4	See Note 4	See Note 4	75	60	See Note 4
Arterial	See Note 4	See Note 4	See Note 4	See Note 4	75	60	See Note 4
Collector ( 1,200 ADT or more)	See Note 4	See Note 4	See Note 4	See Note 4	75	60	See Note 4
Collector (less than 1,200 ADT)	8	3 inches	6 inches	15 inches	75	60	25
Local Road (1,000 ADT or more)	8	3 inches	6 inches	15 inches	75	60	25
Local Road (less than 1,000 ADT)	7	3 inches	6 inches	12 inches	75	60	25
Low Volume Local Road (less than 400 ADT)	6	2.5 inches	6 inches	9 inches	75	60	25

<sup>1</sup> Traffic Index (TI) for 20 year minimum design life. May be adjusted based on traffic study.

<sup>2</sup> Or a minimum of 2 times the nominal maximum aggregate size, whichever is greater.

<sup>3</sup> May be adjusted by site specific geotechnical report; however in no case shall the R-value exceed 45. Additionally, the subbase substitution value shall be 0.75:1 unless documentation is provided demonstrating that the subbase R-value exceeds 60.

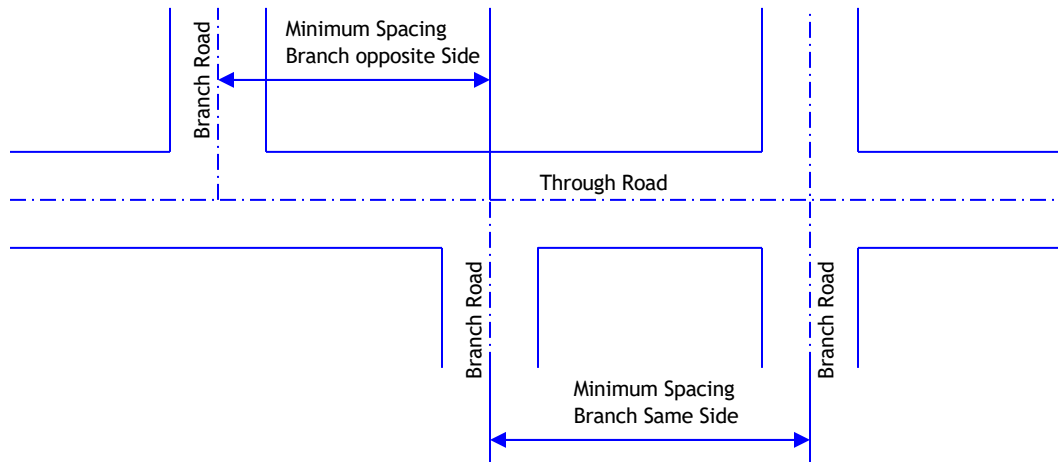
<sup>4</sup> Shall be as determined by District.

3060.070. Pavement class and asphalt binder grade for construction of roadways shall be identified on the construction plans, and shall be based on the Design (20-year period) equivalent single axle loads (ESALs) as set forth in the Superpave Mixture Requirements, and as follows:

- A. Hveem Class I design may be substituted for Superpave SP3.
- B. Hveem Class II or III design may be substituted for Superpave SP2.
- C. Asphalt binder shall conform to AASHTO M 320, Standard Specifications for Performance Graded Binder.
- D. Use PG 70-28 binder on all roads with Design ESALs exceeding 10 million.
- E. Use PG 70-28 binder at intersections with any two approaches having Design ESALs of 1 million or higher (TI of 9.0 or higher), through the intersection and for a distance of 500 feet from the center of the intersection.
- F. Use PG 64-28 binder where PG 70-28 is not otherwise specified.

### 3061. Intersection and Approach Policy

3061.010. Roadway Spacing Policy: See Tables in sections A and B (below) for spacing requirements on rural and urban roadways. Roadway spacing for an Expressway shall be the same as for Principal Arterial.



A. Rural Roadway Spacing (see spacing diagram above):

Through Roadway (see diagram)	Branch Roadway (see diagram)	Minimum Spacing Branch on same side of Through Roadway	Minimum Spacing Branch on opposite side of Through Roadway
Principal Arterial	Arterial	1 mile	1 mile
	Collector	½ mile	½ mile
	Local Road	No Direct Access	No Direct Access
	Private Road	No Direct Access	No Direct Access
Minor Arterial	Arterial	½ mile	½ mile
	Collector	¼ mile	¼ mile
	Local Road	No Direct Access	No Direct Access
	Private Road	No Direct Access	No Direct Access
Major Collector	Collector	1/4 mile	1/8 mile
	Local Road	1/8 mile	1/16 mile
	Private Road	No Direct Access	No Direct Access
Minor Collector	Collector	1/4 mile	1/8 mile
	Local Road	1/8 mile	1/16 mile
	Private Road	1/8 mile	1/16 mile
Local Roads	Local Road	1/8 mile	1/16 mile
	Private Road*	1/8 mile	1/16 mile

\* Private roads shall not be constructed off or extended from Local Public Roads within platted subdivisions.



B. Urban Roadway Spacing (see spacing diagram above):

Through Roadway (see diagram)	Branch Roadway (see diagram)	Minimum Spacing Branch on same side of Through Roadway	Minimum Spacing Branch on opposite side of Through Roadway
Principal Arterial	Arterial	5000 feet	5000 feet
	Collector	2000 feet	2000 feet
	Local Road	No Direct Access	No Direct Access
	Private Road	No Direct Access	No Direct Access
Minor Arterial	Arterial	2500 feet	2500 feet
	Collector	1300 feet	1300 feet
	Local Road	No Direct Access	No Direct Access
	Private Road	No Direct Access	No Direct Access
Major Collector	Collector	1300 feet	1300 feet
	Local Road	500 feet	250 feet
	Private Road	No Direct Access	No Direct Access
Minor Collector	Collector	1300 feet	500 feet
	Local Road	500 feet	250 feet
	Private Road	500 feet	250 feet
Local Roads	Local Road	250 feet	125 feet
	Private Road*	250 feet	125 feet

Notes for 3061.010.A Table also apply to this Table.

3061.020. Driveway Spacing Policy:

A. Rural Roadway Driveway Spacing:

Roadway Classification	Minimum Driveway Spacing (in feet) <sup>1</sup>		
	Minimum Use <sup>2</sup>	Minor Generator <sup>3</sup>	Major Generator <sup>4</sup>
Expressway	See Note 5	See Note 5	See Note 5
Principal Arterial	No New Direct Access	No New Direct Access	No New Direct Access
Minor Arterial	No New Direct Access	No New Direct Access	No New Direct Access
Major Collector	330	660	1320
Minor Collector	180	315	405
Local Road	140	270	360
Low Volume Local Road <sup>6</sup>	75	125	150

<sup>1</sup> Applies to spacing of driveways on same side of road only.

<sup>2</sup> Less than 50 vehicle trips per day or 5 trips in the peak hour (two-way total).

<sup>3</sup> 51 to 5,000 vehicle trips per day or less than 500 trips in the peak hour (two-way total).

<sup>4</sup> Over 5,000 vehicle trips per day or over 500 trips in the peak hour (two-way total).

<sup>5</sup> Determined by interchange or roadway spacing; no direct access allowed.

<sup>6</sup> Low volume is defined as AADT < 400 vpd.

B. Urban Roadway Driveway Spacing:

Roadway Classification	Minimum Driveway Spacing (in feet) <sup>1</sup>		
	Minimum Use <sup>2</sup>	Minor Generator <sup>3</sup>	Major Generator <sup>4</sup>
Expressway	See Note 5	See Note 5	See Note 5
Principal Arterial	No New Direct Access	No New Direct Access	No New Direct Access
Minor Arterial	No New Direct Access	No New Direct Access	No New Direct Access
Major Collector	210	350	410
Minor Collector	105	175	210
Local Road	50	100	125
Low Volume Local Road <sup>6</sup>	30	60	75

Notes for 3061.020.A Table also apply to this Table.

C. Driveway spacing standards should be used to determine the minimum acceptable distance between driveways and between driveways and public streets. The spacing between intersections and driveways shall also be based on distances given in the Tables, except on urban collectors intersecting collector or arterial roadways where the spacing shall be 220' for right-in/right-out driveways or 440' for full access driveways.

In applying these guidelines, it is necessary to consider adjacent existing and future land use in computing the generator size, including development across the roadway.

The spacing of right-turn access on each side of a divided roadway can be treated separately. However, where left turns at median breaks are involved, the access on both sides should line up or be offset from the median break by at least 300 feet.

On undivided roadways, access on both sides of the road should be aligned. Where this is not possible, driveways should be offset by at least 165 feet when two minor traffic generators are involved, and 330 feet when two major traffic generators are involved.

3061.030. Driveways are not allowed direct access onto expressway or arterial roads, or roads designated to be expressways or arterials in the future. If unusual conditions prevent approach locations as specified above, the Applicant may request a variance in accordance with Section 2140. Where a variance is granted, driveways shall be designed and constructed to provide forward vehicular movement for ingress and egress to the adjacent properties. Where double front lots are included in a development, a note shall be included on the plat stating that direct access is not allowed to the arterial or major collector roadway.

3061.040. A circle driveway with a permanent barrier at its midpoint may be granted an access permit for one dwelling only and cannot be used for a lot split. Dwelling address is to be included in the permit.

3061.050. All approaches serving primarily truck traffic shall use a curb return approach. The radius shall be adequate to accommodate the truck turning movements, and the approach width shall be 40 feet.

3061.060. All approaches shall conform to the requirements of Section 2020.030 of these Standards and Standard Drawings ACCHD-105 and ACCHD-106. Approach aprons shall be paved for access serving three or more residential building permits, in conjunction with the first issued permit.

3061.070. No access shall be allowed to land in a platted subdivision other than to internal subdivision streets or as otherwise shown on the plat.

3061.080. When an approach is granted by variance, it shall be documented as follows:

- A. For land currently in the platting process, the approach shall be shown on the final plat with a note stating its location, width, authorized type of use, and a statement that no other access is allowed except to internal subdivision streets.
- B. For land in a plat dated June 14, 1977 or later, the approach shall be shown on a plat modification and re-recorded in the County Records. The modification shall show the approach location, width, authorized type of use, and a statement that no other access is allowed except to internal subdivision streets.
- C. For land in a plat dated before June 14, 1977, the approach shall be documented in a deed restriction and recorded in the County Records. The deed restriction shall state the approach location, width, authorized type of use, and that no other access is allowed to the subject property except from internal subdivision streets.
- D. For land which is neither platted nor in the platting process, the approach shall be documented in a deed restriction and recorded in the County Records. The deed restriction shall state the approach location, width, authorized type of use, and that no other access is allowed to the subject property.

## 3062. Earthwork

3062.010. Geotechnical Engineering Report: All preliminary plat subdivision applications *should* be accompanied by a geotechnical engineering report (Soils Report) documenting site soils and groundwater conditions and containing sufficient engineering information to verify adequate soil bearing capacities, embankment requirements and seasonal groundwater fluctuations.

### 3063. Trenching

3063.010. Utility Corridor: Private utilities that are not controlled by the PUC shall be located in a ten (10) foot easement adjacent to the public right-of-way unless otherwise approved by the District. For development within a mile of a city's limits, utilities may be located in accordance with the city's utility corridor.

3063.020. Roadway Cuts: Cuts in roadways with pavement improvements less than five (5) years old shall not be allowed, unless specifically approved by the District. Utility service installations in these roadways shall be bored. All permitted roadway cuts shall be perpendicular to or parallel to the travel lanes, and located at the edge or center of the nearest travel lane.

3063.030. At utility/culvert crossings, all utilities shall be installed with 24" minimum vertical clearance under culverts, unless otherwise approved by the District.

3063.040. At the District's discretion, major underground utility facilities within the right-of-way, including gas, power or fiber optics, may be installed at a minimum depth of 48", or 6" below the bottom of subbase, whichever is greater; minor utility facilities within the right-of-way may be installed a minimum depth of 36", or 6" below the bottom of the subbase, whichever is greater. Other facilities require specific approval by District.

3063.050. Contractor shall be responsible for the maintenance of a roadway for one (1) year after installation. PUC regulated utilities shall be responsible for the maintenance for a period of three (3) years.

### 3064. Water

3064.010. General: Developments in an area of city impact may be required to provide water system improvements in accordance with that City's requirements. When water system improvements are required, the developer shall submit the water system improvement drawings to the City for review and comment. The District may then include the City's comments in the District's review and approval of the development.

Water valves shall not be located in the wheel paths on any arterial or collector roadway. Wheel paths are considered to be three (3) foot wide strips in each lane of traffic, centered at three (3) feet and ten (10) feet from the centerline or adjacent lane stripe.

All crossings shall be as close to 90 degrees to the roadway centerline as practical (zero skew) and in no case shall the skew be greater than 20 degrees from perpendicular.

3064.020. Conformance to Master Plan: New water system improvements shall conform to the appropriate City's current water system master plan. Developments adjoining existing public streets shall provide water system improvements in the roadway as called for in the master plan or as required by the City. Trunk lines shall be extended to the boundary of the development in general conformance to the master plan or as required by the City for future extension.

### 3065. Sewer

3065.010. General: Developments in an area of city impact may be required to provide sewer system improvements in accordance with that City's requirements. When sewer system improvements are required, the developer shall submit the sewer system improvement drawings to the City for review and comment. The District may then include the City's comments in the District's review and approval of the development.

Manholes shall not be located in the wheel paths on any arterial or collector roadway. Wheel paths are considered to be three (3) foot wide strips in each lane of traffic, centered at three (3) feet and ten (10) feet from the centerline or adjacent lane stripe.

All crossings shall be as close to 90 degrees to the roadway centerline as practical (zero skew) and in no case shall the skew be greater than 20 degrees from perpendicular.

3065.20. Conformance to Master Plan: New sewer system improvements shall conform to the City's current sewer system master plan. Developments adjoining existing public roadways shall provide sewer system improvements in the roadway as called for in the master plan or as required by the City. Trunk lines shall be extended to the boundary of the development in general conformance to the master plan or as required by the City for future extension.

### 3066. Irrigation

3066.010. All irrigation facilities, excepting crossings, shall be removed and maintained outside Highway District right-of-way. Highway ditches may not be used for conveying irrigation water of any type.

3066.020. Irrigation and/or drain ditch culverts crossing roadways shall have cleanout boxes with minimum interior length and width dimensions of four feet, on each side of the roadway outside and adjacent to the right-of-way. Pressurized irrigation crossings shall be of one of the pipe types shown below, or shall be placed in a casing to promote future removal for maintenance without disruption of the roadway. Casings shall meet the requirements of ISPWC Section 308 and ISPWC SD-307 except that the annular space between the casing and carrier pipe shall not be filled and a water-tight seal shall be placed between or around the casing and carrier pipe at each end. End seals shall be closed cell polyurethane or synthetic rubber boots with stainless steel bands. Casings shall extend to the right-of-way line. All crossings shall be as close to 90 degrees to the roadway centerline as practical (zero skew) and in no case shall the skew be greater than 20 degrees from perpendicular.

3066.030. Allowable pipe types for pressurized irrigation crossings are as follows:

- A. AWWA<sup>1</sup> C900 Class 150 PVC<sup>2</sup> water pipe
- B. ASTM<sup>3</sup> D2241 SDR<sup>4</sup>17 Class 250 PVC<sup>2</sup> water pipe
- C. AWWA<sup>1</sup> C906 SDR<sup>4</sup>11 Class 160 HDPE<sup>5</sup> pipe
- D. Notes for 3066.030.A, B and C are as follows:

<sup>1</sup> American Water Works Association

<sup>2</sup> Polyvinyl Chloride

<sup>3</sup> American Society of Testing Materials

<sup>4</sup> Standard Dimension Ratio

<sup>5</sup> High Density Polyethylene

### 3070. Drainage

3070.010. All drainage features for the development shall be designed by an Idaho Registered Professional Engineer and approved by the District in conjunction with the roadway plans.

A. Hydrologic Procedures - The Rational Method shall be used for drainage areas up to 50 acres. For drainage areas between 50 and 200 acres, either the Rational Method or the SCS TR-55 Method shall be used. For drainage areas greater than 200 acres, the SCS TR-55 Method shall be used. When the Rational Method is used, the approach and equations included in this section shall be used. When the SCS TR-55 Method is used, the methodology included in Natural Resource Conservation Service

(formerly Soil Conservation Service) Technical Release 55 - Urban Hydrology for Small Watersheds shall be used.

B. Design Storm - The following design storm return periods shall be used with either the Rational Method or the SCS TR-55 Method:

<u>Facility Type</u>	<u>Return Period</u>
Conveyance System (Ditches, Pipes, Inlets, and Curb & Gutter)	25-Year
Secondary Conveyance Systems	100-Year
Detention Basins	25-Year
Retention Basins / Subsurface Disposal Systems	100-Year

C. Time of Concentration - Time of Concentration ( $T_c$ ) shall be determined based on the most hydraulically remote point of the contributing drainage area to the point of analysis. Time of Concentration shall be the sum of the applicable travel times for saturation, sheet flow, shallow concentrated flow, pipe flow and open channel flow. The components of the time of concentration shall be determined using the following equations:

1. Saturation Time - The time of saturation ( $T_s$ ) shall be 10 minutes.

2. Sheet Flow Travel Time - The length of sheet flow ( $T_{\text{sheet}}$ ) shall be less than 300 feet. Beyond 300 feet, the flow should be treated as shallow concentrated flow, unless a defined open channel (i.e. ditch, gutter, pipe) exists, in which case Manning's equation for open channel formula shall be used.

$$T_{\text{sheet}} = \frac{0.9333 (nL)^{0.6}}{(I)^{0.4} s^{0.3}}$$

Where:

$T_{\text{sheet}}$  = Sheet Flow Travel Time (minutes)

$n$  = Manning's Roughness Coefficient for sheet flow (See Table)

$L$  = flow length (feet)

$I$  = Rainfall Intensity (inches/hour; use 1"/hour for calculations)

$s$  = slope (feet/foot)

Manning's Roughness Coefficients for Sheet Flow

Surface Description	n
Smooth Surfaces (concrete, asphalt, gravel, or bare soil)	0.011
Fallow (no residue)	0.05
Cultivated Soils:	
Residue Cover ≤ 20%	0.06
Residue Cover > 20%	0.17
Grass	
Short Grass Prairie	0.15
Dense Grass	0.24
Bermuda Grass	0.41
Range (natural)	0.13
Woods:	
Light Underbrush	0.40
Dense Underbrush	0.80

3. Shallow Concentrated Flow Travel Time - The travel time of shallow concentrated flow ( $T_{con}$ ) shall be determined using the following equation:

$$T_{con} = \frac{L}{60 k s^{0.5}}$$

Where:

$T_{con}$  = Shallow Concentrated Flow Travel Time (minutes)

k= Intercept Coefficient for Overland Flow (See Table)

L= flow length (feet)

s= slope (feet/foot)

Intercept Coefficients for Overland Flow

Surface Description	k (ft/ft)
Short Grass Pasture	7.0
Cultivated Straight row	9.0
Grassed Waterway	15.0
Unpaved	16.1
Paved Area	20.3

4. Pipe Flow Travel Time ( $T_{pipe}$ ) - Pipe flow velocity shall be determined using Manning's Equation, and the corresponding travel based on the length divided by the velocity. Alternatively, pipe flow velocity may be calculated using a velocity of 2 fps.

5. Open Channel Flow Travel Time ( $T_{channel}$ ) - Open channel flow velocity shall be determined using the Manning's equation, and the corresponding travel time based on the length divided by velocity. Alternatively, open channel flow may be calculated using a velocity of 1.5 fps.



D. Peak Runoff - The peak runoff rate ( $Q_p$ ) when determined by the Rational Method shall use the following equation and coefficients:

$$Q_p = C I A$$

Where:

$Q_p$  = Peak Runoff Rate (cubic feet per second)

C = Runoff Coefficient (See Table)

I = Rainfall Intensity (inches per hour)

A = Tributary Area (Acres)

The Runoff Coefficient shall be selected from the following table for the appropriate surface type. If more than one surface type is present within the drainage area, a composite Runoff Coefficient shall be determined based on the individual area and coefficient of each surface type.

Rational Method Runoff Coefficients	
Surface Description	c
Pavement	
Asphalt and Concrete	0.95
Brick	0.85
Roofs	0.95
Lawns, Sandy Soil	
Flat (<2%)	0.10
Average (2% to 7%)	0.15
Steep (>7%)	0.20
Lawns, Heavy Soil	
Flat (<2%)	0.17
Average (2% to 7%)	0.22
Steep (>7%)	0.35

Table adapted from ACSE Design and Construction of Urban Stormwater Management Systems.

The intensity shall be determined from the Idaho Transportation Department's Intensity-Duration-Frequency Curves for Zone A based on the time of concentration (duration) and frequency (return period).

E. Runoff Volume - Runoff volume (V) shall be determined using the triangular SCS unit hydrograph, based on the following equation:

$$V = \frac{1}{2} Q_p (2.67 * T_c * 60)$$

Where:

V = Volume (cubic feet)

Q<sub>p</sub> = Peak Runoff Rate (cubic feet per second)

T<sub>c</sub> = Time of Concentration (minutes).

The runoff volume shall be analyzed using the calculated T<sub>c</sub> and 60 minutes (and corresponding Q<sub>p</sub> values) and whichever produces the greater volume shall be used for design.

3070.020. Culverts: Culverts used for drainage purposes shall be in conformance with the following table:

Location	Diameter	Material		
		Steel <sup>1,2</sup>	Aluminum	Concrete
Under Public Roads	18" to 36"	0.079" thick min. <sup>1</sup> (14 gage)	0.075" thick min. (14 gage)	Class V
Not Under Public Roads	12" to 36"	0.064" thick min. <sup>2</sup> (16 gage)	0.060" thick min. (16 gage)	

<sup>1</sup> Steel culverts under Public Roads shall be aluminized, polymer coated or trench coated.

<sup>2</sup> Steel culverts not under Public Roads shall be aluminized, polymer coated, trench coated or zinc (galvanized) coated.

Other classes of concrete pipe may be used if proper cover is provided in accordance with manufacturer's recommendations and approval is obtained from the District.

