Highway Standards

for the

Associated Highway Districts

KOOTENAI COUNTY, IDAHO

2023

POST FALLS LAKES EAST SIDE WORLEY

HIGHWAY STANDARDS

FOR THE

ASSOCIATED HIGHWAY DISTRICTS

KOOTENAI COUNTY IDAHO

2023

Adopted By:

EAST SIDE HIGHWAY DISTRICT	April 17, 2023 (Date)	(Chairman)
LAKES HIGHWAY DISTRICT	March 22, 2023 (Date)	(Chairman)
POST FALLS HIGHWAY DISTRICT	April 5, 2023 (Date)	(Chairman)
WORLEY HIGHWAY DISTRICT	3-29-23 (Date)	(Chairman)

Section 100

Introduction

Section 100 – Introduction

101. Authority of Highway Districts

101.01. The authority to establish Highway Districts within the State of Idaho is a power vested in the county government by Idaho Code Section 40, Chapter 6. The authority for administrative responsibility over road rights-of-way is assigned to the Highway District under Idaho Code Section 50-1330.

101.02. The 37th session of the Idaho Legislature enacted H.B. 329, which brought about the authority to hold an election within Kootenai County to consolidate the then numerous districts into four. On December 14, 1970, the Kootenai County Commissioners took action to officially form the four Highway Districts of East Side, Lakes, Post Falls, and Worley. This action is recorded in the Kootenai County Courthouse, Book S, Pages 230 and 231 of the Commissioner's Journal. This action gave authority and responsibility to these Districts to construct and maintain a continuous safe roadway transportation facility within Kootenai County.

101.03. In 1971, the four Highway Districts in Kootenai County consisting of East Side Highway District, Lakes Highway District, Post Falls Highway District, and Worley Highway District formed an association named the Associated Highway Districts of Kootenai County, Idaho (AHDKC). The purpose of this organization is for the betterment of the secondary highway system in Kootenai County through cooperation of all the existing Highway Districts, dissemination and sharing of knowledge and ideas common to and for the benefit of all operating Highway Districts within Kootenai County, and to actively seek through legislative action or any other available source to constantly improve the secondary highway system in the State of Idaho and particularly within Kootenai County. The Commissioners and Director of Highways from the four Highway Districts each have one vote on decisions made by this body, and they elect a chairman and a vice-chairman with an appointment of a secretary/treasurer. An executive board is also established consisting of one member of each Highway District who has been appointed by that District. These Standards are prepared for the Associated Highway Districts of Kootenai County and are intended for their use in administering their road programs in Kootenai County.

102. Need for Uniformity

102.01. It is the intent of these Standards to provide a uniform roadway network in Kootenai County. While each Highway District in Kootenai County has its own jurisdiction, there is a common goal to provide consistent roadways to serve the people of Kootenai County. The roadway system of Kootenai County is established by the Highway Districts as shown on the Functional Highway Classification System map in each Highway District Office.

102.02. It is further the intent of these Standards to upgrade and maintain the safest roadway system available to the Highway Districts' users. It is not the intent to put forward conflicting Standards that will infringe upon the safety of the traveling public.

102.03. The maintenance of the roadway systems is the responsibility of the Highway Districts. Consequently, the intent of these Standards is also to facilitate that maintenance responsibility by designing roads and constructing them in such a manner that maintenance will be minimized.

102.04. These Standards are minimum standards and do not preclude a member Highway District from requiring a different or greater standard.

103. Non-Discrimination Policy Statement

103.01. The Associated Highway Districts assure that no person shall, on the grounds of race, color, national origin, sex, age, disability, or retaliation as provided by Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987 (Public Law 100.259), and subsequent related acts, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity. The Associated Highway Districts further assure every effort will be made to ensure non-discrimination in all of its programs and activities, whether those programs and activities are federally funded or not.

The Civil Rights Restoration Act of 1987 broadened the scope of Title VI coverage by expanding the definition of terms "programs or activities" to include all programs or activities of Federal Aid recipients, sub-recipients, and contractors/consultants, whether such programs and activities are federally assisted or not (Public Law 100.259 (S.557) March 22, 1988).

104. Disclaimer

104.01. Nothing herein shall be construed to impose an obligation or duty upon the Highway Districts to construct, reconstruct, or improve existing roadways to comply with these Standards.

105. Severability Clause

105.01. If any section, sub-section, sentence, clause, phrase, or portion of these Standards 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.

Section 200

General Conditions

Section 200 – General Conditions

201. Plat Approval

201.01. Care must be exercised by the developer/applicant in coordinating the preparation of plats with Kootenai County, any applicable municipality and the Highway District having jurisdiction in the area. The Highway District must review the preliminary plat, as well as the final plat, to make sure that all items conform to these Associated Highway Districts' Standards. Once the Highway District receives the applicant's information and comments from Kootenai County, the Plat will be placed on the Highway District regular meeting or workshop agenda. The Subdivision Review Fee/deposit must be paid in order to be placed on the Highway District meeting agenda. A Traffic Impact Study may be required by a Highway District for a plat, re-plat, or land use change. (See **Appendix**.)

The Highway District Board of Commissioners will review the Subdivision Plat at a regular meeting or workshop. The Board, in its sole discretion, may call a special meeting to review the Subdivision Plat if requested to do so by an applicant. If a special meeting is called, a minimum fee of $500.00 will be required. The District will then respond to Kootenai County with a letter of the Highway District's requirements. A copy of this letter will be sent to the applicant/developer, surveyor, or engineer.

201.02. All Final Subdivision Plats within the Highway District's jurisdiction shall be submitted for review at the appropriate Highway District. The signature of the Chairman of the Highway District Board of Commissioners shall appear on all such Final Subdivision Plats prior to presentation for recording with the Kootenai County Recorder. Such signature shall signify the Highway District's review of the Final Plat and general acceptance of the Plat only, and such signature does not constitute acceptance of any roadway depicted on the Plat prior to its construction to these Standards and acceptance for maintenance and repair by the Highway District.

202. Road Right-of-Way and Easement Dedication

202.01. All rights-of-way that are intended for public use shall be dedicated to the public in the name of the Highway District. Easements shall be perpetual and exclusive roadway drainage and utility easements dedicated to the public in the name of the District.

202.02. Any public rights-of-way to be created, which are not within a recorded subdivision plat, shall be transferred to the appropriate Highway District by acceptable deed or easement, as defined by Idaho Code 40-202. A statement of acceptance of such right-of-way must appear in the official records of the Highway District. Upon acceptance of a deed or easement for a public right-of-way, such instrument shall be submitted to the Highway District for recording with the Kootenai County Recorder.

202.03. Rights-of-way for existing roads adjacent to the plat shall be dedicated or conveyed by easement to the public in the name of the Highway District from the centerline of the existing road or from the section line, whichever is greater. Centerlines of existing roads,

which do not coincide with the section line, must be shown by dimension and location on the plat.

202.04. The Highway District may require that all roads or portions thereof adjacent to the plat be constructed or reconstructed to current Associated Highway Districts' standards.

202.05. All utility relocation costs associated with subdivision road improvements, construction or reconstruction requirements shall be paid for by the developer.

203. Roadway Plans

203.01. Roadway plans consisting of the plan and profile view of the roadway to be constructed shall be prepared by a Professional Engineer licensed in the State of Idaho and shall be of a scale sufficient to show the necessary details but shall in no case be to a scale less than 1" = 50' horizontally and 1" = 5' vertically. Under special design circumstances, cross sections of the roadway may be requested by the Highway District. The roadway plans must include provisions for proper drainage of both the natural watercourses and the roadway, and they must show any necessary easements, and any special design considerations necessary for the completion of the roadway structure. The developer, or his engineering representative, shall call to the attention of the Highway District any proposed deviations from these Standards.

203.02. Two (2) copies of all roadway plans requiring the Highway District's approval must be submitted to the Highway District no less than thirty (30) days prior to a regular or special meeting of the appropriate Highway District.

203.03. The applicable Highway District will review the plans at a regular or special meeting and will make the necessary comments or approval in writing to the developer or his engineering representative within two weeks after the review meeting.

203.04. The roadway cross section outside the paved area and inside the remaining right-of-way shall conform in all aspects with the American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide, latest edition.

204. Development Construction Time Period

204.01. The developer shall make every effort to complete the road construction in the development or phased development within a period of two (2) years from final plat approval. If after two years, the roads are not completed to these Standards, the development is subject to a review of the roadway plans and an upgrading of those plans to coincide with any new Standards adopted by the Highway District.

205. Financial Guarantee Agreements on Plat Infrastructure

205.01. Prior to the approval of the final plat, the developer shall place with the appropriate Highway District or with Kootenai County a surety bond, cash deposit, certified check,

negotiable bond or irrevocable bank letter of credit in the amount of 150 percent of the total estimated cost of construction of the remaining and/or unfinished improvements as estimated by the Highway District and in accordance with the current Kootenai County Subdivision Ordinance. In the event the developer completes construction and does not bond for the improvements, the developer shall provide a two (2) year guarantee on completed work in an amount equivalent to 10% of the engineer's estimate of construction improvements prior to the Highway District signing the final plat. Any financial guarantee shall be in a form approved by the District. A bond placed with Kootenai County shall also name the Highway District.

206. Street and Road Names

206.01. All road names shall be submitted to and approved in accordance with the Kootenai County Road Naming and Addressing Ordinance, latest Ordinance.

206.02. Road name signs shall be installed at all new road intersections by the developer. All signs shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) or as modified by the Kootenai County Street and Road Naming and Addressing Ordinance, latest ordinance.

207. Construction Observation

207.01. The observation of the construction work as outlined in these Highway Standards shall be accomplished by the applicable Highway District Director or his agent. The Director will be given a minimum 24-hour notice of the need for observation. Said 24-hour period and observation visit shall be included in the normal workweek of the applicable Highway District.

207.02. Those phases of construction requiring observation shall be as follows:

207.02.a. After all erosion control measures are in place.

207.02.b. After the topsoil has been stripped and all clearing has been completed.

207.02.c. Immediately after all drainage, utilities and retaining structures have been completed, prior to their backfill and subsequently after their backfill.

207.02.d. After the subgrade has been prepared and compacted to its finished grade.

207.02.e. After the ballast has been placed and compacted to its finished grade.

207.02.f. After the base material has been placed and compacted to its finished grade.

207.02.g. During and after all asphalt surfacing operations.

207.02.h. After final cleanup and seeding are completed.

207.02.i. After final site stabilization is complete.

208. Fees for Plan Reviews, Construction Observation and Fees in Lieu of Construction

208.01. The developer/applicant will be charged for all fees related to the reviews of the preliminary plat, final plat, roadway plan and profile and for all construction observation. Charges for plan reviews and observation will be based on the Highway District's actual cost. The charges will include the Highway District engineer's fees, legal fees, the Highway District agent's hourly costs, mileage for the Highway District agent, material testing, compaction testing, and quality control testing required by the Highway District. Any testing required by the Highway District (other than Supplemental Testing) but not provided by the applicant may be completed by the Highway District, and all costs associated therewith shall be paid by the applicant. The fees shall be payable as billed and final acceptance of the roadway into the Highway District system will not be granted until all costs and fees are paid by the applicant.

Major and Minor Subdivision Review Fees - The developer/applicant will be charged those fees and cost established by each individual Highway District for review of the proposed subdivision. All adjoining roads must be constructed to current Highway District Standards. In subdivisions with four or less lots, in lieu of actual construction of adjacent roadway improvements, at the discretion of the Highway District Board, a per lot fee may be accepted for each additional lot created.

Private Roads – Kootenai County Subdivision Ordinance requires private roads in gated communities to be built to Associated Highway Districts Standards and the Highway District to verify the road construction meets its standards. Pursuant to a Memorandum of Understanding entered into between Kootenai County and the Highway Districts, the Highway Districts have agreed to provide this service. Therefore, a deposit must be submitted to the appropriate Highway District for plan reviews and construction observation, which will be conducted to verify roads are designed and constructed to Highway District Standards. This deposit shall be remitted to the Highway District Office prior to any reviews or construction observation. The applicant will be required to replenish the deposit when it becomes depleted prior to any further construction observations being done.

209. Special Permits

209.01. Idaho Code Section 50-1330 gives Highway Districts exclusive jurisdiction over public road rights-of-way. Any use of the rights-of-way for purposes other than vehicular travel along the roadway shall be by permit only, obtained from the appropriate Highway District. This will include, but not be limited to, driveways, approach roads, buried utilities, signs, utility poles, conduits, landscaping, etc. The use of rights-of way for other than vehicular travel shall be in accordance with the Utility Coordination Policy adopted by the Associated Highway Districts and included in the **Appendix** of these Standards.

209.02. All new approaches to roads and rights-of-way must secure an Approach Permit from the respective Highway District. The approach permit or permit to use right-of-way is contained in the **Appendix**. Approaches or intersections onto District roads shall be designed and constructed to provide forward vehicular movement for ingress and egress to the adjacent properties. Approaches or intersections shall be limited such that a minimum separation of 330-feet center to center of approach or intersection is achieved on arterial and major collector roads. Minimum approach spacing on minor collector and local roads shall meet the minimum stopping sight distances specified in Standard Detail 3A for the various travel speeds.

209.03. All utilities within rights-of-way must secure a permit to use the right-of-way from the respective Highway District. All utilities Installed within the right-of-way shall be installed a minimum of 36 inches below:

1. The finished road surface
2. The invert of ditches
3. Any culvert

Utilities shall be placed between the ditch line and the right-of-way line or within the 10-foot perpetual and exclusive roadway, drainage, and utility easement unless otherwise approved by the Director. Utilities placed near culverts shall be 5 feet beyond the end of a culvert and may be buried at standard depths.

All utility road crossings with one or more of the following criteria shall be bored, no open cuts allowed unless a bore pit reveals material that is unsuitable for boring or the bore fails to cross after three (3) attempts

1. The road has an ADT of 100 or less
2. The road has a functional classification of minor collector or above.
3. The pavement is less than five (5) years old.
4. The road has been chip sealed within the last three (3) years.
5. The road is being used as a detour route.

Refer to Standard Detail 7A for Open-Cut Policy, Chip Seal and Transverse Bore Requirements.

209.04 The Highway Districts have adopted a no-dig policy within the roadway prism from October 15 to April 15. Emergency excavations require the approval of the Director and will require temporary road surfaces until full repairs can be made. A bond for 150 percent of the full road repair will be required. The roadway prism is the roadway surface and ditch slopes from the centerline of the ditch to the opposite side ditch centerline.

209.05. The Highway Districts have adopted policies for open cuts and transverse road bores. Standard Drawings SD-7A and 7B contain these policies.

209.06. Protection of Roadways – Weight and Speed Reductions. The Highway Districts are authorized by Idaho Code 49-1005 to make regulations reducing the permissible sizes, weights, or speeds of vehicles operated on highways for any periods as may be necessary for the protection of the highway or for public safety.

210. Acceptance into Highway District System

210.01. Acceptance of any road or right-of-way into Highway District system for ownership and/or maintenance is at the sole discretion of each Highway District Board. If a roadway is to be considered for acceptance into the Highway District system for ownership and maintenance, all conditions, specifications, and Standards of the Highway District shall have been met or a variance shall have been granted thereto.

210.02. A request for acceptance of a roadway shall be in written form and shall be accompanied by the following:

1. Payment of all fees
2. Engineer's Statement of Completion with required submittal
3. Final review and acceptance of the roadway and right-of-way by Highway District staff

210.03. The Highway District Board, by motion and a passing vote, shall be the only method of accepting a roadway into Highway District system for ownership and maintenance.

211. Stormwater Compliance

211.01. All work within a public right-of-way or on adjacent land that drains to public right-of-way shall comply with all applicable federal, state, and local stormwater rules and regulations. All work within a public right-of-way shall comply with the stormwater resolution of the respective Highway District. Also see Section 307 - Drainage.

Section 300

Design Criteria

Section 300 – Design Criteria

301. General Design Criteria

301.01. All designs shall be based on criteria listed in the Highway Standards for the Associated Highway Districts. Any variance from these Standards and/or use of other standards or design criteria must be submitted and reviewed in accordance with Section 500 of these Standards prior to use.

