

CONSTRUCTION AND INSPECTION STANDARDS
PUBLIC WORKS DEPARTMENT
ALACHUA COUNTY, FLORIDA

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CONSTRUCTION AND INSPECTION STANDARDS

PUBLIC WORKS DEPARTMENT

ALACHUA COUNTY, FLORIDA

ARTICLE I - TITLE

This document shall be known as the ALACHUA COUNTY ROAD INSPECTION STANDARDS and shall be used to supplement the Alachua County Subdivision Ordinance.

ARTICLE II - JURISDICTION

These specifications apply to all unincorporated areas of Alachua County, and County road rights-of-way and easements within incorporated municipalities.

ARTICLE III - PURPOSE

The purpose of this document is to establish minimum standards for road and highway construction in Alachua County. This document is to be used in conjunction with the FDOT Standard Specifications and Design Standards. If these specifications conflict with any FDOT standards, these specifications will govern.

ARTICLE IV - DEFINITIONS

When the following terms or their pronouns occur herein, the intent and meaning shall be as follows:

A.A.S.H.T.O.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS. Any reference to A.A.S.H.T.O. standards shall mean the most recent published revision, unless otherwise specified.

A.S.T.M.

AMERICAN SOCIETY FOR TESTING MATERIALS. Any reference to A.S.T.M. means the most recent published revision, unless otherwise specified.

Consulting Engineer

A professional engineer or engineering firm registered in the State of Florida that has been retained to provide professional engineering services for a project.

Contractor

Person, firm or corporation with whom the contract for construction has been made by the owner, the developer or the County.

County Engineer

County Engineer of Alachua County, Florida, acting directly or through an assistant or other representative authorized by him.

Design Drawings

Drawings and plans depicting line, grade and scope of construction, exhibiting County Engineer approval.

F.D.O.T. Specifications

Florida Department of Transportation, Standard Specifications for Road and Bridge Construction. Any reference to these specifications means the most recently published revision, unless otherwise specified.

F.D.O.T. Design Standards

Florida Department of Transportation, Roadway and Traffic Design Standards. Any reference to these standards means the most recently published revision, unless otherwise specified.

F.D.O.T. Green Book

Florida Department of Transportation, Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways.

Independent Laboratory

A registered professional geotechnical engineer or engineering firm registered in the State of Florida and who is engaged in the design and testing of construction materials.

ARTICLE V - PRECONSTRUCTION

5.1 Scope

This section describes the items that must be performed prior to the actual start of construction.

5.2 Preconstruction Meeting

For subdivisions, ACPW contracted work, and any widening or improvements within existing right-of-away, no work shall begin prior to a preconstruction meeting between the Owner, Contractor, Design Engineer and County Engineer. Notice to proceed or construction permit as applicable, shall be issued at the preconstruction meeting.

5.3 Permits

Prior to start of work all applicable federal, state and local permits shall be obtained by the owner from the appropriate governing agency. These include Florida Department of Environmental Protection, flood plain, Water Management District, Florida Department of Transportation and tree removal permits. The contractor shall obtain burn permits prior to open burning of tree clearing debris from the Florida Division of Forestry.

5.4 Drawings

Drawings used for construction shall exhibit approval by the Consulting Engineer and County Engineer. One set of appropriately approved plans will be maintained on site at all times. No work shall proceed contrary to the approved design drawings. The County Engineer must approve any revisions required prior to actual construction of the change.

5.5 Contractor Supervision

At all times during performance of work, responsible supervision shall be maintained on site to allow immediate correction of discrepancies. A contact for after-hour emergencies shall be made available.

5.6 County Engineer Notification

Contractor shall notify the County Engineer forty-eight (48) hours in advance of the start of construction, and at specified stages throughout construction as identified during the pre-construction conference.

5.7 Traffic Control

Traffic control devices shall be erected twenty-four (24) hours in advance of start of construction. Devices and methods of traffic control shall be in accordance with the FDOT Design Standards and shall be maintained as required throughout the construction period.

5.8 Construction Staking

Prior to start of work, necessary staking shall be in place to assure progress of construction to the appropriate line and grade. All staking within fill or excavation areas shall have necessary offset to preclude removal during construction. Appropriate

construction staking shall be maintained throughout the construction phase. A registered land surveyor, registered in the State of Florida, shall provide all centerline control points, and sufficient control points and bench marks for horizontal and vertical control of all constructed items. The Contractor shall have available a registered land surveyor for the purpose of verification of horizontal and vertical location of any item of construction, when so requested by the County Engineer.

ARTICLE VI - CLEARING AND GRUBBING

6.1 Scope

This section describes the requirements for clearing and grubbing and the removal of excess materials and debris from the roadway right-of-way and easements.

6.2 Clearing and Grubbing

Areas within the right-of-way and easements shall be cleared of all trees, roots, vegetation, and all other obstructions resting on or protruding through the surface. Areas of exclusion such as trees or designated buffers shall be adequately marked for protection.

6.2.1 Areas to receive fill or to be excavated for fill material shall have all organic material and topsoil removed to a depth of no less than one foot.

6.3 Disposal of Debris

Stockpiles of waste or excess material shall not remain within the right-of-way or easements and shall be removed from the bounds of the project prior to County Engineer approval of roadway subgrade.

6.3.1 Stockpiles of excavated topsoil or fill material shall be located such that site drainage or waterways are not obstructed. The owner of property may temporarily stockpile topsoil or rocks, outside of all rights-of-way and easements, to remain for future landscaping. Stockpiles of excess suitable material must be removed prior to final inspection or appropriately permitted to remain on site. A stockpile location approval must be obtained through the Development Review Staff and a permit must be obtained.

6.3.2 Appropriate permits shall be obtained prior to the burning of debris or off-site disposal of materials. Burning shall be conducted in a manner which will not harm adjacent trees, shrubs or property, or create a public nuisance.

6.4 Erosion Control

Erosion control measures in accordance with FDOT Design Standards, Index Numbers 102 and 103 shall be in place prior to exposing erodible earth on such grades as erosion

may be detrimental to adjoining properties, rights-of-way, waterways, or stormwater management facilities.

ARTICLE VII-EARTHWORK

7.1 Scope

This section describes requirements for all excavation, fill, subgrade preparation and earthen drainage control construction.

7.2 Excavation

- 7.2.1 Excavation shall include removal of all materials and structures necessary to construct roadway and drainage facilities to the appropriate line and grade.
- 7.2.2 Roadway excavation shall be maintained and well drained at all times. Appropriate erosion control measures shall prevent loss of materials due to action of wind or water.
- 7.2.3 Material removed shall be disposed of off-site or stockpiled as appropriate in accordance with Article VI of this specification.