All culvert installations shall include aprons on both ends of the culvert.

Corrugated metal pipe shall have 2-2/3" x 1/2" corrugations. Culverts or multiplate installations larger than 36 inches in diameter or any culvert under fills of 20-feet or greater in height shall have an HS-25 load rating.

Culverts shall be of a size necessary to accommodate the peak design storm flow. Culverts under public roads shall not be smaller than 18" in diameter. Culverts over 70 feet long shall not be smaller than 24" in diameter. Other culverts shall not be smaller than 12" in diameter. Culverts under private roads or driveways shall have a minimum diameter of 12 inches and a length sufficient to accommodate the driveway width plus 4:1 slopes (on each end) to the ditch bottom and shall be extended a minimum of 6 feet from the edge of the approach to the culvert end.

A 12-inch minimum cover from the bottom of pavement (top of base) is required on all pipe culverts, except for residential driveways, which may have 6-inch minimum cover.

3070.030. Drainage Easements: All necessary drainage easements for accommodating drainage structures and maintenance access shall be shown and recorded on the plat prior to approval. Drainage easements necessary for draining storm water across private property shall be shown on the plat and recorded with the District by a letter from the Applicant describing the areas containing the easements such as lot lines, blocks, etc.

3070.040. Borrow Ditches: Roadway or borrow ditches shall be designed to convey stormwater runoff and shall not be designed for stormwater disposal through infiltration. Interception of natural drainage ditches and subsequent use of the roadway ditch to convey the natural drainage will not be acceptable.

Roadway ditches shall be designed to convey the peak flow with a minimum of 0.5-feet of freeboard from the water surface to the edge of roadway shoulder (top of foreslope).

Where flow velocities in the ditches exceed two (2) fps, scour protection measures shall be provided in the ditch. Use of a six (6) inch layer of three (3) inch drain rock (per ISPMC) may be used to line ditches with velocities up to five (5) fps for scour protection. For velocities greater than five (5) fps, the Applicant's Engineer shall design scour protection measures suitable for the velocities and submit to the District for approval, or design a closed (piped) system for stormwater conveyance in these locations.

Stormwater runoff in excess of pre-development flow from private property in subdivisions and new developments shall not be discharged to the right-of-way or be conveyed by the roadway ditch.

3070.050. Subsurface Stormwater Disposal: Subsurface stormwater disposal methods (including "dry wells" and seepage beds) may only be used in special circumstances where approved by the District. The District's approval shall be based on an analysis, prepared by the Applicant's Engineer, of all other possibilities for disposal of storm water and determination that there is no feasible alternate to subsurface disposal. Subsurface infiltration facilities shall not be permitted where the native soil at the infiltration surface has an infiltration rate less than 0.25 inches per hour. Should subsurface stormwater disposal be allowed, it will be designed and sealed by a Registered Professional Engineer.

A. The following minimum criteria shall apply to the design of subsurface infiltration facilities where approved by the District:

1. Subsurface stormwater disposal systems shall be designed for a 100-year storm event and the tributary areas time of concentration or one (1) hour, whichever provides the greater runoff volume.
2. One (1) foot of freeboard shall be provided from the design water surface elevation in the subsurface facility to top of the bed.
3. Design infiltration rates shall be based on percolation tests conducted by the Applicant's Engineer at the location of the proposed subsurface drainage facility, but in no case shall a rate exceeding eight (8) inches/hour be used.
4. The subsurface drainage facility shall be designed to drain completely within 24-hours.
5. The bottom of any subsurface disposal system shall be located a minimum of three (3) feet above seasonal high groundwater level or bedrock.
6. Subsurface disposal systems shall be backfilled with 1½ - inch washed drain rock (void ratio 35%).
7. Perforated distribution piping shall be a minimum of 12" diameter and meet the requirements of ISPWC Section 601.
8. Filter fabric shall be placed on the sides and top of the drain rock and all fabric joints shall be overlapped a minimum of 1-foot.
9. If the native material directly below the drain rock is not free draining sand or gravel, a layer of filter sand meeting the requirements of ISPWC Section 801 shall be placed to a depth of 3-feet below the drain rock.
10. If the native material directly below the filter sand or drain rock does not have an infiltration rate equal to or exceeding the design infiltration rate, 6" uncrushed aggregate, 3" uncrushed aggregate, sand, or filter sand meeting the requirements of ISPWC Section 801 shall be extended to a depth where material meeting the design infiltration rate is encountered.

11. A sediment and grease trap shall precede subsurface disposal systems. Sediment and grease trap shall be an API type Oil/Water separator with a minimum volume of 1000 gallons. The maximum throat velocity shall be 1 fps.

12. A minimum of two (2) monitoring wells extending to four (4) feet below the infiltration basin floor shall be provided for each seepage bed, one within the bed and one within 10' of the seepage bed perimeter. The monitoring wells shall conform to the monitoring well requirements in Section 3070.090.

3070.060. Curb and Gutter: Curb and gutter roadway sections shall be designed to convey the design storm so that no more than  $\frac{1}{2}$  of the outside travel lane is covered with water during the peak storm design flow. Inlets shall be designed to intercept all gutter flow without bypassing flow or the downstream drainage facilities and curb and gutter shall be designed to accommodate the by-passed flow. When a curb and gutter roadway section is proposed, a complete storm sewer system must be designed and constructed under the review of a Registered Professional Engineer. The District reserves the right to require curb and gutter at locations where, in its sole discretion, such is necessary to adequately control storm runoff or to address maintenance concerns.

3070.070. Storm Sewer Systems: Storm sewer system pipes shall be designed to convey the peak flow without surcharging. Manholes shall be placed at all junctions, changes in grade or alignment, and at no more than 400-foot spacing.

All piping and appurtenances for storm sewers shall conform to the ISPWC for materials, installation and testing.

3070.080. Secondary Conveyance Systems: Secondary Conveyance Systems are roadways, open channels, overland flow, or other flow routes that convey flows in excess of the conveyance systems capacity. The Applicant's Engineer shall design the secondary conveyance systems to convey the 100-year storm while remaining within the right-of-way or drainage easements.

Any disruption of the normal drainage pattern of the area to be developed must have special consideration to facilitate future drainage of the area. Continuation of an area's natural drainage pattern shall be accommodated in the design.

3070.090. Detention/Retention Facilities: Stormwater detention/retention facilities to store runoff shall be provided at a location outside the required minimum width of right-of-way for type of roadway

as provided in Section 3030. Storage/infiltration of water in the roadside ditches is not allowed. Runoff volumes calculated for use in determining storage requirements shall be based on a storm duration of one (1) hour (or the time of concentration, whichever produces the greater volume) when using the rational method, or 24 hours when using the SCS method. Release rates of water from detention basins to downstream facilities shall be limited to the pre-development discharge rates. The facilities shall be located within a drainage easement. The drainage easement shall provide for the sole purpose of locating, establishing, constructing, and maintaining over and across the described real property the stormwater detention/retention facilities together with such rights of entry on, passage over, and storage of material and equipment on such stormwater detention/retention facilities as may be necessary or useful for the reconstruction, maintenance, cleaning out and repair of such stormwater detention/retention facilities. Ownership and regular maintenance responsibility of the property upon which the stormwater detention/retention facilities and drainage easement are located shall be in accordance with Section 3070.100.

A. The following criteria shall apply to the design of all detention/retention facilities:

1. One (1) foot of freeboard shall be provided above the design water surface elevation.
2. Sideslopes shall be no steeper than 4 horizontal to 1 vertical (4:1).
3. Sideslopes shall be stabilized with irrigated turf grass or dryland grass.
4. Detention and surface infiltration facilities shall be designed to drain the design volume within 24-hours.
5. Scour protection shall be provided at the inlet and outlet pipes and may consist of concrete aprons, or appropriately sized rip-rap/cobbles with filter fabric.
6. Emergency overflows shall be provided for all detention/retention facilities and shall be concrete or rip-rap with filter fabric.

B. The following criteria shall apply to the design of detention facilities:

1. Detention facilities shall be designed using a 25-year storm event and the tributary areas time of concentration or one (1) hour, whichever produces the greater volume.

2. The floor of any detention facility shall be located a minimum of three (3) feet above the seasonal high groundwater level.

3. The detention basin floor shall be sloped at 1 percent to the low flow outlet/orifice.

C. The following criteria shall apply to the design of surface infiltration (retention) facilities:

1. Surface infiltration facilities shall not be permitted where the native soil at the infiltration surface has an infiltration rate less than 0.25 inches per hour.

2. Surface infiltration facilities shall be designed using a 100-year storm event and the tributary areas time of concentration or one (1) hour, whichever produces the greater volume. The storage volume shall be 115% of the design storm runoff volume.

3. Design infiltration rates shall be based on percolation tests conducted by the Applicant's Engineer at the location of the proposed infiltration facility.

4. The floor of any surface infiltration facility shall be located a minimum of three (3) feet above seasonal high groundwater level or bedrock.

5. The floor of surface infiltration facilities shall have a minimum depth of three (3) feet of filter sand meeting the requirements of ISPWC Section 801, unless there is four (4) feet or more of clearance to high groundwater, then the depth of filter sand may be reduced to eighteen (18) inches.

6. If the native material directly below the filter sand does not have an infiltration rate equal to or exceeding the design infiltration rate, 6" uncrushed aggregate, 3" uncrushed aggregate, sand, or filter sand meeting the requirements of ISPWC Section 801 shall be extended to a depth where material meeting the design infiltration rate is encountered.

7. A monitoring well extending a minimum of 4' below the infiltration basin floor shall be provided within 10' of the basin perimeter, when the high groundwater level is within 4 feet of the proposed bottom of the pond or when required by the District Engineer. The monitoring well shall be in accordance with the ISPWC, including ISPWC SD-627.

3070.100. Maintenance: Maintenance of storm drainage facilities located outside the public right-of-way shall be the responsibility of the property owner or homeowner's association. Maintenance shall include non-routine, or "heavy" maintenance, and routine or "light" maintenance. Non-routine ("heavy") maintenance consists of rehabilitative activities necessary to correct deficiencies in the operation of a facility that are not normally performed on a regular basis. Routine ("light") maintenance consists of preventative activities generally performed on a regular basis to maintain the operation and aesthetics of a facility. A note shall be included on the face of the final plat stating "Storm drainage facilities outside the public right-of-way shall be the responsibility of the Homeowner's Association or property owner on which the storm drainage facility is constructed if no homeowner's association exists. Responsibility for storm drainage facilities includes all maintenance, both routine and non-routine.

### 3080. Structures

3080.010. Bridges and Structures: Bridges and structures shall be designed in accordance with the AASHTO Standard Specifications for Highway Bridges, latest edition.

The design vehicle for bridges shall be a minimum HS-25. The HS-20 design load may be used on local roads and low volume local roads. If Load and Resistance Factor Design (LRFD) method is used, the loading shall be HL-93.

Bridge structure width shall extend from right-of-way to right-of-way, as measured from the outside of structure. The vertical clearance above waterways shall be 2 feet above the 50-year flood and 17 feet over other roadway surfaces.

No utility facilities shall be installed on or above the top of bridge or culvert structures. Utilities may only be attached to the side of or underneath of bridge or culvert structures with special permission from the District.

Only structures of steel, or steel and concrete, shall be used without prior approval by the District.

3080.020. Retaining walls shall be either reinforced concrete, bin walls, reinforced earth, or concrete crib walls. All retaining wall structures shall be designed and sealed by a Registered Professional Engineer and shall be approved by the applicable District prior to their construction.



3080.030 A foundation investigation and recommendation shall be prepared, for all bridges and retaining walls, by a registered professional engineer and submitted to the District with the plans and specifications.

### 3090. Signing

3090.010. All permanent signing shall be shown on the design plans and shall be in conformance with the Manual on Uniform Traffic Control Devices (MUTCD), latest edition adopted by the State of Idaho, and shall conform to Section 4000 of these specifications.

- A. All sign sheeting shall be high intensity prismatic meeting the retroreflectivity requirements of the MUTCD. All sign blanks shall be aluminum.
- B. Stop signs shall be 36-inch.
- C. Speed limit signs shall be 24-inch by 30-inch.
- D. Road name signs shall have 9" high blanks with 6" lettering height and 3" height road type designation (i.e., DR, LN, ST, etc.). Private road name signs and installation shall meet the requirements for public road name signs as specified herein, except with white lettering on a blue background.

3090.020. All signs shall be installed by the Applicant prior to the acceptance of the project by the District.

3090.030. All construction signing shall conform to the MUTCD, latest edition.

3090.040. No stop signs shall be installed at intersections internal to subdivisions, unless the design engineer determines a full stop is always required at the intersection, per MUTCD Section 2B.05. If such a determination is made, it shall be so noted on the plans.

3090.050. The design speed of all subdivision roads shall be shown on the plans, and speed limit signs shall match the design speed.

3090.060. When streets in a subdivision have the same design speed, a speed limit sign shall be posted at all entrances to the subdivision. Under each speed limit sign shall be an additional sign placard reading "ALL SUBDIVISION STREETS", with black letters on white background. There shall be no additional speed limit signs within the subdivision.

### 3100. Guardrail

3100.010. Guardrail may be necessary in certain areas depending upon the warrants for protecting the traveling public. The developer shall provide the applicable warrants for determining if guardrail is needed, in accordance with the AASHTO Roadside Design Guide as supplemented by Section 570 of the ITD Design Manual. The District reserves the right to determine the need for guardrail under each separate circumstance.

3100.020. The type of guardrail to be installed shall be determined by the District as the location dictates.

### 3110. Striping or Pavement Markings

3110.010. All Collector and Arterial roads shall have centerline, lane separation and fog line pavement markings. The District reserves the right to require pavement markings on local roads. All permanent striping or pavement markings shall be shown on the design plans and shall be in conformance with the Manual on Uniform Traffic Control Devices (MUTCD), Latest edition adopted by the State of Idaho.

### 3120. Traffic Impact Studies

3120.010. The Highway District must consider the impacts of a proposed development on nearby land uses and transportation facilities. A traffic impact study (TIS) will be required if the proposed development exceeds the threshold traffic volumes identified in the following table.

Traffic Impact Study Thresholds*		
	Suburban	Rural
Peak Hour Trips	50	50
Average Annual Daily Trips	500	500

\* Rural developments are defined as located in the jurisdiction of the County and not within a Municipal Area of Impact, Suburban sites are in the County and within a Municipal Area of Impact or 1 mile of City Limits, and urban sites have been or will be annexed at the time of application. No provision for trip capture is included during the threshold phase. If a project has special circumstances associated with it, the District may require an impact study even if the aforementioned criteria are not met. The District may administratively waive the requirement if, in the District's opinion, there are no traffic issues to resolve.

In addition to the threshold limits identified above, the District may require a TIS for other types of land use actions that may be appropriate for evaluation, including but not limited to:

- Access Permits
- Conditional Use Permits
- Rezone Requests
- Preliminary Plat
- Final Plat
- Formation of special purpose districts
- Amendments to comprehensive plans
- Annexations

If a TIS is required, the District shall review and accept the findings of the preliminary TIS prior to land use approval by the County. Subsequent to land use approval by the County, and prior to approval of construction plans by the County and District, the District shall review and accept the findings of the final TIS prepared by the applicant.

3120.020. Prior to initiation of a TIS, the developer shall meet with the District to establish study parameters and discuss the requirements of the study. The purpose of this meeting will be to identify and approve:

- Scope of TIS
- Methodology & assumptions
- Area of influence
- Other agencies who will be involved in the review process
- Review & response time limits
- Multi-modal considerations
- Cumulative development considerations
- Deliverables (hard copies & electronic files)
- Other items identified by the District
- Report content

A TIS shall be conducted in conformance with accepted industry standards and shall be sealed by a registered Idaho Professional Engineer. The Institute of Transportation Engineers' recommended practice, Traffic Access and Impact Studies for Site Development, or other industry-accepted guidelines, may be used as guidance in conducting traffic impact studies. The boundary of the study area and other project-specific study parameter shall be identified jointly by the professional conducting the study and the District. Projects estimated to generate more than 5000 vehicle trips per day require a major traffic impact study. The additional scope of this study shall be determined by the District Engineer.

The minimum design Level of Service (LOS) shall be "C" for rural roadways and intersections, and "D" for suburban roadways and intersections.

Traffic generated by each type of Land Use will be determined using the Institute of Transportation Engineers (ITE) publication, "Trip Generation". The developer shall submit the traffic impact study to the District with the preliminary plat application, unless a different submittal date is determined by the District Engineer. If the combined volumes of a multi-phase development meet TIS thresholds, then a study shall be completed for all phases and submitted with the first phase.

The traffic study area shall include all roadways and intersections directly joining the proposed development and adjacent collector/arterial intersection within ½ mile of the development boundary, the farthest intersection where the development increases the traffic volume 5% over the background traffic, or the area of significant traffic influence resulting from the proposed development as identified by the District Engineer. Each traffic study shall consider the following:

A. The continuation of local, collector and arterial roads. The study shall cover roadway from the development boundaries to an intersection with existing or proposed local, collector or arterial road.

B. Existing land use, roadways, traffic patterns, roadway volume, and turning movement volume within the study area. The study must consider local roads average daily traffic and traffic during at least the representative peak hour at all intersections and all collector and arterial roadways.

C. Existing levels of service within the study area. This will be determined using the latest edition of the HIGHWAY CAPACITY MANUAL (HCM) and existing traffic control devices.

D. Planned road improvements and major land developments within the study area.

E. Forecasts of future traffic patterns, roadway capacity and turning movements in the study area without consideration of the proposed development. This establishes "background traffic." Traffic patterns and roadway capacity shall be forecast for the build-out year and the build-out plus 5 years. Contact the District for known adjacent developments to be included in study. Turning movements shall be forecasted for the "build-out" year. Traffic forecasts by the Community Planning Association (COMPASS) can be used, where available. Those forecasts shall be checked for credibility and reconciled with independent forecasts. The study shall include a reasonable rate of regional traffic growth. It shall also estimate the additional traffic likely to be generated by vacant land development in, and surrounding the area. The basis of development projections shall be current zoning prepared with advice from District staff.

F. Trip generation and distribution expected for proposed development. This is “site traffic”.

G. Forecast of future traffic patterns, roadway capacity volumes, and turning movements in the study area after the proposed development is fully built and occupied. These numbers are “site traffic” plus “background traffic.”

H. Future levels of service in the study area, with “site traffic” plus “background traffic”. Forecast intersection levels of service at the development build-out year and at build-out plus 5 years. Identify all roadway/intersection configurations and traffic control devices necessary to maintain the minimum design LOS.

I. For commercial or industrial development recommended roadway/pathway improvements and mitigation measures. This includes location and design of driveways, intersections and traffic control devices. Include potentially viable non-roadway measures, such as ridesharing, transit, bicycling incentives, and staggered or flexible work hours.

J. For any development within one (1) mile of an existing or proposed school, analyze all school crossings, safe routes to school, bikeways and all collectors and arterials to and from school.

K. Evaluate the effects of the traffic from the proposed development on existing local roads and the effects of traffic from existing local streets on the proposed development.

L. Evaluate the need for right and left turn-lanes at all intersections. At non-signalized intersections or approaches, left-turn lane and right-turn lane warrants shall be based on NCHRP Report 457 Evaluating Intersection Improvements: An Engineering Study Guide.

M. Average Daily Traffic (ADT). Estimate ADT for all roadway segments in the proposed development likely to have volumes exceeding 1,000 vehicles per day. These estimates will help select the proper road cross-section for each segment. Each proposed collector road should be broken into several segments. Base this evaluation on key intersections in the proposed street network. This will determine the length of collector-width road required, and the extent of collector traffic levels into the development.

Compare projected volumes on streets that provide access to the development with the applicable threshold volumes. Use the District design policy and adopted planning thresholds as references.

Any development located on or near any mid section shall include provisions for ¼ mile or ½ mile Collector Road. Traffic study shall optimize location and connectivity of ¼ collector roads through developments.

N. Trip Generation Rates. Trip generation rates used in the impact study shall be supported by appropriate data presented in the latest edition of the ITE publication, “Trip Generation”. Other studies recognized by the traffic engineering profession may be used. Those conducting impact studies also should consult ITE’s “Traffic Access and Impact Studies for Site Development” (A Recommended Practice, 1991), and the Federal Highway Administration’s, “Site Impact Traffic Evaluation (S.I.T.E.) Handbook” (Report No. FHWA/PL/85/004, January 1985), or current revisions and updates of those publications.

O. Preparation of Traffic Impact Study. A qualified Professional Engineer shall prepare and seal the traffic impact study.

### **3130. Transportation Plan and Connectivity**

Public roads shall be designed and built to the specifications in this manual and in conformance with the following requirements:

3130.010. District Transportation Plan: All roadways in a subdivision shall conform to the most recent adopted version of the master transportation plan of the District and any adopted neighborhood roadway plans. Where a subdivision abuts or contains an existing or proposed arterial street (including those in the State Highway System) or railroad, the District may require marginal access streets, reverse frontage with screen planting contained in a non-access reservation along with rear property line, frontage or backage roads, stub streets, and provisions to terminate temporary access when alternate access is provided, or such other treatment as may be necessary for the safety and capacity of the arterial roadway, adequate protection of residential properties and to afford separation of through and local traffic

3130.020. Stub Street: Where adjoining areas are not subdivided, the arrangement of roads in new subdivisions shall be such that said roads extend to the boundary line of the tract to make provision for the future extension of said roads into adjacent property areas in accordance with the District’s master street plan or the District Engineer’s requirement(s). A reserve strip may be required and held in public ownership between the tract boundary and the stub extension. Proper provision for a temporary or permanent turnaround at the end of the stub connection shall be made. Any such turnaround shall be

subject to acceptance by the Fire Jurisdiction. A sign shall be installed at the subdivision boundary stating that the roadway will be extended in the future. Temporary turnarounds shall meet ACCHD-104 Standard Cul-De-Sac Layout, except that plant mix pavement is not required beyond the standard roadway section when 2 or fewer lots are served off the stub street.

3130.030. Frontage & Backage Roads: Where property abuts or is located within ¼ mile of a Class I or Class II Regional Mobility Corridor, a parallel collector (frontage/backage road) shall be included in the development and stubbed to the adjacent properties, unless otherwise provided for and approved by the District as shown on the adopted District mobility corridor map or functional classification map.

