Camden County Development Regulations

Updated February 2017

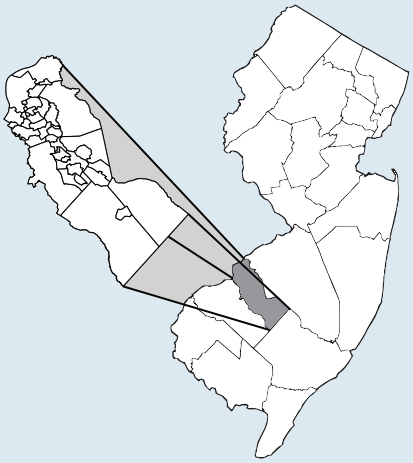
camden county

Making It Better, Together

GENERAL MEETING SCHEDULE OF THE CAMDEN COUNTY PLANNING BOARD

All meetings will convene at 6:00 PM on the 4th Tuesday of each month and will be held in the large conference room at:

The Charles J. DePalma Public Works Complex
2311 Egg Harbor Road
Lindenwold NJ, 08021



Planning Board Members

George W. Jones, Chairman
Daniel P. Cosner, Vice Chairman
Thomas Schina, Member
Joseph Pillo, Member
Thomas Bock Jr., Member
Ryan Dorin, Member
Alexis M. Williams, Member
Kevin Becica, County Engineer
Susan Shin Angulo, Freeholder
Carmen G. Rodriguez, Freeholder Alternate

Andrew Levecchia, Director of Planning
Carol Sigman, Planning Secretary

Camden County

Subdivision and Site Plan Review

Procedures, Engineering and Planning Standards

Volume 1 –Application Review and Approval Procedures

Camden County Planning Board
May 2014
Revised May 2015

INTRODUCTION

TITLE

This document consists of application, review, approval procedures and engineering and planning design standards and shall be officially titled, cited and referred to as the "Camden County Planning Board Development Regulations" (Regulations).

PURPOSE

The purpose of these Regulations is to:

1. Provide procedures, rules and design standards for Camden County Planning Board review and action on **all** proposed subdivisions of land and site plans requiring County Planning Board approval in accordance with NJSA 40:27, et seq., County Planning Act and N.J.S.A. 13:18-1et seq., Pinelands Protection Act.

2. Provide Standards to ensure that land development throughout the County is consistent with the goals and objectives of the County Comprehensive Plan and all of its elements.

3. Provide coordination of land development applications with various State, regional, County and municipal regulatory entities to ensure a consistent and reliable review process.

4. Provide standards for the assessment of an applicant's fair share of the cost of improvements required by the development of land.

APPLICABLE LAWS

The authority to review and approve subdivision and site plan applications detailed in these regulations is provided by the New Jersey County Planning Act NJSA 40:27-6.2, et seq. and NJSA 40:27- 6.6, et seq.

Other state laws which govern county and other jurisdictions containing provisions for implementing the New Jersey County Planning Law include:

New Jersey Municipal Land Use Law – NJSA 40:55D-37, et seq.
New Jersey Map Filling Law – NJSA 46:23 – 9.8
New Jersey Uniform Construction Code – NJSA 5:23-2.15
County Roads and Highways – NJSA 27:16-31
New Jersey Open Public Meeting Law – NJSA 10:4-6

ADOPTION AND ADMINISTRATION

These Regulations shall be adopted by the Camden County Board of Chosen Freeholders and shall be administered by the Camden County Planning Board in accordance with NJSA 40:27-6.2, et seq. and NJSA 40:27- 6.6, et seq.

These Regulations shall take effect immediately after adoption by the Camden County Board of Chosen Freeholders. These Regulations shall apply to all subdivision and site plan applications which have not received approval prior to the effective date of these Regulations.

Camden County Development Review Committee

The Camden County Planning Board relies on the Camden County Development Review Committee to review and provide administrative actions on subdivision and site plan applications. The Committee shall consist of two (2) members of the Camden County Planning Board appointed by the chairman of the Planning Board, the County Planning Director and the County Engineer.

Administrative actions taken on behalf of the Camden County Planning Board are limited to the acceptance of revised subdivisions and site plans, letters of no impact, waivers and exempt from approval actions.

Municipal Approvals

The municipal approving authority shall not issue final approval to a subdivision or site plan requiring Camden County Planning Board approval until said subdivision or site plan has received final Camden County Planning Board approval.

The municipal agency or official authorized to issue building permits shall not issue such permits for structures resulting from a subdivision or site plan requiring Camden County Planning Board approval until said subdivision or site plan has received final approval from the Camden County Planning Board.

APPLICABILITY

Subdivisions that require Camden County Planning Board **review:**

The following subdivisions of land shall be submitted to the Camden County Planning Board for review:

- All subdivisions within Camden County
- All subdivisions outside of Camden County that are within 200 feet of the County boundary
- Major subdivisions within a municipality that is contiguous to Camden County which would adversely affect Camden County roads, drainage facilities and structures.

Subdivisions that require Camden County Planning Board **approval**:

The following subdivisions of land shall be submitted to the Camden County Planning Board for approval:

- All subdivisions that abut a County road
- All subdivisions that abut a County drainage structure
- Subdivisions that do not abut a County road or drainage structure but affect the safety and efficiency of a County road or drainage structure through an increase in traffic
- Subdivisions that do not abut a County road but where stormwater drainage from the subdivision flows to a County drainage structure or facility

Site Plans that require Camden County Planning Board **review:**

The following site plans shall be submitted to the Camden County Planning Board for review:

- Site plans that abut a County road
- Site plans that abut a County drainage structure or facility
- Site plans that abut a County road for a change of use to the existing structures
- Site plans that abut a County road or drainage facility for proposed one (1) – four (4) family residential units and appurtenances

- Site plans that abut a County road or drainage structure for a building addition, expansion or alteration which results in a significant increase in traffic or that modifies or changes any driveway that connects to a county road
- Site plans that do not abut a County road or drainage structure that includes one (1) or more acres of impervious surfaces
- Site plans that do not abut a County road or drainage structure that contain less than one (1) acre of impervious surfaces which will affect the safety and efficiency of a county road or drainage structure
- Site plans within municipalities contiguous to Camden County which adversely affect Camden County roads and drainage structures.

Site Plans that require Camden County Planning Board **approval:**

The following site plans shall be submitted to the Camden County Planning Board for approval:

- Site plans that abut a County road
- Site plans that abut a County drainage structure or facility
- Site plans that do not abut a County road or drainage structure that includes one (1) or more acres of impervious surfaces
- Site plans that abut a County road or drainage structure or contain one (1) acre or more of impervious surfaces for proposed commercial, industrial, multifamily structures containing five or more units or any other land development requiring off-street parking
- Site plans that **do not** abut a County road or drainage structure or contain one (1) acre or more of impervious surfaces for proposed commercial, industrial, multifamily structures containing five or more units or any other land development requiring off-street parking
- Site plans that do not abut a County road or drainage structure but where stormwater drainage from the site is directed to a county drainage structure or facility
- Site plans that do not abut a County road or drainage structure but affect the safety and efficiency of a county road or drainage structure through an increase in traffic

TYPES OF APPROVAL GRANTED FROM THE CAMDEN COUNTY PLANNING BOARD

The following types of approval are granted form the Camden County Planning Board

For **Subdivision** requiring **review:**

- Letter of no impact to County roads or drainage facilities (Waiver)
- Exempt form approval

For **Subdivisions** requiring **approval:**

- Camden County Planning Board Approval - **Final approval** is granted once County Planning Board staff has determined that all engineering requirements have been satisfied.

For **Site Plans** requiring **review:**

- Letter of no impact to county roads or drainage facilities (Waiver)
- Exempt form approval

For **Site Plans** requiring **approval:**

- Camden County Planning Board Approval – **Final approval** is granted once County Planning Board staff has determined that all engineering requirements have been satisfied.

***** Note** - Any application that requires **approval**, **must** receive an approval letter from the Camden County Planning Board before any construction or development takes place. Applicants proceeding to construction without the proper Camden County Planning Board approval are subject to a $500 penalty. Additional penalties of $500 will be imposed on those applicants that are not compliant with these regulations.

APPLICATION PROCEDURES

Pre- Application Meeting

Prior to submitting a formal application to the Camden County Planning Board all applicants and/or their representatives are encourage to request a meeting with Camden County Planning Board staff, in order to expedite the application process. Pre- application meetings will be scheduled only when Camden County Planning Board staff determines that a meeting is warranted.

The purpose of such a meeting is to:

- Inform the applicant of the administrative, technical and procedural requirements
- Review the application and submission requirements with the applicant
- Determine the type and scale of the proposed development
- Review the design standards and potential requirements as they pertain to the county highway system and drainage facilities
- Review surrounding development plans to coordinate roadways, driveways, and drainage facilities
- Review and discuss the general design of the project
- Inform the applicant of environmentally sensitive areas
- Coordinate requirements with local and state officials when applicable

Information items that should be provided prior to or on the day of the pre-application meeting should include but not be limited to:

- Name of the applicant
- Name of the project
- Site location including address, block and lot number
- Size and type of the existing and proposed land use
- Traffic impact of such development
- Stormwater and drainage impact of such development
- Volume and rate of stormwater flow from the proposed development
- Anticipated date of construction and build out

The Camden County Planning Board and Development Review Committee shall not be bound by any recommendations and or advisory comments made by staff of the Camden County Planning Board during a pre-application meeting.

SUBMITTING THE APPLICATION

Contents of Application Package

All applications submitted to the Camden County Planning Board must be sent to:

Camden County Planning Board
Division of Planning
Charles J. DePalma Complex
2311 Egg Harbor Rd.
Lindenwold, New Jersey 08021

Types of Submissions

- New Application: Subdivision (both major and minor) or Site Plan
- Revision of Prior Application
- Resubmission of Part of a major subdivision

Administrative Completeness Review

Staff of the Camden County Planning Board reviews all applications for administrative completeness. All application packages must include but are not limited to the following:

- Two (2) copies of a fully completed Camden County Planning Board application signed by the applicant or their agent or representative
- Two (2) copies of a fully completed Submissions Requirements Checklist
- Two (2) copies of a fully completed Affidavit of Ownership
- Two (2) copies of a fully completed Fee Schedule
- A check made to the Camden County Treasurer in the amount of the appropriate fees

Any application received that does not include these documents, the correct number of copies or incomplete information will be deemed incomplete and therefore will not be reviewed or heard by the Camden County Planning Board until such time when the application is completed.

Specified Time for Administrative Completeness review

Within thirty (30) business days of receipt of a Planning Board application staff will notify the applicant, representative, or agent of any items that must be submitted to satisfy the requirements for administrative completeness.

Failure to Submit Items Required for Administrative Completeness

If the applicant or their agent or representative fails to submit the required items for administrative completeness within 90 days of the date of notification of the items that must be submitted, the incomplete application package will be voided and discarded and all fees will be forfeited.

Review of Application Package for Determination of Technical Completeness

Technical requirements vary for the type of application being submitted. The following requirements are for:

Subdivision applications (both minor and major) must include but are not limited to the following:

- One (1) copy of the Municipal/Township Application
- One (1) set of plans
- One (1) copy of Pinelands Certification of Filing (where applicable)
- Two (2) sets of a Traffic Impact Study (Major subdivision with new streets connecting to County Highways)

Site Plan applications must include but are not limited to the following:

- One (1) copy of the Municipal/Township Application
- Two (2) Sets of Signed and Sealed Plans (Which reflect all requirements contained in Chapter 2 of this publication.)
- Two (2) sets of Drainage Calculations (Data based upon 10 YEAR – PRE and a 25 YEAR POST Year Storm Event)
- Two (2) Sets of Traffic Impact Study (If applicable)
- One (1) Copy of Pinelands Certificate of Filing (If applicable)
- One (1) Copy of Local Engineer's Report
- Two (2) Copies of a signed and sealed survey conducted by a licensed surveyor if existing conditions are referenced in accordance with N.J.A.C. 13:40-7.2 (a.)1
- All Dedications, Easements, Deed, etc…

Specified Time to review for Technical Completeness

Within thirty (30) days of receipt of a completed application staff will notify the applicant, representative, or agent of any items that must be submitted to satisfy the requirements for technical completeness as defined in this section. If the Camden County Planning Board fails to notify the applicant, its representative or agent of the items that must be submitted to satisfy the application for technical completeness within thirty (30) days, the application is deemed technically complete and the Camden County Planning Board must take action on the application within this same 30 day period.

REVIEW, APPROVAL AND RECORDING PROCEDURES

Types of Subdivisions:
The Camden County Planning Board recognizes two types of subdivisions of land. They are minor and major subdivisions.

A Minor subdivision of land is defined as any division of land that is:

- 3 or less lots
- Does not contain any new streets connecting to a county road/s
- Does not represent partial development of a larger tract in single ownership

A Major subdivision of land is defined as any division of land that is:

- Greater than 3 lots
- Contains a new street/s connecting to a county road/s

Subdivision Review and Approval Procedures

General Requirements

Submissions shall be made by the applicant or through the appropriate municipal approving authority and shall conform to the details outlined in the section of these procedures titled Application Procedures.

Subdivision review requires three (3) submissions in sequence, as follows:

- Preliminary Plan
- Final Development Plan
- Filing Plan

All plan submissions shall conform to the Subdivision Submission Details section of these procedures.

Approval of a final development plan represents authorization to submit a filing plan for approval in accordance with the requirements of the New Jersey Map Filing Law. Submission of a final development plan and a filing plan may be concurrent.

Exemptions

The following divisions of land are exempt from these subdivision procedures pursuant to NJSA 40:55D-7, provided that no new streets or roads are proposed. Please note that a subdivision that is exempted does not need to go through the application process.

- Divisions of land for agricultural purposes where the resulting parcels are five (5) acres or larger in size.
- Divisions of property by testamentary or intestate provisions
- Divisions of property upon court order
- Consolidation of existing lots by deed or other recording instrument and
- The conveyance of one or more adjoining lots, tracts or parcels of land, owned by the same person or persons and all which are found and certified by the administrative officer to conform to the requirements of the municipal development regulations and are shown and designated as the municipality.

The term “subdivision” shall also include the term “re-subdivision”.

Subdivision Waiver

In certain instances, the requirement of submission of a Final Development Plan may be waived. An applicant may proceed directly from Preliminary Plan approval to Filing Plan under the following circumstances:

- For subdivisions that **do not abut** a county road or drainage structure and:

    - Will create less than three (3) lots to be used only for construction of single family detached residence
    - Do not exceed more than three (3) acres in size
    - Do not create an indirect adverse effect on a County road or drainage facility and,
    - Does not represent the partial development of a larger tract in single ownership.

- For subdivisions that **abut** a County Road or drainage structure and:

    - Will create less than three (3) lots to be used only for construction of single family detached residence
    - Do not exceed more than three (3) acres in size

- Consists of not more than three (3) single family detached residences with circular, semicircular or a turnaround driveway to prevent motorists from backing onto the county roadway.
- Will not have an adverse effect on County roads or County drainage facilities.
- Will not have an adverse traffic increase on the County road.
- Does not represent the partial development of a larger tract.

For all subdivisions abutting a County road, that have been waived from full subdivision review, the Preliminary Plan shall depict any proposed additional County Rights-of-way as established by the County Transportation Master Plan and County Road Design Standards contained herein.

Subdivision Review and Approval Procedures

Minor Subdivisions

A minor subdivision shall contain the plat details set forth in these regulations and shall be accompanied by the information that is necessary to properly assess impacts on county roads, county drainage structures and facilities. The Camden County Development Review Committee will not take formal action on a minor subdivision application that does not contain sufficient plan details or is not accompanied by the information that is necessary for the Camden County Development Review Committee to determine impacts on county roads, county drainage structures and facilities.

After a review of the application and supporting documents upon advice of the Camden County Development Review Committee, the County Planner or designated staff shall take action on application for minor subdivisions as indicated below:

- Minor subdivisions that **do not abut** a county road or drainage facility will be granted:

    - A **waiver** from approval.

    Waiver from approval will be indicated in letter issued by the Camden County Planning Director or designated staff and forwarded to the municipal approving authority, the applicant and their authorized representative.

- Minor subdivisions that **abut** a county road or drainage facility require approval by the Camden County Planning Board and will be forwarded to the Board for approval. Minor Subdivision applications may be required to provide additional information that includes but is not limited to:

- Physical features
- Design constraints
- Impacts of increased traffic
- Impacts of increased stormwater

Additional information required for review shall be indicated in a letter, email or phone correspondence by the Camden County Planning Director or designated staff and forwarded to the municipal approving authority, the applicant, the applicant's attorney or applicants authorized representative.

The Camden County Planning Board upon advice of the Camden County Development Review Committee, the County Engineer and/or County Planner may take the following actions on applications for minor subdivisions as indicated below:

- **Disapproval**

  Reasons for disapproval of a minor subdivision may include but are not limited to:

  - The subdivision is substantially inconsistent with the provisions of these regulations
  - The subdivision results in adversely affecting the safety and free flow of traffic traveling on a county road or drainage facility.
  - Driveways are not shown to maximize sight distance or to limit or eliminate conflicts at or along the county road and do not meet the sight distance standards contained in these regulations.
  - Subdivision creates an adverse drainage condition along a county road, drainage structure or facility.
  - Information contained on the subdivision plat, application form, or in accompanying studies, analyses or other supportive documents is found to be inaccurate or false

Upon a decision of the Camden County Planning Board disapproving a subdivision, the reasons for disapproval shall be reported in letter by the Camden County Planning Director or designated staff and shall be forwarded by certified mail to the municipal approving authority, the applicant, and the applicants authorized representative.

- **Approval**

  Conditions of final approval may include but are not limited to the following:

  - Revisions of the subdivision plat to meet the Subdivision Submission Details as outlined in these regulations.
  - Revisions of the subdivision plat to conform with provisions outlined in these regulations known as “Design Standards” such as:
    - Rights-of-way and Easements
    - Access Design Standards
    - Public Rights-of-Way –Residential and Non – Residential
    - Multi- Family Residential or Non Residential Driveways
    - County Road/ Traffic Design Standards
    - County Storm Water Management
    - Landscaping
    - Traffic Signal
  - Revision of the subdivision plat to add, delete or modify notes on the plat
  - Revision of the subdivision plat to show land preservation easements
  - Submission of a deed of easement to the County of Camden for the maintenance and reconstruction of a county drainage structure, dedication of a road Right-Of-Way to be used in accordance with the Camden County Transportation Plan, and for the dedication of a sight triangle or drainage easement.
  - Posting of a performance guarantee pertaining to the satisfactory installation of improvements to a county road and/or county drainage structure.