7.3 Subsoil Excavation

- 7.3.1 Subsoil excavation shall include removal of all muck, rock, clay or unsuitable materials within the roadway.
- 7.3.2 Clay and other unsuitable materials within 24 inches of the top of the subgrade shall be removed and replaced with select fill material. Select and unsuitable materials are as defined in FDOT Design Standards Index Number 505. Undercut profile shall be in accordance with FDOT Design Specifications Index Number 500 or as approved by the County Engineer. Underdrain, as required, shall be installed in compliance with Appendix II of this specification. The final surface of the undercut area shall be compacted to the maximum extent possible, with a sheepsfoot roller, in accordance with FDOT Specification 120-9.
- 7.3.3 Removal of muck (AASHTO M-145 Classification A-8) should be performed until a suitable bearing foundation is encountered or sufficient select fill may be placed to provide adequate bearing for subgrade construction, or as otherwise directed by the County Engineer.
- 7.3.4 Materials used for replacement of unsuitable materials shall be placed in accordance with Section 7.4 of this specification.
- 7.3.5 Where paved swale sections are utilized adjacent to undercut areas, swale section grades shall be adjusted so that the undercut line intersects the swale no lower

than the swale bottom or top of ditch paving as applicable, in accordance with FDOT Design Specifications, Index No. 500.

- 7.3.6 Extreme care shall be exercised in the excavation and grading of swale sections in clay materials to avoid over-excavation, requiring replacement of material to match line and grade.

7.4 Placement of Fill Materials

- 7.4.1 Fill placed for roadway embankment or replacement of sub soil excavation shall be placed in a maximum of 12" lifts, and compacted to minimum density specified on the design drawings. Fill placed in excess of four feet in total depth may be placed at a minimum compaction of 95% of maximum as determined by AASHTO Method T-180, except that the top four-foot of fill shall meet the specified compaction requirements for subgrade.
- 7.4.2 Materials placed under the roadway must be select fill of AASHTO M-145 Classification A-1, A-3, or A-2-4. Plastic materials may be used in deep fills under the roadway at depths greater than four feet only with prior approval from the County Engineer. Plastic materials may be used in sanitary sewer or storm sewer excavations performed in undercut areas. If pervious fill is used for trench backfill in undercut areas, a minimum of 12" of impervious material shall be placed over the trench to facilitate subgrade drainage.
- 7.4.3 Materials placed in storm sewers, sanitary sewers and other utility excavations under the roadway, shall conform to compaction requirements for embankment fill for the full depth of the excavation. Lift thickness of fill material may be reduced as necessary due to type of compaction equipment, and material classification, in order to obtain the required compaction.
- 7.4.4 Placement and compaction of fill sections shall be constructed to full width required, in sections not less than 300 feet in length or full length of the embankment. Density will be verified in accordance with Appendix I of this specification.
- 7.4.5 Fill material placed outside of roadway embankment (outside of 2:1 slope downward from shoulder edge or back of curb) shall be compacted to density approximately equal to undisturbed soil adjacent to the fill area.
- 7.4.6 Materials placed for stormwater management basin embankments shall be placed in maximum 12" lifts and compacted to a minimum of 95% of maximum density as determined by AASHTO Method T-99.

7.5 Subgrade Preparation

- 7.5.1 Work shall consist of bringing the bottom of excavations and top of embankments of the roadway to a surface conforming to the grades, lines, and cross sections shown on the plans.
- 7.5.2 All soft and yielding material that will not compact readily shall be removed and replaced with suitable material.
- 7.5.3 All stumps, roots, and organic matter shall be removed to a depth of two feet minimum below the bottom of the base material. All rocks larger than six inches shall be removed and all rock larger than 3 1/2 inches, which cannot be readily broken by mixing operations, shall be removed to a depth of two feet.
- 7.5.4 Subgrade materials, to a minimum depth of 12 inches, must meet the bearing value requirements of the roadway design for Type B stabilization, determined by the F.D.O.T. Limerock Bearing Ratio Method (LBR). Sampling of the material will be performed after mixing to a minimum depth of 12 inches, at frequencies established in Appendix I. Where a **minimum** LBR value is specified, under-tolerance allowance is not applicable.
- 7.5.5 Full limits of the subgrade will be mixed by rotary tiller or other equipment approved by the County Engineer, regardless of the existing soil LBR. Prior to mixing, subgrade shall be brought to an elevation such that after mixing, subgrade will conform to the required line and grade.
- 7.5.6 Subgrade materials known not to meet specified LBR value will require introduction of an additive material. Materials used to increase LBR value shall conform to Section 914 of the FDOT Standard Specifications. Amount of additive required will be determined by the Contractor and spread uniformly over the area to be stabilized, such that after mixing, subgrade will conform to specified line and grade.
- 7.5.7 Upon completion of mixing, subgrade shall be compacted, checked for line and grade and sampled to a depth of 12 inches for LBR determination. After acceptable LBR value is determined, the subgrade shall be density tested for conformance to design plans. Frequency of testing will be in accordance with Appendix I of this specification.
- 7.5.8 Underdrain required for subgrade drainage shall be installed in accordance with Appendix II and functional prior to subgrade acceptance for placement of limerock base.
- 7.5.9 The Contractor shall maintain required density and line and grade until placement of limerock base. Rework requiring addition of materials will require re-stabilization and retesting for bearing and density requirements.

7.6 Stormwater and Erosion Control

- 7.6.1 All drainage control structures (i.e. underdrains, swales, basins, storm sewers) shall be in place once subgrade is completed in order to allow subgrade to remain drained.
- 7.6.2 Drainage structures shall have been constructed to appropriate line and grade. Inlets and drainage structures shall be constructed in accordance with Article VIII of this specification. Temporary inlet drains per FDOT Index No. 201, will be installed when extended delay is anticipated prior to limerock base placement.
- 7.6.3 All siltation control devices, as required by the Alachua County Stormwater Ordinance, Stormwater Pollution Prevention plans and other Florida Department of Environmental Protection permits, will be in place in accordance with FDOT Design Standards, Index No. 102 and 103 and per the approved Stormwater Pollution Prevention Plan. Grassing of all slopes and swale bottoms will occur at the earliest feasible time to prevent erosion and siltation of basins and waterways

7.7 Curb Construction

Curb and gutter construction shall be in accordance with Article VIII of this specification. Construction shall begin only after acceptance of the subgrade for stabilization and density requirements.

ARTICLE VIII - DRAINAGE CONSTRUCTION

8.1 Scope

This section describes requirements for construction of storm sewers, inlets, swales, basins, underdrain and curb and gutter.

8.2 Storm Sewer

- 8.2.1 Storm sewer piping shall be manufactured in accordance with Section 449 of FDOT Standard Specifications for concrete pipe, Section 943 of FDOT Standard Specifications for corrugated steel, or Section 948 for corrugated polyethylene, as applicable.
- 8.2.2 Foundation of pipe trench shall be firm and unyielding. If undercutting is necessary, granular material shall be placed and compacted to form adequate bedding prior to pipe placement.
- 8.2.3 Pipe shall be laid true to line and grade with hubs upgrade and tongue end fully entered into the hub, in order to form a watertight seal.
- 8.2.4 Concrete pipe joint materials shall conform to Section 430-7 of the FDOT Standard Specifications.

- 8.2.5 Fill material shall be mechanically compacted to a minimum of one foot over the pipe to avoid deflection in alignment. Crossing with heavy construction equipment or heavy compactive effort shall not be allowed until fill over the pipe is equal to one-half the diameter of the pipe.
- 8.2.6 Fill material placed over the top of the pipe shall be placed in maximum of 12" thick lifts, to compaction requirements specified in Appendix I of this specification, as appropriate for location and depth of the trench.
- 8.2.7 When storm drainpipe protrudes into the stabilized subgrade, the subgrade and pipe fill shall be replaced with limerock in accordance with Index No. 205 of the FDOT Design Standards.
- 8.2.8 There shall be a minimum of 6" from the top of any pipe to normal bottom of the base material.