Reference Manuals for design criteria (latest editions):

- MUTCD (Manual on Uniform Traffic Control Devices)
- AASHTO A Policy on the Geometric Design of Highways and Streets
- AASHTO Roadside Design Guide
- AASHTO Bridge Design Manual
- AASHTO Guide for the Development of Bicycle Facilities
- AASHTO Manuals as appropriate and not listed herein
- Idaho Transportation Department (ITD) Standard Drawings & Standard Specifications
- ITD Traffic Manual (online only)
- Idaho Standards for Public Works Construction (ISPWC) Standard Specifications and Standard Drawings
- Local Highway Technical Assistance Council (LHTAC) Manuals
- Public Right-of-Way Accessibility Guidelines
- Idaho Department of Environmental Quality, Stormwater Best Management Practices

301.02 All surveys, maps or legal descriptions submitted to the Highway Districts for design and all related work shall be conducted under the supervision of a Professional Land Surveyor licensed in the State of Idaho. Additionally,

- The topographic survey shall locate and note, via a legend or leader, all features within the project area including all trees larger than 6” at waist height.
- The topographic survey shall show all those underground utilities marked by the one-call locating service.
- Underground structures such as manholes, catch basins and drywells shall include rim and invert elevations. Other similar miscellaneous structures with inverts shall also contain rim and invert information.
- The topographic features shall be located based on standard survey procedures such as GPS or total station work and/or:
  - The topographic features may be located through the use of properly georeferenced aerial imagery such as those obtained by drones.
- The topographic survey shall obtain sufficient shot density to produce a 1’ contour map.

- The topographic survey drawing shall be on a size similar to the other plan sheets but shall be no smaller than 11x17.
- Horizontal Datum shall be NAD 83/11 – at ground.
- Vertical Datum shall be NAVD88.
- The topographic survey shall be stamped and signed by a professional land surveyor.

302. Roadway Classification

302.01. All roadways within each Highway District shall be classified in accordance with the current version of the Federal Highway Act. All roads shall be classified as Arterials (Rural or Urban), Collectors or Local Residential Roads. It shall be the prerogative of the Highway District having jurisdiction over the area to define which roads are classified as Arterials, Collectors or Local Residential Roads. Refer to SD-1 for information on roads.

303. Public Right-of-Way

303.01. Arterial routes shall have a right-of-way between 80 and 120-feet in width with additional right-of-way or easement as needed to accommodate cut and fill sections.

303.02. Collectors shall have a right-of-way width of between 60 and 120-feet with additional right-of-way or easement as needed to accommodate cut and fill sections.

303.03. Local residential roads shall have a right-of-way width of between 60 and 80-feet with additional right-of-way or easement as needed to accommodate cut and fill sections.

303.04. Right-of-way for future connectivity of local public roads shall be provided. Additionally, roads providing access to 25 or more properties shall have multiple points of access from another public roadway.

303.05 Cul-de-sacs shall have a minimum right-of-way radius of 60-foot with additional right-of-way or easement as needed to accommodate cut and fill sections and snow storage area. Cul-de-sacs of a temporary nature may be allowed providing each right-of-way is shown on the plat and approved by the Highway District. A standard cul-de-sac layout is shown in the **Appendix**.

303.06. All intersecting rights-of-way lines at road intersections shall be connected by a curve having a minimum radius of 30 feet. All intersecting rights-of-way lines at cul-de-sac bulbs and private driveway approaches shall be connected by a curve having a radius of 20 to 30 feet or as directed by the Highway District.

303.07. There shall be a perpetual and exclusive minimum 10-foot roadway, drainage, and utility easement granted to the Highway District on each side of the right-of-way in addition to the right-of-way widths required in Sections 303.01 through and including 303.04.

304. Alignment

304.01. The following table is intended to show the minimum and maximum values for various parameters used in roadway design for the three classes of roads. Design centerline and super elevation rates shall comply with AASHTO, A Policy on Geometric Design of Highways and Streets based on agency designated classification and speed of roadway. The centerline profile of roads shall also be designed above the surrounding ground in flat and rolling terrain as defined in these Standards.

Design Parameters	Arterial	Collector	Local
Vertical Grades	Min. 0.5% Max. 6%	Min. 0.5% Max. 6%	Min. 0.5% Max 6% Max 2% Cul-de-sac
Horizontal Curvature On Centerline	7˚ max. Min. Radius 830'	11.5˚ max. Min. Radius 510'	25˚ max. Min. Radius 200'
Design Speed	35-55 mph	35-55 mph	35-45 mph
Superelevation	Max 0.06-ft/ft	Max. 0.06-ft/ft	Max 0.06-foot per foot
Minimum Runoff	150-feet	120-feet	110-feet
Angles of Intersection	80-90˚	80-90˚	80-90˚
Turn Lane	Width = 12' all locations		
	Length and Taper = per ITD Design Manual, designed by P.E.		

304.02 Where development occurs within an Area of City Impact, the District will defer to City Roadway Design Standards.

305. Stopping and Passing Sight Distance

305.01. The stopping and passing sight distances shall be at least the minimum shown in the following table for the design speed used on the roadway.

Minimum Sight Distances in Feet

Design Speed, MPH	20	25	30	35	40	50	60
Stopping Sight Distance:							
Stopping Distance, ft.	115	155	200	250	305	425	570
K Value for:							
Crest Vertical Curve	7	12	19	29	44	84	151
Sag Vertical Curve	17	26	37	49	64	96	136
Passing Sight Distance:							
Passing Distance, ft. 2 lane	710	900	1090	1280	1470	1835	2135
K Value for:							
Crest Vertical Curve	180	289	424	585	772	1203	1628

Notes

1. K value is a coefficient by which the algebraic difference in grade may be multiplied to determine the length in feet of the vertical curve, which will provide minimum sight distance.
2. According to AASHTO's Policy on Geometric Design of Highways and Streets (latest edition), the following values are assumed in sight distance design:
   a. Driver's eye height: 3.50 feet for computation of stopping sight distance and passing sight distance.
   b. Object height: 3.50 feet for computation of passing sight distance and 2.00 feet for computation of stopping sight distance.
   c. Perception/reaction time: assumed equal to 2.5 sec(s) for stopping sight distance.

306. Roadway Cross Section

306.01. The Roadway Standard Drawing sheets (SD-1 and SD-2) in the **Appendix** depict the cross section characteristics for arterial, collector, and local residential roads. The pavement width is exclusive of the pavement requirements for bike/pedestrians, for paved shoulders or widening on corners. The pavement width for the class of road will be set by the individual Highway District. The individual Highway District may also require bike/pedestrian paths, paved shoulders and/or pavement widening on corners (on narrow roads, on tight radius curves, or on roads with 5 percent or greater truck traffic.

306.02. Local residential roads are intended to provide access to local properties and provide connectivity or alternative access to nearby subdivisions or parcels of land. The Highway District will determine the paved surface width based on the following criteria:

1. A 22-foot paved surface width may be allowed if:
    - Topographical constraints limit construction of a 28 foot paved surface width or the local residential road serves a subdivision of less than 30-lots and there is no potential for future connectivity to adjacent parcels.
2. A 24-foot paved surface width may be allowed if:
    - Topographical constraints limit construction of a 28 foot paved surface width or the local residential road within a subdivision or travel shed has no potential to be classified as a collector.
3. A 28-foot paved surface width will be required if:
    - Local residential road functions as a collector and is funneling traffic to main roadways and existing collectors or serves a travel shed that warrants a wider roadway.

The applicant must meet with the Highway District early in the project development process to discuss the paved surface width for local residential roads. The pavement width determination will be at the sole discretion of the Highway District Board of Commissioners.

306.03. Collector roads are intended to link neighborhoods or areas of homogeneous land use with the arterial roadway system. These roadways not only serve traffic movements between arterials and local roads, but also serve through traffic within local areas.

The Highway District will determine the paved surface width for collector roads based on the following criteria:

1. A 24-foot paved surface width may be allowed if:
    - Topographical constraints limit construction of a 28-foot paved surface width, and the Highway District determines that the roadway alignment and cross section proposed are consistent with the anticipated traffic volume and composition.
2. A 28-foot paved surface is the standard width for a rural collector within the Associated Highway Districts' jurisdiction.
3. A pavement width greater than 28-feet may be required at the Highway Districts' discretion to provide an acceptable level of service to accommodate the anticipated traffic volume and composition, considering the area topography, roadway alignment, and other design factors.

306.04. The typical curb and gutter section shown on the Roadway Standard Drawing SD-2 may be required on subdivisions with a density equal to or greater than one home per acre. Individual Highway Districts shall make that determination at the time of Plat Review by the Highway District.

306.05. Approaches shall be in conformance with the Local Highway Technical Assistance Council, "Manual for Use of Public Right-of-Way Standard Approach Policy," latest edition with the following exceptions. All approaches serving primarily truck traffic shall use a "curb return approach" in accordance with Fig. IV, C (SD-6). The radii shall be adequate to accommodate the truck turning movements and the maximum approach width shall be 40-feet. See Figure IV, C in the **Appendix** SD-6.

306.06. Turn lane, traffic signals, and other traffic control features in new developments shall be designed by a licensed Professional Engineer registered in Idaho.

306.06.1 For Safety, turn lanes shall be installed at all new or modified approaches based on the following traffic volumes:

Right-Turn Lanes[1]		Left-Turn By-Pass Lane[2]		Left Turn Lane[2]	
Through Volume, vph[3]	Turn Volume[4]	Opposing Through Volume, vph	Turn Volume	Opposing Through Volume, vph	Turn Volume
200	5	50	5	200	5
				100	5<19
				50	20 or more

1. Source, NCHRP Report 279, Table 4-7 (Idaho)
2. Source, NCHRP Report 745, Table 1
3. 10% of the Average Daily Traffic Volume.
4. 10% of the total estimated Home-Based Trips

Approach trip generation shall be based on Trip Generation Estimates from the 2005 Spokane and Kootenai County Regional Travel Survey, estimating Home Based Trips of 5 per residential unit, Source KMPO

306.07. Bicycle and pedestrian paths, new and extensions, may be required by the Highway District for new developments and on major roadway reconstruction projects in accordance with Highway District, Kootenai Metropolitan Planning Organization, Idaho Transportation Department, and local City Master Plans.

Bicycle and pedestrian facility classes to be considered should be consistent with these facility descriptions:

- Class I: A Class I bicycle facility is a separated multiple use path 10 to 14 feet wide. The path is physically separated from motor vehicle traffic by a 10-foot minimum open space or barrier of 4.5 feet.

- Class II: A Class II bicycle facility has a 4- to 6-foot portion of the roadway designated for preferential use by bicyclists.
- Class III: A Class III bicycle facility is a shared facility where bicyclists and motorists share the same travel lane. The travel lane should be 14 feet in width.

All bike and pedestrian projects should be designed to meet Americans with Disabilities Act (ADA) accessibility standards and American Association of State Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* (Green Book) guidelines whenever possible.

307. Drainage

307.01. All drainage for the development shall be designed by a Professional Engineer licensed in Idaho. Drainage plans shall be reviewed and approved by the Highway District in conjunction with the roadway plans. The minimum design flood for culvert sizing will be the 50-year flood event unless otherwise directed by the District. Any disruption of the normal drainage pattern of the area to be developed must have special consideration to facilitate future drainage of this area. It shall be the responsibility of the Developer to secure a Grading Permit from Kootenai County and to comply with the following requirements from the Highway Districts:

307.01.a. Approach Permit: Contractors shall have a valid permit from Kootenai County (or other local jurisdiction) for site and stormwater. This may include, but not be limited to, the following:

- A requirement that contractors have a US EPA Construction General Permit (CGP)
- A Notice of Intent (NOI) has been filed with US EPA, where applicable
- Permittees should be SEEP certified; a SEEP-certified foreman shall be on the project

The Kootenai County permit shall be documented in the Approach Permit.

307.01.b. A standard stabilized construction entrance and the requirement that Best Management Practices (BMP) are in place to protect the Highway District rights-of-way from stormwater, sedimentation, and erosion from construction zones. Site Plans should show stormwater drainage direction pre- and post-construction. Additionally, erosion and sedimentation controls, culvert locations, sheet flow direction, and conveyances should be clearly noted and provided to the Highway District with jurisdiction as part of the Approach Permit.

307.01.c. Permittees shall cover the cost for monitoring any/all stormwater discharge.

307.02. Culverts used for drainage purposes shall be corrugated steel or corrugated high-density polyethylene pipe (HDPE) Type C or Type S with approval from the Highway District. Steel culvert material thickness and cover over the top of the pipe to the road finish grade shall be in conformance with the following table and as approved by the Highway District. HDPE pipe specifications must be submitted with bury and cover details to the Highway District for approval.

Diameter (in.)	Steel Thickness (in.)	Minimum Cover Required (in.)	Apron Required
12	0.064	12	NO
15	0.064	12	NO
18	0.064	12	Yes
21	0.064	12	Yes
24	0.064	12	Yes
30	0.064	24	Yes
36	0.064	24	Yes

Corrugated metal pipe shall have 2⅔-inch x ½-inch corrugations. Culverts or multiplate installations larger than 36 inches in diameter or any structure under fills greater than 5 feet in height shall be designed by a Professional Engineer licensed in the State of Idaho.

All culvert installations shall be in accordance with the manufacturer's requirements. The installer shall provide a copy of the installation requirements to the Highway District prior to installing culvert. Special ditch grading may be required for culverts over 12 inches in diameter and for polyethylene culverts to maintain the cover and the flow line.

307.03. Culverts under all roadways shall be a minimum of 18 inches in diameter until a length of 70-feet is reached. All culverts over 70-feet in length shall be 24-inches or more in diameter as required to accommodate the design flow. Culverts under driveway approaches shall have a minimum diameter of 12 inches and a minimum length of 40 feet (or as directed by the Highway District), meeting the requirements of 307.02.

307.04. All necessary drainage easements for maintenance of drainage paths and structures shall be shown and recorded on the plat as a part of the approved plat. Drainage easements necessary for draining stormwater across private property shall be shown on the plat with language requiring the underlying property owner to maintain said easement in a manner that will not impede or change the water velocity.

307.05. Disruption of natural drainage ditches and subsequent use of the roadway ditch to convey the natural drainage will not be acceptable.

307.06. Drywells may be used in special circumstances where all other possibilities of taking care of storm drainage water have been explored and there is no feasible alternate to drywell installation. Should drywells be necessary they will be constructed to the standards as shown in the **Appendix**. It shall be the responsibility of the Developer to secure all permits and pay all fees for installation of the drywells.

307.07. When a curb and gutter roadway section is proposed, a complete storm sewer system must be designed and constructed under the supervision of a Professional Engineer licensed in the State of Idaho.

307.08. The increase in runoff rate generated by developments shall comply with any and all applicable Kootenai County ordinances. The developer shall be responsible for obtaining all necessary permits. Copies of all permits must be submitted with improvement plans for review by the Highway District. Perpetual maintenance of the stormwater by the development must be on file at the Highway District before a development or a final plat can be formally reviewed and/or accepted.

308. Structures

308.01. Bridge structures, structures 20 feet in length or longer, shall be designed in accordance with 1) "Standard Specifications for Highway Bridges", latest edition, with supplements thereto prepared by the American Association of State Highway and Transportation Officials and 2) Idaho Transportation Development's Bridge Design LRFD Manual, latest edition. The minimum width of a bridge structure from the face-to-face of curb or the face-to-face of the guardrail or bridgerail should match the width of the approach roadway guardrail. The vertical clearance above waterways should be 2 feet above the design flood surface and 16 feet over other roadway surfaces. Only structures of steel or reinforced concrete shall be used.

308.02. Retaining walls shall be reinforced concrete, bin walls, or concrete crib walls or other approved retaining wall system. All retaining wall structures shall be designed by a Professional Engineer licensed in the State of Idaho and shall be approved by the applicable Highway District prior to construction.

309. Signing, Traffic Control, and Construction

309.01. All traffic control signing shall be included in the design plans, shall be in conformance with the Manual on Uniform Traffic Control Devices (MUTCD) latest edition, and be installed by the developer in accordance with the MUTCD.

309.02. All construction signing and permanent signing shall conform to the MUTCD, latest edition.

309.03. Sign-posts shall be metal square tubing type E-1 with type E-1 anchor post sleeve or 4 x 4 treated wood to be decided by each Highway District. See **Appendix** for standard drawing.

309.04. Special signing requested by other agencies or adjacent landowners shall meet MUTCD standards and shall be approved by the Highway District. Signs and posts placed within the clear zone shall not be constructed in a manner that creates a safety hazard.

310. Guardrail

310.01. Guardrail may be necessary in certain areas depending upon the warrants for protecting the traveling public. The Highway District reserves the right to determine the need for guardrail under each separate circumstance. The warrants for determining the need for guardrail shall be made using the Idaho Transportation Department Design Manual or using the American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide for Selecting, Locating, and Designing Traffic Barriers, latest edition.

310.02. The type of guardrail to be installed shall be approved by each individual Highway District as the location dictates.

311. Striping or Pavement Markings

311.01. Each Highway District will determine where pavement markings will be required. Should centerline striping or other pavement markings be required, they will be constructed in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways, latest edition. The spacing, location, and width of markings will be determined on an individual basis by the appropriate Highway District. Paint quality shall be the same as that used by the Idaho Transportation Department for their pavement marking.