Upon a decision of the Camden County Planning Board approving a minor subdivision, Camden County Planning Director or designated staff will issue a letter stating such approval to the municipal approving authority, the applicant, and the applicants authorized representative.

Major Subdivisions

All major subdivisions are subject to review by the Camden County Development Review Committee, County Engineer and County Planner. Such review will be in accordance with the procedures and engineering and planning standards outlined in this manual. The review is subject to those items provided for in NJSA 40:27 - 6.2.

A major subdivision shall contain the plats or schematic plans, preliminary plans and final plats details as set forth in these regulations. The Camden County Development Review Committee will not take formal action on a major subdivision application that does not contain sufficient plan details or is not accompanied by the information that is necessary for the Camden County Development Review Committee to determine impacts on county roads, county drainage structures and facilities.

After a review of the application and supporting documents, upon advice of the Camden County Development Review Committee, the County Planner or designated staff shall take action on an application for major subdivisions as indicated below:

- Major subdivisions that **do not** affect a county road, county drainage structure or county drainage facility and are not subject to the parameters outlined in NJSA 40:27-6.2 proceed as follows:

    - Upon receipt of a completed application and a staff review including review by the County Engineer and County Planner the applicant will receive a letter of **"no impact"** and can proceed directly from Preliminary submission to Filing Plan

      Included in the **"no impact"** letter may be additional advisory comments and recommendations relative to goals, objectives and policies contained in the Camden County Comprehensive Plan and to promote sound planning practices.

- Major subdivisions that **abut** a county road or drainage facility require approval by the Camden County Planning Board and will be forwarded to the Board for approval. Major Subdivision applications may be required to provide additional information that includes but is not limited to:

    - Physical features
    - Design constraints
    - Impacts of increased traffic
    - Impacts of increased stormwater

Additional information required for review shall be indicated in a letter, email or fax correspondence by the Camden County Planning Director or designated staff and forwarded to the municipal approving authority, the applicant, and the applicant's attorney or authorized representative.

The Camden County Planning Board upon advice of the Camden County Development Review Committee, the County Engineer and County Planner may take the following actions on applications for major subdivisions as indicated below:

- **Disapproval**

  Reasons for disapproval of a major subdivision may include but are not limited to:

  - The subdivision does not provide reverse frontage on the county road
  - The subdivision does not provide a service road or marginal access road along the county road
  - The width of the county road right-of-way shown on the subdivision plan is not consistent with the Camden County Transportation Element of the Comprehensive Plan
  - Roads and driveways that intersect the county road are not designed or aligned in accordance with Camden County design criteria and standards
  - The subdivision is substantially inconsistent with the provisions, design criteria and design standards of these regulations
  - The safety and efficiency of traffic traveling on a county road or on a county drainage structure would be adversely affected as a result of the subdivision
  - Driveways are not shown to maximize sight distance along the county road or limit or eliminate conflicts at the county road and do not meet the sight distance standards contained in these regulations.
  - Stormwater drainage from subdivision would adversely affect a county road, drainage structure or facility
  - Information on the subdivision plans, application form or contained in the accompanying studies, analysis or other supportive documents is found to be erroneous

Upon a decision of the Camden County Planning Board disapproving a major subdivision, the reasons for disapproval shall be reported in a letter by the Camden County Planning Director or designated staff and shall be forwarded by certified mail to the municipal approving authority, the applicant, and/or authorized representative.

- **Approval**

  After review of the application, supporting documents and any additional requested information the County Engineer or designated staff member will issue a report outlining the conditions needed by the applicant to meet compliance with the Camden County Development Regulations: Design Standards for the following generalized subject areas, but not limited to:

  - Rights-of-way and Easements
  - Control of Access to County Roads and Access Design Standards
  - County Road Design
  - County Storm Water Management Systems Design Criteria and Design Standards
  - Landscaping along County Roads Design Standards
  - Traffic signal Design Standards
  - County Bridge or Culvert Construction/ Reconstruction Design Standards

  The report, outlining the conditions for approval, will be forwarded by mail, email or fax correspondence by the Camden County Engineer or designated staff to the municipal approving authority, the applicant, the applicant's attorney or authorized representative. Final approval for subdivisions will not be granted until all conditions are satisfied.

  Conditions of final approval may include but are not limited to the following revisions of the plans:

  - Provide reverse frontage for lots along the county road with no direct access to the county road
  - Provide marginal access roads or service roads to limit direct access to the county road
  - Show shared driveways

- Provide improvements to county roads and drainage systems and drainage structures and drainage facilities in accordance with county design criteria and design standards or as required by the County Engineer
- Show roads and driveways located to maximize sight distance and to meet sight distance standards outlined in these regulations
- Show the new subdivision roads connected only to an adjacent municipal road not the county road
- Limit turning movements at the proposed subdivision road intersection at county roads
- Show one-way circulation for streets that intersect county roads
- Show the clearing of sight lines along the county road
- Provide improvements to roads and drainage systems not owned or maintained by the county to mitigate development impacts to a county owned road, drainage system or facility
- Show driveways designed to allow vehicles to turn around on-site so that vehicles are not forced to back out onto a county road.
- Show that corner lots along a county road will have access only to the adjacent municipal road, not to the county road
- Show the relocation of utility poles and equipment
- Show landscaping along the county road
- Show the county road rights-of-way located in accordance with the Camden County Transportation element of the Comprehensive Plan and rights-of-way and easements as required accommodating improvements necessitated by the development or as required to accommodate improvements contained in the Camden County Capital Improvement Program.
- Show easements for maintenance and reconstruction of county drainage structures, facilities, county road drainage systems and traffic facilities
- Show sight triangle easements in accordance with design standards
- Show the reservation of land for proposed county facilities
- To add, delete or modify notes on the plan
- Show farmland preservation easements
- Submissions of construction plans and details for off-site/off-tract road and/or county drainage structures improvements.

Before final approval is granted additional submissions may be requested which include, but are not limited to:

- Submission of permits and/or approvals from other government agencies or authorities that pertain to county review, approval or the installation of improvements affecting a county road or county drainage structure
- Submission of a letter(s) from affected utilities stating that poles will be relocated in accordance with approved plans
- Submission of a copy of a municipal ordinance restricting turning movements at the county road(s) in accordance with approved plans
- Submission of monies in lieu of the installation of improvements when, as determined by Camden County Development Review Committee upon advice of the development review staff and the county engineer, the installation of improvements would create an adverse impact on a county road, drainage structure or facility, when the county has planned or scheduled improvement of the adjacent county road or county drainage facility, when the installation of the improvement by the developer would be impractical or when the subdivision is located on a scenic county road
- Contribution toward construction of county drainage structures or facilities where drainage from the development would flow to a county drainage structure or facility or where traffic from the development would cross over a county drainage structure or facility
- Contribution of a pro-rata share of the cost of off-tract/off-site county road improvements
- Execution by the developer of a county/developer agreement to provide for the construction of off-tract/off-site county road, county drainage structure or county drainage facility improvements, to require that the developer contributes toward the construction of off-tract/off-site county road, county drainage structure or county drainage facility improvements and/or to require that the developer contributes to or implements traffic reduction measures or a traffic management program
- Submission of deeds for county road rights-of-way, construction easements, sight triangle easements, drainage easements, easements for maintenance and reconstruction of county drainage structures or facilities and easements for the installation and maintenance of guiderail along a county road or county drainage structure

- Submission of a performance guarantee for design and construction of a traffic signal and related improvements if it is determined that a traffic signal may be warranted within five (5) years from the date of full build-out of the development. The performance guarantee shall be separate from other performance guarantees posted and shall remain in effect for five (5) years from the date of build-out of the development
- Submission of performance guarantees to ensure the satisfactory installation of improvements to county roads, county drainage systems, county drainage structures or facilities, to ensure future payment of a contribution toward off-tract/off-site county road, county drainage system, county drainage structure or facility improvements, to ensure the submission of construction plans for improvements to county roads, county drainage structures or county drainage facilities and to ensure the submission of parcel maps for acquisition of rights-of-way or easements
- Submission of maintenance guarantees not to exceed two (2) years in duration, to ensure the maintenance and/or repair of any required improvement that has been damaged by the developer's forces or that exhibits abnormal deterioration

Final approval of a major subdivision will not be granted until the applicant satisfies all of the conditions outlined in the County Engineers report and or conditions discussed and agreed upon during the regularly scheduled Camden County Planning Board meeting in which the applicant presents the major subdivision plan to the Board and receive comment.

Final approval shall be indicated in a report issued by the Camden County Planning Director or designated staff member and forwarded to the municipal approving authority, the applicant, and the applicant's attorney or authorized representative.

SITE PLAN REVIEW AND APPROVAL PROCEDURES

Site plans shall contain the plan details as set forth in these regulations and shall be accompanied by the analyses and information that are necessary to properly assess the development's impacts on county roads, county drainage structures and county drainage facilities.

The Camden County Development Review Committee will not make any recommendations or advisory comments on any site plan application that does not contain sufficient plan details or is not accompanied by the information and analyses that are necessary for the Camden County Development Review Committee to determine impacts on county roads, county drainage structures and facilities.

After review of the application and supporting documents and information and upon advice of the Camden County Development Review staff and the Camden County Engineer, the Camden County Development Review Committee shall take action on a site plan application as indicated below:

- Site Plans that **do not affect** a county road, county drainage structure or county drainage facility and do not contain one or more acres of impervious surfaces are:
    - Exempt From Approval

The Camden County Planning Director or designated staff member shall issue a letter indicating that approval of the Camden County Development Review Committee and/or the approval of the Camden County Planning Board are not required for a site plan that does not affect a county road, county drainage structure or county drainage facility. Letter of exemption will be forwarded to the municipal approving authority, the applicant and their authorized representative.

The Camden County Development Review Committee or development review staff may make advisory comments and recommendations relative to goals, objectives and policies contained in the Camden County Master Plan, and to promote sound planning practices.

- Upon receipt of a completed application and a staff review including review by the County Engineer and County Planner, Site Plans **along** a county road that do not disturb existing impervious coverage, **affect** a county road, county drainage structure or county drainage facility, can receive a **letter of no impact**, if the staff review determines that there will be no impact to county facilities.

- Site Plans that **affect** a county road, county drainage structure or county drainage facility or that contain one or more acres of impervious surfaces require approval by the Camden County Planning Board and will be forwarded to the Board for approval.

The Camden County Planning Board upon advice of the Camden County Development Review Committee, the County Engineer and County Planner may take the following actions on applications for site plan:

- **Disapproval**

  Reasons for disapproval of a site plan may include but are not limited to the following:

  - The site plan does not provide a service road or marginal access road along the county road
  - Driveways that intersect a county road are not designed or aligned in accordance with county design criteria or standards
  - Driveways are connected to the county road and not to an adjacent municipal road only
  - The width of the county road right-of-way shown on the site plan is not consistent with the Camden County Master Plan
  - Driveways that intersect the county road are not designed or aligned in accordance with county design criteria and standards
  - The site plan is substantially inconsistent with the provisions, design criteria and design standards of these regulations
  - The safety and efficiency of traffic traveling on a county road or on a county drainage structure would be adversely affected or access to buildings and lands owned or maintained by the county would be adversely affected as a result of the site plan
  - Driveways are not shown to maximize sight distance along the county road, to limit or eliminate conflicts at the county road or to meet the sight distance standards contained in these regulations
  - Stormwater from the site would adversely affect a county road, county drainage structure or county drainage facility or on buildings and lands owned or maintained by the county
  - Information contained on the subdivision plans, application form or contained in the accompanying studies, analyses or other supportive documents is found to be erroneous
  - The plans contain inconsistent or confusing details or information

Upon a decision of the Camden County Planning Board disapproving a site plan, the reasons for disapproval shall be reported in a letter by the Camden County Planning Director or designated staff and shall be forwarded by certified mail to the municipal approving authority, the applicant, and the applicants authorized representative.

- **Approval**

  After review of the application, supporting documents and any additional requested information the County Engineer or designated staff member will issue a report outlining the conditions needed by the applicant to meet compliance with the Camden County Development Regulations: Design Standards for the following generalized subject areas, but not limited to:

  - Rights-of-way and Easements
  - Control of Access to County Roads and Access Design Standards
  - County Road Design
  - County Storm Water Management Systems Design Criteria and Design Standards
  - Landscaping along County Roads Design Standards
  - Traffic signal Design Standards
  - County Bridge or Culvert Construction/ Reconstruction Design Standards

  The report, outlining the conditions for approval, will be forwarded by mail, email or fax correspondence by the Camden County Engineer or designated staff to the municipal approving authority, the applicant, the applicant's attorney or authorized representative. Final approval for subdivisions will not be granted until all conditions are satisfied.

  Conditions of final approval may include but are not limited to the following revisions of the plans:

  - Include a marginal access road or service road
  - Show improvements to county roads and drainage systems and to county drainage structures and drainage facilities in accordance with county design
  - Show roads and driveways located and designed in accordance with county design standards
  - Show access through a shared driveway

- To limit turning movements from driveways along the county road
- Show one-way traffic circulation for driveways that intersect county roads
- Show access only to the adjacent municipal road, not the county road
- Show clearing of sight lines along the county road
- Show driveways and parking areas designed so that vehicles do not back out onto the county road or maneuver in the path of vehicles entering or exiting the site
- Show the removal of encroachments from within the county road right-of-way or county easements
- Show improvements to roads and drainage systems not owned or maintained by the county to mitigate development impacts on a county owned road, drainage system or facility
- Show the relocation of utility poles and/or equipment
- Show landscaping along the county road
- Show the county road rights-of-way located in accordance with the Camden County Transportation element of the Comprehensive Plan and rights-of-way and easements as required accommodating improvements necessitated by the development or as required to accommodate improvements contained in the Camden County Capital Improvement Program.
- Show easements for maintenance and reconstruction of county drainage structures and facilities
- Show easements for county road drainage systems
- Show sight triangle easements to the County of Camden in accordance with county design standards
- Show easements for maintenance and reconstruction of county traffic facilities
- Show the reservation of land for proposed county facilities
- To add, delete or modify notes on the plans
- Show farmland preservation easements
- Submission of permits and/or approvals from other government agencies or authorities that pertain to county review, approval or the installation of improvements affecting a county road or drainage structure
- Submission of a letter(s) from affected utilities stating that poles will be relocated in accordance with approved plans
- Submission of a copy of a municipal ordinance restricting turning movements at the county road(s) in accordance with approved plans

- Submission of construction plans and details for off-site/off-tract county road and/or county drainage structure improvements
- Submission of monies in lieu of the installation of improvements when, as determined by Camden County Development Review Committee upon advice of the development review staff and the county engineer, the installation of improvements would create an adverse impact on a county road, county drainage structure or facility, if the county has planned or scheduled improvement of the adjacent county road or drainage facility, when the installation of the improvement by the developer would be impractical or when the subdivision is located on a scenic county road.
- Contribution toward construction of a county drainage structure or facility where drainage from the development drains to a county drainage structure or facility or where traffic from the development will cross over a county drainage structure or facility
- Contribution of a pro-rata share of the cost of off-tract/off-site county road improvements
- Execution by the developer of county/developer agreement to provide for the construction of off-tract/off-site county road, county drainage structure or county drainage facility improvements, to require that the developer contributes toward the construction of off-tract/off-site county road, county drainage structure or county drainage facility improvements and/or to require that the developer contributes to or implements traffic reduction measures or a traffic management program
- Submission of deeds for county road rights-of-way, construction easements, sight triangle easements, easements for installation and maintenance of guiderail along a county road or a county drainage structure, and easements for maintenance and reconstruction of county drainage structures or facilities
- Submission of a performance guarantee for design and construction of a traffic signal and related improvements if it is determined that a traffic signal may be warranted within five (5) years from the date of full build-out of the development; the performance guarantee shall be separate from other performance guarantees posted and shall remain in effect for five (5) years from the date of build-out of the development
- Submission of performance guarantees to ensure the satisfactory installation of improvements to county roads, drainage systems, structures or facilities, and to ensure future payment of a

contribution toward off-tract/off-site road, drainage system, structure or facility improvements

- Submission of maintenance guarantees not to exceed two (2) years in duration to ensure the maintenance and repair of any improvement that has been damaged by the developer's forces or that exhibits abnormal deterioration.

Final approval of a site plan will not be granted until the applicant satisfies all of the conditions outlined in the County Engineers report and/or conditions discussed and agreed upon during the regularly scheduled Camden County Planning Board meeting in which the applicant presents the site plan to the Board and receive comments.

Final approval shall be indicated in a letter issued by the Camden County Planning Director or designated staff member and forwarded to the municipal approving authority, the applicant, the applicant's attorney or authorized representative.

Camden County

Development Regulations

Volume 2 – Design Standards

Camden County Planning Board
Revised August 2015
Revised February 2017

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APPENDIX

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CAMDEN COUNTY DEVELOPMENT

REGULATIONS and DESIGN STANDARDS

1.0 INTRODUCTION

The purpose of this document is to provide a comprehensive list of plan requirements, design standards, and guidelines for preparing engineering plans, studies and analyses in connection with subdivision and site plan applications requiring review and approval by the Development Review Committee of the Camden County Planning Board.

The following publications have been consulted for the purpose of developing the design standards, and shall be applicable to design of traffic control devices, bridges, culverts, roadways and roadside features:

- A Policy on Geometric Design of Highways and Streets - American Association of State Highway and Transportation Officials (AASHTO) most current edition.

- Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)

- New Jersey Department of Transportation Roadway Design Manual

2.0 PLAN AND PLAT DETAILS

The plan and plat details listed below are generally considered to be the minimum details required to conduct a proper review of an application for development. The Camden County Engineer may require additional details and information not listed based on the scope and characteristics of the application. However, the County Planner may conduct a review and make recommendations to the Camden County Development Review Committee and County Engineer on an application for development that does not contain the entire plan and plat details listed if it is determined by the County Engineer that sufficient details and sufficient information has been provided with the application to conduct a proper review.

All plan and plat sheets shall include a title block containing the title of the plan, the project reference, block and lot numbers and municipality in which the development is located as appropriate, the scale of the plan, the name, address, license number, signature and embossed seal of the person preparing the plan, the date of original plan preparation and a list of revision dates.

2.1 SKETCH PLAT/CONCEPTUAL PLAN FOR SUBDIVISION OR SITE PLAN

The sketch plat/conceptual plan shall be based on the municipal tax map or some similarly accurate based information at a minimum.