### 3200. Vision and Signage Clearance

3200.040. Landscape plantings placed within clear vision triangle areas, as hereafter reiterated, shall be selected according to their ability to be easily maintained in compliance with the requirements of such areas.

3200.050. No plantings shall be placed within five (5) feet of a traffic sign associated with a subdivision or allowed to grow within two feet (2') of the same. No plantings shall be placed within three feet (3') of a fire hydrant.

3200.060. Any vegetation, fence or other obstruction which creates a traffic hazard, interferes with pedestrian traffic, obscures traffic control signs, or creates a vision sight problem, may be deemed a nuisance and be subject to modification, removal or otherwise according to the provisions of these Standards and Idaho Code.

3200.070. Trees in the vision clearance area shall be trimmed to at least ten feet (10') above the curb line or edge of pavement to provide clear visibility up to that height. Shrubs and site obscuring fences or walls in vision clearance areas shall not exceed three feet (3') in height above the curb line or edge of pavement or as required to maintain a clear line of site. Landscaping amenities such as boulders and subdivision signs shall also comply with the clear vision clearance requirements as well as the clear zone requirements of Section 3060.040.

### 3300. Roundabouts

3300.010. Roundabouts shall be designed and constructed in accordance with the ACCHD Roundabout Guide and these standards.

## SECTION 4000

### CONSTRUCTION SPECIFICATIONS

#### STANDARD CONSTRUCTION SPECIFICATIONS

The Association of Canyon County Highway Districts (ACCHD) has adopted the Idaho Standards for Public Works Construction (ISPMC), latest edition, as their standard construction specifications with the modifications listed in the following specifications. In the event of a conflict between the ISPMC and the ACCHD specifications the ACCHD specifications shall govern.

#### MODIFICATIONS

The sections which follow replace, modify or add to sections of like numbers in the ISPMC.

#### 200 EARTHWORK

- 201.3.1.B.5      Removal and disposal; delete the second sentence and replace with the following:
- Complete stripping 4 inches deep or as approved by the District.
- 201.3.1.B.8      Removal and disposal; add the following item:
8. Clear and grub, in accordance with this section, all areas that will be utilized for construction of any permanent building, dwelling, roadway, driveway, sidewalk or any other feature that may be damaged by settlement.
- 202.1.4.B          Submittals; add the following subparagraph:
- B. Submit blasting plan and copies of all permits to the District prior to commencing blasting operations.
- 202.3.3.C.8       Controlled blasting provisions; add the following item:
8. In solid rock excavation, the rock shall be excavated a minimum of 6 inches below the finished subgrade elevation and backfilled with uncrushed aggregate in accordance with Section 801 and compacted to Class A Compaction.
- 202.3.5.H          Subgrade; delete subparagraph H and replace with the following:
- H. Obtain District approval of the subgrade, including borrow ditches, fill and cut slopes, prior to placing subbase. The District shall have 24 hours notice. Observation by the District shall be during normal District working hours.
- 202.3.7.C          Excavation of Unsuitable Material; delete the second sentence and replace with the following:
- The repair is to consist of the excavation and disposal of the existing soil and replacement with uncrushed aggregate base in accordance with section 801 and includes Class A compaction.



- 202.3.8.A.1 General; add the following sentence:
- Embankment construction also consists of any construction fill upon which a permanent building, roadway or feature intended to be delivered to the District for continuous operation and maintenance may be built.
- 202.3.8.A.8 General; add the following item:
8. Embankment construction must conform to the recommendations of the geotechnical engineer for allowable lift thickness and required compaction.
- 202.3.8.B.1 Construction Requirements; add the following sentence:
- If the material used for constructing embankments meets the requirements of S2 and S3 soil in accordance with section 203, the material will not be required to meet the S.E. requirement.
- 202.3.8.B.3 Embankment Construction Requirements; add the following to the end of the first sentence:
- ... at the end of each shift or day.
- 202.3.9.B Classes of Compaction and Density Requirements; delete the sentence and replace with the following:
- Class A Compaction is specified unless otherwise approved by the District.
- 202.3.12.C Erosion Control and Fencing; add the following subparagraph:
- C. Provide a copy of the erosion control plan and Notice of Intent, submitted to the EPA, to the District prior to starting construction.
- 204.3.3.B.1 Construction Requirements; delete item 1 and replace with the following:
1. Place no structure until the foundation has been approved by the District. The District shall have 24 hours notice. Observation by the District shall be during normal District working hours.
- 205.1.4.B Submittals; add the following subparagraph:
- B. After approval by the Engineer, the Engineer shall submit a copy of the approved dewatering plan, including the required discharge permits, to the District prior to commencing dewatering activities.
- 206.2.7.D.3 Concrete Stabilized Riprap; delete item 3 and replace with the following:
3. To be used only when pre-approved by the Engineer and the District.

206.3.1.C.2 Class of Seeding; delete item 2 and replace with the following:

2. At a minimum, Class B Seeding shall be used with the following seed mixture and fertilizer, or as approved by the District.

<u>SPECIES</u>	<u>Lbs. Bulk Seed Per Acre</u>
"Sodar" Streambank W.G. (ELLAL)	6
Intermediate W.G. (THIN6)	6
Hard Fescue (FETR3)	2
Bottlebrush Squirreltail (SIHY)	8
Lodak Alfalfa (MESAL)	1
Silky Lupine (LUSE)	2
Nitrogen	based on available moisture
Phosphorous	1.2

206.3.3.A.3 Riprap; add the following to the end of the first sentence:

... by the District. District shall have 24 hours notice. Observation by the District shall be made during normal District working hours.

207.1.1.A Stormwater Filters; delete items 2, 4 and 5 (these items are not approved for use).

207.1.1.B Infiltration Facilities; modify item 1 as follows:

1. Infiltration Trench (allowed only in urban street sections).

207.1.1.B Infiltration Facilities; delete item 2 (this item is not approved for use).

207.1.1.C Detention Facilities; add the following to items 1, 2, 3 and 4:

... shall be pre-approved by the Engineer and the District before use.

207.1.1.C Detention Facilities; delete item 5 (this item is not approved for use).

207.1.1.D Other Structural Controls; delete item 2 (this item is not approved for use).

### 300 TRENCHING

301.1.4.D Submittals; add the following subparagraph:

D. Submit copy of approved dewatering plan, including any required discharge permits, to the District prior to commencing dewatering activities.

301.3.14.A Tunneling; delete the last sentence of subparagraph A and replace with the following:

Fill annular space with flowable fill in accordance with Section 703.

301.3.16.B Watering for Dust Control; delete subparagraph B and replace with the following:

B. Correct deficient dust control within 4 hours after notification by the Engineer or District. If not corrected within 4 hours, the District may correct the deficiency at the Contractor's / Developer's expense.

305.2.3 Type II Bedding; delete this paragraph (not approved for use).

- 305.3.11.A.3 Bedding System Application; delete items 3 and 4, and replace with the following:
3. Pressure Sewer, Pressure Water, Pressure Irrigation: Use Class B-2 Bedding System.
- 306.3.3.B.4 Compaction Requirements; delete item 4 and replace with the following:
4. Method: Use A-1 or compaction technique approved by the Engineer. If A-1 is not used, the reason for and description of the alternate technique used shall be documented on the certified test results and on the post-construction documentation.
- 306.3.3.B.5 Compaction Requirements; add item 5 as follows:
5. Too Granular to Test: If material is too granular to test, the Engineer shall specify a compaction technique to ensure compaction requirements are met. This shall be documented per item 4 above.
- 306.3.3.D Type A-2 Compaction; delete this subparagraph (not approved for use).
- 306.3.3.E Type A-3 Compaction; delete this subparagraph (not approved for use).
- 306.3.7 Minimum Testing Frequency; add paragraph 3.7 - MINIMUM TESTING FREQUENCY as follows:
- A. A minimum of one (1) compaction test per backfill layer is required for any trench backfill including "Bell Holes".
- B. For all other trench backfill, compaction testing must be performed at the following frequency:
1. Two (2) tests, at different locations for every trench less than 500 feet in length, but not less than once per day.
  2. One (1) test per every 500 feet of additional trench and at locations where materials or construction procedures change, but not less than once per day.
  3. At every location for 1 and 2 above, obtain a test at ½ of the total trench depth and one (1) test at the top of the trench backfill (test set).
- 307.1.4.C Submittals; add the following subparagraph:
- C. Submit one copy of required documentation listed in paragraphs 307.1.4.A. and 307.1.4.B. to the District. Additionally, a utility permit must be obtained from the District prior to working in public right-of-way.
- 307.3.1 General Requirements; add the following to subparagraph B:
- All trenches and bell holes that extend into the asphalt pavement shall include roadway removal and Type "P" Surface Restoration to the adjacent lane line or centerline of the roadway.
- 307.3.10.F Full Width Pavement Surface Restoration; replace "Section 3.10.D" with "Section 3.12.C".
- 307.3.12.C.1 Incidental Surface Restoration; add the following to item 1:

Surface repair in gravel shoulder areas within three (3) feet of pavement shall meet the same aggregate base requirements as repairs in the pavement.

307.3.14 Minimum Testing Frequency; add Paragraph 3.14 - MINIMUM TESTING FREQUENCY as follows:

A. A minimum of one (1) compaction test of the base course and one (1) compaction test of the pavement for surface repairs less than 50 feet in length.

B. Compaction testing shall be performed on the base course at the following minimum frequencies:

1. Two (2) tests at different locations for every surface repair less than 500 feet in length but not less than once per day.

2. One (1) test per every 500 feet of additional surface repair and at locations where materials or construction methods change, but not less than once per day.

C. Compaction testing shall be performed on the pavement surface at the following minimum frequencies;

1. Two (2) tests at different locations for every surface repair less than 300 feet in length, but not less than once per day.

2. One (1) test per every 300 feet of additional surface repair and at locations where materials or construction methods change, but not less than once per day.

309.1.4.F Submittals; add the following subparagraph:

F. Submit one (1) copy of required documentation listed in paragraphs 309.1.4.A. through 309.1.4.E to the District.

### 300 STANDARD DRAWINGS

Standard Drawing No. SD-301; delete Legend Note 1 and replace with the following:

1. Minimum cutback beyond the trench limits shall be one (1) foot for trenches parallel to the roadway. Minimum cutback beyond the trench limits shall be ten (10) feet for trenches crossing the roadway.

Standard Drawing No. SD-303; revise note 1 to read as follows:

1.  $\frac{3}{4}$ " minus crushed aggregate base (8") or thickness of existing gravel, whichever is greater.

Standard Drawing No. SD-303; delete Legend Note 9 and replace with the following:

9. Minimum cutback beyond the trench limits shall be one (1) foot for trenches parallel to the roadway. Minimum cutback beyond the trench limits shall be ten (10) feet for trenches crossing the roadway.

#### 400 WATER

Waterline construction may be required in development within a City's area of impact as identified in Section 3000. When waterlines are required within a City's area of impact, construction will conform to the requirements of the City, water district, or water company having jurisdiction, except the District's requirements for trench backfill and surface restoration shall apply if more stringent.

#### 500 SEWER

Sewer line construction may be required in development within a City's area of impact as identified in Section 3000. When sewer lines are required within a City's area of impact, construction will conform to the requirements of the City, sewer district, or sewer company having jurisdiction, except the District's requirements for trench backfill and surface restoration shall apply if more stringent.

#### 600 CULVERTS, STORM DRAIN, AND GRAVITY IRRIGATION

601.2.2 Culvert, Storm Drain and Gravity Irrigation Pipe and Fittings; delete subparagraphs C, F and I (these materials are not approved for use) and add the following before subparagraph A:

Pipe materials listed in subparagraph H, J, K, and L are approved for use as culverts, as modified in paragraph 3070.020.

601.3.5.A Testing; delete subparagraph A and replace with the following:

A. Perform testing in the presence of the Engineer. Clean pipe per ISPWC Section 501.3.4.F. Visually inspect pipe per ISPWC Section 501.3.4.B for alignment and grade, pipe distortions, leaks, infiltration, and that a full diameter of pipe is visible from one manhole to the next. Low pressure air, hydrostatic, and mandrel testing will be used to confirm compliance with subparagraphs B & C.

602.3.3.A Connection of Storm Drain or Gravity Irrigation Lines; delete item 1.

#### 600 STANDARD DRAWINGS

The following universal changes are herein incorporated by reference:

1. Grade Rings limited to 1'-0" maximum.
2. All catch basins shall have a 1'-0" sump beneath the lowest pipe.

#### 700 CONCRETE

703.3.5.C Curing and Protection; delete subparagraph C and replace with the following:

C. Protect concrete from freezing in accordance with ISPWC Section 705.3.8.E.

#### 700 STANDARD DRAWINGS

Modify SD-701 Note D, and SD-702 Note B to read as follows:

Continuous placement preferred, score intervals at 10-foot maximum spacing (or consistent with the sidewalk scoring). Score 4'-0" sidewalks at 8'-0" and score 5'-0" sidewalks at 10'-0". Scores shall be 1-inch deep by ¼-inch wide.

## 800 AGGREGATES AND ASPHALT

802.2.1.E Production requirements; delete item 2 and replace with the following:

2. The percentage of aggregate retained on the No. 4 sieve having at least one fractured face as determined by WAQTC TM-1 shall be 75 percent.

802.2.1.E Production requirements; add the following items:

4. Flat aggregate particles not to exceed 8% by weight and elongated aggregate particles not to exceed 8% by weight.

5. Fine Aggregate Angularity shall be a minimum of 40.

802.2.2.A Crushed Aggregate For Base Gradation; replace Table 1 with the following:

TABLE 1 CRUSHED AGGREGATE FOR BASE GRADATIONS				
PERCENTAGES BY WEIGHT PASSING SQUARE MESH SIEVES				
SIEVE SIZE	NOMINAL MAXIMUM SIZE			
	3/8 in	1/2 in	3/4 in	2 in
2-1/2 in				100
2 in				90-100
1 in			100	55-80*
3/4 in		100	90-100*	
1/2 in	100	90-100*		
3/8 in	85-100*			
No. 4	55-75	50-70	40-65*	30-60*
No. 8	40-60*	35-55*	30-50	35-50
No. 30	20-40	12-30		10-25
No. 200	3.0-9.0*	3.0-9.0*	3.0-9.0*	0-8.0*
Note: *denotes the sieves used for consistency checks				

802.2.3 Aggregate Control; delete subparagraph A, B and C and replace with the following:

A. Consistency checks for percent passing on the sieves noted in Table 1 for samples taken from belt, loading/hauling equipment or from stockpiles.

B. Variation from as crushed stockpile average on 2-1/2" thru 1/2" sieves shall not be greater than  $\pm 6\%$ . Variation from as crushed stockpile average on 3/8" thru No. 8 sieves shall not be greater than  $\pm 4\%$ . Variation from as crushed stockpile average on sieves smaller than the No. 8 shall not be greater than  $\pm 2.0\%$ .

C. Target gradation for as crushed stockpile average shall fall within the gradation limits indicated in Table 1 by, at least, the variations indicated in Item B.

802.3.1.A.2 Preparation for Placement; delete item 2 and replace with the following:

2. Obtain District approval of previously placed subbase prior to placing any base material. District shall have 24 hours notice. Observation by the District shall be made during normal District working hours.

- 802.3.1.A.3 Preparation for Placement; add the following item:
3. Prior to requesting observation of the finished subbase, red top stakes set to finished subbase elevation shall be in place on 100 foot stationing for tangents or 50 foot stationing for curves, at centerline and shoulders.
- 802.3.6 Aggregate Base Material In Stockpile; add the following subparagraph:
- G. Construct stockpiles in a manner that prevents aggregate segregation.
- 803.1.3 Submittals; delete subparagraphs B and C and replace with the following:
- B. Proposed gradation from hot plant stockpiles
- C. Test Results - washed gradation, sand equivalent, percent wear, etc.
- 803.1.5.B Delivery, Storage and Handling; delete subparagraph B and replace with the following:
- B. Stockpile, load, haul and place material in a manner which minimizes segregation and degradation.
- 803.2.1.E Production requirements; delete items 3 and 4 and replace with the following:
3. Flat aggregate particles not to exceed 8% by weight and elongated aggregate particles not to exceed 8% by weight.
4. Material may require screening and/or washing to eliminate excessive fines. No additional payment will be made for pre-screening or washing.
- 803.2.2.A Plant Mix Aggregate Gradation; replace Table 1 with the following:

TABLE 1 BLENDED AGGREGATE GRADATIONS FOR PLANT MIX PERCENTAGES BY WEIGHT PASSING SQUARE MESH SIEVES			
SIEVE SIZE	NOMINAL MAXIMUM SIZE		
	3/8 in	1/2 in	3/4 in
1 in			100
3/4 in		100	95-100*
1/2 in	100	95-100*	75-90
3/8 in	90-100*	75-90	60-85*
No. 4	60-85	50-75	40-65
No. 8	40-65*	35-60*	25-50*
No. 30	20-40*	15-35*	14-30*
No. 50	12-28	10-25	9-21
No. 200	5.0-10.0*	4.0-8.0*	3.0-8.0*
Note: *denotes the sieves used for consistency checks			

- 803.2.2.B Plant Mix Aggregate Gradation; delete the first sentence and replace with the following:
- Blend of Aggregate Sand Equivalent  $\geq 40$ .

- 803.2.2 Plant Mix Aggregate Gradation; add the following subparagraphs:
- D. The fine Aggregate Angularity shall be 45, minimum for SP3 or greater Plant Mix Pavement and shall be 40, minimum for SP2 Plant Mix Pavement.
- E. Aggregate gradation will be accepted on gradations from the cold feed samples for crushing projects and from samples obtained from behind the paver on paving projects.
- 803.2.3 Aggregate Control; delete subparagraphs A, B and C and replace with the following:
- A. Consistency checks for percent passing on the sieves noted in Table 1 for samples taken from belt, loading/hauling equipment or from stockpiles.
- B. Variation from as crushed stockpile average on 1" thru No. 8 sieves not to be greater than  $\pm 5\%$ . Variation from as crushed stockpile average on sieves smaller than No. 8 down to No. 50 sieve not to be greater than  $\pm 3\%$ . Variation from as crushed stockpile average on sieves smaller than the No. 50 not to be greater than  $\pm 2.0\%$ .
- C. Target gradation for as crushed stockpile average shall fall within the gradation limits indicated in Tables 1 by, at least, the variations indicated in Item B.
- 803.3.2.E Crushing; add the following to the end of subparagraph E.
- ... and degradation.
- 803.4.1.A Measurement and Payment; delete subparagraph A and replace with the following:
- A. Plant Mix Aggregate: By the ton based on truck tickets, adjusted to dry unit weight. Complete moisture testing at the rate of 1 per 1500 tons and utilize average moisture content to determine average dry unit weight for payment.
- 805.1.4.A Submittals; delete subparagraph A and replace with the following:
- A. Submit asphalt manufacturer's certification to the District prior to paving.
- 810.2.1.A Classification; delete subparagraph A (including Table 1) and replace with the following:
- A. Perform plant mix pavement design to conform to the following (HVEEM) requirements and target these values throughout construction.

Table 1

Pavement	Nominal Maximum Size	Design Air Voids	VMA (min.)	Minimum Stability	Dust/AC	Manufactured Sand/Natural Sand (min.)	Min. Immersion Compression %
Class I	3/4" 1/2"	4.0% 4.0%	13.0% 14.0%	37	0.6-1.2 0.6-1.2	2:1 2:1	85
Class II	3/4" 1/2"	4.0% 4.0%	13.0% 14.0%	35	0.6-1.2 0.6-1.2	1:1 1:1	85
Class III	3/4" 1/2" 3/8"	3.0% 3.0% 3.0%	12.0% 13.0% 14.0%	30	0.6-1.2 0.6-1.2 0.6-1.2	1:2 1:2 1:2	85
Class IV	Not for use in Permanent Work.						



1. Mixes with other than  $\frac{3}{4}$ " nominal maximum size for Class I & II pavement and mixes with other than  $\frac{3}{4}$ " and  $\frac{1}{2}$ " nominal maximum for Class III pavement shall require approval by the District prior to use.

2. Additionally, all classes of plant mix must have a Los Angeles Wear showing not greater than 30% loss, a Sand Equivalent greater than 40, and not have over 2.0% absorption. For Class III Plant mix aggregate, not less than 75% by weight of the aggregate particles retained on the No. 4 sieve shall have at least one fractured face.

810.2.1.B Classification; delete Table 2 and add the following:

1. If a Marshal Mix Design is proposed, use Table 2 for the mix design parameters in addition to the Nominal Maximum Size, Design Air Voids, VMA, Manufactured Sand/Natural Sand & Immersion Compression Values identified in Table 1.

Table 2

Pavement	No. of Blows	Minimum Stability	Flow	VFA
Class I	75	1800	8-18	65-75
Class II	50	1200	8-18	65-75
Class III	35	1000	8-18	65-75

810.2.1 Hot Mix Asphalt Design; add the following subparagraphs:

I. Substitution of a higher class mix for a lower class mix will only be allowed upon approval of the Engineer and the District. In considering class of mix substitutions, the District will consider the traffic volume and may require adjustments to the AC content, VMA and air voids of the mix design.

J. All individuals preparing mix designs shall have passed the ITD mix design qualification course (Level II). All design procedures covered in this course shall be followed.

810.2.2.C Aggregates; add the following subparagraph:

3. Aggregate gradation acceptance shall be based on samples taken from behind the paver.

810.2.3.A.1 Asphalt; delete item 1 and replace with the following:

1. The asphalt shall be PG 64-28 in accordance with AASHTO M 320, Standard Specification for Performance Graded Binder, or as shown on the plans.

810.2.4.A.2 Anti-Stripping Additive; add the following item:

2. A minimum of 0.5% Anti-Stripping additive is specified.

810.2.6 Mix Design Approval; change section title to Mix Design Verification.

810.2.6 Mix Design Approval; add the following to subparagraph B:

Tests shall be performed by a WAQTC certified technician who has completed the ITD Mix Design Qualification Course (Level II) and has followed all design procedures covered in this course. Mix design shall also be completed in a laboratory meeting the requirements of ASTM E 329 and D 3666 or that is certified by ITD for completing mix designs.