8.3 Inlets

- 8.3.1 All inlets shall be constructed in accordance with the applicable FDOT Design Standard Index, except as noted herein.
- 8.3.2 Concrete inlet structures shall be constructed of FDOT Class I (non-stress) concrete. All other materials shall conform to Section 425-3 of the FDOT Standard Specifications.
- 8.3.3 The rear wall portion of inlet tops Type 1, 2, 3 and 4 may be brick, however, dowels to the top slab are required. Dowels shall be double row, as close to 9 inches on center as brick structure and pattern will allow.
- 8.3.4 For Type 5 and 6 inlets, the bent bar from the inlet back, continuous into the inlet top, may be constructed as a dowel of equal length to the front bar in the inlet back wall.
- 8.3.5 All inlet throat, invert, pipe cutting and grout work shall be completed prior to inlet top construction. Inlet top construction shall be completed prior to placement of asphalt.
- 8.3.6 Storm drain pipes connecting to inlets shall be cut flush or set flush with interior inlet walls and grouted for water tight seal, both inside and outside of inlet walls.
- 8.3.7 Cast-in-place inlets shall have both vertical and horizontal reinforcing steel in back walls as required per Index No's 210 and 211 of the FDOT Design Standards. Construction joints with dowels are acceptable at junction of walls and tops.

8.3.8 Design and construction of pre-cast inlet structures shall be certified as meeting all FDOT designs and specifications by the supplier.

8.4 Swales and Basins

8.4.1 All swales and basins shall be constructed to line and grade prior to approval of subgrade construction.

8.4.2 All slopes of 3:1 or greater shall be sodded.

8.4.3 Erosion control per FDOT Index No. 102 and 103, and in accordance with the Stormwater Pollution Prevention Plan provided for the project, shall be installed upon completion of excavation and grading.

8.4.4 Swale sections in conjunction with subsoil excavation shall be constructed in accordance with FDOT Index No. 500, in order to facilitate subgrade drainage.

8.4.5 Embankment fill for basins shall be constructed in accordance with Article VII of this specification.

8.4.6 All swales and basins shall be grassed upon completion of final grading, and erosion control shall remain in place until all slopes have stabilized.

8.4.7 Special ditch sections requiring concrete ditch paving shall be graded and constructed in accordance with design plans. Construction of ditch paving shall be in conformance with FDOT Index No. 201, with contraction joints at 10' intervals. Concrete shall have a float finish, lightly broomed.

8.4.8 Expansion joints in ditch paving shall be constructed at intervals not to exceed 200'. Joint materials shall be 1/2" preformed material conforming to Section 932 of the FDOT Standard Specifications. Paving constructed on clay bottom swales shall have weep holes constructed on 10' centers. Weep holes shall be constructed with gravel (#6 aggregate) sumps, with galvanized wire mesh between the aggregate and concrete, per FDOT Standard Index No. 281.

8.5 Underdrain

8.5.1 Roadway underdrain shall be installed in all areas of subgrade where ground water may rise to within 12" of the bottom of base material, or in undercut areas where ground water may infiltrate or accumulate in the stabilized subgrade.

8.5.2 Underdrain shall be installed with the flow line a minimum of 42" below the top of the curb line, centered 2' behind the curb.

8.5.3 Applications for underdrain are shown in Appendix II of these specifications.

8.5.4 Required subgrade underdrain shall be installed prior to stabilization of subgrade materials and in conjunction with inlet and storm sewer construction.

8.5.5 Underdrain required in basin construction shall be in accordance with Design Specifications.

8.6 Curb and Gutter

8.6.1 Curb and gutter construction shall begin only after approval of subgrade preparation for LBR requirements. Subgrade upon which curb will be placed shall be compacted to design requirements for subgrade prior to curb placement.

8.6.2 Curb and gutter shall be constructed of FDOT Class I (non-stress) concrete, produced in accordance with FDOT Specification, Section 347, 2004 Edition.

8.6.3 Location of curb and gutter shall be verified for density, line and grade prior to placement. Washouts, fill or regrading, subsequent to approval, may require reverification of subgrade

8.6.4 Contraction joints shall be sawed at 10-foot intervals as soon as concrete has hardened. Damage or uncontrolled cracking between sawed joints shall be cause for removal of curb sections.

8.6.5 Expansion joints shall be constructed at all inlets and radius points. Expansion joints shall also be located at intervals not to exceed 500 feet and shall be constructed of 1/2 inch preformed material conforming to Section 932 of the FDOT Standard Specifications.

8.6.6 A brush finish will be applied while concrete is still plastic. Membrane curing compound shall be applied in accordance with Section 520-8.3 of the FDOT Standard Specifications, immediately after application of the finish.

ARTICLE IX - LIMEROCK BASE COURSE

9.1 Scope

This section describes requirements for construction of the limerock base course.

9.2 Materials

Limerock base course shall be constructed of limerock from the Ocala formation, conforming to requirements of Section 911 of the FDOT Standard Specifications. Material must be from a quarry currently approved by FDOT for use on FDOT projects or qualifying test results by an independent testing laboratory and an adequate quality control program must be supplied to the County Engineer and approved prior to use.

9.3 Placement of Materials

- 9.3.1 Delivery of limerock to the placement location shall be conducted in a manner that will not damage the accepted roadway subgrade. Delivery shall be across previously placed limerock whenever possible.
- 9.3.2 When compacted thickness of base course is greater than six inches, material shall be placed in two courses. Thickness of the first course shall be approximately 1/2 of the total thickness, but thick enough to bear the weight of equipment without damaging the subgrade. Final course of base material shall be a minimum of 3” thick.
- 9.3.3 For materials placed in more than one course, each course shall be compacted to 98% of maximum density as determined by AASHTO T-180.
- 9.3.4 Placement of each course of material shall be parallel to specified line and grade.
- 9.3.5 Addition of water or drying of materials shall be conducted for full depth of the course being placed.

9.4 Final Grading and Compaction

Finished surface shall be checked for conformance to line and grade and to a profile template or string line used perpendicular to centerline. A 15' straight edge shall also be used parallel to centerline in the center of each lane. Irregularities exceeding 1/4 inch require material to be scarified, regraded and recompacted. Final density testing will be performed after acceptance of template and grade to assure compaction to 98% of maximum density as determined by AASHTO Method T-180.

9.5 Priming and Maintaining

- 9.5.1 Prior to application of prime coat, moisture content of upper portion of the base shall not exceed 90% of optimum moisture for the material.
- 9.5.2 Prime coat applied to limerock base shall conform to Section 300 of FDOT Standard Specifications.
- 9.5.3 Prior to application of prime coat, all loose or foreign material shall be removed from the base material.

- 9.5.4 Prime coat applications shall be uniformly covered with sand-bituminous hot mix, screenings, or non-plastic sand (bare or hot-asphalt coated), with a mechanical spreader. All surface coatings shall be rolled with a traffic roller as required to produce a dense mass.
- 9.5.5 Crown and template of the finished base shall be maintained with no rutting or distortion until application of asphalt surface course.
- 9.5.6 Areas where prime coat has cured to the extent that it has lost all bonding effect shall have a tack coat applied in compliance with Section 300 of the FDOT Standard Specifications, prior to application of asphaltic concrete.