The sketch plat/conceptual plan must be drawn at a scale of at least 1" = 100' if the area to be developed contains 120 acres or less and at a scale of at least 1" = 200' if the area to be developed contains more than 120 acres.

The sketch plat/conceptual plan shall include but is not limited to the following information:

- A key map at a scale of 1"=2,000' that clearly defines the area proposed for development, the location of the site and its relationship to the surrounding area.
- The name and address of the owner of the property proposed for development.
- The name and address of the applicant.
- The name and address of the person and firm preparing the plat/plan.
- The portion of the lot being subdivided or developed and the remainder if the entire tract is not proposed for development, and the area of each.
- The municipal tax block and lot number.
- A north arrow.
- The scale of the plat/plan (written and graphic).
- The zoning district in which the proposed development is located and a schedule of zone requirements, e.g.; lot area, frontage, depth and set-back requirements, density, floor area ratio, percent of lot coverage, and parking requirements with a comparison of zoning compliance relative to the proposed development.
- The location of existing structures within the area to be developed and within 200' of the site with an indication of which structures are to remain or to be raised.

- The location of existing roads and driveways within the area to be developed and within 200’ of the site and dimensions of the right-of-way widths of the existing and proposed roads.

- The location of existing railroads within the area to be developed and within 200’ of the site.

- The location of the proposed buildings if the application is for a development other than a subdivision.

- The number of proposed lots or dwelling units as applicable.

- The total number of square feet of the proposed building(s) if the building(s) is for either non-residential development or for mid-rise or high-rise residential development.

- The location of proposed parking areas.

- The location of proposed roads and/or driveways.

- The proposed lot lines and lot lines to be eliminated.

- The site topography and topography of land within 200’ of the site shown at 2’contours.

- The location and direction of flow of existing streams, brooks swales, ditches, lakes, ponds, and drainage structures and drainage systems on the site to be developed and within 200’ of the site.

- A delineation of the existing wood lines and clusters of trees within the area to be developed and along the existing road frontage.

- The location and width of all utility easements, drainage easements, access easements, etc., within the site to be developed and within 200’ of the site.

- The location of any traffic signals along the site frontage or within 500’ of the site.

- The phases or section boundaries of the development, if applicable.

2.2 DETAILS FOR PRELIMINARY SUBDIVISION PLANS (SUBDIVISION CONSTRUCION PLANS) AND PRELIMINARY SITE PLANS

Each preliminary plan sheet shall be 24”X36” (only) and shall be of a scale of not less than 1”=50’.

Preliminary plans shall consist of a title sheet, a survey plat of the entire tract and the area to be developed, a lot layout plan, a lot yield plan, a topographic and drainage plan, drainage basin and drainage area maps, a tree save plan, a landscape plan, a utility plan, road, drainage and utility profiles, stream profiles, road cross sections, stream cross sections, a lighting plan, a wetlands delineation plan, a strip map/plan of county road improvements, a traffic line striping and sign plan, a traffic control plan, soil logs, a soil erosion and sedimentation control plan, and detail sheets.

Preliminary plans that combine the features listed separately in the preceding paragraph, such as a single plan showing drainage and utility features or a plan showing landscaping and lighting features, will be accepted for review provided the details of the individual features are shown clearly and are distinguishable without the plan being cluttered, con- fusing or difficult to interpret.

2.2.1 TITLE SHEET

The title sheet of the preliminary plans (subdivision construction plans) shall include but is not limited to the following:

- A key map at a scale of 1”= 2,000’ that clearly defines the area proposed for development, the location of the site and its relationship to the surrounding area and a north arrow.
- The name and address of the applicant.
- The name and address of the owner of the property proposed for development.
- The name and address of the person and firm preparing the plat/plan with license number, seal and signature.
- The portion of the lot being subdivided or developed and the remainder if the entire tract is not proposed for development and the area of each.

- The municipality (ies) within which the development is located, the municipal tax block and lot numbers that the development is located on and the block and lot numbers of properties located within 200’ of the development.

- A list of the names of the owners of property located within 200’ of the development by block and lot numbers.

- A listing of the titles of each sheet and sheet numbers contained in the preliminary set of plans.

- A north arrow.

- The scale of the plat/plan (written and graphic).

- The zoning district in which the proposed development is located and a schedule of zone requirements, e.g.; lot area, density, lot frontage and depth, setbacks, and parking with a comparison of that provided relative to the pro-posed development.

- A table of the development standards required and/or permitted under the zone district within which the development is located and that which is pro- vided under the proposed development plan.

Example:

Front Yard Setback Required	Front Yard Setback Provided
75’	80’
Number of Lots Permitted	Number of Lots Proposed
35(@ 1 per acre)	34
Minimum Frontage Permitted	Minimum Frontage Provided
250’	260’

- The number of proposed lots or dwelling units as applicable.

- The total number of square feet of the proposed building(s) if the building(s) is for either non-residential development or for mid-rise or high-rise residential development.

2.2.2 SURVEY PLAT

The survey of the property to be developed shall include but is not limited to the following:

- The name and address of the owner of the property proposed for development.
- The municipality within which the property is located and municipal tax block and lot numbers of the property that the development is located on.
- North arrow.
- The scale of the plat/plan (written and graphic).
- Existing lot lines with bearings and distances on the property being subdivided including any remainder.
- Existing survey monuments and markers on the property being subdivided including any remainder.
- Existing buildings and structures with type of use indicated on the property being subdivided including any remainder, and within 100' of the property being subdivided.
- Existing roads, driveways, curbs, sidewalks, storm water and utility inlets and manholes on the property being subdivided including any remainder, and within 100' of the property being subdivided.
- Existing easements (e.g. utility, drainage, sight triangle and access) and road rights-of-way on and abutting the property subdivided including any remainder.
- Existing road right-of-way centerline dimensions to the existing right- of-way lines on either side of the road on or abutting the property subdivided including any remainder.
- Existing road right-of-way centerline properly identified using the roadway name and county route number if applicable.
- Existing utilities with identification references as applicable (e.g., pole number and utility company) on the property being subdivided including any remainder, and within 100' of the property being subdivided.

- The location, size and direction of flow of all streams, brooks, drainage structures and drainage ditches on the property being subdivided including any remainder, and within 100’ of the property being subdivided.

- The location and jurisdiction of existing traffic control devices within 100’ of the property being subdivided including any remainder.

- A title block with the name of the person and firm preparing the plat with seal and signature.

2.2.3 LOT LAYOUT PLAN (SUBDIVISION ONLY)

The lot layout plan shall include but is not limited to the following:

- A north arrow.

- The scale of the plat/plan (written and graphic).

- The existing and proposed lot lines and notes indicating which lot lines are to be removed, if applicable.

- The right-of-way lines of each proposed road.

- The easement boundary lines of all drainage easements, sight triangle easements, access easements, conservation easements, stream easements, bridge or culvert easements, etc.

- The existing and proposed right-of-way lines of all existing roads.

- The full width dimension of all existing and proposed road rights-of-way, drainage easements, stream easements and access easements.

- The dimension of all right-of-way corner radii.

- The centerline of the right-of-way of all existing roads.

- The dimension of the existing and proposed right-of-way half width to the hundredths of a foot, as measured from the right-of-way centerline.

- The bearing and distance of each road right-of-way line and

easement line.

- The bearing and distance of each lot line of each lot.
- The building setback lines of each lot in accordance with municipal zoning requirements.
- The area of each lot and the width of each road right-of-way.
- The phases or section boundaries of the development, if applicable.
- The proposed block and lot numbers
- The proposed street names

2.2.4 LOT YIELD PLAN (SUBDIVISION ONLY)

The lot yield plan shall be provided when a cluster design of the development is employed as permitted under municipal zoning regulations. The lot yield plan shall show the lot layout and road system as if a conventional subdivision design was employed in accordance with municipal zoning requirements.

The lot yield plan shall include but is not limited to the following:

- A north arrow.
- The scale of the plat/plan (written and graphic).
- The proposed lots and rights-of-way of each proposed road.
- The dimension of each lot line of each lot.
- The building setback lines of each lot in accordance with municipal zoning requirements.
- The area of each lot and the width of each road right-of-way.

2.2.5 TOPOGRAPHIC, DRAINAGE AND UTILITY PLAN

A separate Utility Plan showing general drainage features and detailed utility features will be required for review where such is necessary for clarity and ease of interpretation of the individual plan features.

The topographic, drainage and utility plan shall include but is not limited to the following:

- A north arrow.
- The scale of the plat/plan (written and graphic).
- The plan shall include a survey baseline with stations and baseline offset dimensions at all points of curvature, points of tangency, angle points, beginning and end of work, manholes, storm sewer inlets, etc…
- The existing and proposed fences within the development and within 100’ of the development.
- The existing and proposed edges of road pavement along county roads and along municipal roads that contain county drainage structures.
- The proposed edges of pavement for all new roads within the proposed subdivision.
- The location and width of existing and proposed roads and/or driveways within the development, on the opposite side of the existing road(s) that abut the development and within 200’ of the development.
- The location and width of all existing and proposed depressed curb and vertical curb tapers.
- The location and dimension of existing and proposed driveway aprons.
- The location of existing and proposed handicap ramps.
- The location and width of sidewalks within the development and within 100’ of the development.
- The existing and proposed curbs with notations indicating where existing curb is to be removed and/or replaced.
- The dimensions of all curb radii.
- The beginning and end of new curb and where new curb is to meet existing curb.

- The existing and proposed retaining walls within the development and within 100’ of the development with top of wall and bottom of wall elevations.

- The beginning and end of portions of existing roads to be milled and resurfaced reconstructed or restored and a graphic representation of the areas to be milled and resurfaced, restored or reconstructed.

- The location of existing buildings with a note indicating which buildings are to remain and which buildings are to be removed.

- The location of each proposed building with first floor elevations indicated.

- The type of use of the existing and proposed buildings.

- The proposed lot lines and existing lot lines that are to be eliminated.

- The phases or section boundaries of the development, if applicable.

- The existing and proposed site topography and topography of land within 200’ of the site shown at 2’ contours.

- The high point of each road within the subdivision and within 350’ of the subdivision.

- The location and width of all existing and proposed utility easements, drainage easements, access easements, landscape easements, conservation easements etc., within the site to be developed and within 200’ of the site.

- The location, size, slope and type of material of existing and proposed underground utilities with invert and rim elevations at manholes

- The location of existing and proposed septic fields.

- The existing and proposed location of all utility poles and above ground utility equipment, including pumping stations and sanitary sewer treatment plants on and adjacent to the site and within 200’ of the site and the identification number of all utility poles on and adjacent to the site and within 200’ of the site.

- The location and direction of flow of existing streams, brooks, swales, ditches and other water courses on the site to be developed

and within 200’ of the site. The direction of flow is to be designated with arrows.

- The location of existing and proposed retention and detention facilities, including recharge basins and dry wells, sub-surface retention or detention facilities, lakes and ponds.

- The normal water surface elevation of all existing and proposed lakes and ponds within the site and within 200’ of the site.

- The size, percent of slope, type, class of pipe and length of each segment of pipe of existing and proposed storm sewer systems on the site and within 200’ of the site.

- The invert elevations of all storm sewer pipes at the beginning and end of each segment of pipe at storm sewer inlets, manholes, headwalls, flared end sections, detention and retention facility outlet structures, weirs, etc. At storm sewer inlets and manholes the invert elevations are to show which pipes are in-flowing and which are out-flowing.

- The elevations at the top and bottom of headwalls and weirs.

- The existing and proposed grate elevation of all storm sewer inlets.

- The existing and proposed rim elevations of all storm sewer manholes.

- The location and type of existing and proposed storm sewer inlets and manholes.

- The existing and proposed top of curb and gutter elevations at 50’ intervals except that additional elevations may be required at intersections to assure positive drainage or in areas where the minimum required slope cannot be achieved.

- The location and dimension of rip-rap aprons.

- Wetlands delineation, 100 year flood hazard lines and stream encroachment line within the site and within 100’ of the site.

- The percent of slope between each of the proposed gutter grades.

- The location of soil borings.

- The location of all existing and proposed guiderail and the type of guiderail end treatment.

2.2.6 TRAFFIC CONTROL PLAN/DETOUR PLAN

A Traffic Control Plan/Detour Plan shall be submitted where it is necessary to close a portion of or the entire county road to accommodate road widening, road reconstruction or utility work or where it is necessary to close a portion of or all of a municipal road for the extension of or reconstruction of a county drainage structure.

The Traffic Control Plan/Detour Plan shall include but is not limited to the following:

- The type, size and location of traffic control devices that shall be used during construction.

- If the county road or municipal road at a county drainage structure is to be totally closed, a detour plan shall be submitted that indicates the route traffic will be diverted to during construction.

- The detour plan shall be approved by all other applicable bodies and agencies retaining jurisdiction (e.g. municipal police, municipal engineer, New Jersey Department of Transportation, etc.).

2.2.7 TRAFFIC SIGNING AND STRIPING PLAN

A Traffic signing and striping plan shall include but is not limited to the following:

- A north arrow.

- The scale of the plat/plan (written and graphic)

- Existing painted centerlines, traffic islands, cross hatching, lane lines, shoulder lines/edge lines and stop bars, existing designated turn lanes, painted arrows, words and/or symbols, existing passing and no-passing zones, existing cross-walks, existing parking spaces and no-parking zones existing loading zones and reflective pavement markers on the existing roads that border the development and are within 500’ of the development.

- Proposed painted centerlines, traffic islands, cross hatching, lane lines, shoulder lines/edge lines and stop bars, proposed designated

turn lanes, painted arrows, words and/or symbols, proposed passing and no-passing zones, proposed crosswalks, proposed parking spaces and no-parking zones, loading zones and proposed reflective pavement markers on the existing and proposed roads that border the development and are within 500' of the development and proposed road approaches to a county road. (Detail 10)

- Dimension of existing and proposed traffic lanes, shoulders and transitions.

- The location and length of existing traffic line striping to be removed and grinding specified as the method used for removal.

- The width, color and material of all proposed traffic line striping in accordance with Camden County standards.

- All existing and proposed traffic signs with the Manual of Uniform Traffic Control Devices (MUTCD) designation and sizes, colors and legends if custom designed.

2.2.8 ROAD PLAN AND PROFILES

Road profiles shall include but are not limited to the following:

- The scale of the plan both horizontal and vertical.

- Baseline stations at 50' intervals.

- Existing and proposed crown of the road.

- Existing and proposed top of curb and gutter of the road.

- Existing and proposed crown, gutter and top of curb elevations at 50' intervals.

- Percent of the existing and proposed slope along the crown between stations.

- Percent of the existing and proposed slope along the gutter between stations.

- Percentage of the existing and proposed slope along the top of curb between stations.

- Location of existing and proposed underground utilities with slope of pipe and invert and manhole rim elevations.

- Location of existing and proposed storm sewers with slope of pipe, invert elevations and grate elevations at storm sewer inlets and invert and rim elevations at manholes.

- Location of existing and proposed drainage structures such as bridges, culverts and pipes that convey storm water flow across the road, with invert elevations.

2.2.9 ROAD CROSS SECTIONS

Road cross sections shall include but are not limited to the following:

- The scale of the plan both horizontal and vertical.

- Road Cross Sections shall be shown with station designations at 50’ intervals and shall include the following:

  - Existing and proposed crown elevations.

  - Existing and proposed gutter elevations.

  - Existing and proposed top of curb elevations.

  - Elevations at the existing and/or proposed right-of-way line.

  - Percent of proposed road cross slope between the crown and the existing edge of pavement and between the existing edge of pavement and pro- posed edge of pavement.

  - Percent of slope between the existing and/or proposed right-of-way line and proposed edge of road pavement.

  - Location of existing and proposed underground utilities with stations and pipe data such as size, type of pipe at road crossings and inverts and rim elevations at manholes.

  - Location of existing and proposed storm sewers with stations and pipe data such as size, type of pipe at road crossings and inverts and grate elevations at inlets.

  - Location of existing and proposed drainage structures such as

bridges, culverts and pipes that convey storm water flow across the road, with type, size and invert elevations.

2.2.10 STREAM PROFILES

Stream profiles shall include but are not limited to the following:

- Station designations at 50’ intervals.
- The scale of the plan both horizontal and vertical.
- Normal water surface elevation
- Top of bank elevations
- Bottom of stream elevations
- The 100 year flood elevation

2.2.11 STREAM CROSS SECTIONS

Stream cross sections shall include but are not limited to the following:

- The scale of the plan both horizontal and vertical.
- Stream cross sections shall be shown with station designations at 50’ intervals and must include but are not limited to the following:
  - Normal water surface elevation
  - Top of bank elevations
  - Bottom of stream elevations
  - The 100 year flood elevation

2.2.12 TREE SAVE PLAN

A Tree Save Plan shall include but is not limited to the following:

- A north arrow
- The scale of the plan (written and graphic)
- The limits of wooded areas within the county road right-of-way and

within 50’ of the proposed county road right-of-way if these areas are densely wooded.

- Identification of trees to be saved within densely wooded areas.
- Identification of trees to be removed within densely wooded areas.
- The diameter of the trunks of existing trees measured at breast height within the county road right-of-way and within 50’ of the proposed right-of-way for areas that are not densely wooded.
- The genus, species and common name of the existing trees within the county road right-of-way and within 50’ of the proposed right-of-way for areas that are not densely wooded.
- Identification of trees to be removed and trees to be saved within the county road right-of-way and within 50’ of the proposed right-of-way for areas that are not densely wooded.
- The method of protecting existing tree/s that is to be saved, during construction.

2.2.13 LANDSCAPE PLAN

A Landscape Plan shall include but is not limited to the following:

- A north arrow
- The scale of the plan (written and graphic)
- A delineation of the existing wood lines and clusters of trees within the area to be developed and along the existing road frontage.
- The diameter of trees measured at breast height, genus and species of trees, shrubs and ground cover, identification of perennials, annuals and other features and materials within the existing and proposed right-of-way and the diameter of trees measured at breast height, genus and species of trees, shrubs and ground cover, identification of perennials, annuals and other features and materials such as rocks, water, walls, fences and paving materials within 50’ of the existing and proposed county road right-of-way. Clusters of trees within this area may be generally described.
- Identification of trees, shrubs, ground cover, perennials and

annuals to be planted within the county road right-of-way and within 50’ of the proposed right-of-way and other materials such as rocks, water, walls, fences, and paving materials to be installed within the existing and proposed county road right-of-way and within 50’ of the existing and proposed county road right-of- way.

- The number of trees, and shrubs to be planted along a tree line or within clusters grouped by genus and species and the number and identification of ground cover, perennials and annuals to be planted within the county road right-of-way and within 50’ of the proposed right-of-way.

