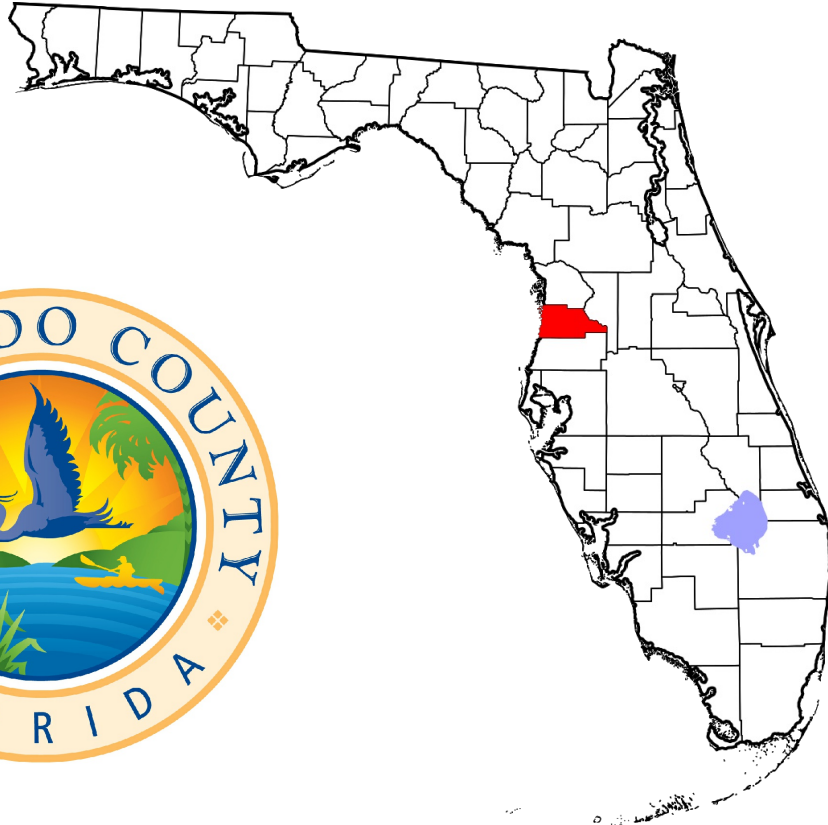


HERNANDO COUNTY FLORIDA
DEPARTMENT OF PUBLIC WORKS / ENGINEERING DIVISION

FACILITY DESIGN GUIDELINES



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*Adopted by the Hernando County
Board of County Commissioners
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NOTE: THESE STANDARDS WERE DEVELOPED IN CONJUNCTION
WITH THOSE ESTABLISHED BY THE FEDERAL HIGHWAY
ADMINISTRATION AND THE FLORIDA DEPARTMENT OF
TRANSPORTATION FOR USE ON THE STREETS AND ROADWAYS IN
HERNANDO COUNTY, FLORIDA.

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ENGINEERING DIVISION

PREFACE

The purpose of this document is to provide uniform minimum standards and criteria for design, construction and maintenance of all public roads and streets medians, curbs, gutters, drainage structures and networks, driveways, sidewalks and curb ramps, traffic controls, and commercial, industrial and residential developments constructed in Hernando County.

The standards established by this document are intended for use on all new construction projects. It is understood that the Standards herein cannot be applied completely to all reconstruction and maintenance type projects, however, the Standards should be applied to the extent that the economic and environmental considerations and existing development will allow, as determined by the County Engineer.

This document refers to the Florida Department of Transportation (FDOT) design standards, specifications, and guidelines; American Association of State Highway and Transportation Officials (AASHTO) publications; Federal Highway Administration (FHWA) books and documents; and Institute of Transportation Engineers (ITE) reports and publications; these guidelines and standards should generally be considered as minimum criteria.

The criteria and standards set forth in other manuals, which have been included by reference, shall be considered as requirements within the authority of the document. Failure to follow these standards may result in a stop work order and/or other enforcement actions.

REFERENCES

The following design standards, specifications, and guidelines are references utilized in this document:

- A Policy on Geometric Design of Rural Highways: (AASHTO Greenbook): American Association of State Highway and Transportation Officials (AASHTO), Latest Edition.
- Transportation and Traffic Engineering Handbook: (ITE Handbook): Institute of Transportation Engineers (ITE).
- Manual on Uniform Traffic Control Devices for Streets and Highways: (MUTCD): U.S. Department of Transportation, Federal Highway Administration (FHWA), Latest Edition.
- Standard Plans for Road and Bridge Construction: (FDOT Topic No. 625-000-003): Florida Department of Transportation (FDOT), <https://www.fdot.gov/programmanagement/Specs.shtml>
- FDOT Design Manual: (FDOT Topic No. 625-000-002): Florida Department of Transportation (FDOT), <http://www.fdot.gov/roadway/FDM/>
- Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways: (FDOT Greenbook): Florida Department of Transportation (FDOT), Latest Edition <https://www.fdot.gov/roadway/floridagreenbook/fgb.shtml>
- Transit Facility Guidelines: Florida Department of Transportation (FDOT), latest edition. <https://www.fdot.gov/fdottransit/transitofficehome/transitplanning.shtml/newtransitfacilitiesdesign.shtml>
- FDOT Drainage Manual: Office of Design, Drainage Section, Latest Edition.
- Drainage Design Guide (Handbook) Florida Department of Transportation (FDOT) <https://www.fdot.gov/roadway/drainage/manualsandhandbooks.shtml>,
- Trip Generation: Institute of Transportation Engineers (ITE), Latest Edition.
- Florida Roundabout Guide: Florida Department of Transportation (FDOT).
- Minimum Specifications for Traffic Control Signal Devices: Florida Department of Transportation (FDOT), Latest Edition.
- Guidelines for Landscaping Roadways: Hernando County Florida.
- Guide for the Development of Bicycle Facilities: American Association of State Highway and Transportation Officials (AASHTO), Latest Edition.
- Hernando County Ordinance No. 2006-10, NPDES Ordinance

TABLE OF CONTENTS

SECTION I

ENGINEERING DESIGN CRITERIA

DEFINITIONS	I-01
MAINTENANCE	I-03
ROADWAY CONSTRUCTION STANDARDS	I-05
ROADWAY REQUIREMENTS	I-06
ROADWAY DESIGN	I-07
TRAFFIC CONTROL REQUIREMENTS	I-09
SIDEWALK AND BICYCLE FACILITY REQUIREMENTS	I-09
TRAFFIC ACCESS ANALYSIS	I-12
DEVELOPMENT PERMIT REQUIREMENTS	I-14
DRAINAGE REQUIREMENTS	I-15
DRAINAGE DESIGN	I-20
DRAINAGE SYSTEM CONSTRUCTION	I-23
LOTS AND LOT GRADING	I-23
EXCAVATION AND STOCKPILES	I-24
PLANS AND SPECIFICATIONS SUBMITTALS	I-24
ADMINISTRATIVE DESIGN VARIANCES	I-26
AUTHORITY OF COUNTY INSPECTOR	I-27
VIDEO REPORT	I-27
GENERAL NOTES	I-27

SECTION II

TESTING & CERTIFICATION

AS-BUILTS AND RECORD DRAWINGS	II-01
CERTIFICATION OF SUBDIVISIONS	II-02
EXPENSE AND RESPONSIBILITY FOR TESTING	II-02
TESTING SCHEDULE	II-03
MINIMUM TEST REQUIREMENTS	II-04

SECTION III

DRAINAGE STANDARDS

RIPRAP	III-01
SWALE DETAILS	III-02
DRA DETAIL (DRY POND)	III-03
DRA DETAIL (WET POND)	III-04
CONCRETE FLUME	III-05
SILT FENCES	III-06
SOIL TRACKING PREVENTION DEVICES	III-07
SODDING	III-08
RESIDENTIAL LOT AND BLOCK GRADING "A"	III-09
RESIDENTIAL LOT AND BLOCK GRADING "B"	III-10
RESIDENTIAL LOT AND BLOCK GRADING "C"	III-11
RESIDENTIAL LOT AND BLOCK GRADING "D"	III-12

SECTION III CONTINUED

DRAINAGE STANDARDS

RESIDENTIAL LOT GRADING RULES.....	III-13
SPECIAL DRAINAGE AREA OF CONCERN 1 (FOREST OAKS)	III-14
SPECIAL DRAINAGE AREA OF CONCERN 2 (BERKELEY MANOR).....	III-15
SPECIAL DRAINAGE AREA OF CONCERN 3 (SPRING HILL DRIVE BASINS) ...	III-16
SPECIAL DRAINAGE AREA OF CONCERN 4 (STONY BROOK AREA OF RIDGE MANOR)	III-17
SPECIAL DRAINAGE AREA OF CONCERN 5 (TOUCAN TRAIL WEST).....	III-18

SECTION IV

ROADWAY STANDARDS

TYPICAL SECTIONS

TWO-WAY SHARED USE PATH	IV-01
ALLEY / ONE WAY ROAD	IV-02
FRONTAGE ROAD	IV-03
LOCAL ROADS	IV-04
MAJOR LOCAL / COMMERCIAL ROADS	IV-05
MAJOR LOCAL FOUR-LANE ROAD - OPEN DRAINAGE	IV-06
MAJOR LOCAL FOUR-LANE ROAD - CLOSED DRAINAGE.....	IV-07
COLLECTOR / TWO-LANE ROAD - OPEN DRAINAGE.....	IV-08
MINOR COLLECTOR / TWO-LANE ROAD - CLOSED DRAINAGE	IV-09
MINOR COLLECTOR / FOUR-LANE ROAD - OPEN DRAINAGE	IV-10
MINOR COLLECTOR / FOUR-LANE ROAD - CLOSED DRAINAGE	IV-11
MAJOR COLLECTOR / TWO-LANE ROAD - OPEN DRAINAGE	IV-12
MAJOR COLLECTOR / FOUR-LANE ROAD - OPEN DRAINAGE	IV-13
RURAL ROADS - OPEN DRAINAGE	IV-14
CLASS B /C SUBDIVISION ROADS	IV-15
OPEN CUT PAVEMENT RESTORATION.....	IV-16
INTERSECTION LANDSCAPING.....	IV-17
DRIVEWAYS	
COMMERCIAL CONNECTION.....	IV-18
RESIDENTIAL CONNECTION	IV-19
DRIVEWAY APRON DETAILS	IV-20
FRONTAGE ROAD DRIVEWAY SPACING	IV-21
PARKING DETAILS	
PARKING LOT / STALL LAYOUT (1 OF 2).....	IV-22
PARKING LOT / STALL LAYOUT (2 OF 2).....	IV-23
POINT OF SERVICE AND QUEUING STANDARDS (1 OF 2)	IV-24
POINT OF SERVICE AND QUEUING STANDARDS (2 OF 2)	IV-25
GOLF CART PARKING DETAILS	IV-26
DISABLED PARKING SIGNAGE.....	IV-27
ASPHALT / CONCRETE PARKING.....	IV-28
BOLLARD DETAILS	IV-29
TURNAROUND DETAILS	IV-30
ADA STANDARD SIDEWALK.....	IV-31
MAILBOXES	IV-32
MANHOLE RISER RINGS	IV-33
GATE LOCATIONS	IV-34

SECTION V

TRAFFIC CONTROL STANDARDS

STOP / YIELD SIGNAGE	V-01
STREET NAME SIGNAGE	V-02
NO OUTLET SIGNAGE	V-03
GOLF CART CROSSING	V-04
ROAD CLOSED SIGNAGE	V-05
TRAFFIC SIGNAL NOTES	V-06
SIGNAL WIRING COLOR CHART	V-07

SECTION I

ENGINEERING DESIGN CRITERIA





DEFINITIONS

ARTERIAL STREETS: A route providing service which is relatively continuous and of relatively high traffic volume, long average trip length, high operating speed, and high mobility importance. In addition, every United States numbered highway is an arterial road. These routes facilitate the through movement, i.e., mobility, of vehicular traffic. Access management techniques are commonly instituted on them to preserve the facilities' capacity. Land access is a secondary priority to the movement of traffic.

BICYCLE FACILITY: A designated travel way for bicycles, including bike lanes, bike paths, paved shoulders, wide lanes, and multi-use trails.

BMP- BEST MANAGEMENT PRACTICE: Implementation of industry standard control practices.

COLLECTOR STREETS: Function primarily to carry traffic from local streets to arterials. The operating speeds are generally lower than that of arterials, but generally greater than that of local streets. Collector roads provide a greater degree of land use.

COMPENSATORY EXCAVATION: The excavation within or directly contiguous to a floodplain for restoring flood storage capacity lost to fill within the floodplain. Compensatory excavation shall become part of the floodplain and based on the professional justification by the engineer of record that the excavated area is adequately connected hydraulically to the historic floodplain area.

CONSTRUCTION ENTRANCES AND TRUCK ROUTES: Approved routes to/from the site to all major roads. All construction vehicles going to/from the site will utilize these routes.

CUL-DE-SAC: A widened end of a local road (typically circular in shape) to enable turnaround movements. The distance from the edge of the nearest connecting roadway to the center point of the cul-de-sac shall not exceed six hundred (600) feet. (To exceed 600 feet a variance is also required from the Fire Department and the cul-de-sac shall be designed to meet current National Fire Protection Association standards.)

DETENTION: The temporary storage of storm water runoff to limit the rate of discharge into receiving water bodies.

DEVELOPER: The owner, his agent, or employee engaged in the process of development.

DEVELOPMENT: Any man-made material change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations.

EASEMENT: A legally defined right of passage or use across a specified property. An easement may allow for access, placement of utilities, drainage, other purposes, or any combination of these uses.

ELEVATION: The height in feet above mean sea level according to North American Vertical Datum (NAVD). NAVD 88 is the official vertical datum of Hernando County and is to be used



in all surveying and mapping efforts.

FILE OF RECORD: A permanent file which contains all pertinent data, correspondence, calculations, drawings, plats, etc. used to review site plans and/or plats of submitted developments.

FLOODPLAIN: The lateral extent of inundation by an event of given statistical frequency, such as “25-year floodplain,” as designated by the Southwest Florida Water Management District (SWFWMD) and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM).

FLOODWAY: The channel of a watercourse and the adjacent land areas that must be reserved in order to discharge the 25-year flood or 100-year flood (base flood), as stipulated without cumulatively increasing the water surface elevation more than one-tenth of a foot.

FRONTAGE ROAD: A street which runs concurrent with an arterial street and provides access to abutting properties and provides protection from higher speed arterial traffic. A frontage road may be developed along the property frontage or to the rear of the property (Reverse Frontage Road).

FUGITIVE SOILS: Soils that have tracked, eroded, blown etc from where they were placed.

IMPERVIOUS: Surface which has been compacted or covered with a layer of material so that it is highly resistant to infiltration by water, including surfaces such as compacted sand, limerock, shell or clay, as well as most conventionally surfaced streets, roofs, sidewalks, parking lots and other similar structures.

KARST: A geologic term used to describe areas where landscapes have been affected by the dissolution of limestone or dolostone, including areas where the formation of sinkholes is relatively common.

MAINTENANCE OF TRAFFIC (MOT)/TEMPORARY TRAFFIC CONTROL (TTC) PLAN: A plan that denotes how vehicular and pedestrian traffic shall be maintained throughout a construction area.

MAJOR COLLECTOR ROAD: Designed to carry traffic from local streets to Arterial roadways; designed for moderate to high traffic volumes, moderate to high trip lengths and moderate to high speeds.

MAJOR DRAINAGE SYSTEM: A system of natural or man-made drainage-ways such as streams, ditches, or canals that collect and transmit stormwater runoff from watersheds identified in Hernando County.

MAJOR LOCAL ROAD: An intermediate road which carries more traffic than a local road but less than a Collector Road. Designed as a main thoroughfare in a residential subdivision to carry traffic to and from local roads to Collector & Arterial roads.

MULTI-USE OR SHARED USE PATH/TRAIL: A designated travel way for combined pedestrian, bicycle and/or other non-motorized travel built to standards for shared use path design and construction, 10-foot standard width, 12-foot width for high volume and multiple modes.



NATURAL DRAINAGE-WAYS: Those watercourses that are either natural or have not been substantially excavated, graded or otherwise altered or improved, by man.

NPDES: National Pollutant Discharge Elimination System.

RECEIVING WATER BODIES: Those bodies and drainage-ways, either natural or man-made, that lie downstream of the site in question and which are susceptible to degradation of water quality due to activity at the upstream site.

PROFESSIONAL ENGINEER OR PROFESSIONAL SURVEYOR AND MAPPER: As defined by Ch. 471 Engineering and 472 Land Surveying and Mapping, Florida Statutes.

RETENTION: The prevention of direct discharge of storm runoff into receiving waters, included as examples are systems which discharge through percolation, exfiltration, and evaporation processes and which generally have residence times less than 3 days.

RURAL AREAS: Those areas outside of urban boundaries. Urban area boundary maps can be found at <https://www.fdot.gov/roadway/BufferMap>

SEASONAL HIGH GROUNDWATER TABLE LEVEL (SHGWT): The elevation to which the ground or surface water can be expected to rise due to a normal wet season.

SIDEWALK: A portion of the county right-of-way or easement dedicated to Hernando County designated for primary use by pedestrians and built to Hernando County standards. Unless prohibited by local ordinance, a sidewalk may legally be used by a bicyclist consistent with Florida Statute 316.2065(5)(b)(9 & 10). All sidewalks shall be ADA compliant.

URBAN AREA: A geographic region comprising, as a minimum, the area inside the United States Bureau of the Census boundary of an urban place with a population of 5,000 or more persons, expanded to include adjacent developed areas as provided for by the Federal Highway Administration (FHWA) regulations. Urban area boundary maps can be found at <https://www.fdot.gov/roadway/BufferMap>

MAINTENANCE

After construction, but prior to County acceptance, the Developer shall maintain all right-of-way, drainage retention areas, and drainage rights-of-way for a period of 18 months. During this period, grass shall be kept viable and mowed to a height not to exceed ten inches. Should pavement cracks develop, the Developer shall be required to remediate the entire road lengths and/or sections with an approved asphalt. Remove and replace the distressed area(s) to the full depth and the full lane width for the full failure length plus 50 feet on each end.

The Developer shall periodically inspect for erosion problems after major storms and correct any erosion over 4 inches in depth. Prompt attention should be made when erosion has occurred within three feet of the edge of pavement or onto sidewalk. The Developer shall take corrective measures to stabilize and



prevent further erosion within seven days. After this time has passed, the deficient area shall be brought to the attention of the Public Works Director for corrective action.

Sod must be monitored for pests and noxious weeds. All necessary work for turf establishment must be performed including watering and fertilizing until final acceptance. Periodic inspections will be performed by the County to determine if 95% of the amount of grassing and/or sodding originally planted has survived. These inspections will be conducted at six months, one year and eighteen months. The Developer shall remediate areas as identified as deficient during the same inspection timelines.



ROADWAY CONSTRUCTION STANDARDS:

The following table summarizes Hernando County's minimum design and construction standards:

ROADWAY CLASSIFICATION	TRAFFIC SAFETY		RIGHT OF WAY				NEW ROAD CONSTRUCTION				PEAK HOUR TRAFFIC
ROADWAY DESCRIPTION	DESIGN SPEED	TRAFFIC STRIPING	MINIMUM (FEET)				LANE WIDTHS	MINIMUM THICKNESS (INCHES) (NOTES 1 & 3)			2 WAY TRIPS DURING PEAK HOUR (NOTE 1)
	(MPH)		OPEN DRAINAGE		CLOSED DRAINAGE			SUBBASE	BASE	SURFACE COURSE	
			4 LANE	2 LANE	4 LANE	2 LANE	(FEET)				
MAJOR COLLECTOR	NOTE 4	YES	160	100	150	N/A	12 (NOTES 2 AND 5)	12	8	3	N/A
COLLECTOR ROAD	NOTE 4	YES	130	80	100	70	12 (NOTES 2 AND 5)	12	8	2.5	151-450
MAJOR LOCAL/ COLLECTOR ROAD	35	YES	120	70	90	60	11	12	8	2	76-150
LOCAL ROAD	NOTE 4	NO	N/A	60	N/A	50	10 (NOTE 5)	9	6	1.75	0-75
FRONTAGE ROAD	30	YES	50	50	N/A	50	12	12	8	2	N/A
CLASS B SUB DIVISION > 10 LOTS	30	NO	N/A	60/30	N/A	N/A	9		4	1 (OPT)	N/A
CLASS C SUB DIVISION ≤10 LOTS	30	NO	N/A	60/30	N/A	N/A	12 (ONE LANE ONLY)		4	1 (OPT)	N/A

NOTES: N/A = Not Applicable

1. Truck traffic may reduce the traffic thresholds
2. Paved shoulders required on open drainage roadways. Paved shoulders not included in min. lane width. See FL Greenbook Table 3-21 for Min Shoulder Widths
3. Layer thickness other than those specified, shall have an equivalent structural number, and shall be subject to approval by the County Engineer.
4. See current "Florida Greenbook" Table 3-1 for design speed specifications
5. See current "Florida Greenbook" Table 3-20 for exceptions to the 10 foot width
6. See current "Florida Greenbook" Section 3C.7.1 for right-of-way discussion

ROADWAY REQUIREMENTS:

A. Minimum right-of-way requirements shall be as follow:

1. See Sheet I-05 and Sheets IV-01 thru IV-15.
2. Cul-de-sacs shall have 50 feet of right-of-way approach to a minimum 120-foot diameter right-of-way for a turn around circle when constructed with curb and gutter, with a 50-foot paved radius. See Sheet IV-30.
3. Cul-de-sacs shall have 60 feet of right-of-way approach to a 140-foot diameter right-of-way for a turn around circle when constructed with open drainage, with a 50-foot paved radius. See Sheet IV-30.

B. Subdivision Streets:

1. Subdivision streets shall be planned so that residential lots will not have driveways entering directly onto Collector, Arterial streets, Frontage Roads, or Reverse Frontage Roads.
2. Subdivision streets shall be classed as “Local Streets, Major Local Streets, or Collector Streets.” See Sheet I-05.
3. Subdivisions having $\frac{1}{4}$ acre lots or smaller, shall utilize curb and gutter, closed drainage, sod common areas and traversable inlets only.
4. Subdivisions having lots larger than $\frac{1}{4}$ acre shall include (1) a four-foot sod strip along all pavement edges when open drainage roadway system is utilized and (2) sod on all common areas.

C. Collector and Arterial streets shall have a minimum design speed as indicated in the FDOT Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways and as outlined in the Geometric Design chapter of this guideline.

D. Roadway radii shall be a minimum of 30 feet at all intersection on Local Streets and Major Local Streets in residential areas.

E. Roadway radii shall be a minimum of 35 feet at all intersections on Collector Streets, Major Collector Streets, and Frontage Roads in Commercial areas.

F. The angle of the centerlines of intersecting roadways shall not be less than 70°.

G. Minimum distance between intersections on Local Streets shall be 150 feet. Intersections shall also meet all sight distance requirements.

H. Intersections: Roadway slopes at intersections shall not exceed 5% without a vertical curve.

ROADWAY DESIGN

Design Standards:

- A. The Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Greenbook – Latest Edition), the FDOT Design Manual (FDM – Latest Edition), the Flexible Pavement Design Manual (Latest Edition) and Roadway and Traffic Design Standards (Latest Edition), each prepared by the FDOT, and the FDOT Standard Specifications for Road and Bridge Construction (Latest Edition) are by reference incorporated into this document except where modified by this document. In case of conflict, the following standards shall apply.
- B. General Paving Criteria:
 - 1) Pavement cross-slope shall be 2% and inverted crowns are not permitted. Finish pavement shall be ¼" higher than the lip of any concrete gutter. See Sheet IV-04, IV-05, IV-07, IV-09, and IV-11.
 - 2) The minimum edge of pavement elevation for Local Street construction shall be at or above the 25-year storm events; Collector Street construction shall be above the 50-year storm event; and Major Collector Street construction shall be above the 100-year storm event, unless otherwise approved by the County Engineer.
- C. Flexible Pavement Standards:
 - 1) For all full-width lanes, all acceleration and deceleration lanes and turn lanes, the paving machine shall weigh thirty thousand (30,000) pounds minimum. The steel wheeled roller shall weigh a minimum of ten (10) tons, and the traffic roller shall weigh a minimum of seven (7) tons.
 - 2) Sub-bases shall be of good, clean, acceptable material with a Limerock Bearing Ratio (LBR) of no less than 40, compacted to 98% of the maximum density determined by AASHTO T-180. The sub-base must extend six (6) inches beyond the back-of-curb or, for sections without curb, to the exterior edge of the shoulder. If utility cuts are made after sub-base stabilization, the trenches shall be backfilled, full depth, with base material compacted to 98% maximum density. Sub-base material shall be separated a minimum of two (2) feet from high ground water conditions.
 - 3) Bases may be constructed of limerock, crushed concrete, shell rock, or asphaltic concrete. Other materials may be proposed by the Developer for approval by the County Engineer, subject to the following standards:
 - a. Base material shall have a Limerock Bearing Ratio (LBR) of not less than 100.
 - b. Asphaltic concrete design mix shall be submitted for approval by the County Engineer.

- c. Asphaltic concrete surface courses shall be mixed, placed, and compacted in accordance with FDOT Specifications for Hot Bituminous Material, Plant Methods, and Equipment & Construction Methods.
7. The pavement section elements specified herein are minimums. In some areas, due to soil conditions and/or traffic density, it may be required that the pavement structural section be designed in accordance with the FDOT Flexible Pavement Design Manual.
8. The widening of an existing roadway may require milling and/or an overlay for the limits of said widening.
9. Approval for deviations from adopted pavement section elements shall be obtained in writing from the County Engineer.
10. Rigid (Portland Cement Concrete) pavement designs will be reviewed for approval by the County Engineer on a case-by-case basis.
11. Sidewalk Construction:
 - 1) Sidewalks shall be constructed of 3,000 psi concrete at least five (5) feet wide and six (6) inches thick. Driveway sidewalks shall be six (6) inches thick with six (6) inches by six (6) inches #10 wire mesh reinforcing or with commercial fiber mesh in lieu of wire mesh reinforcing.
 - 2) Construction joints shall be provided every five (5) feet on center and ½ inch expansion joints every fifty (50) feet on center along entire length.
 - 3) Sub-bases for sidewalks shall be of good, clean, acceptable material compacted to 95% of maximum density as determined by AASHTO T-180.
 - 4) Sidewalks should be located at least two and one-half (2.5) feet of the property line on all roadways.
 - 5) Sidewalks shall be connected to each adjacent street per ADA, County, and FDOT standards. Developers are required to install sidewalks in all common areas, including ADA street connections, parks, etc. Follow the latest version of FDOT Standard Plans for sidewalk and detectable warnings for ADA Mat / Detectable Warning Installation guidelines. For the detectable warning surface refer to the current FDOT Approved Products List (APL). All detectable warning surfaces will be yellow. Optional colors (red, black, orange) are to be approved by the County Engineer only. A tapered edge tile shall be used on all approach sides. All curbs that will get a sidewalk connection in the future will be recessed to accept a handicap ramp in the future.
12. All backfill over any pipe (storm sewer, water line, sanitary sewer) that is to be installed under roadways, must comply with Sheet IV-16, Open Cut Pavement Restoration, using flowable fill. Anything outside of one foot from the pavement, within the shoulder area, etc. of the roadway is

to be compacted per FDOT Standard Specifications, Latest Edition. This particular section specifies compaction to 100% of maximum density as determined by AASHTO T-99. This must be indicated on the plans.

13. Mailboxes shall be installed in conformance with Sheet IV-32 and the FDOT Standard Plans for Road and Bridge Construction - Index 110-200 and as required by the U.S. Postal Service.

TRAFFIC CONTROL REQUIREMENTS

1. All traffic control design and construction shall be per latest editions of the FDOT “Standard Plans for Road and Bridge Construction,” the FDOT “Standard Specifications for Road and Bridge Construction” and the FHWA “Manual on Uniform Traffic Control Devices.” Any deviations from these standards must be approved by the County Engineer.
2. All traffic control devices shall be depicted on plans, including type, placement location and dimensions, and material and installation details in conformance with the FDOT Approved Products List (APL) and County, State, and Federal guidelines.
3. All traffic control devices shall be installed by the Developer, at his/her expense, prior to the opening of the development to public usage and travel.
4. Approved work zone traffic control, and project site security and safety plans/notes are required on the plans. Construction traffic entrance and exiting route shall be designated on construction plans.
5. Frontage roads, Major Local, Collector, and Major Collector roadways shall be striped per the MUTCD with thermoplastic pavement markings.
6. Penalties for illegal use of a disabled parking space shall be shown as \$101 on FTP-22-06.

SIDEWALK AND BICYCLE FACILITY REQUIREMENTS

- A. See additional sidewalk specifications on Sheet I-08 under sidewalk construction and Drawing IV-31, Roadway Standard Sidewalk.
- B. Residential Streets
 1. Subdivisions in all residential zoning districts, Residential Single-Family Manufactured Housing Districts, and Residential Planned Development Project Districts (including single family, multi-family, mobile home, resort residential and residential components of Combined PDPs) shall include sidewalks on both sides of internal streets and on one side along the frontage of all external streets adjoined by the development.

2. Residential developments not required to include sidewalks by Section A.1 shall be required to include one of the following along Major Local, Collector and Arterial roadways:
 - a. A sidewalk on one side (both sides if four or more existing or planned road lanes)
 - b. Bicycle facilities along both sides
 - c. A shared-use multi-use path or trail separated from and parallel to Major Local, Collector, and Arterial roadways.

C. County Collector and Arterial Roadways

1. County collector and arterial road pavement widening projects in urban areas (within FHWA apportioned urban boundaries) where bicycle and pedestrian facilities are planned, as part of a county network shall include paved shoulders (at a minimum) for bicycle travel.
2. County collector and arterial road pavement widening projects in urban areas (within FHWA apportioned urban boundaries) shall include a sidewalk along one side (at a minimum), except when such roads have four or more lanes sidewalks shall be included along both sides.
3. Where parallel public bicycle and/or pedestrian facilities exist or are planned in close proximity to and are (or are planned to be) accessible from county arterial and collector roads, pavement widening projects on these roads may not include additional bicycle and/or pedestrian facilities.
4. All developments fronting county collector and arterial roads in urban areas shall include a sidewalk along one side of all county collector and arterial roads fronted by the development and shall be required to include onsite pedestrian features i.e., sidewalks, crosswalks, etc., built to connect the development to the existing or planned sidewalk(s).
5. Where it is not practical (as determined by the County Engineer based on planned road widening within 5 years or incomplete planning to determine sidewalk locations, or environmental constraints) to construct a required sidewalk, the developer may contribute funds equivalent to the cost of the required sidewalk fund for the area. The contribution amount per linear foot will be verified and determined by the County Engineer using market conditions at the beginning of the Hernando County BOCC fiscal year effective October 1st.

D. Frontage Roads

1. Frontage roads shall include a sidewalk on at least one side.
2. Development (residential and nonresidential) occurring adjacent to existing frontage roads with existing or planned (to a sufficient degree to determine location) sidewalk(s) shall include onsite sidewalk(s) built to connect to the existing or planned sidewalk(s). However, when the existing or planned sidewalk is on the opposite side of the pavement from the development, onsite sidewalk(s) shall be required to connect to the edge of pavement at a

suitable location for pedestrian traffic to safely cross the pavement to reach the sidewalk, and shall include signed and marked pedestrian crossing(s). Developments constructing frontage roads shall include sidewalks as part of frontage road construction.

3. Development occurring adjacent to existing frontage roads without existing or planned (to a sufficient degree to determine location) sidewalks shall be required to include onsite sidewalk(s) built to the property line.
4. Development occurring adjacent to frontage roads shall include pedestrian connections to adjoining properties.
5. Frontage road naming shall be included with the information provided to the Property Appraiser for road naming.

E. Development Proximate to Planned Bicycle and Pedestrian Facilities

1. Development adjoining (or including) planned or existing bicycle and pedestrian facilities where there are gaps in incomplete networks shall construct the portion(s) necessary to continue the planned or existing facilities adjacent to (or through) the development.

F. ADA Ramps and Recessed Curbing

1. Current FDOT Standard Plans Index 522-001, 522-002, and current FDOT Standard Specifications Section 527 shall be followed for all ADA ramps and recessed curbs. The developer of the subdivision shall place all recessed curbs during construction. For the detectable warning surface (truncated domes) Refer to current FDOT Approved Products List (APL). All detectable warning surfaces will be yellow. Optional colors approved by the County Engineer only. A tapered edge tile shall be used on all approach sides.
2. Local roads with T-intersections shall have a minimum of 3 curb recesses/ramps for unimpeded ADA access. All ramps shall be at 45 or 90 degrees to the roadway, so that pedestrians cross and arrive perpendicular to the ramp/sidewalk. Curb ramps should align with crosswalks.
3. Collector and higher-level roads shall have their ADA ramps coordinated with the County Engineers Office prior to design.

TRAFFIC ACCESS ANALYSIS

Projects generating 50 or more PM peak hour, or peak hour of the generator trips, are required to submit an electronic copy of a traffic access analysis, digitally signed and sealed by a Florida professional engineer following Rule 61G15-23.004 F.A.C. – Procedures for Digitally Signing and Sealing Electronically Transmitted Plans, Specifications, Reports or Other Documents. The traffic analysis is utilized to review operational issues by the Engineering Division, and concurrency issues by the Planning Department. The methodology outlined below can be utilized for both purposes; however, be advised a separate application and copy of the study must be electronically transmitted to the Planning Department for purposes of concurrency review.

Traffic access analysis may be for the ultimate project or immediate planned phases. However, if phased, subsequent phases will require a new analysis and may necessitate reconstruction of originally constructed improvements.

Project design may be concurrent with review of the traffic access analysis, however, strictly at the Developer's risk. Site layout, access types and locations, roadway improvements and drainage may all require major revisions.

METHODOLOGY DEVELOPMENT

A. Project Information:

1. Site location and roads to access (e.g. NW corner of US 41 & CR 574 with access on each).
2. Proposed land use and size (e.g. medical office, 30,000 SF)
3. Proposed phasing, if any.
4. Build-out date (e.g. 2028).
5. Developer and consulting engineer's contact information (i.e. name, business name, business address, phone and email).

B. Identify access types and locations (e.g. full access driveway at median opening on Broad Street).

C. Identify roadways, frontage roads, intersections, immediate impacted intersections, and adjacent roadway segments defined as roadways impacted by the project at 5% of the level of service (LOS) 'D' peak hour service volume (county roads) or LOS 'C' peak hour for state roads.

D. Define time frames of analysis (e.g. AM peak, PM peak, peak hour of generator for church, school, theater).

- E. Define trip generation rates (i.e. ITE Trip Generation Manual, 7th Edition, land use and code for daily, AM, and PM peak)
- F. Identify trip distribution methodology and percentages (e.g. gravity model with 40% via west, 60% via east).
- G. Identify data sources (e.g. consultant peak hour turning movement counts).

All data used for analysis shall be within 12 months of age. Additionally, the Consultant may submit, at his/her own risk, completed traffic access analysis without methodology approval.

ANALYSIS SUBMITTAL

Analysis to be a narrative report with supporting data in appendices (with computer analysis).

- A. Cover sheet, table of contents, and list of figures, tables, and exhibits.
- B. Introduction/project description including location map and preliminary site plan.
- C. Trip generation for daily, AM, and PM, per land uses and sizes, per ITE with table when multiple land uses on site.
- D. Pass-by trip reduction, if justified, is not to exceed 10% of adjacent street. Internal capture per ITE worksheets.
- E. Provide listing and map of facilities to be studied (using 5% of LOS 'C' or 'D' peak hour service volume).
- F. Identify method and percentages of distribution of project trips and assign on schematic map.
- G. Acquire traffic signal timings from engineering division. Timings cannot be altered without written approval.
- H. Provide LOS analysis of existing facilities in study area using current foot tables and HCS+, then Synchro, if desired.
- I. Identify growth traffic and vested traffic volumes and add to existing volumes to provide background traffic.
- J. Provide LOS analysis of future conditions in study area using current foot tables and HCS+, then Synchro, if desired (provide schematic map that shows background traffic, project trips, and total traffic for each facility movement).
- K. Identify movements of deficient capacity, and if any, mitigating measures.

- L. Provide analysis of justification (or non-justification) for left and right turn lanes for all project access points and deficient intersection movements, using Harmelink warrants or current AASHTO Exhibit 9-75.
- M. Provide turn lane calculations per Hernando County Guidelines for all justified turn lanes.
- N. Provide LOS analysis of proposed improvements, if any, using current foot tables & HCS+, then Synchro, if desired.
- O. Provide LOS comparison table of existing, future, and improved traffic conditions for all facilities.
- P. Provide study conclusion that summarizes the project, its impacts on capacity, and mitigating improvements.
- Q. Appendices include conceptual site plan, traffic volumes and turning movements including adjustments, roadway, intersection, and driveway capacity analysis worksheets, turn lane justification worksheets, and traffic signal warrant analysis, where applicable.
- R. Traffic access analysis needs to address truck and pedestrian access, where applicable.

The County will respond with an Approval Statement or a Deficiency Statement. An Approval Statement confirms staff approval of submitted traffic access analysis. A Deficiency Statement provides staff questions, concerns, or disputes for the submitted traffic access analysis. An analysis resubmittal is the resubmittal of the traffic access analysis with alterations or additions resultant from the deficiency statement. The developer has the opportunity to appeal to the Board of County Commissioners upon staff final denial.

Hernando County may require specific access, capacity, operational, and/or safety improvements or analysis in association with a proposed project, irrespective of the conclusions derived from the submitted traffic access analysis.

DEVELOPMENT PERMIT REQUIREMENTS

Except in certain cases stipulated below, the case where a proposed storm-water system is to be privately maintained, the issuance of an acceptable storm-water permit (General or Individual ERP; FDOT Drainage Connection Permit), given that said system has been technically reviewed by a Florida-licensed professional engineer through the permitting process, shall be deemed confirmation of compliance with the County's storm-water standards. If this condition is met, the County's requirement for stormwater has thus been met and no additional permit or development order is required for the portion of the system covered by the permit and lying outside of County ROW. The permit and all supporting documentation shall be submitted by the applicant for incorporation into the County permit file and will be deemed to be adopted by reference into the local development permit.

- A. Exceptions:

- 1) If the approved plans differ significantly from the relevant Hernando County-approved master plan, the applicant must either obtain a correspondingly revised master plan or a revised permit.
- 2) If the construction plans submitted to the County differ from the approved plans, the applicant must obtain a correspondingly revised permit or revise the construction plans to have them conform to the approved plans.

DRAINAGE REQUIREMENTS

All proposals for development shall include a detailed stormwater management plan to be submitted for approval by Hernando County. Requirements:

A. Stormwater Runoff Storage/Discharge:

- 1) The retention/detention of cumulative stormwater runoff in excess of pre-development release rates and pre-development runoff volume shall be provided by sufficient storage capacity constructed on the property to be developed or within off-site drainage areas. Detention/retention storage capacity shall be based on a 25-year/24-hour duration storm event for open basins and 100-year/24-hour for closed basins and the requirements listed below. The 100-year pre/post volumes may be provided by a combination of storage volume and/or percolation as demonstrated by a routing and mounding analysis. Design high water elevations shall be established in consideration of adjacent properties and facilities such that off-site drainage impacts are minimized (no greater than the pre-condition).
- 2) Special closed drainage basins, which have undersized receiving Drainage Retention Areas (DRA) that flood during a 100-year 24-hour storm event, will necessitate proposed development to provide additional on-site storage volume to accommodate the 100-year storm event. These basins are the Forest Oaks, Berkeley Manor, Spring Hill Drive Basins, and the Stony Brook Area of Ridge Manor as shown on Sheets III-14-17, and any other basin with documented flooding, identified by the County Engineer and approved by the BOCC.
- 3) The detention facilities designed for the storage of stormwater to control runoff rates and runoff volumes shall:
 - (1) Be designed in accordance with requirements of Hernando County, SWFWMD, the FDOT, the Florida Department of Environmental Protection (FDEP) and/or other agencies with jurisdiction.
 - (2) Be identified as a drainage retention easement or tract on the final plat of a subdivision or be duly recorded as such. Include an outlet structure in detention/retention facilities sized to release, as a maximum, the pre-development runoff rate and pre-development volume and designed to provide water quality treatment of the runoff from the contributing area, in accordance with applicable standards of the respective agencies having jurisdiction.