810.2.6 Mix Design Approval; delete the word "new" from subparagraph D.

- 810.2.6 Mix Design Approval; add the following subparagraphs:
- E. Mix design specimens shall have a minimum two (2) hour cure time.
  - F. Anticipated aggregate breakdown shall be included in the mix design.
- 810.3.1.A.3 Mixing Plant; delete item e and replace with the following:
- e. Consistency check, from cold feed, of the combined aggregate shall be in accordance with 803.2.2.A, Table 1.
    - 1) Variation from the as-crushed combined stockpile average not to exceed  $\pm 4\%$  on the No. 40 and larger sieves. Variations on the No. 8 thru No. 30 sieves not to be greater than  $\pm 3\%$ . Variation from as-crushed combined stockpile average on the No. 50 and smaller sieves not to be greater than  $\pm 2.0\%$ .
- 810.3.1.A.3 Asphalt Control Unit; add the following subparagraph:
- c. Mixes are not to exceed 325°F in any type plant when measured at the point of discharge.
- 810.3.2.B Hauling Equipment; add the following item to subparagraph B:
- 1. Truck bed covers shall extend over the truck bed by at least one (1) foot in each direction.
- 810.3.3 Paver; delete subparagraph A and replace with the following:
- A. Paver to be self propelled with an activated heated vibratory screed.
- 810.3.3 Paver; add the following subparagraphs:
- H. Kickback paddles to be 75% effective.
  - I. Paver shall be equipped with and utilize an operable grade reference device, having a minimum length of thirty (30) feet.
- 810.3.4.E Roller requirements; delete subparagraph E and replace with the following:
- E. Roller requirements
    - 1. Vibratory roller speed shall be matched to vibrations per minute so that there are 10 to 14 vibrations per foot traveled (e.g. 3500 vpm = speed of 250 fpm to 350 fpm).
    - 2. Vibratory rollers with pneumatic tire drive wheel to have smooth tires that leave no visible tracks.
    - 3. No maximum speed is specified for pneumatic tired or steel track rollers. Contractor is responsible for meeting all density and smoothness requirements prior to acceptance by the District.
- 810.3.4.G Rollers; add the following subparagraph:
- G. A Pneumatic tire roller is required in the compaction sequence.

- 810.3.5.A      Mixing; delete subparagraph A and replace with the following:
- A. Moisture content of the mixture at the time of placement not to exceed 0.3%.
- 810.3.6.B      Mixing; delete subparagraph B and C and replace with the following:
- B. The asphalt content average to be within  $\pm 0.2\%$  (of four consecutive tests) with no single test to be more than  $\pm 0.3\%$  of the Contractor's Job Mix Formula (CJMF) as accepted by the District.
- C. Moisture content of the mixture at the time of placement not to exceed 0.3%.
- 810.3.7      Spreading and Finishing; add the following subparagraphs:
- E. Adjacent lanes shall be paved within 48 hours.
- F. Thickness Tolerances;
1. The average pavement thickness shall be within 0.25 inches of the specified thickness with no location varying more than  $\pm 0.35$  inches for roadways with 3 inch minimum specified thickness.
  2. The average pavement thickness shall be within 0.20 inches of the specified thickness with no location more than  $\pm 0.25$  inches for roadways with less than 3 inch minimum specified thickness.
  3. Pavement not meeting the specified tolerance shall be removed and repaved or overlaid as determined by the District.
- 810.3.8.H      Joints; add the following subparagraph:
- H. The average of all unconfined edge densities shall meet 98% of the required mat density with no single joint density less than 95% of the required mat density. All core densities measures shall be centered 5" from free edge. Confined edge densities shall meet the mat density requirements.
- 810.3.9.D      Weather Limitation and Cutoff Dates; add the following subparagraph:
- D. Do not place pavement on a wet or frozen subgrade or gravel base course nor use frozen aggregates in the mix.
- 810.3.9.C      Weather Limitations and Cutoff Dates; delete subparagraph C and replace with the following:
- C. All re-paving of existing pavement surfaces shall be completed within 30 calendar days unless otherwise approved by the District.
- 810.3.10.F      Compaction; add the following subparagraph:
- F. Begin rolling at the sides and proceed longitudinally parallel to the road centerline, with each trip overlapping six (6) inches of the prior roller pass.

- 810.3.12.A Field Quality Acceptance; delete the first row of Table 5 and add the following:
1. The asphalt content average to be within  $\pm 0.2\%$  (of four consecutive tests) with no single test to be more than  $\pm 0.3\%$  of the Contractor's Job Mix Formula (CJMF) as accepted by the District.
- 810.3.12.E Field Quality Control; add the following subparagraph:
- E. All required observation and testing shall be in accordance with the requirements established in Division 5000 of the ACCHD Manual for Highway Standards and Development Procedures.
- 810.3.13.A.3 Surface Smoothness; delete subparagraph 3 and replace with the following:
3. When straight edge is laid on the surface in a direction parallel or perpendicular to the centerline, surface variations not to exceed  $1/8"$  when perpendicular to centerline and  $1/4"$  when parallel to centerline.
- 810.3.14 Approaches; add paragraph 3.14 - APPROACHES as follows:
- Paving item includes plant mix widening at paved approaches and mailbox turnouts as shown on Standard Drawings ACCHD-106 and ISPWC SD-808. Turnout and widening lengths shall be as indicated on the plans.

## 900 - PRESSURE IRRIGATION

The following modifications apply only to those portions of the work that fall within the public right-of-way.

- 901.2.2.A.1 Polyvinyl Chloride (PVC) Pipe and Fittings; delete item 1 and replace with the following:
1. Pressure Class: 200 psi per IDEQ requirements.
- 901.2.2.B Polyvinyl Chloride (PVC) Pipe and Fittings; delete this subparagraph (not approved for use).
- 901.2.2.C.2.b Polyvinyl Chloride (PVC) Pipe and Fittings; delete item b and replace with the following:
- b. Usage: 3" and smaller only.
- 901.2.5 Polyethylene (PE) Pressure Pipe and Fittings; add the following subparagraph:
- B. This pipe shall be only used for transmission piping without services and only upon specific approval of the District.
- 901.2.6 Steel Pipe and Fittings; delete this subparagraph (not approved for use).
- 901.2.9.C Thrust Blocks; add the following subparagraph:
- C. Anchor Rods: Anchor rods shall be  $3/4"$  Cortan or stainless steel.
- 901.3.2.D.1 Pipe Installation; remove and replace item 1 as follows:
1. Pipe bedding: Use Type III Bedding and Class B-2 bedding system.

- 901.3.2.R Pipe Installation; add the following subparagraph:
- R. All connections to existing mains shall be “Hot Tapped” by a District approved Contractor.
- 901.3.11.D Abandonment of Existing Irrigation Mains; add the following subparagraph:
- D. Cap or plug any abandoned pipe left in the ground utilizing a 1’-0” thick concrete grout plug.
- 902.1.3.A References; delete this subparagraph.
- 902.2.6.A Valve Boxes; modify subparagraph A to read as follows:
- A. All areas.
- 902.2.6.B Valve Boxes; delete this subparagraph.
- 903.2.2.A PVC Pipe and Fittings for Irrigation Water Services; delete this subparagraph (not approved for use)
- 903.2.2.B Service Pipe and Fittings; delete items 1 and 2 and replace with the following:
1. Pressure Class: 200 psi
  2. Outside Dimension Ratio: DR 7
- 903.2.3.A Appurtenances; delete subparagraph A and replace with the following:
- A. Service Saddles for PVC Main. Shall meet the requirements of Section 404 - Water Service Lines and Meters.
- 903.2.3.B Appurtenances; delete this subparagraph.
- 903.2.3.E Appurtenances; delete subparagraph E and replace with the following:
- E. Service Valve Box for Irrigation Riser.
1. Size and Type: 4” PVC Pipe per ANSI/ASTM D 3034 or 3” class 160 PVC.
  2. Marking Tag: “Irrigation - Non-Potable, Do not Drink” secured to curb stop box lid with number 8 x 1” screw.
  3. Option A. - Faucets - hand marking tab with nylon cable tie.
  4. Threaded plug and raised nut required PVC to match pipe.
- 903.2.3 Appurtenances; add the following subparagraphs:
- F. Service Ball Valves
1. 1” service - Ford B11-444, Mueller B-20283
  2. 1 ½” Service - Ford B11-666, Mueller B-20283
  3. 2” Service - Ford B11-777, Mueller B-20283

G. Faucets

1. NIBCO 74-CL

2. B-K Boiler, Heavy Duty 102-704

903.3.2.A Installation; delete subparagraph A and replace with the following:

A. Install per Standard Drawing SD-901. For services above one (1) inch in size, seek approval of District.

903.3.2.G Installation; delete items 1 and 2.

903.3.2. Installation; add the following subparagraph:

L. No service line joints shall be located within the public road right-of-way.

1100 TRAFFIC

1102.1.5. Project Record Documents; add the following subparagraph:

C. Accurately record horizontal and vertical locations of all conduit and wires.

1102.2.8 Mast Arms for Wood Poles; delete this subparagraph (not approved for use).

1102.2.9 Wood Poles; delete this subparagraph (not approved for use).

1102.2.10.D Metal Poles; delete subparagraph D and replace with the following:

D. Pole height: 25 feet residential; 30 feet collector, arterial, and major intersection or as stipulated otherwise by City or District.

1102.2.11 Fiberglass Poles; delete this subparagraph (not approved for use).

1102.2.12.A Historic Poles; delete this subparagraph (not approved for use).

1102.2.15 Prefabricated Bases; delete this subparagraph (not approved for use).

1102.2.17.A Light Fixtures; delete subparagraph A and replace with the following:

A. Fixture Wattage: 100 Watt on local roads; 200 watt on collectors, arterials and at major intersections.

1102.2.17.F Light Fixtures; delete subparagraph F and replace with the following:

F. "Shoe Box" type luminaries required. Typical Lithonia lighting KSF3 style with 8" standoff or arm or approved equivalent.

1105.2.1.A Sign Posts; delete subparagraph A (not approved for use)

1105.2.2.D Signs; delete subparagraph D and replace with the following:

D. All reflective sheeting for signs shall meet the requirements of ASTM D4956, Type III or IV sheeting. Splicing of reflective sheet will not be allowed on panels of less than 24 inches in

length or width. One splice may be permitted on larger panels provided all gaps are less than 0.04 inches in width and color matches.

1105.3.2.A Sign Installation; delete subparagraph A (not approved for use)

2060 GUARDRAIL Add section 2060 as follows:

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Guardrail
- B. Guardrail End Treatments
- C. Guardrail Hardware
- D. Post Materials
- E. Spacer Block Materials
- F. Preservation Treatments
- G. Construction Requirements

1.2 RELATED SECTIONS

- A. Section 202 — Excavation and Embankment

1.3 REFERENCES

- A. AASHTO M180
- B. ASTM A153 — Zinc Coating (Hot Dip) Iron and Steel Hardware
- C. ASTM A307
- D. ASTM A325
- E. NCHRP 350, TL3
- F. AWPAP8, P9 and C14
- G. AWP Standard C2

1.4 GENERAL REQUIREMENTS

- A. All guardrail shall be galvanized steel.
- B. Posts shall be wood or galvanized steel.
- C. Spacer blocks shall be wood or polyethylene plastic.
- D. All hardware shall be galvanized steel.

## 1.5 SUBMITTALS

- A. Submit manufacturer's certification that posts, spacer blocks, guardrail, end treatments and all hardware meet or exceed specified requirements.
- B. Submit manufacturer's installation instructions and maintain a copy at the jobsite.
- C. Submit a copy of items 2060.1.5.A and 2060.1.5.B, above, to the District.

## PART 2 MATERIALS

### 2.1 GUARDRAIL

- A. Guardrail Beams shall meet the specifications for AASHTO M 80, Class A, Type I.
- B. The rail element shall not deflect more than 5.5 inches when tested as a simple beam with the traffic face up and with a 2,000 lb load applied at the center of a 12 ft. clear span, through a 3 inch wide flat bearing.

### 2.2 GUARDRAIL END TREATMENTS

- A. Type 1A (NOT NCHRP 350 Compliant).
  - 1. May only be used where not exposed to approaching traffic.
- B. Type 10 (NCHRP 350, TL-3 Compliant).
  - 1. ET-2000
  - 2. SKT-350
  - 3. LET

### 2.3 GUARDRAIL HARDWARE

- A. Bolts, nuts and washers used shall conform to ASTM A 307 or A 325, except that rail splice bolts shall be button headed. Bolts, nuts, washers and other fittings used shall be galvanized in accordance with ASTM A 153.

### 2.4 POST MATERIALS

- A. Wood Posts. Wood posts shall be rough, S2S or S4S. Size tolerance of rough sawn blocks in the direction of the bolt holes is  $\pm \frac{1}{4}$  in. Incising requirements shall be as specified in Standard C2 of The American Wood Preservers Association (AWPA) and treated according to section 2060.2.6.A of this specification. Post length shall be as shown on the plans.
- B. Metal Posts. Metal posts shall be W6x8.5 or W6x9 galvanized steel. Post length shall be as indicated on the plans.



## 2.5 SPACER BLOCK MATERIALS

A. Wood Spacer Blocks. Wood spacer blocks shall be rough, S2S or S4S. Size tolerance of rough sawn blocks in the direction of the bolt holes is  $\pm \frac{1}{4}$  in. Incising requirements shall be as specified in Standard C2 of The American Wood Preservers Association (AWPA) and treated according to section 2060.2.6.A of this specification.

B. Metal Spacer Blocks. Metal spacer blocks are not allowed.

C. Polyethylene Spacer Blocks. Polyethylene spacer blocks shall be impervious to moisture. Polyethylene spacer blocks shall have passed the test requirements of NCHRP 350, TL-3.

## 2.6 PRESERVATION TREATMENTS

A. Wood guardrail posts and spacer blocks shall be pressure treated with pentachlorophenol or copper naphthenate in accordance with the latest version of AWPA standards P-8, P-9 and C-14; except the minimum retention of preservative as determined by assay shall be 0.50 pounds per cubic foot of wood for pentachlorophenol and 0.60 pounds per cubic foot of wood for copper naphthenate.

## PART 3 WORKMANSHIP

### 3.1 DESCRIPTION

A. This work shall consist of furnishing and erecting guardrail in accordance with these specifications and in reasonably close conformance to the lines and grades shown on the plans or established by the Engineer.

### 3.2 CONSTRUCTION REQUIREMENTS

A. Posts shall be spaced as shown on the plans and be set plumb and to the established lines and grades. Backfill material shall then be placed in layers and thoroughly tamped. Boring of wood posts and spacer blocks should be done prior to preservative treatment, but field boring will be permitted providing the hole is treated per section 2060.2.6.A of these specifications, creosoted before driving the bolts.

B. Posts may be driven if this can be done without damage to posts, pavement, shoulders or adjacent slopes. If pilot holes are necessary to prevent such damage, fill any remaining voids between post and soil with dry sand or pea gravel. Misaligned, loose or damaged posts shall be removed, replaced or reinstalled at the Contractor's expense. Any damage to existing pavement or base shall be repaired at the contractor's expense.

## PART 4 MEASUREMENT AND PAYMENT

4.1 Use one or more of the following unit prices as designated in the Bid Schedule. Includes all labor, materials and equipment required to perform the work as specified. If required and not listed in the Bid Schedule, the following Bid Items are to be considered incidental to other Bid Items.

A. Guardrail: Measured by the linear foot complete and in place excluding the length of rail in terminal sections.

1. Bid Schedule Payment Reference: 2060.4.1 .A. 1
2. Bid Schedule Description: Guardrail, linear foot (LF)

B. Guardrail End Terminal: Measured by each unit installed complete in place and in conformance with these specifications.

1. Bid Schedule Payment Reference: 2060.4.1.B.1
2. Bid Schedule Description: Guardrail End Treatment, Type \_\_\_\_, each (EA).

## SECTION 5000

### CONSTRUCTION QUALITY ASSURANCE

#### 5010. Purpose

5010.010. The purpose of this policy statement is to outline the minimum acceptable level of observation to be performed on all roadway construction activities performed within the boundaries of the District. Minimum testing frequencies are also included in this policy statement. However, the ISPWC or Section 4000 of these standards may impose more frequent or additional testing requirements.

#### 5020. Construction Responsibilities

5020.010. Applicant's Responsibilities: The Applicant has the following responsibilities during the construction of the development:

- A. Prior to commencement of construction, the Applicant shall have the improvement drawings accepted by the District.
- B. The Applicant shall perform all construction in accordance with accepted plans, specifications, standards and policies.
- C. The Applicant shall provide reasonable access for District personnel during the course of the project.
- D. Prior to acceptance of the Roadway by the District the applicant shall execute the Financial Guarantee Agreement.

5020.020. District's Responsibilities: The District has the following responsibilities during the construction of the development:

- A. Prior to commencement of construction, the District shall review for acceptance the improvement drawings.
- B. The District shall review for acceptance locations of all traffic control signing.
- C. The District shall review for acceptance design changes during construction which have been approved by the Applicant's Engineer.
- D. The District shall make periodic observations during construction to monitor general compliance with specifications.

- E. Upon notice from the Applicant's Engineer that the project is substantially complete and upon receipt of the Applicant's Engineer's punch list, the District will perform a pre-final review and provide copies of the results to the Applicant's Engineer.
- F. The District shall consider for approval a Financial Guarantee Agreement with the applicant in a form approved by the District.

**5020.030. Applicant's Engineer's Responsibilities:** The Applicant's Engineer has the following responsibilities during the construction of the development:

- A. The Applicant's Engineer shall be responsible for full compliance with the requirements of this Section.
- B. The Applicant's Engineer shall be responsible for all observations, inspections and records at the minimum intervals presented in this policy statement.
- C. The Applicant's Engineer shall accept or reject work performed based on observations, inspections and test results.
- D. The Applicant's Engineer shall assure all necessary construction surveying for the project is provided.
- E. The Applicant's Engineer shall provide to the District certified test results.
- F. The Applicant's Engineer shall schedule and coordinate a pre-construction conference.
- G. The Applicant's Engineer or their field representative shall maintain a project diary containing necessary project information.
- H. The Applicant's Engineer shall provide 24-hour notification to the District for the various stages of construction to facilitate observations by the District.
- I. The Applicant's Engineer shall submit all manufacturers' certificates for materials supplied to the project.
- J. The Applicant's Engineer shall prepare the required post-construction documentation and submit to the District for final acceptance of the roadway.

#### **5030. Pre-Construction Conference**

**5030.010.** A pre-construction conference shall be held on all projects a minimum of two (2) days prior to commencing any construction on the project. An agenda is provided in these standards for use in conducting the pre-construction conference and should generally be followed. At a minimum, the following shall attend the pre-construction conference:

- A. Developer/Applicant

- B. Applicant's Engineer
- C. District Representative(s)
- D. Contractor
- E. Joint Utility Trench Coordinator (or designated representative)
- F. Sub-Contractors (Optional)

#### **5040. Submittals**

5040.010. Submittals shall be provided to the District in accordance with the following:

- A. A minimum of one (1) week prior to scheduled use of the materials on the project for standard materials (not project specific - mix design, base, sub-base, etc. as required by the ISPWC and Section 4000 modifications)
- B. Project specific pre-cast structures or other fabricated components shall be submitted to provide a minimum of two (2) weeks review.

#### **5050. Construction Observation Diary**

5050.010. The Applicant's Engineer or field representative shall be responsible for keeping a project journal during construction, which shall include at a minimum the following information:

- A. Date and work performed.
- B. Weather conditions.
- C. Operations being performed and location of work on project.
- D. Measurements and/or observations made to assure compliance with the plans and specifications.
- E. Discussions, decisions or directives made regarding the design or construction of the project.
- F. Unusual conditions or changes.
- G. Other relative information.

A copy of the diary shall be filed with the District at the completion of the project.5060. Testing Results

#### **5060. Testing Results**

5060.010. Test results and special inspection reports required shall be provided to the Highway District and Applicant's Engineer with 48 hours after testing. Test results shall include at a minimum the following information:

- A. Project Name
- B. Date of Testing
- C. Name of Tester
- D. Test Method Used
- E. Material Tested
- F. Location of Test/Sampling by Road Name and Project Station
- G. Test Results
- H. Specification Limit

#### **5070. Observation and Testing Requirements**

The following are basic, minimum observation intervals required of the Applicant's Engineer and his representative in order to assure that minimum monitoring of the contractor's performance has been accomplished. The Applicant's Engineer shall be responsible for providing the construction observations and testing required to insure substantial compliance with the plans and specifications. Documentation of the observations performed shall be included in the diaries. The final statement by the applicant's Engineer shall verify that the minimum basic observations and testing have been accomplished.

**5070.010. Earthwork Observations and Testing:** The following requirements apply to major excavations and embankments, and roadway subgrade:

- A. Submittals
  - 1. Standard Proctor (ASTM D-698) for imported embankment material.
  - 2. Standard Proctor (ASTM D-698) for native subgrade material.
- B. Observations
  - 1. One (1) time daily during major excavations and embankments.
  - 2. At the completion of the preparation of the subgrade (including subgrade, borrow ditches and fill and cut slopes).
- C. Testing
  - 1. One (1) compaction test each lift (maximum 2 feet) every 10,000 square feet of lift surface area for embankments.
  - 2. Compaction tests every 500 feet of completed roadway subgrade with a minimum of two (2) tests per street.