- A legend of symbols used to identify the genus and species of trees and shrubs to be planted.

- A plant list of trees and shrubs identifying the genus, species and common name of proposed trees, shrubs and ground cover to be planted within the county road right-of-way and within 50’ of the proposed right-of-way. The list must include the size of the trees and/or shrubs to be planted and the average height of the planting at maturity.

- The location of existing and proposed sidewalks, fences, decorative walls, retaining walls and berms.

- Existing and proposed contour lines at 50’ intervals.

- The location of all landmark trees within the project site and/or county right- of-way. Each tree shall be indicated on the landscape plan with an identification number, species name, diameter, elevation at plant base, and area of critical root zone or drip line. Landmark trees are defined as: (1) a tree associated with an historic event or person, (2) a tree having a direct impact on the development of an area; (3) a tree associated with a scenic view or focal point; or (4) a tree that has become noteworthy as a result of rarity or due to a peculiar, or rare, abnormality.

- The location of all Significant Trees, (defined as the largest known individual trees of each species in New Jersey as listed by the New Jersey Department of Environmental Protection (NJDEP) Bureau of Forestry; large trees approaching the diameter of the known largest tree; and/or species that are rare to that area or of particular horticultural or landscape value).

- A schedule of planting by optimum season. Schedule shall also

include known time periods when specific plant material should not be installed.

- Details for the method of construction for all rock placements, water features, sculptures, monuments, art, fences, walls, and other building and paving materials located adjacent to the county right-of-way.

- Identification of areas to receive top soil and seed or sod.

- Delineation of all easements including but not limited to: conservation easements, landscape buffer easements and sight triangle easements, drainage easements, utility easements, etc.

- Details of methods used to plant the trees and shrubs.

- Details of the rate of application of grass seed and method of planting.

2.2.14 SITE DRAINAGE AREA MAPS

Two site drainage area maps must be submitted. One pre-development drainage area map and one post-development drainage area map.

2.2.14.1 Pre-Development Drainage Area Map

Drainage Area Maps must include but are not limited to the following:

- A north arrow

- The scale of the plan (written and graphic)

- Site topography with contours at 2’ intervals.

- A delineation of each existing sub-drainage basin within the area to be developed and a delineation of existing basins that lie partially within the site but that extend off-site.

- An identifying reference for each drainage basin depicted on the drainage area map.

- The area of each existing sub-basin shown on the drainage area map with the existing rate of storm water runoff generated within each sub-basin for the two (2), ten (10),

twenty-five (25) and one hundred (100) year storm event.

2.2.14.2 Post Development Drainage Area Map

- A north arrow
- The scale of the plan (written and graphic)
- Site topography with contours at 2' intervals.
- A delineation of each proposed sub-drainage basin within the area to be developed and a delineation of proposed basins that lie partially within the site but that extend off-site.
- An identifying reference for each drainage basin depicted on the drainage area map.
- The area of each proposed sub-basin shown on the drainage area map with the proposed rate of storm water runoff generated within each sub-basin for the two (2), ten (10), twenty-five (25) and one hundred (100) year storm event.

2.2.15 DRAINAGE AREA MAPS OF DRAINAGE AREAS TRIBUTARY TO COUNTY DRAINAGE STRUCTURES

Drainage Area Maps shall include but are not limited to the following:

- A delineation of the site area that drains to the county drainage structure and a delineation of the total upland drainage area that drains to the county drainage structure depicted on a map that includes site topography. This map must include the amount of the site in acres, that drains to the county drainage structure and the amount of the total upland drainage area in acres that drains to the county drainage structure.

2.2.16 SOIL EROSION AND SEDIMENTATION CONTROL PLAN

The Soil Erosion and Sedimentation Control Plan shall include all the appropriate measures, methods and techniques to control soil erosion and sedimentation as required by the Freehold Soil Conservation District pursuant to the New Jersey Soil Erosion and Sedimentation Control Act (NJSA 4:24-39).

2.2.17 DETAIL SHEETS

Detail sheets are to be placed at the end of the set of preliminary plans (subdivision construction plans). Generally details of Soil Erosion and Sedimentation Control measures should be placed on separate sheets. Any combination of details placed on single sheets for features such as: water and sewer utilities, storm water management facilities and drainage systems, pavement, sidewalk and curb construction, landscape, retaining walls, lighting, site identification signs and traffic signs, will be accepted for review provided the details of the individual features are shown clearly and are distinguishable without the plan being cluttered, confusing or difficult to interpret.

Detail sheets shall include but are not limited to the following:

- Typical cross section of a county road in accordance with Camden County standards (Detail 1, 16, 17, &18).
- Storm sewer inlet and manhole chamber details for each type to be constructed and for existing inlets or manholes to be modified. (Details 15& 19).
- Storm sewer grate casting and manhole casting detail for each type to be constructed and for each existing inlet and manhole to be modified.
- Storm sewer flared end section, headwall and storm water retention and detention outlet structure details
- Storm sewer weir/orifice and trash rack details for outlet structures
- County storm sewer system pipe bedding detail
- Soil logs
- County road pavement cross section detail (Detail 17 & 18)
- County road full faced curb detail (Detail 1)
- County road depressed curb detail (Detail 3)
- County road vertical curb taper detail (Detail 4)
- County road pavement repair detail (with existing curb) (Detail 16)

- County road pavement repair detail (without existing curb) (Detail 16)
- Concrete driveway apron detail (Detail 6)
- Sidewalk detail
- Handicap ramp detail
- Traffic sign details in accordance with the Manual of Uniform Traffic Control Devices
- Traffic sign post and installation details.
- Reflective pavement marker detail
- Traffic signal and foundation details.
- Guiderail details including end treatments in accordance with New Jersey Department of Transportation standards
- Brick paver detail
- Grass concrete paver detail
- Ballard and ballard installation detail
- Fence and fence installation detail
- Deciduous tree planting detail
- Evergreen tree planting detail
- Deciduous and evergreen shrub planting detail
- Guying and staking detail for trees
- Tree protection detail
- Stabilized construction entrance detail
- Silt fence installation detail
- Inlet filter detail

- Sanitary sewer manhole detail
- Water hydrant and valve installation detail
- Water and sewer pipe bedding detail
- Thrust block detail
- Light pole and foundation details

2.3 FINAL MINOR SUBDIVISION PLAT

Each final subdivision plat shall be 24”X36” (only) and shall be of a scale of not less than 1”=50’.

The final subdivision plat shall be prepared in accordance with the New Jersey Map Filing Law (NJSA 46:23-9.8) and shall include but is not limited to the following:

- A key map at a scale of 1”=2,000’ that clearly defines the area proposed for development, the location of the site and its relationship to the surrounding area.
- The name and address of the owner of the property proposed for development.
- The name and address of the applicant.
- A north arrow.
- The scale of the plat/plan (written and graphic).
- The block and lot numbers of all proposed lots within the subdivision.
- The name of streets within the subdivision and adjacent to the subdivision.
- The setback lines in accordance with municipal zoning requirements.
- The location of each proposed building.
- The proposed lot lines and existing lot lines that are to be

eliminated.

- Bearings and distances of all lots lines within the subdivision.

- Camden County road right-of-way with dimensions from the centerline to the right-of- way line with bearings and distances along the boundary of the right-of-way.

- Sight triangle easements drainage easements, construction easements, access easements, conservation easements, easements for landscape buffers, utility easements, easements for maintenance and reconstruction of county drainage structures and drainage facilities with bearings and distances along the boundary of each easement.

- Notations indicating rights-of-way, sight triangle , drainage easements, construction easements, access easements, easements for maintenance and reconstruction of county drainage structures and drainage facilities, granted and/or dedicated to the County of Camden.

- The location of existing railroad rights-of-way within and adjacent to the area to be subdivided.

- The number of proposed lots.

2.4 FINAL MAJOR SUBDIVISION PLAT

Each major subdivision plat shall be either 24”X36” (only) and shall be of a scale of not less than 1”=50’.

The major subdivision plat shall be prepared in accordance with the New Jersey Map Filing Law (46:23-9.8) and shall include but is not limited to the following:

- A key map at a scale of 1”=2,000’ that clearly defines the area proposed for development, the location of the site and its relationship to the surrounding area.

- The name and address of the owner(s) of the property to be subdivided.

- The name and address of the applicant.

- A north arrow.
- The scale of the plat (written and graphic).
- The block and lot numbers of all proposed lots within the subdivision.
- The name of streets adjacent to the subdivision.
- The setback lines in accordance with municipal zoning requirements.
- A legend with municipal zoning requirements and a comparison of lot characteristics provided relative to the zoning requirements.
- Bearings and distances of all lot lines within the subdivision.
- The location of existing buildings with a note indicating which buildings are to remain and which buildings are to be removed.
- The location of each proposed building with first floor elevations indicated.
- The type of use of the existing and proposed buildings.
- The proposed lot lines and existing lot lines that are to be eliminated.
- Camden County road right-of-way with dimensions from the centerline to the right-of- way line with bearings and distances along the boundary of the right-of-way
- Sight triangle easements, drainage easements, construction easements, access easements, conservation easements, easements for landscape buffers, utility easements, easements for maintenance and reconstruction of county drainage structures and drainage facilities with bearings and distances along the boundary of each easement.
- Notations indicating rights-of-way, sight triangle easements, drainage easements, construction easements, access easements, easements for maintenance and reconstruction of county drainage structures and drainage facilities, granted and/or dedicated to the County of Camden.

- The location of existing railroad rights-of-way within and adjacent to the area to be subdivided.
- The number of proposed lots.
- Site topography with contours at 2’ intervals.
- An indication of how access is to be provided (e.g., K-turn driveways).
- Notations indicating materials to be used to construct driveways.
- Identification of existing sidewalks
- The location size and material to be used for proposed sidewalks
- Wetlands delineation, 100 year flood hazard lines and stream encroachment lines within the site and within 100’ of the site.
- The location, size, slope and type of material of existing and proposed underground utilities with invert and rim elevations at manholes
- The location of existing and proposed septic fields.
- The existing and proposed location of all utility poles and above ground utility equipment, including pumping stations and sanitary sewer treatment plants on and adjacent to the site and the identification number of all utility poles on and adjacent to the site.
- The location and direction of flow of existing streams, brooks, swales, ditches and other water courses on the site.
- The location of existing and proposed retention and detention facilities, including recharge basins and dry wells, sub-surface retention or detention facilities, lakes and ponds.
- A delineation of the existing wood lines and clusters of trees within the area to be subdivided and along the existing road frontage.
- The diameter of trees measured at breast height, genus and species of trees and shrubs within the existing and proposed county road right – of – way and within 50’ of the county road right-of-way. Clusters of trees within this area may be generally described.

- Identification of trees and shrubs to be planted within the county road right – of – way and within 50’ of the proposed right-of-way.

- A legend of symbols used to identify the genus and species of trees and shrubs to be planted.

- A plant list of trees and shrubs identifying the genus, species and common name of proposed trees and shrubs to be planted within the county road right-of-way and within 50’ of the proposed right-of-way. The list must include the size of the trees and/or shrubs to be planted and the average height of the planting at maturity.

- The location of existing and proposed fences, decorative walls retaining walls and berms.

- Identification of areas to receive top soil and seed or sod.

- Delineation of conservation easements, landscape buffer easements and all other easements.

- Details of methods used to plant the trees.

- Details of pavement restoration as outline in the Camden County Permits Handbook.

2.5 FINAL SITE PLAN

Each final site plan shall be either 24”X36” (only) and shall be of a scale of not less than 1”=50’.

The final subdivision plan shall be prepared in accordance with the New Jersey Map Filing Law (46:23-9.8) and shall include but is not limited to the following:

- Please refer to the details outlined in Section 2.5 titled Final Site Plan

- All information requested from the County Engineer outlined in the County Engineer’s Report

2.6 SEPARATE CONSTRUCTION PLANS STRIP MAPS FOR COUNTY ROAD, COUNTY ROAD INTERSECTION AND COUNTY BRIDGE OR CULVERT IMPROVEMENTS

At the discretion of the County Engineer, plans for construction or

reconstruction of county roads, county road intersections and/or county bridges and culverts may be required as submissions separate from the set of plans submitted for the associated subdivision or site plan. Where these plans are required for county improvements to be constructed adjacent to the proposed development, a limited amount of related on-site improvements shall be shown on the construction plans.

2.6.1 PLAN DETAILS FOR IMPROVEMENTS TO COUNTY ROADS AND ROADWAY PLAN DETAILS FOR COUNTY BRIDGE AND CULVERT IMPROVEMENTS

Plans for improvements to county roads and the roadway plan sheets for county bridge improvements shall be provided on separate sheets with a maximum size of 24” x 36”. Plans shall be on a scale of 1” = 20’ or 1” = 30’. Profiles shall be on a vertical scale of 1” = 2’. The following is a list of the minimum information which shall be included on typical roadway plans:

- A baseline controlled field survey shall be used to locate existing topographic features. The baseline shall be clearly indicated on the construction plans. The beginning and end of the baseline, as well as all angle points shall have a minimum of three (3) ties each which shall also be indicated on the construction plans. The field survey shall be sufficient to include the probable project limits plus reasonable extensions to show matches to existing conditions. The minimum length of topographic survey shall be 500 feet on each side of a county bridge, 300 feet from the beginning and end of each road segment improvement and 300 feet at each approach to an intersection, but in any case shall be of sufficient length to design and construct proper horizontal and vertical transitions.

- Cross sections at a minimum of 50’ intervals along the existing baseline. Cross sections shall extend a minimum of 50’ on either side of the roadway centerline. Additional cross sections shall be provided at intersections, drive- ways and other critical areas as appropriate. Existing and proposed elevations shall be indicated at the top of curb, gutter, existing edge of pavement and at the centerline. The cross section scale shall be either 1” = 5’ or 1” = 10’ for both the horizontal and vertical dimensions.

- A minimum of three benchmarks tied to the North American Vertical Datum of 1988.

- Baseline stations and offset dimensions shall be provided for

all points of curvature, points of tangency, angle points and at beginning and end of work.

- Elevations shall be identified by baseline station and offset if not clearly shown at 50' stations.

- Spot elevations shall be provided at intersections as necessary. At a minimum, elevations shall be provided at PC's, PT's and the mid-point of each curve.

- Inlets and manholes shall be identified by type, and the baseline station, off- set, invert elevations, and elevations on the top of grate and top of castings shall be provided. For inlets not in travel lanes, the gutter shall be depressed two inches at the grate and the gutter elevations on the calculated profile line indicated. (Detail 15 & 19)

- All pipe diameters, slopes and class. Drainage outfalls and end treatments such as flared end sections shall be located by baseline station and offset dimension. Inverts shall be provided for all existing and proposed pipes and outfalls.

- All curve data including radii, tangent lengths, deflection angles and arc lengths.

- All existing and proposed right-of-way lines and property lines with bearings and distances. The length of all proposed right-of-way courses which begin or end at an existing right-of-way or property line shall be referenced using a dimension. All proposed right-of-way offsets shall be referenced by a set dimension from the survey baseline.

- All existing and proposed utilities.

- The limits of Camden County standard curb and pavement section at intersecting streets and driveways.

- The overall limits of work, as well as any limits of milling, leveling, overlay and/or limits of full pavement reconstruction.

- Centerline and gutter line profiles, with grades and vertical curve data indicated.

- Driveway profiles with proposed improvements including grades

and apron treatments.

- The New Jersey Department of Transportation Standard Construction Details as modified by the Camden County Engineering Department and/or Camden County standard details shall be used for improvements along county roadways. The appropriate details shall be included with the construction plans.

- Construction Specifications shall be the current New Jersey Department of Transportation Specifications for Road and Bridge Construction utilized by the Camden County Engineering Department as modified by the Camden County Supplementary Specifications. Copies of these Supplementary Specifications are available on request from the Camden County Engineering Department.

2.6.2 PLAN DETAILS FOR IMPROVEMENTS TO COUNTY BRIDGES AND CULVERTS

Bridge and culvert plans shall be provided on separate sheets of size 24" x 36" (only). All bridge details shall be drawn on a scale no greater than 1" = 6'. The plans shall contain the following minimum details:

- Plan of proposed structure.

- Elevation of proposed structure.

- Section through proposed structure along roadway centerline.

- Section through proposed deck or culvert perpendicular to roadway center- line or along proposed stream centerline for skewed structures.

- Elevation of abutment (not applicable for box culverts).

- Footing plans.

- Detail sections through proposed wing walls for all concrete structures and through abutments for all structures except box culverts.

- Detailed sections of box culverts where applicable.

- All other details necessary to adequately construct the proposed structure.

- As determined by the County Engineer, the developer shall be required to provide as-built mylars (3 mil double matte) of the construction plans following completion of the improvements. If the developer fails to provide as-built mylars within 30 days of the completion of all punch list items, Camden County may proceed against the bond to fund any necessary survey work.

- All road and bridge construction plans shall be signed and sealed by a professional engineer licensed in the State of New Jersey.

- The developer shall be required to submit a design package signed and sealed by a professional engineer licensed in the State of New Jersey. The design package shall include, but not be limited to the following:
  (1) Survey field notes

  (2) Right-of-way/easement calculations

  (3) Geometric calculations

  (4) Drainage calculations

  (5) Traffic report

  (6) Structural calculations

- The design package must be sufficiently detailed to allow a thorough analysis and review of methods employed in the design of the project.

2.6.3 PLAN DETAILS FOR TRAFFIC SIGNING AND STRIPING PLANS

Municipalities wishing to change signage and striping plans of a County Highway segment within their municipality should follow the directions out lined in appendix titled Camden County Procedure for Municipalities Requesting Changes to Striping Plan on Camden County Highways.

Signing and Striping plans shall be prepared at a scale of 1” = 20’ or 1” = 30’. Signing and striping plans shall indicate the following:

- Existing striping, including centerline, traffic islands and cross hatching, shoulder/edge line, lane markings, pavement marking symbols. Width and color of pavement markings must be indicated.

- Limits of passing/no passing zones 1000 feet from the termini of the lane transitions.

- Existing Traffic Signs by size and type with Manual of Uniform Traffic Control Devices (MUTCD Designation), to remain.

- Existing signs by size and type (MUTCD Designation) to be removed.

- Existing signs by size and type (MUTCD Designation) to be relocated and the location to which the sign will be relocated.

- Existing custom made signs by size, color and legend to be removed, to remain or to be relocated

- Proposed signs by size and type (MUTCD Designation) to be installed.

- Proposed custom made signs by size, color and legend.

- Sign and post installation details.