- (3) Constructed with a DRA height to provide a minimum of six (6) inches of freeboard between the 100-year design high water elevation and the lowest provided berm elevation surrounding the detention/retention area.
 - (4) Discharge from overflow structures should pass through an abutting drainage easement, a minimum twenty (20) feet in width, or a public right-of-way in order to convey stormwater runoff away from the detention area. Drainage easements will be acceptable if the entire conveyance system is built and has capacity to accept increased runoff volumes. Engineering calculations will be required to support the use of drainage easements.
 - (a) All ponds shall have an emergency overflow weir if there isn't any other proposed control structure. Emergency overflow weir invert shall be a minimum of six (6) inches below the pond top of berm.
 - (5) Include special engineering features, such as skimmers, designed to remove oils and greases in accordance with criteria established by the SWFWMD, and other applicable agencies having jurisdiction.
 - (6) Retention/detention pond banks must have top of bank width of at least 10'-0" to allow for compaction and maintenance.
- 4) Off-site discharge and volume are limited to amounts which will not cause adverse off-site impacts. Discharge must be in the same manner as the pre-development condition.
- a) For a project or portion of a project located within an open drainage basin, the allowable discharge shall not exceed historic discharge and volume (25 year-24-hour storm), which is the peak rate and maximum volume at which runoff leaves a parcel of land under existing site conditions. These criteria shall not apply to projects which have been discharging stormwater runoff directly to tidal waterbodies. Examples of tidal water bodies are the Gulf of Mexico and the Gulf Intracoastal Waterway, including manmade portions of the Gulf Intracoastal Waterway.
 - b) For a project or portion of a project located within a closed drainage basin, the required retention volume shall be the post-development runoff volume, less the pre-development runoff volume, computed using SWFWMD's 24-hour/100-year rainfall map, and the Soil Conservation Services, Type II, Florida Modified 24-hour rainfall distribution with an antecedent moisture Condition II. The total post-development stormwater runoff volume leaving the site shall be no more than the total pre-development stormwater runoff volume leaving the site for the design 100-year storm.
- 5) Maintenance of pre-development off-site low flow may be required in hydrologically sensitive areas.
- 6) No net encroachment into the 1% annual chance storm floodplain is allowed. Where encroachment is unavoidable, floodplain volume must be conserved to avoid adverse impacts

to adjacent lands. Where no established floodplain data exists, a detailed 100 yr./24 hr. flood study must be provided and certified to Hernando County by a registered engineer. Floodplain impacts are calculated between the seasonal high groundwater elevation and the 1% annual chance storm floodplain (100 yr./24 hr. floodplain) elevation. Mitigation volume must be provided within the same local drainage system such that there is no net change in the floodplain elevation. See Hernando County Ordinance Chapter 13 (Flood Damage Prevention and Protection), Sec.13-31. (8).

- 7) Off-site Lands: adequate provisions shall be made to allow drainage from off-site upstream areas to downstream areas without adversely affecting the upstream or downstream areas.
- 8) Exfiltration Systems: reference SWFWMD Detention with Effluent Filtration requirements.
- 9) Test(s) to determine saturated and unsaturated infiltration rates shall be performed at each detention/retention facility, unless otherwise approved in advance by the County Engineer. Field tests should be conducted at the proposed basin bottom or lower. A standard penetration test or other such means (e.g. double ring infiltrometer (DRI)) shall be performed for a minimum of two (2) locations within each drainage retention area at the proposed pond bottom and when non-native material is introduced. The surface at the test site should be compacted to simulate pond bottom conditions after construction. If field measurements of K_{vu} are not possible, measure the saturated vertical hydraulic conductivity (K_{vs}) by obtaining undisturbed tube sample in the vertical direction. Conduct laboratory permeameter test and then estimate K_{vu} using an empirical correlation of K_{vu} versus K_{vs}

$$K_{vu} = K_{vs} * 2/3$$

- a) A safety factor of 2.0 or more shall be applied in the exfiltration design to allow for geological uncertainties by dividing the exfiltration rate by the safety factor.
 - b) All development plans shall include a drainage chart, which includes both post-developed and pre-developed discharge rates and volumes; results of Double Ring Infiltration test and the elevation that the test was conducted at; and the Seasonal High Groundwater Table elevation(s).
- 10) Development of multi-family tri-plex and quad-plex projects require Drainage Retention Areas on-site, sized to store ½” of runoff from the contributing runoff sub-basin area for treatment purposes in systems that utilize dry retention methodology. Wet detention areas are to be sized to accept 1” of runoff as above. General: All new developments shall be required to provide a detention/retention system in order to detain/retain-increased runoff caused by the development. Where public or private lakes, ponds, borrow pits, or similar type water detention/retention areas are incorporated in a comprehensive drainage plan, drainage calculations shall demonstrate that the facilities have sufficient capacity for the applicable design storm.

- 11) Systems which receive stormwater from paved areas must include a baffle, skimmer, grease trap or other mechanism suitable for preventing oil and grease from leaving the stormwater system in concentrations that would cause a violation of water quality standards.

B. Hydraulics of curb, gutter, and storm pipes:

- a) Hydraulics of Curb and Gutter: The minimum grade for curb and gutter design shall be 0.4 percent. Spread calculations per current FDOT Drainage Manual, are required and shall be submitted for review.
- b) Hydraulics of Storm Pipes: Underground drainage through storm sewers, where employed, shall conform to current FDOT Drainage Manual requirements. Coefficients of friction suitable for the type of pipe or structure shall be applied. Minimum pipe diameters shall be fifteen (15) inches for side drains and eighteen (18) inches for cross drains. Eighteen (18) inch minimum pipe diameter for closed hydraulic design. Inverted siphons shall not be accepted.

C. Hydraulics of drainage structures: Drainage structures such as bridges, box culverts, headwalls, dams, weirs, bulkheads and other structures shall be designed hydraulically and structurally in accordance with good engineering practice. The effects on adjacent channels and structures shall be considered. Energy dissipaters or other means of reducing flow velocity shall minimize erosion.

D. Drainage Outfalls:

- 1) Positive and adequate outfalls are required for all proposed and/or existing drainage systems. Engineering calculations are required to demonstrate the entire route of the receiving drainage outflow system has capacity to accept the additional stormwater discharge for the project. Energy dissipaters shall be installed at all drainage outfalls with exit velocities greater than 3 fps, for a minimum 10-year 24-hour storm event, or unusual site conditions. The Developer shall provide the “As-Built” location, elevation, and description of each outfall.
- 2) Drainage wells and seepage basins are not acceptable as positive outfalls. Drainage Detention ponds shall include water quality recovery systems in accordance with SWFWMD rules.

E. Discharge Structures: Discharge structures designed to discharge shall be located to outflow into County rights-of-way. A Drainage Right-of-Way (DROW) of twenty (20) feet minimum shall be provided for access to any stormwater detention/retention facility from a dedicated road or street to the discharge structure. The Developer shall provide the “As-Built” location, elevation, and description of each outfall.

- 1) Stormwater Runoff: Runoff and routing analysis shall be based on current hydrological design procedures. Computations shall include a tabulation of both pre-developed and post-developed inflow, discharge, storage capacity, minimum and maximum water elevations, and retention/detention time to peak. Post-developed discharge rate and volume shall not exceed pre-developed discharge rate and volume for 25-year/24 hour storm event.
- F. Conveyance Facilities: General stormwater conveyance facilities include swales, ditches, channels, culverts, storm sewers, inlets, and weirs. The collection of stormwater runoff should be by positive gravity means without the use of siphons, pumps, or similar devices, unless specific approval is obtained from the County Engineer. The Engineer of Record shall design all underground piping and associated structures such that dedicated access for maintenance of facilities is provided.
- G. NPDES Requirements:
- 1) Prior to the commencement of construction the Developer/Owner shall obtain the necessary permit, from State of FDEP, required to comply with the National Pollutant Discharge Elimination System (NPDES) stormwater regulatory program and Chapter 28, Article X of Hernando County's NPDES Ordinance.
 - a) Large Construction Activity is defined in 40 CFR Part 122.26(b)(14)(x)
 - b) Small Construction Activity is defined in 40 CFR Part 122.26(b)(15)
 - 2) Hernando County requires that all construction activity include the implementation of stormwater control "Best Management Practices" (BMPs) meaning those schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of surface waters. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. The applicable measures shall be implemented to minimize the transportation of silts, sediments and fugitive dust off site and to eliminate, to the greatest extent possible, the contamination of surface waters flowing off-site, recharging on-site and the Municipal Separate Storm Sewer System (MS4).
 - 3) Stabilize all disturbed soils within seven days from last construction activity, project completion, or final inspection, whichever occurs first.
 - 4) Contractors shall clean up all fugitive soils weekly or more often as needed. Off-site soil tracking at each construction entrance shall be inspected and cleaned daily or more often as needed.
 - 5) For those sites requiring an FDEP Permit as described above, a copy of the Stormwater Pollution Prevention Plan shall be provided to the Hernando County Engineering Office, 1525 East Jefferson Street, Brooksville, Florida 34601, prior to commencing construction.

- 6) Provide a copy of the Notice of Termination to the County Engineer's office when construction is complete, as above.
- 7) Refer to the current version of the FDEP Florida Stormwater Erosion and Sedimentation Control Inspectors Manual and the State of Florida Erosion and Sediment Control, Designer and Reviewer Manual for additional requirements.

DRAINAGE DESIGN

- A. Drainage design shall adhere to the standards established in this guideline and conform to applicable sections of the following (Latest Editions):
 - 1) FDOT "Standard Plans for Road and Bridge Construction."
 - 2) FDOT "Standard Specifications for Road and Bridge Construction."
 - 3) FDOT "Drainage Manual."
 - 4) FDOT "Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways, "Florida Greenbook."
 - 5) SWFWMD Rules and Regulations
- B. Vertical curbs without gutters shall be per current FDOT Standard Plans and Specifications and are to be used on high side of road only.
- C. Culvert Pipe:
 - 1) Culvert pipe under roadways shall be steel reinforced concrete pipe or polypropylene pipe, that must comply with Section 948 of the FDOT Standard Specifications and meet the Class II (100-year Design Service Life) designation; driveway pipes may be steel reinforced concrete, corrugated metal, corrugated PVC, corrugated polypropylene, or polypropylene. Pipe easements shall be fifteen (15) feet minimum to permit access, maintenance, and protection. Pipes with under 1 foot of cover or over 4 feet of cover shall be steel-reinforced concrete pipe.
 - 2) Maximum length of culvert pipe between structures shall be per current FDOT Drainage Manual.
 - 3) All pipe joints shall be wrapped with approved filter fabric per FDOT Standard Specifications.
 - 4) Pipes shall be sized to accommodate a minimum 10-year 24-hour storm event.

- D. Mitered End Section: all culverts under roadways or driveways shall have mitered end sections made of reinforced concrete. Plastic flared end sections are not allowed. Where shallow swales intersect deeper drainage ditches or DRA's, erosion control shall be provided by use of culvert pipes, concrete swales, mitered end section with spillways, or other suitable means. Cover material over culverts in swales shall be stabilized, compacted, and sodded to prevent erosion. The proposed design of reinforced concrete mitered end sections must meet current FDOT Standard Plans and Specifications. In special cases when a mitered end section is not possible, headwalls will be permitted with approval from the County Engineer or his/her designee.
- E. Splash Pads/Rip Rap: shall be provided on all mitered end sections per current Hernando County Section III Drainage Standards and current FDOT Standard Plans. Where rip rap is specified, a geotextile barrier shall be placed under the rip rap area.
- F. Endwalls shall be used only outside the roadway clear recovery area and be designed per current FDOT Standard Plans and Specifications. Refer to Section III Drainage Standards, Detail III-01.
- G. Manholes or junction boxes shall be constructed of reinforced concrete. They shall be a minimum of four (4) feet inside diameter at the base with straight walls or corbelled a maximum of four (4) inches in one (1) foot, with a manhole rim cast in place for access. Inverts are to be formed to a minimum of $\frac{1}{2}$ the pipe diameter. Current FDOT Standard Plans Index 425-010 and 425-020 shall be used with a maximum corbel height of four (4) feet and a vertical chimney height of no more than eighteen (18) inches including ring and cover. Manholes or junction boxes shall not have metal steps.
- H. Inlets:
 - 1) Curb inlets shall be per current FDOT Standard Plans and Specifications. Bottomless inlets are not allowed. Curb inlets shall not be placed within curb return.
 - 2) Ditch bottom inlets shall be per current FDOT Standard Plans and Specifications. A FDOT Type C or greater shall be used. An FDOT Type F "Modified" may be used and details obtained from Hernando County Engineering Department. Any ditch bottom inlets in the traveled way shall be H20 traffic rated.
- I. Swale Drainage:
 - 1) Roadside Swale Geometry: Shall be per current FDOT Greenbook Standards and Hernando County Section III Drainage Standards.
 - 2) Swale Erosion Protection: Swales shall be provided with permanent erosion protection. Such protection may be turf, using an approved type of grass, or approved type of erosion fabric may be utilized. When turf protection is used, the swales shall be sodded a lateral distance extending from within one (1) foot of the road pavement to the top of the swale backslope.
 - 3) Driveway Across Swales: shall be per current FDOT Standard Plans and Specifications.

J. Canals, Drainage Retention/Detention Areas, Major Waterways.

- 1) One twenty (20) foot minimum unobstructed access via a drainage right-of-way (DROW) is required for each retention/detention area not abutting County ROW.
- 2) The top of the bank of the Drainage Retention Area (DRA) must be offset a minimum of ten feet from the property line with a slope not to exceed 6% and must have a 10-foot maintenance berm. (See Drawing Number III-03)
- 3) All DRAs shall undergo geotechnical subsurface testing. Subsurface testing is initially investigated with borings within proposed DRA areas. Other testing methods (such as Ground Penetrating Radar, Electrical Resistivity Imaging, multi-electrode electrical resistivity) are required to determine the presence of karst features or voids if the DRAs are:
 - a) Planned Class A residential subdivision DRAs.
 - b) DRAs dedicated to the County.
 - c) DRAs serving apartment complexes with one-half acre (1/2) acre or more of pond bottom and a total design depth of six (6) feet or greater.
 - d) Non-residential DRAs within fifty (50) feet of a residential area (measured from top of bank) with one-half (1/2) acre or more of pond bottom and a design depth of six (6) feet or greater.

A report shall be delivered to the County Engineering & Planning Departments, which details the methods, mapping, results, and conclusions of the subsurface testing signed and sealed by a professional engineer or geologist. The project engineer shall sign and seal a letter to the County Engineering Department acknowledging review of the subsurface testing report; acceptance of its findings; conclusions as to the site suitability for stormwater retention; and detailing any recommendations or remediation of any karst features or voids present. All recommended Karst remediation must be included in permitted site plans.

K. Design factors for known karst features within proposed platted lots: Geotechnical analysis of the feature(s) shall be conducted and recommendations for remedial action provided to the Engineering and Planning Departments.

L. Floodplains: where lands are or have been subject to periodic flooding, and where the County and/or FEMA have not established minimum building elevations, the Developer shall establish 100-year, and 25-year flood elevations at design flood conditions in accordance with SWFWMD and County standards. For reference, Hernando County floodplains are shown in the FEMA Flood Insurance Rate Maps or in Administrative Floodplain Maps approved by Hernando County Board of County Commissioners.

DRAINAGE SYSTEM CONSTRUCTION

Standard details and specifications for the construction of storm drainage systems shall adhere to the standards established in this guideline and conform to applicable sections of the following (Latest Editions):

1. FDOT "Standard Plans for Road and Bridge Construction."
2. FDOT "Standard Specifications for Road and Bridge Construction."
3. FDOT "Drainage Manual."
4. FDOT "Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways, "Florida Greenbook."
5. SWFWMD Rules and Regulations

LOTS AND LOT GRADING

- A. Lots one-half acre and smaller with side setbacks or easements of less than seven and one-half (7.5) feet require an Engineered Site Plan. The Engineered Site Plan shall include building and grading details to ensure no adverse drainage impacts to adjacent properties.
- B. Lots with a 5-foot setback that exceed an 8-inch difference in finish floor elevation (FFE) between them shall be designed with a stem wall or retaining wall to be constructed by the homebuilder. Lots with a 7.5-foot setback that exceed 18-inch difference in FFE between them shall be designed with a stem wall or retaining wall. Lots with a 10-foot setback that exceed 28-inch difference in FFE. between them shall be designed with a stem wall or retaining wall. All stemwalls and retaining walls are to be shown on the subdivision plans. Only applies to lots ½ acre and smaller.
- C. All lots being developed shall have provisions made to receive stormwater flows from offsite properties, so they do not impact their construction, to preclude erosion and flooding.
- D. All lots graded as B/C/D per Hernando County Section III Drainage Standards shall have the rear swales in place during the construction of the subdivision.
- E. All lots on subdivision plans shall show FFE, not pad elevations. Typical pad elevation is from 6 inches to 1 foot below FFE.
- G. A final drainage inspection is required on all residential construction to verify the drainage was constructed properly. This inspection is to be complete prior to final sod being installed.

- H. All lots shall be final graded in accordance with approved drainage plans. All building pads shall be prepared in accordance with the County-accepted geotechnical report and related guidelines, which require the removal of all yielding clays, muck, and/or organic materials to a minimum two (2) feet below the building foundation. Temporary ground cover, sod or seed and mulch, shall be planted and maintained on all disturbed areas prior to issuance of certificate of occupancy for the home, and prior to passing final inspection for the subdivision.

EXCAVATION AND STOCKPILES

- A. Excavation and stockpiles shall be placed and managed on the subject project per Hernando County regulation including the following:
 - 1) Residential subdivisions (lots less than one acre), multifamily, hospitals, life care centers: Stockpiles: Five hundred (500) feet from the property line.
 - 2) Commercial, office, institutional, active and developed passive recreation, agriculture/residential subdivision (lots one acre and larger): Three Hundred (300) feet from the property line.
 - 3) Agriculture, industrial, utility, forest, open space: Stockpiles: One hundred (100) feet from the property line.
 - 4) A six-foot stockpile is acceptable for lots that are smaller in size that cannot accommodate the above setbacks and public road applications.
- B. Stockpile locations should be shown on the plans. All necessary BMPs shall be implemented to control fugitive dust and erosion.

PLANS AND SPECIFICATIONS SUBMITTALS

As a condition for approval of site plans, the developer shall furnish complete plans and specifications prepared, signed, sealed, and dated by a Professional Engineer licensed to practice in the State of Florida, which shall include the following:

- 1. Legible plans using good drafting practices. Specific design / construction elements should be shown on separate sheets.
- 2. Overall, site and drainage plans scaled at 50, 100, or 200 feet per inch. Construction sheets scaled at 10, 20, 30, 40, or 50 feet per inch.
- 3. An index of all sheets included in the plans with drawing number references, index shall be alphabetical, numerical, or alphanumerical order.
- 4. A location map scaled to show project location, surrounding streets, and a minimum of one arterial roadway; with all mentioned streets labeled.

5. A topographic map of the development related to NAVD88, with contours shown at not greater than one-foot intervals. The existing and proposed lot and street grading is to be shown. Lot grading shall be shown on all lot corners and break points.
6. A drainage map of the basin or basins within which the development lies, inclusive of immediate off-site drainage. The map may be combined with the above topographic map, but in any event must include suitable topographic data acceptable to the County Engineer. All ridges outlining the basins and the sizes of the basins in acres must be shown. Areas of Special Flood Hazard (FEMA Floodplain) with designation are to be indicated on the mapping. The outlines and sizes in acres of all existing and proposed drainage areas within the basin shall be shown and related to corresponding points of flow concentration. Flow paths shall be indicated throughout, including final outfalls from the subdivision and basins.
7. Drainage data, assumed criteria and hydrologic and hydraulic calculations meeting the requirements of this document, SWFWMD and other jurisdictions. Geotechnical data required to corroborate the variables used in the drainage design.
8. Electronic copy of Hydrologic & Hydraulic (H&H) Modeling for the project.
9. Plans showing the proposed design features and typical sections of canals, swales and all other open channels, storm sewers, all drainage structures; plan, profile, and cross sections of roads, driveways, and curbs; sidewalks and ramps; permanent and work zone traffic control; and other proposed development construction. Plans shall have all drainage structures and DRAs numbered. Roadway Typical Sections shall show proposed utility locations. Design shall meet requirements of this document.
10. Existing natural and manmade features on and abutting the project site, including roads and curbs, intersections, driveways, sidewalks, canal and swales and other drainage features and structures shall be shown in the plans. Where proposed roads intersect existing roads, elevations, and other pertinent details shall be shown. Design shall meet the requirements of this document.
11. Construction entrances and truck routes to/from the site to all major roads. All construction vehicles going to and from the site will utilize these routes. This includes builders and contractors in subdivisions, after the infrastructure is constructed.
12. Specifications to cover construction of all the work proposed, providing for good workmanship and standard practices of construction to achieve the desired finished product as designed by the engineer and accepted by the County Engineer. These specifications shall meet or exceed specifications as referenced in this document.
13. Copies of all required permits, approvals, and other necessary documents shall be provided to the Office of the County Engineer prior to site plan approval.
14. All survey data for new construction shall be in NAVD 1988 and clearly labeled.

15. Digital format (DWG) as-builts shall be submitted prior to the final inspection and granting of the C.O. for all subdivisions.

ADMINISTRATIVE DESIGN VARIANCES

- A. Purpose: The purpose of an Administrative Design Variance is to document site and item specific variances to guidelines, standards, and practices in the preparation of design plans for civil engineering improvements. Many factors influence the design of commercial and subdivision improvements, including: natural features and topography, land boundaries, existing infrastructure and conditions, regulations, policies, political requirements, and engineering practices. The Administrative Design Variance provides for the responsible engineer from the County the ability to acknowledge and approve an engineering design that does not necessarily meet current County design standards and guidelines, yet still provides for significant protection to the public's health, safety, and welfare.
- B. Practice: The design engineer shall submit in writing a request for an Administrative Design Variance for each site / project. This request must detail each specific design variance and include:
 1. Location on site of the proposed variance;
 2. Type of proposed variance;
 3. Design standard from which the variance is requested;
 4. Intended result / effect of each proposed variance;
 5. Mitigating actions, if any;
 6. Reason / justification of the proposed variance;
 7. Other supporting information, as applicable.
- C. Approval: Written approval and confirmation for each design variance request must be issued prior to inclusion in future plan submittals.
- D. Liability: Administrative Design Variances do not relieve the design "Engineer of Record" from liability of his/her chosen design and/or actions.

AUTHORITY OF COUNTY INSPECTOR

- A. County Inspectors may inspect all construction, all materials and may inspect preparation or manufacture of supplies. The County Inspector is not authorized to revoke, alter, or waive any requirements of the specifications, but he/she is authorized to call to the attention of the Developer any failure of work or materials to conform to the plans or specifications.
- B. The County Inspector in no case shall act as foreman or perform other duties for the Developer, and shall not interfere with the management of the work. Any advice that the County Inspector may give to the Developer shall in no way be construed as binding to the County Engineer or releasing the Developer from carrying out the intent of the plans and specifications.
- C. The County Engineer or his/her Inspectors, at any time they perceive a hazard or non-compliance with approved plans, may stop any work within the public right-of-way.

VIDEO REPORT

Any pipe/drainage structure installation which will become a maintenance responsibility of the County must provide a digital video report on a high-quality DVD or digital file in a MPEG2 format video with a standard resolution of 720 x 480 or better. A camera with lighting suitable to allow a clear picture of the entire periphery of the pipe must be used. Center the camera in the pipe both vertically and horizontally while able to pan and tilt to a 90-degree angle with the axis of the pipe and rotating 360 degrees. Use equipment to move the camera through the pipe that will not obstruct the camera's view or interfere with proper documentation of the pipe's condition. The video image shall be clear, focused, and relatively free from roll, static, or other image distortion qualities that would prevent the reviewer from evaluating the condition of the pipe. The video will include identification before each section of pipe filmed. The identification will include the project number, the structure number corresponding to the structure number on the set of plans for the project, size of pipe, the date and time, and indicate which pipe is being filmed if multiple pipes are connected to the structure. Notes should be taken during the video recording process. Provide the Engineer with copies of these notes along with the video. Move the camera through the pipe at a speed not greater than 30 feet per minute. Mark the video with the distance down the pipe. The distance shall have an accuracy of one foot per 100 feet. Film the entire circumference at each joint. Stop the camera and pan when necessary to document and measure defects. Position the camera head perpendicular to all defects requiring measurement by the video micrometer.

GENERAL NOTES

All design shall be in accordance with the FDOT "Manual of Uniform Minimum Standards for Design, Construction and Maintenance" All construction shall be in accordance with the latest edition of the FDOT "Standard Specifications for Road and Bridge Construction" and the FDOT Standard Plans unless superseded by these Guidelines.

All construction in areas of known Karst activity shall follow recommendations of a licensed geotechnical engineer for remediation of same.

All proposed ponds must have the following information shown on the respective plan sheet, preferably within the boundary of the respective pond:

1. Top of Bank (ToB)
2. 100-Year Design High Water Level (DHWL)
3. 25-Year Design High Water Level (DHWL)
4. 10-Year Design High Water Level (DHWL)
5. Pond Bottom (BoP)
6. Season High Water Level (SHWL)

SECTION II

TESTING & CERTIFICATION





AS-BUILTS AND RECORD DRAWINGS

The Subdivision As-Builts will be signed and sealed by a professional surveyor and mapper and/or record drawings will include a certificate of completion from the Engineer of Record stating: At the time of final inspection, the site was completed in substantial accordance with the permitted construction plans and information. Any minor deviations from the original approved plans are noted on the set of as-builts or record drawings. The Engineer's certification shall be based upon on-site observation of construction (scheduled and conducted by the professional engineer of record or a by a project representative under direct supervision) and review of as-built drawings, with field measurements and verification as needed, for the purpose of determining that the work was completed in accordance with original permitted construction plans, information and specifications. The as-built drawings are to be based on the permitted construction drawings revised to reflect any changes made during construction. Both the original design and constructed condition must be clearly shown. The plans need to be clearly labeled as "as-built" or "record" drawings. As required by law, all surveyed dimensions and elevations required shall be verified and signed, dated and sealed by a Florida registered professional surveyor and mapper or professional engineer (as applicable). The following information, at a minimum, shall be verified on the as-built / record drawings, and supplemental documents if needed: At a minimum the following shall be verified on the as-built /record drawings:

A. Stormwater

- 1) Rim elevation of inlets, catch basins, manholes, control structures, headwalls and other special structures.
- 2) Invert elevation of all pipes within inlets, catch basins, manholes, end sections, culverts and other special structures.
- 3) Linear distance along storm sewer from structure to structure.
- 4) Recalculated pipe slopes based on invert-to-invert elevations along the linear distance between structures.
- 5) Horizontal ties on all inlets, catch basins, manholes, flared-end sections and culverts.
- 6) Topographical survey of the storm water management area containing sufficient spot elevations and grading contour lines to show that the storm water management facilities have been constructed in compliance with the approved construction plans.

B. Vertical Improvements: Locate and describe all building improvements constructed per the approved plans. Provide horizontal ties to building corners.

C. Horizontal Improvements/Parking Layout

- 1) Locate and describe all surface parking areas. Provide description as to surface material.



- 2) Locate and describe all installed regulatory or warning signage and pavement markings within the project. Any deviations from the approved construction plans shall be noted.
- 3) Locate all sidewalks and pedestrian access features. Provide material type and width.

D. General

- 1) Show all right-of-way or easement lines, clearly labeled.
- 2) Special detail drawings will be required where installations were not as shown on original drawings due to field conditions or where required for clarity.
- 3) Location, type, material and reinforcement, height, drainage systems and foundation information of all retaining walls.

CERTIFICATION OF SUBDIVISIONS

This statement must be included in the certification letter provided by the Engineer of Record and/or Professional Surveyor and Mapper (as applicable) for subdivisions.

I hereby certify to the Board of County Commissioners of Hernando County, Florida that the above referenced project has been fully and satisfactorily completed in accordance with the APPROVED PLAN and the provisions of the Land Development Code. I am providing written acceptance, from the property owner, of the site as constructed in accordance with the APPROVED PLAN.

I am forwarding herewith one (1) electronic copy in .DWG AutoCAD 2018 or newer format and one (1) electronic copy in .PDF format of the RECORD DRAWING and/or AS-BUILT PLAN which shows the improvements as constructed including dimensions and elevations. The RECORD DRAWING and/or AS-BUILT PLAN has been certified as correctly indicating actual conditions of construction.

EXPENSE AND RESPONSIBILITY FOR TESTING

- A. The developer shall submit to the County Engineer the name of testing laboratory he/she intends to employ for approval prior to starting any construction activities. The Developer will pay for the expense of testing materials and construction. All testing shall be submitted for approval by the County Engineer prior to commencing the next phase of construction, rough grade, underground utilities and storm drain, sub-base, base, wearing surface, final grade and erosion control.



- B. Upon completion of all improvements required, the Developer's engineer shall submit a statement certifying to the best of his/her knowledge, periodic observation and contractor provided record drawings; that the project has been constructed to plans and specifications originally approved by the County Engineer. Accompanying this statement shall be a construction report showing where tests were made, who made them, when they were made, and what the results were. Testing shall be in accordance with "Hernando County Minimum Testing Frequency Requirements" as prepared by the Hernando County Engineering Office (see Section II, these Guidelines). Copies of test reports shall be furnished to the Hernando County Engineering Office after the test has been completed. Where test reports show non-compliance with specifications, corrective work shall be started immediately.
- C. The County may request additional testing by the independent and certified testing laboratory approved by the County. Principals and/or owners of the approved testing laboratory shall not have financial interest in the company performing the work. Costs associated with performing additional testing shall be paid for by the County or the Developer by one of the following methods:
 1. If the Developer's test complied with the approved specifications and appropriate standards, and the County's test showed otherwise, then the Developer would pay for the additional test(s).
 2. If the County's test result also showed compliance with the approved specifications and appropriate standards, the County will pay for the testing.

TESTING SCHEDULE

Testing shall be accomplished by an independent and certified testing laboratory. Principals and/or owners of the testing laboratory shall not have any financial interest in the company performing the work. Any failures in test will be corrected and retested prior to the continuation of work at that location. The project will not be acceptable until all tests and verification thereof have been submitted to and approved by the County Engineer. The Contractor shall pay for any retesting due to evidence of failure in the original test. The developer will pay for the expense of testing materials and construction. All testing shall be approved by Engineer of Record prior to commencing the next phase of construction, rough grade, underground utilities and storm drain, sub-base, base, wearing surface, final grading and erosion control. The test results shall be in a format that provides the test result, the standard it was supposed to meet and whether it passed or failed. The test lab or engineer of record will certify that all testing met Hernando County Standards.

The following is a list of minimum test requirements respective to various items of work:

**HERNANDO COUNTY MINIMUM TESTING FREQUENCY REQUIREMENTS:**

ITEM	TEST	TEST IDENTIFICATION	TEST REQUIREMENTS	TEST FREQUENCY
Base	Maximum Density, Optimum Moisture	AASHTO T-180, ASTM D1557-C, FM 5-515, FM 1-T180	LBR 100	One per source, density test per 10,000 sq. ft. of parking area
	Thickness, Field Density	AASHTO T180, ASTM D2922	98% of Maximum Density, AASHTO T-180, ½ inch tolerance	Each 6-inch course every 300 feet, staggered left and right of centerline.
	Gradation, Atterburg Limits	AASHTO T27, ASTM D6913	FLORIDA DOT Sec 911	One Per source
Stabilized Subgrade	Bearing Values	Florida DOT LBR, FM 5-515	Minimum 40 LBR	One per Material Type
	Maximum Density, Optimum Moisture	AASHTO T180, ASTM D1557	Florida DOT	Each 6-inch course every 300 feet, staggered left and right of centerline.
	Thickness, Field Density	AASHTO T180, ASTM D2922	98% of Maximum Density AASHTO T-180, ½ inch tolerance	Test shall be no more than 300 feet apart under curbs and centerlines (staggered). No less than one per street.
Concrete	Slump Test	AASHTO T119, ASTM C143	Florida DOT	One per set of cylinders
	Compressive Strength Cylinders	AASHTO T23-80, ASTM C31, ASTM C39	Florida DOT Sec 346-9	One set of 3 cylinders for 50 Cubic Yards or Fraction thereof placed each day for tests at 28 days. 2 additional cylinders for each additional early test for backfill, form removal, etc.
	Air Content	AASHTO T199, ASTM C173/C231	Florida DOT	Florida DOT, One per days production
	Rolling Straight Edge Or Longitudinal Laser Profiler	ASTM E950, E1364, FM 5-509	Florida DOT	Florida DOT
Asphaltic Concrete	Aggregate Analysis, Gradation	AASHTO T30, FM 1-T030	Florida DOT	One per day

**HERNANDO COUNTY MINIMUM TESTING FREQUENCY REQUIREMENTS, CONTINUED:**

ITEM	TEST	TEST IDENTIFICATION	TEST REQUIREMENTS	TEST FREQUENCY
Asphaltic Concrete (Continued)	Design Mix	AASHTO M323	Florida DOT	One per Test
	Bitumen Content	ASTM D6927, AASHTO T308	Florida DOT	One per Day
	Field Density	ASTM D2950, AASHTO T310, FM 1-T238	95% of Lab Density	One Density each course every 300L.F. or One density per 10,000 S.F of parking area
	Thickness	Florida DOT FM 5-515	Florida DOT, ¼ inch tolerance	One thickness each course every 300 L.F.
Embankment	Maximum Density, Optimum Moisture	AASHTO T99, ASTM D698 (Proctor)	Florida DOT Sec 120	Per Soil Type or every 1000 feet
	Field Density	AASHTO T180, ASTM D2922	100% of Maximum Density, AASHTO T-99	One per 500 feet horizontally, alternating lifts (1 ft.)
Utility Trench Backfill Under Roadways and Structures	Maximum Density, Optimum Moisture	AASHTO T99, ASTM D698 (Proctor)	N/A	Per Soil Type or every 1000 feet
	Field Density	AASHTO T180, T99, ASTM D2922	100% of Maximum Density, AASHTO T-99	**
Backfill of Structures	Maximum Density, Optimum Moisture	AASHTO T99, ASTM D698	N/A	Per Soil Type
	Field Density	AASHTO T180, T99, ASTM D2922	100% of Maximum Density, AASHTO T-99	Each lift, but not to exceed 1 foot vertically

** Tests shall be located no more than 300 feet apart. Tests shall be performed on each lift, except that tests shall not be further apart than one foot vertically, every 300 linear feet or part there of, and centerline of each roadway. Field densities shall be taken over all road crossings. Field Densities for Sanitary lines shall be staggered to include results over service laterals. There shall be a minimum of one test series for each 6 inches of lift over pipeline between manholes.

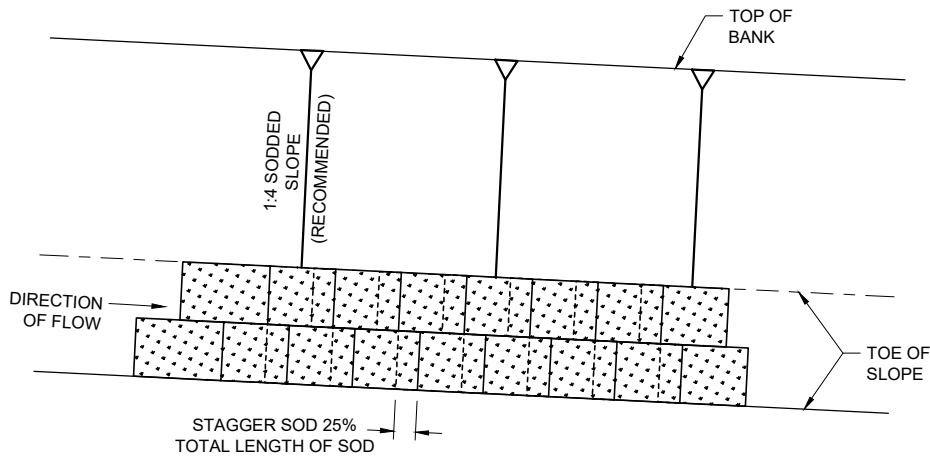
SECTION III

DRAINAGE STANDARDS



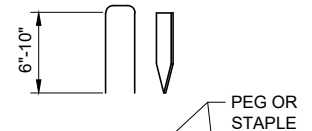
LEGEND

-  INDICATES SLOPE DIRECTION
-  INDICATES GROUND
-  INDICATES SOD



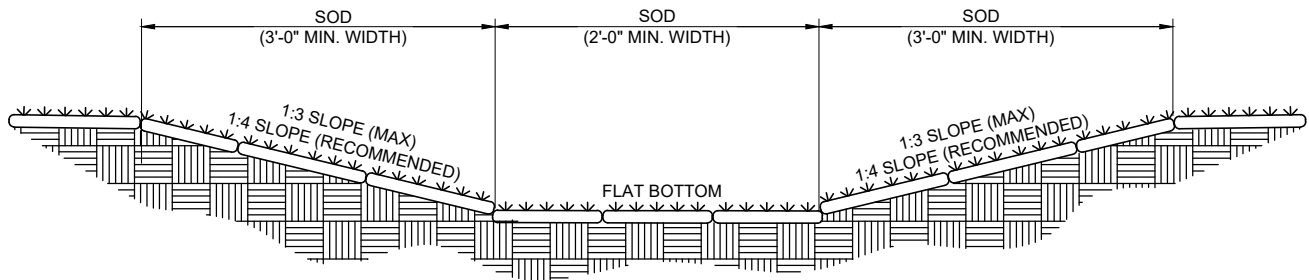
SOD LAPPING PLACEMENT PLAN

N.T.S.



PIN DETAILS

N.T.S.



SWALE BOTTOM SECTION

N.T.S.

NOTES:

1. REFER TO FDEP STORMWATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL AND FDOT SPECIFICATIONS AND DRAINAGE DESIGN GUIDE.
2. SOD SHALL BE OVERLAPPED AT BOTTOM OF SWALES.
3. ON SLOPES OF 3:1 OR GREATER, OR WHEREVER EROSION MAY BE A PROBLEM, SOD SHALL BE LAID WITH STAGGERED JOINTS AND SECURED BY PEGGING OR OTHER APPROVED METHODS. SOD SHALL BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON THE CONTOUR). BEGIN LAYING SOD AT THE BOTTOM OF THE SLOPE AND WORK UPHILL.



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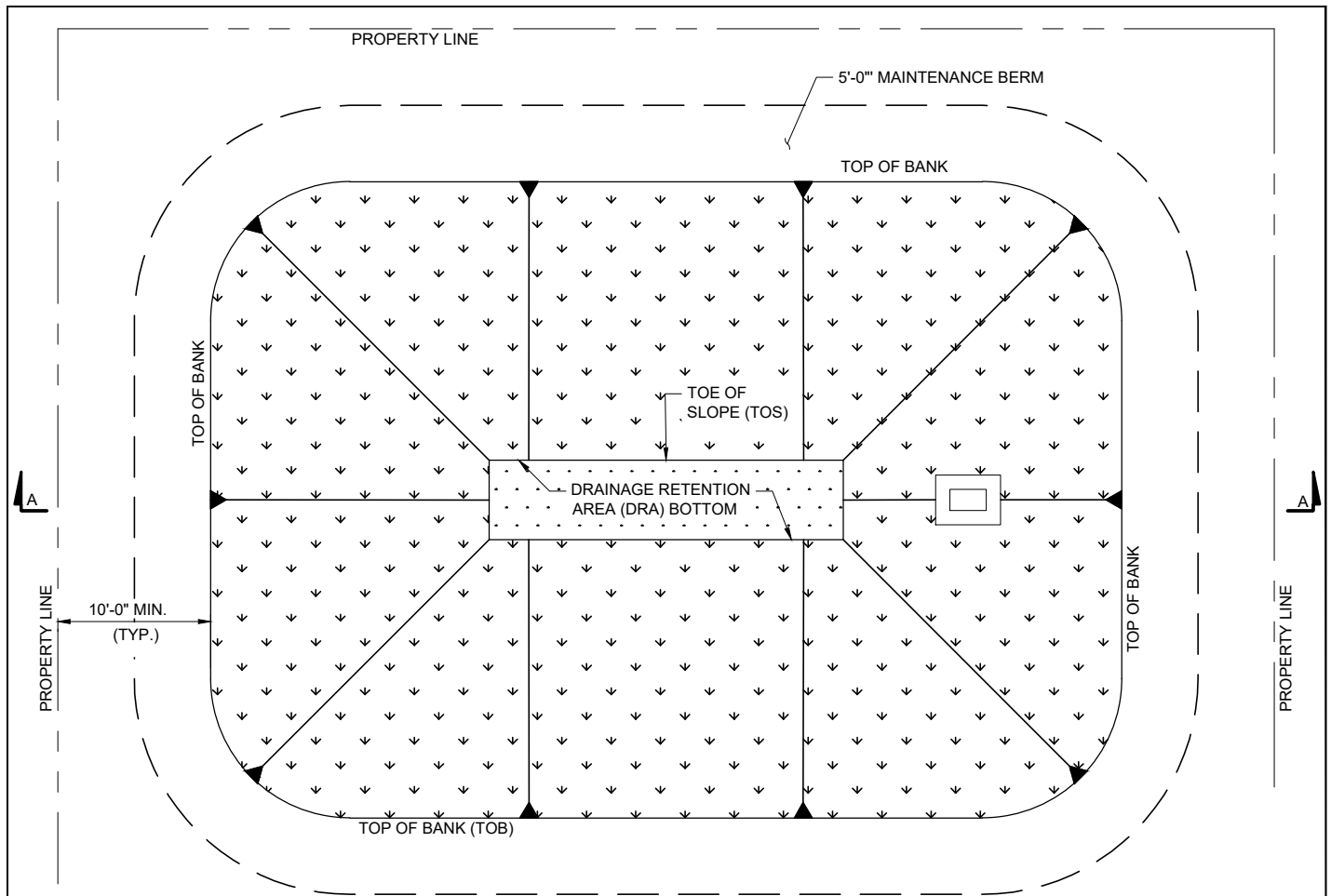
SECTION III - DRAINAGE STANDARDS

SWALE DETAILS

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

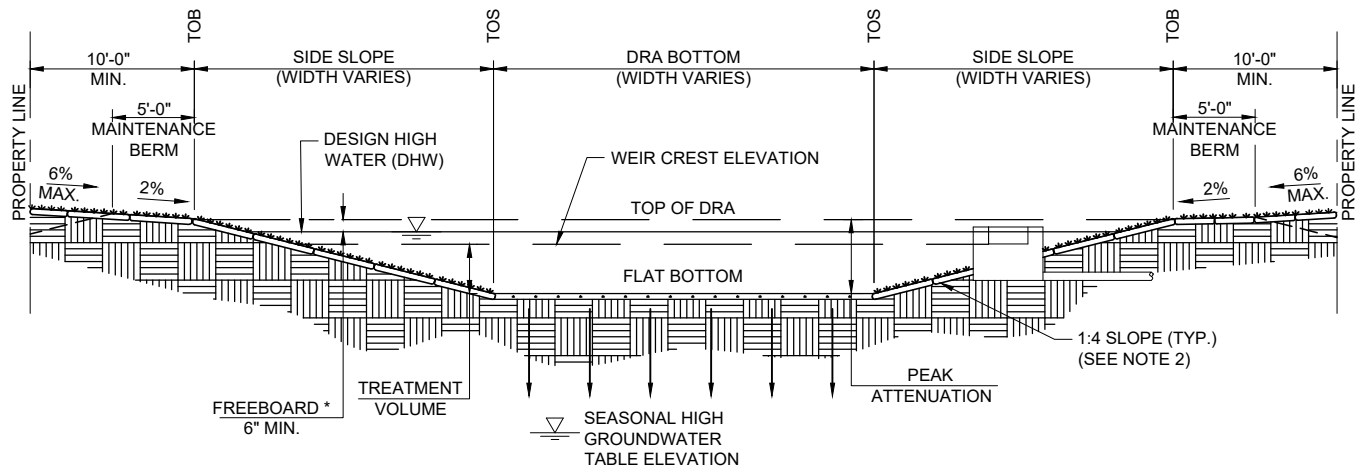
DRAWING NUMBER:
III-02



PLAN VIEW

LEGEND

-  INDICATES SLOPE DIRECTION
-  INDICATES SOD
-  INDICATES SEED & MULCH



SECTION A-A

DRAINAGE RETENTION AREA
N.T.S.