9.6 Required Construction

Prior to application of surface course, all drainage construction shall be complete to include: Inlet inverts, inlet tops, storm drainpipes and outfalls, basins (to include grass stabilized slopes) and swales. Swale sections parallel to roadways may be left rough graded until installation of utilities in accordance with Article XI of this specification. Fill required behind curbs must be in place, and shoulder stabilization must be completed to the depth and LBR specified by design.

ARTICLE X - ASPHALTIC CONCRETE

10.1 Scope

This section describes requirements for application of the Asphaltic Concrete Structural and Surface Course to include equipment and materials.

10.2 Asphaltic Concrete Materials

All materials used shall comply with the most current edition of the FDOT Standard Specifications, Sections 320 and 330. Type of asphaltic concrete shall be specified on the approved design drawings or contract documents. Batch plants shall have current FDOT certification rating. All Marshall based mix design asphalt shall be produced, placed and accepted in accordance with FDOT Specifications, Section 331 (Archive) or Section 337 (Archive). All Superpave mixes shall be produced, placed and accepted in accordance with Section 334, Superpave Hot Mix Asphalt For Local Agencies (Archive).

10.3 Surface Preparation

Prior to placement of asphaltic concrete, the base surface shall be swept clean of all loose and deleterious material by use of power brooms or blowers. Areas of excessive

separation of prime coat during power brooming shall require re-application of prime coat prior to application of surface course. If material is to be placed on another asphaltic concrete surface, a tack coat conforming to Section 300 of the FDOT Standard Specifications shall be applied. Asphaltic concrete materials shall be placed after tack coat has adequately cured, but prior to loss of adhesiveness.

10.4 Asphaltic Concrete Placement

10.4.1 Material shall be placed on clean, dry surfaces with air and surface temperature above the minimum specified for the type of mix being placed. All necessary equipment shall be on hand and operational prior to start of placement. Placement, compaction and equipment shall be as specified in Section 330 of the FDOT Standard Specifications, except as noted herein.

10.4.2 Prior to placement of asphalt, material temperature shall be verified to be within $\pm 25^{\circ}$ of target batch temperature. Type 'S' target batch temperature shall be between 230°F and 310°F , and material having verified temperature outside the range of 205° to 335°F shall be rejected. Superpave material not within $\pm 30^{\circ}$ of the established mix design temperature shall be rejected.

10.4.3 When structural asphalt (S-I or S-III) material placed will be the final surface course, rubber tired rollers may be deleted for breakdown rolling as long as density requirements are met.

10.4.4 Material thickness behind the screed shall be manually checked every 25 feet maximum; however, calculating paver yield periodically during placement shall monitor actual course thickness. Deviations of material weight equivalent to $\frac{1}{4}$ in. as calculated from mix design data, shall require corrective action by the contractor. Paver yield will be monitored each 500 lf until within acceptable range.

10.4.5 Density of Type 'S' material in place shall be tested by nuclear method for 95% of laboratory compaction. Tests shall be performed on initial 500 feet of placement and rolling patterns altered as necessary to achieve compaction. Density shall be checked each 500 feet of placement thereafter. Density of superpave mixes shall be verified in accordance with FDOT Specifications, Section 334 (Archive – 12/19/03), for a minimum of 92% of Gmm (maximum specific gravity).

10.4.6 All longitudinal joints shall be checked with a straight edge. The number of start and stop locations will be kept to a minimum by maintaining uniform supply of asphalt to the paver and adjustment of paver speed.

10.4.7 Contractors shall use a 15-foot rolling straight edge behind the rolling operation. Irregularities greater than $\frac{3}{16}$ th inch shall be corrected either by overlay or removal, as appropriate, if they cannot be removed by increased rolling effort.

10.4.8 Final rolling shall be completed prior to pavement temperature dropping below 175°F.

ARTICLE XI - CERTIFICATE OF COMPLETION AND ACCEPTANCE FOR MAINTENANCE OF SUBDIVISIONS

(Public and Private)

11.1 Inspection for Certificate of Completion

11.1.1 All construction shall be completed prior to performance of an inspection to verify that all construction is completed in accordance with the approved design plans. Areas designated for utilities shall be rough graded to within 0.1' of final grade, and grassed. All erosion control shall be maintained until soils have stabilized.

11.1.2 A completion verification inspection will be conducted upon receipt of a certification of construction completion from the Design Engineer, and certification from a Registered Land Surveyor that all PRM's, PCP's, and lot corner monumentation have been set. If deficiencies exist at time of inspection, another inspection shall be conducted within ninety (90) days, unless all deficiencies are corrected and a request for re-inspection is made. This process shall continue until an acceptable inspection is completed. If surety has been posted on the project and the County determines that adequate progress has not been made to correct the deficiencies, the County shall begin the process of securing the surety.

11.1.3 Punch list items resulting from a completion verification inspection shall be corrected prior to issuance of Certificate of Completion by the County Engineer. The Certificate of Completion shall be forwarded to the developer of the project upon County Engineer approval of the form of surety required in order to begin the one year developer's maintenance period.

11.2 Final Inspection and Acceptance for Maintenance

11.2.1 Final inspection shall be conducted one year after the date of issuance of the Certificate of Completion.

11.2.2 Four weeks prior to the date final inspection is due, a walk down will be conducted with the developer or the contractor if so delegated. Punch list items resulting from this walk down will be forwarded to the developer for resolution.

11.2.3 If deficiencies exist on the date of final inspection, another final inspection will be conducted in 90-days. This process shall continue until all deficiencies are corrected. The owner will be required to extend the surety for the duration of any extension past the original date of final inspection.

11.2.4 For public roadways, after one year of maintenance by the developer, if no deficiencies are noted, the development will be accepted for maintenance and a letter of acceptance will be issued by the County Engineer.

11.2.5 For private roadways, after one year of maintenance by the developer, if no deficiencies are noted, A Certificate of Final Inspection will be issued to the developer.

11.3 Jurisdictional Status During Construction

11.3.1 Construction in right-of-way, which is, or is to be, dedicated to Alachua County, shall be subject to all controls allocated to the County Engineer.

11.3.2 All utility lines, public or private, landscaping, irrigation and lighting, shall be installed in County maintained right-of-way only after the County Engineer's approval of a utility permit or right-of-way use permit as appropriate. Installation will be coordinated with the inspector and the contractor, and controlled in such a manner that it is not detrimental to the roadway and drainage construction.

11.3.3 Construction of private roadways that are inspected by the County Engineer shall be subject to all controls necessary to assure conformance to Design Standards. Utility, landscaping, irrigation and lighting installations in private roadways do not require permits, however, installation is required to be coordinated and controlled in such a manner that it is not detrimental to the roadway and drainage construction.