312. Bicycle and Pedestrian Pathways

312.01. Alternative forms of transportation, including walking, bicycle riding, and bus transportation are encouraged. Each Highway District will consider each of these forms of transportation when reviewing a new development or road improvement project. Improvements to extend routes or provide additional linkages or safety will be evaluated as necessary to meet adjacent City Master Plans or Kootenai Metropolitan Planning Organization's (KMPO) Regional Transportation Master Plan.

Section 400

Construction Specifications

Section 400 – Construction Specifications

401. Clearing and Grubbing

401.01. All stormwater and sediment control measures shall be in place and reviewed by the Highway District or their representative prior to any ground-disturbing activity.

401.02. Clearing and grubbing shall consist of the removal and disposal of all organic and other deleterious material from the road section. All material removed under clearing and grubbing shall be disposed of off the right-of-way and in compliance with the State and Local permits. All denuded areas shall be hydroseeded at the end of the project.

402. Subgrade

402.01. The subgrade shall consist of 6-inch minus natural materials remaining after all topsoil and duff (organic material) has been removed and good construction material is remaining. The determination of the extent to which topsoil shall be removed shall be left to the discretion of the Highway District Director or his designated representative for the Highway District, who may require soil and compaction test results to document the acceptability for construction.

402.02. In solid rock excavation, the solid rock shall be excavated 6 inches below the finished subgrade elevation and backfilled with approved granular material.

402.03. Unstable subgrade conditions shall be remedied by subexcavation and backfilling with approved granular material under the direction of the Highway District Director or his designated representative. Geotextile fabric or additional drainage may be required by the Highway District Director or his designated representative if unstable subgrade conditions cannot be remedied to their satisfaction. The subexcavated surface shall be observed by the Highway District Director or his designated representative prior to the placement of any embankment material. The Supervisor must have at least 24-hour notice prior to the need for observation. Such 24-hour notice shall be given so that the observation can be made during the appropriate Highway District's normal working hours and workweek.

402.04. All construction shall be controlled by slope stakes or grade stakes that have been placed by a Professional Engineer or Surveyor licensed in the State of Idaho prior to the construction operations. Said slope stakes shall conform to the Typical Slope Stake Installation Method shown in the **Appendix**.

402.05. Subgrade shall be compacted to a density no less than 95 percent of an AASHTO T-99 Proctor Density. All utility work within the road prism in fine grained soils (ML, CL, MH, CH, SM, GM, SC, GC) require fill to be placed in 12-inch maximum lifts only, tested at the time of placing and compacting, placement of material and compaction within 2 percentage points of optimum moisture and observed and tested with a full-time technician or engineer.

402.06. The subgrade shall be observed and approved by the Highway District Director or his designated representative prior to placing any ballast on the subgrade. The Supervisor must have at least 24-hour notice prior to the need for observation. Such 24-hour notice shall be given so that the observation can be made during the appropriate Highway District's normal working hours and workweek.

Prior to requesting observation of the finished subgrade, grade stakes set to finished subgrade elevation shall be in place on 50-foot stationing at centerline and shoulders unless a variance is granted and all compaction test reports submitted to the Highway District.

402.07. Fill material used to bring the road structure up to subgrade shall be 6-inch minus from Highway District approved sources. Material shall be granular aggregate or soil material free of organic or deleterious material capable of being compacted to subgrade density without pumping or rutting.

403. Ballast

403.01. The ballast material shall be run through a crushing plant. Material that has only been screened will not be accepted. The ballast shall be placed to a minimum of 12-inches in thickness. The material shall be durable, have a sand equivalent not less than 30, and shall meet the following gradations:

Sieve Size	% Passing
4"	100
3"	98-100
2"	90-100
3/4"	70-90
#4	25-40
#200	5-9

Ballast material shall be quarry crushed stone or crushed prairie gravel with one or more fractured faces or natural angular faces on 50 percent of the particles retained on the #4 sieve or above as determined by Idaho T-71 test.

403.02. The ballast material shall be constructed in layers not to exceed 8-inches in thickness and shall be compacted using mechanical methods to at least 95 percent of the AASHTO T-99 Proctor Density.

403.03. Observation of the ballast is necessary by the Highway District Director or his designated representative prior to the placing of base material. The Supervisor must have at least a 24-hour notice prior to the need for the observation. Such 24-hour notice shall be given so that the observation can be made during the appropriate Highway District's normal working hours and workweek. Prior to requesting observation of the finished ballast,

red top stakes set to finished ballast elevation shall be in place on 50-foot stationing at centerline and shoulders.

404. Base

404.01. The crushed aggregate for the base course shall be 4-inches in depth after it has been compacted and shall comply with the following gradations:

Sieve Size	% Passing
1”	100
¾”	90-100
#4	40-65
#8	30-50
#200	3-9

The crushed aggregate base shall not show more than a loss of 35 percent under the Los Angeles Abrasion Test, and the Sand Equivalent shall not be less than 30 percent. Sixty percent of aggregate retained on the No. 4 Sieve shall have at least one fractured face, as determined by Idaho T-71.

404.02. The material shall be laid in one or more layers to develop the compacted depth of 4 inches minimum. Material shall be mechanically compacted by rolling to 95 percent of the AASHTO T-99 Proctor Density. Care shall be taken to place the aggregate material in such a manner that it will have a uniform mixture throughout.

404.03. The finished base material must be observed and approved by the Highway District Director or his designated representative prior to placing the surface course. The notification for the observation must be 24 hours prior to the observation and must be requested for observation during the appropriate Highway District's normal working hours and workweek.

Prior to requesting observation of the finished base material, blue top stakes will be set to finished base elevations at 25-foot stationing on curves and 50-foot stationing on tangents at centerline and shoulders.

The surface of any base course, when finished, shall be such that when tested with a 10-foot template placed on the surface with its centerline parallel to or perpendicular to the centerline of the street, the maximum deviation from the surface of the edge of the straightedge shall nowhere exceed 1/3 of an inch. In addition, the finished grade shall not deviate more than 1/2 of an inch at any point from the staked elevation, and provided further, the algebraic sum of the deviations from two points not more than 30 feet apart shall not exceed 1-1/2 inches.

If asphalt concrete surfacing is to be placed on the base course no portion of the complete surface of the base course shall be more than 1/2 of an inch below the edge of a straightedge 10-foot in length laid parallel to or perpendicular to the centerline of the roadway. In addition, the finished grade shall not deviate more than 1/4 of an inch at any point from the staked elevation, and provided further, the sum of the deviations from two points not more than 30 feet apart shall not exceed 1/4 of an inch.

Should patching of the base course be necessary in order to meet the above tolerances, it shall be performed using methods and aggregates approved by the Highway District Director or his designated representative.

405. Surfacing

405.01. The surface type and mix design shall be approved by the applicable Highway District and shall be hot mix asphalt concrete. A separate bond for 150 percent of the cost for surfacing may be required by the Highway District. The bond will be held until all costs incurred by the Highway District are paid or resolved and the quality of the completed surface is accepted, or the necessary financing adjustments are resolved to the satisfaction of the Highway District.

405.02. Equipment used for asphalt construction regardless of the type of surface treatment shall meet the following criteria for each type of equipment.

405.02.a. The bituminous mixture hauling trucks shall be pneumatic-tired and equipped with a smooth-lined tight dump body free from cracks, holes or deep dents capable of hauling material without loss during transit. Dump body and gate shall be capable of control discharge onto the roadbed or into approved spreaders or pavers when required. The dump body shall be constructed or equipped to retain the heat of the mixture above the minimum specified for laydown.

405.02.b. Motor graders shall be a pneumatic-tired, self-propelled machine with sufficient power and traction and adequate wheelbase to efficiently perform the work.

405.02.c. Bituminous pavers shall be self-contained, power propelled units provided with an activated screed or strike-off assembly, heated if necessary, and capable of spreading and finishing courses of bituminous plant mix material in lane widths applicable to the specified typical section in thickness as shown on the plans. The paver shall be equipped with a receiving hopper having sufficient capacity for a uniform spreading operation. The hopper shall be equipped with a distribution system to place the mixture uniformly in front of the screed. The screed or strike-off assembly shall effectively produce a finished surface of the required evenness and texture without tearing, shoving or gouging the mixture. Paver shall be capable of being

operated when laying mixtures at forward speeds consistent with satisfactory laying of the mixture. The paver shall be in good working order and subject to the review of the applicable Highway District Supervisor.

405.02.d. Rollers to be of the steel wheel, vibratory or pneumatic-tire type. Rollers to be in good condition and capable of reversing direction without backlash. Operate rollers at speeds low enough to avoid displacement of the mixture and provide sufficient rollers and compactive force to achieve compaction as required in Section 405.04.g. Equipment that produces excessive crushing of the aggregate is not allowed. Rollers producing pickup, washboard, uneven compaction of the surface or other undesirable results are not allowed. Roller Requirements. Do not use fuel oil or other petroleum based oil as a release agent. Use only release agents consisting of mild lime water (1 part lime to 3 parts water), soap or detergent solution or an approved commercial product.

405.02.d.1. Vibratory Rollers

a. Variable amplitude with at least two settings.
b. Variable frequency with minimum of 2000 VPM.
c. Maximum rate of travel under vibration to be 2.5 mph – 220 feet/minute.
d. Vibratory rollers with pneumatic-tired drive wheels to have smooth tires that leave no visible tracks.

405.02.d.2. Pneumatic-tired Rollers

a. Maximum rate of travel to be 5 mph.
b. Rollers to be equipped with smooth compactor tires.
c. Pneumatic-tire rollers to be equipped with skirts enclosing the tires on the top and sides and extending within 6 inches of the pavement surface.

405.02.d.3. Steel Wheel Rollers, maximum rate of travel to be 4 mph.

405.02.e. The asphalt distributor must be in good working order and shall be designed and operated so a uniform application of asphalt can be applied. It must include a tachometer showing the feet per minute and the number of feet covered, a tank thermometer, and a gauge to measure the quantity of the asphalt in the distributor.

405.02.f. The aggregate spreader shall be a self-propelled machine independent of the truck, supported by at least two axles and four wheels with pneumatic-tires and equipped with a means of applying cover material with positive controls

so material will be uniformly deposited over the full width of the asphalt application.

405.03. Hot Mix Asphalt Concrete

405.03.a. The hot mix asphalt concrete surfacing shall be one or more courses of Superpave Hot Mix Asphalt (HMA) in accordance with these Standards and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown on the project plans. The mix used for the HMA must be an approved asphalt mix design. Mix design characteristics must be submitted and approved by the applicable Highway District prior to its use. HMA shall meet the following requirements and shall be subject to the review of the applicable Highway District.

405.03.b. References

1. ITD Current Standard Specifications for Highway Construction – Current version
2. AASHTO Standard Specifications for Transportation and Methods of Sampling and Testing
3. WAQTC TM 8 – In-Place Density of Bituminous Mixes Using the Nuclear Moisture-Density Gauge

405.03.c. Materials

1. HMA shall be ITD SP3, ½-inch, designed in accordance with ITD Standard Specifications for Highway Construction, current edition.
2. Mix Design:
    a. The Contractor shall provide mix designs to the Highway District for review.
    b. The Contractor's mix design shall develop the job mix formula for the project using an ITD-qualified laboratory and shall be stamped by a Professional Engineer licensed in the State of Idaho.
    c. Mix designs shall be developed by an individual holding an ITD Superpave Mix Design Technician qualification and shall be submitted to the Highway District for review.
    d. Mix designs may also have to be approved by ITD and/or an independent materials testing lab.
    e. Recycled Asphalt Pavement (RAP) shall be as defined by ITD Standard Specifications. A maximum of 30 percent RAP content per weight of the mix may be included as part of the job mix formula provided the mix meets all other requirements for plant mix.

f. If RAP is used in the job mix formula, it shall conform to ITD's Category 1 RAP classification requirements, Section 720.07.

3. Asphalt Cement shall be PG 58-28 with binder adjustments meeting current ITD Standard Specifications for RAP content exceeding 17 percent.
4. Aggregate for Plant Mix shall meet Section 703 of the ITD Standard Specifications, current edition.
5. Anti-Stripping Additive shall meet Section 702 of the ITD Standard Specifications, current edition.
6. Tack Coat for AC Pavement shall be applied in accordance with ITD Standard Specifications Section 401, current edition.

405.03.d. Workmanship

1. Verify that the areas to be paved are graded, compacted, and ready for paving.
2. Protect saw cut edges so the new pavement is placed against a straight, vertical surface.
3. Apply a thin, uniform asphalt tack coat to the surfaces of curbing, gutters, manholes, asphalt cement pavement, portland cement pavement, and other structures that will abut the new pavement.

405.03.e. Hauling and Placing Asphalt Pavement

1. Apply tack coat in accordance with ITD Specification Section 405.03, current edition.
2. When necessary, each truck shall have a cover to protect the plant mix from weather in accordance with ITD Section 405.03, current edition.
3. Install work in accordance with ITD Section 405, current edition.
4. The Contractor shall overlap the joint edge 1 to 1.5 inches and bump back or trim the joint line overlap by raking to create a tight, smooth joint.
5. Place asphalt within eight hours of applying primer or tack coat.
6. The Contractor shall hand compact areas inaccessible to rolling equipment.

405.03.f. Pavement Surface Smoothness

1. Place pavement in accordance with the current ITD Standard Specifications for Highway Construction Section 405.03. Surface smoothness shall comply with ITD Specification for a Schedule II project.

405.03.g. Field Quality Control

1. The Contractor shall submit a paving plan in accordance with ITD Specifications 72 hours prior to the pre-paving meeting for review.
2. Forty eight hours prior to placing plant mix, the Highway District, Contractor, Asphalt Supplier, and Quality Control/Quality Assurance personnel involved with the project shall hold a pre-operational paving meeting to discuss the means by which to achieve the highest quality surface.
3. Production Paving shall be in accordance with the current ITD Standard Specification and Supplements for Highway Construction.
4. Field review and testing will be performed in accordance with ITD and these standards.
5. Pavement Density and depth verification testing shall be completed using asphalt cores. A minimum of three (3) cores per paving day shall be tested. Completed density shall correspond to a range between 92.0 percent and 95.0 percent of maximum Theoretical Density for SP-2 to SP-6 asphalt mixes.
6. Pay Factor calculations in accordance with ITD Quality Assurance procedures shall be submitted to the District for consideration of paving acceptance.

405.03.h. Weather Limitation and Cutoff Dates

1. Conform to the following minimum temperatures for all plant mix pavement operations.

Air and Surface Temperature Limitations

Compacted Thickness of Individual Courses	Top Course	Leveling and Courses Below the Top Course
Less than 0.1 foot	60° F	50° F
0.1 foot to 0.18 foot	50° F	50° F
Over 0.18 foot	40° F	40° F

2. Hot mix asphalt pavement shall not be placed between October 15 and April 15.

Section 500

Variances

Section 500 – Variances

501. Variances

501.01. Purpose: Any variance to these Standards may be allowed by the individual Highway Districts when special conditions exist on a project-by-project basis. The Highway 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 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 a showing of undue hardship because of: (1) 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.

501.02. Findings Required for Variance:

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

1. 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.
2. That the granting of the variance will not constitute a grant of special privilege inconsistent with the limitations on other properties.
3. 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.

501.03. Duration of Approval: The use or construction permitted under the terms of any variance shall be commenced within a six-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 six-month period, the Highway District, upon request of the applicant, may extend the variance for up to an additional six months from the original date of approval.

501.04. Application: Application for a variance shall be filed with the Highway District and shall include sufficient information to explain the need and reasoning for the variance request and payment of review fee established by the respective Highway District.

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

Section 600

Definitions

Section 600 – Definitions

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

Dedication - The setting apart of land or interest in land for use by the public. Land becomes dedicated when accepted by the Highway 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 Highway District of the use of a parcel of land by the public, corporation, or persons for specified use and purposes.

Highway District - Any one of the following official Highway Districts within Kootenai County, Idaho.

East Side Highway District
Lakes Highway District
Post Falls Highway District
Worley Highway District

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.

a. Preliminary Plat - A preliminary map, including supporting data, including dimensioned road centerline alignment for the proposed subdivision development, prepared in accordance with Kootenai County ordinances and the Idaho Code.
b. Final Plat - A map of all or part of a subdivision providing substantial conformance to an approved preliminary plat, prepared by a Registered Professional Engineer or a Registered Land Surveyor in accordance with Kootenai County ordinances and the Idaho Code.
c. 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 - 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.

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

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

c. 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.

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

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

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

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

e. Roadway Prism - That portion of the right-of-way between the back of ditch (at the elevation of the adjoining roadway shoulder) or the back of sidewalk and including the roadway ditches, traveled way, shoulders and auxiliary lanes.