NOTES:

1. REFER TO FDOT DRAINAGE GUIDE MANUAL AND SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT APPLICANTS HANDBOOK FOR DESIGN REQUIREMENTS.
2. A 6'-0" HIGH FENCE SHALL BE INSTALLED ON DRA's WITH SIDE SLOPES GREATER THAN 1:4. NO SLOPES SHALL BE GREATER THAN 1:3.
* FREEBOARD IS MEASURED FROM 100-YEAR DESIGN HIGH WATER LINE (DHWL) TO TOP OF POND.



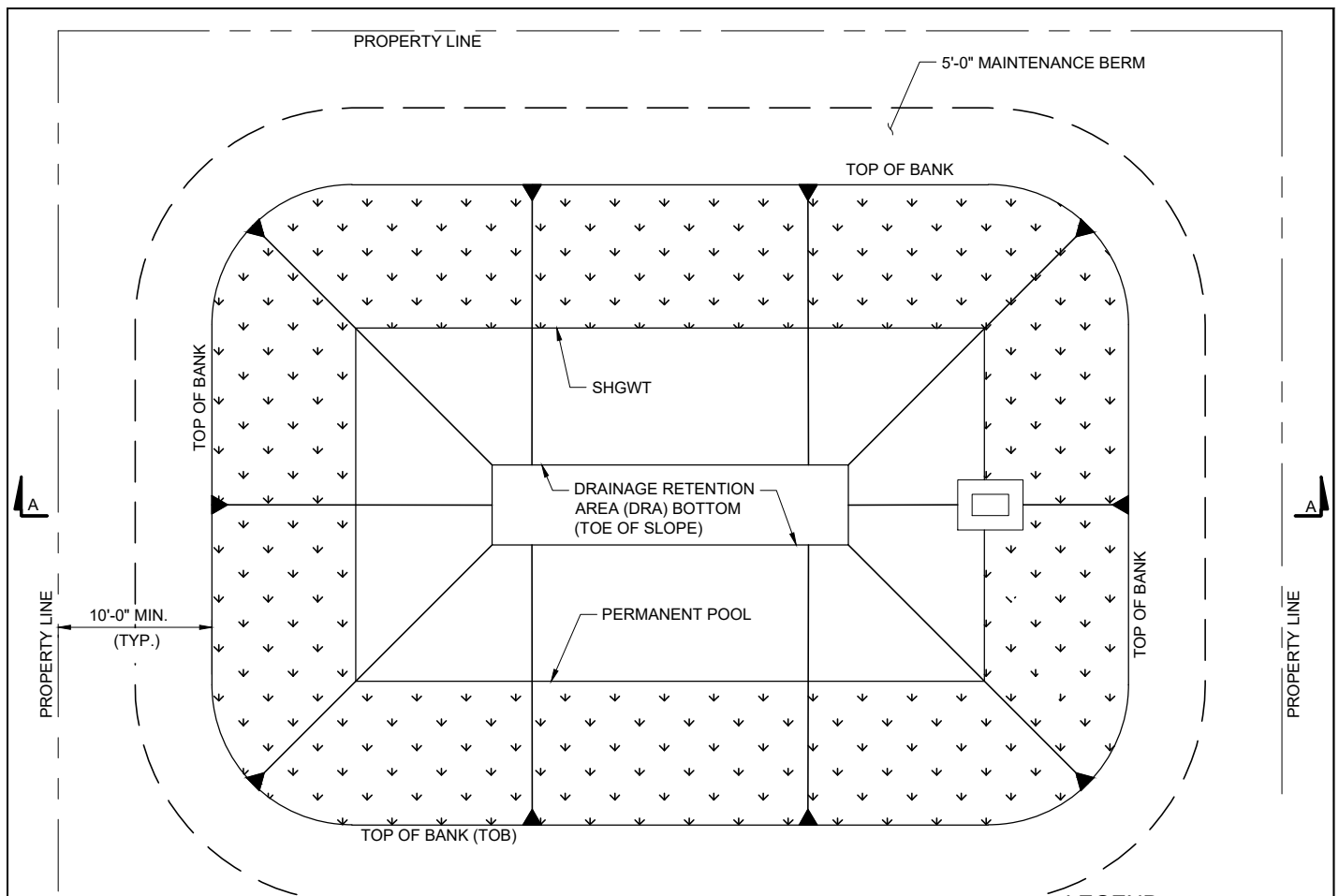
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**SECTION III - DRAINAGE STANDARDS
DRAINAGE RETENTION AREA DETAIL
(DRY POND)**

APPROVED BY:
J. SCOTT HERRING, P.E.

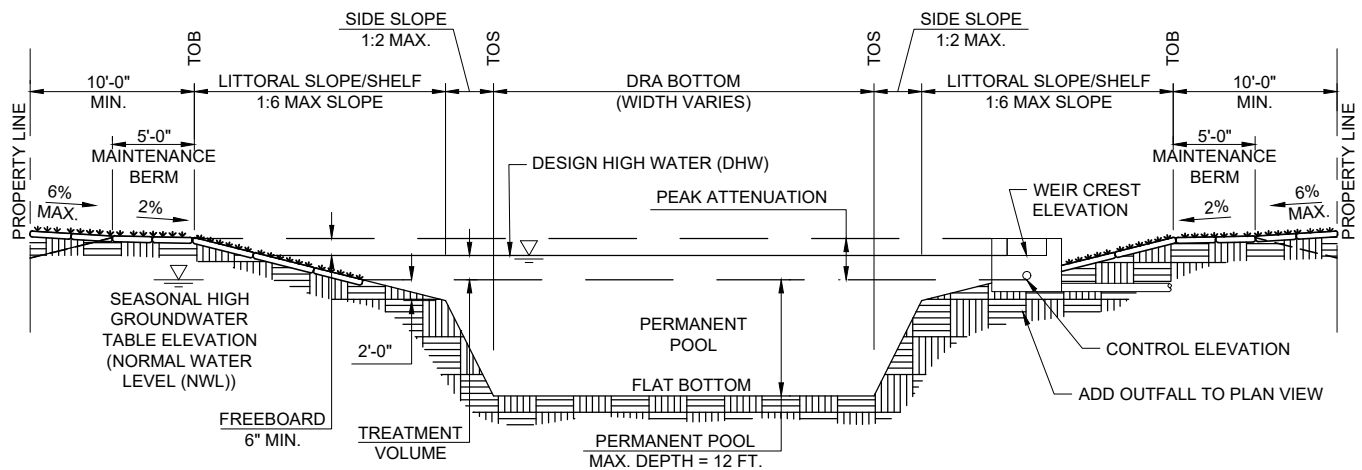
DATE:
JULY28, 2026

DRAWING NUMBER:
III-03



PLAN VIEW

LEGEND
 INDICATES SLOPE DIRECTION
 INDICATES SOD



SECTION A-A
 DRAINAGE RETENTION AREA
 N.T.S.

NOTES:

1. REFER TO FDOT DRAINAGE GUIDE MANUAL AND SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT APPLICANTS HANDBOOK FOR DESIGN REQUIREMENTS.
2. A 6'-0" HIGH FENCE SHALL BE INSTALLED ON DRA's WITH SIDE SLOPES GREATER THAN 1:4.



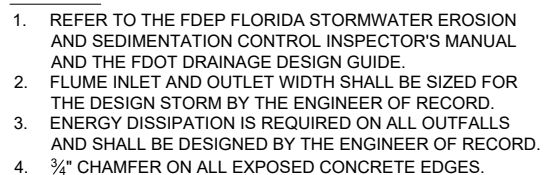
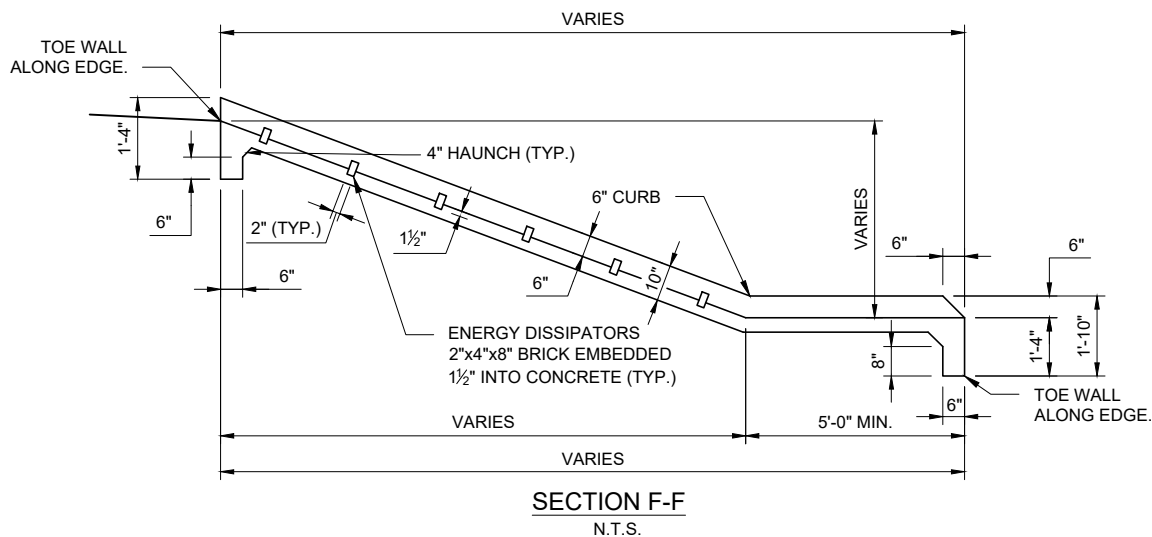
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SECTION III - DRAINAGE STANDARDS
DRAINAGE RETENTION AREA DETAIL
(WET POND)

APPROVED BY:
 J. SCOTT HERRING, P.E.

DATE:
 JULY 28, 2026

DRAWING NUMBER:
 III-04

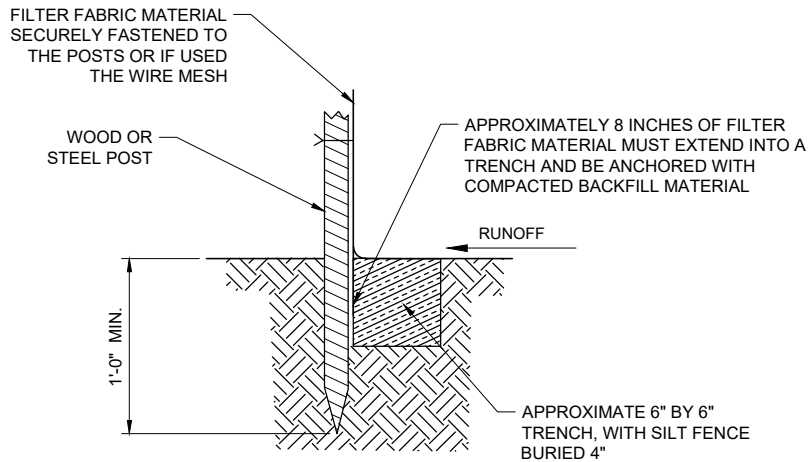
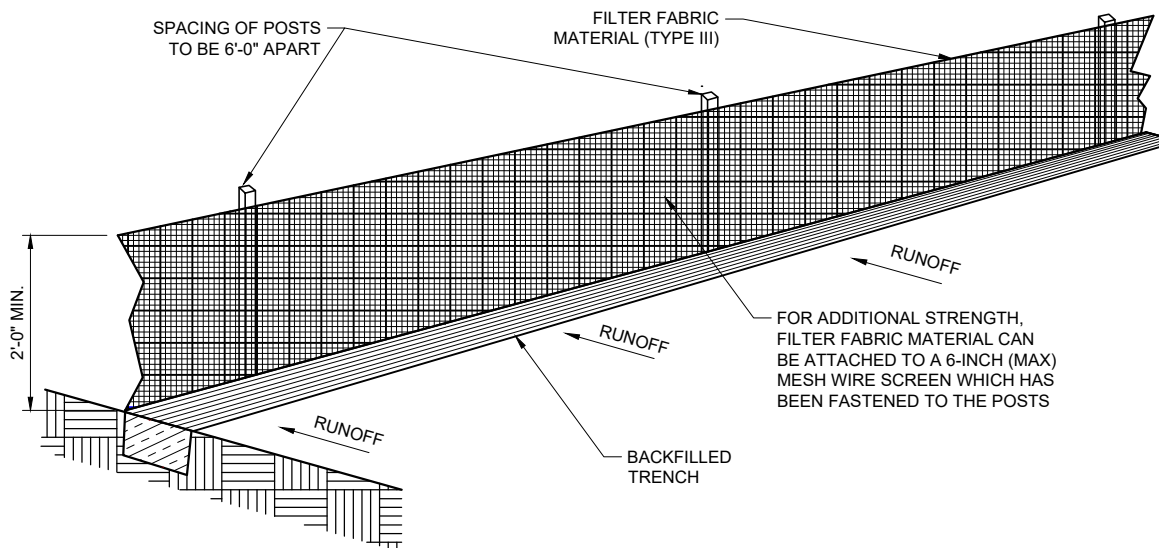


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DATE:
JULY 28, 2026

DRAWING NUMBER:
III-05



SILT FENCE ANCHORAGE

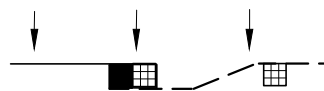


PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE



ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL

DIRECTION OF RUNOFF WATERS



DRIVE BOTH POSTS AT LEAST 1'-0" INTO THE GROUND AND BURY FLAP

JOINING TWO SILT FENCES

NOTES:

1. REFER TO SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT APPLICANTS HANDBOOK, THE FDEP FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL, AND THE FDOT DRAINAGE DESIGN GUIDE FOR ADDITIONAL INFORMATION.
2. ADDITIONAL STAKES MAY BE NECESSARY TO SECURE AND SUPPORT BARRIERS.
3. ADDITIONAL FENCE LENGTHS MAY BE REQUIRED BY THE COUNTY ENGINEER OR BY REGULATORY AGENCIES.
4. TYPE III NORMALLY USED, WHERE REQUIRED.
5. TYPE IV USED WHERE LARGE SEDIMENT LOADS ANTICIPATED.
6. DO NOT DEPLOY IN A MANNER SO THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS ARE TO BE USED AT PERMANENT BODIES OF WATER.
7. ALTERNATE - REFER TO FDEP FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL FOR FILTER SOCK - SEDIMENT RETENTION FIBER ROLLS - WATTLES.



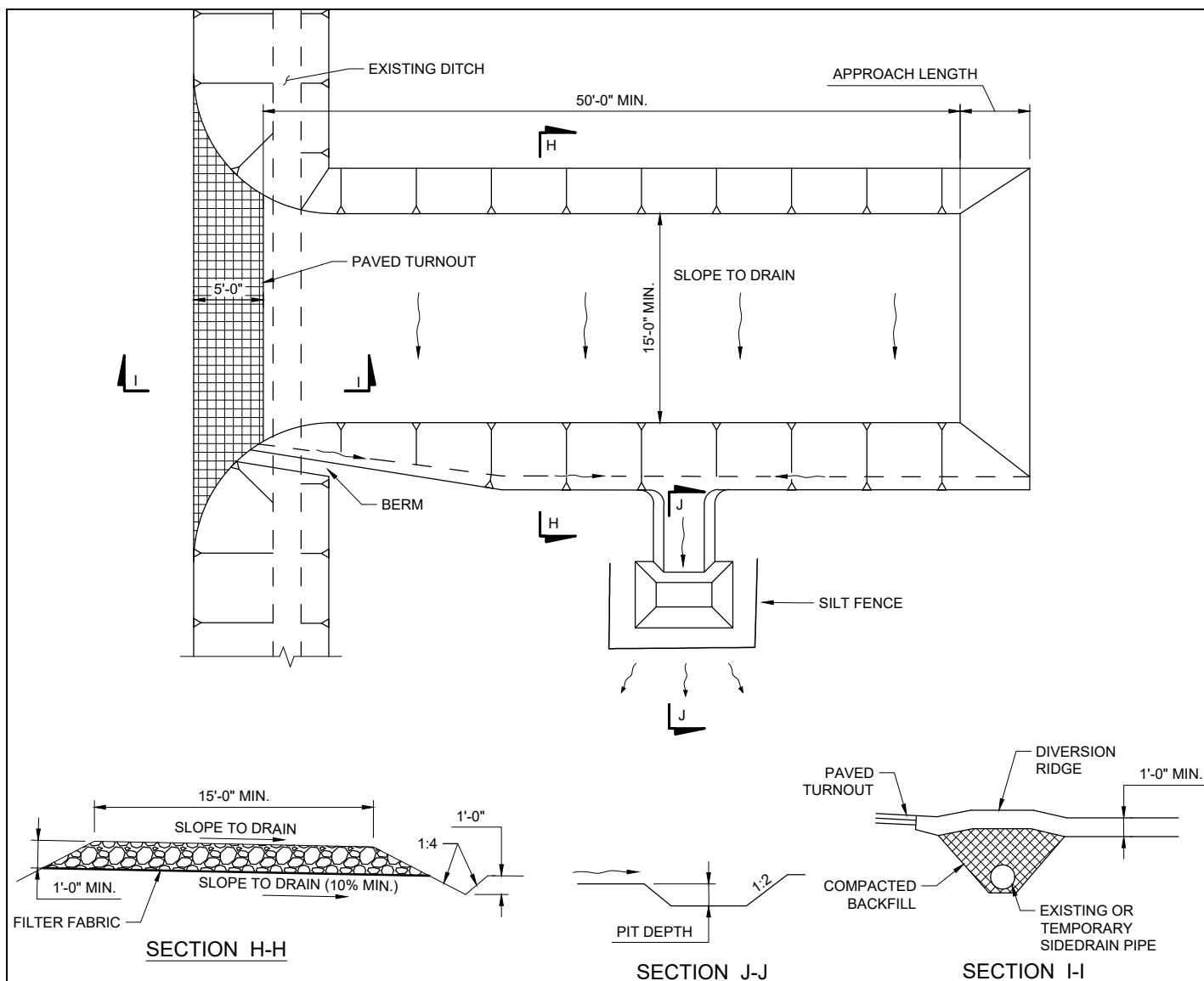
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SECTION III - DRAINAGE STANDARDS
SILT FENCES

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
III-06



NOTES:

1. A SOIL TRACKING PREVENTION DEVICE (STPD) SHALL BE CONSTRUCTED AT LOCATIONS DESIGNATED BY THE COUNTY ENGINEER FOR POINTS OF EGRESS FROM UNSTABILIZED AREAS OF THE PROJECT TO PUBLIC ROADS WHERE OFFSITE TRACKING OF SOIL COULD OCCUR. TRAFFIC FROM UNSTABILIZED AREAS OF THE CONSTRUCTION PROJECT SHALL BE DIRECTED THROUGH A STPD. BARRIERS, FLAGGING, OR OTHER POSITIVE MEANS SHALL BE USED AS REQUIRED TO LIMIT AND DIRECT VEHICULAR EGRESS ACROSS THE STPD.
2. THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE MEANS OF MINIMIZING OFFSITE TRACKING OF SEDIMENTS FOR APPROVAL TO THE COUNTY ENGINEER.
3. ALL MATERIALS SPILLED, DROPPED, OR TRACKED ONTO PUBLIC ROADS (INCLUDING STPD AGGREGATE AND CONSTRUCTION MUD) SHALL BE REMOVED DAILY, OR MORE FREQUENTLY IF SO DIRECTED BY THE COUNTY ENGINEER.
4. USE FDOT SIZE #1 AGGREGATE UNLESS DIRECTED OTHERWISE BY THE COUNTY.
5. THE SEDIMENT PIT SHOULD PROVIDE A RETENTION VOLUME OF 3600 CUBIC FEET PER ACRE OF SURFACE AREA DRAINING INTO THE PIT. AS AN OPTION, TO THE SEDIMENT PIT, THE WIDTH OF THE SWALE BOTTOM CAN BE INCREASED TO OBTAIN THE VOLUME. WHEN THE SEDIMENT PIT OR SWALE VOLUME HAS BEEN REDUCED TO ONE HALF, IT SHALL BE CLEARED. WHEN A SWALE IS USED, BALES SHALL BE PLACED ALONG THE ENTIRE LENGTH.
6. THE SWALE DITCH DRAINING THE STPD SHALL HAVE A 0.2% MINIMUM AND A 1.0% MAXIMUM GRADE ALONG THE STPD AND TO THE SEDIMENT PIT.
7. MITERED END SECTIONS ARE REQUIRED AT THE SIDEDRAIN TERMINI IF THE SIDEDRAIN LIES WITHIN THE CLEAR ZONE.
8. THE STPD SHALL BE MAINTAINED IN A CONDITION THAT WILL ALLOW IT TO PERFORM ITS FUNCTION. TO PREVENT OFFSITE TRACKING, THE STPD SHALL BE RINSED DAILY. ADDITIONAL STABILIZATION OF THE VEHICULAR ROUTE LEADING TO THE STPD MAY BE REQUIRED TO LIMIT THE SOIL TRACKED.
9. STPD SHALL BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR SOIL TRACKING PREVENTION DEVICE, EA. THE UNIT PRICE SHALL CONSTITUTE FULL COMPENSATION FOR CONSTRUCTION, MAINTENANCE, REPLACEMENT OF MATERIALS, REMOVAL, AND RESOTORATION OF THE AREA UTILIZED FOR THE STPD; INCLUDING BUT NOT LIMITED TO EXCAVATION, GRADING, TEMPORARY PIPE (INCLUDING MES WHEN REQUIRED), FILTER FABRIC, AGGREGATE, PAVED TURNOUT, DITCH STABILIZATION, APPROACH ROUTE STABILIZATION, SEDIMENT REMOVAL AND DISPOSAL, RINSING AND CLEANING OF THE STPD AND CLEANING OF PUBLIC ROADS, GRASSING AND SOD. SILT FENCE SHALL BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR SEDIMENT BARRIER, LF.
10. THE NOMINAL SIZE OF A STANDARD STPD IS AS SHOWN. IF THE VOLUME OF ENTERING AND EXITING VEHICLES WARRANT, A 30'-0" WIDTH STPD MAY BE USED WITH THE APPROVAL OF THE ENGINEER. WHEN A DOUBLE WIDTH 30'-0" STPD IS USED, THE PAY QUANTITY SHALL BE 2 FOR EACH LOCATION.



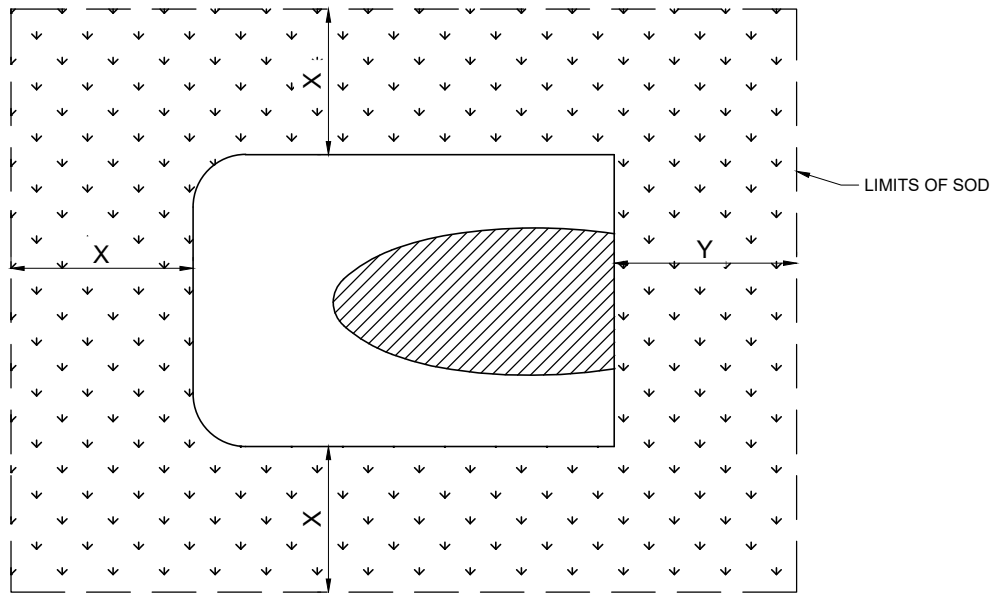
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SECTION III - DRAINAGE STANDARDS SOIL TRACKING PREVENTION DEVICE

APPROVED BY:
J. SCOTT HERRING, P.E.

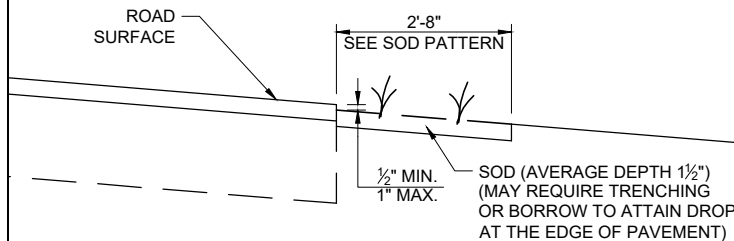
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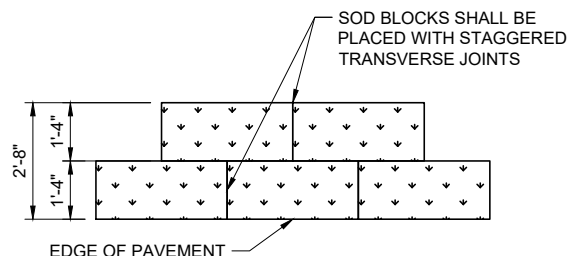


TYPE	"X"	"Y"
SIDE DRAIN	2'-0" MIN.	2'-0" MIN.
CROSS DRAIN	5'-0" MIN.	5'-0" MIN.

SOD DETAIL AT MITERED END



SHOULDER TREATMENT



SOD PATTERN

GENERAL SODDING NOTES:

1. SEE CURRENT FDOT STANDARD PLANS AND HERNANDO COUNTY GUIDELINES ON DETENTION RETENTION AREAS FOR ADDITIONAL DETAILS.
2. ALL DISTURBED AREAS OF AN EXISTING PUBLIC RIGHT-OF-WAY SHALL RECEIVE SODDING TO PRECONSTRUCTION CONDITION OR BETTER.
3. ALL NEW ROADWAYS SHALL RECEIVE SODDING, TWO STRIPS WIDE ALONG THE PAVEMENT EDGES AS A MINIMUM.
4. ALL DRAINAGE STRUCTURES SHALL RECEIVE SODDING PER CURRENT FDOT STANDARD PLANS.
5. ALL SLOPES 1:4 OR STEEPER SHALL RECEIVE SODDING.
6. ALL SOD ON SLOPES EQUAL TO OR GREATER THAN 1:2 SHALL BE PEGGED OR MAT SECURED.
7. SODDING SHALL INCLUDE ALL WORK, FERTILIZERS, AND WATERING NECESSARY TO PRODUCE A DENSE, LIVE STAND OF GRASS
8. SODDING WILL BE CONSIDERED ACCEPTABLE IF 95% OF THE INSTALLATION IS HEALTHY AT THE BEGINNING AND END OF THE 18 MONTH MAINTENANCE PERIOD.
9. REFER TO CURRENT FDOT STANDARD PLANS (PERMANENT EROSION CONTROL) FOR SOD PLACEMENT AT PIPE/CULVERT END TREATMENTS.
10. REFER TO CURRENT FDOT STANDARD PLANS (SHOULDER SODDING AND TURF ON EXISTING FACILITIES) FOR ADDITIONAL SHOULDER TREATMENT OPTIONS.



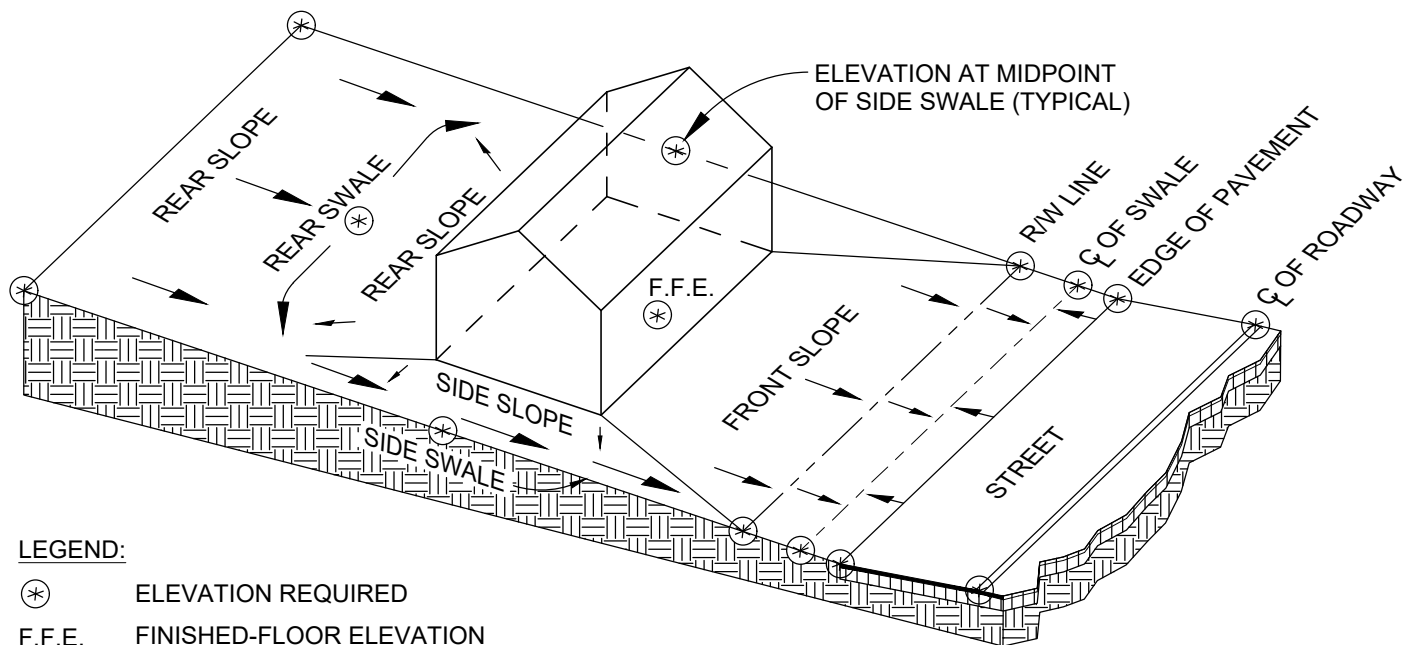
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SECTION III - DRAINAGE STANDARDS
SODDING

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
III-08

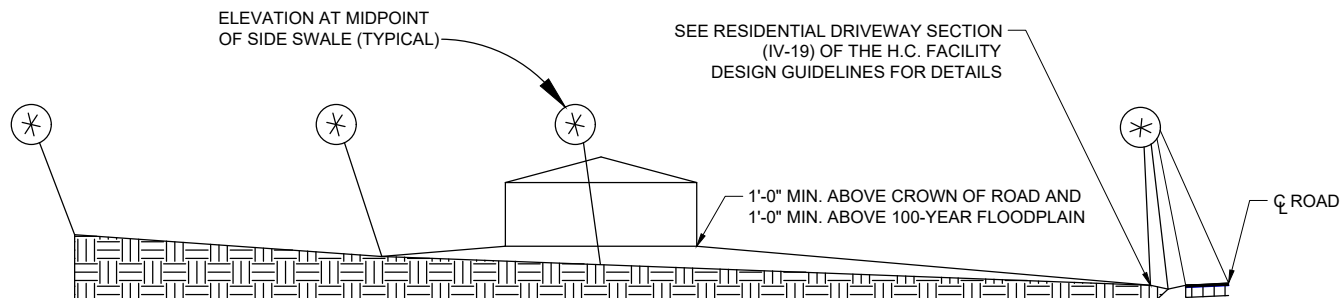


LEGEND:

- (*) ELEVATION REQUIRED
- F.F.E. FINISHED-FLOOR ELEVATION
- R/W RIGHT-OF-WAY
- C CENTERLINE

TYPICAL "A" LOT GRADING NOTES:

1. USE WITH SECTION III-13, RESIDENTIAL LOT GRADING RULES.
2. TYPICAL "A" REPRESENTS REAR SLOPING SITES. WHERE THE SITE IS SLOPED, THE STRUCTURE SHALL BE ELEVATED AT LEAST 1'-0" ABOVE THE HIGHEST ELEVATION AT THE R/W AND REAR SWALE. DRAINAGE WILL BE AWAY FROM AND AROUND THE STRUCTURE.
3. REAR SWALE MINIMUM DEPTH OF 1'-0" BELOW F.F.E. REAR SWALE SHALL DIRECT RUNOFF TO SIDE SWALE FLOWING INTO COUNTY RIGHT-OF-WAY.
4. SIDE SWALE SHALL BE CONSTRUCTED ON THE PROPERTY LINE (NEW DEVELOPMENT) OR OFFSET ENTIRELY ON THE SUBJECT PROPERTY.
5. REFER TO SECTION III-02 FOR TYPICAL SWALE DETAILS.
6. F.F.E. SHALL BE A MINIMUM OF 1'-0" ABOVE THE CROWN OF ROAD AND 1'-0" ABOVE THE 100-YEAR FLOODPLAIN OR HIGHER.
7. DRIVEWAYS TO BE CONSTRUCTED PER SECTION IV-19 UNLESS SITE CONDITIONS REQUIRE AN ALTERNATIVE DESIGN WHICH MUST BE APPROVED BY THE COUNTY ENGINEER.
8. SEE HCDU DETAILS FOR FINAL LOT AND RIGHT-OF-WAY GRADES FOR WATER AND WASTEWATER SERVICES.



SITE AND DRIVEWAY CROSS SECTION



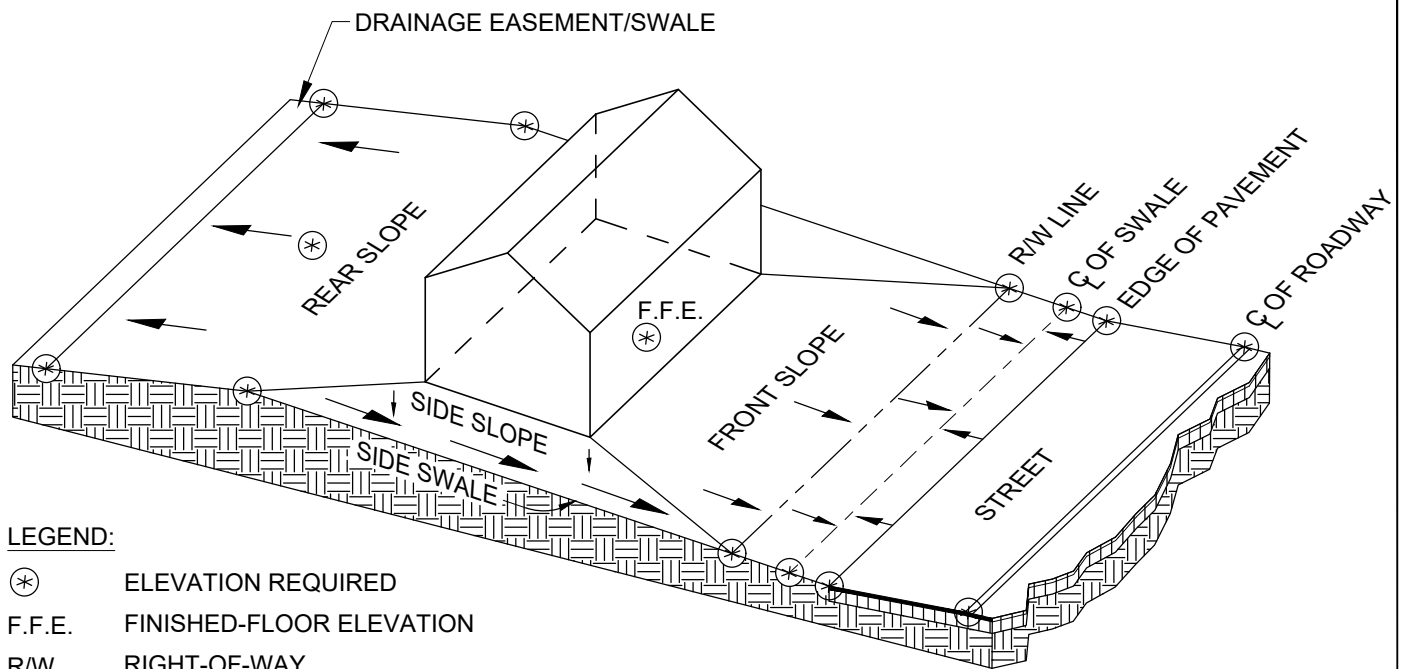
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SECTION III - DRAINAGE STANDARDS
RESIDENTIAL LOT AND BLOCK GRADING "A"

APPROVED BY:
 J. SCOTT HERRING, P.E.

DATE:
 JULY 28, 2026

DRAWING NUMBER:
 III-09

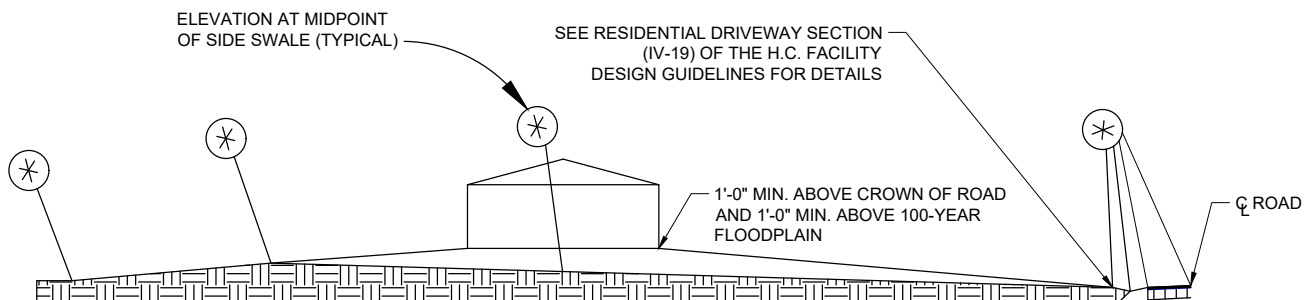


LEGEND:

- (*) ELEVATION REQUIRED
- F.F.E. FINISHED-FLOOR ELEVATION
- R/W RIGHT-OF-WAY
- C CENTERLINE

TYPICAL "B" LOT GRADING NOTES:

1. USE WITH SECTION III-13, RESIDENTIAL LOT GRADING RULES.
2. TYPICAL "B" REPRESENTS FLAT OR DEPRESSED SITES. THE F.F.E. OF THE STRUCTURE SHALL BE AT LEAST 1'-0" ABOVE THE CROWN OF THE ROAD, OPPOSITE THE BUILDING PAD, AND BE AT LEAST 1'-0" ABOVE THE 100-YEAR FLOODPLAIN.
3. SIDE SWALE SHALL BE CONSTRUCTED ON THE PROPERTY LINE (NEW DEVELOPMENT) OR OFFSET ENTIRELY ON THE SUBJECT PROPERTY.
4. REFER TO SECTION III-02 FOR TYPICAL SWALE DETAILS.
5. DRIVEWAYS TO BE CONSTRUCTED PER SECTION IV-19 UNLESS SITE CONDITIONS REQUIRE AN ALTERNATIVE DESIGN WHICH MUST BE APPROVED BY THE COUNTY ENGINEER.
6. SEE HCUF DETAILS FOR FINAL LOT AND RIGHT-OF-WAY GRADES FOR WATER AND WASTEWATER SERVICES.