APPENDIX I - TESTING REQUIREMENTS

1.0 General

- 1.1 A reputable, recognized independent laboratory shall perform all subdivision soil testing.
- 1.2 A certified copy of all test results shall be forwarded to the County Engineer.
- 1.3 All moisture density testing shall be performed by sand cone (AASHTO Method T-190, or ASTM D-1556) or nuclear method (ASTM D-2922, ASTM D-3017). Alternate methods shall be used only with prior approval of the County Engineer.
- 1.4 Moisture determinations may be made by "speedy-moisture" methods appropriately calibrated to oven-dry method ASTM D-2216.
- 1.5 Frequencies specified herein are considered minimums. Materials may be subject to testing at anytime they appear to deviate from the required standards.

2.0 Test Frequencies

2.1 Fill Material

2.1.1 Classification and/or Gradation

- 2.1.1.1 Where specific classification or gradation is required, material shall be pre-qualified prior to use.
- 2.1.1.2 Testing may be required at any time when material appears deficient.

2.1.2 Density

- 2.1.2.1 Upper four (4) feet of roadway fill: Each lift shall be tested for minimum compaction required for subgrade, as specified on design plans. No less than one density verification for each 500 linear foot length of a single lift of fill.
- 2.1.2.2 Roadway fill sections over four (4) feet in depth: Material below the upper four (4) feet - a minimum of every other lift for 95% of maximum as determined by AASHTO T-180. No less than one density verification for each 500 linear feet of a tested lift.
- 2.1.2.3 Embankment fill for retention ponds: Every other 12" lift - 95% of maximum as determined by AASHTO T-99. No less than one density verification for each 500 linear foot length of a tested lift.

2.1.2.4 Fill for sewer, storm drain or utility trenches: Every other 12" lift for density requirements as determined by depth of excavation.

NOTE:(A lift will be considered any single layer spread and compacted, regardless of length and size prior to subsequent placement of fill material)

2.2 Subgrade

2.2.1 Limerock Bearing Ratio - Type "B" Stabilization

2.2.1.1 After stabilization and mixing, sample to a depth of 12" minimum for each change of subgrade material, or each section of subgrade with differing amounts of added stabilizing material.

2.2.1.2 Minimum of 2 tests per mile of roadway. No less than 2 determinations shall be made per project.

2.2.1.3 Bearing value shall be determined in accordance with FDOT limerock bearing ratio method, FM5-515.

2.2.1.4 Verify width and depth of stabilization every 200 foot.

2.2.2 Vertical Grade and Horizontal Alignment

2.2.2.1 Verify vertical grade a minimum of every 50 feet in typical crown sections.

2.2.2.2 Verify vertical grade every 25 feet in super elevations or transition sections.

2.2.2.3 Grades shall be within no more than 1/4-inch high and 1/2 inch below design grade.

2.2.2.4 Verify subgrade alignment in the right-of-way, a minimum of every 100 feet.

2.2.3 Density

2.2.3.1 No less than one density determination per 500 feet of subgrade or one per each section of roadway between intersections or between intersections and ends of cul-de-sac roads. Density shall be as specified on design plans, utilizing the proctor sample as modified for the LBR testing.

2.2.3.2 Subgrade densities performed solely for placement of curb shall not satisfy requirements for subgrade density verification prior to

base material placement. Curb densities shall be performed at the same frequency as subgrade densities.

2.2.3.3 Portions of subgrade not worked as a part of overall compactive effort or sections replaced as rework or repair, shall be tested for density and bearing value prior to placement of base rock.

2.3 Base Material

2.3.1 Material Qualification

Material for limerock base shall be from a FDOT approved source, or pre-qualification tests shall be provided indicating conformance to Section 911 of FDOT Standard Specifications.

2.3.2 Vertical Grade and Horizontal Alignment

2.3.2.1 Verify profile grade every 50 feet minimum on typical crown sections utilizing a string line or a template laid perpendicular to centerline, and a 15-foot straight edge laid parallel to centerline.

2.3.2.2 Verify profile grades every 25 feet between the P.C. and P.T in super elevated sections.

2.3.2.3 Grades shall be within 1/4 inch of design profile.

2.3.2.4 Verify alignment in right-of-way and width of roadway a minimum of every 100 feet.

2.3.3 Density

2.3.3.1 Each course - 98% of maximum as determined by AASHTO T-180.

2.3.3.2 No less than one density determination per 500 linear feet of base.

2.3.3.3 Minimum of one density test between intersections or intersection and end of cul-de-sac roads. A minimum of 2 densities per project shall be performed.

2.4 Asphaltic Concrete

(Note: Type “S” asphaltic concrete and Superpave asphaltic concrete shall be produced, inspected and tested, and accepted in accordance with current edition of Section 330 of the FDOT Specification, and archived editions of Section 331 (Appendix IV), 334 (Appendix VII), and 337 (Appendix VIII).

2.4.1 Temperature

2.4.1.1 Verify first five trucks for within $\pm 25^\circ$ of target batch temperature. Corrective action required will be as specified in the FDOT Specification Section 330, or in Archived Sections 331, 334, or 337 as appropriate.

2.4.1.2 Verify a minimum of every fifth (5th) truckload if temperatures remain within tolerance. If tolerance is exceeded, the contractor must perform corrective action and each truck shall be verified until within established temperature range. Asphalt exceeding the range established by FDOT Specifications shall be rejected for use on the project. ("S" mix – 205° to 335° required for acceptance, Superpave – outside of the range of $\pm 30^\circ$ of target temperature for the mix design is rejected.)

2.4.2 Thickness and Profile

2.4.2.1 Manually check loose thickness every 25 feet maximum.

2.4.2.2 Actual thickness - calculate paver yield a minimum of once daily and after each adjustment of the screed, or relocation of the paver, for a length of approximately 1000 lf of roadway. Deficiencies of lb./sq. yd. equivalent to $\frac{1}{4}$ in. of material, as calculated from the specified mix design, require corrective action by the contractor and verification of paver yield until within specified range.

2.4.2.3 Cross slope shall be verified a minimum of each time that paver yield is calculated.

2.4.3 Density

2.4.3.1 Type "S": Initial 500 feet shall be tested by nuclear method to verify adequacy of rolling pattern - minimum 95% of laboratory density for average of three tests. Verify each 500 feet of subsequent placement with a minimum of one density determination

2.4.3.2 Superpave: Density determinations will be in accordance with the supplier's QA program for verification of Lots. A minimum of three cores a day will be obtained for verification of density.

2.5 Concrete

2.5.1 Non-reinforced Concrete

All construction of non-reinforced concrete structures shall be constructed of Class I (Nonstructural) concrete, produced in accordance with FDOT Specifications, Section 347 (2004 Edition). Acceptance testing and inspection of the product shall be in accordance with the specific Specification or Index applicable to the product.

2.5.2 Reinforced Concrete

All construction of reinforced concrete structures shall be constructed of concrete produced in accordance with FDOT Specifications, Section 346. Acceptance testing and inspection of the product shall be in accordance with the specific Specification or Index applicable to the product.