- Existing pavement markings to remain. Details, including width and color or pavement markings shall be provided.

- Existing and proposed Right of Way.

- Utility poles, guiderail, mailboxes trees and other roadside appurtenances which may impact the placement of signs.

- Existing raised pavement markers. Details including color and type of marking shall be included.

- Proposed raised pavement markers. Details including color and type of marking shall be included.

- Plans shall include a note stating that prior to the installation of traffic line striping and associated pavement markings, the proposed striping and pavement markings will be marked-out for inspection and approval by the Camden County Engineer.

- As-Built plans shall be provided as determined by the Camden County Engineer.

2.6.4 CONSTRUCTION PLAN DETAILS AND SPECIFICATIONS FOR TRAFFIC SIGNALS ON COUNTY ROADS

Design shall comply with a Policy on Geometric Design of Highways and Streets by the American Association of State Highway and Transportation Officials (ASSHTO), the Manual on Uniform Traffic Control Devices for Streets and Highways, current edition and the Camden County Engineering Division Design Standards. Signal timing shall be derived utilizing accepted methodologies (i.e.: SIDRA software). In addition, all timing and phase calculations shall be based on assuming fully or semi-actuated operation of the traffic signal.

The following are required prior to consideration of a Traffic Signal:

- A Gap Analysis
- A Traffic Signal Warrant Analysis
- A summary of the most recent three-year crash history
- A comparison of existing and anticipated traffic volume with the criteria set forth in the Manual on Uniform Traffic Control Devices.

Design of traffic signals shall conform to the standards set forth herein, current Camden County specifications, the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction (Current Edition), NJDOT Roadway Design Manual, Camden County Traffic Safety Engineering Division Design Standards and all other NJDOT manuals, guidelines and procedures with subsequent addenda.

A separate Traffic Signal Operational Plan (24” x 36”) shall be prepared showing only functional information as necessary for the county’s submission to the New Jersey Department of Transportation (NJDOT) Bureau of Traffic Engineering and Investigation. Functional information shall include, but not be limited to, phasing sequence; signage; pavement markings and signal layout.

A Traffic Signal Electrical Plan shall be prepared showing traffic signal hardware including controller, meter cabinet, junction boxes, phasing sequence, regulatory and street name signs mounted on signal standards and mast arms, conduit, block wiring diagram, signal heads and signs

legend, construction notes including height of pole mounted signal heads, table of items to be constructed, existing and proposed Right-of-Way, utilities, guiderail and other roadside appurtenances affecting layout of traffic signal components. Pavement markings, excluding notes and labels, shall also be shown for informational purposes, but should be screened to minimize clutter. A note shall be placed on the electrical plan stating that the contractor shall obtain electrical service for the intersection in the name of the municipality within which the controller is located.

Construction details of hardware components must be included in the construction documents.

Traffic Signal Electrical, Signing/Striping and Traffic Signal Operational Plans shall be in 1"=20' or 1" = 30' scale.

Specifications shall be prepared in accordance with the New Jersey Department of Transportation 1989 Standard Specifications for Road and Bridge Construction and as supplemented by Camden County Specifications. Final specifications must be submitted and approved by Camden County.

3.0 DESIGN STANDARDS

3.1 RIGHTS-OF-WAY AND EASEMENTS

Sample Easements are available electronically, upon request and in the back of this book.

3.1.1 ROAD RIGHTS-OF-WAY

Right-of-way widths of county roads that abut proposed subdivisions and site plans shall conform to the right-of-way widths on the Camden County Transportation Element of which is an adopted element of the Camden County Master Plan. If the existing right-of-way width of a county road that abuts a proposed subdivision or site plan does not conform to the right-of-way width shown on the Camden County Transportation Element an easement of additional right-of-way shall be required.

Where a county road is intersected by an existing or proposed municipal road or state highway, or where two county roads intersect, the right-of-way lines of the roads shall be connected at the intersection by a 35' corner radius.

The subdivision or site plan shall include a notation showing the additional

right-of- way as follows: “Easement to the County of Camden”. Bearings and distances shall be shown along the boundary of the dedicated area on the subdivision or site plan.

If the subdivision or site plan is located on both sides of a county road the full width of the right-of-way shown on the Camden County Transportation Element of Master Plan shall be dedicated by easement to the County of Camden. If the subdivision or site plan is along only one side of the county road, one-half (1/2) of the required right-of-way width shall be dedicated, measured from the existing right-of-way centerline.

Where by reason of special or unusual conditions, to conform to the adopted Camden County Transportation Element, or to conform to a realignment plan or road widening plan determined to be necessary by the County Engineer, additional right-of-way easement in excess of the proposed right-of-way width shown on the Camden County Transportation Element, may be required. If it is determined that the requirement for the easement of additional right-of-way in excess of that shown on the Camden County Transportation Element is not reasonably related to the anticipated impacts of the subdivision or site plan, the area of such additional right-of-way shall be reserved for future acquisition and all building setbacks and site improvement setbacks shall be measured from the limits of the reserved area.

The applicant shall be required to submit a legal description, a plan of metes and bounds signed by a Professional Land Surveyor and a title search, to the County of Camden that describes the required right-of-way easement if the application is for minor subdivision or site plan approval. The applicant may be required to submit a deed to the County of Camden that describes the required right-of-way dedication if the application is for a major subdivision.

3.1.2 SIGHT TRIANGLE EASEMENTS

Sight triangle easements shall be required at all existing and proposed road or street intersections with a county road and at driveways as determined to be necessary by the County Engineer. Sight triangle easements should be in accordance with AASHTO standards and be shown on plans.

The applicant shall be required to submit a deed of sight triangle easement to the County of Camden that describes the required easement area.

3.1.3 EASEMENTS FOR MAINTENANCE AND RECONSTRUCTION OF COUNTY DRAINAGE STRUCTURES

Easements for maintenance and reconstruction of the drainage structures shall be required at all county drainage structures that abut a subdivision or site plan or are within 50' of a subdivision or site plan. The easements shall be 50' X 100'. The easement is to be measured 50' from and parallel to the centerline of the road in which the drainage structure is located and 50' from and parallel to the center of the waterway.

In special circumstances based on site conditions and road and/or stream alignment, the County Engineer may recommend easement dimensions that vary from the standard described above.

If replacement of the drainage structure involved is planned by the county and construction and/or temporary by-pass easements are proposed or anticipated by the County Engineer, additional easements and easement dimensions that vary from the standard described above may be required.

The required easement shall be shown on the subdivision or site plan at a scale of at least 1" =50. Bearings and distances shall be shown along the easement boundary. The plan shall include the following notation: "Easement granted to the County of Camden for Maintenance and Reconstruction of County Drainage Structure (insert county drainage structure reference number)".

The applicant shall be required to submit a deed of easement to the County of Camden for maintenance and reconstruction of the county drainage structure.

3.1.4 DRAINAGE EASEMENTS

Storm sewer systems that extend along a county road that collect storm water runoff from a county road, storm sewer systems that convey storm water runoff from a county road to a municipal, state or private storm sewer system or storm sewer systems that convey storm water runoff from a county road to a waterway are under Camden County jurisdiction.

Drainage easements to the County of Camden shall be required for maintenance and reconstruction of the drainage systems described above. The size and extent of the drainage easements will be determined on a case by case basis as recommended by the County Engineer.

The subdivision or site plan shall include the following notation: "Easement granted to the County of Camden for maintenance and reconstruction of the county drainage system." Bearings and distances shall be shown along the boundary of the easement on the subdivision or site plan.

The applicant shall be required to submit a deed of easement to County of Camden for maintenance and reconstruction of the county drainage system.

3.1.5 OTHER EASEMENTS AND RIGHTS-OF-WAY

Other easements including but not limited to construction easements, slope easements, guiderail easements and traffic signal maintenance easements shall be required as necessary to construct and maintain improvements to county roads, county drainage structures, county drainage systems and county drainage facilities associated with the development. The developer shall be responsible for the acquisition of any off-site easements and rights-of-way that are necessary to construct improvements to county roads, county drainage structures, county drainage systems and county drainage facilities that are required in conjunction with approval of the development.

3.1.6 ENCROACHMENTS IN THE RIGHT-OF-WAY

Subdivisions and site plans shall be designed so that no part of the county right- of-way is used to conduct private business. The county road right-of-way is to be kept clear of buildings, structures, any portion of a detention or retention basin, sales or merchandise displays, vehicle parking areas, vehicles service areas, service equipment and appurtenances thereto, and fences, walls, advertising signs or business identification signs unless approved by the Camden County Development Review Committee.

Restaurants located along a County right-of-way seeking to provide seasonal (non-permanent seating) seating along sidewalks will have to sign a liability waiver for the use of seating in any County right-of-way. (See Appendix titled Non-Permanent Portable Seating)

3.2 CONTROL OF ACCESS TO COUNTY ROADS AND ACCESS DESIGN STANDARDS

Road, street or driveway access shall not be permitted on the following portions of a county road:

- Jug handle
- Along any portion of an interchange
- Entrance or exit ramp of an interchange or jug handle, including any portion of an acceleration or deceleration lane

3.2.1 SUBDIVISIONS (Public Rights-of-Way - Residential or Non- Residential Site Improvements)

3.2.1.1 Access Location, Access Spacing, Access Restrictions and Intersection Design

3.2.1.1.A Reverse Frontage, Marginal Access Roads and Service Roads

Individual lots that are part of a common subdivision tract will not be permitted to have individual separate accesses to the county road. Major subdivisions of land that abut a county road shall be designed using reverse frontage, marginal access roads or service roads (Detail 20 & 21) unless the County Engineer determines that site constraints, or special or unusual circumstances exist that prohibit the application of the reverse frontage design, marginal access roads or service roads.

3.2.1.1.B Alternate Access

Access to a county road shall not be permitted if the subdivision also abuts a municipal road and access to the municipal road can be reasonably provided.

3.3.1.1.C Access at County Drainage Structure

Road or street access will not be permitted immediately adjacent to a county drainage structure or within the area protected by guiderail extending from a county drainage structure.

3.2.1.1.D Sight Distance

3.2.1.1.D.1 Intersection Sight Distance

Proposed roads and streets access to a county road shall be located to maximize sight distance along the county road. New roads and streets shall be located so as to provide an unobstructed line of sight as established by following the horizontal and vertical measurements outlined in the current edition of A Policy on Geometric Design of Highways and Streets published by American Association of State Highway and Transportation Officials (AASHTO).

3.2.1.1.D.2 Left Turn Sight Distance

New road or streets shall be located to provide adequate sight distance for drivers to safely turn left from the county road into the road or street. An unobstructed line of sight for drivers turning left into the new road or street shall be provided as established by following the horizontal and vertical measurements outlined in the current edition of A Policy on Geometric Design of Highways and Streets published by American Association of State Highway and Transportation Officials (AASHTO).

3.2.1.1.D.3 Stopping Sight Distance

At the discretion of the County Engineer stopping sight distance standards applied to vehicles traveling on the county road approaching vehicles slowing or stopped at the new driveway or new road or street, may be considered in determining the appropriate location of a new driveway or new road or street. Stopping sight distance will be based on guidelines contained in the current edition of A Policy on Geometric Design of Highways and Streets published by American Association of State Highway and Transportation Officials (AASHTO) for the posted speed limit on the county road. Stopping sight distance requirements are not to be applied in place of intersection sight distance requirements. Rather, stopping sight distance requirements shall be used as a supplement to intersection sight distance requirements as determined to be necessary by the County Engineer.

Expanded or redeveloped sites that access an existing street or driveway will also be required to meet the requirements prescribed herein.

Where the sight line criteria cannot be met, and the applicant is unable to remove the line of sight obstruction certain turning movements at the intersection may be prohibited. (Detail 11)

3.2.1.1E Common Driveways/Single Lot Driveways

If the County Engineer has determined that site constraints, or special or unusual circumstances exist that prohibit the application of reverse frontage subdivision design or marginal access roads/service roads, access may be permitted at the county road from a limited number of residential lots. Consideration will be given to the land use characteristics of the surrounding area and existing driveway spacing in the area of the subdivision. If access is provided from more than one individual lots located on a county road common or shared driveways shall be required. Shared driveways will consist of a common two way access point with onsite vehicle turnaround to prevent vehicles from backing out or driving in

reverse into the County right-of-way.

Camden County prohibits the use of horseshoe style driveways and will only permit one driveway access point from each residential lot.

If driveway access to a county road from a residential lot or lots within a major/minor subdivision is permitted, additional improvements to the county road may be required.

Roads and driveways shall be located to maximize sight distance and shall comply with the sight distance requirements and standards contained in these regulations.

3.2.1.1.E.1 Driveway Width

Single Family or Two-Family residential driveways shall be a minimum width of 11', with a minimum apron flare of 1.5' on each side of the driveway or 10' radii provided at the terminus of the driveway at the county road.

Where common or shared residential driveways are permitted from lots in a major/minor subdivision on a county road, such driveways shall be a minimum width of 20', with a minimum apron flare of 1.5' on each side of the driveway, with onsite vehicle turnaround to prevent vehicles from backing out or driving in reverse into the County right-of-way.

The maximum width of a residential driveway is 22'.

3.2.1.1.E.2 Maximum Driveway Slope

The grade of a driveway approach to a county road generally, shall be no greater than 3% for a minimum distance of 25' from the edge of pavement of the intersecting road. Based on site design constraints identified by the applicant's design professional, the maximum grade of the driveway approach may be exceeded. However, in no instance shall the driveway approach grade be more than 7%.

The vertical profile of the driveway approach to the county road shall be designed to prevent impacting of the road or driveway by the front, rear or undercarriage of a vehicle.

Where concrete aprons are provided or required the maximum grade differential between the slope of the apron and the cross slope of the roadway shall not be more than 8 %.

3.2.1.1.E.3 Angle of Driveway

Driveways used for two-way operation shall intersect the county road at right angles (90° as measured at the centerlines of the intersecting driveway and the county road). If due to mitigating site conditions it is not practical for the driveway to intersect the county road at 90°, a maximum angle of 80° may be permitted.

Driveways used for one-way operation shall not intersect the county road at angles smaller than 45°.

3.2.1.1.E.4 Depressed Curb and Apron

Depressed curb shall be provided where curb is required, proposed or exists along a county road at a proposed driveway (Detail 3). The depressed curb shall extend to a distance of at least 5’ further than the width of the driveway unless corner radius curb is required or provided. The depressed curb shall extend to the points on either side of the driveway where the corner radius curb meets the curb along the county road. Depressed curb is to consist of class “B” 6% $\pm$ 1.5 air entrained gray concrete (Portland cement) and measure 8” at the top, 9” at the base, 18” in height and have a 1 ½” reveal.

Reinforced concrete aprons shall be required at driveways. Aprons shall be class “B” air entrained concrete (Portland cement) 6” thick and reinforced with welded wire fabric (6” X 6”–8/8). Depressed curb must be provided where concrete aprons are required or provided.

Where new curb is required or provided along a county road the pavement must be saw cut for a 2ft wide trench and repaired in accordance with county requirements and standards contained in these regulation.

3.2.1.1. E.5 Paved Driveway

Driveways at a county road shall be paved with bituminous concrete, reinforced concrete or other approved material for the full width of the driveway for a distance of at least 25’ from the edge of pavement of the county road.

3.2.1.1. E.6 On-Site Vehicle Turn Around

In cases where residential driveway access is permitted on a county road, driveways at the county road must be designed with provisions for on-site vehicle turn-around so that vehicles are not forced to back out into the

county road. The on-site vehicle turn around must be designed in accordance with the passenger vehicle turning radius templates contained in the current edition of A Policy on Geometric Design of Highways and Streets published by American Association of State Highway and Transportation Officials(AASHTO).

3.2.1.1. F Spacing of New Roads and Streets (MAJOR SUBDIVISION ONLY)

In determining location and spacing between new roads and streets consideration will be given to the following variables:

- *Stopping sight distance and intersection sight distance (AASHTO and Camden County Standards)*
- *Posted or operating speed of the county road*
- *Types of vehicles that will access the development*
- *Volume of traffic generated at each new road or street*
- *Existing and anticipated traffic on the county road*
- *Weaving and merging distances of traffic on the county road*
- *Distance required enabling exiting traffic to enter the traffic stream on the county road without creating significant speed differences*
- *Conflicting vehicle turning movements in the vicinity of the new road or street*
- *Acceleration rates of vehicles exiting the new road or street in question and the adjacent site*
- *Storage distances for back to back left turn lanes on the county road*
- *Type and design of the county road*
- *Queuing distances (backups) of existing and anticipated traffic at intersections and driveways along the county road*
- *Traffic signal coordination requirements*
- *Surrounding land uses*

- *Whether the development is located in an urban, suburban or rural environment.*

Generally, only one new road or street from a major subdivision shall access a county road unless the frontage of the subdivision abutting the county road equals or exceeds 800'. Where the frontage of the subdivision abutting the county road equals or exceeds 800', two (2) new road or street accesses may be permitted on the same side of the county road at intervals of not less than 400' as measured between the centerlines of the new roads or streets. In determining the spacing of new roads and streets consideration shall be given to existing and proposed roads and streets on either side of the development and on the opposite side of the county road.

For undivided county roads, access to subdivisions on county roads shall align with existing or proposed roads and streets located on the opposite side of the county road. If the County Engineer determines that design constraints or special circumstances exist that prohibit such roads and streets to be aligned then the new roads or streets may be offset from the existing or proposed road or street on the opposite side of the county road by not less than 250' feet as measured between the centerlines of the roads or streets.

Care will be used within specific roadway environments to avoid the repeated use of minimum spacing standards to maintain the operational integrity of the county road while providing appropriate access where it is essential.

3.2.1.1. F.1 Proximity to Adjacent Property Line

Generally the center line of new roads and streets shall be located at least 125' from an adjacent property line. If the County Engineer determines that mitigating site conditions and design constraints exists that prohibit the strict application of the road or street spacing requirements, adjustments to the required spacing may be applied. However, no portion of a road or street shall be located within 20' of a side property line. The 20' distance shall be measured at the point of the widest portion of the proposed road or street at the edge of pavement of the county road. The corner radii of the proposed road or street are considered as portions of the proposed road or street.

Provision of appropriate sight distance and sight triangles shall be considered in determining the proper location for a new road or street at a county road.

3.2.1.1. G Access Geometry and Road or Street Intersection Design (Major Subdivision)

3.2.1.1. G.1 Angle of Intersection

Roads, streets and driveways shall intersect the county road at right angles (90° as measured at the centerlines of the intersecting roads, streets or driveways and the centerline of the county road). If due to mitigating site conditions it is not practical for the roads, streets or driveways to intersect the county road at 90°, a maximum angle of 80° may be permitted.