SITE AND DRIVEWAY CROSS SECTION



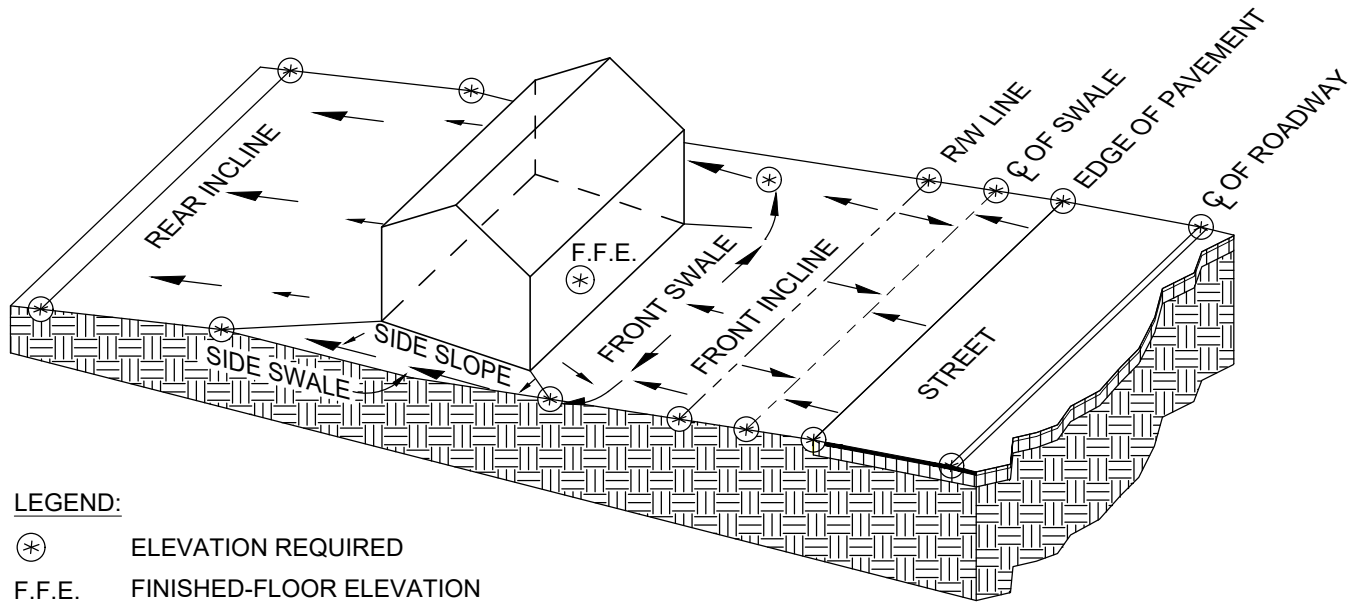
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SECTION III - DRAINAGE STANDARDS RESIDENTIAL LOT AND BLOCK GRADING "B"

APPROVED BY:
 J. SCOTT HERRING, P.E.

DATE:
 JULY 28, 2026

DRAWING NUMBER:
 III-10

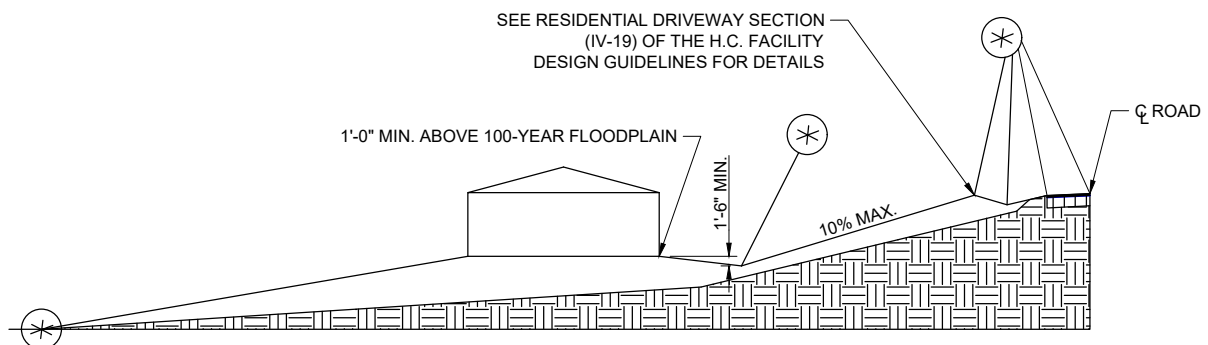


LEGEND:

- (*) ELEVATION REQUIRED
- F.F.E. FINISHED-FLOOR ELEVATION
- R/W RIGHT-OF-WAY
- C CENTERLINE

TYPICAL "C" LOT GRADING NOTES:

1. USE WITH SECTION III-13, RESIDENTIAL LOT GRADING RULES.
2. TYPICAL "C" REPRESENTS SLOPING SITES. WHERE THE SITE IS SLOPED, THE STRUCTURE SHALL BE ELEVATED AT LEAST 1'-0" ABOVE THE HIGHEST ELEVATION THE STRUCTURE SITS ON. DRAINAGE WILL BE AWAY FROM AND AROUND THE STRUCTURE.
3. FRONT SWALE MINIMUM DEPTH 1'-6" BELOW THE F.F.E. FRONT SWALE SHALL DIRECT RUNOFF TO SIDE SWALE FLOWING INTO REAR YARD DRAINAGE EASEMENT.
4. IF DRIVEWAY IS GREATER THAN 10% SLOPE AT TIME OF FIRST ROUGH GRADE, BUILDER MAY BE REQUIRED TO RELOCATE THE STRUCTURE OR PROVIDE AN ENGINEERED SITE PLAN TO ENSURE THEY CAN MEET DRIVEWAY STANDARDS AND POSITIVE FLOW.
5. SIDE SWALE SHALL BE CONSTRUCTED ON THE PROPERTY LINE (NEW DEVELOPMENT) OR OFFSET ENTIRELY ON THE SUBJECT PROPERTY.
6. REFER TO SECTION III-02 FOR TYPICAL SWALE DETAILS.
7. F.F.E. SHALL BE A MINIMUM OF 1'-0" ABOVE THE 100-YEAR FLOODPLAIN.
8. DRIVEWAYS TO BE CONSTRUCTED PER SECTION IV-19 UNLESS SITE CONDITIONS REQUIRE AN ALTERNATIVE DESIGN WHICH MUST BE APPROVED BY THE COUNTY ENGINEER.
9. SEE HCDU DETAILS FOR FINAL LOT AND RIGHT-OF-WAY GRADES FOR WATER AND WASTEWATER SERVICES.



SITE AND DRIVEWAY CROSS SECTION



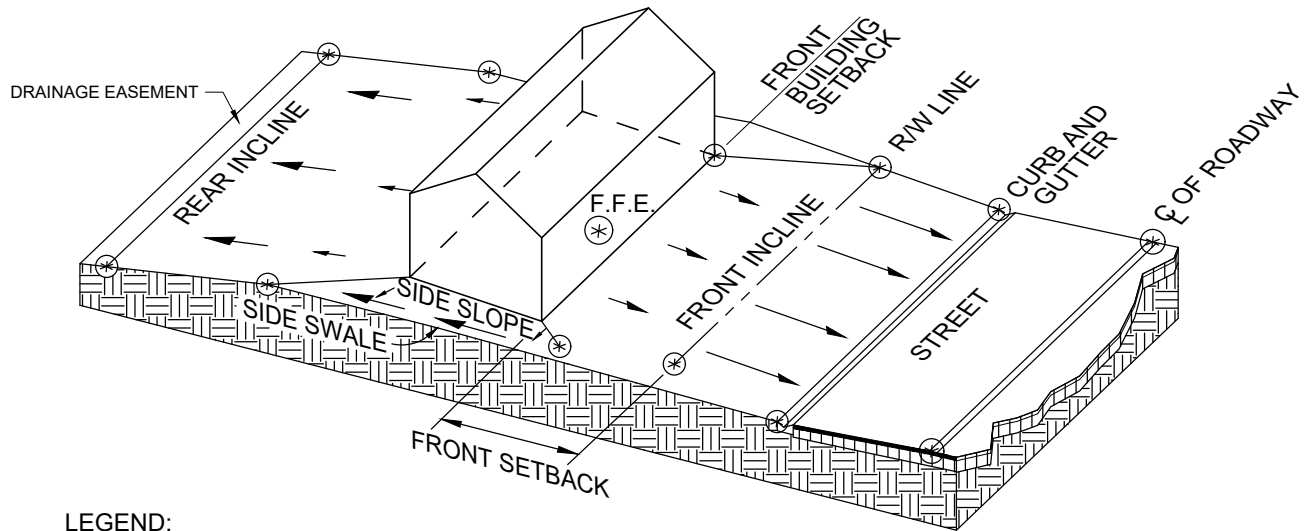
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SECTION III - DRAINAGE STANDARDS RESIDENTIAL LOT AND BLOCK GRADING "C"

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY28, 2026

DRAWING NUMBER:
III-11

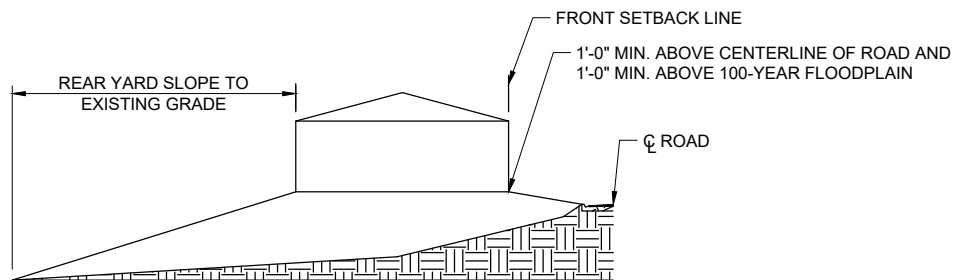


LEGEND:

- (*) ELEVATION REQUIRED
- F.F.E. FINISHED-FLOOR ELEVATION
- R/W RIGHT-OF-WAY
- CL CENTERLINE

TYPICAL "D" LOT GRADING NOTES:

1. USE WITH SECTION III-13, RESIDENTIAL LOT GRADING RULES.
2. TYPICAL "D" REPRESENTS SLOPING SITES. WHERE THE SITE IS SLOPED, THE STRUCTURE'S F.F.E. SHALL BE ELEVATED AT LEAST 1'-0" ABOVE THE HIGHEST ELEVATION THE STRUCTURE SITS ON. DRAINAGE WILL BE AWAY FROM AND AROUND THE STRUCTURE.
3. F.F.E. TO BE A MINIMUM 1'-0" ABOVE CENTERLINE OF ROAD GRADE OPPOSITE THE BUILDING PAD AND BE A MINIMUM OF 1'-0" ABOVE THE 100-YEAR FLOODPLAIN.
4. IF DRIVEWAY IS GREATER THAN 10% SLOPE AT TIME OF FIRST ROUGH GRADE, BUILDER MAY BE REQUIRED TO MOVE THE BUILDING OR PROVIDE AN ENGINEERED SITE PLAN TO ENSURE THEY CAN MEET DRIVEWAY STANDARDS AND POSITIVE FLOW.
5. SIDE SWALE SHALL BE CONSTRUCTED ON THE PROPERTY LINE (NEW DEVELOPMENT) OR OFFSET ENTIRELY ON THE SUBJECT PROPERTY.
6. REFER TO SECTION III-02 FOR TYPICAL SWALE DETAILS.
7. DRIVEWAYS TO BE CONSTRUCTED PER SECTION IV-19 UNLESS SITE CONDITIONS REQUIRE AN ALTERNATIVE DESIGN WHICH MUST BE APPROVED BY THE COUNTY ENGINEER.
8. SEE HCUD DETAILS FOR FINAL LOT AND RIGHT-OF-WAY GRADES FOR WATER AND WASTEWATER SERVICES.



SITE AND DRIVEWAY CROSS SECTION



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SECTION III - DRAINAGE STANDARDS RESIDENTIAL LOT AND BLOCK GRADING "D"

APPROVED BY:
 J. SCOTT HERRING, P.E.

DATE:
 JULY 28, 2026

DRAWING NUMBER:
 III-12

RESIDENTIAL LOT GRADING RULES:

1. THIS STANDARD IS INTENDED TO MEET THE PROVISIONS OF THE FLORIDA BUILDING CODE REQUIRING DRAINAGE BE DESIGNED TO CARRY WATER AWAY FROM STRUCTURE. IT IS NOT INTENDED TO AND DOES NOT NECESSARILY PREVENT FLOODING CAUSED BY THE STRUCTURE BEING LOCATED IN A FLOOD PRONE AREA.
2. THE FINISHED FLOOR ELEVATION SHOULD BE SHOWN ON SUBDIVISION FINAL CONSTRUCTION PLANS TO THE NEAREST TENTH (0.1) OF A FOOT.
3. PROVISIONS SHOULD BE MADE TO RECEIVE RUNOFF FROM HIGHER ADJACENT LOTS, AND TO DISCHARGE TO LOWER LOTS AT AN APPROPRIATE LOCATION
4. FINISHED FLOOR ELEVATIONS OF ADJACENT STRUCTURES, IF EXISTING, SHALL BE PROVIDED.
5. ELEVATION OF SWALE & AT EACH PROPERTY LINE PROJECTION AND BOTH CULVERT INVERTS, IF EXISTING, SHALL BE PROVIDED.
6. FILLS OR CUTS 2'-6" OR GREATER SHALL REQUIRE AN ENGINEERED SITE PLAN TO ADDRESS DRAINAGE AND SLOPE STABILITY.
7. FRONT, SIDE, AND REAR SLOPES SHALL NOT BE STEEPER THAN 3:1.
8. NO STRUCTURE, BUILDING, OR IMPROVEMENT CAN ENCROACH, OR BE CONSTRUCTED WITHIN EASEMENTS.
9. IF SIDE AND/OR REAR EASEMENTS EXIST, AND IF RETAINING WALL CONSTRUCTION IS REQUIRED ALONG SIDE AND/OR REAR OF LOT, THE SIDE AND/OR REAR LOT EASEMENTS MUST FIRST BE VACATED AND THE RETAINING WALL(S) MUST THEN BE CONSTRUCTED ADJACENT TO THE PROPERTY LINE.
10. LOTS WITH 5' -0" SIDE SETBACKS/EASEMENTS REQUIRE AN ENGINEERED SITE PLAN FOR ANY CONSTRUCTION.
11. LOTS WITH A 5'-0" SETBACK THAT EXCEED 8" DIFFERENCE IN F.F.E. BETWEEN THEM REQUIRE A STEM WALL OR RETAINING WALL BETWEEN THEM, (LOCATIONS TO BE SHOWN ON PLANS). LOTS WITH 7'-6" SETBACK THAT EXCEED 1'-6" DIFFERENCE IN F.F.E. BETWEEN THEM REQUIRE A STEM WALL OR RETAINING WALL BETWEEN THEM, (LOCATIONS TO BE SHOWN ON PLANS). LOTS WITH A 10'-0" SETBACK THAT EXCEED 2'-4" DIFFERENCE IN F.F.E. BETWEEN THEM REQUIRE A STEM WALL OR RETAINING WALL BETWEEN THEM, (LOCATIONS TO BE SHOWN ON PLANS).
12. ALL SINGLE FAMILY RESIDENTIAL AND ACCESSORY STRUCTURES SHALL RECEIVE A FINAL GRADE AND DRAINAGE INSPECTION PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
13. ALL FINISHED FLOOR ELEVATIONS SHALL BE AT LEAST ONE FOOT ABOVE THE 100-YEAR FLOODPLAIN ELEVATION.
14. THE STRUCTURE SHALL BE 1'-0" HIGHER THAN THE FLOW LINE OF ADJACENT SWALES.
15. LOTS WITHIN THE VELOCITY ZONE, THE 100-YEAR FLOOD ZONE, AND INFILL LOTS SHALL REQUIRE KNOCKOUT WALLS, STEM WALLS, AND/OR RETAINING WALLS AS NECESSARY TO PROVIDE ADEQUATE DRAINAGE AND ACCEPTABLE GRADE TRANSITIONS TO ADJACENT LOT ELEVATIONS. REFER TO THE CURRENT FBC AND FEMA REGULATIONS FOR REQUIREMENTS.
16. LOT GRADING SHALL MAINTAIN HISTORICAL FLOW PATHS AND PREVENT ACCUMULATION OF WATER OR EXCESSIVE RUNOFF ONTO ADJACENT PROPERTIES.
17. SIDE SWALES SHALL DRAIN TO THE FRONT OR REAR ON EACH LOT AND SHALL FUNCTION INDEPENDENTLY FROM ALL ADJOINING LOTS.
18. WHERE A SEPTIC SYSTEM MOUND IS REQUIRED, ADEQUATE DISTANCE MUST BE PROVIDED BETWEEN THE TOE OF SLOPE OF THE MOUND AND THE PROPERTY LINE TO ADDRESS DRAINAGE ISSUES (SEE LOT GRADING RULE 16 ABOVE). ALL SEPTIC MOUNDS MUST HAVE A 10'-0" LOT LINE SETBACK. REFER TO FDEP ON-SITE DISPOSAL SYSTEM CHAPTER 64E-6 FOR REQUIREMENTS.
19. IN SUBDIVISIONS ADJACENT LOTS GENERALLY SHARE A COMMON SWALE. THE CENTER OF THE SWALE IS THE PROPERTY LINE. THE FIRST HOUSE BUILT MUST ESTABLISH THEIR HALF OF THE COMMON SWALE.
20. REFER TO HERNANDO COUNTY LAND DEVELOPMENT CODE FOR ADDITIONAL GRADING REQUIREMENTS.



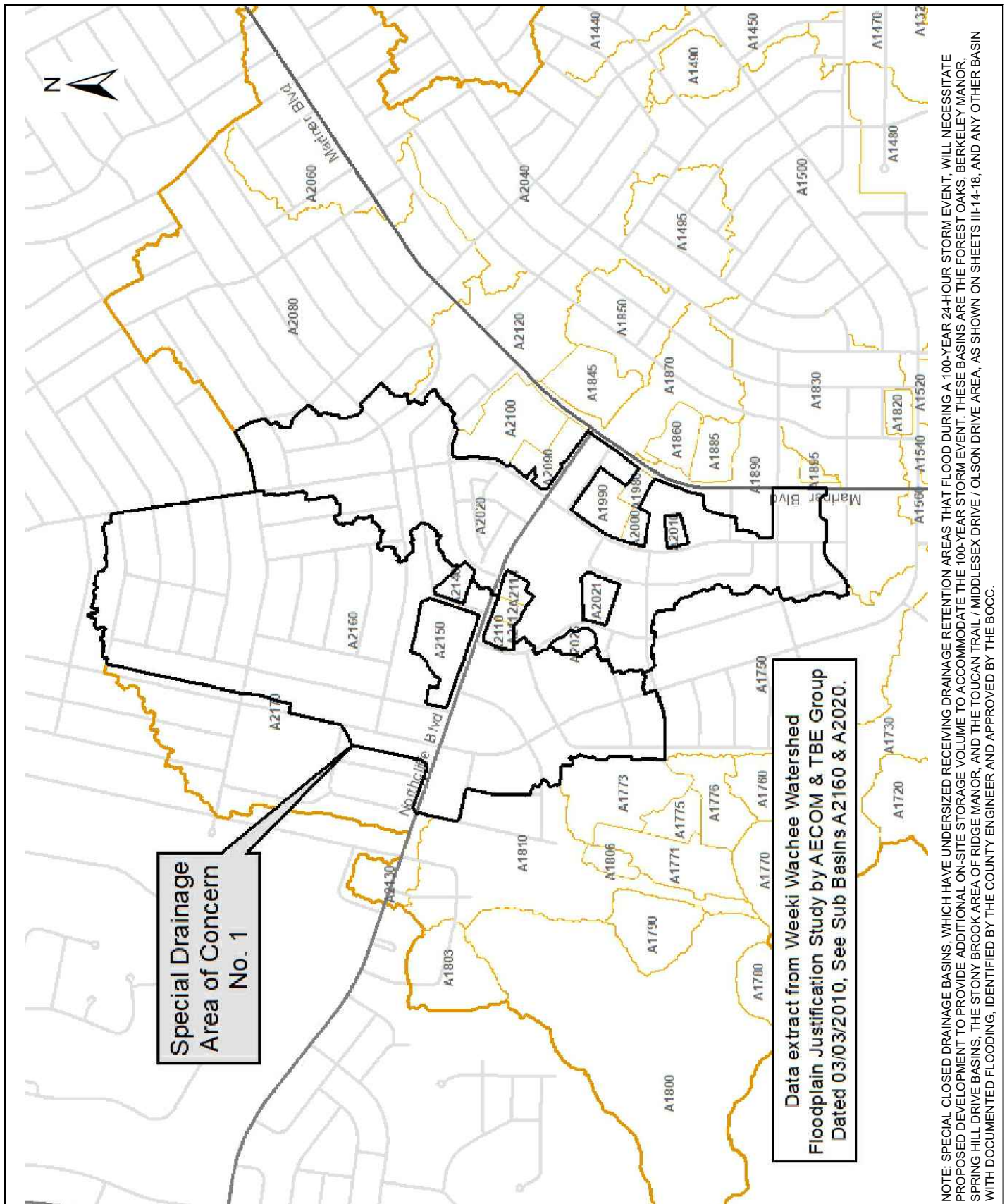
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SECTION III - DRAINAGE STANDARDS RESIDENTIAL LOT GRADING RULES

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28 2026

DRAWING NUMBER:
III-13



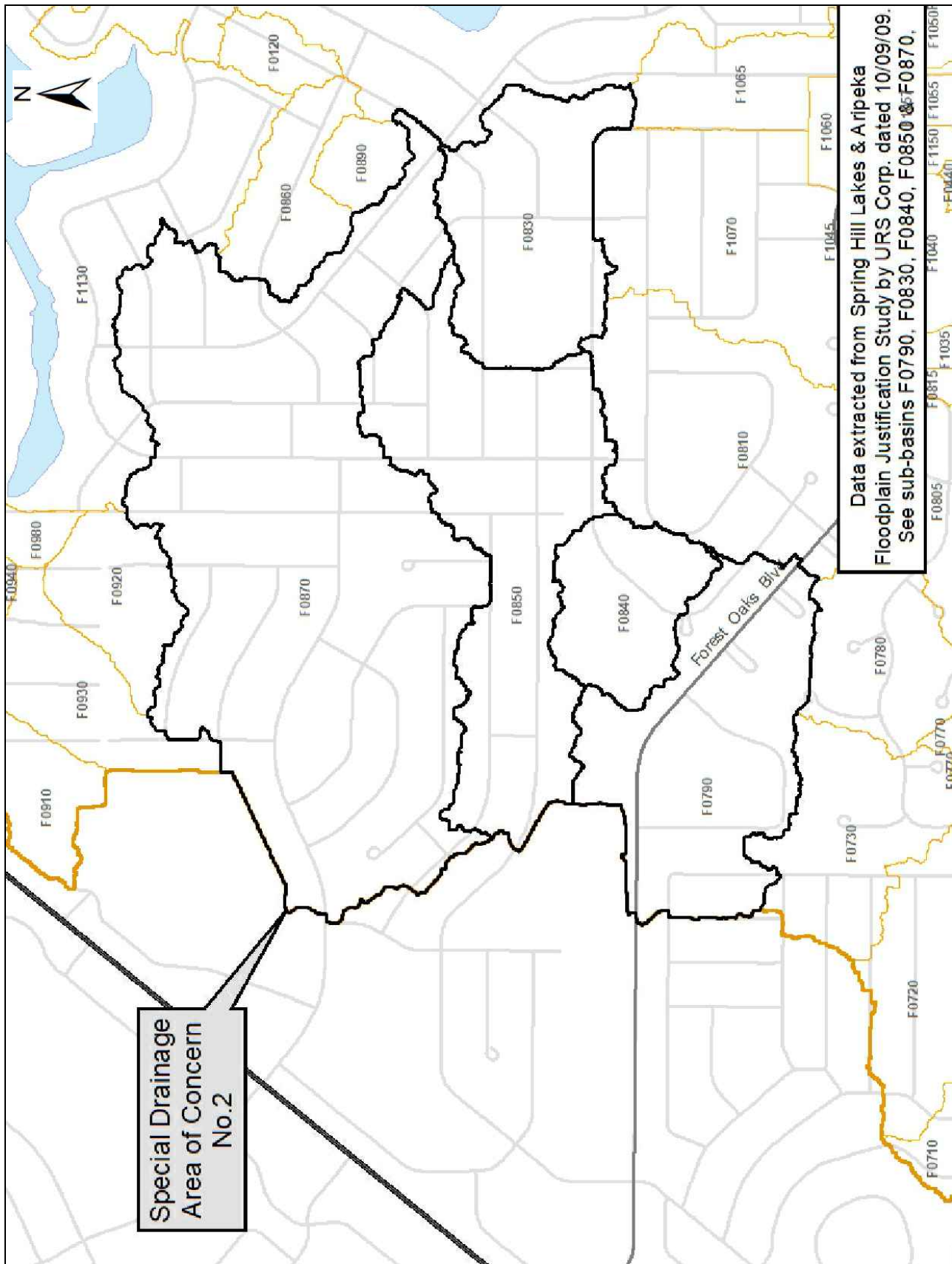
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**SECTION III - DRAINAGE STANDARDS
 SPECIAL DRAINAGE AREA OF CONCERN 1
 (FOREST OAKS)**

APPROVED BY:
 J. SCOTT HERRING, P.E.

DATE:
 JULY 28, 2026

DRAWING NUMBER:
 III-14



Data extracted from Spring Hill Lakes & Aripeka
Floodplain Justification Study by URS Corp. dated 10/09/09.
See sub-basins F0790, F0830, F0840, F0850 & F0870.

Special Drainage
Area of Concern
No. 2

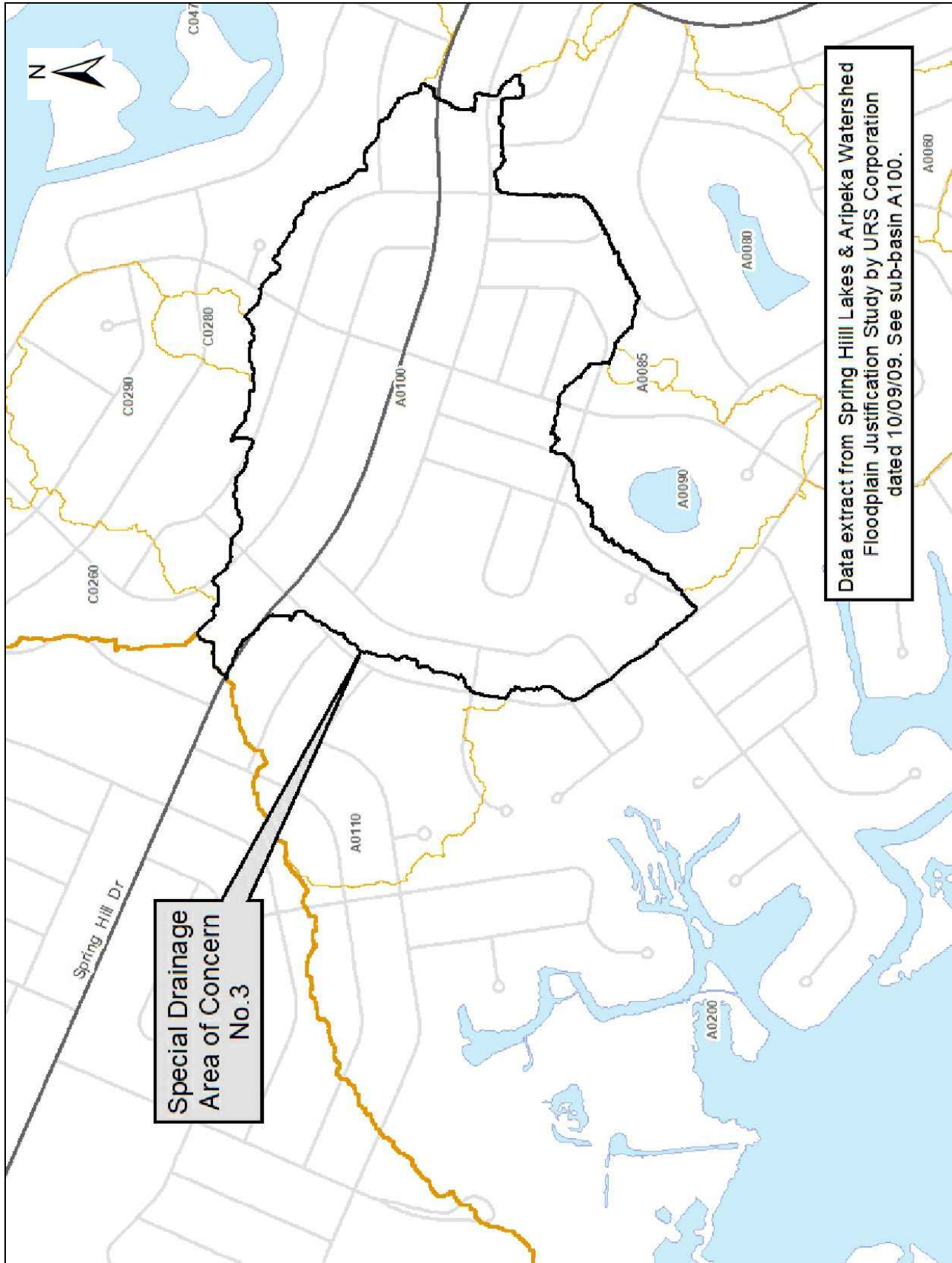
NOTE: SPECIAL CLOSED DRAINAGE BASINS, WHICH HAVE UNDERSIZED RECEIVING DRAINAGE RETENTION AREAS THAT FLOOD DURING A 100-YEAR 24-HOUR STORM EVENT, WILL NECESSITATE PROPOSED DEVELOPMENT TO PROVIDE ADDITIONAL ON-SITE STORAGE VOLUME TO ACCOMMODATE THE 100-YEAR STORM EVENT. THESE BASINS ARE THE FOREST OAKS, BERKELEY MANOR, SPRING HILL DRIVE BASINS, THE STONY BROOK AREA OF RIDGE MANOR, AND THE TOUCAN TRAIL / MIDDLESEX DRIVE / OLSON DRIVE AREA, AS SHOWN ON SHEETS III-14-18, AND ANY OTHER BASIN WITH DOCUMENTED FLOODING, IDENTIFIED BY THE COUNTY ENGINEER AND APPROVED BY THE BOCC.



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SECTION III - DRAINAGE STANDARDS
SPECIAL DRAINAGE AREA OF CONCERN 2
(BERKELEY MANOR)

APPROVED BY: J. SCOTT HERRING, P.E.	DATE: JULY 28, 2026	DRAWING NUMBER: III-15
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Data extract from Spring Hill Lakes & Aripeka Watershed
Floodplain Justification Study by URS Corporation
dated 10/09/09. See sub-basin A100.

Special Drainage
Area of Concern
No. 3

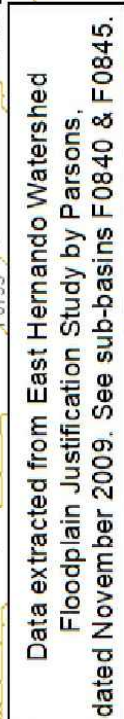
NOTE: SPECIAL CLOSED DRAINAGE BASINS, WHICH HAVE UNDERSIZED RECEIVING DRAINAGE RETENTION AREAS THAT FLOOD DURING A 100-YEAR 24-HOUR STORM EVENT, WILL NECESSITATE PROPOSED DEVELOPMENT TO PROVIDE ADDITIONAL ON-SITE STORAGE VOLUME TO ACCOMMODATE THE 100-YEAR STORM EVENT. THESE BASINS ARE THE FOREST OAKS, BERKELEY MANOR, SPRING HILL DRIVE BASINS, THE STONY BROOK AREA OF RIDGE MANOR, AND THE TOUCAN TRAIL / MIDDLESEX DRIVE / OLSON DRIVE AREA, AS SHOWN ON SHEETS III-14-18, AND ANY OTHER BASIN WITH DOCUMENTED FLOODING, IDENTIFIED BY THE COUNTY ENGINEER AND APPROVED BY THE BOCC.



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SECTION III - DRAINAGE STANDARDS
SPECIAL DRAINAGE AREA OF CONCERN 3
(SPRING HILL DRIVE BASINS)

APPROVED BY: J. SCOTT HERRING, P.E.	DATE: JULY 28, 2026	DRAWING NUMBER: III-16
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SECTION III - DRAINAGE STANDARDS
SPECIAL DRAINAGE AREA OF CONCERN 4
(STONY BROOK AREA OF RIDGE MANOR)

APPROVED BY:
J. SCOTT HERRING, P.E.

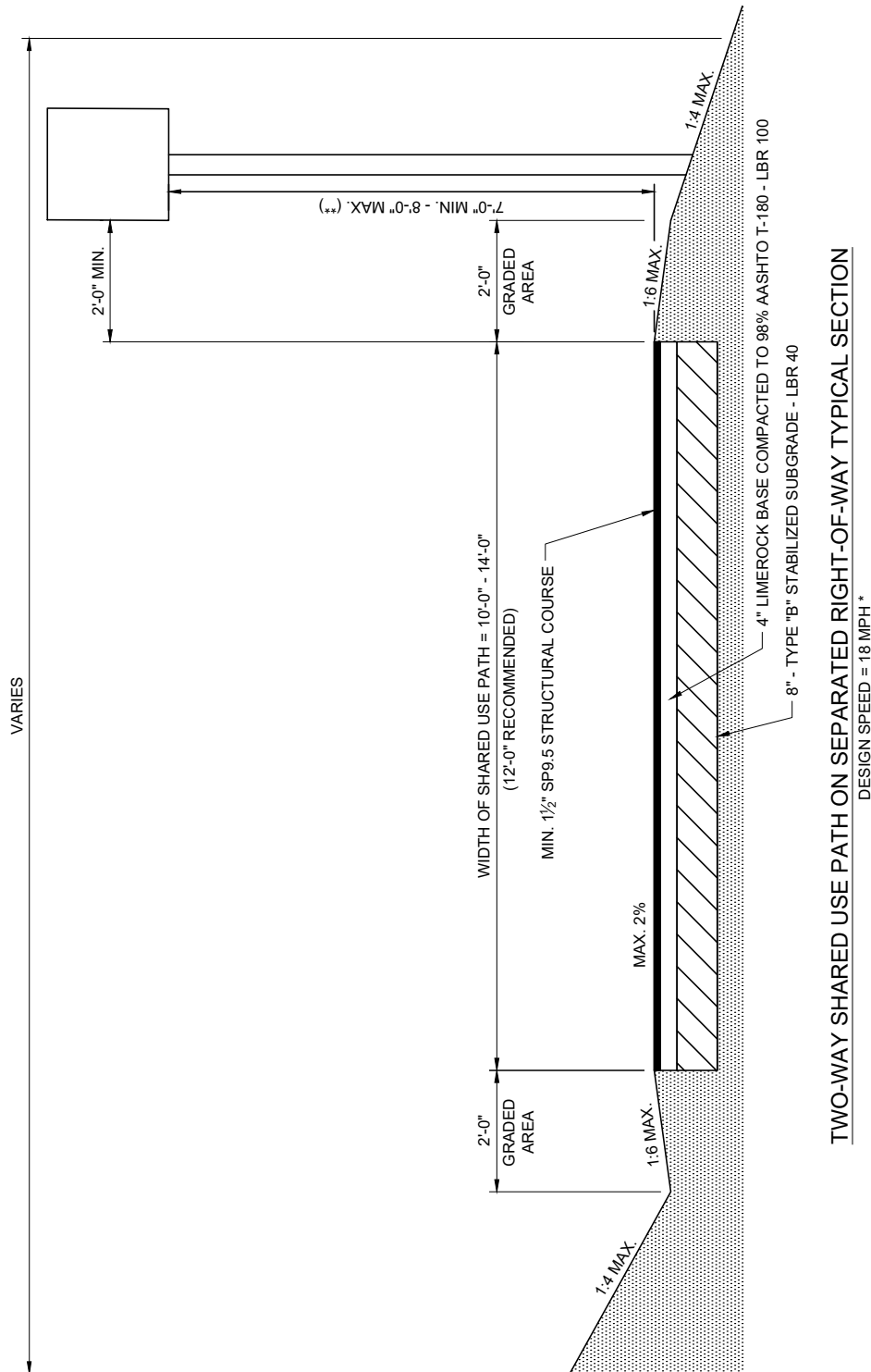
DATE:
JULY 28, 2026

DRAWING NUMBER: III-17

SECTION IV

ROADWAY STANDARDS





- NOTES:
- DESIGN SPEED, RIGHT-OF-WAY, AND ROADSIDE DIMENSIONS ARE MINIMUMS. SITE CONDITIONS MAY REQUIRE INCREASES.
 - * VARIANCE IN HORIZONTAL DESIGN SPEED ALLOWED WITH JUSTIFICATION AND APPROPRIATE SIGNAGE.
 - ** REFER TO FLORIDA GREENBOOK FOR VERTICAL CLEARANCES GREATER THAN 8'-0".



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SECTION IV - ROADWAY STANDARDS

TWO-WAY SHARED USE PATH

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
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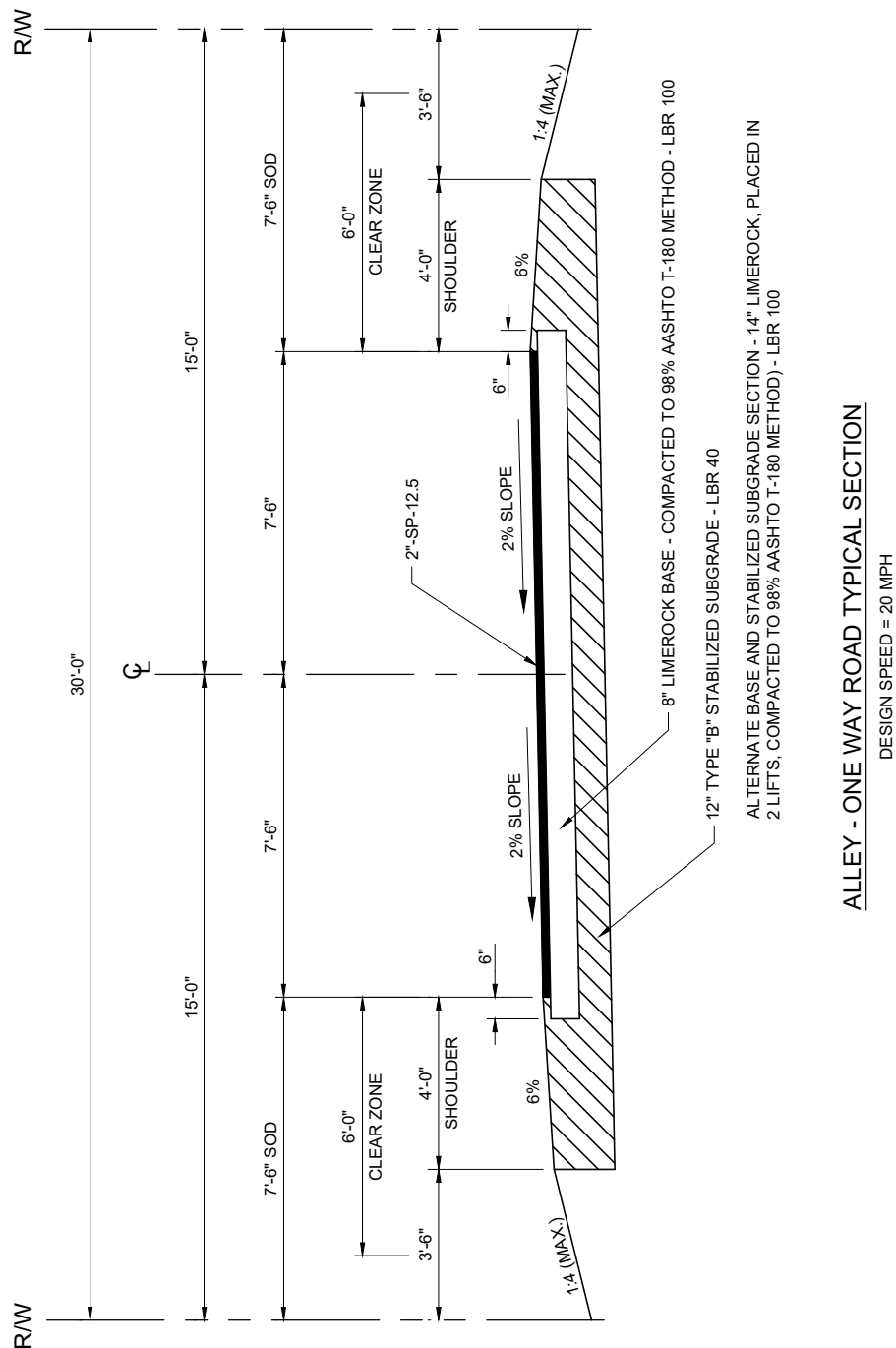
SECTION IV - ROADWAY STANDARDS

ALLEY / ONE WAY ROAD

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
IV-02



ALLEY - ONE WAY ROAD TYPICAL SECTION

- NOTES:
- DESIGN SPEED, RIGHT-OF-WAY, AND ROADSIDE DIMENSIONS ARE MINIMUMS. SITE CONDITION MAY REQUIRE INCREASES OR DECREASES.
 - VARIANCE IN DESIGN SPEED ALLOWED WITH JUSTIFICATION AND APPROPRIATE SIGNAGE



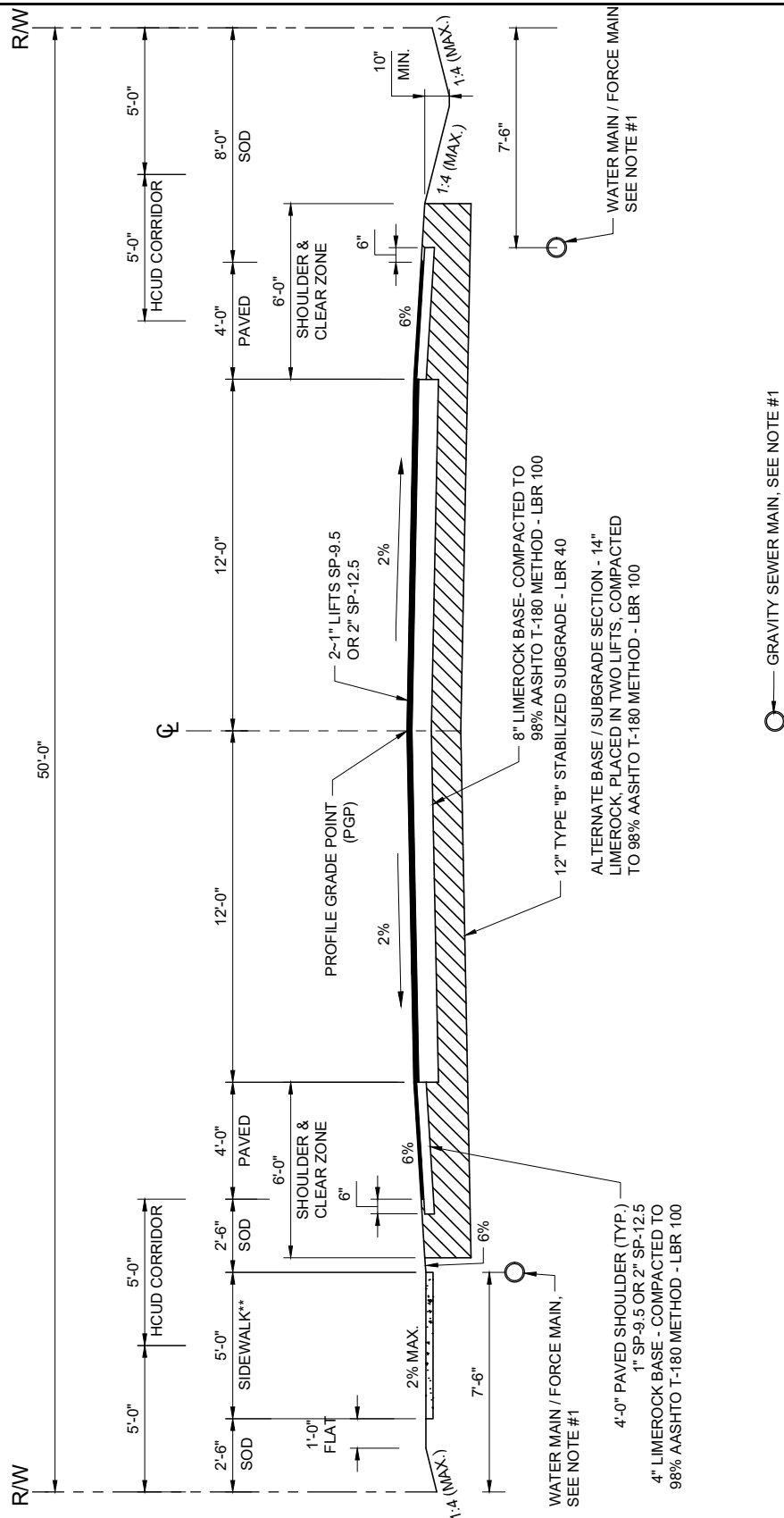
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SECTION IV - ROADWAY STANDARDS FRONTAGE ROAD

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
IV-03



GRAVITY SEWER MAIN, SEE NOTE #1

FRONTAGE ROAD TYPICAL SECTION

DESIGN SPEED = 30 MPH*

- NOTES:
- SEE HCUD STANDARDS AND TECHNICAL SPECIFICATIONS FOR DEPTHS OF MAINS.
 - DESIGN SPEED, RIGHT-OF-WAY, AND ROADSIDE DIMENSIONS ARE MINIMUMS. SITE CONDITION MAY REQUIRE INCREASES OR DECREASES.
 - FRONTAGE ROADS SHALL HAVE NO RESIDENTIAL DRIVEWAYS.
 - * VARIANCE IN DESIGN SPEED ALLOWED WITH JUSTIFICATION AND APPROPRIATE SIGNAGE.
 - ** SIDEWALKS IF APPLICABLE.