APPENDIX II - SUBGRADE DRAINAGE AND UNDERDRAIN CONSTRUCTION

1.0 General

- 1.1 Plastic materials encountered within a minimum of 24" of the surface of the roadway subgrade shall be removed. Material removed shall be replaced with select material of AASHTO M-145 Soil Classification A-1, A-3 or A-2-4. Removal of organic material shall be performed in accordance with FDOT Index 500, sheet 1 of 2.
- 1.2 Removal of unsuitable material from subgrade area shall be to the profiles exhibited in FDOT Index 500, sheet 1 or 2, as appropriate.
- 1.3 Underdrain to facilitate subgrade drainage shall be installed in accordance with FDOT Index 500, sheet 2 of 2, and FDOT Index 286, using either Type I or Type II design (without the filter fabric envelope), as appropriate. Underdrain shall be constructed in any locations where ground water may rise to within twelve (12) inches of the bottom of the base material. Underdrain designs contrary to FDOT Index 286 or 500 shall be approved by the County Engineer.

2.0 Underdrain Materials

- 2.1 Pipe used in underdrain construction shall be PVC conforming to ASTM D-3033 with perforation conforming to AASHTO M-189. Minimum pipe size shall be 6 inch in diameter and wall thickness shall be Schedule 40.
- 2.2 Fine aggregate used, as filter material shall conform to Section 902-4 of the FDOT Standard Specifications.
- 2.3 Coarse aggregate required for roadway underdrain shall conform to FDOT Standard Specifications, Section 901-2 or 901-3. Gradation shall conform to Grades 4 through 57 of Table 1, Section 901.
- 2.4 Coarse aggregate utilized for basin drainage shall conform to FDOT Standard Specifications, Section 901-2 or 901-3 and Grades 5 or 9 of Table 1.
- 2.5 Filter fabric materials shall conform to FDOT Standard Specifications Section 985 and Table 1 for sub-surface drainage.

3.0 Underdrain Installation

- 3.1 Underdrain trench excavations shall be formed to widths necessary for type of construction required and to such depth that flow lines of drain piping will be a minimum of 42" below the top of curb grade.

- 3.2 Piping shall be bedded on a 1" to 3" layer of filter material with a positive flow to the outfall end through its full length on a minimum grade of 0.1%.
- 3.3 Pipe joints may be made with cemented couplings or slip joints.
- 3.4 Penetrations into inlets shall be grouted both inside and outside of inlet walls with a non-shrink grout.
- 3.5 Clean outs shall be installed at ends of all pipe runs. Each 250' of underdrain shall be accessible by a clean out.

APPENDIX III - ACCESS CONSTRUCTION STANDARDS AND PROCEDURES

1.0 General

- 1.1 This standard applies to the construction of all Class I (residential and agricultural) driveways, bike paths, sidewalks, and drainage connections accessing the County road system, constructed independent of an approved commercial development site or subdivision plan. This shall include access to all single-family homes, duplex, multi-family units (of four or less units), and access to fields for agricultural uses within both incorporated and unincorporated areas of Alachua County.
- 1.2 All driveways or access to county maintained roadways, or modifications to existing driveways on county maintained road, must have a Right-of-Way Connection Permit application approved by the County Engineer prior to installation.
- 1.3 All reference to urban roadways shall mean roadways with curb and gutter construction. Rural roadways shall mean all roadways without curb and gutter.

2.0 Permitting

- 2.1 Application for permits may be obtained from the Office of Codes Enforcement or the Public Works Department. All applicable information on the application must be completed.
- 2.3 The application must be submitted and the proposed location approved prior to the start of any access construction.
- 2.3 The application shall specify the type of construction proposed. The proposed location must be marked in such a way as to clearly indicate the desired location for the driveway, sidewalk, or drainage connection prior to location approval.
- 2.4 Specified construction requirements will be communicated to the permittee, or the specified contractor, once the location is approved.
- 2.5 All driveways, bike paths, sidewalks, and drainage connections constructed under the jurisdiction of a Class I Right-of-Way Connection Permit will require initial and final inspection by the Public Works Department.
- 2.6 A permit application will not be considered completed and approved until all required construction is completed and approved by the applicable County Inspector. Copy of the completed and approved permit may be obtained by sending a stamped, self-addressed envelope to:

Alachua County Public Works

3.0 Location Approval

- 3.1 Desired location shall be marked with spray paint on curb locations and flags or stakes on rural locations. Curb cut locations shall be marked to show total length of actual curb back removal.
- 3.2 Driveway locations will be inspected to determine compliance with the following criteria:
- 3.2.1 The edge of urban driveway connections shall be a minimum of six (6) feet from the property line, at the right-of-way line, or twelve (12) feet from any adjoining driveway at the right-of-way, on local and subdivision roadways. On urban roadways classified as collector or higher, the edge of driveways shall be thirteen (13) feet from the property line, at the right-of-way, or twenty-six (26) feet from adjoining driveways at the right-of-way. Rural driveway connections shall be a minimum of fifteen (15) feet from the property line, at the right-of-way line, or thirty (30) feet from any adjoining driveway at the right-of-way. If a joint use driveway is required or desired, separation may be reduced to zero, both urban and rural.
- 3.2.2 No driveway may be constructed within one hundred fifty (150) feet of the radius return of major intersecting roadways (i.e. collector or higher classification), or signalized intersections. For extenuating circumstances, the applicant shall have the right to request a variance, in writing, from the County Engineer. For all other intersections, no portion of driveway construction may be within the radius return of the intersecting roadways. (NOTE: Radius return is the curved section of curb or edge of pavement in the corner of an intersection.)
- 3.2.3 There shall be no more than two (2) driveway connections to any single property unless the road frontage exceeds six hundred sixty (660) feet. Variances may be granted only upon presentation of an approved traffic engineering study indicating the necessity for additional access.
- 3.2.4 Class I driveway connections shall be no less than ten (10) feet wide and no more than twenty-four (24) feet wide, measured at the right-of-way line.
- 3.2.5 Driveway locations shall be selected so that vehicles entering the roadway and vehicles traveling on the roadway may be visible to each other in adequate time to avoid collision. **Sight Distance For Approach to Stops, Table 3-14, Intersection Site Distance, Figures 3-8 and 3-9 of the**

Florida Green Book, establish minimum sight distance at intersection locations, for various roadway speeds.

- 3.3 Applicants will be notified of location approval or rejection by phone. Any discrepancies noted with the driveway location must be resolved prior to start of construction.

4.0 Urban Driveway Construction

- 4.1 Curb cuts will be made no closer than one foot from joints in existing curb. Ends of transitions within one foot of curb joints require removal of the back of curb up to the existing joint.
- 4.2 Curb cut lengths shall be the driveway width plus three (3) feet at each end for transition width (i.e., width of driveway plus six (6) feet for total length of curb cut), on subdivision and local roads. On collector and arterial roadways, a ten (10) foot flare will be added to each side.
- 4.3 Only the back of curb and radius at gutter line shall be removed. No curb will be cut or removed where valley gutter is already constructed. Damage to curb section adjoining asphalt pavement must be reported to the County Engineer immediately for repair instructions.
- 4.4 Driveway, sidewalk and apron construction will be in accordance with FDOT Index 515, except a three foot (3') transition will be used on all subdivision and local roadway connections. Connections to collector or arterial roadways will use a ten foot (10') flare with 3' or 6' transition as shown on the approved design plans. Contact the County Engineer's office for inspection of the forming prior to placing concrete. All concrete used shall be produced using an approved FDOT Class I non-stress concrete mix design.