#### 5070.020. Pipe Installation & Drainage Facilities Observations & Testing

- A. Submittals
  - 1. Gradation (Sieve Analysis) and Sand Equivalent.
  - 2. Standard Proctor (ASTM D-698).
- B. Observations
  - 1. At completion of trench excavation, prior to placement of pipe.
  - 2. One (1) time per day during installation of pipe and pipe bedding.
  - 3. At every manhole or catch basin prior to backfill.
  - 4. All thrust blocks prior to backfill.
- C. Testing
  - 1. Pipe Testing
    - a. Shall be performed in the presence of the Engineer.
    - b. Clean pipe per ISPWC Section 501.3.4.F.
    - c. Visually inspect pipe per ISPWC Section 501.3.4.B for alignment and grade, pipe distortions, leaks, infiltration, and that a full diameter of pipe is visible from one manhole to the next.
    - d. Low pressure air, hydrostatic, and mandrel testing will be used to confirm compliance.
  - 2. Trench Backfill.
    - a. A minimum of one (1) compaction test per backfill layer is required for any trench backfill including "Bell Holes".
    - b. For all other trench backfill compaction testing must be performed at the following frequency:
      - 1. Two (2) tests, at different locations for every trench less than 500 feet in length, but not less than one (1) time per day.
      - 2. One (1) test per every 500 feet of additional trench and at locations where materials or construction procedures change, but not less than one (1) time per day.
      - 3. At every location for 1 and 2 above, obtain a test at ½ of the total trench depth and one (1) test at the top of the trench backfill (test set).

5070.030. Road Base Observations & Testing: The following requirements apply to the Sub-Base and Base Course.

- A. Submittals (Each source or change in material)

1. Gradation (Sieve Analysis) and Sand Equivalent.
2. Proctor (ASTM D-698).
- B. Observations
  1. At completion of each lift.
- C. Testing
  1. Compaction tests every 500 feet of roadway per lift of material with a minimum of two (2) tests per street.

#### **5070.040. Structures**

- A. Submittals
  1. Concrete Mix Design.
- B. Construction Observations
  1. Structure foundation conditions shall be verified by the Geotechnical Engineer for consistency with the design parameters prior to forming footings/foundations.
  2. After completion of forming and reinforcing placement, but prior to placement of concrete.
  3. Once per day during placement of concrete.
  4. After placement of concrete and striping forms, but prior to backfill placement.
- C. Testing
  1. Slump, temperature and entrained air at least each pour less than 50 cubic yards and once per each additional 50 cubic yards.
  2. Compressive Strength cylinders and tests at least each pour less than 50 cubic yards and once per each additional 50 cubic yards.

#### **5070.050. Curb, Gutter and Sidewalk**

- A. Submittals
  1. Concrete Mix Design.
- B. Construction Observations
  1. After completion of forming or establishment of grade line, but prior to placement of concrete.
  2. At least one (1) time per day during placement.



- C. Testing
  - 1. Compaction test on curb and gutter base course at least one (1) time every 300 feet of curb.
  - 2. Slump, temperature, entrained air, and compressive strength cylinders and tests as required by the District.

#### 5070.060. Paving

- A. Submittals
  - 1. Asphalt Concrete Mix Design.
- B. Construction Observations
  - 1. At commencement of paving operation on the project.
  - 2. One (1) time per day during the placement.
- C. Testing
  - 1. Density tests at commencement of the paving operations until an acceptable roller pattern is developed and at least one (1) for every 300 feet throughout project.
  - 2. Extraction and gradation at least one (1) for every 2,000 feet of roadway, but not less than one (1) each day of paving operations.
  - 3. Core of in-place pavement at least one (1) for every 1,000 feet of roadway with a minimum of two (2) tests per street. In-place air voids shall be tested with each core test.
- D. Thickness Tolerances (based on core samples)
  - 1. The average pavement thickness shall be within 0.25 inches of the specified thickness with no location varying more than  $\pm 0.35$  inches for roadways with 3 inch minimum specified thickness.
  - 2. The average pavement thickness shall be within 0.20 inches of the specified thickness with no location more than  $\pm 0.25$  inches for roadways with less than 3 inches minimum specified thickness.
  - 3. Pavement not meeting the specified tolerance shall be removed and repaved or overlaid as determined by the District.

#### 5070.070. Surface Restoration Testing

- A. Submittals
  - 1. Base
    - a. Gradation (Sieve Analysis) and Sand Equivalent.
    - b. Proctor.

- 2. Paving
  - a. Asphalt Concrete Mix Design.
- B. Construction Observations
  - 1. Base
    - a. At completion of each lift.
  - 1. Paving
    - a. At the commencement of paving operation on the project.
    - b. Once per day during the placement.
- C. Testing
  - 1. A minimum of one (1) compaction test of the base course and one (1) compaction test of the pavement for surface repairs less than 50 feet in length.
  - 2. Compaction testing shall be performed on the base course at the following minimum frequencies:
    - a. Two (2) tests at different locations for every surface repair less than 500 feet in length but not less than one (1) time per day.
    - b. One (1) test per every 500 feet of additional surface repair and at locations where materials or construction methods change, but not less than once per day.
  - 3. Compaction testing shall be performed on the pavement surface at the following minimum frequencies:
    - a. Two (2) tests at different locations for every surface repair less than 300 feet in length, but not less than one (1) time per day.
    - b. One (1) test per every 300 feet of additional surface repair and at locations where materials or construction methods change, but not less than one (1) time per day.

#### **5080. Pre-Acceptance Final Review**

**5080.010.** After substantial completion of the project, including all paving, drainage, and traffic control sign installation, a pre-acceptance final review shall be conducted on the project site. The following shall attend the pre-acceptance final review:

- A. District Representative
- B. Applicant's Engineer
- C. Contractor
- D. Developer/Applicant (Optional)

#### 5090. Post Construction Submittal

5090.010. On completion of the project, the Applicant's Engineer shall provide the post-construction submittal to the District. Consideration of acceptance of the roads will not occur until an acceptable post construction submittal is provided to the District. The post construction submittal shall include the following:

- A. A statement that all work performed during the project was in accordance with project plans and specifications, and that the minimum testing and inspections were performed in accordance with this policy statement. The form of the statement is to be specified by the District.
- B. Record drawings on Mylar and electronic copy on CD/DVD as required under Section 2000.
- C. A copy of the Construction Observation Diary for the project.
- D. A copy of the test results for the project.

## ENGINEER'S STATEMENT

\_\_\_\_\_  
Name of Project

\_\_\_\_\_  
Applicant

\_\_\_\_\_  
Engineer

I hereby state the following:

1. Observation was performed substantially to at least the basic minimum construction observation intervals established by the District.
2. Construction practices and materials observed were in compliance with the approved plans and specifications.
3. Construction was performed substantially to the lines and grades shown on the approved plans or as approved by the District.
4. Based on tests performed, the asphalt pavement meets the District Standards.
5. A Record Drawing (three copies) has been submitted to the District. One (1) copy must be on archival media (e.g. Mylar, etc.) and one (1) electronic copy (CD/DVD).
6. A copy of the construction diary has been submitted to the District.

Any of the above items which cannot be fully satisfied shall be explained on a separate sheet of paper and attached hereto.

Attachments: \_\_\_ yes    \_\_\_ no

\_\_\_\_\_  
Signature of Engineer

\_\_\_\_\_  
Date

## SECTION 6000

### DEFINITIONS

**AASHTO** - American Association of State Highway Transportation and Officials.

**Applicant** - Any person, persons or firm making application to the District.

**Approach** - A location of vehicular ingress or egress to a public roadway, including driveways and non-public roadways, and further defines as:

**Field Approach** - An approach serving parcels that are only used for cultivation of crops, grazing of livestock, or operation and maintenance of irrigation facilities.

**Residential Approach** - An approach serving no more than two (2) single family homes.

**Commercial Approach** - All other approaches, that are not field or residential approaches, including approaches serving three (3) or more residences or parcels, agricultural buildings, and all other uses.

**Area of City Impact** - Those areas outside of current city limits that the city and county mutually administer to plan for future growth (I.C. 67-6526).

**City** - Any of the incorporated Cities within Canyon County, Idaho.

**Developer** - Any person, persons or firm making application to the District.

**Development** - Any activity within the District requiring application to the District, review by the District or approval of the District, including but not limited to approach construction or improvements, roadway construction or improvements, utility construction or improvements, subdivision of land by plat or other legal methods and all other activities affecting District right-of-way, right-of-way dedication, right-of-way vacation or right-of-way access.

**Dedication** - The setting apart of land or interest in land for use by the public. Land becomes dedicated when accepted by the District as a public dedication, either by ordinance, resolution or entry in the official minutes, or by the recording of a plat showing such dedication.

**Easement** - A grant by the owner of the use of a parcel of land by the public, corporation or persons for specified use and purposes.

**Engineer** - A Professional Engineer licensed to practice within the State of Idaho or authorized to provide services within the State of Idaho by the Idaho Board of Professional Engineers and Professional Land Surveyors.

**Frontage** - The extent of District right-of-way contiguous with any portion of a development.

**Highway District (District)** - Any one of the following official Highway Districts within Canyon County, Idaho.

Nampa Highway District No. 1

Notus Parma Highway District No. 2

Golden Gate Highway District No. 3

Canyon Highway District No. 4

**ISPWC** - Idaho Standards for Public Works Construction (latest edition).

**LHTAC** - Local Highway Technical Assistance Council, 3330 Grace Street, Boise, ID 83703. Phone (208) 344-0565, Fax (208) 344-0789.

**Irrigation Facilities** - Includes canals, laterals, ditches, conduits, gates, wells, pumps and allied equipment necessary for the supply, delivery and drainage of irrigation water.

**Local Highway Jurisdictions, (LHJ)** - The city or District having jurisdiction over the public highways, streets and rights-of-ways.

**Minor Utilities** - Utility lines serving a single parcel of land or two single residential parcels, except gas lines greater than 2-inches in diameter.

**Owner** - The person or persons holding title by deed to land or holding title as vendees under land contract.

**Plat** - A map of a subdivision.

**Preliminary Plat** - A preliminary map, including supporting data, indicating a proposed subdivision development, prepared in accordance with Canyon County ordinances and the Idaho Code.

**Final Plat** - A map of all or part of a subdivision providing substantial conformance to an approved preliminary plat, prepared by a Registered Professional Land Surveyor in accordance with Canyon County ordinances and the Idaho Code.

**Recorded Plat** - A final plat bearing all of the certificates of approval required by ordinance and duly recorded in the County Recorder's Office.

**Public Right-of-Way (right-of-way)** - A right-of-way open to the public and under the jurisdiction of a public highway agency, where the public highway agency has no obligation to construct or maintain said right-of-way for vehicular traffic, nor shall there be any liability for any injury or damage for failure to maintain it or any highway signs. [I.C. 40-117(6), I.C. 40-202(4) and I.C. 50-1301(7)].

**Reserve Strip** - A strip of land between a dedicated street or partial street and adjacent property, in either case, reserved or held in public ownership for future street extension or widening.

**Right-of-Way** - A parcel of land dedicated or reserved for use as a public way, which normally includes streets, sidewalks, utilities or other service functions.

**Roadway** - Any street, avenue, boulevard, road land, parkway, place, viaduct, easement for access, or other way which is an existing state, county, or municipal roadway; or a street or way shown in a plat heretofore approved pursuant to law or approved by official action; or a street or way in a plat duly filed and recorded within the right-of-way boundaries whether improved or unimproved and may be comprised of pavement, shoulder, curbs, gutters, sidewalks, parking areas, and lawns.

**Arterial Route** - A general term including expressways, major and minor arterial streets, and interstate, state or local highways having regional continuity.

**Collector Street** - A street that provides for traffic movement within neighborhoods of the District and between major streets and local street and for direct access to abutting property.

**Local Street** - A street that provides for direct access to residential, commercial, industrial, or other abutting land for local traffic movements and connects to collector and/or arterial streets.

**Marginal Access Street** - A minor street parallel and adjacent to an arterial route that intercepts local streets and controls access to an arterial route.

**Cul-de-Sac Street** - A short local street having one end permanently terminated in a vehicular turnaround.

**Loop Street** - A minor street with both terminal points on the same street of origin.

**Alley** - A public service way used to provide secondary vehicular access to properties otherwise abutting upon a street.

**Rural (Rural Roadway)** - All areas and roadways not within one mile of an incorporated city limit or within a city limit.

**Shall** - Mandatory, same as "will", as opposed to "may" or "should".

**Subdivider** - A subdivider shall be deemed to be the individual, firm, corporation, partnership, association, syndication, trust or other legal entity having sufficient proprietary rights in the property to represent the owner, which submits the required subdivision application and initiates proceedings for the subdivision of land in accordance with these procedures.

**Subdivision** - The division of any lot, tract or parcel of land into more than two (2) parts.

**Terrain** - The topography of the land traversed for the alignment of roads and streets. To characterize variations in topography, engineers generally separate terrain into three classifications:

**Level Terrain** - Terrain where sight distances are generally long or can be made to be so without construction difficulty.

**Rolling Terrain** - Terrain where natural slopes consistently rise above and fall below the road or street grade, and occasional steep slopes offer some restriction to normal horizontal and vertical roadway alignment.

**Mountainous Terrain** - Terrain where longitudinal and transverse changes in the elevation of the ground with respect to the road or street are abrupt and benching and side hill excavation are frequently needed to obtain acceptable horizontal and vertical alignment.

The Highway Commissioners shall have sole discretion on the determination of terrain classification for a road.



**Urban (Urban Roadway)** - All areas and roadways within one mile of an incorporated city limit or within a city limit.

**Utilities** - Installations or facilities, underground or overhead, furnished for use by the public, including but not limited to, electricity, gas, steam, communications, water, drainage, irrigation, sewage disposal, or flood control, owned and operated by any person, firm, corporation, municipal department, or board duly authorized by state or municipal regulations. Utility or utilities as used herein may also refer to such persons, firms, corporations, departments or boards, as applicable herein.

## APPENDIX

### Standard Forms

- Financial Guarantee Agreement Form (2 pages)
- Pre-Construction Conference - Agenda & Sign-in Sheet (4 pages)
- Review Checklist - Improvement Plans (4 pages)
- Review Checklist - Conditional Use, Rezone, Preliminary Plat (2 pages)
- Review Checklist - Final Plat (2 pages)

### Standard Drawings

- ACCHD-101, Typical Two Lane Rural Road Section
- ACCHD-101A, Typical Three & Five Lane Rural Road Sections
- ACCHD-102, Typical Two Lane Urban Road Section
- ACCHD-102A, Typical Three & Five Lane Urban Road Sections
- ACCHD-103, Standard Side Slope Details
- ACCHD-104, Standard Cul-De-Sac Layout
- ACCHD-105, Standard Residential Approaches
- ACCHD-106, Commercial Approach and Access Serving 3 or more Properties
- ACCHD-107, Clear Sight Triangle
- ACCHD-107A, Sight Triangle at Uncontrolled Intersections
- ACCHD-107B, Sight Triangle at Controlled Intersections
- ACCHD-108, Raised Medians
- ACCHD-110, Typical Rural Road Section & Typical Curb Road Section

## FINANCIAL GUARANTEE AGREEMENT

THIS AGREEMENT, made this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between \_\_\_\_\_, (hereinafter referred to as "Applicant") and the \_\_\_\_\_ Highway District No. \_\_\_\_\_ (hereinafter referred to as "District"),

### IT IS AGREED:

1. APPLICANT has completed, or caused to be completed, the improvements as shown on Drawing(s) No. \_\_\_\_\_, Sheet(s) \_\_\_\_\_ through \_\_\_\_\_, for \_\_\_\_\_ (hereinafter referred to as "Project") and in accordance with all special conditions as set forth by the District as are on file in the office of the District, including the installation of all necessary utility lines, structures and service connections directly associated with the project within the public rights-of-way and easements.

2. APPLICANT has paid or agrees to pay for all labor and material costs for completion of the improvements, and the completed improvements are free and clear of all liens, encumbrances, assessments or unpaid obligations.

3. APPLICANT assures that all improvements listed herein are completed in accordance with the standard specifications adopted by the District and all fees incurred or charged by the District in connection with this project have been paid. Applicant further agrees to pay, when due, all additional fees incurred or charged by the District in connection with this project.

4. Upon acceptance of the roadway by the District, Applicant shall furnish a cash deposit, Surety Bond or irrevocable letter of credit issued by a financial institution authorized to do business in the State of Idaho, in a form approved by the District in the amount of 50% of the construction cost<sup>1</sup> of the public or special improvements. This guarantee shall remain in effect for (1) one year, after acceptance of the roadway by the District, assuring performance of Applicant's obligations under this agreement. "Public or special improvements" are defined as follows: road improvements operated and maintained by the District and others as follows:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5. DISTRICT agrees that upon satisfactory completion of the improvements listed herein, in accordance with the specifications and requirements of said District, the District will be responsible for continuous maintenance of the public road(s) within the District's boundaries.

6. APPLICANT further agrees neither the final certificate of completion nor any provision within this agreement nor partial or entire use of the improvements embraced in this agreement by the District or the public shall constitute an acceptance of work not done in accordance with said approved drawings and District standards and specifications or relieve the Applicant of liability in respect to any or all warranties or responsibility for faulty materials or workmanship. The Applicant shall remedy or shall cause to be remedied promptly any defects in the work and to pay for any damage to other work resulting therefrom which shall appear within a period of one (1) year from the date of final acceptance of the improvements. The District will give notice of defective materials and work with reasonable promptness.

7. APPLICANT assures that he retained a licensed, Professional Engineer who supervised the construction and provided an Engineer's Statement indicating that all improvements are constructed in

<sup>1</sup> Construction cost to be verified by construction or bid

accordance with the accepted improvement drawings and the adopted District standards and that construction observation was in accordance with Section 5000 of the Highway Standards and Development Procedures for the Canyon County Highway Districts.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the date first written above.

\_\_\_\_\_ Highway District No. \_\_\_\_\_

\_\_\_\_\_  
CHAIRMAN

ATTEST:

\_\_\_\_\_

\_\_\_\_\_  
APPLICANT

# **Pre-Construction Conference**

## **Agenda**

**Project:**

**Date:**

**Time:**

### **Key Personnel**

- Indicate key personnel and contact information on attached sheet.

### **Approvals/Permits**

- Improvement Plans
- Application and Permit to use Right-of-Way – Utilities
- Application and Permit to use Right-of-Way – Approaches and Other

### **Construction Responsibilities & Relationships**

- Applicant
  - o Perform construction in accordance with accepted plans, specifications, standards and policies
  - o Provide reasonable access to Highway District
  - o Execute Financial Guarantee Agreement
- Highway District
  - o Review locations of all signing
  - o Review design changes for acceptance during construction
  - o Make periodic observation during construction
  - o Perform pre-acceptance final review and provide results to Applicant's Engineer
  - o Execute Financial Guarantee Agreement with Applicant
- Applicant's Engineer
  - o All observations, inspections, and records at minimum intervals required in Section 5000 of the Highway Standards and Development Procedures for the Canyon County Highway Districts
  - o Accept or reject work performed based on observations, inspections, and test results
  - o Provide all necessary construction surveying/staking
  - o Provide certified test results in a timely manner
  - o Maintain project diary
  - o Coordinate testing and construction observation with Highway District
  - o Submit changes to Highway District for acceptance
  - o Prepare record drawings of project and provide Engineer's Statement regarding work.

### **Submittals**

- Provide submittals one week prior to use on project
- Material sources for subbase, base, and asphalt concrete
- Gradation for subbase & base
- Mix design for asphalt concrete
- Concrete mix design

### **Construction Observation & Testing**

- Construction Observation
  - o Project Diary (Date, Work Performed, Weather, Engineering Operations, Unusual conditions or changes, Other)
  - o Frequency as required by Section 5000 of the Highway Standards and Development Procedures for the Canyon County Highway Districts
  - o Consistent throughout project
  - o Coordinate 24-Hours in advance with Highway District for joint observation:
    - Before Trench Backfill
    - During Concrete Placement
    - During Paving
    - At Sub-base, Base, and Pavement Compaction Testing
- Construction Testing
  - o Conduct compaction testing at minimum frequencies required.
  - o Conduct proctors and extraction gradation as required.
  - o Conduct concrete slump, air entrainment, and 7-day and 28-day compressive tests.
  - o Provide test results to Highway District within 48-hours or before proceeding with next construction phase, whichever is sooner.

### **Conformance with Plans & Specifications**

- General – All work shall be in conformance with the following:
  - o Improvement Plans approved by the Highway District
  - o Changes Accepted by the Highway District and Approved by Owner's Engineer
  - o ACCHD Highway Standards, Current Edition
  - o Idaho Standards for Public Works Construction, Current Edition
- Clearing & Grubbing
- Subgrade/Earthwork
- Subbase
- Base
- Paving
- Drainage
  - o Cross-Culverts
  - o Borrow Ditches

- Structures
- Utilities
- Traffic Items
  - o Signs
  - o Guardrail
  - o Pavement Markings

### **Schedule**

- Provide Schedule with anticipated completion of major milestones (Earthwork, Drainage, Utilities, Structures, Sub-base, Base, and Paving).

### **Safety**

- Traffic Control
  - o Contractor to provide in accordance with MUTCD
  - o Traffic control plans to be approved by Highway District
- Digline (1-800-342-1585)
  - o Contractor's responsibility to call digline
- Trench Safety & Confined Space Entry
  - o Contractor's responsibility to comply with all State and Federal requirements

### **Miscellaneous**

- Maintenance of existing roads

### **Project Close-Out**

- Final Project Review and Acceptance
- Owner's Engineer shall submit the following:
  - o Project Diary
  - o Test Results
  - o Record Drawings on Mylar
  - o Engineer's Statement
- Payment of All Fees
- Financial Guarantee Agreement

### **Other Issues**

## KEY PROJECT PERSONNEL

Project:

	Name	Company/Agency	Address	Telephone	Cell Phone	FAX
Highway District						
Highway District's Engineer						
Applicant/Owner						
Owner's Engineer						
Testing Services						
<b>Contractors</b>						
24-Hour Contact						
Earthwork						
Drainage						
Surfacing/Paving						
Other						
<b>Utilities</b>						
Electrical						
Telephone						
Cable						
Gas						
Water						
Sewer						



## PLAN REVIEW CHECKLIST IMPROVEMENT PLANS

Subdivision: \_\_\_\_\_ Date: \_\_\_\_\_  
 Project Location: \_\_\_\_\_  
 Developer: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Engineer: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reference the Highway Standards and Development Procedures for the Canyon County Highway Districts when completing development plans and this checklist.