APPROVED BY: J. SCOTT HERRING, P.E.	DATE: JULY 28, 2026	DRAWING NUMBER: IV-04
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DESIGN SPEED = 30MPH*



NOTES:

- 1. SEE HCD STANDARDS AND TECHNICAL SPECIFICATIONS FOR DEPTHS OF MAINS.
- 2. DESIGN SPEED, RIGHT-OF-WAY, AND ROADSIDE DIMENSIONS ARE MINIMUMS.
- * VARIANCE IN HORIZONTAL DESIGN SPEED ALLOWED WITH JUSTIFICATION AND APPROPRIATE SIGNAGE.
- ** SIDEWALKS IF APPLICABLE.

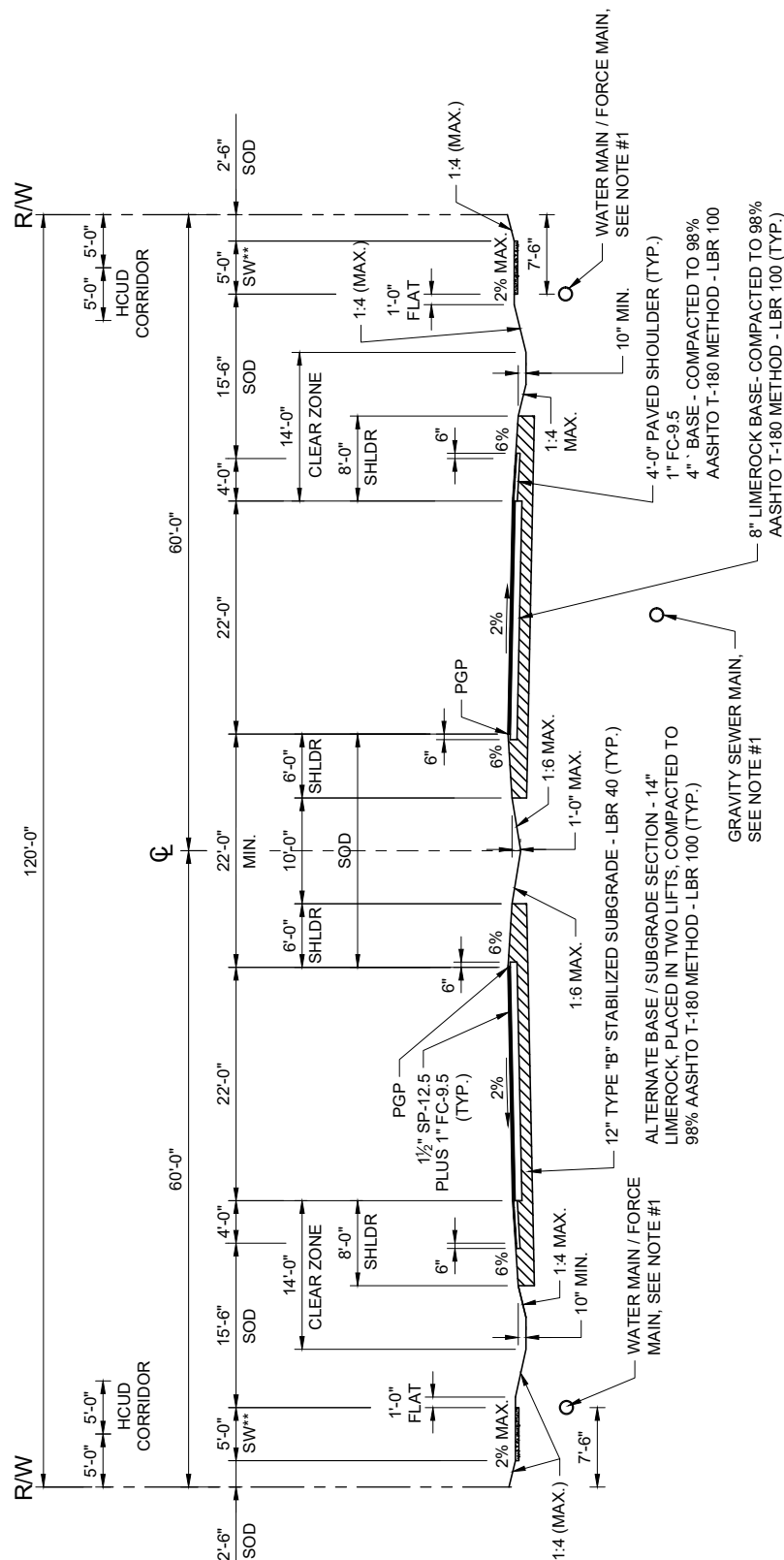
SECTION IV - ROADWAY STANDARDS

MAJOR LOCAL FOUR-LANE ROAD - OPEN DRAINAGE

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE: JULY 28, 2026

DRAWING NUMBER:	IV-06
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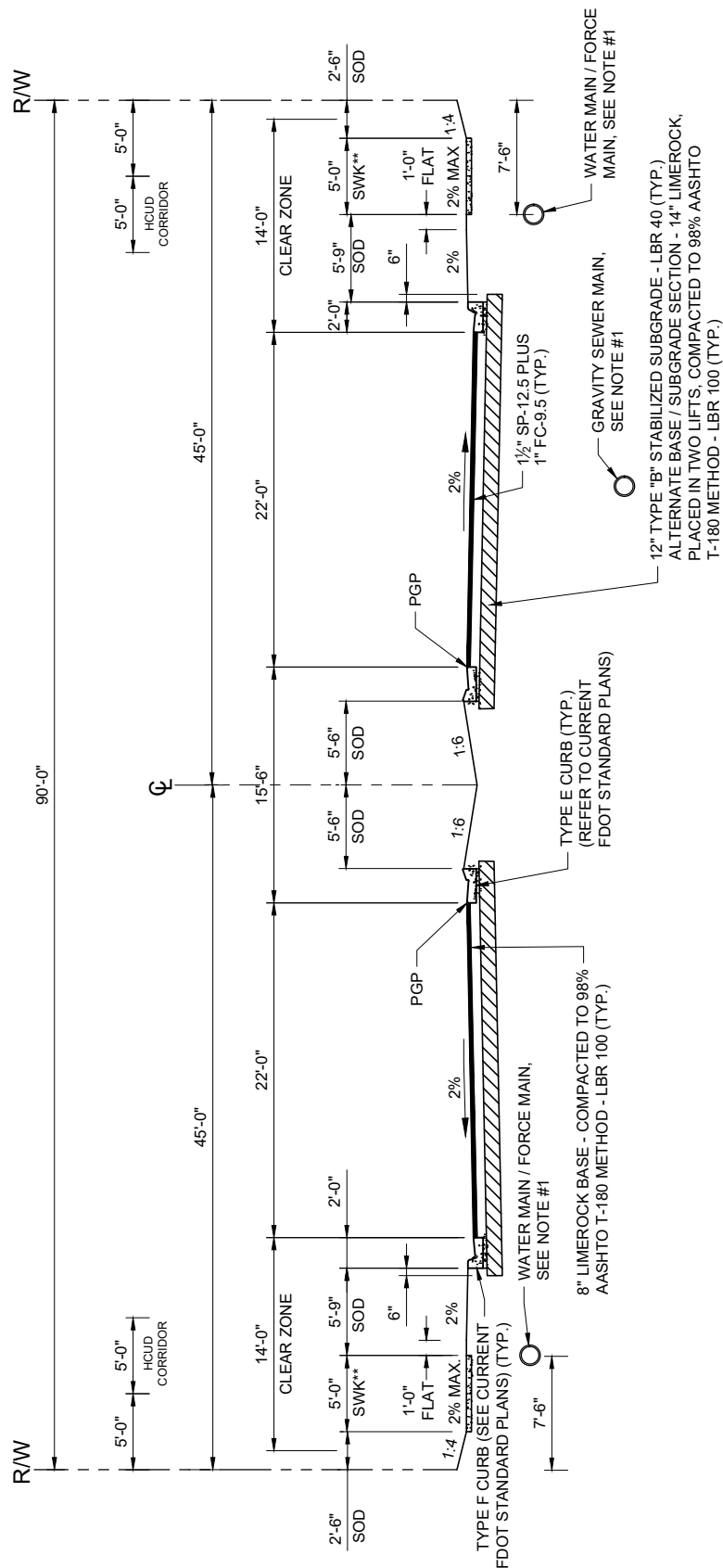


MAJOR LOCAL 4 LANE ROAD - OPEN DRAINAGE TYPICAL SECTION

DESIGN SPEED = 35 MPH*

NOTES:

- 1. SEE HCD STANDARDS AND TECHNICAL SPECIFICATIONS FOR DEPTHS OF MAINS.
- 2. DESIGN SPEED, RIGHT-OF-WAY, AND ROADSIDE DIMENSIONS ARE MINIMUMS.
- * VARIANCE IN HORIZONTAL DESIGN SPEED ALLOWED WITH JUSTIFICATION AND APPROPRIATE SIGNAGE.
- ** SIDEWALKS IF APPLICABLE.



MAJOR LOCAL 4 LANE ROAD - CLOSED DRAINAGE TYPICAL SECTION

DESIGN SPEED = 35 MPH*

- NOTES:**
1. SEE HCUD STANDARDS AND TECHNICAL SPECIFICATIONS FOR DEPTHS OF MAINS.
 2. DESIGN SPEED, RIGHT-OF-WAY, AND ROADSIDE DIMENSIONS ARE MINIMUMS.
- * VARIANCE IN HORIZONTAL DESIGN SPEED ALLOWED WITH JUSTIFICATION AND APPROPRIATE SIGNAGE.
- ** SIDEWALKS IF APPLICABLE.



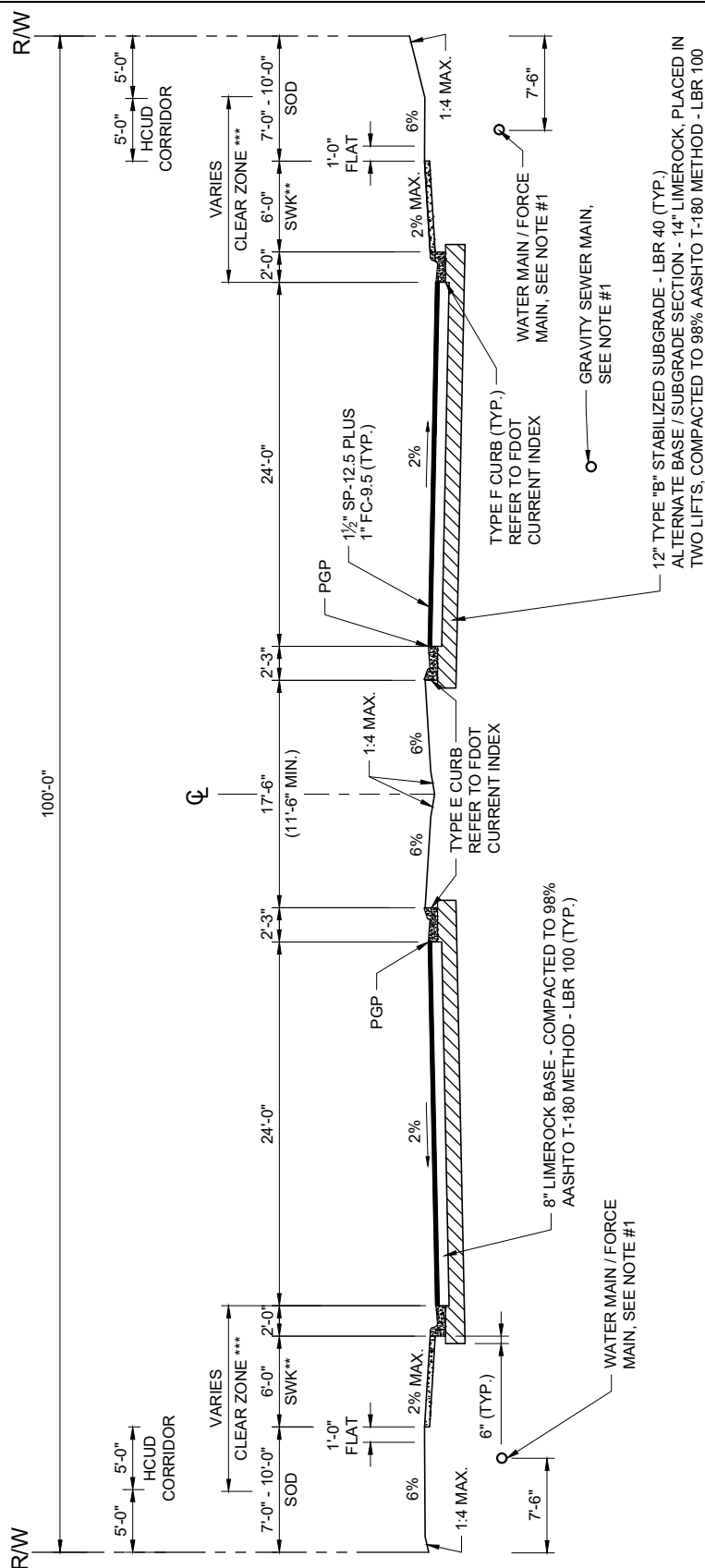
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SECTION IV - ROADWAY STANDARDS MINOR COLLECTOR / FOUR-LANE ROAD - CLOSED DRAINAGE

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

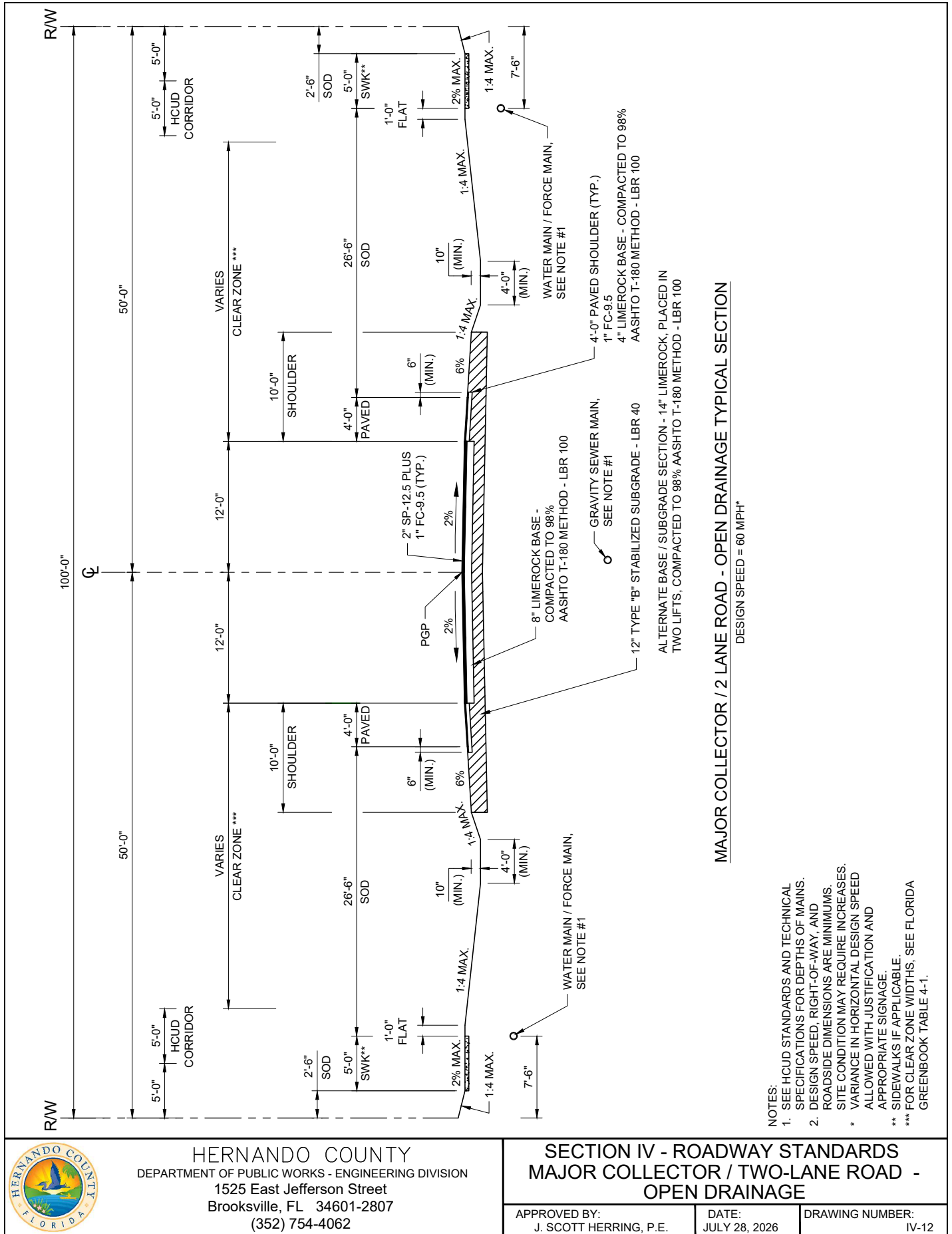
DRAWING NUMBER:
IV-11



MINOR COLLECTOR / 4 LANE ROAD - CLOSED DRAINAGE TYPICAL SECTION

DESIGN SPEED = 40 MPH *

- NOTES:
1. SEE HCUD STANDARDS AND TECHNICAL SPECIFICATIONS FOR DEPTHS OF MAINS.
 2. DESIGN SPEED, RIGHT-OF-WAY, AND ROADSIDE DIMENSIONS ARE MINIMUMS.
- * SITE CONDITION MAY REQUIRE INCREASES. ALLOWED WITH JUSTIFICATION AND APPROPRIATE SIGNAGE.
- ** SIDEWALKS IF APPLICABLE.
- *** FOR CLEAR ZONE WIDTHS, SEE FLORIDA GREENBOOK TABLE 4-1.





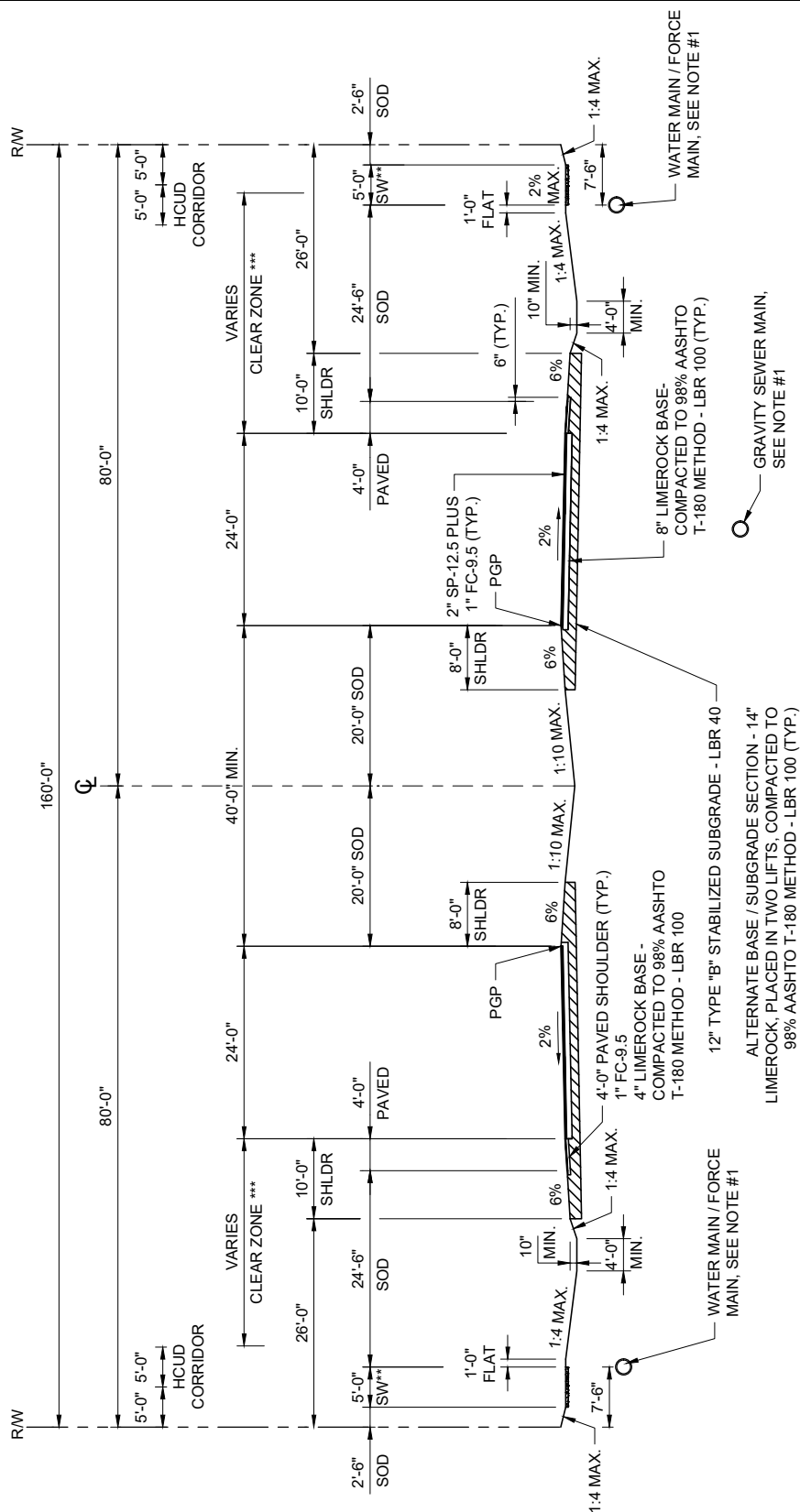
HERNANDO COUNTY
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1525 East Jefferson Street
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(352) 754-4062

SECTION IV - ROADWAY STANDARDS MAJOR COLLECTOR / FOUR-LANE ROAD - OPEN DRAINAGE

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
IV-13



MAJOR COLLECTOR / 4 LANE ROAD - OPEN DRAINAGE TYPICAL SECTION

DESIGN SPEED = 60 MPH*

- NOTES:
- SEE HCLD STANDARDS AND TECHNICAL SPECIFICATIONS FOR DEPTHS OF MAINS.
 - DESIGN SPEED, RIGHT-OF-WAY, AND ROADSIDE DIMENSIONS ARE MINIMUMS.
 - SITE CONDITION MAY REQUIRE INCREASES.
 - * VARIANCE IN HORIZONTAL DESIGN SPEED ALLOWED WITH JUSTIFICATION AND APPROPRIATE SIGNAGE.
 - ** SIDEWALKS IF APPLICABLE.
 - *** FOR CLEAR ZONE WIDTHS, SEE FLORIDA GREENBOOK TABLE 4-1.



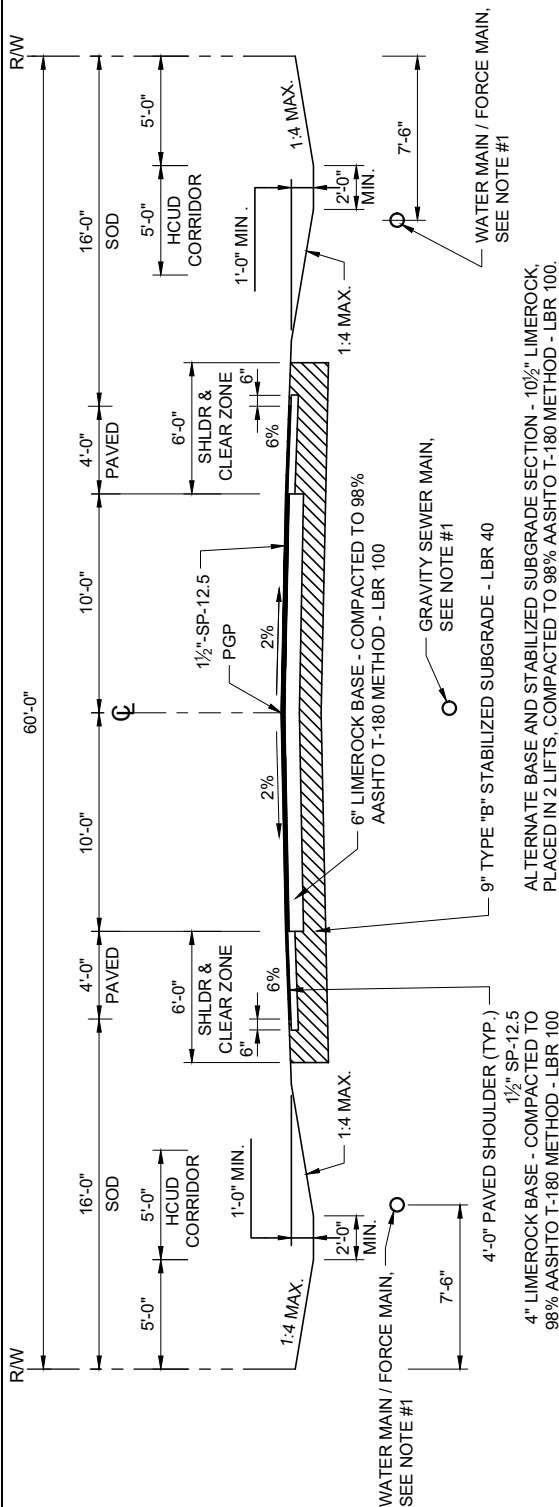
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SECTION IV - ROADWAY STANDARDS RURAL ROADS - OPEN DRAINAGE

APPROVED BY:
J. SCOTT HERRING, P.E.

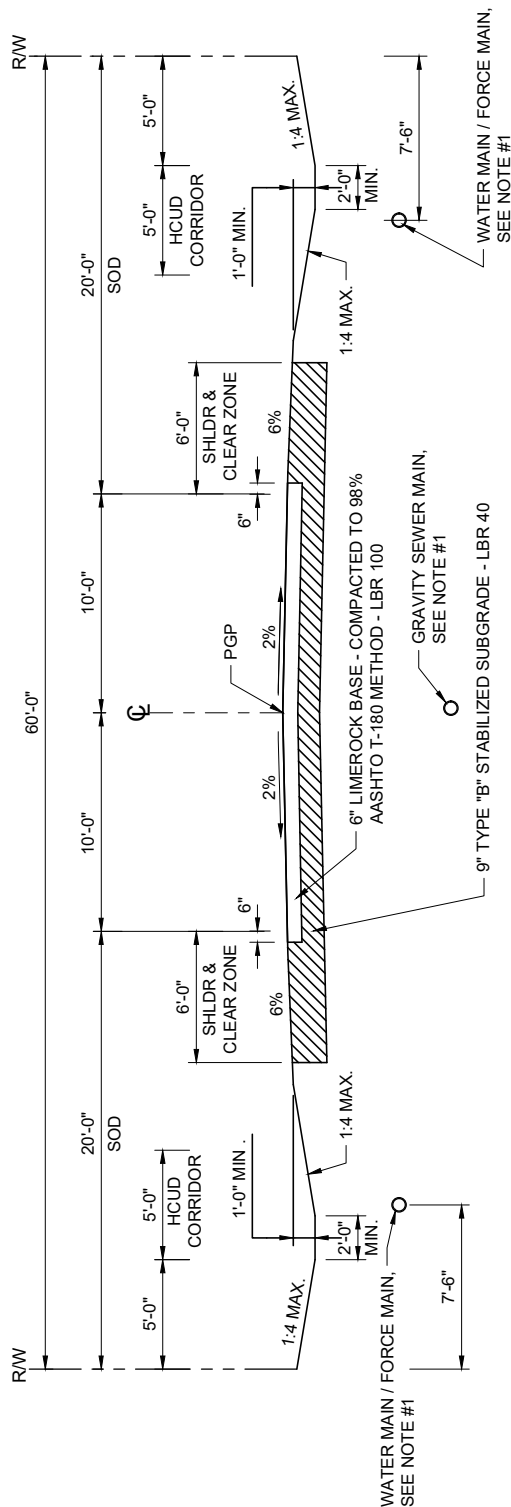
DATE:
JULY 28, 2026

DRAWING NUMBER:
IV-14



PAVED ROAD - OPEN DRAINAGE TYPICAL SECTION

DESIGN SPEED = 30 MPH*



UNPAVED RURAL ROAD - OPEN DRAINAGE TYPICAL SECTION

DESIGN SPEED = 30 MPH*

- NOTES:
- SEE HCUD STANDARDS AND TECHNICAL SPECIFICATIONS FOR DEPTHS OF MAINS.
 - DESIGN SPEED, RIGHT-OF-WAY, AND ROADSIDE DIMENSIONS ARE MINIMUMS. SITE CONDITION MAY REQUIRE INCREASES.
 - * VARIANCE IN HORIZONTAL DESIGN SPEED ALLOWED WITH JUSTIFICATION AND APPROPRIATE SIGNAGE.



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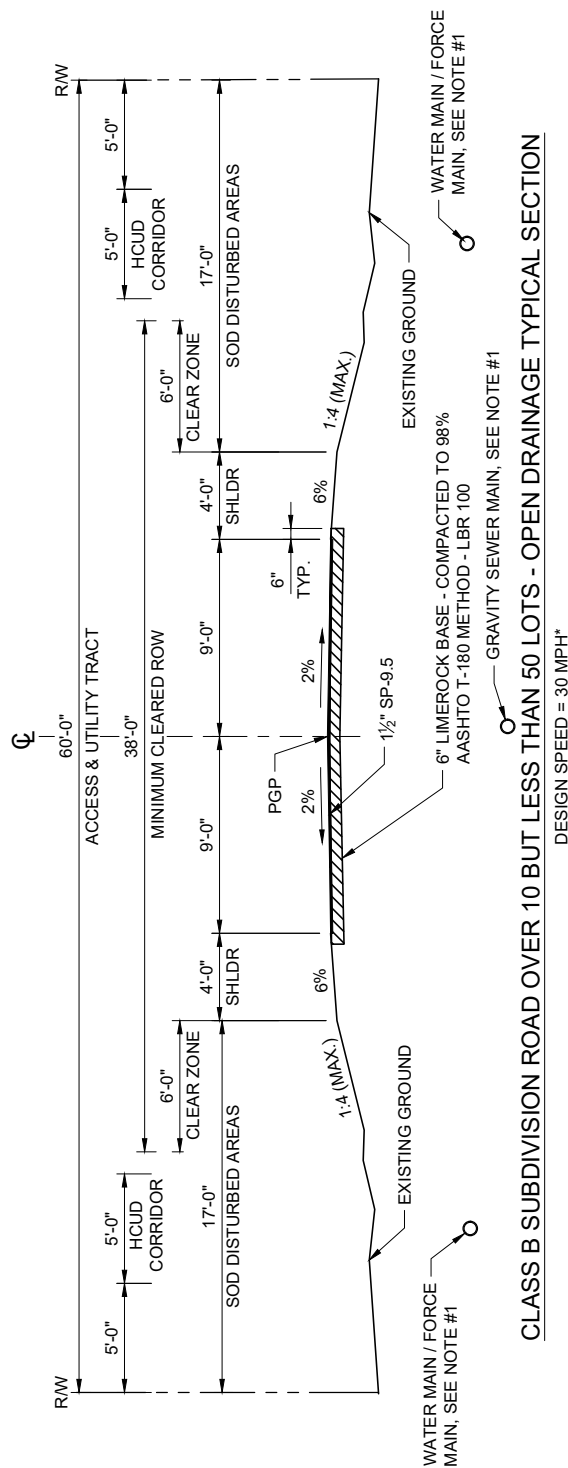
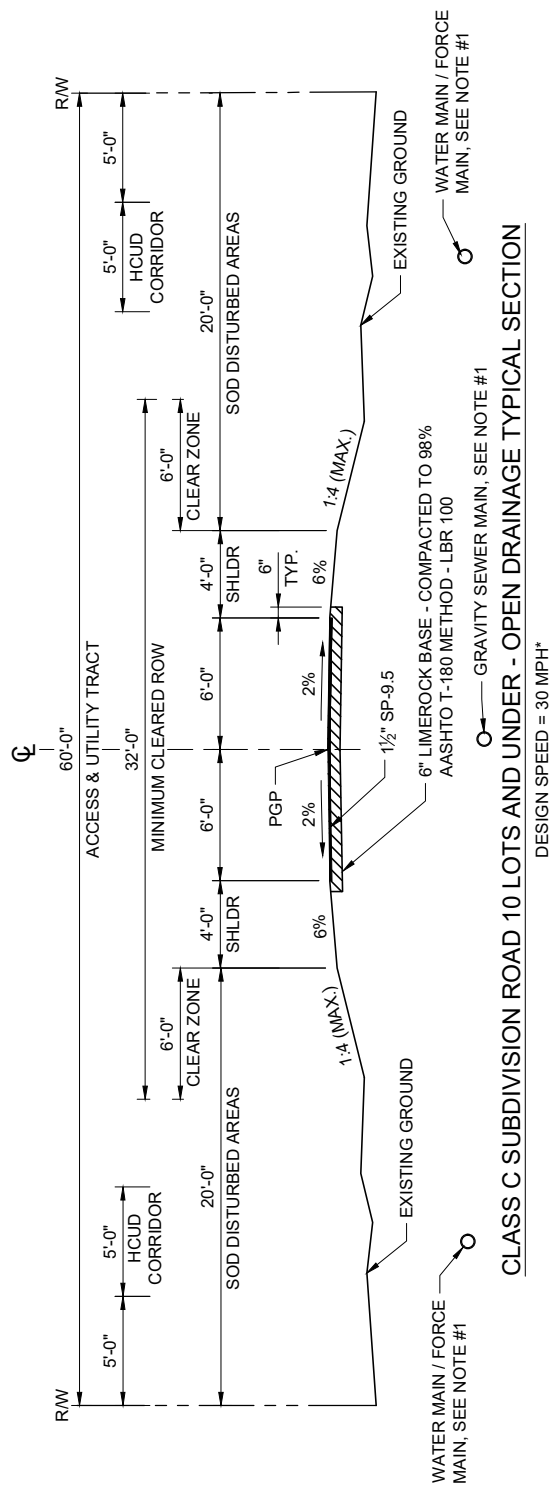
SECTION IV - ROADWAY STANDARDS CLASS B / C SUBDIVISION ROADS

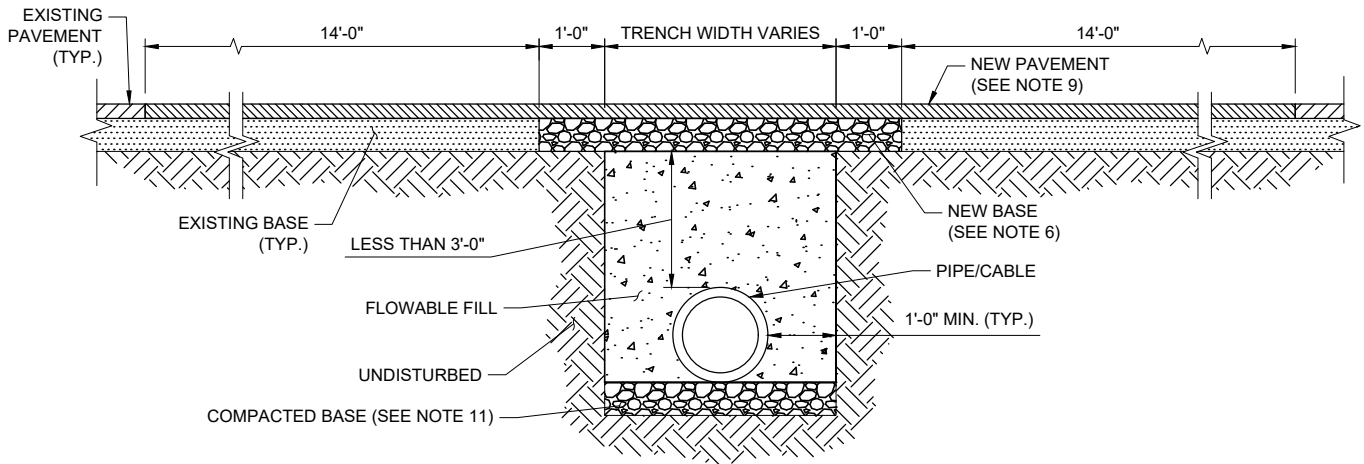
APPROVED BY:
J. SCOTT HERRING, P.E.