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.

a. Minor Subdivision - A subdivision that proposes to create four (4) or fewer lots, with no shared infrastructure or improvements other than a water system that does not require engineering that must be constructed to meet the requirements of the County or other agencies. Property that has been subdivided within the previous five (5) years cannot be re-divided as a minor subdivision, except where the two subdivisions together will create four or fewer lots.

b. Major Subdivision - A subdivision that proposes to: a) create five (5) or more lots, or b) re-divide land that has been subdivided in the previous five (5) years, when the two

subdivisions together will create five or more lots, or c) create 2-4 lots with shared infrastructure or improvements, or a water system that requires engineering, that must be constructed to meet the requirements of the County or other agencies.

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:

a. Level Terrain - Terrain where sight distances are generally long or can be made to be so without construction difficulty. The slope of the existing terrain is from zero to five (5) percent.

b. 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. The slope of the existing terrain is from five (5) to fifteen (15) percent.

c. 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 slope of the existing terrain exceeds fifteen (15) percent.

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

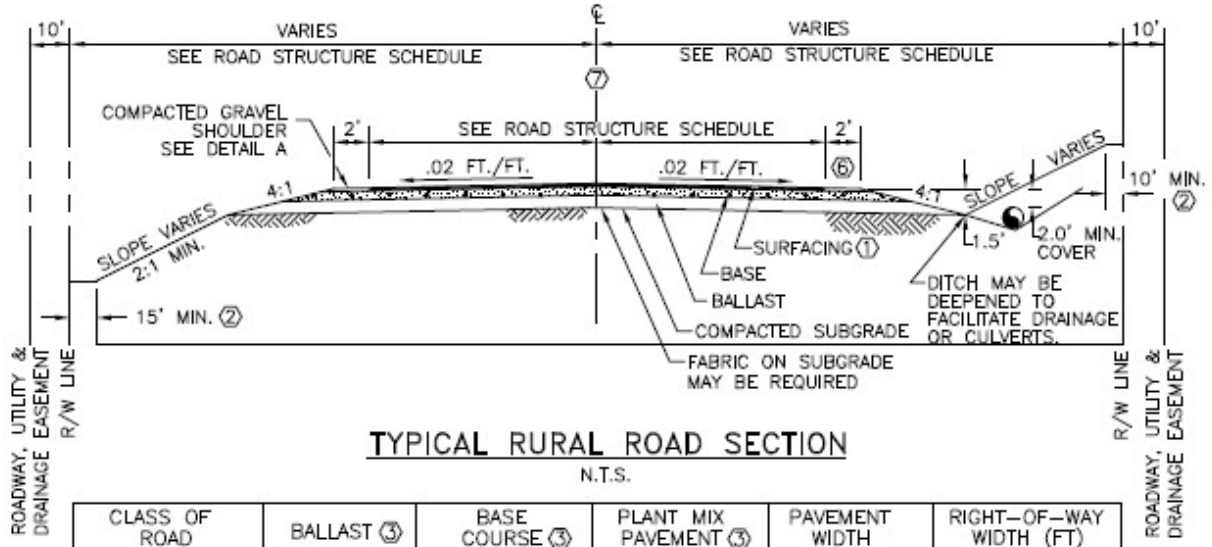
Utilities - Installations or facilities, underground or overhead, furnished for use by the public, including but not limited to, electricity, gas, steam, communications, water, drainage, irrigation, sewage disposal, or flood control, owned and operated by any person, firm, corporation, municipal department,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

Appendices

Standard Drawings
Supplemental Information
- Financial Guarantee Agreement
- Construction Observation Policy
- Application for Approach/Driveway Permit, Application for Permit to Use Right-of-Way - Utilities
- Utility Coordination Policy
- Engineer's Statement
- Memorandum with Kootenai County
- Plat Requirements - Minimum for Highway District Review
- Legal Description Essential Requirements Checklist
- Traffic Impact Study Guidelines

Appendix

Standard Drawings



TYPICAL RURAL ROAD SECTION

N.T.S.

CLASS OF ROAD	BALLAST ③	BASE COURSE ③	PLANT MIX PAVEMENT ③	PAVEMENT WIDTH	RIGHT–OF–WAY WIDTH (FT)
ARTERIAL	12"	4"	4"	40' – 64'	80 – 120
COLLECTOR	12"	4"	4"	24' – 40' ⑤	60 – 120
LOCAL RESIDENTIAL	12"	4"	2"	22' – 28' ⑤	60
INDUSTRIAL \ COMMERCIAL	12"	4"	4"	24' – 64'	*OUTSIDE ACI

NOTES:

① SURFACING SHALL BE PLANT MIX ASPHALT, ITD SP–3 1/2–INCH WITH CHIP SEAL AS REQUIRED BY INDIVIDUAL HIGHWAY DISTRICTS. CHIP SEALS SHALL BE APPLIED WITHIN 1 TO 2 YEARS OF ALL NEWLY PAVED ROADS, THE SEASON FOLLOWING THE INITIAL YEAR OF PAVING.

② IN CUT AND FILL SECTIONS, 10 FEET AT THE TOP OF CUT AND 15 FEET AT TOE OF FILL MAY SERVE AS ROADWAY, UTILITY & DRAINAGE EASEMENT WITH CONCURRENCE OF THE HIGHWAY DISTRICT.

③ ROAD STRUCTURE SECTIONS SHOWN ARE FOR GRANULAR SUBGRADE OR SUBGRADE SOILS WITH AN R VALUE GREATER THAN 15. A GEOTECHNICAL DESIGN IS REQUIRED FOR OTHER SOIL CONDITIONS. SUBGRADE TO BALLAST FABRIC SEPARATION IS REQUIRED ON NON–GRANULAR SUBGRADES. SEEDING OF ALL DENUDED AREAS IS REQUIRED.

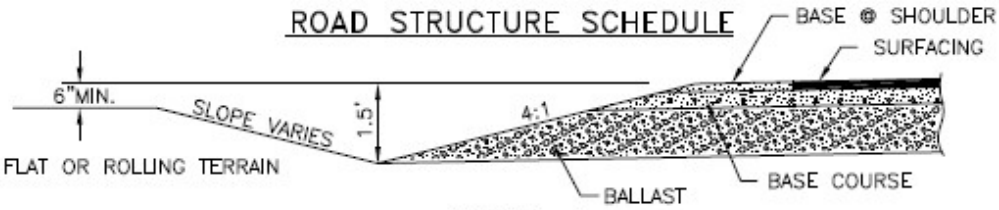
④ DEPTHS ARE MINIMUM COMPACTED DEPTH REQUIREMENTS.

⑤ SEE SECTION 306 – ROADWAY CROSS SECTION.

⑥ CURB, GUTTER AND ROADWAY SECTION SHALL COMPLY WITH APPLICABLE CITY STANDARDS WHEN LOCATED WITHIN AREA OF CITY IMPACT.

⑦ ROAD CENTERLINE PROFILE MUST BE ABOVE THE ORIGINAL GROUND LINE AT CENTERLINE AND EDGE OF RIGHT OF WAY, IN FLAT OR ROLLING TERRAIN.

ROAD STRUCTURE SCHEDULE



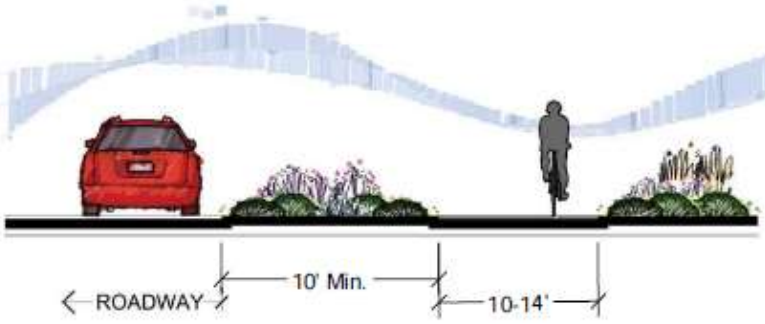
DETAIL A

N.T.S.

* SHOULDER MAY BE PAVED 1.0 FOOT WIDE WITH PLANT MIX ASPHALT ON LOCAL RURAL ROADS WITH HIGHWAY DISTRICT APPROVAL.

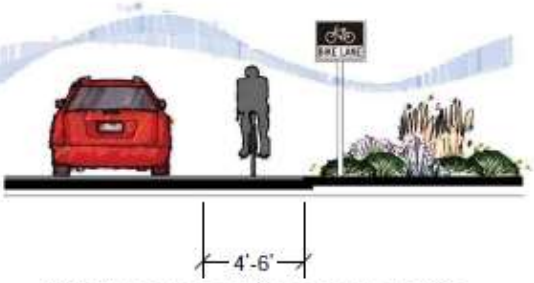
ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

SD–1



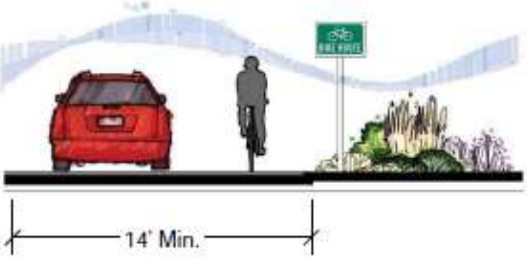
(Separated path from roadway for exclusive use of bicycles and pedestrians)

CLASS I BIKE PATH



Width depends on parking and edge condition
(Striped Bike Lane with Bike Lane symbol)

CLASS II BIKE LANE



Shared use with pedestrians and motor vehicle traffic.

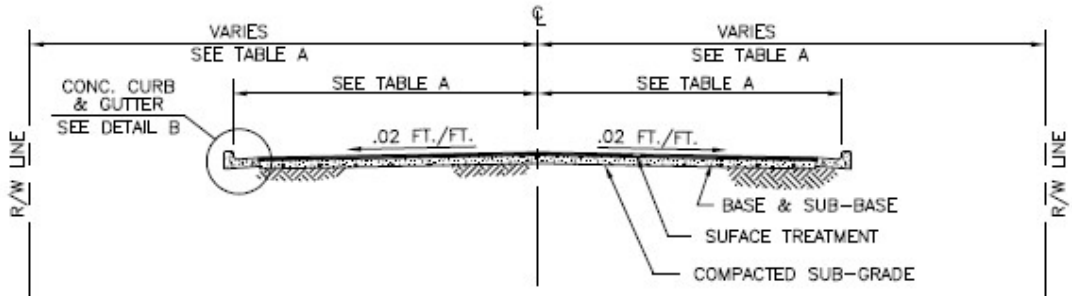
CLASS III BIKE ROUTE

NOTES:
BIKE LANES/ROUTES SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES AND WITH THE CONCURRENCE OF THE RESPECTIVE HIGHWAY DISTRICT.

BIKE LANE CLASSES

ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

SD - 1A



TYPICAL CURB & GUTTER SECTION

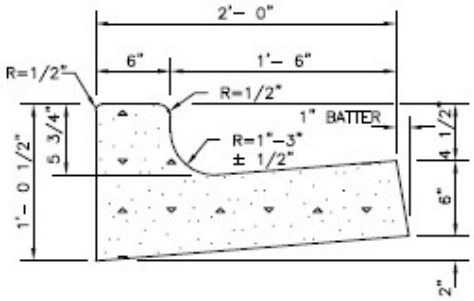
N.T.S.

CLASS OF ROAD	ROAD WIDTH FACE-FACE OF CURB	RIGHT-OF-WAY WIDTH (FT)	CURB TYPE
MINOR ARTERIAL	64'- 0"	80 - 120	VERTICAL
COLLECTOR OR COMMERCIAL	40'- 0"	60 - 120	VERTICAL
LOCAL RESIDENTIAL	36'- 0"	60 - 80	VERTICAL OR ROLL

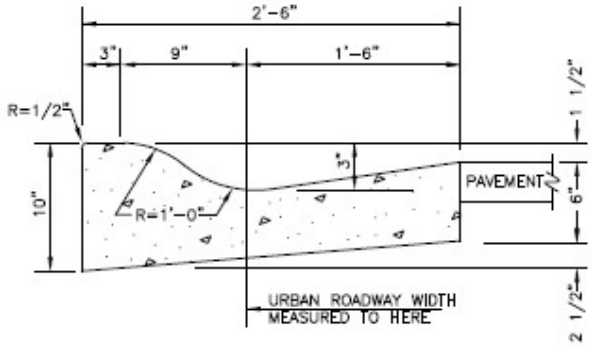
TABLE A

DETAIL B

N.T.S.



VERTICAL CURB



ROLL CURB

(LOCAL ROADS ONLY)

NOTES:

① CURB, GUTTER AND ROADWAY SECTION SHALL COMPLY WITH APPLICABLE CITY STANDARD WHEN LOCATED WITHIN AN AREA OF CITY IMPACT.

ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

SD-2

MINIMUM STOPPING SIGHT DISTANCES

DESIGN SPEED MPH	20	25	30	35	40	50	60
STOPPING DISTANCE, (S) FEET	115	155	200	250	305	425	570

NOTES:

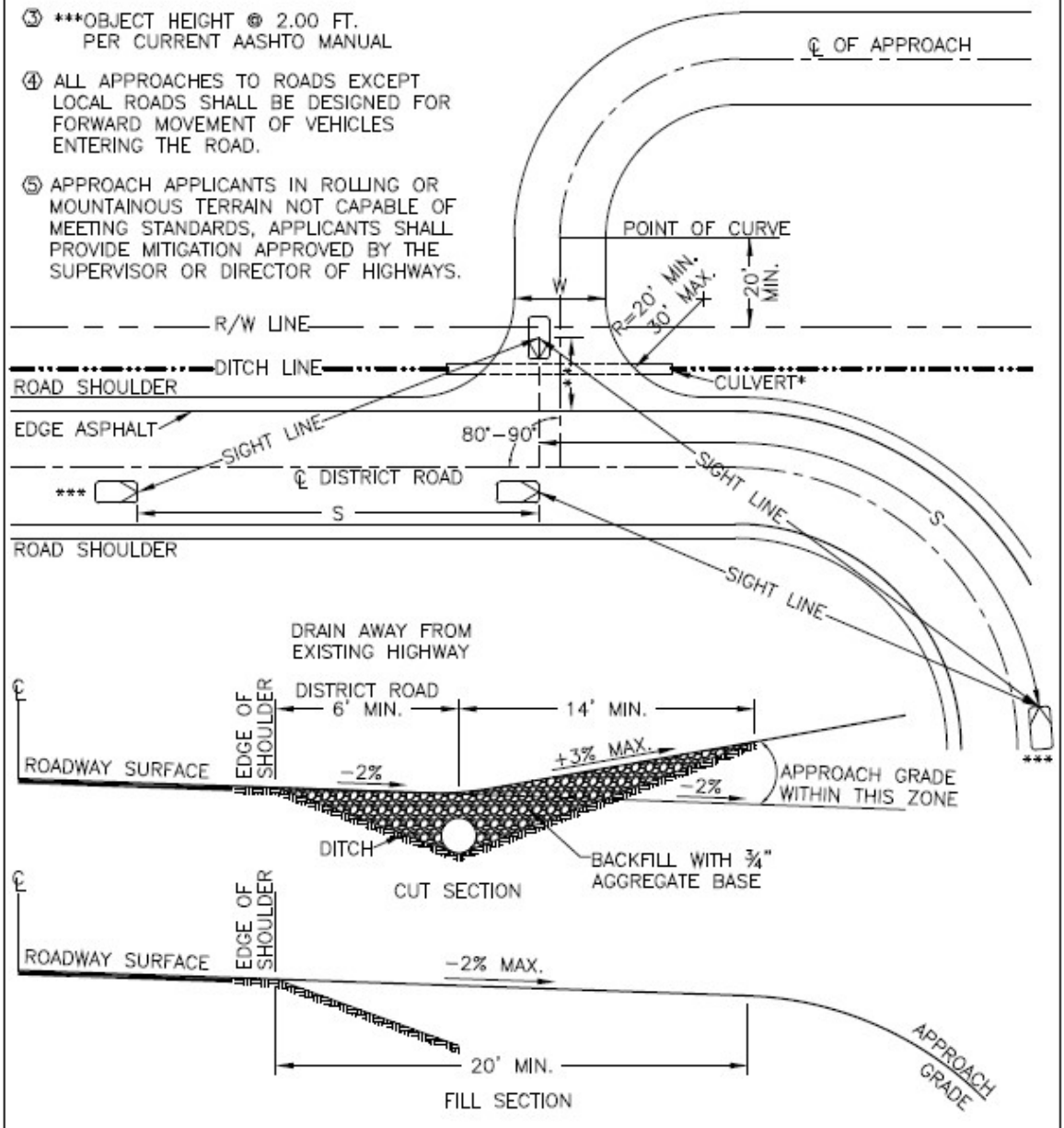
① *CULVERT
MIN. 12" DIAMETER
MIN. 40' LENGTH

② **10' FROM EDGE OF ROADWAY TO DRIVER'S EYE POSITION @ 3.50 FT. ABOVE ROAD

③ ***OBJECT HEIGHT @ 2.00 FT. PER CURRENT AASHTO MANUAL

④ ALL APPROACHES TO ROADS EXCEPT LOCAL ROADS SHALL BE DESIGNED FOR FORWARD MOVEMENT OF VEHICLES ENTERING THE ROAD.