3.2.1.1. G.2 Profile of a Road or Street Approach to a County Road

The grade of a road, street or driveway approach to a county road generally, shall be no greater than 3% for a minimum distance of 25' from the edge of pavement of the intersecting county road. Based on site design constraints identified by the applicant's design professional and accepted by the County Engineer, the maximum grade of the driveway approach may be exceeded. However, in no instance shall a road, street or driveway approach grade to a county road be more than 7%.

The vertical profile of a road, street or driveway approach to the county road shall be designed to prevent impacting of the road, street or driveway by the front, rear or undercarriage of a vehicle.

A maximum grade differential between the slope of the new road, street or driveway and the cross slope of the county road shall not be more than 8%.

3.2.1.1. G.3 Width of Roads or Streets that Intersect a County Road

Refer to the NJ Residential Site Improvement Standards (RSIS) for details on residential streets.

Non-residential streets may require wider lane widths and /or additional lanes on the new road or streets that intersect a county road as is determined to be necessary by the Camden County Engineer based on traffic volumes, the types of vehicles that will use the new road or street and other traffic safety considerations.

3.2.1.1. G.4 Corner Radii/Curb Return Radii

The minimum corner radii where a new road or street intersects a county road shall be 35'. Larger corner radii may be required to ensure that vehicles turning into and out of the subdivision road or street do not cross the centerline of the new road, street or driveway, or cross the centerline of the county road or encroach on an adjacent traffic lane. The determination of the appropriate turning radii shall be based on turning radii of vehicle types that are anticipated to use the intersection. Required minimum turning radii for various vehicle types will be based on turning radii templates contained in the current edition of A Policy on Geometric Design of Highways and Streets published by American Association of State Highway and Transportation Officials (AASHTO).

3.2.1.1. G.5 Americans with Disabilities Act (ADA) Requirements

All Road and Street intersections shall be designed to satisfy ADA requirements. Where curb returns are provided or required at the intersection of a new road or street and a county road depressed curb must be provided to meet the "Americans with Disability Act" design requirements whether or not sidewalks are provided or the most recent Proposed Accessibility Guidelines for Pedestrians Facilities for Public Rights-of-Way.

3.2.1.1. G.6 Stop Sign and Stop Bar

A stop sign and stop bar shall be provided at each road or street approach to a county road. The stop bar and stop sign shall be designed, fabricated, located and installed in accordance with the current edition of the Manual of Uniform Traffic Control Devices, in accordance with the design standards contained herein and as more specifically directed by the County Engineer.

3.2.1.1. G.7 Left Turn Storage Lanes

A one-way or two-way left turn lane may be required on a county road at the intersection of a new road or street.

Where a left turn lane is provided or required on a county road traffic signs and traffic line striping must be installed in accordance with the current edition of the Manual of Uniform Traffic Control Devices, the current edition of A Policy on Geometric Design of Highways and Streets published by the American Association of State Highway and Transportation Officials (AASHTO), in accordance with the design standards contained herein and as more specifically directed by the County Engineer.

3.2.1.1. G.8 By-Pass Areas

Where the left turning movements into the subject property from the county road are not significant enough to warrant a formal left turn lane, the County Engineer may require a traffic by-pass to allow through traffic to bypass a vehicle waiting to make a left turn into the subject site. This may require the acquisition of additional right-of-way, which is the responsibility of the developer. Traffic volumes and posted speed limits will be taken into consideration in determining the need for a by-pass area. Generally, a by-pass area will not be required on county roads where the posted speed limit is less than 40 MPH, where through traffic volumes are low or moderate and where the proposed development is projected to generate fewer than 15 left turns from the county road during the peak hour.

A by-pass area shall be a section of widened pavement along a portion of the county road on the side opposite the new road that serves left turns into the development. The by-pass area shall extend to a distance of 100' in each direction along the county road as measured from the extended curb line or edge of pavement of the new road. The widening for the by-pass shall extend to a distance of 20' from the painted centerline of the county road and shall begin and end with pavement tapers designed in accordance with county design standards.

3.2.1.1. H Acceleration / Deceleration Lane (Major Subdivision)

Where deemed necessary by the County Engineer, acceleration and deceleration lanes shall be provided. The length of these lanes and associated lane transitions will be determined by the County Engineer based on the traffic generated by the development and the existing and projected traffic on the abutting county road.

3.2.1.1. I Emergency Access (Major Subdivision)

Emergency access points shall be a maximum width of 18', and shall be designed so as not to be readily visible and not usable by the general motoring public. The emergency access should be gated and signed to allow access for emergency vehicles only. Emergency access drives shall be located to allow for the safe ingress and egress of the emergency vehicles.

All emergency access points on a county road must be approved by the local fire official.

3.2.1.1. J Temporary Construction Access

Temporary construction access on county roads may be permitted at the discretion of the County Engineer. Any entrance must afford adequate sight distance for drivers of vehicles entering and exiting the driveway. In considering approving such access the County Engineer will take into consideration the acceleration and deceleration rates of the construction vehicles. Soil conservation methods must be employed to prevent the tracking of soils onto the county road. Paving of a portion of the driveway at the county road may be required. A Camden County Highway Department Road Opening permit must be obtained for any driveway to be used for construction access whether such driveway is temporary or is at the approved location for the site access.

3.2.1.1. K Traffic Signs

Traffic control signs shall conform to the Manual on Uniform Traffic Control Devices, current edition, and the New Jersey Department of Transportation specifications. The county may require increasing the standard sign size where it is necessary due to site specific conditions.

The location and material of traffic control signs shall conform to the current edition of the Manual on Uniform Traffic Control Devices, and the New Jersey Department of Transportation specifications. The county may determine that adjustments to the sign locations are necessary due to site specific conditions.

3.2.1.1. L Advertising Signs

The installation of advertising signs within the county right-of-way shall not be permitted unless permission is granted by the Camden County Development Review Committee based upon the recommendation of the Camden County Engineer. The applicant may be required to enter into an Indemnification agreement with the County of Camden if such agreement is recommended by Camden County Planning Board Counsel.

3.2.1.1. M Pavement Markings

Pavement marking materials installed on a county road shall be long-life extruded thermoplastic. Long traffic lines shall be in extruded thermoplastic material. Other pavement markings such as directional arrows, “ONLY”s, diagonal stripes, markings for railroad crossings, crosswalks and stop bars shall be in thermoplastic or as directed by the County Engineer. (Detail 10)

3.2.1.1. N Traffic Signals

Where a subdivision or site plan is expected to generate an amount of traffic, or create a traffic safety hazard, which would warrant the installation of a traffic signal, the County Engineer may recommend that the land developer prepare plans, specifications, and construct a traffic signal to facilitate traffic entering and leaving the land development.

Where it is determined at the time of review of the land development that a traffic signal may be warranted in the near future, the land developer may be required to post a performance guarantee to cover the cost of designing and constructing a new traffic signal or improving an existing signal. This performance guarantee shall be separate from other performance guarantees posted by the land developer and shall remain in effect for five (5) years from the date of the first occupancy within the land development.

If and when the traffic signal becomes warranted during this five (5) year period, the land developer shall prepare plans, specifications, and construct the traffic signal. The Developer shall be responsible for providing As-Built plans within seven (7) days of the signal activation.

In all cases, no traffic signal shall be installed unless it meets the warrants as specified in the current edition of the Manual of Uniform Traffic Control Devices and the New Jersey Department of Transportation authorizes the design and installation of such signal.

3.2.1.1. O Traffic Signal Restrictions

New traffic signals shall not be permitted at locations where the following conditions exist:

- Where the signal does not meet the installation criteria as outlined in the Camden County Development Regulations.
- Adequate sight distance to the traffic signal cannot be achieved.
- 95 percentile traffic queues anticipated for any time period would extend to an adjacent signal.
- 95 percentile traffic queues from an existing traffic signal would extend to the proposed access location.

- Access from an existing driveway or road adjacent to the new access could not be combined.

- The installation of a traffic signal would adversely affect the safety and efficient operation of a county road.

3.3 SITE PLANS (Multi-Family Residential or Non-Residential Driveways)

3.3.1 Access Location, Access Spacing, Access Restrictions and Intersection Design

3.3.1.1 Marginal Access Roads, Service Roads and Common Driveways

Marginal access roads, service roads (Details 20 & 21) and common driveways to limit the number of access points and driveway conflicts along a county road shall be encouraged or required as determined to be necessary by the County Engineer.

3.3.1.2 Alternate Access

Access to a county road shall not be permitted if the site plan also abuts a municipal road or adjacent driveway and access to the municipal road or adjacent driveway can be reasonably provided.

3.3.1.3 Backing out or Maneuvering of Vehicles Not Permitted

Driveways on a county road shall be designed so that vehicles are not forced to back out into the county road.
Driveways on a county road shall be designed so that vehicles do not maneuver into or out of on-site parking spaces within the portion of the driveway that is within 20 feet of a county road. (Detail 20)

Loading areas shall be located and designed so that vehicles are not required to maneuver or back out onto a county road.

3.3.1.4 Drive-Through

A Drive-through shall be designed so as not to allow vehicles to stack through the site driveway and onto the county roadway. The site plan shall provide a minimum distance of 50 feet from the rear of the maximum queue (or 95-percentile queue) to a point where vehicles can freely maneuver into the site driveway circulation pattern.

3.3.1.5 Loading

Off-street loading areas are not permitted within the county right-of-way or within sight lines or sight triangles (see figures 5 & 6). Loading areas shall be designed so that vehicles maneuvering into or out of loading areas do not enter the path of vehicles entering the site.

Off-street loading areas shall be designed so that vehicles that load and/or unload on the site do not maneuver into or out of the loading area within the county road. Loading areas must be designed and located so that vehicles can maneuver into and out of the loading areas without backing out onto the county road.

3.3.1.6 Parking

Off-street parking spaces and parking isle lanes other than approved ingress and egress driveways shall not be permitted within the county right-of-way. Off-street parking areas shall be designed so that vehicles maneuvering into or out of parking spaces do not enter the path of vehicles entering the site. Off-street parking areas shall be designed to prevent the maneuvering of vehicles into or out of parking spaces within any portion of an entrance driveway that is within 20 feet of the edge of pavement of a county road. Off-street parking areas shall be designed to permit all vehicles to turn around on the site to prevent vehicles from backing out onto the county road.

Off-street parking shall not be permitted or placed in such a manner as to restrict intersection corner sight distance from the site driveway or an adjacent intersecting street or driveway.
Approved on-street parking shall not obstruct sight distance from the site driveway or an adjacent intersecting street or driveway.

3.3.1.7 Access at County Drainage Structure

Driveway access will not be permitted immediately adjacent to a county drainage structure, within the area protected by existing guiderail extending from a county drainage structure or within the area where future guiderail would be installed based on New Jersey Department of Transportation standards.

3.3.1.8 Intersection, Left Turn, Stopping Sight Distance

Proposed roads and streets access to a county road shall be located to maximize sight distance along the county road. New roads and streets shall be located so as to provide an unobstructed line of sight as

established by following the horizontal and vertical measurements outlined in the current edition of A Policy on Geometric Design of Highways and Streets published by American Association of State Highway and Transportation Officials (AASHTO).

Where the sight line criteria cannot be met, and the applicant is unable to remove the line of sight obstruction certain turning movements at the intersection may be prohibited (Detail 11).

3.3.1.9 Spacing of New Driveways

In determining location and spacing between driveways consideration will be given to the following variables:

- Number of existing and proposed driveways
- Stopping sight distance and intersection sight distance (AASHTO and Camden County Standards)
- Posted or operating speed of the county road
- Types of vehicles that will access the site
- Volume of traffic generated at each site driveway
- Location to existing driveways, marginal, internal, services or access roads
- Existing and anticipated traffic on the county road
- Weaving and merging distances of traffic on the county road
- Distance required enabling exiting traffic to enter the traffic stream on the county road without creating significant speed differences
- Conflicting vehicle turning movements in the vicinity of the site driveway
- Acceleration rates of vehicles exiting the site in question and adjacent site
- Storage distances for back to back left turn lanes on the county road
- Type and design of the county road
- Queuing distances (backups) of existing and anticipated traffic at inter- sections and driveways along the county road

- Traffic signal coordination requirements
- Surrounding land uses
- Whether the development is located in an urban, suburban or rural environment.

Generally, only one new two-way driveway shall access a county road from a proposed development. In determining the spacing of new driveways consideration shall be given to existing and proposed roads and driveways on either side of the development and on the opposite side of the county road.

Two access driveways may be permitted for an individual site where one-way driveway circulation is permitted.

Where more than one (1) two-way driveway is permitted on a county road from a site a minimum distance of at least 400’ shall be provided between the closest edges of the driveways. The 400’ distance shall be measured at the point of the widest portion of the driveway at the edge of pavement of the county road. The widest portion of the driveway shall include driveway apron flares and corner radii.

Where a site plan is located at the corner of two intersecting roads no portion of the new driveway, including apron and corner radii, shall be located within 10’ of the point of tangency of the existing or proposed corner radius.

Unless mitigating site conditions and design constraints are identified by the applicant’s design professional to the satisfaction of the County Engineer, no portion of a driveway shall be located within 10’ of a side property line. The 10’ distance shall be measured at the point of the widest portion of the driveway at the edge of pavement of the county road. Driveway apron flares and corner radii are considered as portions of the driveway.

For undivided county roads, access to a site shall align with existing or proposed roads or driveways located on the opposite side of the county road. If the County Engineer determines that design constraints or special circumstances exist that prohibit such driveways and/or roads to be aligned then the new driveway may be offset from the existing or proposed road or driveway on the opposite side of the county road by not less than 250’ feet as measured between the centerlines of the roads or driveways.

Provision of appropriate sight triangles, if required, shall be considered in determining the proper location for a new road or street at a county road

It is the policy of the Camden County Development Review Committee and Camden County Planning Board to encourage the use of shared driveways where new development is adjacent to existing development and where shared accommodations are permissible.

Care will be used within specific roadway environments to avoid the repeated use of minimum spacing standards to maintain the operational integrity of the county road while providing appropriate access where it is essential for traffic circulation into and out of proposed sites.

3.3.1.10 Access Geometry and Driveway Intersection Design

3.3.1.10. A Angle of Intersection

Driveways shall intersect the county road at right angles (90° as measured at the centerlines of the intersecting driveway and the centerline of the county road). If due to mitigating site conditions it is not practical for the roads, streets or driveways to intersect the county road at 90°, a maximum angle of 80° may be permitted.

3.3.1.10.B Profile of a Driveway Approach to a County Road

The grade of a driveway approach to a county road generally, shall be no greater than 3% for a minimum distance of 25’ from the edge of pavement of the intersecting county road. Based on site design constraints identified by the applicant’s design professional and accepted by the County Engineer, the maximum grade of the driveway approach may be exceeded. However, in no instance shall a driveway approach grade to a road be more than 7%.

The vertical profile of a driveway approach to the county road shall be designed to prevent impacting of the road, street or driveway by the front, rear or undercarriage of a vehicle.

A maximum grade differential between the slope of the new driveway and the cross slope of the county road shall not be more than 8 %.

Where concrete aprons are permitted or required the maximum grade differential between the slope of the apron and the cross slope of the roadway shall not be more than 8 %.

3.3.1.10.C Width of Driveways that Intersect a County Road

The minimum width of a driveway for non-residential or multi-family residential use shall be 24'. In determining the width of the driveway the types of vehicles that will use the driveway shall be considered. As a minimum a new driveway must be designed to accommodate a single unit truck.

The maximum width of a driveway for non –residential use is 45'.

3.3.1.10.D Corner Radii/Curb Return Radii/Driveway Aprons

The minimum corner radii where a new two lane driveway intersects a county road shall be 15'. Larger corner radii may be required to ensure that vehicles turning into and out of the new driveway do not cross the centerline of the new driveway, or cross the centerline of the county road or encroach on an adjacent traffic lane.

Where driveway aprons are permitted or required the apron shall flare out a minimum of 3' on each side of the driveway at the terminus of the driveway at the county road. Larger driveway flares may be required to ensure that vehicles turning into and out of the new driveway do not cross the centerline of the new driveway, or cross the centerline of the county road or encroach on an adjacent traffic lane.

The determination of the appropriate turning radii shall be based on turning radii of vehicle types that are anticipated to use the intersection. Required minimum turning radii for various vehicle types will be based on turning radii templates contained in the current edition of A Policy on Geometric Design of Highways and Streets published by American Association of State Highway and Transportation Officials (AASHTO).

3.3.1.10.E Driveway and Apron Material

Driveways at a county road shall be constructed of reinforced concrete for the full width of the driveway for a distance of at least 25' from the edge of pavement of the county road including a 4' width of sidewalk.

Where concrete aprons are permitted or required the aprons shall be consist of class "B" 6% ± 1.5 air entrained concrete (Portland cement) 6" thick and reinforced with welded wire fabric (6" X 6"– 8/8). (Detail 6)

Where concrete aprons are permitted or required depressed curb shall be provided at a proposed driveway. The depressed curb shall extend to a distance of at least 10' further than the width of the driveway where the

apron flares out at the county road. Where curb radii are permitted or required the depressed curb shall extend to the point of curvature at the edge of the county road. Depressed curb shall consist of be class “B” air entrained gray concrete (Portland cement) and measure 8” at the top, 9” at the base, 18” in height and have a 1 ½” reveal (Detail 3).

Where depressed curb is installed at a new driveway the county road pavement must be saw cut and repaired in accordance with county requirements and standards contained in these regulations (Detail 16).

3.3.1.10.F Americans With Disabilities Act (ADA) Requirements

All driveway intersections shall be designed to satisfy ADA requirements. Where curb returns are provided or required at the intersection of a new road or street and a county road depressed curb must be provided to meet the “Americans with Disability Act” design requirements whether or not sidewalks are provided.

3.3.1.10.G Stop Sign and Stop Bar

A stop sign and stop bar shall be provided at each new driveway approach to a county road. The stop bar and stop sign shall be designed, fabricated, located and installed in accordance with the current edition of the Manual of Uniform Traffic Control Devices in accordance with the design standards contained herein and as more specifically directed by the county traffic engineer.

3.3.1.10.H Left Turn Storage Lanes

A one-way or two-way left turn lane may be required on a county road at the intersection of a new driveway (Detail 14) and in accordance with the current edition of the Manual of Uniform Traffic Control Devices, and the current edition of A Policy on Geometric Design of Highways and Streets published by American Association of State Highway and Transportation Officials (AASHTO), in accordance with the design standards contained herein and as more specifically directed by the County Engineer.