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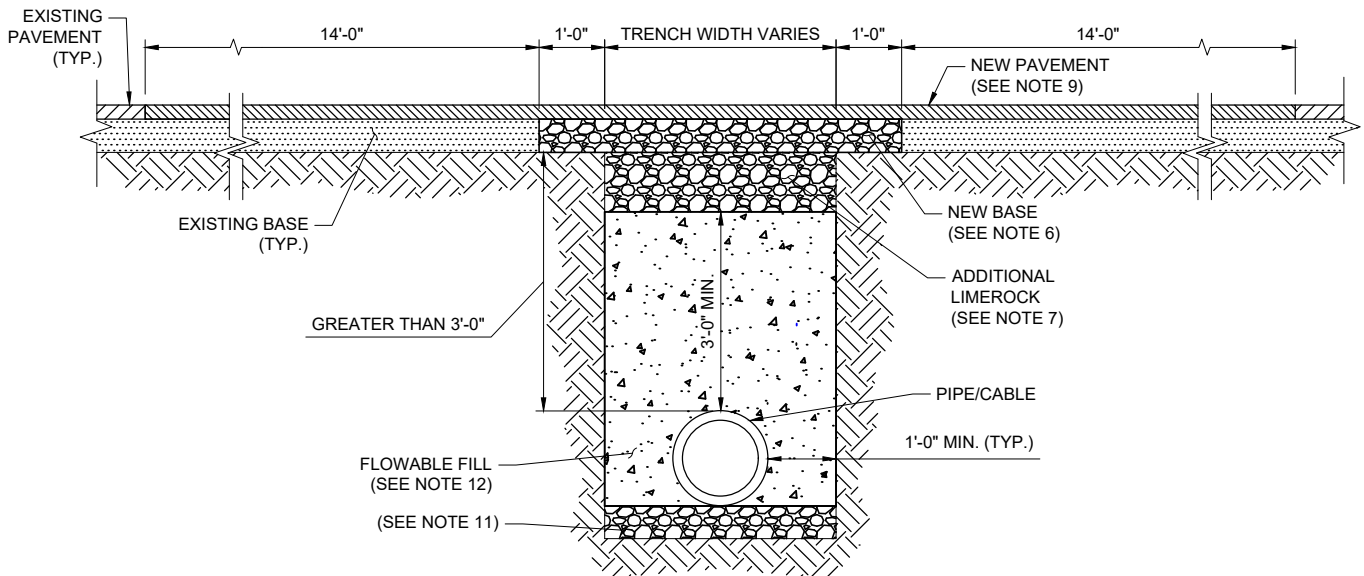
DRAWING NUMBER:
IV-15

- NOTES:
1. SEE HCUD STANDARDS AND TECHNICAL SPECIFICATIONS FOR DEPTHS OF MAINS.
 2. DESIGN SPEED, RIGHT-OF-WAY, AND ROADSIDE DIMENSIONS ARE MINIMUMS.
- * SITE CONDITION MAY REQUIRE INCREASES. VARIANCE IN HORIZONTAL DESIGN SPEED ALLOWED WITH JUSTIFICATION AND APPROPRIATE SIGNAGE.





OPEN ROAD CUT - UTILITY LESS THAN 3'-0" BELOW BOTTOM OF BASE



OPEN ROAD CUT - UTILITY GREATER THAN 3'-0" BELOW BOTTOM OF BASE

FOR UTILITY CONSTRUCTION (WATER / SEWER LINES USE FLOWABLE FILL PER HCU.D.

NOTES:

1. THE USE OF "OPEN CUT" PLACEMENT OF UTILITIES IS DISCOURAGED, AND SHOULD ONLY BE CONSIDERED WHEN CONVENTIONAL DIRECTIONAL DRILLING AND / OR JACK AND BORE CANNOT BE REASONABLY ACCOMPLISHED. OPEN CUTS REQUIRE EXTENSIVE TRAFFIC CONTROL DURING THE WORK, WHICH MAY EXCEED 12 HOURS. DISRUPTION TO MAINLINE AND SIDE STREET TRAFFIC ACCESS MUST BE CONSIDERED.
2. DETAILED RESTORATION PLANS, AND MAINTENANCE OF TRAFFIC PLANS MUST BE SUBMITTED WITH ANY REQUEST FOR EACH OPEN CUT.
3. ALL PAVEMENT MUST BE SAW CUT.
4. TRENCH TO BE CLEAN CUT. TRENCH TO EXTEND A MINIMUM OF 1'-0" BEYOND PIPE OUTSIDE DIAMETER.
5. FLOWABLE FILL TO BE EXCAVATABLE AND MEET THE REQUIREMENTS OF FDOT STANDARD SPECIFICATIONS; WITH A USUAL INITIAL CURE TIME OF 12 HOURS PRIOR TO OPENING ROADWAY TO TRAFFIC.
6. LIMEROCK BASE REPLACEMENT TO MATCH DEPTH OF EXISTING BASE, BUT IN NO CASE LESS THAN 6" FOR DRIVEWAYS AND 8" FOR ROADWAYS; COMPACTED TO 98% AASHTO T-180 METHOD, LBR100.
7. ON OPEN CUTS GREATER THAN 3'-0" FROM BOTTOM OF BASE TO TOP OF PIPE OR CABLE, INSTALL FLOWABLE FILL 3'-0" DEEP PER NOTE 5, WITH REMAINDER OF DEPTH TO BASE TO BE FILLED WITH LIMEROCK IN MAXIMUM 4" LIFTS, COMPACTED TO 98% AASHTO T-180 METHOD, LBR100.
8. RC-70 OR EQUIVALENT LIQUID ASPHALT EMULSION SHALL BE APPLIED TO ALL EXPOSED LIMEROCK AND PAVEMENT JOINT SURFACES.
9. ASPHALT CONCRETE REPLACEMENT TO MATCH DEPTH OF EXISTING PAVEMENT, BUT IN NO CASE LESS THAN 1½" OF TYPE SP-9.5.
10. CONTRACTOR IS RESPONSIBLE FOR CORRECTION OF ANY SETTLING PAVEMENT SURFACES FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF OPEN CUT WORK.
11. PROVIDE SELECT FILL PIPE BEDDING OR CRUSHED STONE (WET CONDITION) WHERE THE EXISTING BEDDING MATERIAL IS OF INADEQUATE SUPPORTING VALUE, AS DETERMINED BY THE ENGINEER.
12. FULL DEPTH LIME ROCK OR CRUSHED CONCRETE MAY BE USED IN LIEU OF FLOWABLE FILL FOR STORM PIPE, WATER AND SEWER LINES.



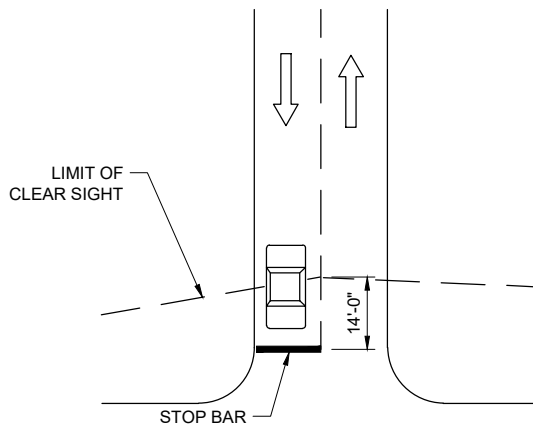
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SECTION IV - ROADWAY STANDARDS
OPEN CUT PAVEMENT RESTORATION

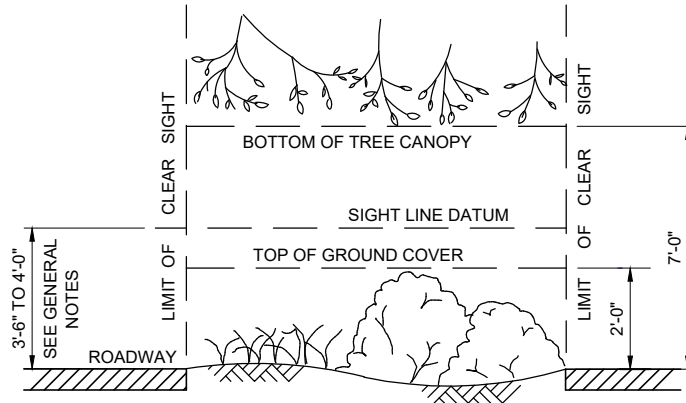
APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
IV-16



LINE OF SITE INSET



THE INTENT OF THIS STANDARD IS TO PROVIDE A WINDOW WITH VERTICAL LIMITS 3'-0" ABOVE AND 1'-0" BELOW THE SIGHT LINE DATUM, AND THE HORIZONTAL LIMITS DEFINED BY THE LIMITS OF CLEAR SIGHT.

WINDOW DETAIL

NOTES:

1. WORK THIS SHEET WITH FDOT DESIGN MANUAL EXHIBITS 212-4 TO 7.
2. THE LIMITS OF CLEAR SIGHT DEFINE A CORRIDOR THROUGH WHICH A CLEAR SIGHT WINDOW MUST BE PRESERVED. SEE WINDOW DETAIL.
3. CLEAR SIGHT IS PROVIDED BY A SIGHT LINE ORIGINATING 3.5' ABOVE THE PAVEMENT AT DRIVERS EYE LEVEL AND ENDING 4' ABOVE THE PAVEMENT AT THE VEHICLE OBSERVED.
4. THE CORRIDOR DEFINED BY THE LIMITS OF CLEAR SIGHT IS A RESTRICTED PLANTING AREA.
5. SEE HERNANDO COUNTY LANDSCAPING GUIDELINES FOR PLANTING TYPES AND SPACING.
6. PLANTS SHALL NEVER OBSCURE TRAFFIC SIGNS OR SIGNALS.
7. IF LANDSCAPING INTERFERES WITH THE LINE OF SIGHT PRESCRIBED BY THESE STANDARDS, THE COUNTY ENGINEER MAY REARRANGE, RELOCATE, OR ELIMINATE PLANTINGS.
8. SEE PLANS FOR ROADWAY CONSTRUCTION DIMENSIONS.
9. SEE CURRENT FDOT STANDARD PLANS FOR PAVEMENT MARKING INFORMATION.



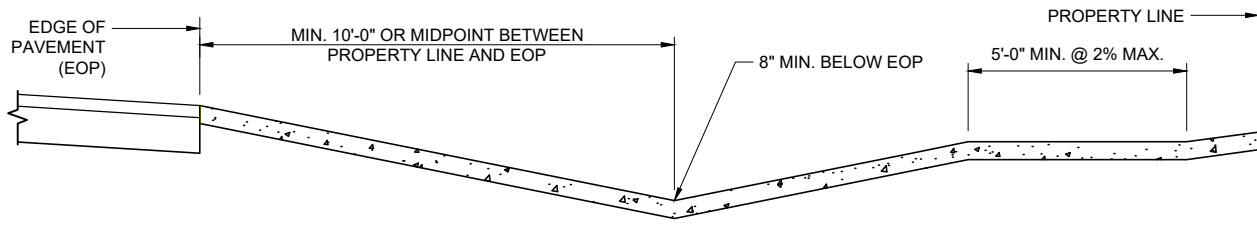
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**SECTION IV - ROADWAY STANDARDS
INTERSECTION LANDSCAPING**

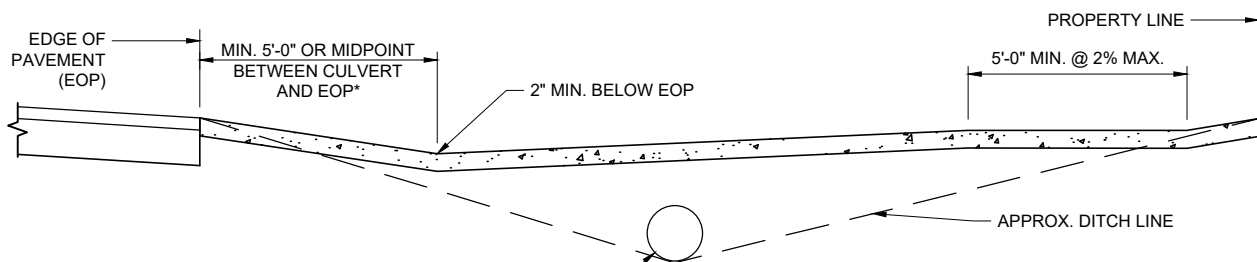
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DATE:
JULY 28, 2026

DRAWING NUMBER:
IV-17



COMMERCIAL DRIVEWAY CONNECTION SECTION WITHOUT CULVERT



CULVERT SIZE CHART	
ROUND	OVAL
15"	12"x18"
18"	14"x23"
24"	19"x30"

CULVERT SIZE AND TYPE TO BE DETERMINED BY PUBLIC WORKS PERMITTING; MINIMUM CULVERT SIZE 15" OR EQUIVALENT (SEE COMPARISON CHART TO LEFT)

DRIVEWAYS FOR LOTS OVER 150'-0" DEEP WILL NOT EXCEED 5% SLOPE. DRIVEWAYS FOR LOTS UNDER 150'-0" DEEP WILL NOT EXCEED 12%. DRIVEWAYS WITH ADA SIDEWALKS WILL HAVE A MIN 5' SIDEWALK NOT TO EXCEED 2% CROSS SLOPE.

*PW PERMITTING DISCRETION TO MOVE SWALE TO 2' MIN TO EDGE OF PAVEMENT.

COMMERCIAL DRIVEWAY CONNECTION SECTION WITH CULVERT

DRIVEWAY NOTES:

- PAVERS NOT ALLOWED WITHIN COUNTY RIGHT OF WAY, UNLESS APPROVED BY COUNTY ENGINEER. PAVERS FOR SIDEWALKS MUST MEET ADA GUIDELINES. PAVERS CONSTRUCTED WITHIN THE RIGHT OF WAY WILL NOT BE MAINTAINED BY HERNANDO COUNTY.
- ALL RIGHT-OF-WAY FRONTING THE EDGE OF PAVEMENT SHALL BE SODDED.
- WHEN THE PERMITEE'S PROPERTY ABUTS A DRAINAGE RIGHT-OF-WAY OR A COUNTY LAKE, SUFFICIENT VEGETATION MUST BE UTILIZED TO CONTROL EROSION IF THE AFOREMENTIONED AREA IS DISTURBED BY REGRADING, SOD MUST BE UTILIZED TO CONTROL SUBSEQUENT EROSION.
- ALL WORK TO BE COMPLETED PRIOR TO ISSUING A CERTIFICATE OF OCCUPANCY, UNLESS AN EXTENSION IS GRANTED BY THE BUILDING DEPARTMENT.
- DRIVEWAYS CONSTRUCTED ON UNPAVED STREETS WILL TERMINATE 7'-0" OFF THE GRADED TRAVEL WAY, AND AREA BETWEEN DRIVEWAY AND ROAD TO BE STABILIZED WITH A MINIMUM OF 6" LIMEROCK. NO. 57 STONE IS NOT PERMITTED.
- DRIVEWAY PROFILES TO BE SHOWN ON PLANS.
- USE HERNANDO COUNTY STANDARD ASPHALT OR CONCRETE DETAILS FOR MATERIALS FOR DRIVEWAYS. MINIMUM THICKNESS IS 6", DETERMINED BY THE PROJECT ENGINEER.
- ALL VEHICULAR ACCESS POINTS SHALL BE LOCATED AT LEAST 150'-0", OR 2/3rd THE DISTANCE OF THE LOT FRONTAGE, WHICHEVER IS LESS, FROM THE INTERSECTION OF ANY RIGHT-OF-WAY LINES OF STREETS OR A STREET AND A RAILROAD AND AT LEAST 15'-0" FROM ALL SIDE OR REAR PROPERTY LINES.
- ON 24" AND LARGER PIPES, A 6'-0" WIDE SHOULDER SHALL BE PROVIDED ON EACH SIDE OF THE DRIVEWAY PAVEMENT WITH 2:1 MITERED END SECTIONS. ON 18" AND SMALLER PIPES, A 2'-0" FOOT WIDE SHOULDER SHALL BE PROVIDED WITH A 4:1 MITERED END SECTIONS.
- ADDITIONAL DRIVEWAYS, LOCATIONS OR WIDTHS REQUIRE A VARIANCE BY THE COUNTY ENGINEER.
- DEVIATIONS FROM THIS STANDARD MAY BE APPROVED BY THE COUNTY ENGINEER IF ACCEPTABLE DRAINAGE CAN BE ASSURED WITH AN ALTERNATE DETAIL.

DRIVEWAY WIDTH OPTIONS PER ROADWAY:

- ONE VEHICULAR ACCESS ONLY, NOT TO EXCEED FORTY (40) FEET IN WIDTH IN THE RIGHT-OF-WAY FOR A TWO LANE DRIVEWAY.
- ONE VEHICULAR ACCESS POINT, NOT TO EXCEED SIXTY (60) FEET IN WIDTH IN THE RIGHT-OF-WAY FOR A FOUR LANE DRIVEWAY.
- TWO VEHICULAR ACCESS POINTS, NOT TO EXCEED TWENTY-FOUR (24) FEET IN WIDTH EACH.
- ALL DRIVEWAYS SHALL BE A MINIMUM OF 24 FEET WIDTH.

MATERIALS OPTIONS:

- 6" CONCRETE W/ 6"x6" 10/10 WELDED WIRE MESH OR COMMERCIAL FIBERMESH
- 6" LIMEROCK, COMPACTED TO 98% AASHTO T-180 METHOD, 1.5" TYPE SP-9.5



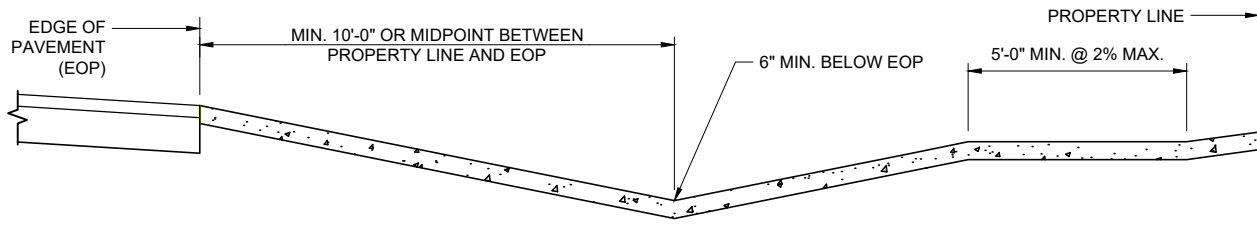
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SECTION IV - ROADWAY STANDARDS COMMERCIAL CONNECTION

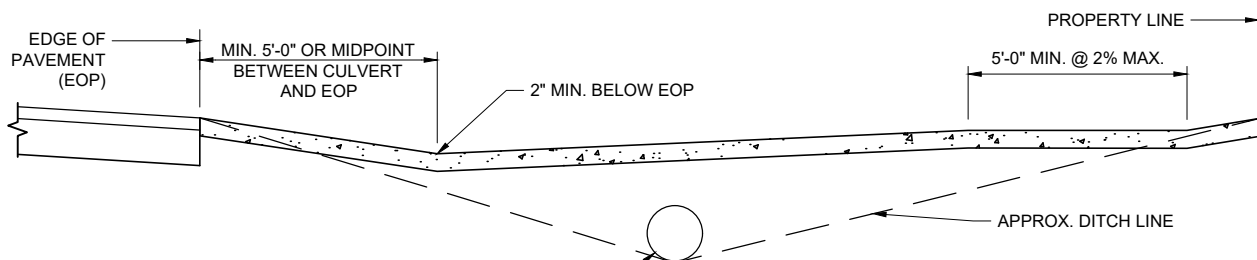
APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
IV-18



RESIDENTIAL CONNECTION SECTION WITHOUT CULVERT



CULVERT SIZE CHART	
ROUND	OVAL
15"	12"x18"
18"	14"x23"
24"	19"x30"

CULVERT SIZE AND TYPE TO BE DETERMINED BY PUBLIC WORKS PERMITTING; MINIMUM CULVERT SIZE 15" OR EQUIVALENT (SEE COMPARISON CHART TO LEFT)

MAX SLOPE FOR DRIVEWAY 12%. ADA SIDEWALK PORTION NOT TO EXCEED 2% CROSS SLOPE. IF NO SIDEWALKS, DISREGARD SIDEWALK PORTION.

RESIDENTIAL CONNECTION SECTION WITH CULVERT

DRIVEWAY NOTES:

- PAVERS NOT ALLOWED WITHIN COUNTY RIGHT OF WAY, UNLESS APPROVED BY COUNTY ENGINEER. PAVERS FOR SIDEWALKS MUST MEET ADA GUIDELINES. PAVERS CONSTRUCTED WITHIN THE RIGHT OF WAY WILL NOT BE MAINTAINED BY HERNANDO COUNTY.
- A PAVED APRON/DRIVEWAY WITHIN THE RIGHT OF WAY IS REQUIRED FOR DRIVEWAY CONNECTIONS TO PAVED ROADS. APRON SHALL BE FROM EDGE OF PAVEMENT TO PROPERTY LINE, 3'-0" WIDE TAPER ON EITHER SIDE OF DRIVEWAY. DRIVEWAY WIDTH SHALL BE 12'-0" MINIMUM, 20'-0" MAXIMUM FOR OPEN DRAINAGE AND 30'-0" MAX. FOR CLOSED DRAINAGE, APRON/DRIVEWAY CAN BE CONSTRUCTED WITH A MINIMUM OF 6" LIMEROCK BASE AND ONE AND ONE HALF INCH OF ASPHALT OR, MINIMUM 6" OF 3000 P.S.I. CONCRETE WITH WIRE MESH OR COMMERCIAL FIBER MESH.
- ALL RIGHT OF WAY AND THE PROPERTY LINE WILL BE SODDED.
- WHEN THE PERMITEE'S PROPERTY ABUTS A DRAINAGE RIGHT OF WAY OR COUNTY LAKE, SUFFICIENT VEGETATION MUST BE UTILIZED TO CONTROL EROSION IF THE AFOREMENTIONED AREA IS DISTURBED BY REGRADING, SOD MUST BE UTILIZED TO CONTROL SUBSEQUENT EROSION.
- DRIVEWAYS CONSTRUCTED ON UNPAVED STREETS SHALL TERMINATE 7'-0" OFF THE GRADED TRAVEL WAY, AND THE AREA BETWEEN THE CONSTRUCTED DRIVEWAY AND ROAD TO BE STABILIZED WITH 6" OF LIMEROCK, CONFORMING TO EXISTING SWALE, WITH A MINIMUM 6" DEEP SWALE.
- DRIVEWAYS OTHER THAN CONCRETE, REQUIRE ONLY A PUBLIC WORKS PERMIT.
- ALL WORK TO BE COMPLETED PRIOR TO ISSUING A CERTIFICATE OF OCCUPANCY, UNLESS AN EXTENSION IS GRANTED BY THE BUILDING DEPARTMENT.
- AREA WITHIN RIGHT OF WAY BETWEEN PROPERTY LINE AND EDGE OF PAVEMENT SHALL BE SODDED.
- MAXIMUM WIDTH OF DRIVEWAY FOR CLOSED DRAINAGE SHALL BE 30'-0", 40'-0" FOR OPEN DRAINAGE.
- ON 24" AND LARGER PIPES, A 6'-0" WIDE SHOULDER SHALL BE PROVIDED ON EACH SIDE OF THE DRIVEWAY PAVEMENT WITH 2:1 MITERED END SECTIONS. ON 18" AND SMALLER PIPES, A 2'-0" WIDE SHOULDER SHALL BE PROVIDED ON EACH SIDE OF THE DRIVEWAY PAVEMENT WITH 4:1 MITERED END SECTIONS.
- SIDEWALKS SHOULD BE FORMED FIRST TO ENSURE ADA COMPLIANCE SHALL BE MET.
- DEVIATIONS FROM THIS STANDARD MAY BE APPROVED BY THE COUNTY ENGINEER IF ACCEPTABLE DRAINAGE CAN BE ASSURED WITH AN ALTERNATE DETAIL.

MATERIALS OPTIONS:

- 6" CONCRETE W/ 6"x6" 10/10 WELDED WIRE MESH OR COMMERCIAL FIBERMESH.
- 6" LIMEROCK, COMPACTED TO 98% AASHTO T-180 METHOD, 1.5" TYPE SP-9.5.
- ALTERNATE BASE MATERIAL INCLUDES CRUSHED CONCRETE, SHELL ROCK, OR ASPHALTIC CONCRETE.



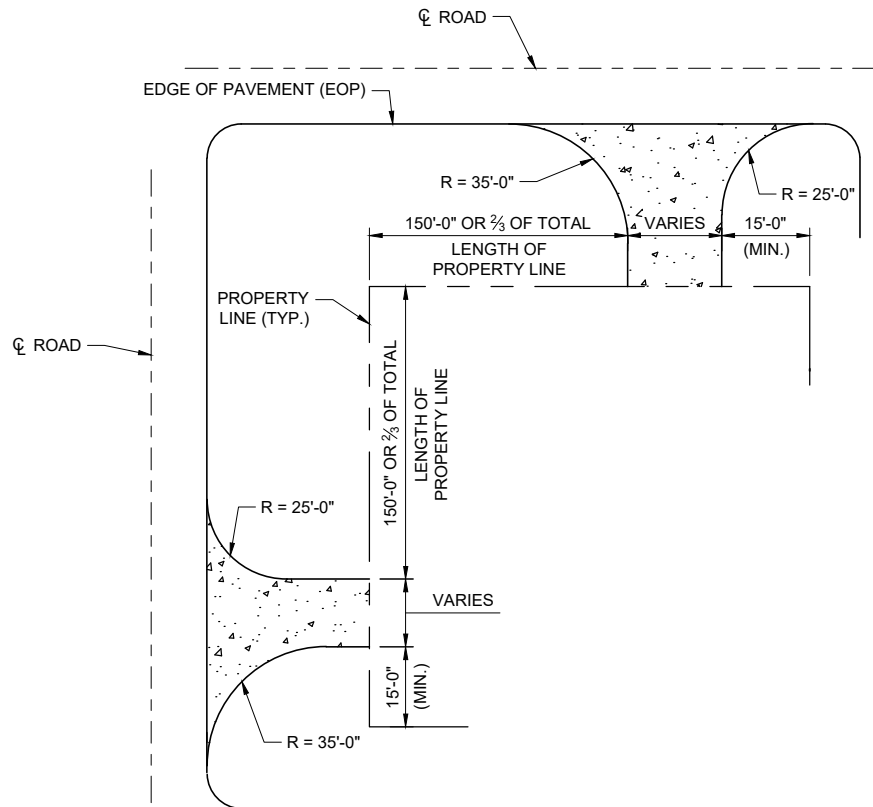
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SECTION IV - ROADWAY STANDARDS RESIDENTIAL CONNECTION

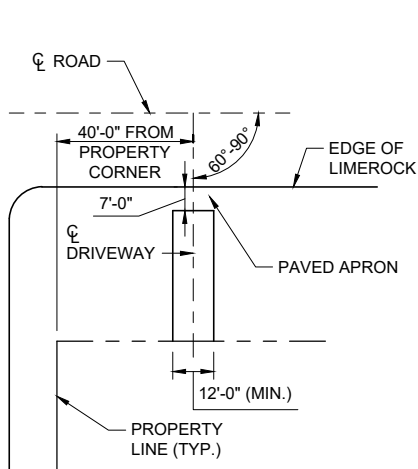
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JULY 28, 2026

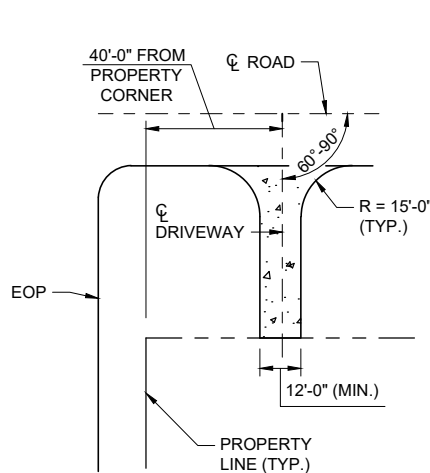
DRAWING NUMBER:
IV-19



COMMERCIAL DRIVEWAY PLAN



RESIDENTIAL DRIVEWAY PLAN - UNPAVED ROADS



RESIDENTIAL DRIVEWAY PLAN - PAVED ROADS

NOTE: RESIDENTIAL DRIVEWAYS SHALL HAVE A MAXIMUM WIDTH OF 20'-0" FOR OPEN DRAINAGE AND 30'-0" FOR CLOSED DRAINAGE.



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SECTION IV - ROADWAY STANDARDS
DRIVEWAY APRON DETAILS

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28 2026

DRAWING NUMBER:
IV-20



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SECTION IV - ROADWAY STANDARDS FRONTAGE ROAD DRIVEWAY SPACING

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
IV-21

PARKING LOT TO FRONTAGE ROAD ACCESS (2 LANE FRONTAGE ROAD)

MAINLINE ROAD

** DISTANCE VARIES DUE TO PARKING LOT LAYOUT

QUEUE LENGTH
(4 @ 25'-0") = 100'-0"

SU
CR

BRAKE DISTANCE
TO STOP = 75'-0"

P
CR

MINIMUM 217'-0" (**)

FRONTAGE ROAD

INTERSECTION DESIGNED PER
SU (SINGLE UNIT TRUCK)

INTERSECTION DESIGNED PER
P (PASSENGER VEHICLE)

PARKING LOT DIMENSIONS PER
CURRENT I.T.E STANDARDS

8'-0" SIDEWALK

8'-0" SIDEWALK

PARKING LOT TO FRONTAGE ROAD ACCESS (3 LANE FRONTAGE ROAD)

MAINLINE ROAD

** DISTANCE VARIES DUE TO PARKING LOT LAYOUT

QUEUE LENGTH
(2 @ 25'-0") = 50'-0"

SU
CR

BRAKE TO STOP
DISTANCE = 75'-0"

P
CR

MINIMUM 167'-0" (**)

FRONTAGE ROAD

INTERSECTION DESIGNED PER
SU (SINGLE UNIT TRUCK)

INTERSECTION DESIGNED PER
P (PASSENGER VEHICLE)

8'-0" SIDEWALK

8'-0" SIDEWALK

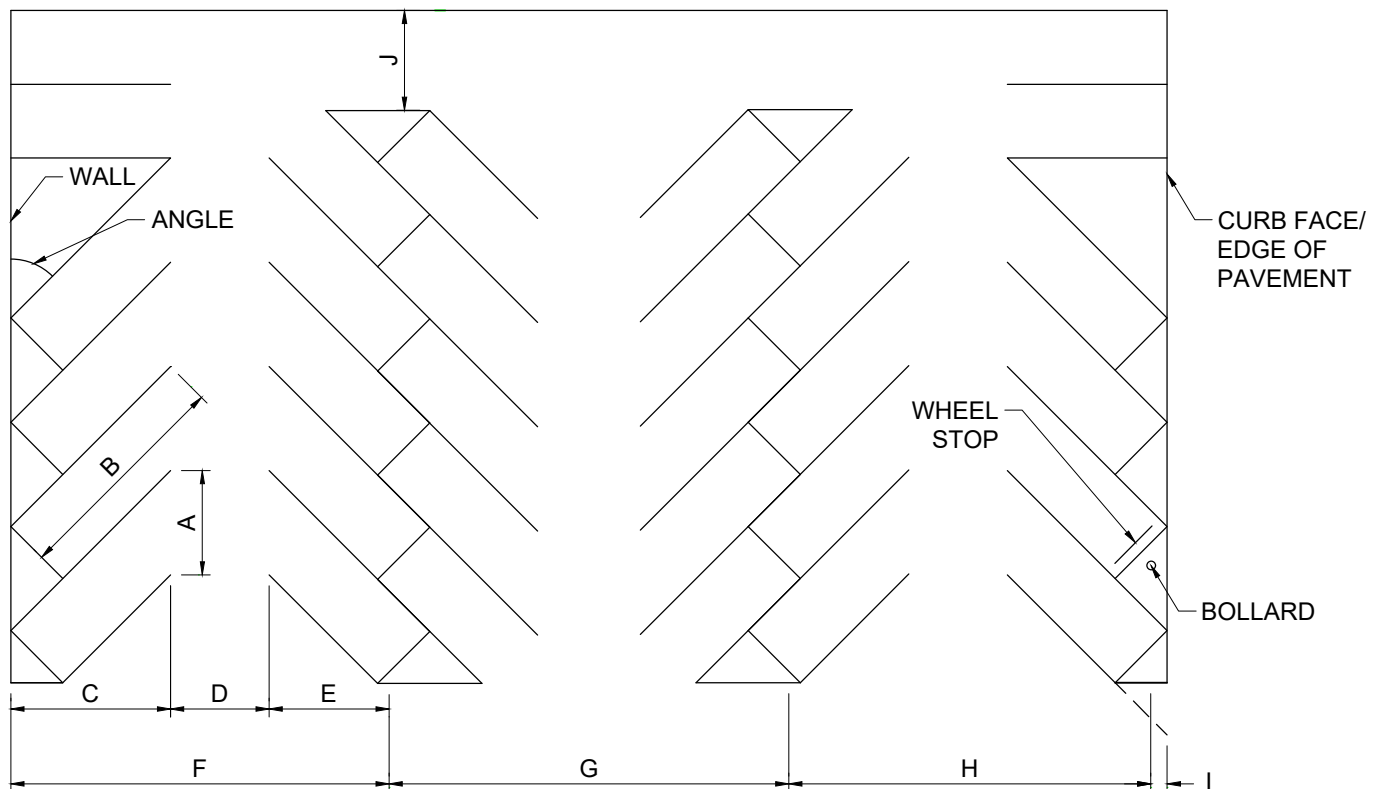
PARKING LOT DIMENSIONS PER
CURRENT I.T.E STANDARDS

DRIVEWAY SPACING DESIGN CRITERIA:

1. SPACINGS SHOWN ARE CENTERLINE TO CENTERLINE OF DRIVEWAY.
2. SU = SINGLE UNIT TRUCK WITH A CONTROL RADIUS (CR) OF 60'-0" (50'-0" MIN.).
3. P = PASSENGER CAR WITH CONTROL RADIUS (CR) OF 50'-0" (40'-0" MIN.).
4. QUEUE LENGTH: TWO-LANE 100'-0" 4 PASSENGER VEHICLES @ 25'-0" EACH.
5. QUEUE LENGTH: THREE LANE 50'-0" 2 PASSENGER VEHICLES @ 25'-0" EACH (PAIRED).
6. MINIMUM DISTANCES SUBJECT TO PROJECT REVIEW.
7. VARIES SPACE DUE TO VARYING ITE DESIGNS, ANGLE OF PARKING, AND DRIVE AISLE WIDTH.

GENERAL NOTES:

1. THE DIMENSIONS LISTED ARE MINIMUMS, AND GREATER DIMENSIONS MAY BE REQUIRED BY THE COUNTY ENGINEER.
2. DUE TO UNIQUE CIRCUMSTANCES, THE SPACING MAY BE REDUCED BY THE COUNTY ENGINEER, IF IT IS DETERMINED SAID VARIANCE IMPROVES TRAFFIC OPERATIONS AND SAFETY.
3. SEE PLANS FOR ROADWAY AND PARKING LOT CONSTRUCTION DIMENSIONS.
4. SEE CURRENT FDOT STANDARD PLANS FOR PAVEMENT MARKING INFORMATION.
5. COUNTY LANDSCAPING REQUIREMENTS NOT DEPICTED.
6. PARKING LAYOUT FOR ILLUSTRATION PURPOSES ONLY.
7. SINGLE COMMERCIAL DEVELOPMENTS MAY BE ENTITLED TO THEIR OWN ENTRANCE. ENTRANCE LOCATION SUBJECT TO THE APPROVAL OF THE COUNTY ENGINEER.
8. REFERENCE FDOT DESIGN MANUAL 212.22 FOR INTERSECTION SIGHT DISTANCE.
9. THERE SHALL BE NO RESIDENTIAL DRIVEWAYS LOCATED ON FRONTAGE OR REVERSE FRONTAGE ROADS.



DIMENSION	ON DIAGRAM	PARALLEL	ANGLE				
		0°	45°	60°	75°	90°	
STALL WIDTH, PARALLEL TO AISLE	A	10.0	12.7	10.4	9.3	9.0	
STALL LENGTH OF LINE	B	22-24	27.5	23.7	20.9	18.5	
STALL DEPTH TO WALL	C	N/A	19.5	20.5	20.0	18.5	
AISLE WIDTH BETWEEN STALL LINES	D	14.0	12.0	16.0	23.0	26.0	
STALL DEPTH, INTERLOCK	E	N/A	16.5	18.5	19.0	18.5	
MODULE, WALL TO INTERLOCK	F	58-62	48.0	55.0	62.0	63.0	
MODULE, INTERLOCKING	G	58-62	45.0	53.0	61.0	63.0	
MODULE, INTERLOCK TO CURB FACE	H	58-62	46.0	52.5	59.5	60.5	
VEHICLE OVERHANG	I	0.0	2.0	2.0	2.0	2.0	
CROSS AISLE, ONE-WAY	J	14.0	14.0	14.0	14.0	14.0	
CROSS AISLE, TWO-WAY	J	24.0	24.0	24.0	24.0	24.0	

NOTES:

1. FOR MORE DETAILED INFORMATION, REFER TO INSTITUTE OF TRANSPORTATION ENGINEERS' TRANSPORTATION AND ENGINEERING HANDBOOK.
2. WHITE STRIPING ON CONCRETE PARKING LOTS MUST BE OUTLINED IN BLACK.
3. WHEEL STOPS SHALL BE USED WHEN PARKING SPACES RUN PERPENDICULAR (OR AT ANGLE) TO SIDEWALK.
4. WHEEL STOPS SHALL BE USED WHEN PARKING SPACES RUN PERPENDICULAR (OR AT AN ANGLE) TO LANDSCAPED AREAS AND DO NOT ADJUT AN UP-RIGHT CURB.
5. WHEEL STOPS SHALL BE PLACED PER "VEHICLE OVERHANG" IN TABLE ABOVE AND BE CENTERED ON THE WIDTH OF THE SPACE.
6. WHEEL STOPS SHALL BE PER FDOT STANDARD PLANS INDEX 520-001.
7. BOLLARDS MAY BE UTILIZED INSTEAD OF WHEEL STOPS. A 2' OFFSET IS REQUIRED, EITHER OUTSIDE OF THE PARKING SPACE OR BY EXTENDING LENGTH TO 20.5'. SEE IV-29 FOR DETAILS.
8. REFER TO HERNANDO COUNTY CODE OF ORDINANCES FOR ADDITIONAL PARKING LOT DESIGN REQUIREMENTS.



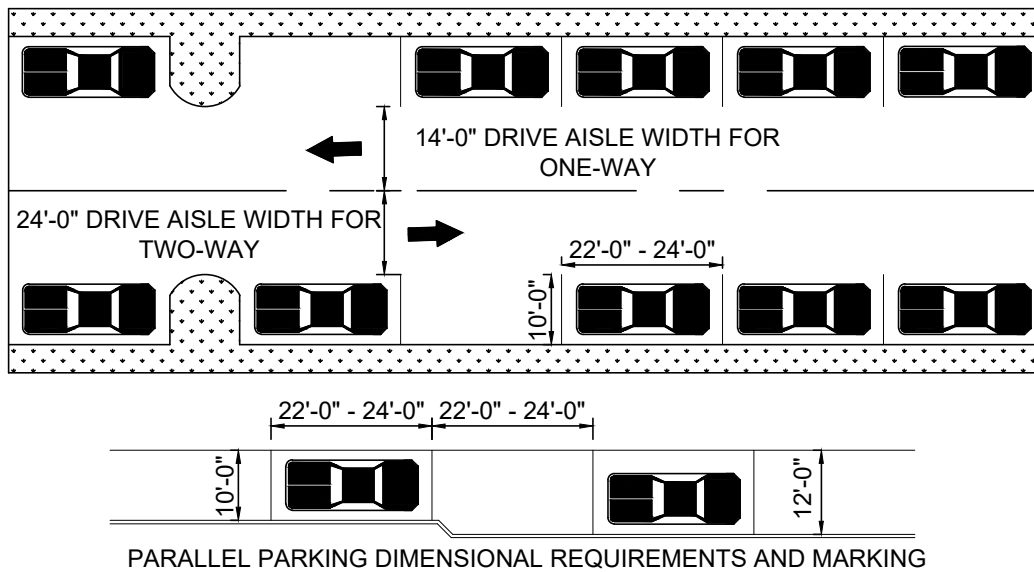
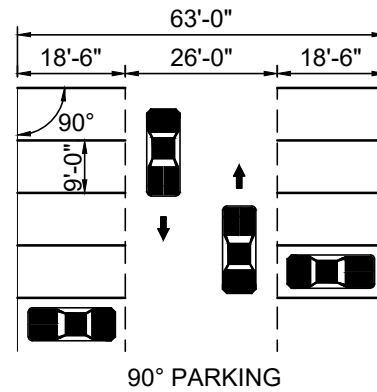
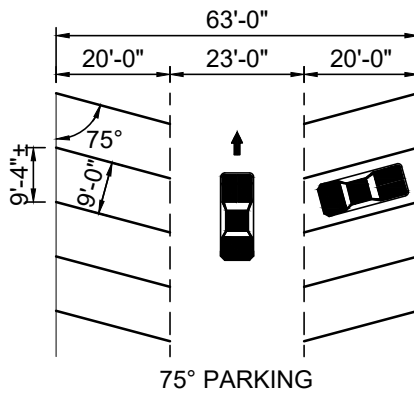
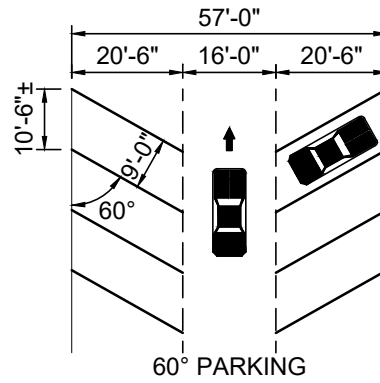
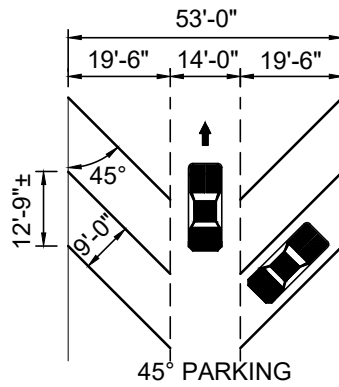
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SECTION IV - ROADWAY STANDARDS PARKING LOT / STALL LAYOUT (1 OF 2)

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
IV-22



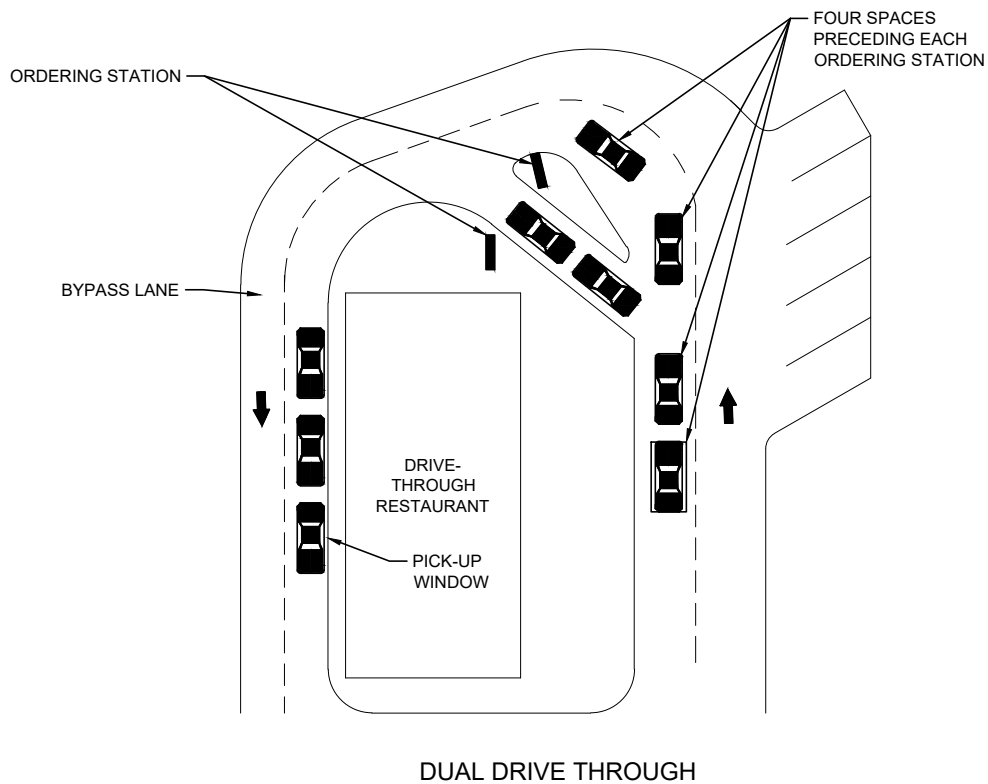
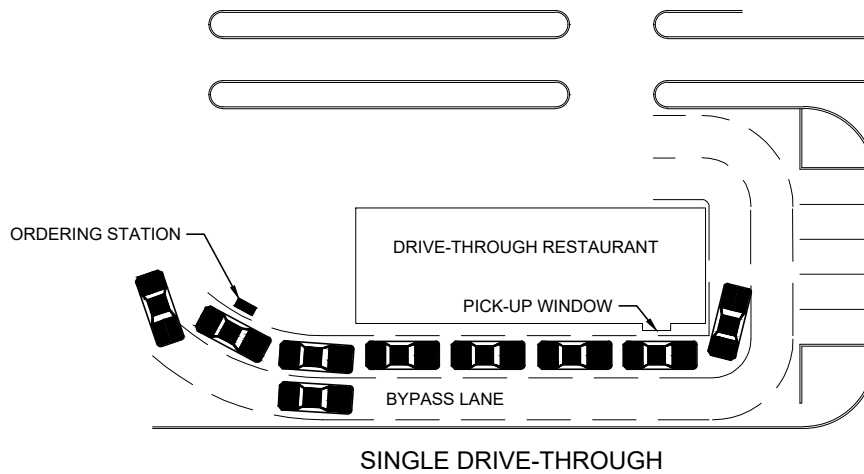
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SECTION IV - ROADWAY STANDARDS PARKING LOT / STALL LAYOUT (2 OF 2)

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
IV-23



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SECTION IV - ROADWAY STANDARDS
 POINT OF SERVICE AND
 QUEUING STANDARDS (1 OF 2)

APPROVED BY:
 J. SCOTT HERRING, P.E.