⑤ APPROACH APPLICANTS IN ROLLING OR MOUNTAINOUS TERRAIN NOT CAPABLE OF MEETING STANDARDS, APPLICANTS SHALL PROVIDE MITIGATION APPROVED BY THE SUPERVISOR OR DIRECTOR OF HIGHWAYS.



STANDARD APPROACH POLICY

ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

SD-3A

Dear Building Contractor and/or Owner:

Both Kootenai County and the Associated Highway Districts of Kootenai County have minimum requirements for access roadways and driveways to residential properties. The Highway District's requirements are set forth in this letter. Failure to comply with these regulations has caused a multitude of problems for residents and the Highway District. This letter is provided to you as part of a continuing effort by the Highway District to improve the safety and integrity of roadways in the District.

In an effort to avoid future problems, the Highway District will be performing a thorough review before signing off on Approach Permits. To perform this review, the District will require site information related to the approach. The District's efforts will also be of value to the owner by improving the awareness of the relationship between the home site, driveway and approach to the roadway.

Prior to obtaining Highway District approval for an approach permit, the Highway District will require submission of a site plan for the lot and driveway showing:

1. A 20 foot minimum, 30 foot maximum curve radius on edge of the driveway from the edge of the roadway pavement. All of the driveway, including the radius shall be within the extension of the lot line or property line.

2. A minus 2% driveway slope from the edge of the pavement to the center of the ditch line. This allows surface water from the driveway to drain off into the ditch and not sheet drain onto the roadway.

3. A positive 3% maximum driveway slope from the center of the ditch line to the right–of–way line where the driveway goes uphill from the roadway.

4. A minus 2% driveway slope from the edge of pavement for a distance of at least 20' where the driveway goes downhill from the roadway.

5. The proposed driveway slope from the right–of–way line to the garage or parking pad. The Highway District suggests meeting the requirements of Kootenai County's Ordinance for private road or driveway grades. Grades of 10% or greater shall not exceed one hundred (100) feet in length".

6. A sectional drawing of the driveway within the Highway District right–of–way showing driveway width, ditch section, maximum slopes for grading, maximum slope heights and erosion control measures to be used on the slopes. The driveway standard for the Highway District within the District's right–of–way is a width of at least 20 feet.

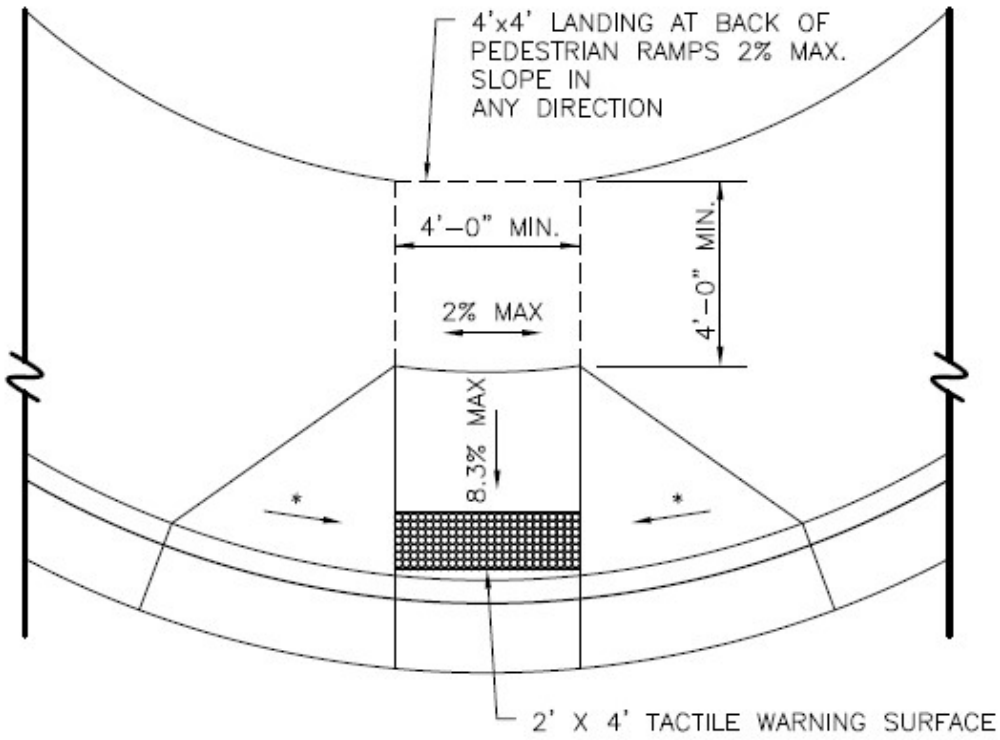
7. A site plan showing the location of the house and garage and/or parking pad with dimensions from side, front and rear lot lines. The site plan must provide for forward movement of all vehicles as they enter the Highway District roads.

8. The site plan shall show the proposed location of mailbox and any mailbox turnout area.

If you have any further questions, please don't hesitate to contact the appropriate Highway District:

East Side Highway District	(208) 765–4714
Lakes Highway District	(208) 772–7527
Post Falls Highway District	(208) 765–3717
Worley Highway District	(208) 664–0483

SD–3B



*MAXIMUM SLOPE 1:10

NOTES:

(1) PEDESTRIAN CURB DROPS ARE REQUIRED WHERE CURBS ARE USED.

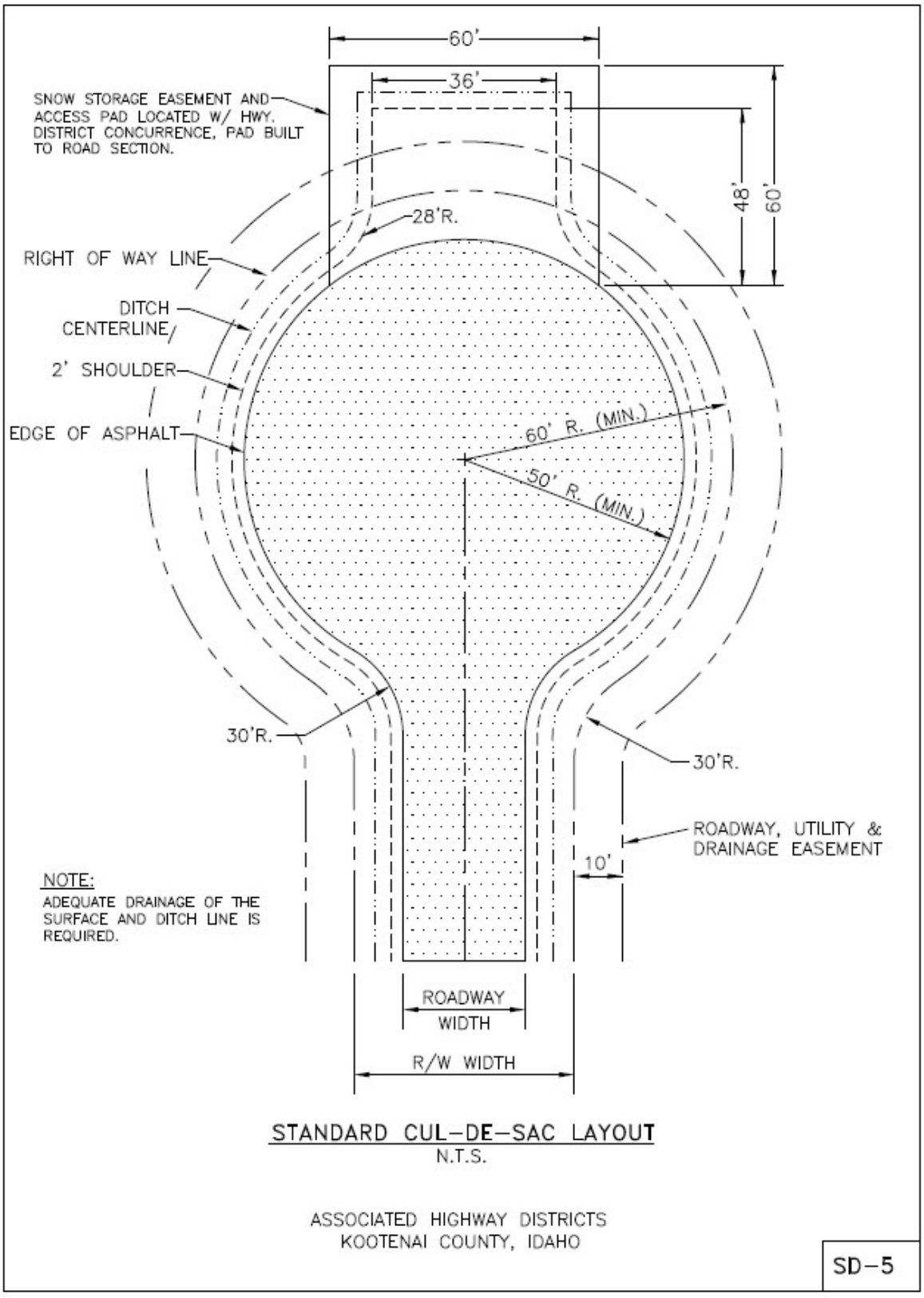
(2) ALL PEDESTRIAN CURB DROPS MUST MEET AREA OF CITY IMPACT STANDARDS FOR THE LOCAL COMMUNITY.

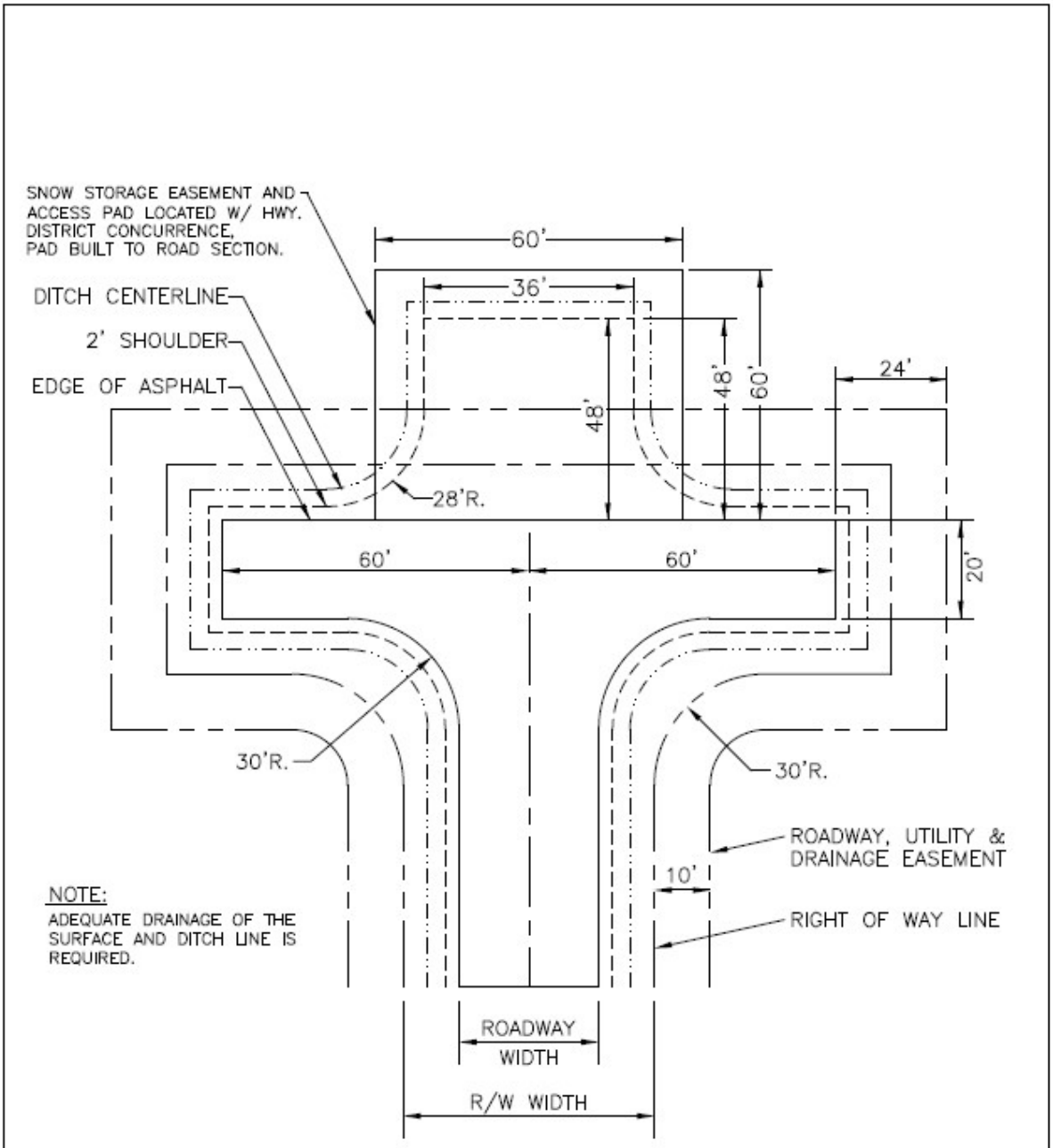
(3) ALL PEDESTRIAN CURB DROPS MUST COMPLY WITH THE AASHTO STANDARDS AND ADA REQUIREMENTS, LATEST EDITIONS.

STANDARD PEDESTRIAN CURB DROP

ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

SD-4


60'
36'
SNOW STORAGE EASEMENT AND ACCESS PAD LOCATED W/ HWY. DISTRICT CONCURRENCE, PAD BUILT TO ROAD SECTION.
48'
60'
28'R.
RIGHT OF WAY LINE
DITCH CENTERLINE
2' SHOULDER
EDGE OF ASPHALT
60' R. (MIN.)
50' R. (MIN.)
30'R.
30'R.
ROADWAY, UTILITY & DRAINAGE EASEMENT
10'
NOTE:
ADEQUATE DRAINAGE OF THE SURFACE AND DITCH LINE IS REQUIRED.
ROADWAY WIDTH
R/W WIDTH
STANDARD CUL-DE-SAC LAYOUT
N.T.S.
ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO
SD-5