Where a left turn lane is provided or required on a county road traffic signs and traffic line striping must be installed in accordance with the current edition of the Manual of Uniform Traffic Control Devices, and the current edition of A Policy on Geometric Design of Highways and Streets published by American Association of State Highway and Transportation Officials (AASHTO), in accordance with the design standards contained herein and as more specifically directed by the County Engineer.

3.3.1.10.I By-Pass Areas

Where the left turning movements into the subject property from the county road are not significant enough to warrant a formal left turn lane, the County Engineer may require a traffic by-pass to allow through traffic to bypass a vehicle waiting to make a left turn into the development. This may require the acquisition of additional right-of-way, which is the responsibility of the developer. Traffic volumes and posted speed limits will be taken into consideration in determining the need for a by-pass area. Generally, a by-pass area will not be required on county roads where the posted speed limit is less than 40 MPH, where through traffic volumes are low or moderate and where the proposed development is projected to generate fewer than 15 left turns from the county road during the peak hour.

A by-pass area shall be a section of widened pavement along a portion of the county road on the side opposite the driveway that serves left turns into the development. The by-pass area shall extend to a distance of 100' in each direction along the county road as measured from the extended curb line or edge of pavement of the site driveway. The widening for the by-pass shall extend to a distance of 20' from the painted centerline of the county road and shall begin and end with pavement tapers designed in accordance with county design standards (Detail 18)

3.3.1.10.J Jug Handles and Overpasses

Where left turns are prohibited from the county road into a development based on high traffic volumes on the county road and generated by the development, the construction of a jug handle or overpass may be required to provide for left turn ingress and/or egress. The installation of a traffic signal may be required in con- junction with a jug handle. Any property acquisitions necessary to construct the jug handle shall be the responsibility of the developer.

3.3.1.10.K Centerline and Lane Transitions

Where the painted centerline of the county road is shifted to provide for a left turn lane or to create a by-pass area on the opposite side of the development, the centerline and/or lane lines shall be re-painted with the appropriate transitions in accordance with the current edition of the Manual of Uniform Traffic Control Devices.

3.31.10.L Traffic Control Islands

Traffic control islands shall be designed in accordance with the current edition of the Manual of Uniform Traffic Control Devices, the current edition of A Policy on Geometric Design of Highways and Streets published by American Association of State Highway and Transportation Officials (AASHTO) and as more specifically directed by the County Engineer.

3.3.1.11 Acceleration / Deceleration Lane

Where deemed necessary by the County Engineer, acceleration and deceleration lanes shall be provided. The length of these lanes and associated lane transitions will be determined by the county traffic engineer based on the traffic generated by the development and the existing and projected traffic on the abutting county road. (Detail 13)

3.3.1.12 Emergency Access

Emergency access points shall be a maximum width of 15', and shall be designed so as not to be readily visible and usable by the general motoring public. The emergency access should be gated and signed to allow access for emergency vehicles only. Emergency access drives shall be located to allow for the safe ingress and egress of the emergency vehicles. The emergency access from the county road to the development must consist of grass concrete pavers or equivalent. Use of the emergency access to accommodate pedestrians and/or bicycles may be permitted if the installation of the appropriate signs is approved by the county traffic engineer.

3.3.1.13 Temporary Construction Access

Temporary construction access on county roads may be permitted at the discretion of the County Engineer. Any entrance must afford adequate sight distance for drivers of vehicles entering and exiting the driveway. In considering approving such access the County Engineer will take into consideration the acceleration and deceleration rates of the construction vehicles. Soil conservation methods must be employed to prevent the tracking of soils onto the county road. Paving of a portion of the driveway at the county road may be required. A Camden County Highway Department Road Opening Permit must be obtained for any driveway to be used for construction access whether such driveway is temporary or is at the approved location for the site access.

3.3.1.14 Traffic Signs

Traffic control signs shall conform to the current edition of the Manual on

Uniform Traffic Control Devices, and the New Jersey Department of Transportation specifications. The county may require increasing the standard sign size where it is necessary due to site specific conditions.

The location of traffic control signs shall conform to the current edition of the Manual on Uniform Traffic Control Devices, and the New Jersey Department of Transportation specifications. The county may determine that adjustments to the sign locations are necessary due to site specific conditions.

Installation of traffic control signs shall conform to the current edition of the Manual on Uniform Traffic Control Devices and Camden County standards.

Materials for traffic control signs shall conform to the current edition of the Manual on Uniform Traffic Control Devices, the New Jersey Department of Transportation specifications and Camden County standards. Use of plywood or other non-ferrous materials will not be permitted even under temporary conditions.

3.3.1.15 Advertising Signs

The installation of advertising signs within the county right-of-way shall not be permitted unless permission is granted by the Camden County Development Review Committee based upon the recommendation of the Camden County Engineering Division. The applicant may be required to enter into an Indemnification agreement with the County of Camden if such agreement is recommended by Camden County Planning Board Counsel.

Advertising signs shall be located:

I. Outside the County Right-of-Way and
II. Outside the Sight Triangle Easement and
III. Ten feet behind the front face of curb or edge of pavement.

3.3.1.16 Pavement Markings

Pavement marking materials installed on a county road shall either be long-life extruded thermoplastic, or long-life spray extruded thermoplastic. Long traffic lines shall be in extruded thermoplastic material. Other pavement markings such as directional arrows, "ONLY"s, diagonal stripes, markings for railroad crossings, crosswalks and stop bars shall be in extruded thermoplastic or as directed by the County Engineer.

Pavement marking colors shall either be white or yellow and shall conform to the current edition of the Manual of Uniform Traffic Control Devices and as directed by the County Engineer.

Centerline markings installed on the county road shall be 4" wide yellow, extruded thermoplastic material. Dashed centerlines, dashed lane lines shall consist of 10' long stripes, extruded thermoplastic material, separated by 30' long gaps. Where two 4" centerline markings (double lines) are installed, they shall be separated by a gap of 4"-6". The gap shall be consistent with the gap between the double lines on the remaining portion of the road.

The removal of existing centerline markings across from the driveway of a large development may be required by the County Engineer. If required the existing centerline shall be removed by the grinding method a minimum of 25' on either side of the extended centerline of the new driveway. Where centerline markings are altered due to the installation of left turn lanes, the plans must indicate the limits of No Passing zones on the approach and departure sides of the proposed lane striping. Where passing zones fall below the minimum criteria established by the MUTCD, the passing zones must be eliminated and a no passing zone shall be installed.

Lane lines shall be used to delineate two separate travel lanes, where traffic moves in the same direction. Lane lines shall be 4" wide white, extruded thermoplastic material, except at intersections to delineate exclusive turning lanes, where 8" wide white extruded thermoplastic material shall be used.

Edge lines shall be used to delineate the right edge of the travel lane. Edge lines shall be 4" wide white extruded thermoplastic material. The removal of existing edge lines may be required by the County Engineer. Where required the existing edge lines shall be removed a minimum distance of 25' from the centerline of a new driveway that enters the county road.

Cross-hatching shall be installed to delineate painted channelizing islands. Cross- hatch lines shall be either white or yellow extruded thermoplastic material, and shall consist of 24" wide lines, separated by a 12' gaps.

Stop bars shall be used at all new driveway locations. Stop bars shall consist of 24" wide white extruded thermoplastic material. Stop bars must be located a minimum of 4' behind the extended edge of pavement of the county road or a minimum of 4' behind an existing or proposed depressed

curb for existing or future handicap ramps.

Pavement markings consisting of words and symbols shall be used to indicate mandatory lane use. They shall be white and shall consist of extruded thermoplastic material.

Painted crosswalks may be required as determined to be appropriate by the County Engineer, at locations where a new driveway enters the county road where sidewalks exists or are proposed. Crosswalk lines across county roads, municipal roads or driveways shall consist of 6" wide white extruded thermoplastic material, separated by a 6' gap. In urban areas or in areas with heavy pedestrian traffic as determined by the County Engineer, crosswalks across a county road shall consist of 2' wide by 6' long white extruded thermoplastic material, separated by 2' gaps.

Raised pavement markings (RPM's) shall be installed at locations where existing RPM's require removal as a result of modifying the centerline location. RPM materials and installation shall conform to Camden County specifications.

3.3.1.17 Maintenance of Traffic Control Devices

The County of Camden is not responsible for maintaining traffic control signs, traffic striping, or pavement markings outside the county right-of-way or on a driveway or street approach to the county roadway that is not under Camden County jurisdiction.

3.3.1.18 Traffic Signals

Where a subdivision or site plan is expected to generate an amount of traffic, or create a traffic safety hazard, which would warrant the installation of a traffic signal, the County Engineer may recommend that the land developer prepare plans, specifications, and construct a traffic signal to facilitate traffic entering and leaving the land development.

Where it is determined at the time of review of the land development that a traffic signal may be warranted in the near future, the land developer may be required to post a performance guarantee to cover the cost of designing and constructing a traffic signal. This performance guarantee shall be separate from other performance guarantees posted by the land developer and shall remain in effect for five (5) years from the date of the first occupancy within the land development.

If and when the traffic signal becomes warranted during this five (5) year period, the land developer shall prepare plans, specifications, and

construct the traffic signal.

In all cases, no traffic signal shall be installed unless it meets the warrants as specified in the current edition of the Manual of Uniform Traffic Control Devices and the New Jersey Department of Transportation authorizes the design and installation of such signal.

3.3.1.19 Traffic Signal Restrictions

New traffic signals shall not be permitted at locations where the following conditions exist:

- Where the signal does not meet the installation criteria as outlined in the Camden County Development Regulations.
- Adequate sight distance to the traffic signal cannot be achieved.
- 95 percentile traffic queues anticipated for any time period would extend to an adjacent signal.
- 95 percentile traffic queues from an existing traffic signal would extend to the proposed access location.
- Access from an existing driveway or road adjacent to the new access could not be combined.
- The installation of a traffic signal would adversely affect the safety and efficient operation of a county road.

3.4 County Road Design Standards

The design of roadway improvements shall be in accordance with the current edition of American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets, New Jersey Department of Transportation standards and Camden County design standards. Construction details shall follow the New Jersey Department of Transportation construction detail sheets.

3.4.1 County Road Width

The minimum width of a county road from edge of pavement to edge of pavement is 40'. The minimum half-width of a county road that abuts a development shall be 20' which generally will consist of a 12' wide through lane and an 8' wide shoulder. The 20' half-width shall be measured from the painted centerline of the road not from the centerline of the road right-of-way unless otherwise directed by the County Engineer.

3.4.2 Lane Widths

Other county road design configurations may be required where additional lanes are necessary. The following lane widths shall be provided on county roads:

- Through lanes with shoulder shall be 12’
- Through lanes without shoulders shall be 15’
- Left turn lanes shall be 12’
- Right turn lanes shall be 15’.
- Two-Way Center Left Turn Lanes shall be a minimum of 14’.
- Shoulder Width – Shoulder widths shall be a minimum of 3’ and a maximum width of 10’.

3.4.3 Road Cross-Slope

Widening of a county road or new road construction shall be designed to obtain the best practical horizontal and vertical alignments. The cross slopes on a widened county road shall be between 2% and 3%. Cross slopes on new roadways shall be 2.5%. The minimum cross slope for overlays of existing roadways shall be 2%. Careful consideration shall be given to impacts on existing intersections, driveways and sidewalks.

3.4.4 Super-elevation

Super-elevations of a county road shall not be permitted without the approval of the Camden County Engineer. In those circumstances where Super-elevation is permitted, the roadway cross section shall be broken a minimum of three feet from the outside curb line or edge of pavement to provide for a minimum 2.5% cross slope to the gutter.

3.4.5 Crown and gutter profile

The minimum crown and gutter profiles shall be 0.5%. Careful consideration shall be given to impacts on existing intersections, driveways and sidewalks. On sag curves, the gutter line profile grades may need to be broken to maintain the minimum 0.5% required. If gutter profile is less than 0.5%, concrete curb and gutter shall be provided and concrete swale shall be provided.

3.4.6 Pavement Section

The county pavement cross-section specifications are (Detail 18):

- Surface course – 9.5M64, 2” thick
- Base course - Bituminous stabilized base course, 12.5M64, 6” thick
- Sub-base course - Dense graded aggregate conforming to Subsection 901.08 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction (1989 edition or most current edition) 6” thick (As required by County Engineer)

The minimum final pavement thickness for any roadwork shall be not less than 8”.

3.4.7 Pavement Joint for Road Widening

3.4.7.1 No Existing Curb

The county road shall be sawcut 2’ from the edge of the existing pavement where curb does not exist. The standard county road pavement section shall be installed between the sawcut and the new edge of pavement or new curb line. (Detail 18)

3.4.7.2 Existing Curb

The county road shall be sawcut 1’ from the curb line. The standard county road pavement section shall be installed between the sawcut and the new edge of pavement or new curb line. (Detail 16)

3.4.8 Pavement Overlay/Resurfacing

If determined to be necessary by the County Engineer, a 2” overlay shall be provided along the development frontage from the existing centerline to the new curb line. Milling will be required to key in the new pavement at the centerline. Pavement restoration, as outlined in the Camden County Permits Handbook must be recorded on site or subdivision plans. Where the county road is to be resurfaced**/**overlaid the area to be resurfaced/overlaid shall be milled for at least 50’ from the limits of work at either end. Feathering into the adjacent pavement will not be permitted.

3.4.9 Curb

Curb must be provided along the development property that abuts a county road. The curb line must be located no closer than 18’ from the painted centerline of the county road. The curbing shall be constructed of Class “B” gray air entrained concrete and measure 8” at the top, 9” at the base, 18” in height and have a reveal of 6” (Detail 1). Based on existing conditions in the area surrounding the site and where the site frontage is minimal, a lower curb reveal may be required as determined by the County Engineer.

Vertical curb tapers shall be required at the beginning and end of a new curb line where existing curb does not exist along the properties adjacent to the new curb line. Vertical curb tapers shall be 10’ in length, 2” in height at the low end and meet the height of the new curb at the high end. (Detail 4)

3.4.10 Pavement Repair for Replacement of Existing Curb

Where curb along a county road is to be replaced, the existing curb shall be removed; the county road pavement shall be sawcut 2’ from the curb line through the surface course of pavement only. The surface course of pavement shall be removed and the new curb shall be face formed. The surface course of pavement shall be replaced with fine aggregate bituminous concrete between the sawcut and new curb. (Detail 2)

3.4.11 Treatment of the County Right-of-Way and Area Immediately Adjacent to the Right-of-Way

The area behind the curb/edge of pavement and within the county right-of-way must be graded at either a 2% incline or decline. The area must be treated with 4” of topsoil hydro-seeded or fertilized and seeded. Grading from the right-of-way back into the development property must be at a maximum slope of 3 feet horizontal to one foot vertical.

3.4.12 Utility Poles

Utility poles shall be located or relocated a minimum of 18” from the front face of curb or edge of pavement to the front face of a utility pole on a county road. The County Engineer may authorize adjustments to the strict adherence to this standard for relocations of three (3) poles or less. The applicant must provide a letter to the County stating that the utility company approves the location of the utility poles.

3.4.13 Sidewalks

If sidewalks are required by the municipal approval authority along any portion of a development that abuts a county road, the sidewalks are to be installed 5 feet from the front face of curb unless otherwise directed. Sidewalks must be a minimum of 4' wide and shall be constructed to meet the following standards:

- 4 inch minimum thickness
- Concrete will be 4500psi and 6% ± 1.5 air entrainment
- 2% cross slope.

Since the County of Camden does not assume any maintenance responsibility for sidewalks, sidewalks will not be required by the Camden County Development Review Committee as a condition of approval unless it is to replace existing sidewalk.

3.4.14 Pavement Tapers

Pavement tapers shall be provided at the beginning and end of any portion of a county road that is to be widened where the existing pavement at either end of the widening is not consistent with the width of the area being widened. The pavement taper at the beginning of the widening (approach side) is to be 50' in length. The pavement taper at the end of the widening (departure side) is to transition at 15:1 (15' of taper for every 1' of widening). Curb may be required along the pavement taper and will be determined based on site conditions.

3.4.15 Guiderail

3.4.15.1 Guiderail Warrants and Construction Details

Warrants for guiderail installation shall be based on AASHTO Roadside Design Guidelines and New Jersey Department of Transportation standards.

Length of need calculations, post spacing, fixed object treatment, guiderail materials and end treatments, etc. shall be in accordance with New Jersey Department of Transportation standards and as more specifically directed by the County Engineer.

3.5 COUNTY STORM WATER MANAGEMENT SYSTEMS DESIGN CRITERIA AND DESIGN STANDARDS

Adequate drainage facilities shall be provided in county roads where a subdivision or site plan will contribute storm water runoff to the road or where county roads are widened or otherwise improved. The system must be sized for all areas tributary to it.

3.5.1 DESIGN CRITERIA

Storm sewer systems must be designed to convey the peak runoff from a 25-year storm under full flow conditions. Minimum design velocity at flowing full conditions shall be three feet per second. Maximum design velocity shall not exceed fifteen feet per second. Hydraulic losses at inlets, outlets, junctions, bends, etc., must be considered in the design.

3.5.1.1 Hydrology

All stormwater calculations shall be provided in accordance with NJAC 7:8 and NJ Stormwater Best Management Practices Manual.

If required for determination for impact to County Structures calculations in accordance with the U.S. Army Corps of Engineers HEC-RAS shall be provided.

Storm pipe calculations shall be provided using current NJ RSIS.

3.5.2 Storm Sewer Inlets

3.5.2.1 Spacing and Type of Inlets

On curbed roads Type B inlets with Type N eco grates shall be provided along County roads at 400’ intervals

Where curb along a county road is waived by the Camden County Development Review Committee as recommended by the County Engineer, “B” type inlets are to be installed with 10’ long vertical curb tapers on each side of the inlet. (Detail 15)

Where the subdivision road intersects the county road, gutter drainage along the county road must be intercepted by storm water inlets on the upstream side of a new road or driveway to prevent storm water from crossing the intersection. Dished type gutters to carry drainage through an intersection will not be permitted.

"E" type storm sewer inlets may be permitted where the County Engineer has approved that site conditions allow the use of "E" type inlets.

On non-curbed county roads Type B inlets with Type N eco grate with 10' curb transitions shall be provided set back 5' from the edge of pavement with additional pavement to the new inlet.