5.0 Rural Driveway Construction

- 5.1 All culverts used in driveway construction shall be corrugated steel pipe conforming to AASHTO M-36, or concrete pipe conforming to ASTM C76 (AASHTO M-170). Corrugated polyethylene may be used in conjunction with metal or concrete mitered end sections, in accordance with FDOT Standards.
- 5.2 The County Inspector will determine pipe size and length during location approval. In no case may the pipe be less than 18 inches in diameter (15"x21" CMP oval equivalent, or 14"x23" RCP) nor less than 36 feet in length. Each end will also have 4:1 mitered end sections and, will have concrete collars constructed. Diameter of pipe will be determined by evaluation of drainage

requirement of the swale section at the driveway location. Total pipe length will be determined by driveway width, type of traffic, and swale configuration.

- 5.3 Construction of driveways requiring culverts will be in accordance with FDOT Index 515. Mitered end collars shall be constructed of FDOT Class I non-stress concrete.
- 5.4 Driveways connecting to rural highway sections, with no defined swale, or at roadside drainage breaks, may be constructed as ditch blocks (fill with no pipe). The County Inspector will determine if ditch block construction is appropriate at time of location approval.
- 5.5 Construction of ditch block driveways will be in accordance with profiles shown in FDOT Index 515, except that no pipe will be required.
- 5.6 All areas of the right-of-way disturbed by construction of the connection will be regraded to conform to plan and profile views depicted in FDOT Index 515, and sodded, with the exception of the actual driving surface. Contact the Office of Inspections for inspection and release of completed driveway.

6.0 Bike Path and Sidewalk Construction

- 6.1 Asphalt bike paths and sidewalks shall be constructed with a minimum of 4" of limerock and 1" of asphalt surfacing. Minimum width shall be 5'.
- 6.2 Concrete bike paths and sidewalks shall be a minimum of 4" thick and shall be constructed of FDOT Class I non-stress concrete. Sections of bike path or sidewalk subject to vehicular traffic shall be a minimum of 6" thick, (i.e. driveways). Contraction joints shall be cut at 30' intervals with tooled dummy joints each 10' in-between. Minimum width shall be 5'.
- 6.3 Curb cut ramps on curb and gutter roadways shall be in accordance with FDOT Index No. 304.
- 6.4 Asphalt bike path and sidewalks intersecting rural type roadways shall have a minimum of 6" of limerock for a distance of 10' from the roadway, with a 3' flare each side. Concrete bike paths and sidewalks shall be a minimum of 6" thick for a distance of 10' from the roadway, with a 3' flare each side. Topography adjacent to the connection may require addition of culverts for drainage considerations. If required, culvert pipe construction will be equivalent to the driveway construction requirements, with a minimum of 5' of flat area each side of the bike path/sidewalk at the pipe crossing.
- 6.5 All bike path and sidewalk construction in the County right-of-way shall be permitted by issuance of a Construction Permit and Right-of-Way Connection Permit prior to construction.

7.0 Rights and Privileges of the Permittee

- 7.1 Approval of a Right-of-Way Connection permit by the County Engineer does not constitute approval of any other construction in the road right-of-way. Any other construction, other than installation of a standard mailbox conforming to U.S. Postal Service Standards and FDOT Index No. 532, requires specific written approval of the County Engineer.
- 7.2 Some of the construction specifically prohibited without written approval includes signs, fences, brick mailbox structures, brick wall entrances, lighting and related electrical wiring, irrigation and related hardware and lines, and vertical wall culvert end treatments.
- 7.3 Future maintenance responsibilities of Alachua County are restricted to replacement of culverts and replacement of the surface area within five feet from the edge of rural roadways. Damaged or improperly constructed urban driveway aprons will be the responsibility of the owner/permittee.

APPENDIX IV - PRIVATE LANDSCAPING, WATERLINES AND ELECTRIC LINE INSTALLATIONS IN COUNTY RIGHT-OF-WAY

1.0 General

- 1.1 All landscaping and privately maintained water and electric lines in County maintained rights-of-way shall be controlled through the completion of a Right-of-Way Use Permit (Attachment I). Liabilities assigned by permit and statutes will be in effect. Repair of any damage to roadway or right-of-way resulting from permitted work or installation shall be the responsibility of the permittee.
- 1.2 The Permittee will not perform landscaping and installation of private facilities prior to approval of the permit. Depiction of the facilities on approved subdivision construction plans does not constitute approval of the installation of any portion of systems that will not be maintained by the jurisdictional utility company.

2.0 Irrigation Systems

- 2.1 Water line crossings beneath roadways will be encased in 4" 0 SCH 40 PVC conduit extending a minimum of 5 feet from the edge of pavement or back of curb. Casings shall be a minimum of 36 inches below edge of pavement surface, installed 90° to roadway centerline. Installation during new construction shall be prior to roadway stabilization and coordinated with the roadway contractor. Subsequent installation shall be by jack and bore.
- 2.2 All primary water lines shall be SCH. 40 PVC, installed 36 inches below pavement and 30 inches below ground surface outside of roadway crossing. Primary water lines shall be installed 90° to right-of-way line.
- 2.3 Primary water lines shall have an accessible cut off valve located adjacent to the water main tap. All meters, electrical devices, back-flow preventers, etc., shall be installed at the back of the right-of-way, or out of the right-of-way.
- 2.4 Secondary irrigation lines may be installed within the landscaped area at a minimum depth of 12 inches. Pop-up sprinkler heads must be utilized within any mowable area. However, in no case may sprinkler heads nor secondary lines be installed within 5 feet of the back of roadway curb or on the front slope and ditch bottom of swale sections. No sprinkler heads or secondary piping may be installed in areas subject to routine maintenance by heavy equipment.
- 2.5 Installation of secondary piping and sprinkler heads in landscaped areas may only be accomplished after installation of all public utility systems, unless specific agreement is coordinated or alternate easements are provided for subsequent utility installations.

- 2.6 Irrigation systems that are designed to direct water spray over sidewalks; bike paths or roadways shall not be authorized for construction in public right-of-way or on private property.

3.0 Electric Lines And Lighting

- 3.1 All electrical crossings beneath roadways will be encased in SCH. 40 PVC conduit extending a minimum of 5 feet from the edge of pavement or back of curb. Casings shall be a minimum of 36 inches below the edge of pavement surface, installed 90° to roadway centerline. Installation during new construction shall be prior to roadway stabilization and coordinated with the roadway contractor. Subsequent installation shall be by jack and bore.
- 3.2 Electrical service lines installed in the right-of-way, outside of the roadway crossing, shall be a minimum of 30 inches below ground level, traversing at 90° to the right-of-way line.
- 3.3 All electrical meters, junction boxes, switches, transformers, etc., shall be located at the right-of-way line or outside of the right-of-way.
- 3.4 Standard and low voltage lighting systems may be installed in planted areas only. Standard (120 VAC) electric lines shall be a minimum of 30 inches deep and low voltage lines (I.E. 12V. DC) shall be a minimum of 12 inches deep, all within the planted areas only.
- 3.5 Lighting fixtures may be installed within the planted areas only. No light fixtures may be installed in the mowable landscape area. Installation shall occur after all permitted utilities are installed unless specific agreement is coordinated or alternate easements are provided for subsequent utility installations.
- 3.6 No lighting may be installed which will direct light toward any vehicular traffic, either on roadways or bike paths, or which may create a nuisance to adjoining properties.