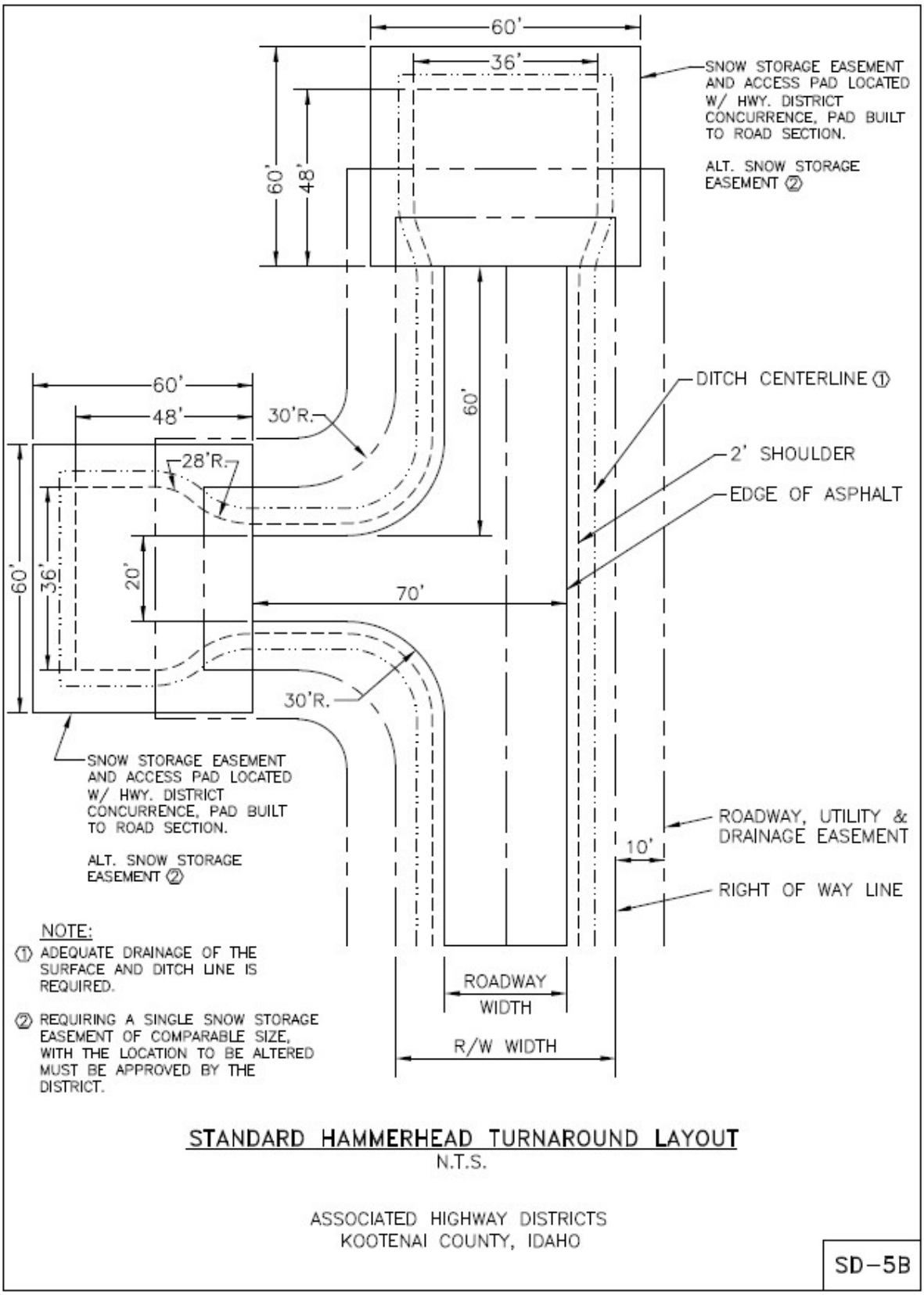


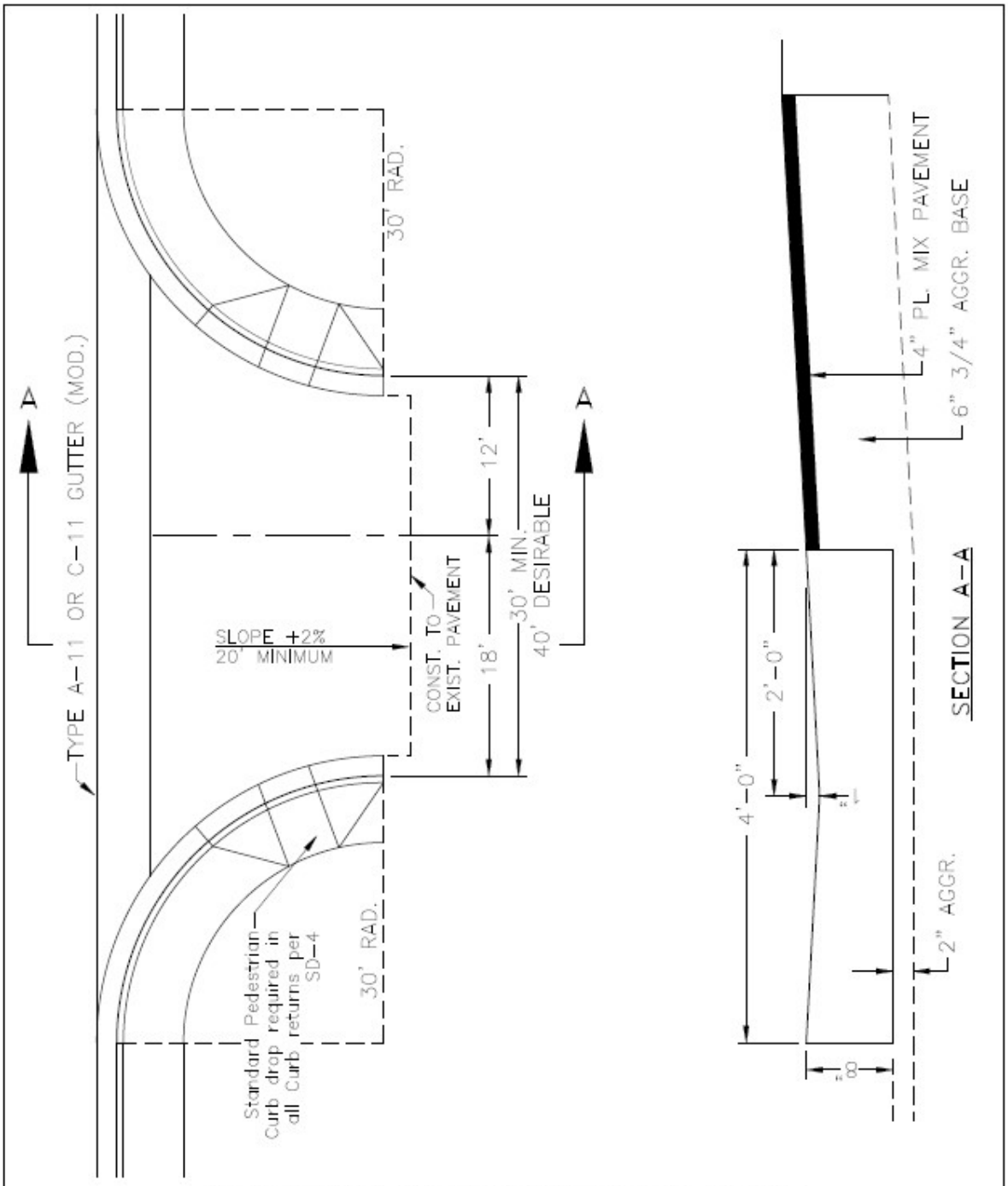
STANDARD HAMMERHEAD TURNAROUND LAYOUT

N.T.S.

ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

SD–5A


60'
36'
SNOW STORAGE EASEMENT AND ACCESS PAD LOCATED W/ HWY. DISTRICT CONCURRENCE, PAD BUILT TO ROAD SECTION.
ALT. SNOW STORAGE EASEMENT ②
60'
48'
60'
48'
30'R.
28'R.
60'
DITCH CENTERLINE ①
2' SHOULDER
EDGE OF ASPHALT
60'
36'
20'
70'
30'R.
SNOW STORAGE EASEMENT AND ACCESS PAD LOCATED W/ HWY. DISTRICT CONCURRENCE, PAD BUILT TO ROAD SECTION.
ALT. SNOW STORAGE EASEMENT ②
ROADWAY, UTILITY & DRAINAGE EASEMENT
10'
RIGHT OF WAY LINE
NOTE:
① ADEQUATE DRAINAGE OF THE SURFACE AND DITCH LINE IS REQUIRED.
② REQUIRING A SINGLE SNOW STORAGE EASEMENT OF COMPARABLE SIZE, WITH THE LOCATION TO BE ALTERED MUST BE APPROVED BY THE DISTRICT.
ROADWAY WIDTH
R/W WIDTH
STANDARD HAMMERHEAD TURNAROUND LAYOUT
N.T.S.
ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO
SD-5B



CURB RETURN APPROACH FOR TRUCK TRAFFIC

REF.: LHTAC FIG.IV,C FROM "MANUAL FOR USE OF PUBLIC RIGHT-OF-WAY STANDARD APPROACH POLICY"

ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

SD-6

OPEN-CUT POLICY & CHIP SEALING REQUIREMENTS

This policy applies to any person or firm wishing to Open-Cut a road within the jurisdiction of the Kootenai County Associated Highway Districts.

An open cut may be allowed at the Road Supervisors discretion when one or more of the following circumstances is met.

1. The road is classified as a local road.
2. The road is gravel.
3. The road is scheduled for reconstruction within 1 year.
4. The road has an ADT of 100 or less.
5. It is in the best interest of the public or the Highway District.

The Highway Districts will require any person or firm wishing to open-cut a road within this Highway District to to place a bond with the Highway District for 150% of the estimated cost of restoring the road surface plus a fee of $500.00 plus $2.40/square yard of disturbed road surface. This fee is to be charged to insure that the proper overlap on all joints is done. When one (1) lane is removed and replaced to centerline, the full road width will be sealed in order to seal all joints, repair any damage to the other lane, and the status of the full width of the road will be maintained.

Payment will be required when application is made to the Highway District for a permit to perform the open-cut.

The chip seal on the open-cut roadway will be done the following year during the Highway District's regular chip seal season.

Open-cut repair shall be in accordance with SD-7B.

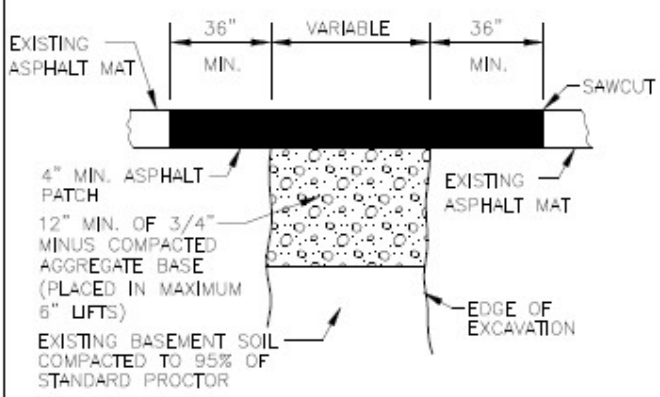
TRANSVERSE ROAD BORE REQUIREMENTS

All roads with one or more of the following criteria shall be bored, no open cuts shall be allowed unless a bore pit of reasonable size cannot be dug or reveals material that is unsuitable for boring, the bore fails to cross the road after 3 attempts or the pipe size is to big for a reasonable bore.

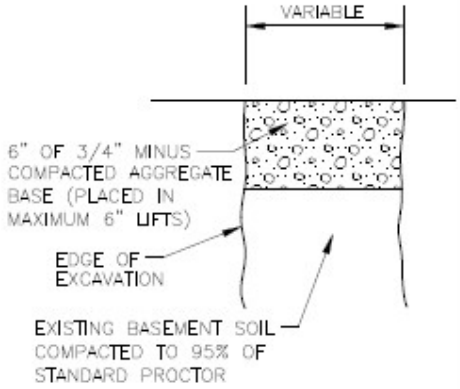
1. The road has a functional classification of a minor collector or above.
2. The pavement is less than 5 years old.
3. The road has been chip sealed within the last 3 years.
4. The road is being used as a detour route.

ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

SD-7A



PAVED SURFACE



GRAVEL SURFACE

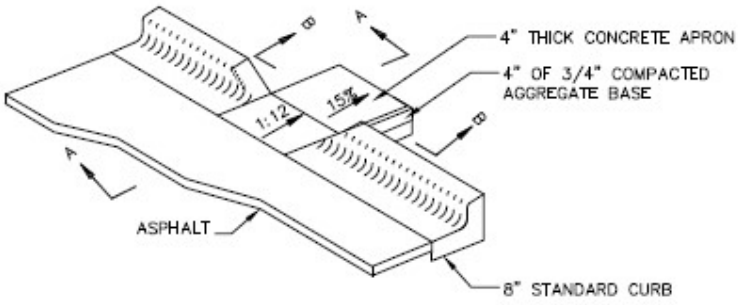
NOTES:

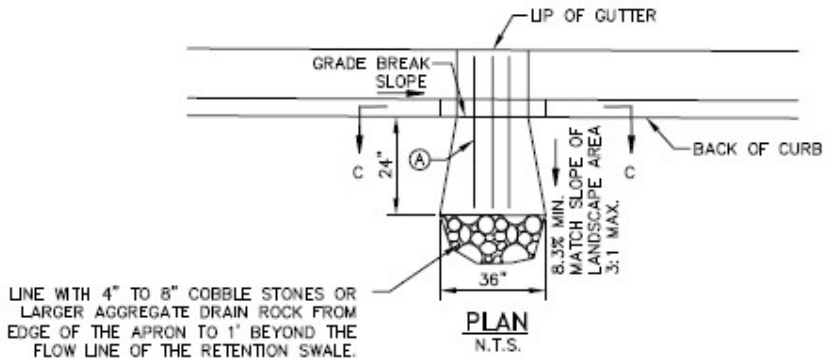
1. FULL DEPTH CONTROLLED DENSITY FILL (CDF) 1 SACK MIX MAY BE REQUIRED FULL DEPTH OF THE TRENCH
2. BACKFILL AT SUBGRADE SHALL NOT SHOW VISIBLE DEFLECTION UNDER 4,000 LB. WHEEL LOAD.
3. WHERE 50% OR MORE OF THE SURFACE AREA OF PAVEMENT HAS BEEN REMOVED OR DAMAGED, FULL WIDTH RESTORATION SHALL BE REQUIRED. ANY STRIP OF REMAINING PAVEMENT LESS THAN TWO FEET IN WIDTH ALONG CURB AND GUTTER OR PAVEMENT EDGE SHALL BE REMOVED AND REPLACED.
4. WHERE STREET SURFACING HAS BEEN IN SERVICE FIVE YEARS OR LESS, THE CONTRACTOR MUST BORE CROSSINGS. STREET CUTS PARALLEL TO CENTERLINE MUST BE APPROVED BY THE HIGHWAY DISTRICT AND WILL REQUIRE RESURFACING USING A PAVING MACHINE. CROSSINGS OF MAJOR COLLECTOR STREETS AND ARTERIALS MAY REQUIRE BORING AT THE DIRECTION OF THE HIGHWAY DISTRICT.
5. STREET SURFACING SHALL BE TACKED TO A NEAT STRAIGHT LINE WITH THE EDGES FREE OF DUST, MOISTURE OR LOOSE MATERIAL.
6. ALL COLD JOINT SURFACES SHALL BE TACKED WITH EMULSION WHICH SHALL HAVE "BROKEN" PRIOR TO PATCHING.
7. MATERIALS AND CONSTRUCTION OF STRUCTURAL REPAIR SHALL CONFORM TO HIGHWAY DISTRICT SPECIFICATIONS.
8. COMPLETED PATCH SHALL NOT DEVIATE FROM EXISTING SURFACE MORE THAT 0.03 FT. /10 FT. IN PROFILE OR 0.05 FT. / 10 FT. IN CROSS-SECTION WHEN MEASURED WITH A 10 FT. STRAIGHT EDGE.
9. COMPLETED PATCH SHALL NOT POND WATER.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF STREET REPAIR FOR TWO YEARS AFTER INSTALLATION. THE BOND SHALL REMAIN IN PLACE FOR THIS TWO YEAR TIME PERIOD.
11. ALL MATERIAL TO BE COMPACTED TO AT LEAST 95% OF OPTIMUM DENSITY PER APPROPRIATE AASHTO STANDARD PROCTOR TEST RESULT.
12. CONTRACTOR SHALL PROVIDE A MINIMUM OF TWO TESTS ON THE TRENCH BACKFILL LAYERS AND ONE TEST ON THE 3/4" MINUS AGGREGATE BASE.

ROAD CUTS AND SURFACE REPAIRS

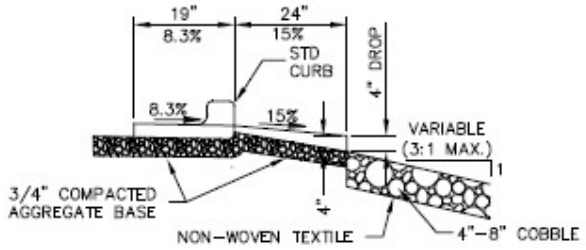
ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

SD-7B

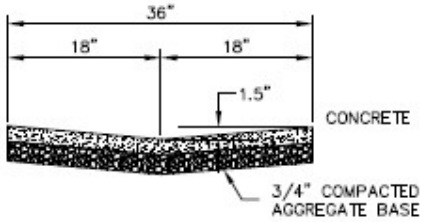




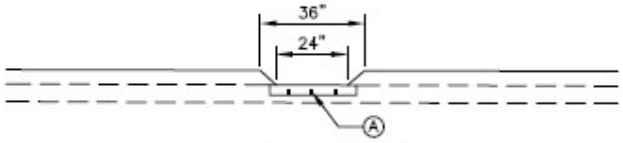
PLAN
N.T.S.



SECTION A-A
N.T.S.



SECTION B-B (PARTIAL)
N.T.S.



SECTION C-C
N.T.S.

NOTES:

Ⓐ 3 # 4 BARS AT MID DEPTH OF CONCRETE SPACE EQUALLY ACROSS CURB OPENING.

Ⓑ REQUIRED WITH INFILTRATION SWALE DESIGN.