DATE:
 JULY 28, 2026

DRAWING NUMBER:
 IV-24

MINIMUM QUEUING STANDARDS

USE	NUMBER OF SPACES	REQUIRED BY-PASS (6)
DRIVE-THROUGH FINANCIAL INSTITUTION		
TELLER LINES	6	Y
AUTOMATIC TELLER LINES	6	N
DRIVE-THROUGH RESTAURANT	12	Y
MINIMUM BEFORE MENU BOARD	4	Y
DRIVE THROUGH CAR WASH		
AUTOMATIC	5	N
SELF-SERVICE	3	Y
DRIVE-THROUGH OIL CHANGE	4	Y
DRIVE-THROUGH DRY CLEANING OR LAUNDRY	3	Y
DRIVE-THROUGH GENERAL RETAIL	4	Y
DRIVE-THROUGH GENERAL PHARMACY	4	Y
DRIVE-THROUGH COFFEE SHOP	12	Y
DAY CARE PICK UP/DROP OFF	6	N
COMMERCIAL PARKING LOT	3	N

NOTES:

1. ALL DRIVE-THROUGH ESTABLISHMENTS MUST MEET THESE STANDARDS IN ADDITION TO THE PARKING STANDARD.
2. A POINT OF SERVICE SPACE SHALL BE PROVIDED FOR ALL DRIVE-THROUGH ESTABLISHMENTS. THE DIMENSIONS FOR THE POINT OF SERVICE SPACE SHALL BE A MINIMUM OF TEN BY 25 FEET.
3. QUEUING SHALL BE PROVIDED FOR THE DRIVE-THROUGH ESTABLISHMENTS DESCRIBED IN THE IN THE TABLE ABOVE, CLEARLY DEFINED AND DESIGNED SO AS NOT TO CONFLICT OR INTERFERE WITH OTHER TRAFFIC USING THE SITE. UNLESS OTHERWISE INDICATED BELOW, QUEUING SHALL BE MEASURED FROM THE FRONT OF THE STOPPED VEHICLE LOCATED AT THE POINT OF SERVICE TO THE REAR OF THE QUEUING LANE. ONE ADDITIONAL QUEUING SPACE SHALL ALSO BE PROVIDED AFTER THE POINT OF SERVICE FOR ALL USES.
4. A BY-PASS LANE A MINIMUM OF TEN FEET WIDE SHALL BE PROVIDED BEFORE OR AROUND THE POINT OF SERVICE. SUBJECT TO THE COUNTY ENGINEER'S APPROVAL, A BY-PASS LANE MAY NOT BE REQUIRED IF THE QUEUING LANE IS ADJACENT TO A VEHICULAR USE AREA WHICH FUNCTIONS AS A BY-PASS LANE. THE BY-PASS LANE SHALL BE CLEARLY DESIGNATED AND DISTINCT FROM THE QUEUING AREA.
5. THE ALLOWANCE FOR DUAL DRIVE-THROUGH LANES CONVERGING TO A SINGLE LANE WITH FOUR SPACES PRECEDING EACH MENU BOARD IS CONSISTENT WITH THE QUEUING REQUIREMENTS.
6. ALL USES: A BY-PASS LANE SHALL BE REQUIRED IF MORE THAN FIVE QUEUING SPACES ARE PROVIDED.



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SECTION IV - ROADWAY STANDARDS POINT OF SERVICE AND QUEUING STANDARDS (2 OF 2)

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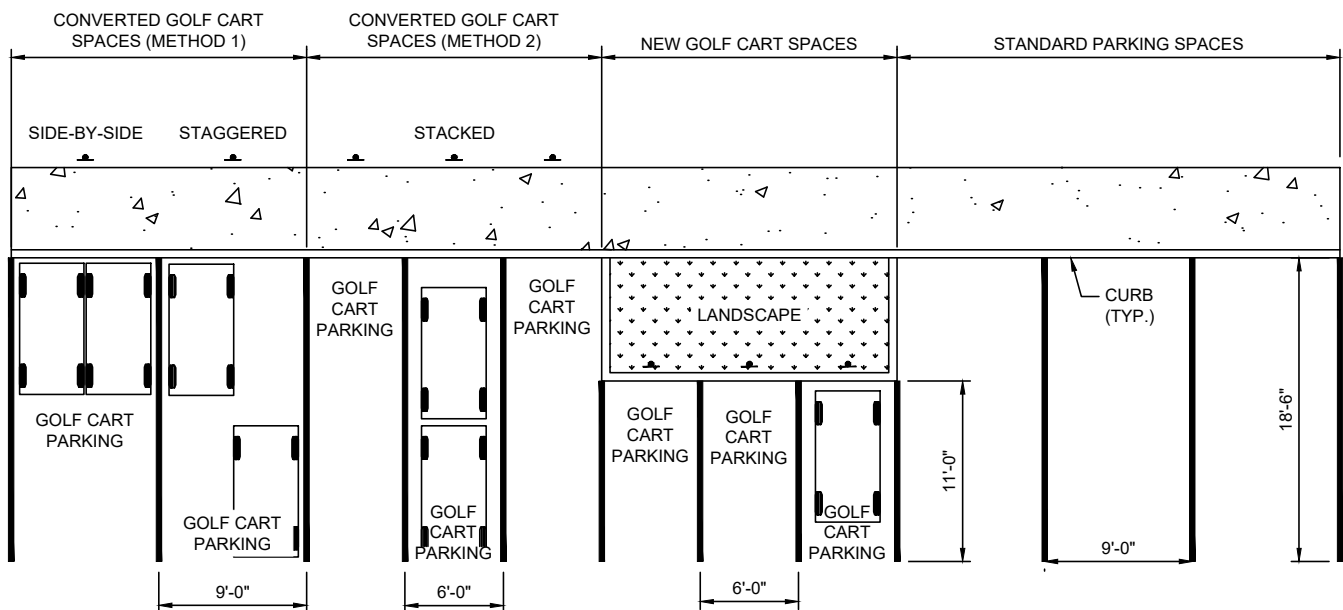
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IV-25



GOLF CART PARKING SIGN DETAIL

24" x 30"
GREEN SIGN ON WHITE BACKGROUND
SIGN HEIGHT MIN. 7'-0" / MAX. 8'-0"



TYPICAL GOLF CART PARKING LAYOUT OPTIONS

NOTES:

1. WHEN DESIGNATED GOLF CART SPACES ARE NOT AVAILABLE, GOLF CARTS SHOULD BE PARKED SIDE BY SIDE OR IN A MANNER THAT TWO (2) GOLF CARTS CAN FIT WITHIN A VEHICLE PARKING SPACE. DISABLED ACCESSIBLE PARKING SPACES MAY BE USED IN THE SAME MANNER AS LONG AS THE CART COMPLIES WITH THE LAW FOR USE OF THESE SPACES.
2. THE MINIMUM DIMENSIONS FOR A GOLF CART PARKING SPACE SHALL BE SIX (6) FEET WIDE BY ELEVEN (11) FEET IN LENGTH.
3. WHERE GOLF CART PARKING SPACES ARE SITUATED TO BE FLUSH WITH ADJACENT SIDEWALK, WHEEL STOPS SHALL BE INSTALLED AT EACH GOLF CART SPACE.
4. A GOLF CART PAVEMENT SYMBOL MAY BE REQUIRED AT THE COUNTY ENGINEER'S DISCRETION IN SPACES UTILIZING METHOD 1. THE SYMBOL SHALL BE 2'-4" TO 5'-0" HIGH AND WHITE IN COLOR.



OPTIONAL GOLF CART
PAVEMENT SYMBOL



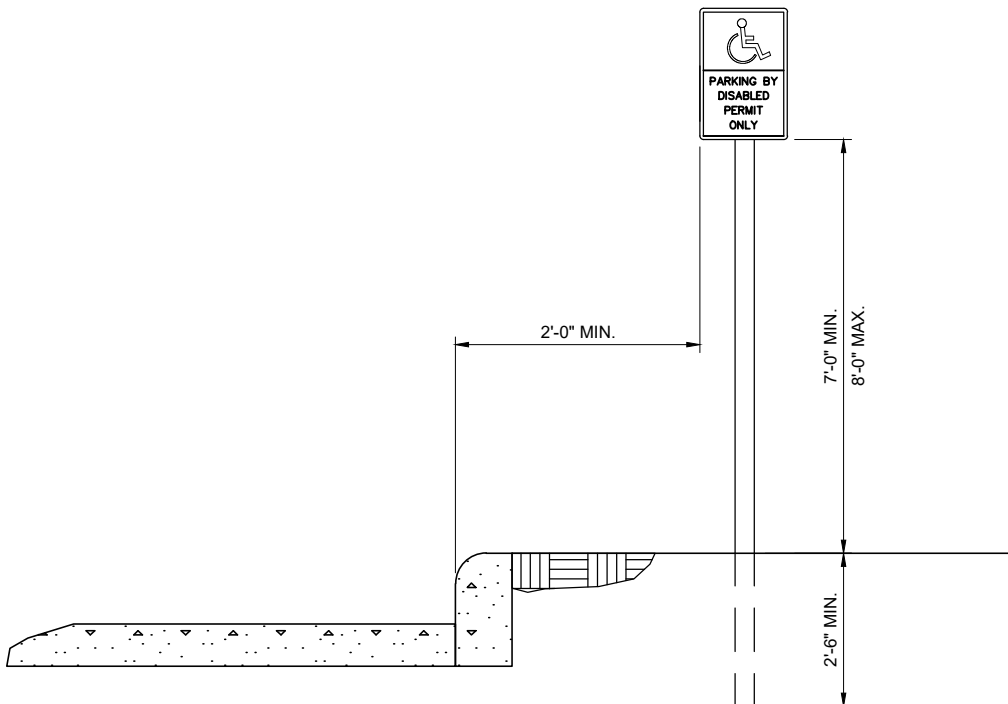
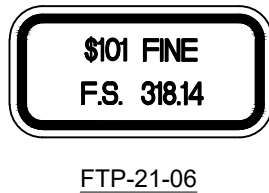
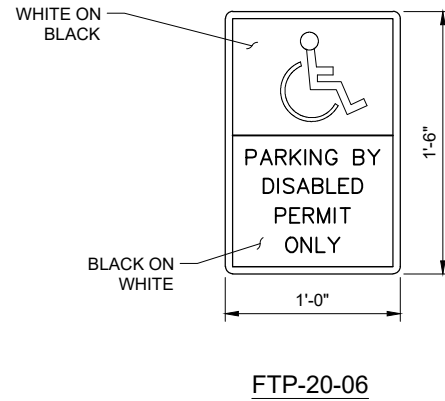
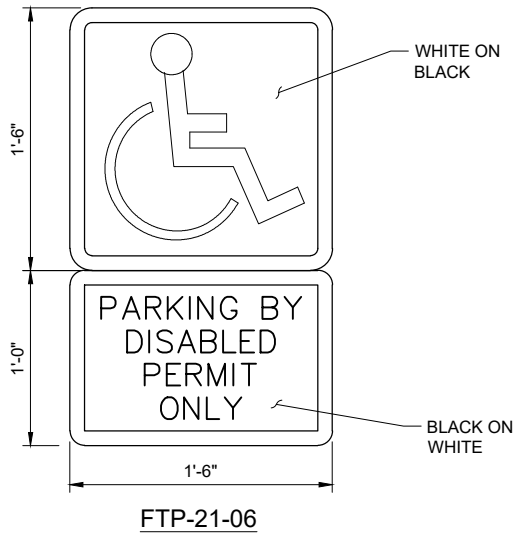
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SECTION IV - ROADWAY STANDARDS GOLF CART PARKING DETAILS

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DRAWING NUMBER:
IV-26



NOTES:

1. PENALTY FOR ILLEGALLY PARKING IN A DISABLED PARKING SPACE IS \$101 PER HERNANDO COUNTY ORDINANCES.
2. DISABLED PARKING SIGN(S) MAY BE AFFIXED ON PERMANENT STRUCTURES IN LIEU OF INSTALLING ON POLES.
3. REFER TO CURRENT FDOT STANDARD PLANS FOR OTHER PARKING DETAILS.



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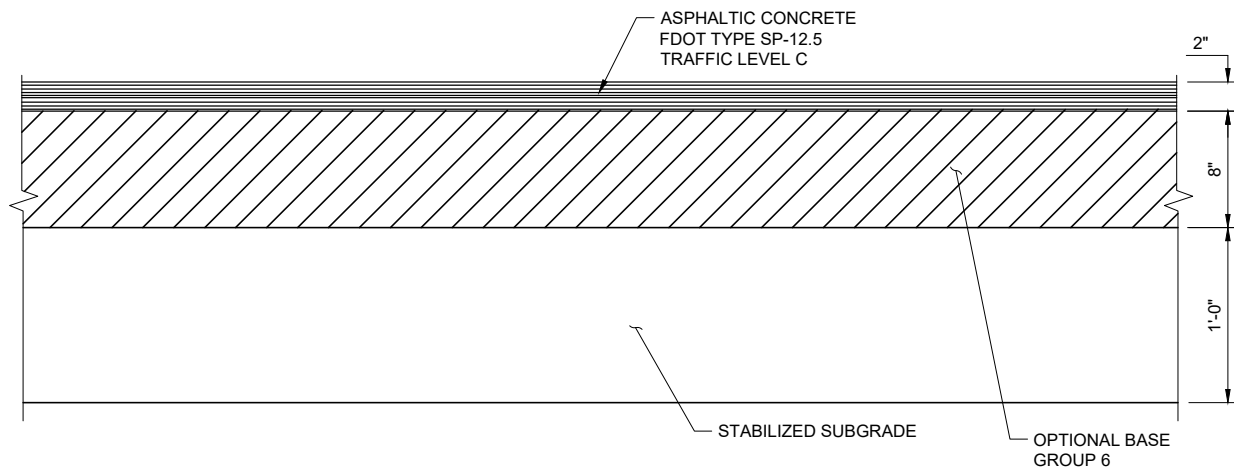
SECTION IV - ROADWAY STANDARDS

DISABLED PARKING SIGNAGE

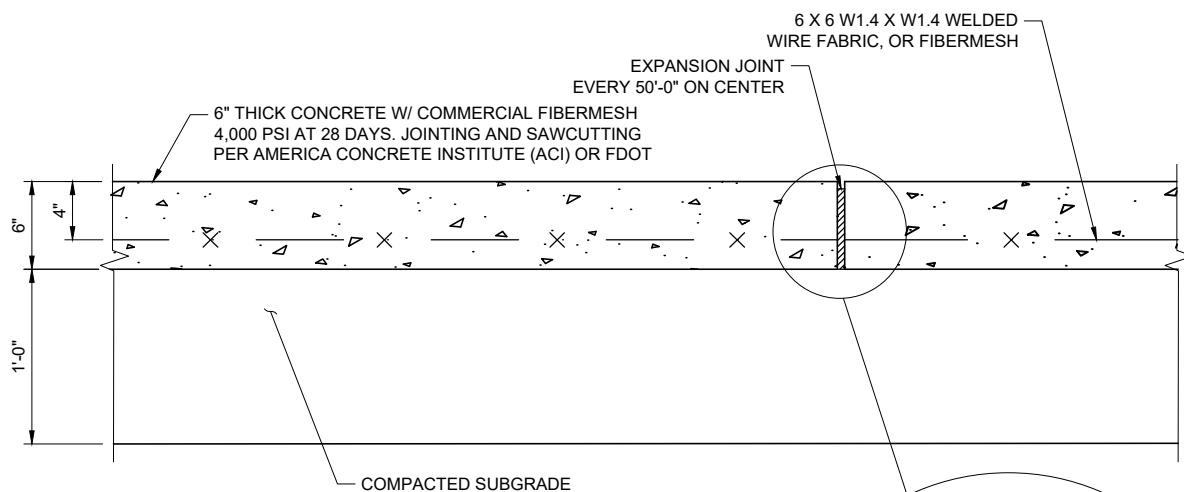
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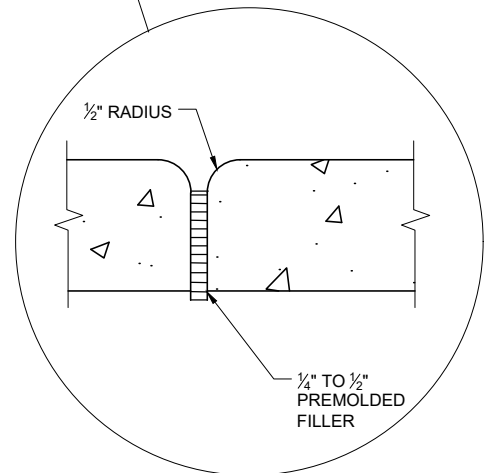
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 IV-27



COMMERCIAL PARKING LOT-FLEXIBLE PAVEMENT



COMMERCIAL PARKING LOT-
RIGID PAVEMENT



EXPANSION JOINT

NOTES:

1. ALL BASE AND ASPHALT THICKNESSES ARE A MINIMUM.
2. ASPHALT BASE COMPACTION TO MEET 98% UNDER AASHTO T-180.
3. ASPHALT-STABILIZED SUBGRADE COMPACTION TO LBR 40 (MIN.) 98% DENSITY PER AASHTO T-180, MEASURED AT SURFACE.
4. CONCRETE - COMPACTED SUBGRADE COMPACTION TO A MINIMUM OF 98% MAX DRY DENSITY PER MODIFIED PROCTOR TEST, AND WITHIN 3% OF ITS OPTIMUM MOISTURE CONTENT. SUBGRADE TO ACHIEVE A MINIMUM LBR OF 40. MATERIALS MAY CONSIST OF FREE-DRAINING AGGREGATES AND MAY INCLUDE CRUSHED CONCRETE. LIMEROCK, CLAYS AND SILTS ARE NOT CONSIDERED FREE-DRAINING AND SHOULD BE AVOIDED.



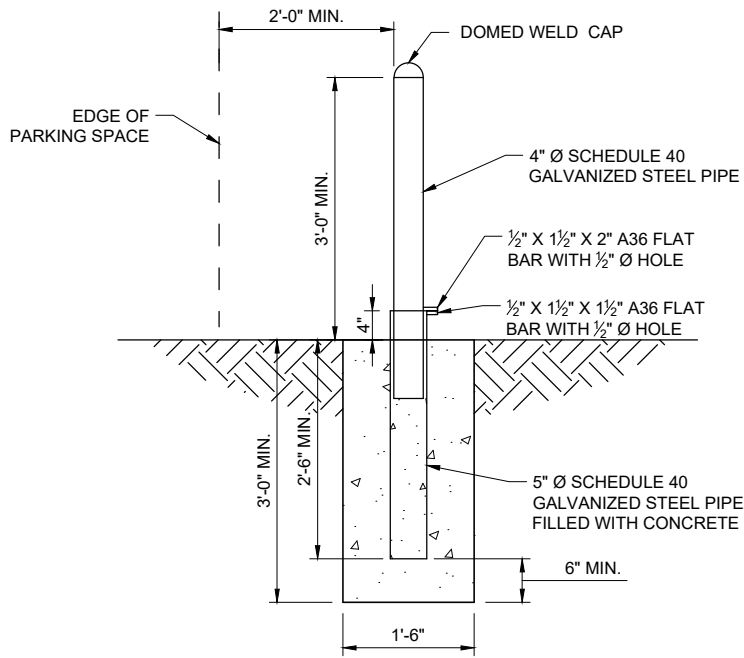
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SECTION IV - ROADWAY STANDARDS
ASPHALT / CONCRETE PARKING

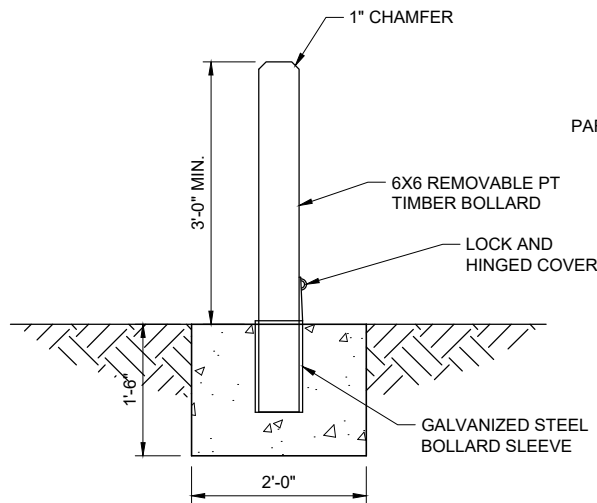
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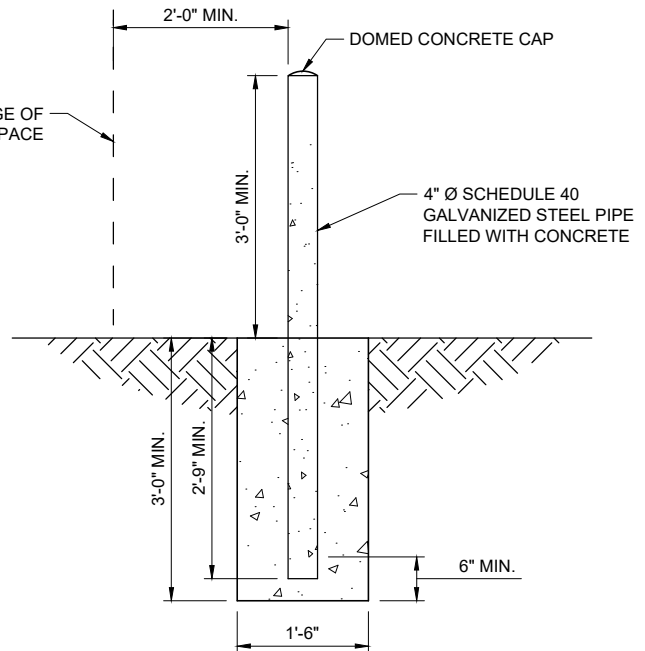
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IV-28



REMOVABLE BOLLARD - STEEL PIPE



REMOVABLE BOLLARD - TIMBER



PERMANENT BOLLARD - STEEL PIPE

NOTES:

1. BOLLARD FOUNDATIONS SHALL BE CONSTRUCTED OF 3,000 PSI CONCRETE. THE BOLLARD SHALL BE CENTERED ON THE FOUNDATION.
2. THE BOLLARDS SHOWN ARE NOT RATED TO RESIST VEHICULAR COLLISION FORCES. PROVIDE AN ALTERNATIVE BOLLARD DESIGN IN INSTANCES WHERE SITE CONDITIONS REQUIRE THE BOLLARDS TO RESIST VEHICULAR COLLISION FORCES.
3. IF BOLLARD IS PLACED IN LIEU OF WHEEL STOP, PARKING SPACE MUST BE 20 FEET IN LENGTH.



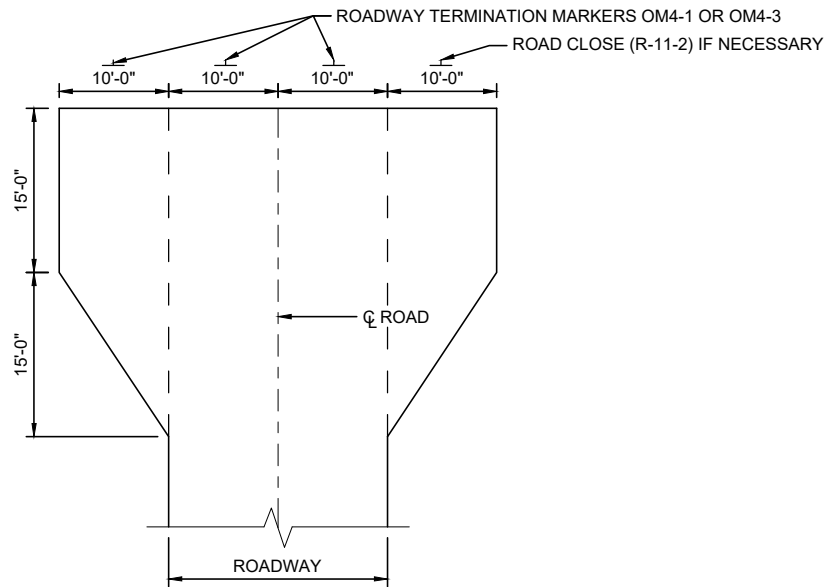
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SECTION IV - ROADWAY STANDARDS
BOLLARD DETAILS

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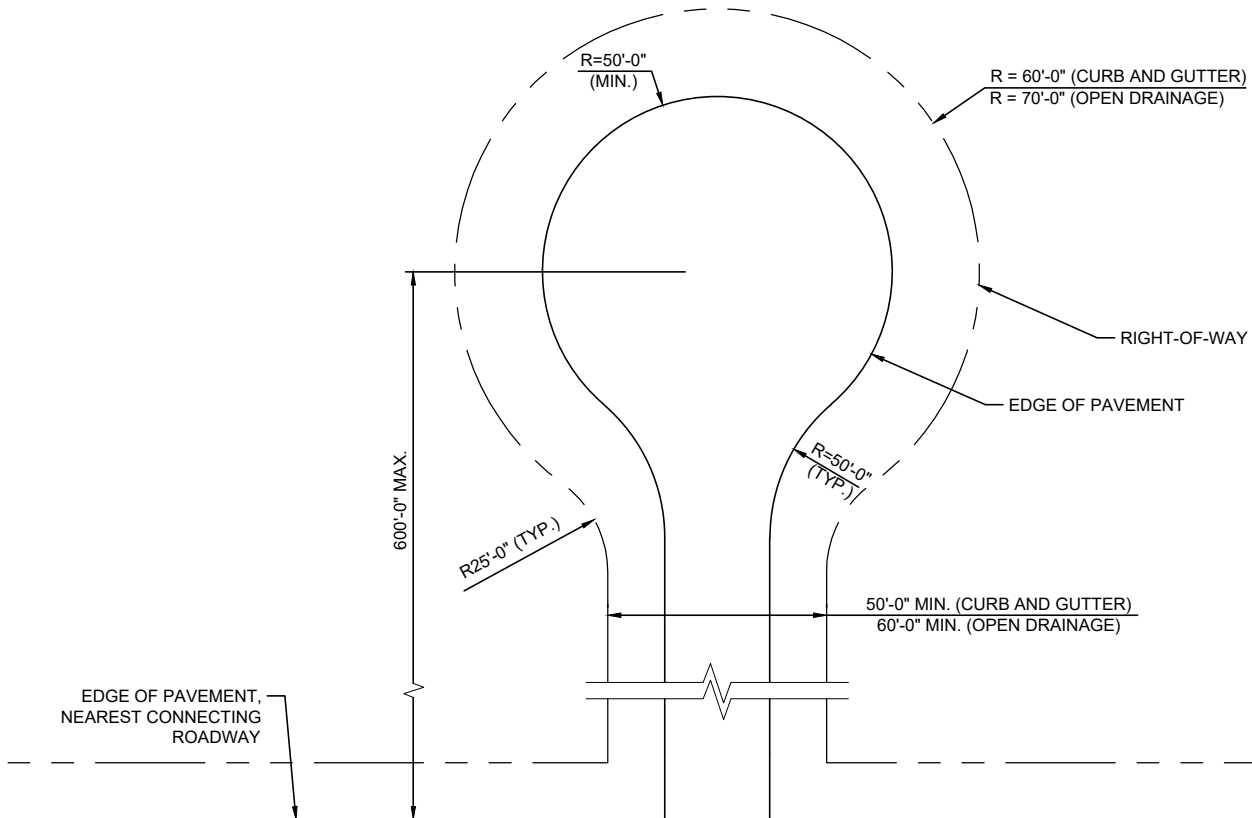
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IV-29



HAMMERHEAD TURNAROUND

HAMMERHEAD TURNAROUND NOTES:

1. TURN AROUNDS SHALL BE CONSTRUCTED PER THE SAME SECTION DIMENSIONS AS THE ROADWAY ON WHICH THEY ARE CONSTRUCTED.
2. DRAINAGE AROUND THE WINGS SHALL BE ADDRESSED ON A SITE-SPECIFIC BASIS.
3. ROADWAY TERMINATION MARKERS AND "NO OUTLET" SIGNAGE MAY BE REQUIRED.



CUL-DE-SAC DETAIL



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SECTION IV - ROADWAY STANDARDS
TURNAROUND DETAILS

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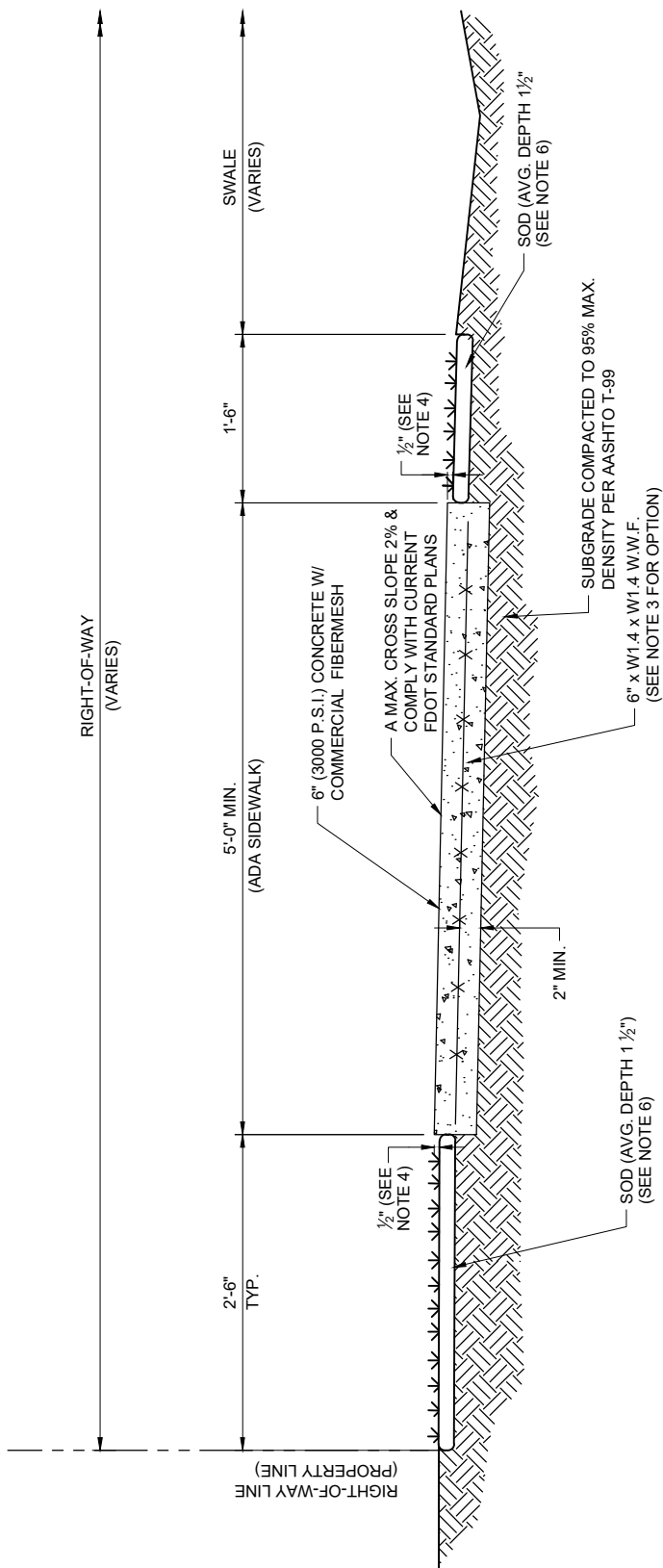
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SECTION IV - ROADWAY STANDARDS ADA STANDARD SIDEWALK

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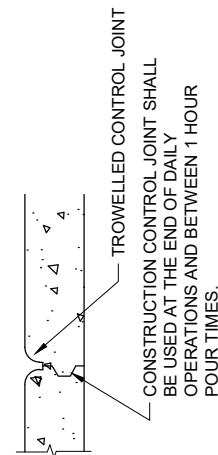
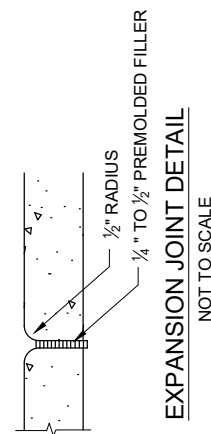
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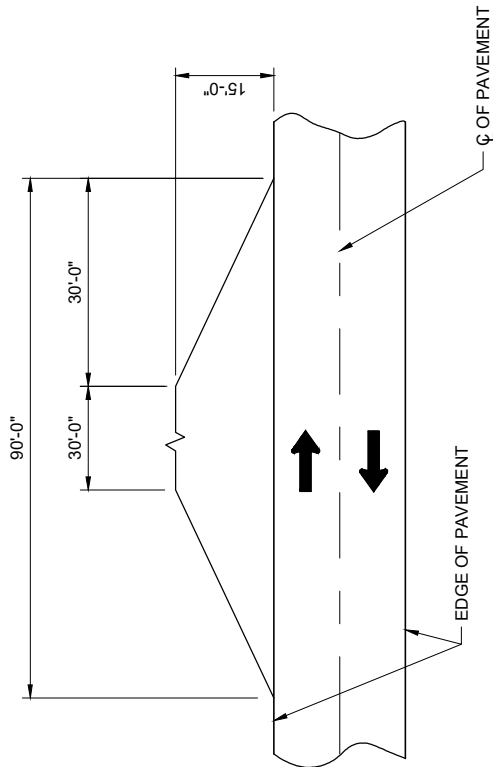
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NOTES :

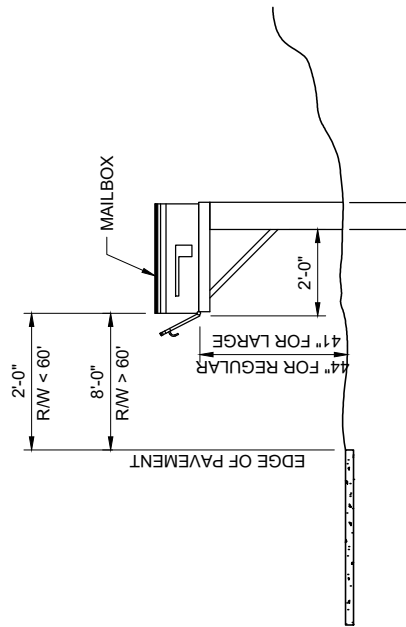
1. 1" DEEP EXPANSION JOINT NEEDED EVERY 50', TROWELLED CONTROL JOINT NEEDED EVERY 5'.
2. AT CONTRACTORS DISCRETION, IN LIEU OF TROWELLED CONTROL JOINTS, SAW CUTTING JOINTS WILL BE ALLOWED AND BE 1" DEEP.
3. IN LIEU OF WIRE WOVEN FABRIC, THE CONTRACTOR MAY USE CONCRETE REINFORCED WITH COMMERCIAL FIBERMESH AS AN ACCEPTABLE ALTERNATE.
4. SPECIAL ATTENTION SHALL BE GIVEN TO THE GRADED SOD PLACEMENT TRENCH. THE GRADING BY THE CONTRACTOR SHALL PROVIDE A 1/2" DROP FROM THE SIDEWALK TO THE TOP OF THE SOD.
5. SIDEWALKS ABUTTING DRAINAGE STRUCTURES SHALL BE LEVEL WITH THE TOP OF THE STRUCTURE.
6. IF AREA CANNOT BE SODDED, SIDEWALK TO BE 6'-0" WIDE PER THE FLORIDA GREENBOOK.
7. CONTRACTOR WILL USE DUST CONTROL MEASURES DURING SAW CUTTING OF CONCRETE.





CONGLOMERATE MAIL BOXES

1. TO BE PLACED AT LEAST 200 FEET FROM NEAREST INTERSECTION.
2. CAN NOT BE INCLUDED AS A PART OF A DRIVEWAY.
3. CAN NOT BE PLACED IN A RESIDENTIAL NEIGHBORHOODS.



MAIL BOX INSTALLATION

1. WOOD SUPPORTS SHOULD NOT EXCEED 5" IN DIAMETER, IF ROUND, OR SHOULD NOT HAVE NORMAL DIMENSIONS GREATER THAN 4"x4".
2. METAL SUPPORTS IN SMALL DIAMETER PIPES OR LIGHT WEIGHT FENCE POSTS MAY BE USED BUT MAY NOT HAVE A NOMINAL INSIDE DIAMETER GREATER THAN 1 1/2".
3. HEAVY METAL POSTS, CONCRETE, AND OTHER MISCELLANEOUS EQUIPMENT SHALL NOT BE USED.
4. SEE CURRENT FDOT STANDARD PLANS AND FDOT GREENBOOK FOR MAILBOX DETAILS AND LOCATIONS ON CURB ROADWAYS.
5. CONSTRUCTION AND INSTALLATION SHALL CONFORM TO (OR WITH) THE REQUIREMENTS OF THE U.S. POSTAL SERVICE, THE FLORIDA DEPARTMENT OF TRANSPORTATION AND HERNANDO COUNTY.