4.0 Landscape Area Locations And Landscape Island Construction

- 4.1 Landscaped islands in roadways must be a minimum of 10 feet wide from back of curb to back of curb. Islands must be constructed with curb and gutter around the perimeter.
- 4.2 Prior to approval for landscaping, islands in roadways must have had subsoil evaluation performed for determination of drainage requirements based on subsoil characteristics. Impervious or poorly drained soils will require engineered drainage for removal of excess water. Required evaluation and drainage design shall be performed as a part of the development review process for approval.

- 4.3 Landscape plantings (other than sod) within 5 feet from the back of curb and gutter, and 5 feet from back of ditch bottoms in swale sections, shall be approved prior to installation.
- 4.4 No rocks, boulders, railroad ties, timbers, walls, fences, signs or other structures may be installed in the right-of-way with the exception of signs in the entrance island. Design of entrance signs in the entrance island must be approved by the County Engineer, and permitted by the Office of Code Enforcement, prior to construction, and be included in permitted landscape plans.
- 4.5 All irrigation and lighting installations necessary to serve landscaped areas and islands shall meet criteria established herein and shall be approved by permit prior to any installation.
- 4.6 Landscape plantings of areas in the right-of-way, which are designated for utility service locations, shall occur after installation of the affected utilities unless specific agreement is coordinated or alternate easements are provided for subsequent utility installations.

5.0 LANDSCAPE PLANTING AND LANDSCAPE DESIGN

- 5.1 Landscape plans shall be included in permits for irrigation and lighting. Landscape plans shall be approved prior to any planting.
- 5.2 Vegetation shall be considered for height of growth, root system, degree of maintenance and expected trunk growth size. No vegetation will be approved which may become a sight distance hazard, damage roadway areas, or become a hazard to the traveling vehicle.
- 5.3 Landscape plan presentation shall include anticipated height of growth for annuals and perennials. Trees, shrubs and bushes desired shall show height of growth, crown size, root spread in relation to the crown and trunk size at maximum growth.
- 5.4 No trees with horizontal spreading root systems may be installed in entrance islands. Any trees, such as palms, which may be planted in entrance islands must be maintained and trimmed to 16-foot vertical clearance over the roadway.
- 5.5 Tree plantings in other locations of the right-of-way must meet clear zone and sight vision criteria. No trees shall be planted beneath overhead power lines, or in the radius of connections to collector roads. Tree plantings on collector roads shall be no closer than 30 feet from the edge of travel lanes without specific approval of the County Engineer.
- 5.6 Trees identified in the Unified Land Development Code shall be used for consideration of location and type of tree plantings.

APPENDIX V

ALACHUA COUNTY PUBLIC WORKS UTILITY ACCOMMODATION GUIDE

Alachua County Public Works intends to utilize the Florida Department of Transportation (FDOT) Utility Accommodation Manual for installation guidelines, to the greatest extent possible. This guide shall be utilized to provide exceptions to the referenced FDOT standards.

The following items are exceptions to the FDOT Utility Accommodation Manual:

PERMITTING

- 1.) Applications shall be submitted on the Utility Permit form, Appendix A.
- 2.) Permit applications shall be accompanied by the appropriate fee as established by resolution of the Board of County Commissioners.
- 3.) All reference to the Local Maintenance Engineer, the District Maintenance Engineer, or the District Permit Engineer shall be understood to mean the County Engineer.
- 4.) All permits submitted for approval shall be originals, in triplicate.
- 5.) Pictures of the proposed work are not required, unless specifically requested during the approval review process.
- 6.) Emergency repair, initiated to protect life and property, may be initiated immediately and the County Engineer, or his designee, shall be notified immediately. A permit application must be initiated the following business day.

NON-COMPLIANCE

- 1.) Permit non-compliance will be addressed in accordance with the Utility Installation Ordinance.

ACCOMMODATION STANDARDS

- 1.) Permits for installations on rights-of-way designated as “Scenic Roads”, by act of the Board of County Commissioners, shall conform to all stipulations of the respective Ordinance for utility installations.
- 2.) Clear recovery zone dimensions shall be governed by the FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Green Book) when dimensions reflected in the Accommodation Manual are less restrictive.

PAVEMENT CUTTING

1.) Cutting of the asphalt surface of an existing County maintained roadway will only be allowed in extenuating circumstances. Pavement cuts that are allowed shall have the asphalt surface replaced within 24 hours, with open cut restoration performed in accordance with FDOT Index No. 307, most current edition, using the flowable fill option. Thickness of limerock base may be replaced with Type "S" asphaltic concrete at the rate of 2.5" of asphalt for 6" of limerock base.

LOCATION CRITERIA

1.) All underground installations shall be placed parallel to the roadway, or right-of-way, as far back from the edge of the roadway as possible. Congestion due to existing facilities will not be grounds for approval of any installation detrimental to the roadway integrity.

2.) No underground utilities, installed parallel to the roadway, shall be installed in the shoulder area of a rural roadway or within 4' of the back of curb on a curb and gutter roadway.

UNDERGROUND CROSSINGS

1.) Underground crossings of existing roads may be installed by jacking, boring, or directional bore. Directional boring will be restricted from areas known to contain flint rock of enough concentration to deflect the true plane of the installation. Crossing of existing roadways with any pressurized line will require that the utility line be placed in a casing. On new construction, all service lines of any utility will be in a casing, however water mains may be installed without a casing when the main is constructed of ductile iron pipe (DIP).

2.) All crossings installed either by direct bury or by boring, will have the ends of the casing no closer than 8' from the edge of the pavement on rural roads with paved shoulders, 13' on rural roads without a paved shoulder, and no closer than 5' from the back of the curb on a curb and gutter roadway. Casing lengths may be required to be longer in order to facilitate known future widening or reconstruction. All jacked, bored, or directional bored crossings are subject to require pressure testing to a minimum of 20 psi for 24 hours, prior to the installation of the utility line, if there are any concerns about the integrity of the casing after installation.

3) Alachua County Construction Inspections shall be notified 24 hours prior to the start of a roadway crossing by directional bore or by jack and bore. The assigned inspector and the utility contractor making the crossing shall meet on site prior to the excavation of any bore pits. The area shall be evaluated to prevent damage to any underground drainage structures, under drain, sidewalk, or any other structural portion of the roadway.

ACCESS TO UTILITY FACILITIES

1.) Any utility facility which requires frequent access, such as communication huts, lift stations, junction boxes, or any other similar facility, shall have permanent driveway access constructed. Such driveway access shall be permitted in accordance with the Alachua County Access

Management Ordinance prior to construction.

THIS DOCUMENT MAY BE REVISED AS NECESSARY IN ORDER TO PROMOTE TECHNOLOGY, ADDRESS SITE SPECIFIC CIRCUMSTANCES, OR TO IDENTIFY FURTHER DIFFERENCES WITH THE FDOT UTILITY ACCOMMODATION MANUAL AS THEY OCCUR OR ARE IDENTIFIED.

CURRENT DATE OF THIS REVISION NO. 2 IS AUGUST 1, 2002.