INCLUDED	NOT APPLICABLE	SUBMITTAL ITEM
		<b>PLAN NOTES</b>
		All work shall be completed in accordance with the Idaho Standards for Public Works Construction (latest edition), the Highway Standards and Development Procedures for the Canyon County Highway Districts and the Project Specifications.
		All Contractors, Sub-Contractors and Utility Contractors shall attend a pre-construction conference a minimum of two (2) days prior to commencing any construction on the project.
		Only plan sets stamped "Approved for Construction" and signed by the Engineer shall be used for Project construction. Use of plans not stamped "Approved for Construction" shall be grounds for the issuance of a stop work order.
		All materials furnished on or for the Project shall meet the minimum requirements of the approving agency or as set forth in the Project plans and specifications, whichever is more restrictive. Contractor shall furnish proof that all materials meet the requirements at the request of the Owner or Engineer.
		The Contractor shall be responsible for providing and paying for all costs associated with all testing required by the Project Specifications. All tests shall be performed by a certified testing laboratory and certified test results shall be submitted to the Owner's Engineer. Work performed without certified test results shall not be accepted.
		Plant Mix Pavement shall be Class _____ with a nominal maximum aggregate size of _____. PG _____ - _____ (Performance Graded Asphalt Binder) shall be used. A minimum of 0.5% Anti-Stripping additive is specified.
		Profile the surface the following roadways in accordance with Idaho T-140: _____
		<b>SURVEY</b>
		A minimum of two Section/Quarter corners are referenced
		Vertical control tied to NAVD 88
		Control monuments set within development

<b>INCLUDED</b>	<b>NOT APPLICABLE</b>	<b>SUBMITTAL ITEM</b>
		<b>RIGHT-OF-WAY</b>
		Roadway right-of-way widths meet standards
		Cul-de-sacs have the required minimum right-of-way
		Intersection of right-of-way lines have minimum required radii
		All obstructions and right-of-way encroachments are shown to be removed
		<b>HORIZONTAL AND VERTICAL ALIGNMENT</b>
		Horizontal alignment meets AASHTO standards
		Minimum and maximum vertical grades meet the standards
		Vertical curves are included for all grade breaks in excess of one percent
		Minimum tangent lengths between curves are met
		<b>ROADWAY CROSS SECTION</b>
		Roadway widths (travel lanes, shoulders, foreslopes, ditches, back slopes, etc.) meet standards
		Foreslopes, back slopes and fill slopes meet the established standard and are shown on the plans
		Curb and Gutter section is shown where required or approved
		Roadside grading and obstructions meet the AASHTO Roadside Design Guide or appropriate guardrail is shown
		Pavement, base and sub-base thickness are shown in accordance with the standard or the approved section thickness based on a materials report and section calculations
		Base and sub-base aggregate size is called out on the typical roadway section
		Asphalt tack coat material and application rate is indicated on the plans
		The limits of pavement repair for existing roadways extends to the lane line or centerline
		<b>INTERSECTIONS AND APPROACHES</b>
		Roadway intersections meet the minimum spacing requirements
		Private and commercial approaches meet the minimum spacing requirements with no new approaches to arterial and major collector roadways
		Curbed approach show for all accesses serving primarily truck traffic
		Mailbox and approach widening length, width and taper are called out on the plans

INCLUDED	NOT APPLICABLE	SUBMITTAL ITEM
		<b>EARTHWORK</b>
		A soils report documenting the site soil and groundwater conditions is included with the preliminary plat
		A mass excavation and grading plan is included if required by the District
		Clearing and seeding limits are shown on the plans
		<b>TRENCHING</b>
		Utilities are shown in the appropriate corridor, including private utilities in an easement outside the right-of-way
		Utility installation in roadways with pavement less than five years old are show as borings
		<b>WATER, SEWER AND IRRIGATION</b>
		The city or irrigation district has reviewed and approved the plans for their facilities
		A copy of the agency conditions and approval has been provided to the District
		Valves and manholes are not located within the wheel paths
		Irrigation facilities are located outside the right-of-way
		Irrigation crossings include cleanout boxes on each side of the right-of-way
		Information necessary to complete the appropriate right-of-way use agreements is included
		<b>DRAINAGE</b>
		Drainage calculations are stamped by an Idaho Registered Professional Engineer and provided with the submittal
		All calculations are included with the submittal including time of concentration, peak runoff, runoff volume, conveyance system capacity, infiltration rates, discharge rates, etc.
		Culverts are sized appropriately, are of an approved material, include aprons and have adequate cover
		Borrow ditches meet the depth standards, including freeboard, and have adequate erosion protection where flow velocities are greater than two feet per second
		If subsurface stormwater disposal systems are proposed, documentation that there is no feasible alternative is provided and the system meets the minimum established criteria
		Detention and Retention facilities meet the minimum established criteria
		Maintenance of stormwater facilities outside the public right-of-way is shown to be the responsibility of the property owner or homeowner's association

<b>INCLUDED</b>	<b>NOT APPLICABLE</b>	<b>SUBMITTAL ITEM</b>
		<b>STRUCTURES</b>
		Bridges meet minimum load requirements
		Bridge width meets standards
		Bridge clearance above waterways and roadways meet minimum standards
		Retaining walls are shown where required
		Appropriate materials reports are included for all structure designs
		<b>SIGNING AND PAVEMENT MARKINGS</b>
		All permanent signing meets the requirements of the MUTCD
		A construction traffic control plan meeting the requirements of the MUTCD is included
		Pavement markings meeting the MUTCD are shown where required by District standard
		<b>TRAFFIC IMPACT STUDIES</b>
		Mitigation measures identified in the traffic impact study have been included

# PLAN REVIEW CHECKLIST

## CONDITIONAL USE, REZONE, PRELIMINARY PLAT

Subdivision: \_\_\_\_\_ Date: \_\_\_\_\_  
 Project Location: \_\_\_\_\_  
 Developer: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Engineer: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reference the Highway Standards and Development Procedures for the Canyon County Highway Districts when completing the Improvement Plans, Preliminary Plat and this checklist.

INCLUDED	NOT APPLICABLE	SUBMITTAL ITEM
		<b>RIGHT-OF-WAY</b>
		Roadway and cul-de-sac right-of-way meet standards
		All obstructions and right-of-way encroachments are shown to be removed
		Out parcels and associated right-of-way dedication are properly addressed
		Intersection of right-of-way lines have minimum required radii
		Sufficient right-of-way is provided for extreme cut and fill locations
		Stub streets are included as required by the District
		Utility, drainage and other required easements are shown
		Parallel frontage roads are included where required by the District adjacent to collector and arterial roadways
		Roadway alignment (curve radii, tangent lengths) meet standards
		<b>INTERSECTIONS AND APPROACHES</b>
		Roadway intersections and approaches meet the minimum spacing requirements
		Access to adjacent properties is available with no landlocked or intervening strip parcels
		Approaches and intersections have adequate sight distance
		Turn lane requirements have been analyzed
		Multiple access points to a single parcel have been pre-approved and meet the applicable spacing requirements
		Commercial approaches and approaches serving three or more parcels are paved
		No direct access to adjacent collector and arterial roadways

INCLUDED	NOT APPLICABLE	SUBMITTAL ITEM
		<b>ROADWAY</b>
		Roadway design meets District and AASHTO standards including but not limited to intersection geometry, horizontal alignment, profile, cross section and roadside grading
		Special considerations (i.e. curb and gutter) are included for development within the area of city impact
		The limits of pavement repair for existing roadways extends to the lane line or centerline
		<b>TRAFFIC IMPACT STUDIES</b>
		A traffic impact study is included based on the established criteria or requirement of the District
		Parameters and requirements of the traffic impact study have been discussed with the District
		Traffic impact mitigation measures are identified
		The traffic impact study is stamped by an Idaho Registered Professional Engineer
		<b>DRAINAGE</b>
		An area outside the public right-of-way and within an easement is provided for storm drainage disposal facilities
		The Homeowner's Association, underlying property owner or adjacent property owner is responsible for all storm drainage facilities outside the public right-of-way, including all routine and heavy maintenance

# PLAN REVIEW CHECKLIST FINAL PLAT

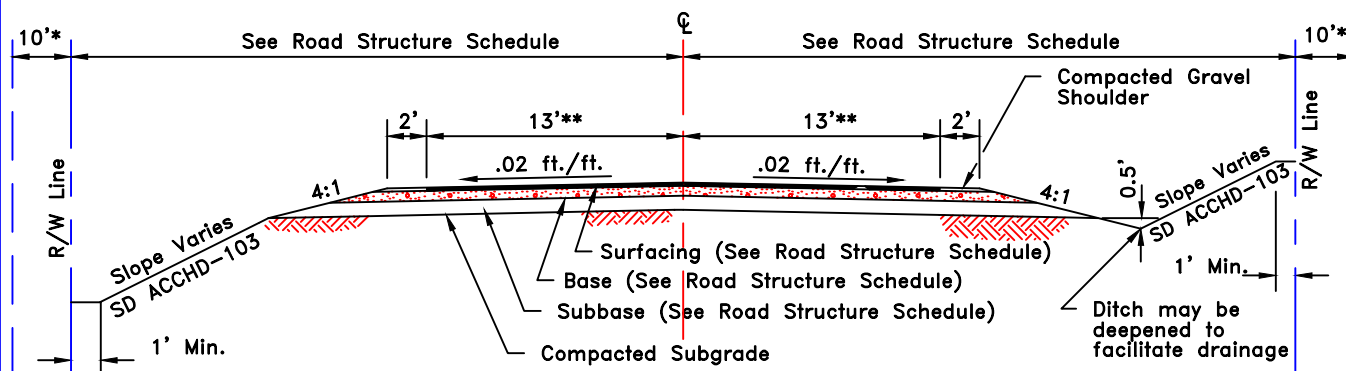
Subdivision: \_\_\_\_\_ Date: \_\_\_\_\_  
 Project Location: \_\_\_\_\_  
 Developer: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Engineer: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reference the Highway Standards and Development Procedures for the Canyon County Highway Districts when completing the Final Plat and this checklist.

INCLUDED	NOT APPLICABLE	SUBMITTAL ITEM
		<b>PLAT NOTES (DEDICATION AND ACCEPTANCE)</b>
		Plats with only public road right(s)-of-way dedication(s): _____ Highway District No. __ does hereby accept this plat, and the dedicated public streets, highways and rights-of-way as are depicted on this plat, in accordance with the provisions of I.C. § 50-1312.
		Plats with public road right(s)-of-way being dedicated, include the following in the "Certificate of Owner":  The public streets and rights-of-ways shown on this plat are dedicated to the public forever.
		Plats with private roads and public road right(s)-of-way dedication(s): _____ Highway District No. __ does hereby accept this plat, and the dedicated public streets, highways and rights-of-way as are depicted on this plat, in accordance with the provisions of I.C. § 50-1312. Private streets depicted on this plat are not maintained by or under the jurisdiction of the Highway District. There is no legal obligation or assurances that the private streets will be accepted as public streets in the future.
		Plats with private roads and no public road right(s)-of-way dedication(s): _____ Highway District No. __ does hereby accept this plat in accordance with the provisions of I.C. § 50-1312. Private streets depicted on this plat are not maintained by or under the jurisdiction of the Highway District. There is no legal obligation or assurances that the private streets will be accepted as public streets in the future.
		Signature and date line for District Chairman
		<b>RIGHT-OF-WAY</b>
		Roadway and cul-de-sac right-of-way meet standards
		Out parcels and associated right-of-way dedication are properly addressed
		Intersection of right-of-way lines have minimum required radii
		Sufficient right-of-way is provided for extreme cut and fill locations
		Stub streets are included as required by the District

INCLUDED	NOT APPLICABLE	SUBMITTAL ITEM
		Utility, drainage and other required easements are shown
		Roadway alignment (curve radii, tangent lengths) meet standards
		<b>INTERSECTIONS AND APPROACHES</b>
		Roadway intersections meet the minimum spacing requirements
		Access to adjacent properties is available with no landlocked or intervening strip parcels
		Note on plat regarding no direct access to adjacent collector and arterial roadways
		<b>MISCELLANEOUS</b>
		Note on the face of the plat for homeowner's association or property owner maintenance requirements - The Homeowner's Association or adjacent property owner is responsible for maintaining any and all amenities (lawns, sprinklers, sidewalks, landscaping, etc.) approved by the District to be within the public right-of-way
		Note on the face of the plat for storm drainage facilities maintenance - The Homeowner's Association, underlying property owner or adjacent property owner is responsible for all storm drainage facilities outside the public right-of-way, including all routine and heavy maintenance
		Setback waivers (if applied for) are approved by the District and a note containing language approved by the District is included on the plat





- \* 10' Roadway, Drainage, Slope and Utility Easement
- \*\* 12' for low volume local roads. (ADT < 400)

## TYPICAL TWO LANE RURAL ROAD SECTION

N.T.S.

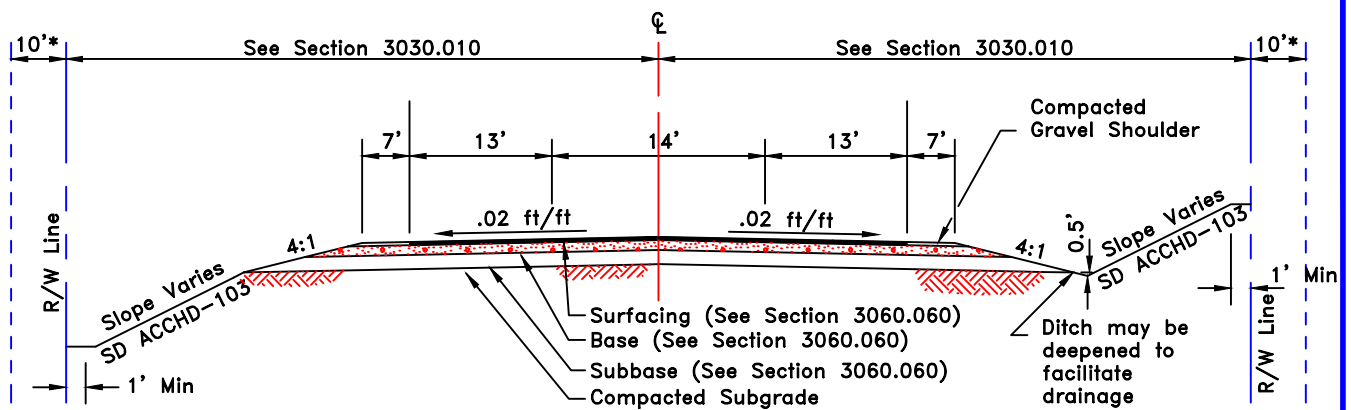
### ROAD STRUCTURE SCHEDULE

Class of Road	TI	Minimum Thickness (in.)			Right of Way Width (FT)
		Pavement	Base	Subbase	
Collector (under 1,200 ADT)	8	3"	6"	15"	80
Local Road (1,000–3,000 ADT)	8	3"	6"	15"	60
Local Road (under 1,000 ADT)	7	3"	6"	12"	60
Low Volume Local Road (under 400 ADT)	6	2.5"	6"	9"	56

- Road Structure Section may vary for poor soil conditions. Changes to these Section requirements will be based on a Geotechnical Report prepared by a Registered Professional Engineer.
- Road Structure Schedule is based on ITD Method, as modified in Section 3060.060, using an "R"-value of 25. If the subgrade has an "R"-value less than 25, submit an alternate section design prepared by a Registered Professional Engineer.
- For Collector (1,200 ADT or more), Arterial or Expressway, see Sections 3030.010 and 3060.060.

STANDARD DRAWING No. ACCHD-101  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO

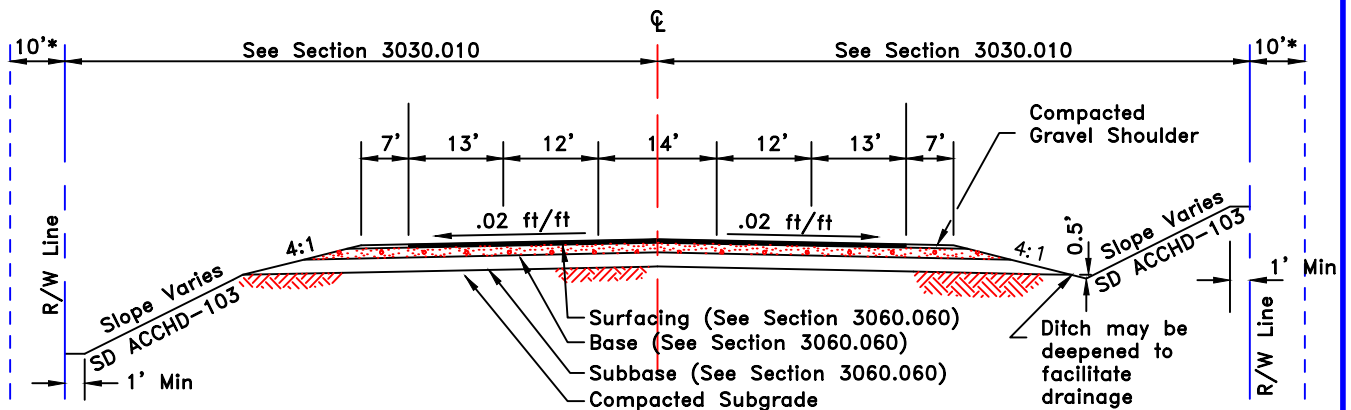
REVISED 12/16



\* 10-foot Roadway, Drainage, Slope, and Utility Easement

### 3-LANE ROAD SECTION

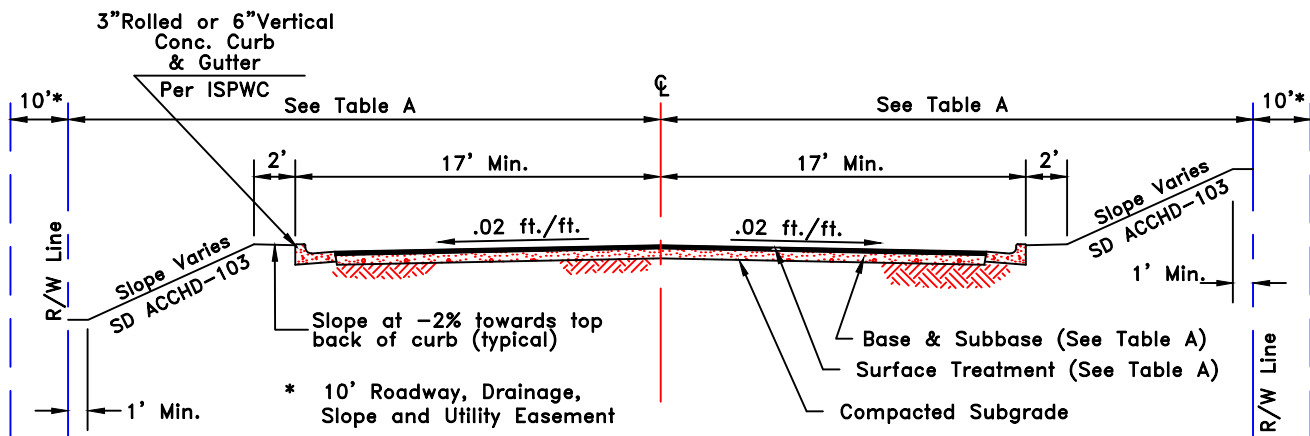
N.T.S.



\* 10-foot Roadway, Drainage, Slope, and Utility Easement

### 5-LANE ROAD SECTION

N.T.S.



## TYPICAL TWO LANE CURB & GUTTER SECTION

N.T.S.

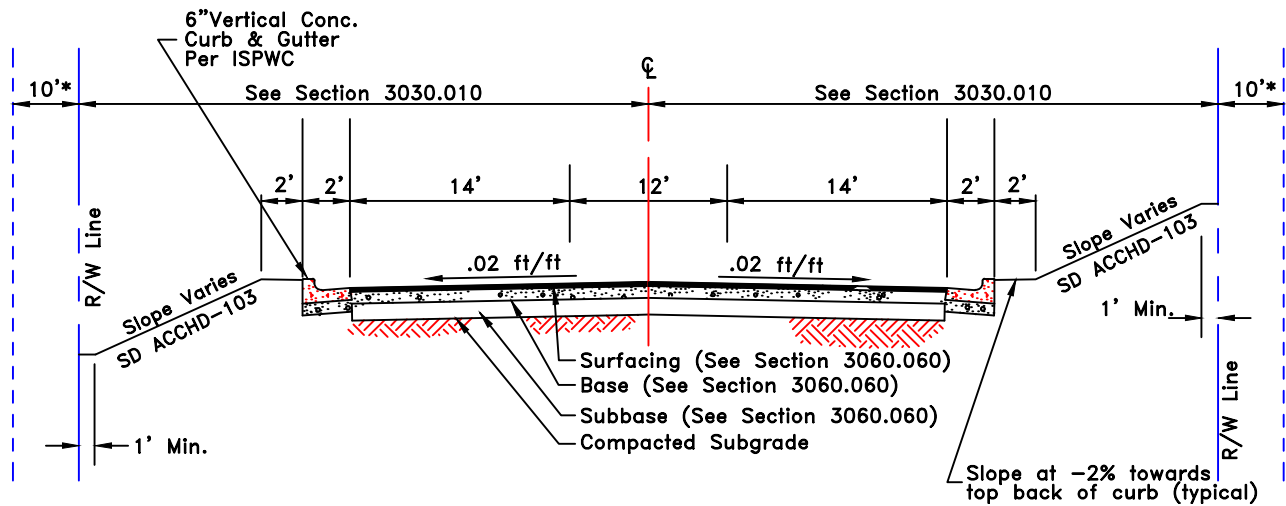
TABLE A

Class of Road	TI	Minimum Thickness (in.)			Right of Way Width (FT)
		Pavement	Base	Subbase	
Collector (under 1,200 ADT)	8	3"	6"	15"	80
Local Road (1,000–3,000 ADT)	8	3"	6"	15"	56
Local Road (under 1,000 ADT)	7	3"	6"	12"	56
Low Volume Local Road (under 400 ADT)	6	2.5"	6"	9"	50

1. Road Structure Section may vary for poor soil conditions. Changes to these Section requirements will be based on a Geotechnical Report prepared by a Registered Professional Engineer.
2. Table A is based on ITD Method, as modified in Section 3060.060, using an "R"-value of 25. If the subgrade has an "R"-value less than 25, submit an alternate section design prepared by a Registered Professional Engineer.
3. For Collector (1,200 ADT or more), Arterial or Expressway, see Sections 3030.010 and 3060.060.