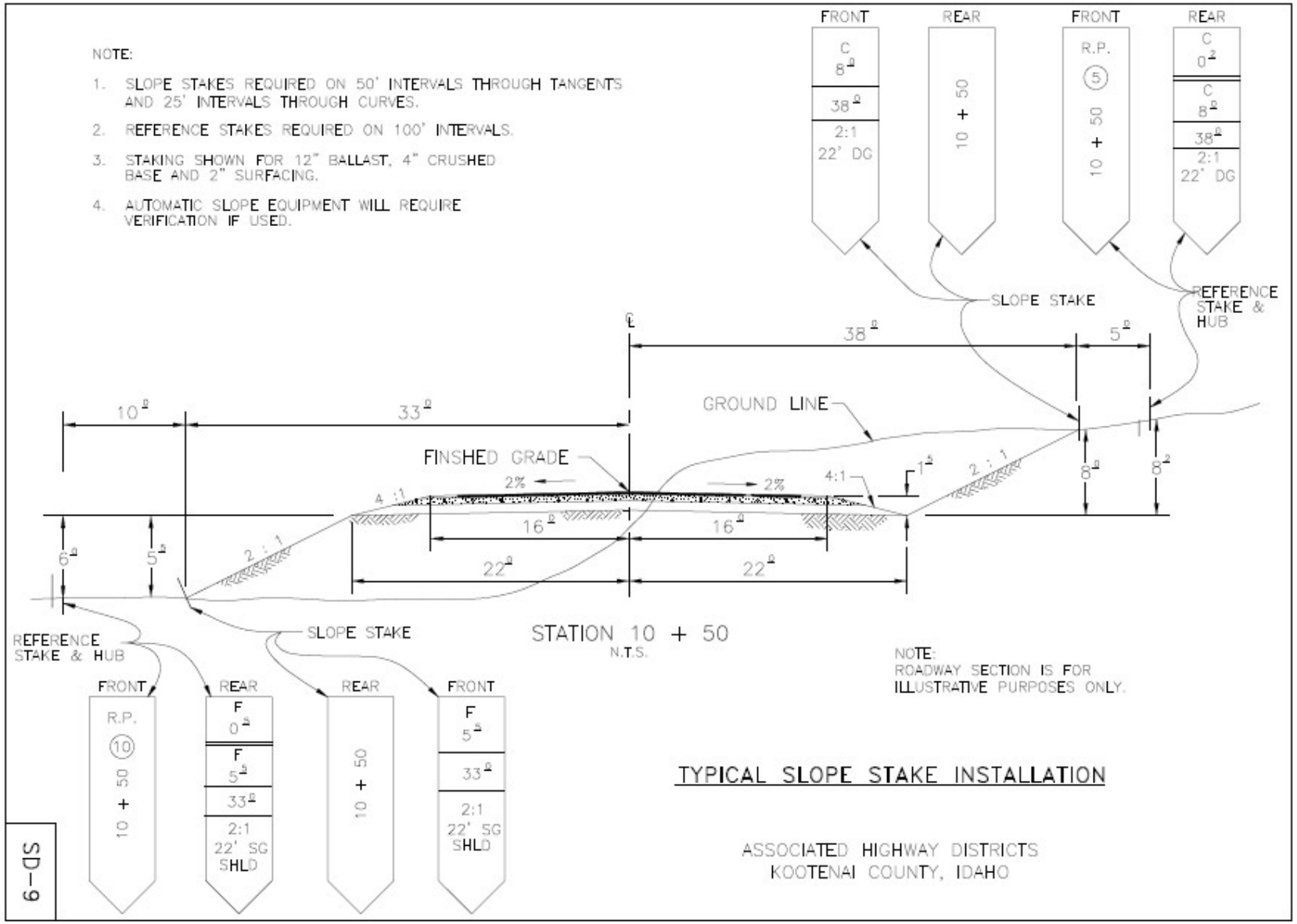
Ⓒ CONCRETE APRON SHALL REMAIN FREE OF ALL OBSTRUCTIONS INCLUDING GRASS AND OTHER VEGETATION THAT MAY BE USED IN CONJUNCTION WITH LANDSCAPING OF SWALE OR RETENTION BASIN.

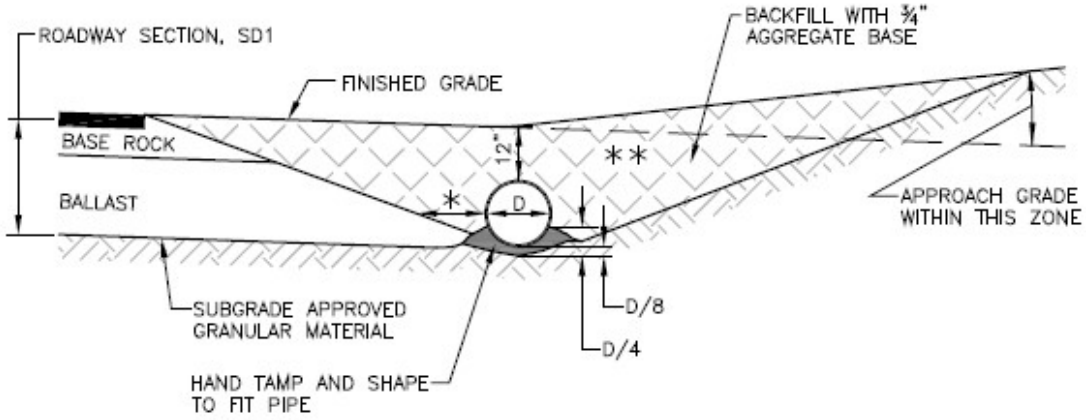
Ⓓ ADOPTED FROM IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION, 2012

DRAINAGE CURB CUT

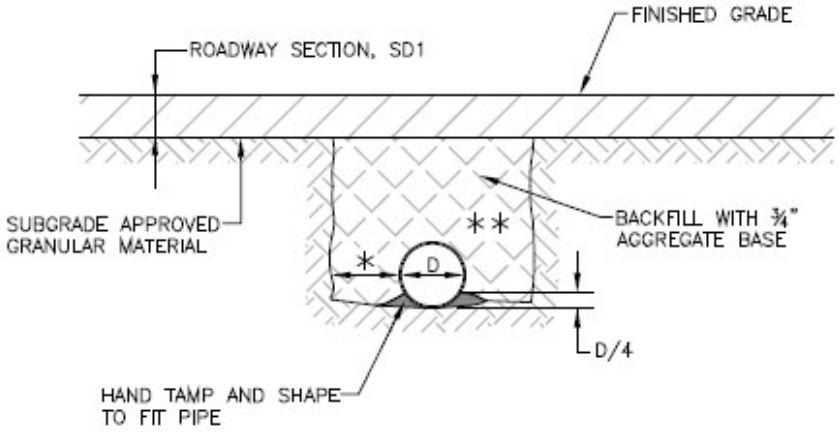
ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

SD-8


NOTE:
1. SLOPE STAKES REQUIRED ON 50' INTERVALS THROUGH TANGENTS AND 25' INTERVALS THROUGH CURVES.
2. REFERENCE STAKES REQUIRED ON 100' INTERVALS.
3. STAKING SHOWN FOR 12" BALLAST, 4" CRUSHED BASE AND 2" SURFACING.
4. AUTOMATIC SLOPE EQUIPMENT WILL REQUIRE VERIFICATION IF USED.
FRONT
C 8"
38"
2:1 22' DG
REAR
10 + 50
FRONT
R.P. (5)
10 + 50
REAR
C 0"
C 8"
38"
2:1 22' DG
SLOPE STAKE
REFERENCE STAKE & HUB
℄
38"
5"
10"
33"
GROUND LINE
FINSHED GRADE
2%
2%
4:1
4:1
2:1
2:1
1"
8"
8"
16"
16"
22"
22"
6"
5"
REFERENCE STAKE & HUB
SLOPE STAKE
STATION 10 + 50
N.T.S.
NOTE:
ROADWAY SECTION IS FOR ILLUSTRATIVE PURPOSES ONLY.
FRONT
R.P. (10)
10 + 50
REAR
F 0"
F 5"
33"
2:1 22' SG SHLD
REAR
10 + 50
FRONT
F 5"
33"
2:1 22' SG SHLD
SD-9
TYPICAL SLOPE STAKE INSTALLATION
ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO



ON SUBGRADE



BELOW SUBGRADE

NOTE:

* D OR 12" WHICHEVER IS GREATER

** MECHANICAL COMPACTED BACKFILL. PLACED IN 6" LAYERS. BASE MATERIAL CONFORMING TO SUB–SECTION 404.01.

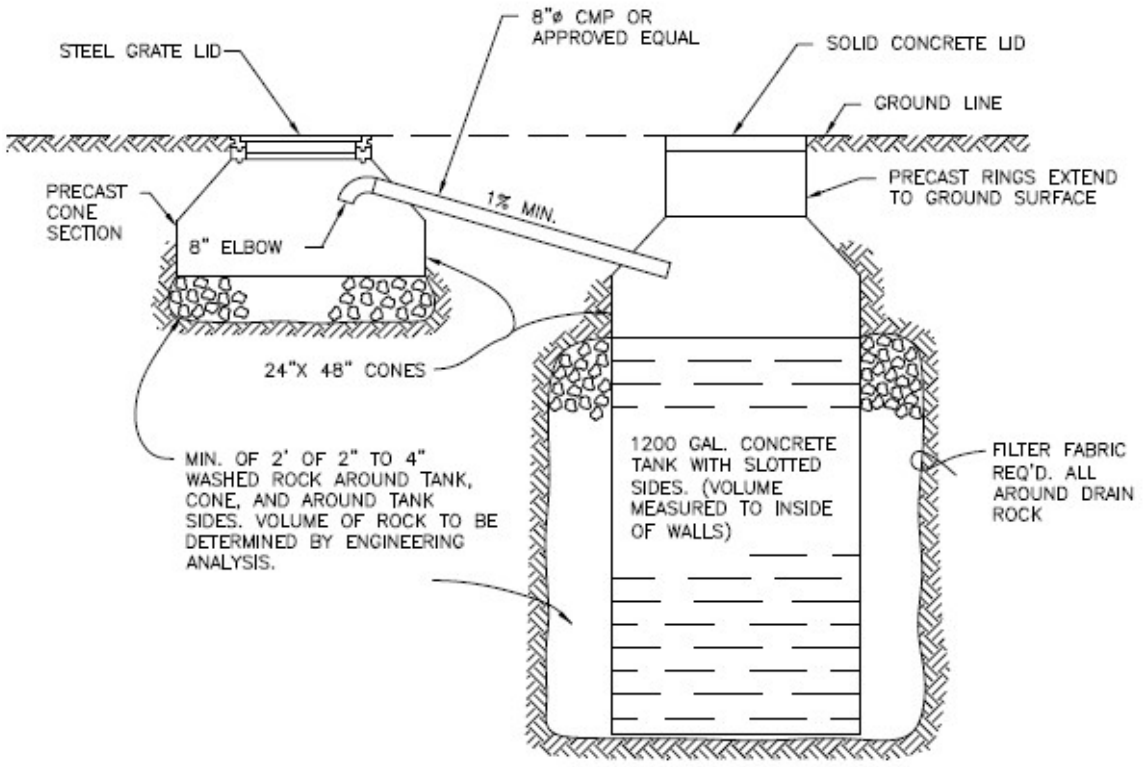
TYPICAL CULVERT INSTALLATION

N.T.S.

ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

SD–10

NOTE:
FOR CONTROLLED INTERSECTIONS SIGHT DISTANCE MUST BE ADEQUATE TO PROVIDE A STOPPING SIGHT DISTANCE IN ACCORDANCE WITH SECTION 305.01 OF THESE STANDARDS.
SIGHT TRIANGLE
40'
40'
SIGHT LINE
OBSTRUCTION
PROPERTY LINE
EDGE OF PAVEMENT
ROADWAY
7' MIN.
3' MAX.
SIGHT TRIANGLE AT
UNCONTROLLED
INTERSECTIONS
REF. I.C.-49-221
ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO
SD-11



NOTES:

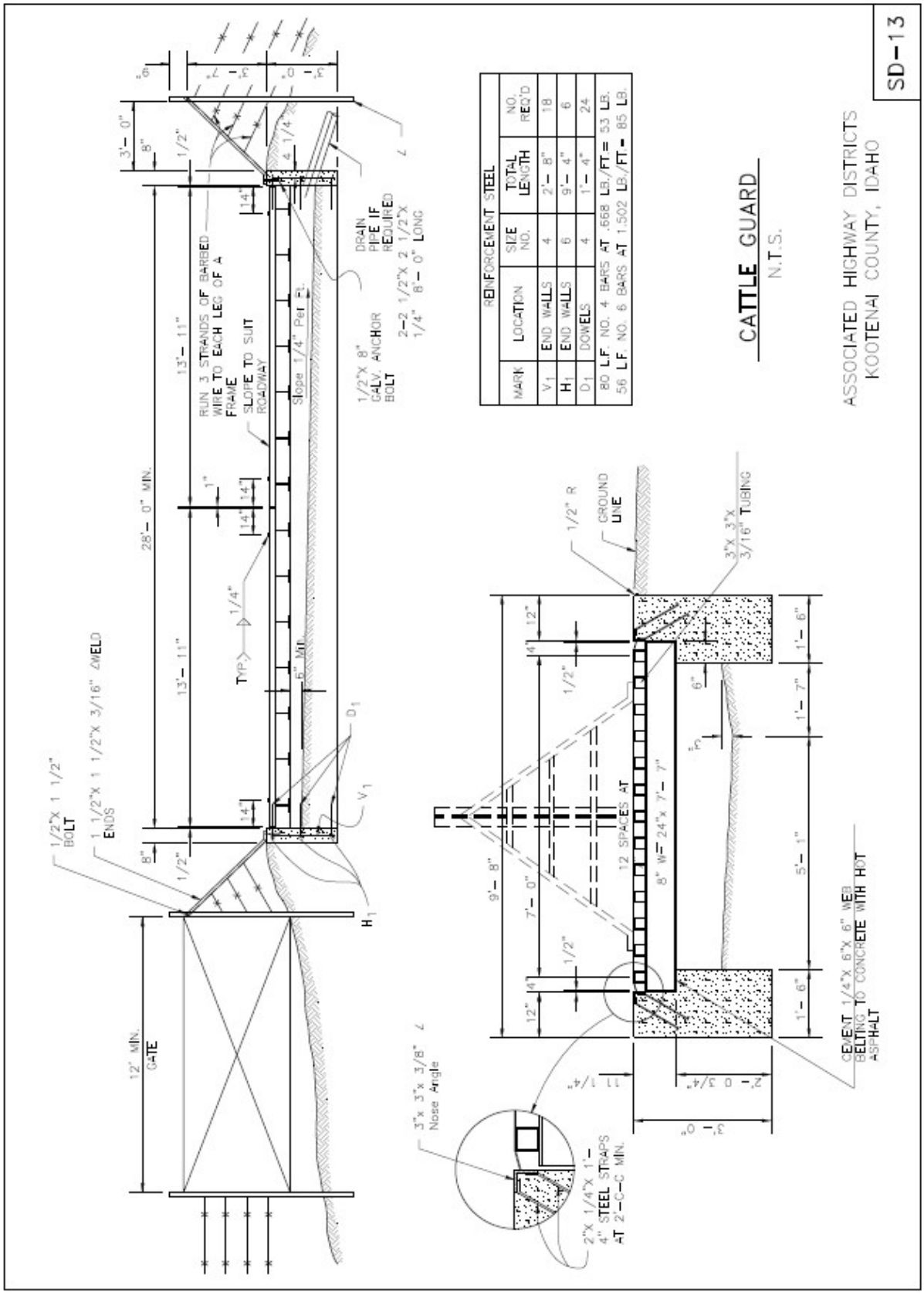
① DRY WELL INSTALLATION MAY REQUIRE A PERMIT AND/OR REGISTERING AT PANHANDLE HEALTH DISTRICT.

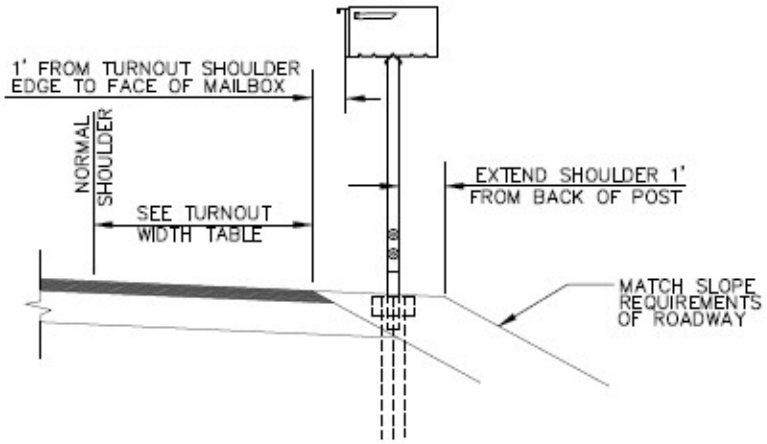
CATCH BASIN & DRYWELL INSTALLATION

N.T.S.

ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO

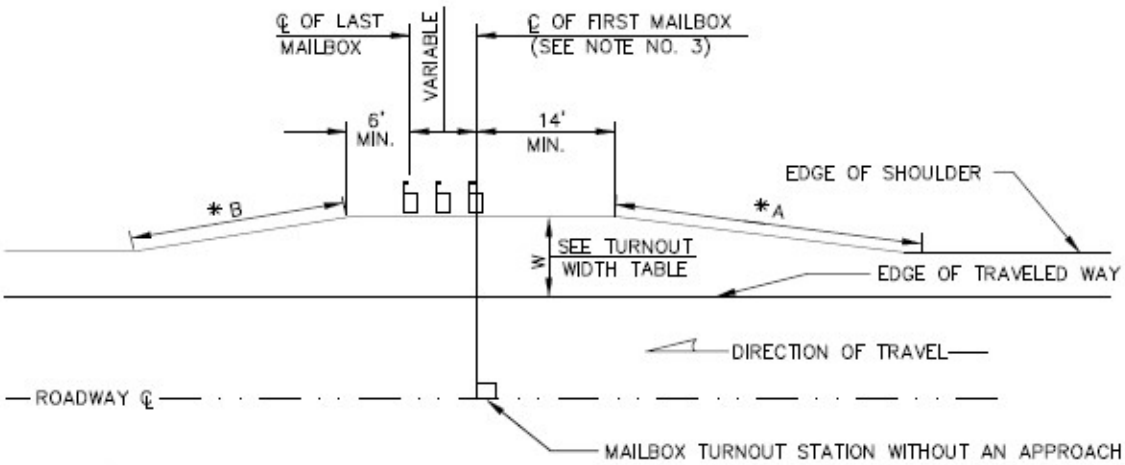
SD-12


SD-13
ASSOCIATED HIGHWAY DISTRICTS
KOOTENAI COUNTY, IDAHO
CATTLE GUARD
N.T.S.
REINFORCEMENT STEEL
MARK
LOCATION
SIZE NO.
TOTAL LENGTH
NO. REQ'D
V1
END WALLS
4
2'- 8"
18
H1
END WALLS
6
9'- 4"
6
D1
DOWELS
4
1'- 4"
24
80 LF NO. 4 BARS AT .668 LB./FT = 53 LB.
56 LF NO. 6 BARS AT 1.502 LB./FT = 85 LB.
3'- 0"
8"
1/2"
13'- 11"
28'- 0" MIN.
RUN 3 STRANDS OF BARBED WIRE TO EACH LEG OF A FRAME
SLOPE TO SUIT ROADWAY
Slope 1/4" Per Ft.
1/2"X 8" GALV. ANCHOR BOLT
DRAIN PIPE IF REQUIRED
2-2 1/2"X 2 1/2"X 1/4" 8'- 0" LONG
1/2"X 1 1/2" BOLT
1 1/2"X 1 1/2"X 3/16" ∠WELD ENDS
TYP.
1/4"
6" Min.
12' MIN. GATE
3"X 3"X 3/8" ∠ Nose Angle
2"X 1/4"X 1'- 4" STEEL STRAPS AT 2'-0" C. MIN.
1/2" R
GROUND LINE
3"X 3"X 3/16" TUBING
9'- 8"
7'- 0"
12 SPACES AT 8" W= 24"X 7'- 7"
1'- 6"
1'- 7"
5'- 1"
CEMENT 1/4"X 6"X 6" WEB BELTING TO CONCRETE WITH HOT ASPHALT



MAILBOX SLOPE TYPICAL

N.T.S.



*A = 4:1 and *B + 2.5:1 TAPERS:
FOR ROADS WITH SPEEDS OF 40 MPH OR LESS, OR AN ADT OF 400 OR LESS.
*A = 20:1 and *B = 12:1 TAPERS:
FOR ROADS WITH SPEEDS GREATER THAN 40 MPH OR AN ADT GREATER THAN 400

TURNOUT WIDTH TABLE
** (SEE NOTE NO. 2)*

SPEED/ADT	PREFERRED	MINIMUM
55/>10000	>12'	12'
55/1500–10000	12'	10'
55/100–1500	10'	8'
55/<100	8'	8'
<40/<50	8'	8'

1. WHEN USING THE TURNOUT WIDTH TABLE THE "SPEED" (MPH) IS THE MAXIMUM POSTED ROADWAY SPEED. THE "ADT" IS THE AVERAGE DAILY TRAFFIC.

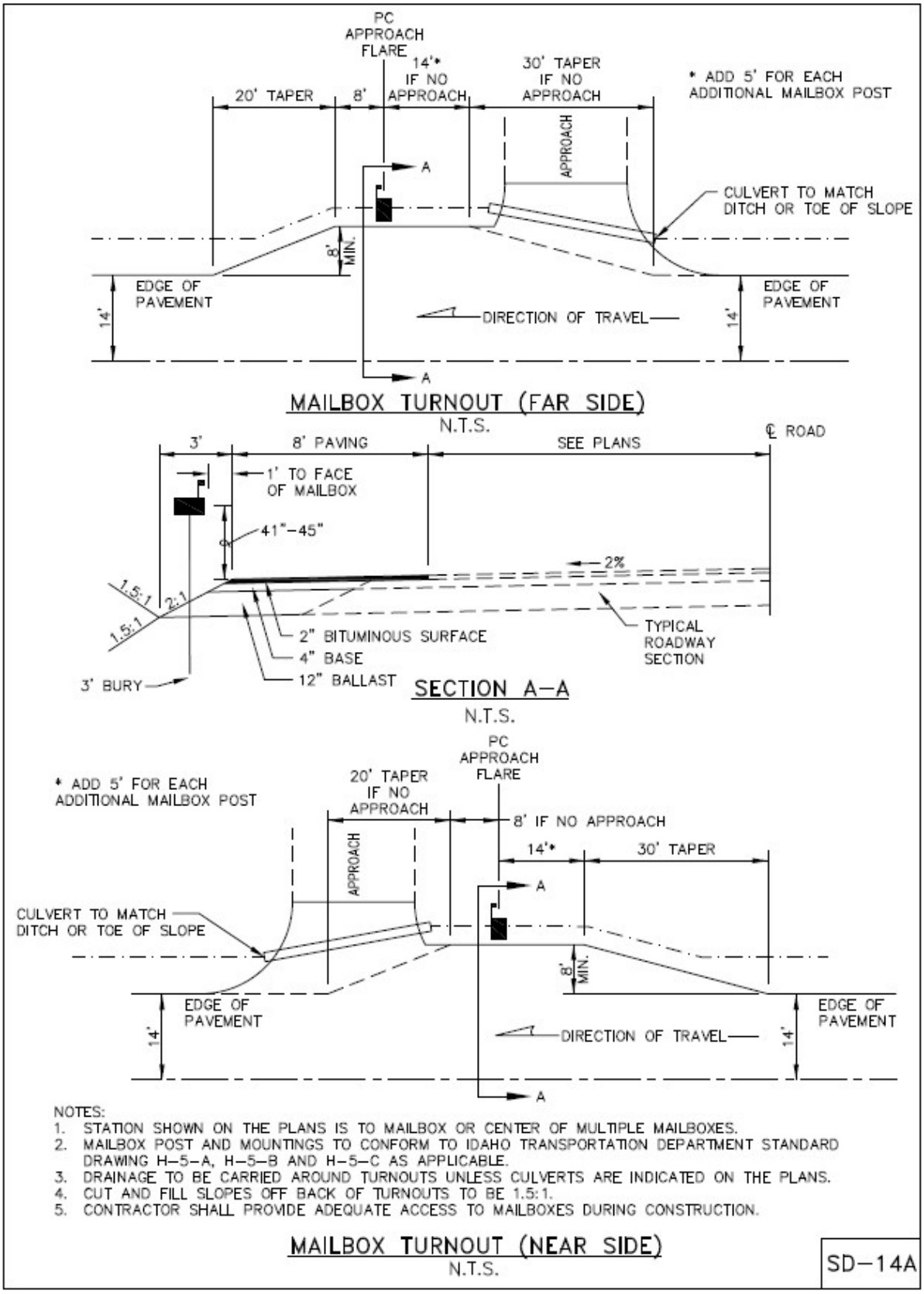
2. THE BALLAST REQUIREMENTS OF MAILBOX TURNOUTS SHALL BE AS THE ADJACENT ROADWAY SECTION.

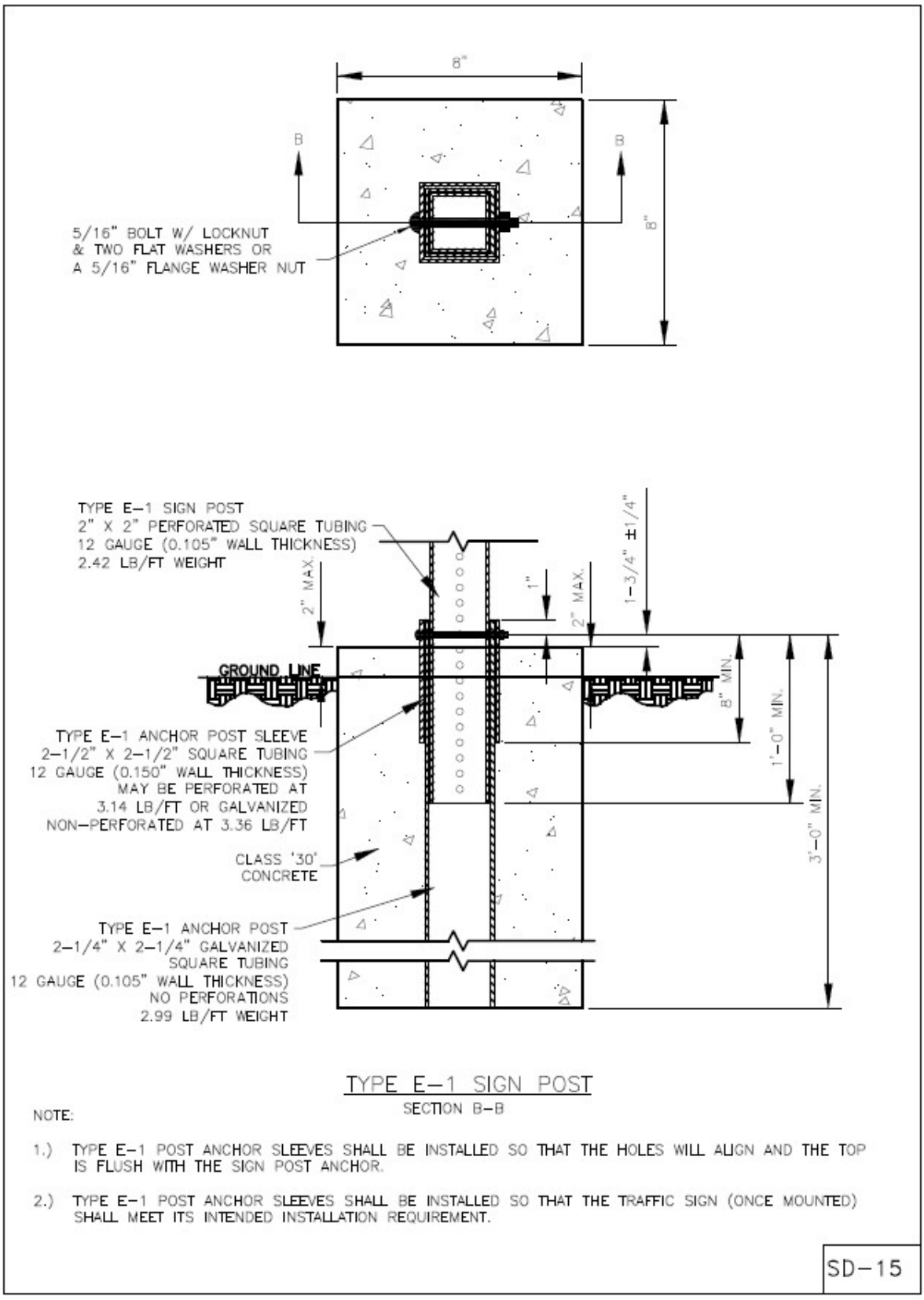
3. REFER TO THE UNITED STATES POST OFFICE STANDARDS FOR MAILBOX INSTALLATION.

MAILBOX TURNOUT DETAIL

N.T.S.

SD–14


PC
APPROACH
FLARE
14'*
IF NO
APPROACH
20' TAPER
8'
30' TAPER
IF NO
APPROACH
* ADD 5' FOR EACH
ADDITIONAL MAILBOX POST
APPROACH
A
CULVERT TO MATCH
DITCH OR TOE OF SLOPE
8'
MIN.
EDGE OF
PAVEMENT
14'
DIRECTION OF TRAVEL
EDGE OF
PAVEMENT
14'
A
MAILBOX TURNOUT (FAR SIDE)
N.T.S.
3'
8' PAVING
SEE PLANS
℄ ROAD
1' TO FACE
OF MAILBOX
41"-45"
2%
1.5:1
2:1
1.5:1
2" BITUMINOUS SURFACE
4" BASE
12" BALLAST
TYPICAL
ROADWAY
SECTION
3' BURY
SECTION A-A
N.T.S.
PC
APPROACH
FLARE
* ADD 5' FOR EACH
ADDITIONAL MAILBOX POST
20' TAPER
IF NO
APPROACH
8' IF NO APPROACH
14'*
30' TAPER
APPROACH
A
CULVERT TO MATCH
DITCH OR TOE OF SLOPE
8'
MIN.
EDGE OF
PAVEMENT
14'
DIRECTION OF TRAVEL
EDGE OF
PAVEMENT
14'
A
NOTES:
1. STATION SHOWN ON THE PLANS IS TO MAILBOX OR CENTER OF MULTIPLE MAILBOXES.
2. MAILBOX POST AND MOUNTINGS TO CONFORM TO IDAHO TRANSPORTATION DEPARTMENT STANDARD DRAWING H-5-A, H-5-B AND H-5-C AS APPLICABLE.
3. DRAINAGE TO BE CARRIED AROUND TURNOUTS UNLESS CULVERTS ARE INDICATED ON THE PLANS.
4. CUT AND FILL SLOPES OFF BACK OF TURNOUTS TO BE 1.5:1.
5. CONTRACTOR SHALL PROVIDE ADEQUATE ACCESS TO MAILBOXES DURING CONSTRUCTION.
MAILBOX TURNOUT (NEAR SIDE)
N.T.S.
SD-14A



TYPE E-1 SIGN POST

SECTION B-B

NOTE:

1.) TYPE E-1 POST ANCHOR SLEEVES SHALL BE INSTALLED SO THAT THE HOLES WILL ALIGN AND THE TOP IS FLUSH WITH THE SIGN POST ANCHOR.

2.) TYPE E-1 POST ANCHOR SLEEVES SHALL BE INSTALLED SO THAT THE TRAFFIC SIGN (ONCE MOUNTED) SHALL MEET ITS INTENDED INSTALLATION REQUIREMENT.

SD-15

Supplemental Information

Financial Guarantee Agreement

Construction Observation Policy

Application for Approach/Driveway Permit
Application for Permit to Use Right-of-Way Utilities

Utility Coordination Policy

Engineer's Statement

Memorandum with Kootenai County

Plat Requirements - Minimum for Highway District Review

Legal Description
Essential Requirements Checklist

Traffic Impact Study Guidelines

Supplemental 1 – Mountain Road Terrain Standards

The following Supplemental to the 2023 Adopted Highway Standards for the Associated Highway Districts of Kootenai County is provided herein to specifically include a Mountainous Terrain Road Design Standard for East Side Highway District, dated April 17, 2023.

For Clarification:

304.01. The following table is intended to show the minimum and maximum values for various parameters used in roadway design for the three classes of roads. Design centerline and super elevation rates shall comply with AASHTO, A Policy on Geometric Design of Highways and Streets based on agency designated classification and speed of roadway. The centerline profile of roads shall also be designed above the surrounding ground in flat and rolling terrain as defined in these Standards.

Design Parameters	Arterial	Collector	Local	Mountainous Terrain
Vertical Grades	Min. 0.5% Max. 6%	Min. 0.5% Max. 6%	Min. 0.5% Max 6% Max 2% Cul-de-sac	Max. 10% Max 6% Cul-de-sac
Horizontal Curvature On Centerline	7° max. Min. Radius 830'	11.5° max. Min. Radius 510'	25° max. Min. Radius 200'	Min. 110' 100' on stop control
Design Speed	35-55 mph	35-55 mph	35-45 mph	Min. 20-mph
Superelevation	Max 0.06-ft/ft	Max. 0.06-ft/ft	Max 0.06-foot per foot	Max 0.06-foot per foot
Minimum Runoff	150-feet	120-feet	110-feet	110-feet
Angles of Intersection	80-90°	80-90°	80-90°	80-90°
Turn Lane	Width = 12' all locations			
	Length and Taper = per ITD Design Manual, designed by P.E.			

Recommended for Approval

By: _____

Ben Weymouth, P.E., Director

EAST SIDE HIGHWAY DISTRCT

By: _____

Graham Christensen, Chairman