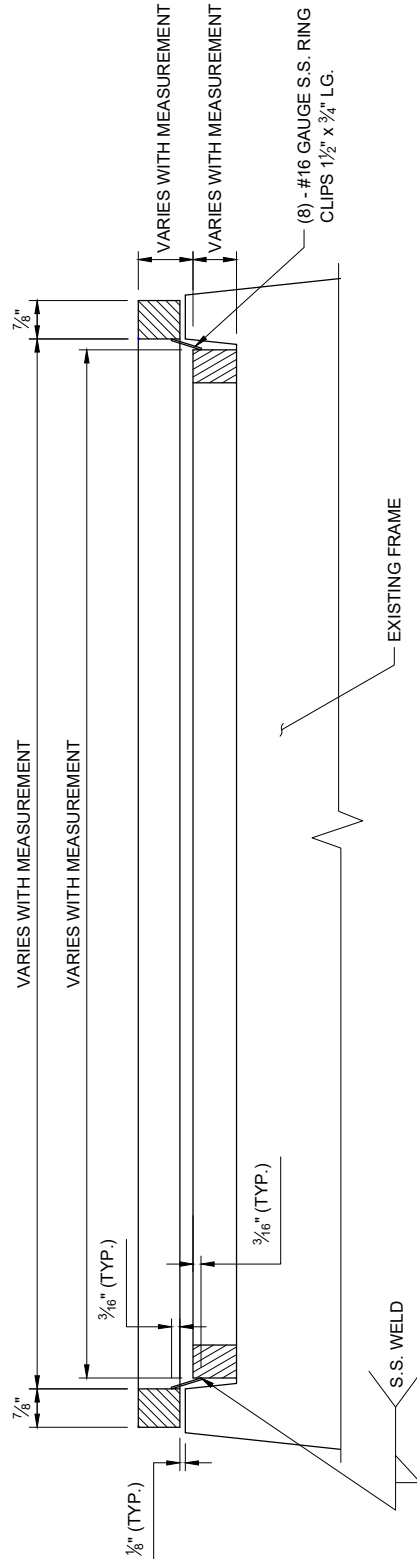
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SECTION IV - ROADWAY STANDARDS MAILBOXES

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IV-32



MANHOLE RISER RING SECTION

- NOTES:
1. RINGS SHALL BE HOT-DIP GALVANIZED STEEL.
 2. CONTRACTOR MUST MEASURE EACH MANHOLING AND COVER TO ORDER THE CORRECT SIZE.



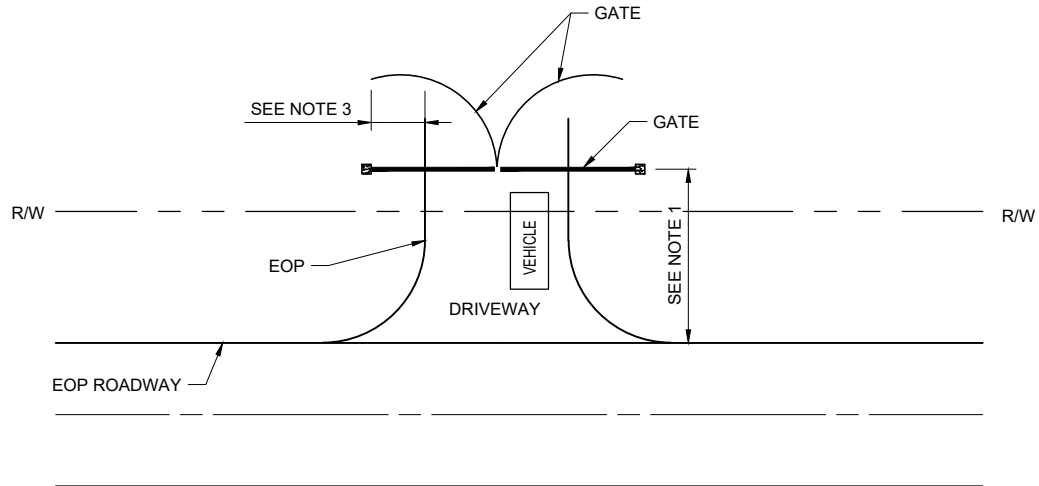
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SECTION IV - ROADWAY STANDARDS MANHOLE RISER RINGS

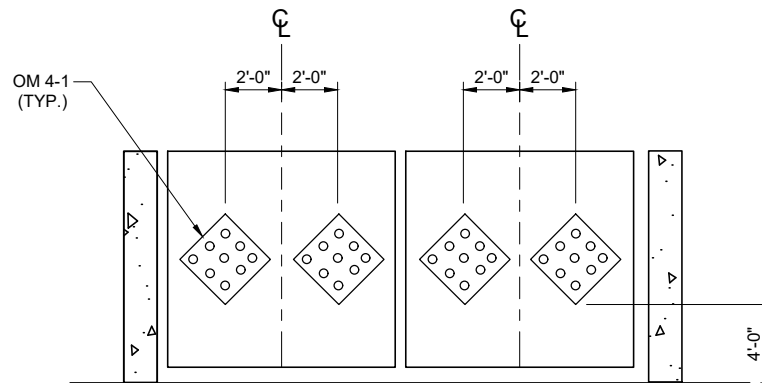
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GATE LOCATION



GATES WITH OM4-1 OR OM4-3

NOTES:

1. GATES SHALL BE SET BACK FROM THE CLOSEST EDGE OF PAVEMENT 1.5 TIMES THE LENGTH OF THE LONGEST PROPOSED VEHICLE TO REGULARLY USE THE GATE, OR DEPENDENT ON THE TRAFFIC STUDY, IF ONE WAS DONE.
2. GATES SHALL OPEN INWARD ONTO PRIVATE PROPERTY, NOT TOWARDS THE ROADWAY.
3. THE CURRENT FDOT MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN AND MAINTENANCE FOR STREETS AND HIGHWAYS (THE FLORIDA GREENBOOK), GOVERNS THE GATE FEATURE PHYSICAL LOCATIONS. NO PORTION OF THE GATE SUPPORTS SHALL BE CLOSER THAN 6'-0" FROM THE EDGE OF PAVEMENT, OR 18" FROM THE BACK OF CURB, IF A 6" UPRIGHT CURB. CURBING MUST BE 50'-0" ON ENTRANCE SIDE AND 10'-0" ON EXIT SIDE OF GATE.
4. THE CLEAR SITE TRIANGLE IS GOVERNED BY CURRENT FDOT INDEX 546 FOR ANY OBJECT INSTALLATION.
5. THE MINIMUM RADII FOR THE TURN AROUND IN FRONT OF THE GATES SHALL ACCOMMODATE A SU CLASS VEHICLE, IF REQUIRED.
6. TWO (2) RED OBJECT MARKERS, OM4-1 OR OM4-3 SHALL BE INSTALLED 4'-0" ON CENTER, 4'-0" ABOVE PAVEMENT GRADE ON THE FRONT AND BACK OF EACH GATE.
7. ADDITIONAL SIGNAGE AND PAVEMENT MARKINGS MAY BE REQUIRED.



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SECTION IV - ROADWAY STANDARDS GATE LOCATIONS

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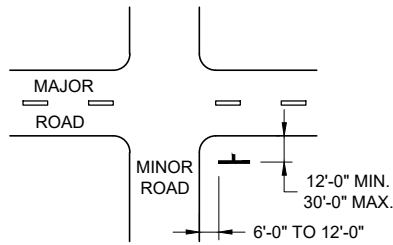
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SECTION V

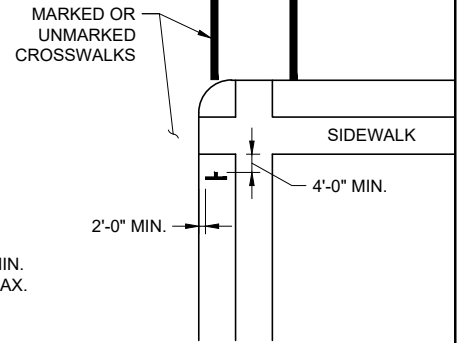
TRAFFIC CONTROL STANDARDS



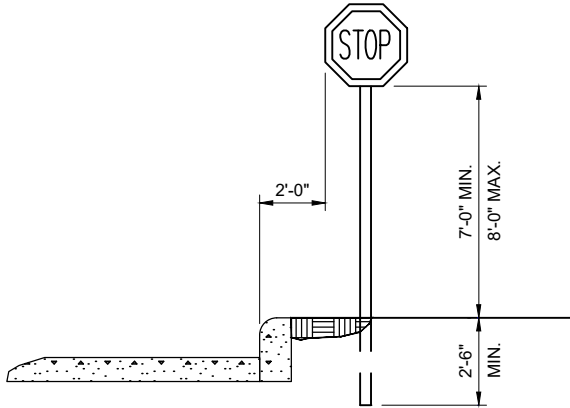
**** MATERIAL NOTES ****
 "STOP" (R1-1) AND "YIELD" (R2-1) SIGNS SHALL FOLLOW TABLE 2B-1 AND GUIDELINES IN MUTCD FOR SIZE.



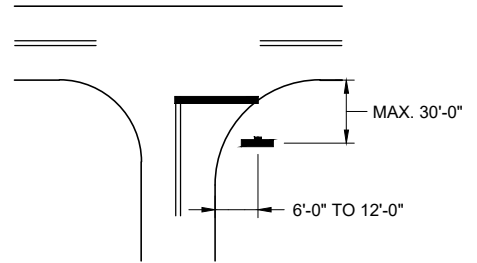
MINOR CROSSROAD



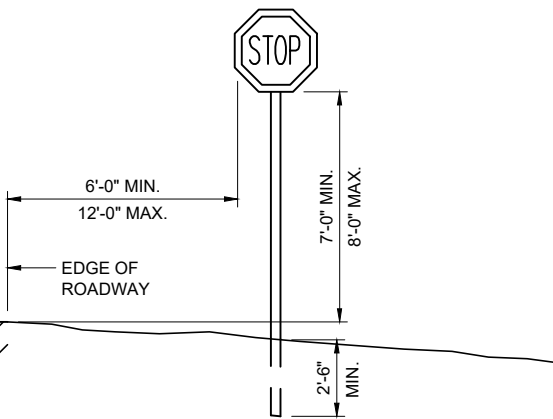
URBAN INTERSECTION



URBAN TYPICAL



WIDE THROAT INTERSECTION



RURAL TYPICAL

LOCATION OF STOP AND YIELD SIGNS

A STOP SIGN SHOULD BE ERECTED AT THE POINT WHERE THE VEHICLE IS TO STOP, OR AS NEAR THERETO AS POSSIBLE, AND MAY BE SUPPLEMENTED WITH A STOP LINE AND/OR THE WORD "STOP" ON THE PAVEMENT. A YIELD SIGN SHOULD BE ERECTED IN THE SAME MANNER. WHERE ONLY ONE SIGN, STOP OR YIELD, IS USED, IT SHALL BE ON THE RIGHT-HAND SIDE OF THE TRAFFIC LANE TO WHICH IT APPLIES. AT THE INTERSECTION WHERE A WIDE THROAT EXISTS ON THE SIGNED APPROACH, OBSERVANCE OF THE SIGN MAY BE IMPROVED BY THE ERECTION OF AN ADDITIONAL SIGN ON THE LEFT PLACED WHERE IT IS VISIBLE TO TRAFFIC IN THE INNER LANE. AT CERTAIN CHANNELIZED INTERSECTIONS, THE ADDITIONAL SIGNS MAY BE EFFECTIVELY PLACED ON A CHANNELIZED ISLAND. IN NO INSTANCE SHALL A STOP OR YIELD SIGN BE MOUNTED ABOVE ANOTHER SIGN ON THE SAME POST.

WHERE TWO ROADS INTERSECT AT AN ACUTE ANGLE, THE STOP OR YIELD SIGN SHOULD BE POSITIONED AT AN ANGLE OR SHIELDED SO THAT THE MESSAGE IS VISIBLE FROM THE APPROPRIATE APPROACH.

ALL SIGNS SHALL BE TYPE III-A, HIGH PERFORMANCE SHEETING, WHICH CONSISTS OF ENCAPSULATED SPHERICAL LENS ELEMENTS



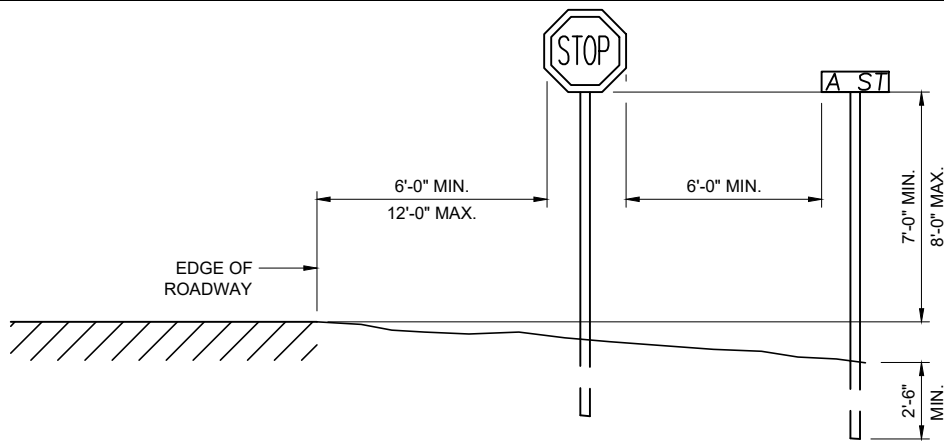
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SECTION V - TRAFFIC CONTROL STOP/YIELD SIGNAGE

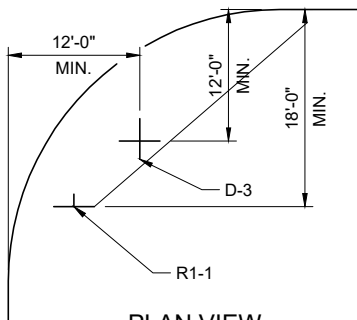
APPROVED BY:
 J. SCOTT HERRING, P.E.

DATE:
 JULY 28, 2026

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 V-01



RURAL TYPICAL



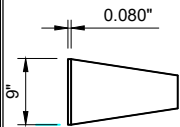
PLAN VIEW



1" SERIES "B"
ALL UPPER
CASE, SPACED
TO FIT.

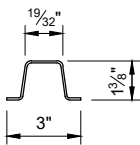
THIS SIGN SHALL BE USED ON A PRIVATE ROAD WHERE IT MEETS A PUBLIC ROAD.

STANDARD HERNANDO COUNTY DPW MATERIALS



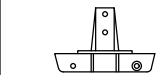
FLAT ALUMINUM BLADE

FLAT BLADES OF 5052-H38 ALUMINUM ALLOY HAVE A .080 THICKNESS, WITH 3/4" RADIUS CORNERS AND ALADINE FINISH.



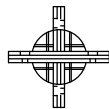
FLANGED CHANNEL
SIGN POSTS (STEEL)

LENGTH	WEIGHT PER FT.	FINISH
6'-0"	1.5 LB.	GALVANIZED
10'-0"	2.0 LB.	GALVANIZED
12'-0"	2.0 LB.	GALVANIZED
14'-0"	2.5 LB.	GALVANIZED
16'-0"	3.0 LB.	GALVANIZED

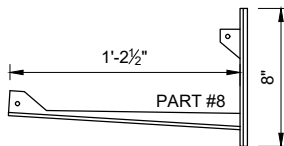


SUPR-LOK PRUF BRACKETS

FOR FLAT ALUMINUM
LENGTH OF SLOT: 5 3/8"
WIDTH OF SLOTS: 3/16"
SUPR-LOK PRUF 91-U-F FOR
ALL U POSTS.



SUPR-LOK PRUF 990 F



METRO-WING BRACKET #8

NOTES:

1. STREET NAMES SHALL BE CONFIRMED BY THE HERNANDO COUNTY ADDRESSING DEPARTMENT.
2. STREET NAME SIGNS SHOULD BE INSTALLED AT EVERY INTERSECTION WITH A MINIMUM OF ONE SIGN FOR EACH STREET NAME. ALONG MULTI-LANE ROADWAYS, STREET NAME SIGNS SHOULD BE PLACED AT LEAST ON DIAGONALLY OPPOSITE CORNERS SO THEY WILL BE ON THE FAR RIGHT SIDE OF THE INTERSECTION FOR TRAFFIC ON THE MAJOR STREET.
3. STREET NAME SIGNS SHALL BE INSTALLED ON THEIR OWN SEPARATE POST, AT A HEIGHT OF 7' FROM THE BOTTOM OF THE SIGN PANEL TO PAVEMENT GRADE.
4. STREET NAME SIGNS SHOULD HAVE A WHITE LEGEND ON A GREEN BACKGROUND, AND THE BORDER, IF USED, SHOULD BE THE SAME AS THE LEGEND.
5. STREET NAME SIGNS SHALL BE TYPE-III HIGH PERFORMANCE SHEETING WHICH CONSISTS OF ENCAPSULATED SPHERICAL LENS ELEMENTS.
6. STREET NAME BLADES SHOULD BE .080" X 9" X LENGTH NECESSARY.
7. LETTERING SHALL BE MINIMUM 6" UPPER-CASE WITH 4.5" LOWER-CASE LETTERS, ALL SERIES "B".

STANDARD ACCEPTED ABBREVIATIONS ARE:

DRIVE-DR	COURT-CT	PARKWAY-PKWKY
ROAD-RD	JUNCTION-JCT	AVENUE-AVE
CIRCLE-CIR	TERRACE-TER	BOULEVARD-BLVD
LOOP-LOOP	PLACE-PL	
STREET-ST	WAY-WAY	
LANE-LN	TRAIL-TRL	



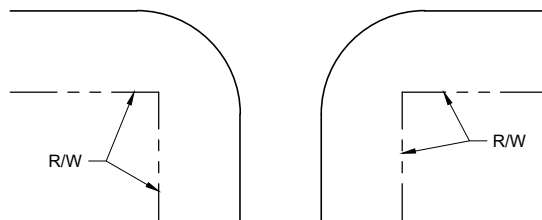
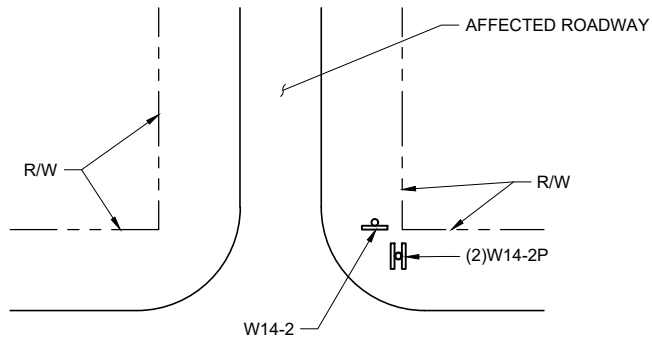
HERNANDO COUNTY
DEPARTMENT OF PUBLIC WORKS - ENGINEERING DIVISION
1525 East Jefferson Street
Brooksville, FL 34601-2807
(352) 754-4062

SECTION V - TRAFFIC CONTROL STREET NAME SIGNAGE

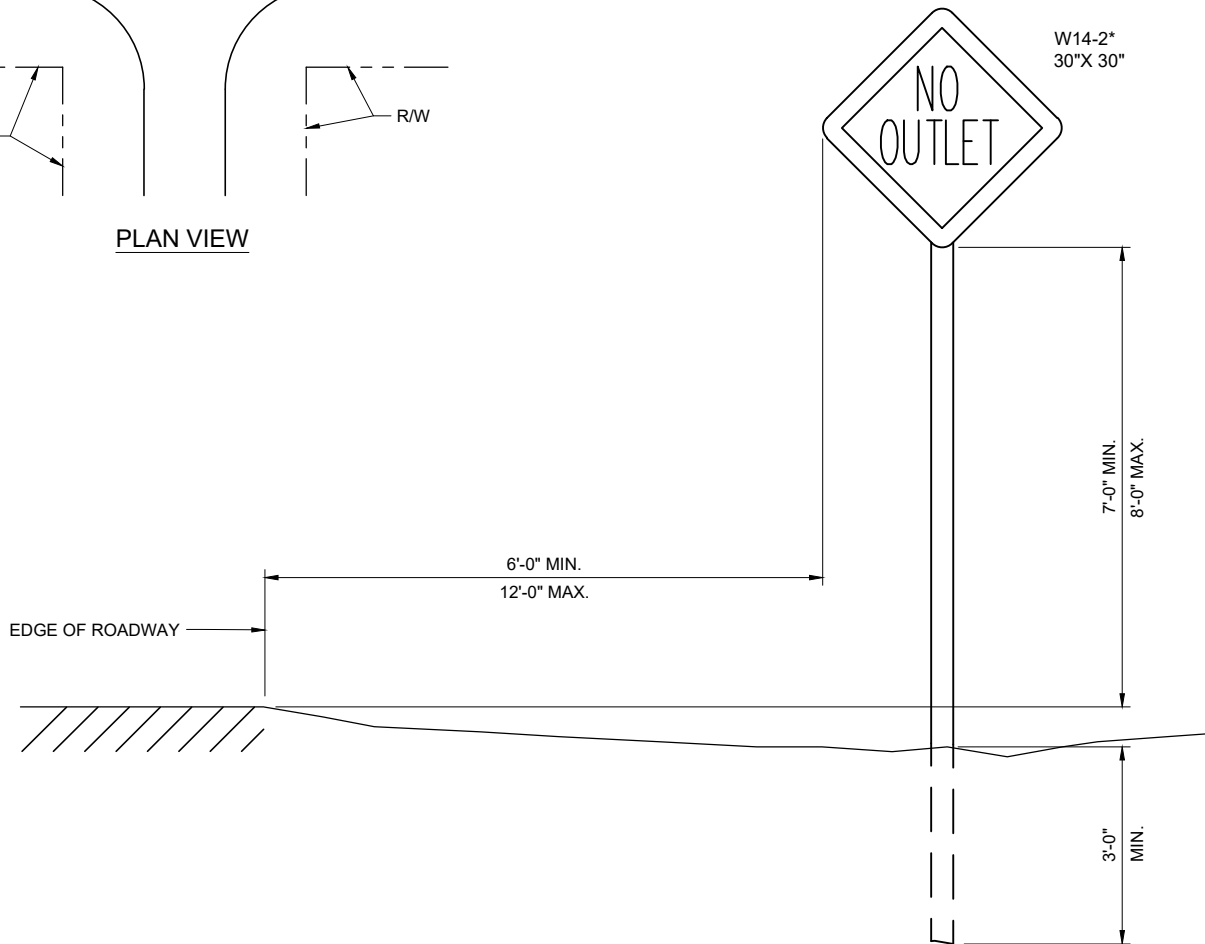
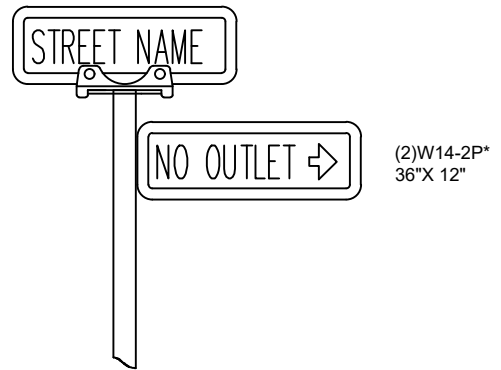
APPROVED BY:
J. SCOTT HERRING, P.E.

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JULY 28, 2026

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V-02



PLAN VIEW



ELEVATION

NOTES:

1. ALL SIGNS SHALL BE TYPE III-A, HIGH PERFORMANCE SHEETING, WHICH CONSISTS OF AN ENCAPSULATED SPHERICAL LENS ELEMENT.
2. LOCATE SIGN(S) AT THE LAST AVAILABLE INTERSECTION THAT IS APPLICABLE.
3. ROADWAY TERMINATION MARKERS MAY BE REQUIRED ON SOME STREETS IN CONJUNCTION WITH THIS SIGNAGE.
4. NO OUTLET SIGNS W14-2P MAY BE LOCATED BELOW STREET NAME SIGNS UTILIZING A METRO WING BRACKET #8.
5. A W14-2 SIGN IS REQUIRED IF THE AFFECTED ROADWAY BEGINS AT A CROSS INTERSECTION.



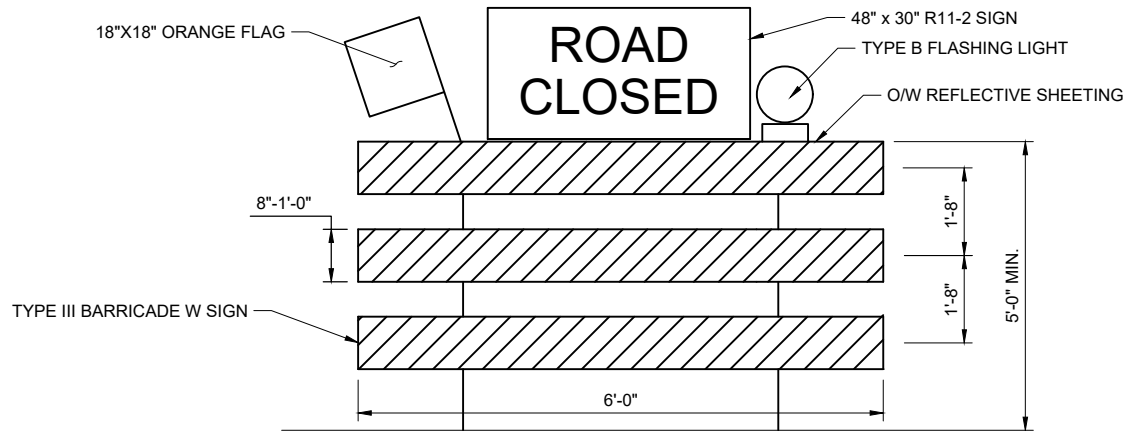
HERNANDO COUNTY
DEPARTMENT OF PUBLIC WORKS - ENGINEERING DIVISION
1525 East Jefferson Street
Brooksville, FL 34601-2807
(352) 754-4062

SECTION V - TRAFFIC CONTROL
NO OUTLET SIGNAGE

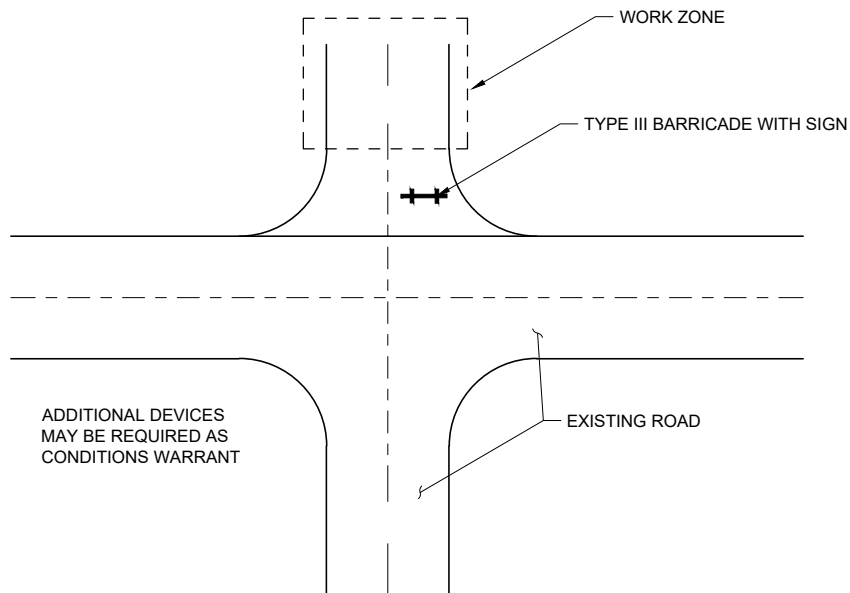
APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
V-03



TYPE III BARRICADE PLACEMENT



BARRICADE PLACEMENT

NOTES:

1. ALL STREETS ENTERING THE CONSTRUCTION ZONE SHALL RECEIVE ROAD CLOSURE SIGNAGE.
2. ALL ROAD CLOSED SIGNS SHALL BE ACCOMPANIED BY AN 18"X18" ORANGE FLAG AND A TYPE B HI-INTENSITY FLASHING LIGHT.
3. OTHER WORK ZONE TRAFFIC CONTROL DEVICES MAY BE REQUIRED FOR CONSTRUCTION. REFER TO PART VI OF THE CURRENT MUTCD AND THE CURRENT FDOT STANDARD PLANS FOR ADDITIONAL DETAILS.
4. ROADWAY(S) SHALL NOT TO BE OPENED TO PUBLIC TRAVEL UNTIL:
 - A. ALL PERMANENT TRAFFIC CONTROL DEVICES ARE IN PLACE;
 - B. PROJECT IS INSPECTED AND ACCEPTED.
5. TYPE III BARRICADES AND ROAD CLOSED SIGN SHALL NOT BLOCK INTERSECTION/DRIVEWAY SIGHT DISTANCE.
6. ALL SIGNS SHALL BE TYPE III-A, HIGH PERFORMANCE SHEETING, WHICH CONSISTS OF ENCAPSULATED SPHERICAL LENS ELEMENTS.



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SECTION V - TRAFFIC CONTROL
ROAD CLOSED SIGNAGE

APPROVED BY:
 J. SCOTT HERRING, P.E.

DATE:
 JULY 28, 2026

DRAWING NUMBER:
 V-05

TRAFFIC SIGNAL NOTES:

1. ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE CRITERIA SET FORTH IN THE FOLLOWING PUBLICATIONS:
 - FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
 - FDOT STANDARD PLANS, LATEST EDITION.
 - HERNANDO COUNTY FACILITY DESIGN GUIDELINES.
2. ANY ROADWAY OR INTERSECTION CONSTRUCTION NEAR AN EXISTING TRAFFIC SIGNAL MAY REQUIRE RECONSTRUCTION OF PARTS OR ALL OF THAT SIGNAL. TRAFFIC SIGNALS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
3. CONTACT PUBLIC WORKS - ENGINEERING FOR THE LATEST FORMAT OF TRAFFIC SIGNAL PLANS AND SPECIFICATIONS.
4. ALL NEW MAST ARMS AND NEW STRAIN POLES SHALL BE DESIGNED TO FDOT STANDARD SPECIFICATIONS WITH A DESIGN WIND SPEED OF 150 MPH AND 140 MPH, RESPECTIVELY. MODIFICATIONS TO THESE REQUIREMENTS MUST BE APPROVED IN WRITING BY THE COUNTY ENGINEER.
5. ALL NEW TRAFFIC SIGNALS SHALL INCLUDE COUNTDOWN PEDESTRIAN SIGNALS AND DETECTORS AND ADA RAMPS, UNLESS OTHERWISE APPROVED IN WRITING BY THE COUNTY ENGINEER.
6. ALL VEHICULAR AND PEDESTRIAN TRAFFIC SIGNAL INDICATIONS SHALL BE LED, WITH STAINLESS STEEL HARDWARE. PUSH BUTTON SHALL HAVE VISUAL INDICATION OF ACTUATION AND SHALL REMAIN ILLUMINATED UNTIL THE PEDESTRIAN WALK INDICATION IS DISPLAYED.
7. ALL VEHICULAR TRAFFIC SIGNAL HEADS SHALL USE TUNNEL VISORS. ALL SIGNAL HEADS TO HAVE METAL BACKPLATES WITH REFLECTIVE BORDER.
8. VIDEO DETECTION (PER COUNTY STANDARDS) IS THE PREFERRED METHOD OF DETECTION WITH MAST ARMS. LOOPS ARE REQUIRED FOR SPAN WIRE SUPPORTED SIGNALS.
9. ALL LOOPS SHALL BE TYPE F, 6'-0" X 30'-0", USING A WRAP PATTERN OF 3-6-3, AND THE LEADING EDGE LOCATED 2'-0" BEYOND THE STOP BAR.
10. SIGNAL POWER CABLES, DETECTOR CABLES, AND FIBER OPTIC CABLES SHALL BE LOCATED IN SEPARATE CONDUITS AND PULL BOXES.
11. THE CONTROLLER CABINET ASSEMBLY SHALL BE FDOT TYPE V WITH AN 18" TALL ALUMINUM CABINET RISER (FROM CABINET MANUFACTURER) WITH AN ECONOLITE COBALT CONTROLLER. SEPARATE UPS CABINET IS REQUIRED.
12. STREET NAME SIGNS SHALL BE INTERNALLY ILLUMINATED, AND INSTALLED FREE SWINGING USING COUNTY DEFINED HARDWARE.
13. CONTRACTOR SHALL PROVIDE 3 SETS OF "AS-BUILT" PLANS, ALONG WITH ALL DOCUMENTATION AND TESTING, PRIOR TO PROJECT CLOSEOUT.
14. ALL EQUIPMENT SHALL BE COMPATIBLE WITH THE HERNANDO COUNTY SIGNAL SYSTEM.
15. ANY NEW SIGNAL PROPOSED SHALL INCLUDE FIBER OPTIC INTERCONNECT TO ANY ADJACENT EXISTING OR PROGRAMMED TRAFFIC SIGNAL WITHIN 1.0 MILE.
16. SPLICES IN FIBER OPTIC CABLE ARE NOT PERMITTED BETWEEN SIGNAL CABINETS. NEW CONTINUOUS CABLE BETWEEN CONTROLLER CABINETS IS REQUIRED WHEN THE FIBER OPTIC IS SEVERED FOR ANY REASON.
17. ALL FIBER ENDS SHALL BE FUSION SPLICED TO A "PIGTAIL" WITH A ST TYPE CONNECTOR, AND HAVE AN IDENTIFICATION TAG STATING THE BUFFER COLOR, FIBER COLOR, AND CABLE ORIGIN. ALL FIBERS SHALL BE OTDR TESTED, WITH THE RESULTS PROVIDED TO THE COUNTY.
18. THERE ARE MANY VARIOUS WAYS TO ACCOMPLISH THE DESIGN OF A TRAFFIC SIGNAL. THE INFORMATION CONTAINED ON THIS SHEET IDENTIFIES SOME OF THE CRITERIA FOR THE DESIGN AND CONSTRUCTION OF TRAFFIC SIGNALS IN HERNANDO COUNTY.
19. CONTACT POWER COMPANY TO APPLY FOR ELECTRICAL POWER AND PAY ALL FEES. OBTAIN AN ELECTRICAL PERMIT FROM HERNANDO COUNTY DEVELOPMENT SERVICES DEPARTMENT. VERIFY TYPE OF METER CAN WITH THE HERNANDO COUNTY SIGNAL SHOP. FOLLOW DETAILS IN THE PLANS FOR THE TRAFFIC CONTROL STANDARD POWER SERVICE DISCONNECT ASSEMBLY.
20. PRIOR TO ALL TRAFFIC SIGNAL CHANGES (I.E., MAINTENANCE OF TRAFFIC CHANGES, NEW SIGNAL INSTALLATIONS, DIFFERENT PAVEMENT CONFIGURATIONS, ETC.) CONTACT HERNANDO COUNTY DEPARTMENT OF PUBLIC WORKS AT 352-754-4060 AT LEAST ONE WEEK PRIOR TO THE START OF THE WORK.



HERNANDO COUNTY
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1525 East Jefferson Street
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SECTION V - TRAFFIC CONTROL TRAFFIC SIGNAL NOTES

APPROVED BY:
J. SCOTT HERRING, P.E.

DATE:
JULY 28, 2026

DRAWING NUMBER:
V-06

WIRING COLOR CODE FOR 12 CONDUCTOR CABLE / SOP 7			
WIRE COLOR	CABLE 'A'	CABLE 'B'	INDICATION
1. GREEN	MAIN Ø2	MAIN Ø6	GREEN
2. ORANGE	MAIN Ø2	MAIN Ø6	YELLOW
3. RED	MAIN Ø2	MAIN Ø6	RED
4. GREEN/BLACK	MINOR Ø4	MINOR Ø8	GREEN
5. ORANGE/BLACK	MINOR Ø4	MINOR Ø8	YELLOW
6. RED/BLACK	MINOR Ø4	MINOR Ø8	RED
7. BLUE/BLACK	L/T Ø1 (L/T Ø7 IF SOP 10)	L/T Ø5 (L/T Ø3 IF SOP 10)	GREEN
8. BLACK/WHITE	L/T Ø1 (L/T Ø7 IF SOP 10)	L/T Ø5 (L/T Ø3 IF SOP 10)	YELLOW
9. WHITE/BLACK	SPARE (L/T Ø7 IF SOP 10)	SPARE (L/T Ø3 IF SOP 10)	SPARE RED - IF 3 SECTION IS USED
10. BLUE	L/T Ø3	L/T Ø7	GREEN (SPARE IF 3 SECTION ONLY)
11. BLACK	L/T Ø3	L/T Ø7	YELLOW (SPARE IF 3 SECTION ONLY)
12. WHITE	NEUTRAL RETURN	NEUTRAL RETURN	NONE

**CABLE "C" TO BE ADDED WHEN
PROTECTED LEFT TURNS ARE USED**

1. GREEN	MAIN L/T Ø1	GREEN
2. ORANGE	MAIN L/T Ø1	ORANGE
3. RED	MAIN L/T Ø1	RED
4. GREEN/BLACK	MAIN L/T Ø5	GREEN/BLACK
5. ORANGE/BLACK	MAIN L/T Ø5	ORANGE/BLACK
6. RED/BLACK	MAIN L/T Ø5	GREEN
7. BLUE/BLACK	SPARE	SPARE
8. BLACK/WHITE	SPARE	SPARE
9. WHITE/BLACK	SPARE	SPARE
10. BLUE	SPARE	SPARE
11. BLACK	SPARE	SPARE
12. WHITE	NEUTRAL RETURN	NONE

NOTES:

1. AS PER FDOT SPECIFICATIONS; ALL SIGNAL HEAD DISCONNECTS SHALL BE CAPABLE OF TERMINATING ALL WIRES OF THE SIGNAL CABLE, THIS INCLUDES ALL SPARES, ON THE TERMINAL BLOCK OF THE DISCONNECT.
2. DOWN SIZING OF THE SIGNAL CABLES (DROPPING CONDUCTORS) WILL NOT BE ACCEPTED. THERE SHALL BE THE SAME AMOUNT OF WIRES THROUGHOUT ALL DISCONNECTS TO THE END DISCONNECT.
3. ALL CABLES SHALL BE IDENTIFIED IN THE CABINET WITH A CORRESPONDING SHEET AND PERMANENT INDELIBLE CABLE MARKERS SHALL BE ATTACHED TO EACH CONDUCTOR TO IDENTIFY ITS CONNECTION POINT.
4. ANY QUESTIONS CONCERNING THE WIRING COLOR CODE TO BE USED AT A SPECIFIC INTERSECTION, CONTACT HERNANDO COUNTY DPW TRAFFIC DIVISION (352)-754-4060.
5. CONTACT HERNANDO COUNTY DPW TRAFFIC ENGINEERING (352)-754-4475 FOR COLOR CODES AND TERMINATIONS OF FIBER OPTIC CABLES.

WIRING COLOR CODE FOR 18 CONDUCTOR CABLE / SOP 10			
WIRE COLOR	CABLE 'A'	CABLE 'B'	INDICATION
1. GREEN	MAIN Ø2	MAIN Ø6	GREEN
2. ORANGE	MAIN Ø2	MAIN Ø6	YELLOW
3. RED	MAIN Ø2	MAIN Ø6	RED
4. GREEN/BLACK	MINOR Ø4	MINOR Ø8	GREEN
5. ORANGE/BLACK	MINOR Ø4	MINOR Ø8	YELLOW
6. RED/BLACK	MINOR Ø4	MINOR Ø8	RED
7. BLUE/BLACK	L/T Ø1	L/T Ø5	GREEN
8. BLACK/WHITE	L/T Ø1	L/T Ø5	YELLOW
9. WHITE/BLACK	L/T Ø1	L/T Ø5	RED - SPARE IF 5 SECTION
10. BLUE	L/T Ø3	L/T Ø7	GREEN (SPARE OR 3 SECTION ONLY)
11. BLACK	L/T Ø3	L/T Ø7	YELLOW (SPARE OR 5 SECTION ONLY)
12. WHITE	NEUTRAL RETURN	NEUTRAL RETURN	NONE
13. GREEN/WHITE	L/T Ø3 (NOT FOR 5 SECTION)	L/T Ø7 (NOT FOR 5 SECTION)	GREEN (PROTECTED)
14. BLUE/WHITE	L/T Ø3 (NOT FOR 5 SECTION)	L/T Ø7 (NOT FOR 5 SECTION)	ORANGE (PROTECTED)
15. RED/WHITE	L/T Ø3 (NOT FOR 5 SECTION)	L/T Ø7 (NOT FOR 5 SECTION)	RED (PROTECTED)
16. BLACK/RED	SPARE	SPARE	
17. ORANGE/RED	SPARE	SPARE	
18. WHITE/RED	SPARE	SPARE	

**WIRING COLOR CODE FOR
12 CONDUCTOR CABLE / SOP 7**

WIRE COLOR	TO PHASE	INDICATION
1. GREEN	Ø2 OR 6	WALK
2. WHITE	Ø2 OR 6	PEDESTRIAN PUSH BUTTON
3. GREEN	Ø2 OR 6	DON'T WALK
4. GREEN	Ø4 OR 8	WALK
5. WHITE	Ø4 OR 8	PEDESTRIAN PUSH BUTTON
6. GREEN	Ø4 OR 8	DON'T WALK
7. BLUE/BLACK	SPARE	
8. BLACK/WHITE	SPARE	
9. WHITE/BLACK	LOGIC GROUND	
10. BLUE	SPARE	
11. BLACK	SPARE	
12. WHITE	NEUTRAL	

CABLES SHALL BE MARKED AS P-1, P-2, P-3, P-4, ETC. TO IDENTIFY THEM. PERMANENT INDELIBLE CABLE MARKERS SHALL BE ATTACHED TO EACH CONDUCTOR TO IDENTIFY ITS CONNECTION POINT. A CORRESPONDING SHEET SHALL BE INCLUDED IN THE CABINET TO IDENTIFY SAID CABLES AND CONDUCTORS, AND SPECIFY WHAT LOCATION EACH CABLE GOES TO.



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**SECTION V - TRAFFIC CONTROL
SIGNAL WIRING COLOR CHART**

APPROVED BY:
J. SCOTT HERRING, P.E.

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JULY 28, 2026

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V-07