STANDARD DRAWING No. ACCHD-102  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO

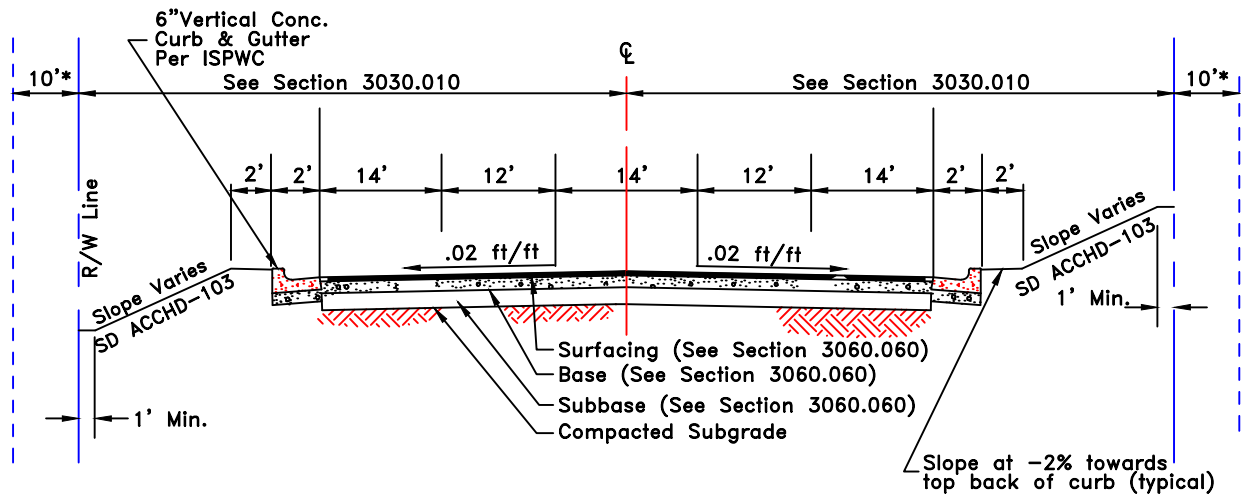
REVISED 12/16



\* 10-foot Roadway, Drainage, Slope, and Utility Easement

### 3-LANE ROAD SECTION

N.T.S.

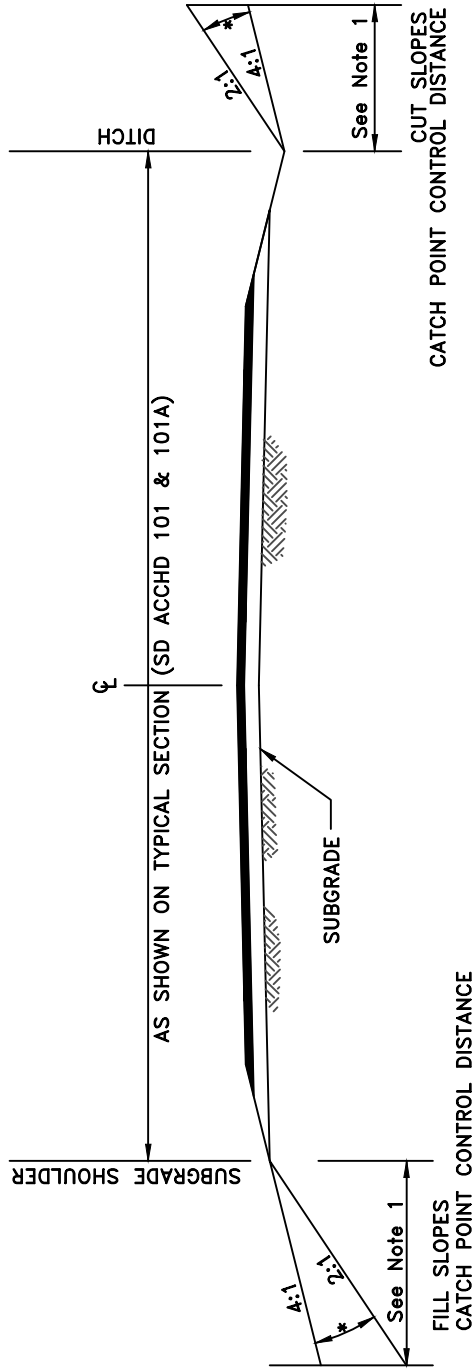


\* 10-foot Roadway, Drainage, Slope, and Utility Easement

### 5-LANE ROAD SECTION

N.T.S.

STANDARD DRAWING No. ACCHD-102A  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO



N.T.S.

\* VARIABLE SLOPE 4:1 - 2:1

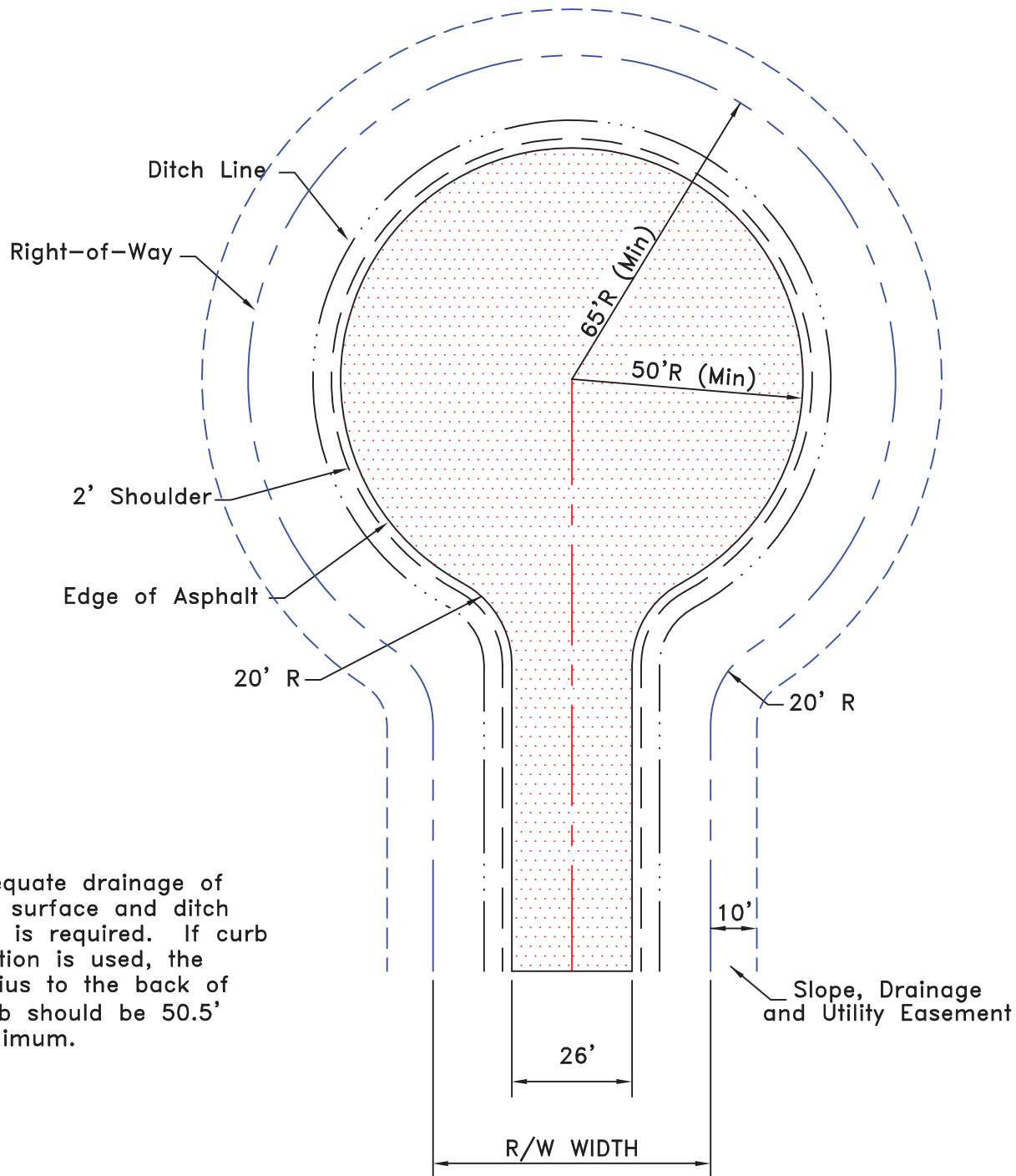
NOTES:

1. SET THE CATCH POINT CONTROL DISTANCE AT 1 FOOT INSIDE THE RIGHT-OF-WAY:  
USE 4:1 SLOPE FOR CUTS AND FILLS THAT CATCH INSIDE THE CATCH POINT CONTROL DISTANCE.  
USE VARIABLE SLOPES (4:1 TO 2:1) FOR CUTS AND FILLS THAT CATCH AT THE CATCH POINT CONTROL DISTANCE.  
USE 2:1 SLOPE FOR CUTS AND FILLS THAT EXTEND BEYOND THE CATCH POINT CONTROL DISTANCE, (SEE NOTE #2).
2. CUT AND FILLS SLOPES IN DIFFICULT TERRAIN MAY REQUIRE SPECIAL CONSIDERATION AND ADDITIONAL RIGHT-OF-WAY.
3. ALL SLOPES SHALL BE CHECKED TO DETERMINE IF GUARDRAIL IS WARRANTED BASED ON SLOPE HEIGHT AND STEEPNESS.
4. WHEN USING GUARDRAIL, WIDEN SHOULDERS AS APPROPRIATE.

STANDARD SIDE SLOPE DETAIL

N.T.S.

STANDARD DRAWING No. ACCHD-103  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO



NOTES:

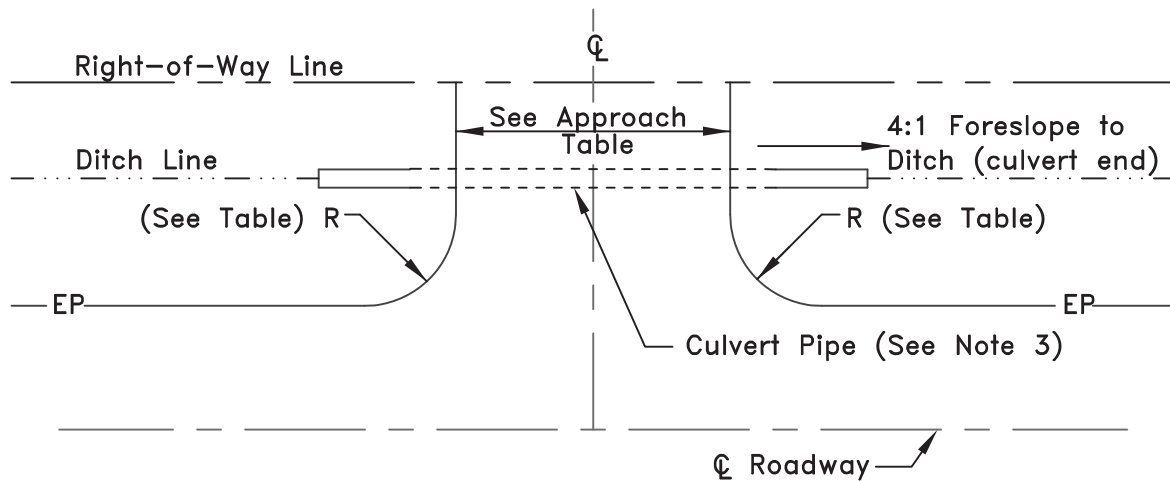
Adequate drainage of the surface and ditch line is required. If curb section is used, the radius to the back of curb should be 50.5' minimum.

## STANDARD CUL-DE-SAC LAYOUT

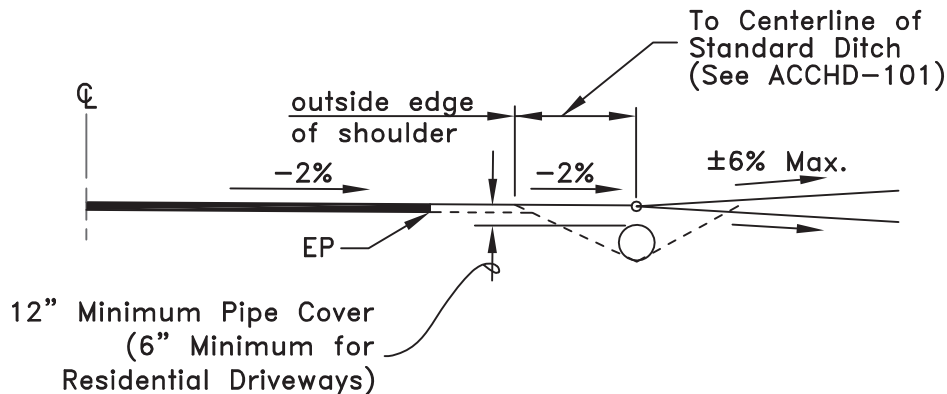
N.T.S.

STANDARD DRAWING No. ACCHD-104  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO

REVISED 5/07



APPROACH PLAN



GRADE REQUIREMENTS

APPROACH TABLE

APPROACH TYPE	Appr. Width		Min. Radius
	Min.	Max.	
Farmyard, Field	20'	40'	20'
Residential*, on Rural Road	20'	30'	10'
Residential*, on Subd. Road	20'	36'	0'
Or	15'		5'

APPROACH STRUCTURAL SECTION

2.5" Asphalt (optional)  
6" Base  
9" Sub Base

\*Residential approach serving 1 or 2 residences.  
See ACCHD-106 for approaches serving commercial, or 3 or more residences.

**NOTES:**

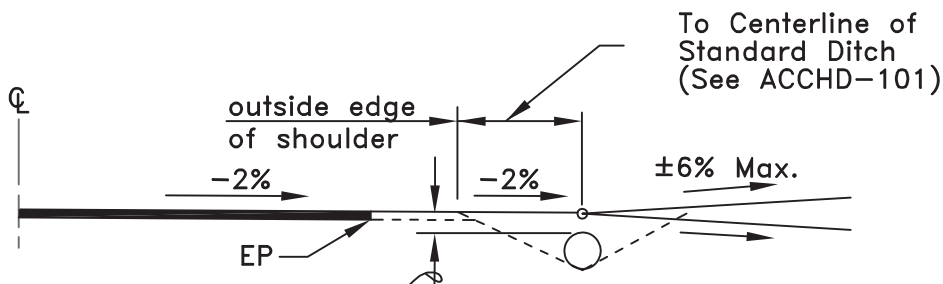
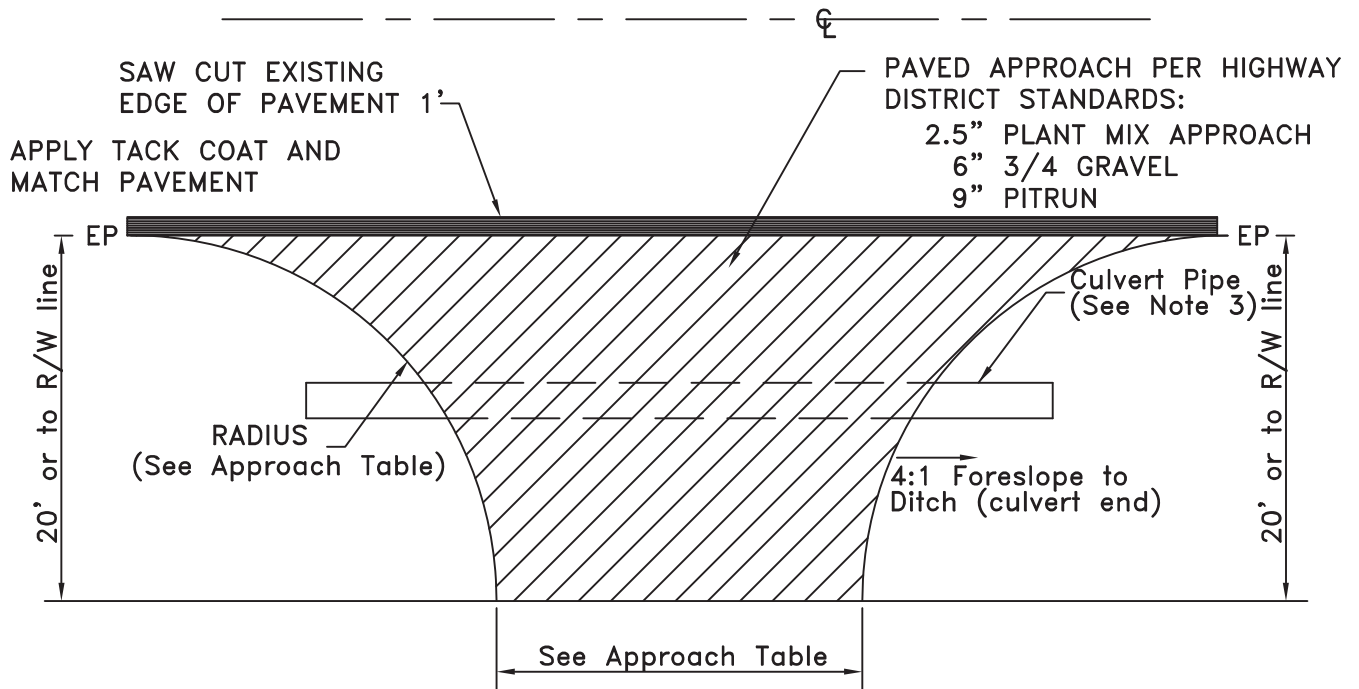
1. APPROACH SPACING SHALL CONFORM TO SECTION 3000 OF THE ACCHD MANUAL.
2. INGRESS/EGRESS BY FORWARD MOTION ONLY.
3. CULVERT PIPE SHALL BE 12" MIN. DIAMETER. CULVERT PIPE SHALL EXTEND TO THE INTERSECTION OF THE DITCH LINE AND THE 4:1 APPROACH FORESLOPE. PIPE MATERIAL SHALL BE EITHER 0.064" THICK CORRUGATED STEEL, 0.060" CORRUGATED ALUMINUM OR CLASS V REINFORCED CONCRETE. CULVERT PIPE SHALL BE A MINIMUM OF 6 FT. FROM THE EDGE OF APPROACH TO CULVERT END.
4. SUBDIVISION ROADS ARE DEFINED AS ROADS THAT PRIMARILY PROVIDE ACCESS TO ADJACENT LOTS OR PARCEL, DO NOT SERVE AS COLLECTOR ROADS, ARE NOT LOCATED ON SECTION OR QUARTER SECTION LINES, AND HAVE A POSTED SPEED OF 25 MPH OR LESS. ALL OTHER ROADS SHALL BE CONSIDERD RURAL ROADS FOR APPLICATION OF APPROACH STANDARDS.

## STANDARD RESIDENTIAL APPROACHES

N.T.S.

STANDARD DRAWING No. ACCHD-105  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO

REVISED 12/08



APPROACH TABLE

APPROACH TYPE	Appr. Width*		Min.** Radius
	Min.	Max.	
Residential, Three or More	24'	30'	20'
Commercial (One Way)	20'	30'	20'
Commercial (Two Way)	24'	40'	20'

\* Does not include 2' gravel shoulder on each side of approach.

\*\* Or based on applicable commercial design vehicle.

**NOTES:**

1. APPROACHES SPACING SHALL CONFORM TO SECTION 3000 OF THE ACCHD MANUAL.

2. INGRESS/EGRESS BY FORWARD MOTION ONLY.

3. CULVERT PIPE SHALL BE 12" MIN. DIAMETER. CULVERT PIPE SHALL EXTEND TO THE INTERSECTION OF THE DITCH LINE AND THE 4:1 APPROACH FORESLOPE. PIPE MATERIAL SHALL BE EITHER 0.064" THICK CORRUGATED STEEL, 0.060" CORRUGATED ALUMINUM OR CLASS V REINFORCED CONCRETE.

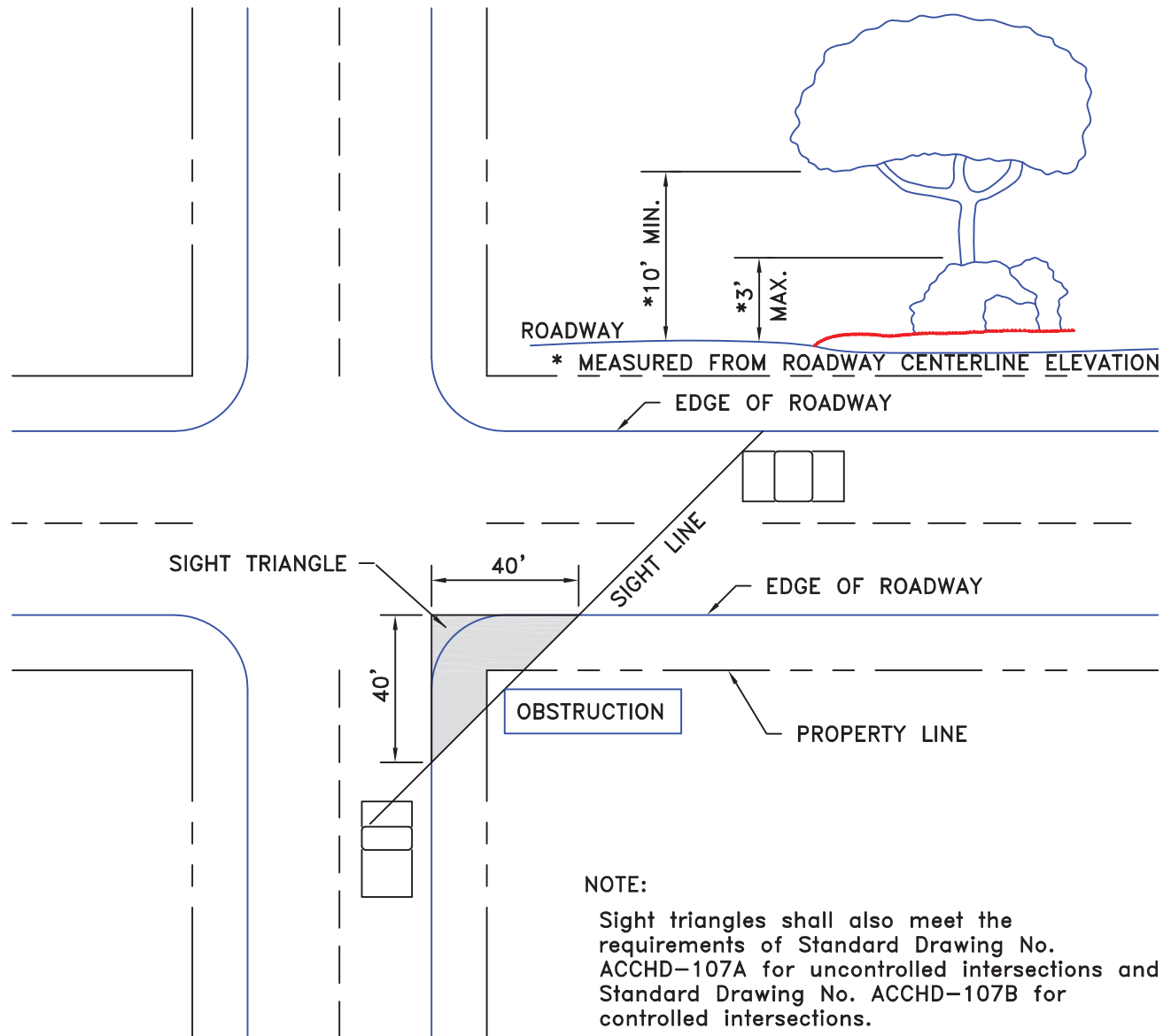
## COMMERCIAL APPROACH AND ACCESS SERVING 3 OR MORE PROPERTIES

N.T.S.

STANDARD DRAWING No. ACCHD-106  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO

REVISED 12/08

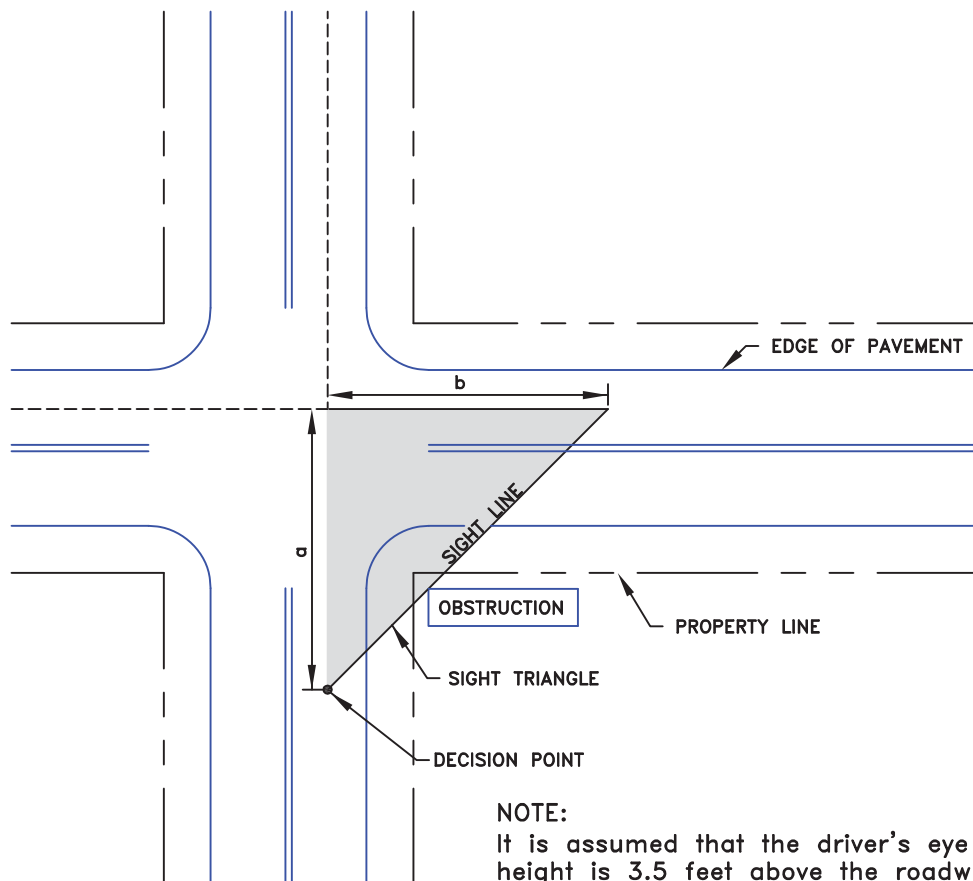




## CLEAR SIGHT TRIANGLE

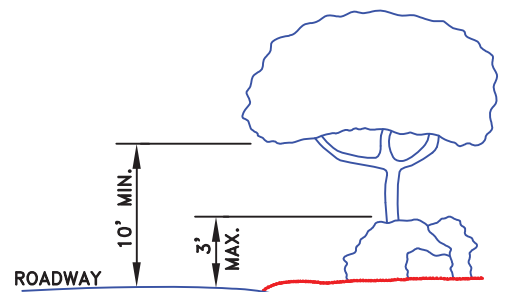
N.T.S.

STANDARD DRAWING No. ACCHD-107  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO



Design Speed (mph)	Length of Leg [a,b] (ft)
20	90
25	115
30	140
35	165
40	195

Sight triangles for uncontrolled intersections shall also meet the Idaho Code requirements shown on Standard Drawing No. ACCHD-107



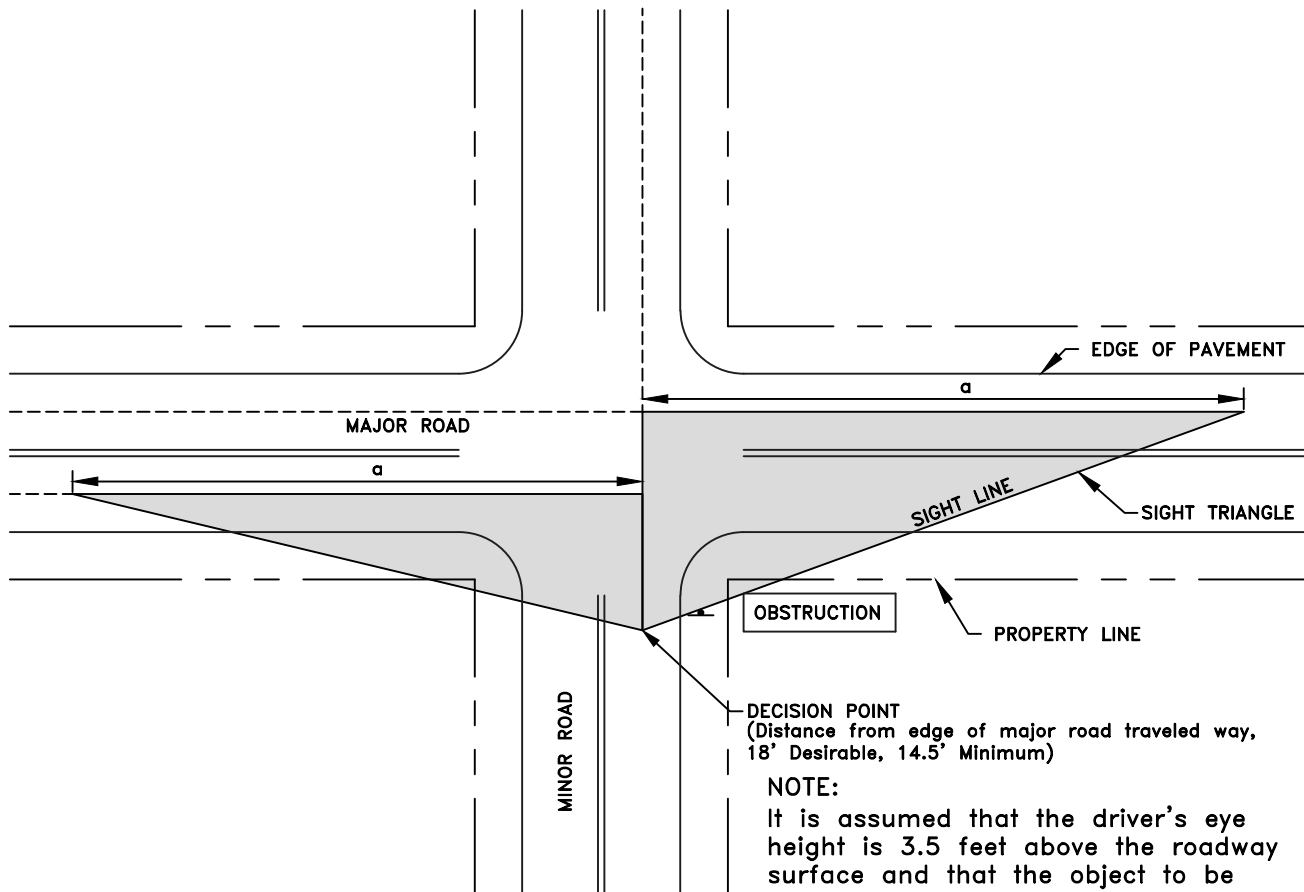
Obstructions between 3' and 10' above the roadway centerline surface elevation are prohibited within sight triangles

## SIGHT TRIANGLE AT UNCONTROLLED INTERSECTIONS

N.T.S.

STANDARD DRAWING No. ACCHD-107A  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO

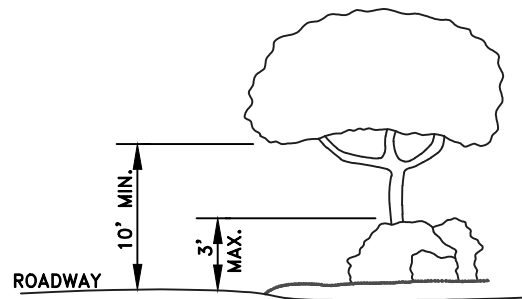
REVISED 5/07



**NOTE:**

It is assumed that the driver's eye height is 3.5 feet above the roadway surface and that the object to be seen is 3.5 feet above the surface of the intersecting road.

Design Speed (mph)	Stopping Sight Distance (ft)	Length of Leg a (ft)
20	115	225
25	155	280
30	200	335
35	250	390
40	305	445
45	360	500
50	425	555
55	495	610
60	570	665
65	645	720



Obstructions between 3' and 10' above the roadway centerline surface elevation are prohibited within sight triangles

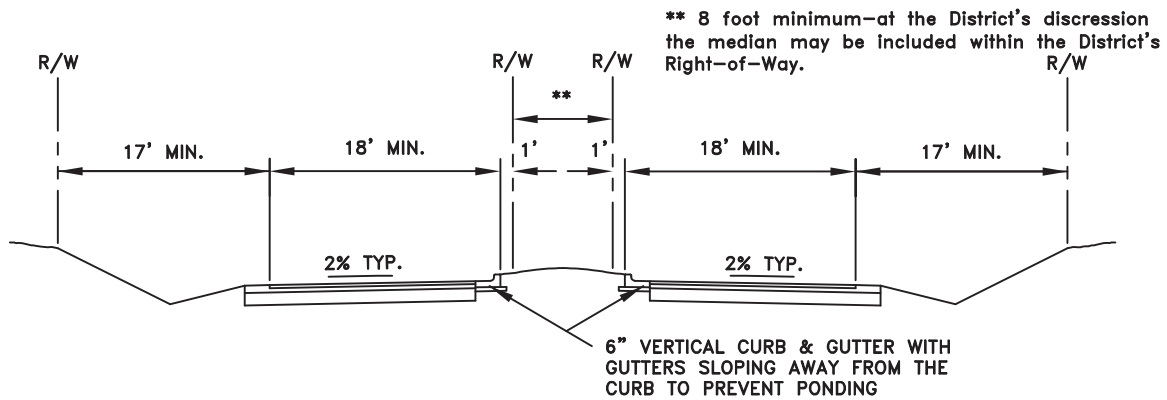
Sight triangles for controlled intersections shall also meet the Idaho Code requirements shown on Standard Drawing No. ACCHD-107

## SIGHT TRIANGLE AT CONTROLLED INTERSECTIONS

N.T.S.

STANDARD DRAWING No. ACCHD-107B  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO

REVISED 10/16



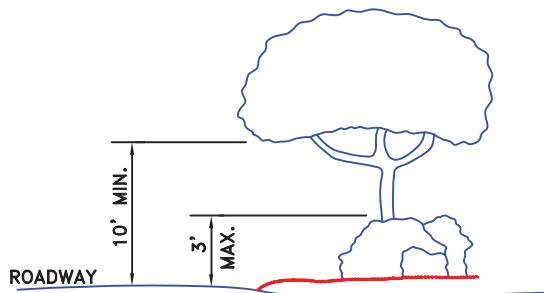
### TYPICAL STREET SECTION

N.T.S.

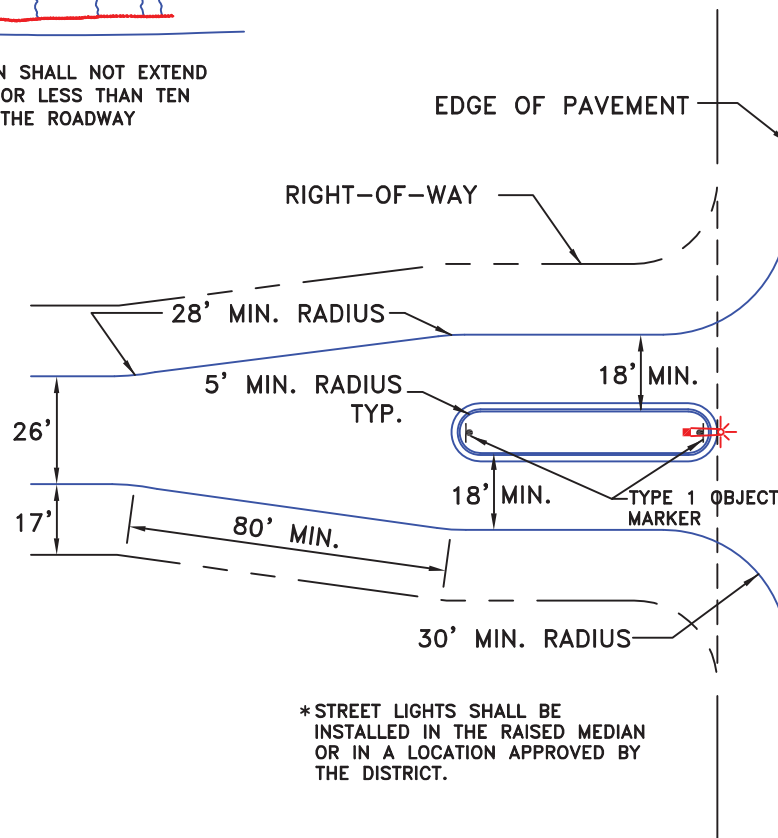
#### NOTE:

ROADWAY STRUCTURAL SECTION, DITCH FORESLOPE AND BACKSLOPE PER TYPICAL SECTION (ACCHD-101 & 101A).

VERTICAL CURB & GUTTER PER ISPWC.



OBSTRUCTIONS IN THE MEDIAN SHALL NOT EXTEND MORE THAN THREE (3) FEET OR LESS THAN TEN (10) FEET IN HEIGHT ABOVE THE ROADWAY CENTERLINE ELEVATION.

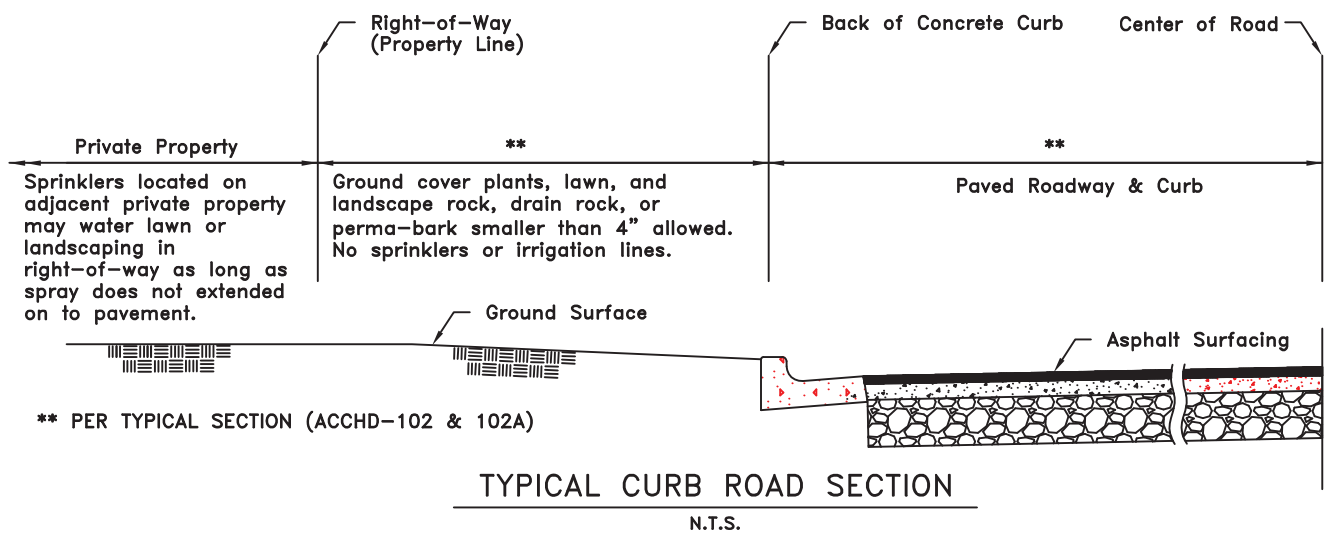
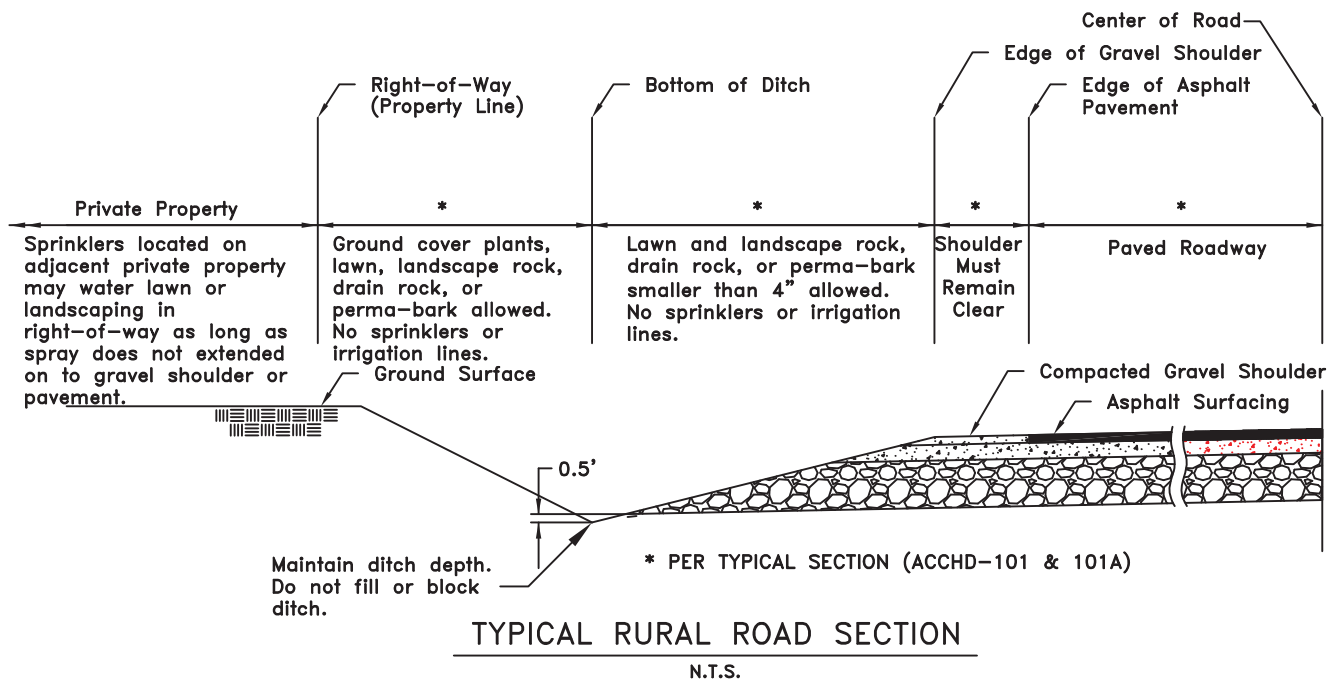


\* STREET LIGHTS SHALL BE INSTALLED IN THE RAISED MEDIAN OR IN A LOCATION APPROVED BY THE DISTRICT.

### RAISED MEDIANS

N.T.S.

STANDARD DRAWING No. ACCHD-108  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO



#### GENERAL NOTES:

1. Landscape rock, drain rock or perma-bark within the right-of-way must be 3" or smaller in size.
2. Use of wood landscape bark within the right-of-way is not allowed.
3. Where permitted, ground cover plants within the right-of-way shall not exceed 6" in height.
4. No irrigation piping, sprinklers, or other irrigation components are permitted in the right-of-way.
5. Any landscaping or mailbox located within the right-of-way not complying with District standards or otherwise creating a safety or maintenance concern may be removed by the District without notice.
6. For local roads the nearest face of the mailbox shall be located at or behind the back of curb or on rural subdivision roads at the outside edge of shoulder, or other greater distance required by the U.S. Postal Service. For collector and arterial roads place mailboxes in accordance with ISPWC SD-808.
7. Mailboxes shall be installed on a 4" by 4" wood post, 2" diameter steel pipe with a maximum wall thickness of 0.095", a support meeting the requirements of the Local Highway Technical Assistance Council's Manual For The Location, Support, and Mounting of Mailboxes, Current Edition, or equivalent support system approved by the District. Mailboxes installed on mounting or support systems determined unacceptable by the District, including, but not limited to, brick, masonry, concrete, rock, or heavy gauge metal, shall be relocated outside the right-of-way at the owner's expense.

STANDARD DRAWING No. ACCHD-110  
CANYON COUNTY HIGHWAY DISTRICTS  
CANYON COUNTY, IDAHO

REVISED 5/07