If an existing storm sewer inlet needs to be relocated to allow for pavement widening, a modified inlet may be used if the offset of the new inlet grate is three feet or less. (Detail 19) If the offset is greater than three feet, the existing inlet must be converted to a manhole and a new inlet must be constructed at the new edge of pavement. Storm water is to be relayed from the new inlet to the manhole with appropriately designed and sized reinforced concrete pipe.

3.5.2.1.A Grate Type

All storm sewer inlets adjacent to properties under development, or impacted by development or new storm sewer inlets must meet Camden County Stormwater Permit Attachment – C with Bicycle safe grate and Type N eco piece. (Detail 15)

3.5.3 Drainage Ditches

Drainage ditches along the sides of county roads shall be eliminated and replaced with storm sewers of adequate capacity.

3.5.4 Storm Sewer Pipes

3.5.4.1 Type of Pipe

All sub-surface storm sewers within the county right-of-way shall be made of reinforced concrete pipe or ductile iron pipe.

3.5.4.2 Class of Pipe

The class of reinforced concrete pipe to be used within the county right-of-way shall be at a minimum of Class III. If conditions are such that cover over the pipe must be reduced below the acceptable values for Class III, higher classes of pipe (Class IV or Class V) shall be used as appropriate in accordance with specifications of the most current publication of the Concrete Pipe Association of New Jersey. Where ductile iron pipe is approved, CL 52 shall be used.

3.5.4.3 Diameter of Pipe

The minimum pipe diameter for pipe constructed within the county right-of-way shall be 15”.

The pipe diameter must be properly sized in to accommodate with the county’s design criteria for closed conduit system design.

3.5.4.4 Depth of Cover

The depth of cover over a storm sewer pipe within the county right-of-way shall be a minimum of 6 inches. Acceptable depths of cover for each class of pipe shall be based on specifications of the most current publication of the Concrete Pipe Association of New Jersey. The pipe cover shall be checked at the storm inlet grates to ensure that minimum separation is available between the casting and the storm pipe.

3.5.4.5 Pipe Transitions

Where pipe sizes are less than 48 inches in diameter, all transitions in slope, changes in horizontal direction, junctions of pipes and change in pipe sizes shall be confined to manholes, catch basins, or other accessible structures designed for such purposes. Where 48 inch pipe lines and larger are used, vertical and horizontal deflections may be accomplished using 100 foot radii curves, or greater if approved by the County Engineer.

3.5.4.6 Storm Water Pipes in Driveways

Where a drainage ditch exists within the county road right-of-way, and where the proposed development is for a minor subdivision, and where driveway access is approved by the Camden County Development Review Committee, the driveway may be carried over the ditch by the installation of concrete pipe or ductile iron pipe with adequate hydraulic capacity as approved by the County Engineer. Flared end pipe sections must be provided at the beginning and end of the pipe.

Where a drainage ditch exists within the county road right-of-way and where a major subdivision or a development of multi-family homes, commercial, industrial, office, warehousing use is proposed, the drainage ditch shall be replaced with a sub-surface storm sewer system approved by the County Engineer.

3.5.4.7 End Treatment

3.5.4.7.A Headwall

Gravity headwalls shall not be used for pipes with diameters of 60” and greater. Cast-in-place reinforced concrete footings, headwalls and wing walls as necessary shall be used.

3.5.4.7.B Flared End Sections

Flared end sections are permitted at the outfall of county drainage systems for pipe diameters less than 60”.

3.5.4.8 Regional Detention/Retention Facilities

The use of regional detention/retention facilities are strongly encouraged and may be required. Where all or a portion of one or more developments are proposed within a drainage basin, the storm water flow from the developments may be directed into detention/retention facilities that will accommodate the storm water from all of the proposed developments within the basin.

4.0 STUDIES AND ANALYSIS

4.1 TRAFFIC IMPACT STUDY/ANALYSIS

A traffic impact study, signed and sealed by a New Jersey licensed professional engineer, shall be submitted for proposed developments that generate 50 or more peak-hour, peak-direction vehicle trips. This threshold will be met based on 50 or more project generated trips at either the road peak hour or project peak hour. Seasonal high traffic volumes may be required to establish the threshold value.

The determination of the threshold value will be based upon the Institute of Transportation Engineers (ITE) Trip Generation Manual current edition at the time the development application is determined to be complete.

The Camden County Development Review Committee **requires** a Traffic Impact Study for any new proposed multiple unit housing development or commercial site along or affecting a county road. This includes but is not limited to:

- Town homes
- Condominiums
- Apartments or
- Clustered housing

The Camden County Development Review Committee may require a traffic impact study or traffic impact statement for a proposed development that does not meet the threshold value for a traffic impact study when special circumstances exist that include but are not limited to the following:

- The proposed development will generate heavy truck traffic.
- The proposed development will generate bus traffic.
- The proposed development is near an historical site or within an historic district or urban area.
- The proposed development is near a school or a major public facility such as a regional library.
- The proposed development is within a central business district.
- The proposed development contains a drive-through facility that

requires one or more stacking lanes.

- The proposed development is within 500’ of a signalized intersection.

- The proposed development would contain a new road or driveway that would result in turning movement conflicts with adjacent roads or driveways, or roads or driveways on the opposite side of the abutting street.

- The proposed development is located in an area where special safety concerns exist or would be created as a result of the proposed development.

4.2 DRAINAGE ANALYSIS/STORM WATER MANAGEMENT PLAN

A drainage analysis/storm water management plan, signed and sealed by a New Jersey licensed professional engineer, shall be submitted for all proposed developments that would create one (1) acre or more of impervious surfaces, for developments where a storm sewer connection is proposed into a county drainage system or county drainage structure, or for developments, including parking areas, located along a county road that would create five thousand (5,000) square feet or more of impervious surface that drains toward a county road or county drainage structure or facility.

5.0 OFF TRACT IMPROVEMENTS TO COUNTY ROADS AND COUNTY DRAINAGE FACILITIES

The applicant of a proposed development may be required to construct off tract improvements to county roads or county drainage facilities, make a fair share contribution toward off tract improvements to county roads or drainage facilities or make a payment to the county in lieu of improving or reconstructing off tract improvements to county roads or county drainage facilities.

5.1 OFF TRACT IMPROVEMENTS TO COUNTY ROADS AND COUNTY ROAD INTERSECTIONS.

The applicant of a proposed development with the exception of the developments listed below, may be required to mitigate impacts to off-tract county roads and/or county road intersections by improving or reconstructing said county roads and/or intersections, by making a fair share contribution toward improving or reconstructing said off tract county roads and/or intersections or by making a payment in lieu of improving or reconstructing said county roads and/or intersections.

Exceptions:

- Developments that contain less than three (3) new lots and do not contain new streets or shared driveways that connects to a county road.

- Developments that contain less than one (1) acre of impervious surfaces and do not abut a county road.

- Developments that abut a county road and contain less than 5,000 square feet of impervious area.

5.1.1 CONSTRUCTION OF OFF TRACT IMPROVEMENTS TO COUNTY ROADS AND COUNTY ROAD INTERSECTIONS

The applicant shall be required to mitigate traffic impacts from a proposed development on a county road and/or county road intersection by making improvements to or reconstructing the affected county road and/or county road intersection based on the following criteria:

- Traffic impacts from a development shall not be permitted to degrade any approach to a county road intersection that operates at Level of Service (LOS) D or lower. If the traffic impacts from the

development would degrade any approach to the county road intersection below a LOS D, the applicant shall be responsible for making improvements to that location so that the approach LOS is no worse than the LOS without the Development's traffic. For signalized intersections, redistribution of green time shall not be permitted if that redistribution results in any approach or the intersection degrading to LOS D or lower.

- If an approach to a county road intersection operates at LOS C or Middle B after post development traffic impacts from the development traffic including background growth have been analyzed, the approach may be degraded to LOS D. However, in no instance will any approach to a county intersection be permitted to be deteriorated more than 1 ½ levels of service.

- For un-signalized intersections, the applicant of a development shall be required to install a traffic signal and associated improvements at a county road intersection and bear all associated costs, including construction, engineering and right-of-way acquisition when such installation is necessary to mitigate traffic impacts to a county road intersection based on the above criteria provided that traffic signal warrants as established by the current edition of Manual of Uniform Traffic Control Devices are met.

- Improvements to county road segments impacted by development traffic may be required. Improvements that may be required include additional traffic lanes, vertical and horizontal road reconstruction and realignment and traffic safety enhancement to mitigate traffic impacts based on traffic volumes and traffic safety considerations. For county road segments, in no instance shall any single travel lane of a county road be permitted to exceed 1,000 vehicles per hour as a result of proposed development traffic.

5.2 OFF TRACT IMPROVEMENTS TO COUNTY DRAINAGE FACILITIES

Applicants of proposed developments with the exceptions listed below, may be required to mitigate traffic and/or drainage impacts to off-tract county drainage structures, county drainage systems and/or other county drainage facilities by improving, extending, expanding or reconstructing the affected off-tract drainage facilities, by making a fair share contribution toward improving, extending, expanding or reconstructing the affected off-tract drainage facilities, and/or by making a payment in lieu of improving, extending, expanding or reconstructing the affected off tract drainage

facilities.

Note: Off-tract county drainage facilities include but are not limited to county drainage structures, such as pipes, culverts and bridges that abut and or are impacted by the development site.

Exceptions:

- Developments that contain less than three (3) new lots and do not contain new streets or shared driveways that connects to a county road.

- Developments that contain less than one (1) acre of impervious surfaces, that do not abut a county road or county drainage structure, drainage system or drainage facility or where improvements required by other agencies and approving authorities do not affect a county drainage structure, drainage system or drainage facility.

- Developments that generate traffic that does not impact a county drainage structure, drainage system or drainage facility.

Traffic generated by a development is considered to impact or adversely affect a county drainage structure, drainage system or other drainage facility based on the following:

- Traffic generated by the development for reasons of traffic safety as well as roadway capacity will cause, or accelerate the need for the county drainage structure, drainage system, drainage facility or the road approach to a county drainage structure to be improved, extended, expanded or reconstructed.

- Municipal requirements pertaining to a development application, such as widening of the roadway adjacent to a county drainage structure, or other improvements proposed by a developer will cause, or accelerate the need for the county drainage structure, drainage system, or other drainage facility or the road approach to a county drainage structure, to be improved, extended, expanded or reconstructed.

Storm water runoff produced by a development is considered to impact or adversely affect a county drainage structure, drainage system, or other drainage facility based on the following:

- The downstream county drainage structure, drainage system or

other drainage facility is determined by the County Engineer to be hydraulically inadequate and the development is situated in a drainage basin upstream of the county drainage structure.

5.2.1 CONSTRUCTION OF OFF-TRACT IMPROVEMENTS TO COUNTY DRAINAGE FACILITIES

If an applicant of a proposed development proposes to widen the roadway adjacent to a county bridge, pipe or culvert that is not scheduled for replacement by the county, the developer may be required to extend the subject culvert or pipe to the full width of the proposed right-of-way and may be required to widen any affected bridges to the width of road pavement plus five (5) feet for sidewalks.

If the County Engineer determines that extending the county drainage structure is impractical due to the structural composition of the structure, the developer may be required to reconstruct the structure.

If the County Engineer has determined that a county drainage structure located downstream of a proposed development is hydraulically inadequate and the affected structure is not scheduled for reconstruction, the developer may be required to reconstruct the structure.

The developer will be obligated to provide all construction plans for reconstruction of the structure, parcel maps for any rights-of-way and easements, documents and plans necessary to obtain applicable permits, pay the full cost of right-of-way and easement acquisitions and pay the full cost of the reconstruction.

6.0 LANDSCAPING ALONG COUNTY ROADS

Street trees, which shall be planted along all county roads, are subject to review and approval by the Camden County Development Review Committee. All shade trees shall be minimum of 2 -2 ½ inch caliper, Balled and Burlapped, and conform to the American Standard of Nursery Stock (current edition).

6.1 Street Tree Spacing

Spacing of existing shade trees shall determine the spacing standards for new shade trees unless otherwise directed by the county planner. Shade trees may be inter-planted between existing shade trees; however, the species should remain the same, or have similar growth habit and visual characteristics.

Shade trees shall be spaced evenly along the street, however, if a specific effect is desired, the trees may be massed at critical points or shall be a combination of both. If columnar trees are to be planted, the spacing may be closer. All tree spacing shall be subject to review and approval by the Camden County Development Review Committee.

All trees shall adhere to the following minimum planting distances for all utility or site infrastructure clearances:

- All trees shall be planted a minimum six (6) feet from the edge of pavement except where underground or overhead utilities are present, then the minimum distance shall be fifteen (15) feet for small trees, twenty (20) feet for medium trees, and thirty (30) feet for large trees.

- All trees shall be planted a minimum ten (10) feet from all drain inlets, catch basins, and trench drains.

- All trees shall be planted a minimum ten (10) feet from any driveway aprons.

- All trees shall be planted a minimum five (5) feet from any sidewalk. Shade trees along county roads shall generally be of the same species unless specified otherwise. Shade trees shall vary in species from road to road. Where shade trees along a county road include a variety of species, the general growth habit and scale of the trees should be similar so as to produce continuity.

The following table should be used for general guidance in the spacing of shade trees to be planted along county roads. Specific situations or specific design requirements require review and approval of the modification of standards by the county planner.

Tree Size	Height in feet	Spacing in feet
Large trees	45+	40
Medium trees	30 - 45	30
Small trees	below 30	25

All deciduous trees shall be a minimum of two (2) inches in caliper as measured at one (1) foot above the ground. The size of evergreens and shrubs shall be allowed to vary depending on setting and type of tree or shrub.

The minimum height of all proposed deciduous trees shall be eleven (11) feet. The minimum height of all ornamental trees shall be allowed to vary depending on setting and type of tree.

6.2 Grass and Topsoil

Identification of all areas to receive topsoil and seed, sod or other approved vegetative cover. Topsoil removed during the course of construction within county right-of-way shall be stockpiled and redistributed on all re-graded surfaces within county right-of-way. A minimum even cover of four (4) inches shall be redistributed to all disturbed areas of the affected right-of-way and shall be stabilized by seeding, application of sod, hydro seeding, use of other approved vegetative material and fertilizer.

6.3 Guying and staking

All deciduous trees under three (3) inches in caliper shall be staked. All deciduous trees three (3) inches in caliper or greater shall be guyed. All evergreen trees under eight (8) feet shall be staked. All evergreen trees eight (8) feet or greater shall be guyed. Guying and staking detail shall be included on Landscape Plan. Guying and staking may be omitted if specific site conditions permit, subject to review and approval by the County Engineer.

All deciduous and evergreen trees requiring stakes shall have a minimum of three (3), six (6) to eight (8) foot cedar or oak stakes, no less than two (2) inches in diameter, installed in a triangular pattern to anchor the tree

against the prevailing winds. Each stake shall be set two (2) feet into the ground parallel to the tree just beyond the root ball. Each tree shall be secured to the stakes with double strand twisted malleable #10 gauge annealed steel wire. The wire shall be looped through a two-ply fabric bearing rubber hose ½" minimum I.D. and secured approximately 2/3's up the tree or just at first branches. All stakes and wires shall be removed after two years.

6.4 Buffer Areas

A buffer may be required along county roads where topography, or existing vegetation alone, does not provide sufficient visual screening. The Development Review Committee may determine that the proposed development requires additional buffering to minimize adverse impacts such as incompatible land uses, noise, glaring light, and traffic. All landscape buffers shall be designed to provide a year- round visual screen to minimize the adverse impacts from a site adjacent to a county road. The buffer may consist of plants; land contouring, fencing, walls, rocks, boulders, mounds, berms, or combinations thereof to achieve the stated objectives. All buffers shall take into consideration the existing and proposed site conditions including landscape patterns.

Where required, a minimum width of planted buffer of fifty (25) feet shall be provided along county right-of-way.

The Development Review Committee may consider alternatives to the minimum planted buffer width in those cases where such buffer width becomes impractical.

Proposed buffers shall take into consideration the existing surrounding landscape and vegetative patterns. All buffers should be designed to provide maximum visual protection to adjacent properties. All buffers should appear as natural to the site and the surrounding area, as possible.

6.5 Plant Selection

All plant materials used shall be true to name and size in conformity with the American Standard of Nursery Stock (current edition) and shall be typical of their species and variety. All plants shall have normal, well-developed branches and vigorous root systems. Plants shall be sound, healthy, vigorous, and free from defects, disfiguring knots, and abrasions of the bark, sunscald injuries, plant diseases, insect eggs, borers and all other forms of infection. All plants shall be nursery grown, unless specifically approved by the county planner. All plants shall be grade "A"

nursery stock.

All plant material shall be climatically suitable for that particular climatic zone in which the project is located. Plant material must be tagged at the source by the Landscape Architect or agent in charge. All plants (B&B or container) shall be clearly identified as to Genus, specie, variety, Common Name and size on weather-proof labels securely attached prior to delivery to the project site. All plants shall be protected from wind and heat damage during transit to the job site by a tarpaulin.

6.6 Pruning

All deciduous trees shall be pruned at time of planting to thin and shape the canopy. Branches extending below six (6) feet shall be pruned. All evergreen trees and shrubs shall only be pruned to remove damaged or broken branches. All deciduous shrubs shall be pruned to thin branch tips and foliage by 1/3 and to shape the plant. All cuts shall be made within ¼ inch of a lateral branch or bud. Under no circumstances shall the central leader of any deciduous or evergreen tree be cut.

6.7 Fences and Walls

All fences and/or walls shall be erected within property lines, and no fence or wall shall be erected so that it will encroach upon the county right-of-way.

6.8 Street Furniture

All street furniture including, but not limited to, trash receptacles, benches, planters, phone booths, etc., shall be reviewed and approved on a case by case basis by the County Planner and Engineer to be approved by the County Planning Board. Restaurants seeking to place outdoor seating on sidewalk along the county right-of-way should review the Indemnification Agreement titled Non-permanent portable seating in the appendix of these standards.

6.9 Landscaping on Channelized Islands or Traffic Islands

All channelized islands or traffic islands with less than two hundred fifty (250) square feet of area shall be paved. Decorative paving material, such as brick, concrete paver, or similar paving material may be permitted on channelized islands or traffic islands.

All channelized islands or traffic islands with greater than two hundred fifty (250) square feet of area shall be planted with turf, groundcovers, annuals,

perennials, or shrubs and shall not exceed thirty (30) inches in height as measured above the centerline grade of the intersecting street or driveway.

6.10 Landscaping on Medians

All medians fifteen (15) feet in width or less, that is not required to be paved, shall be planted with turf, groundcovers, annuals, perennials, or shrubs and shall be maintained to a height of thirty (30) inches as measured from the centerline grade of the adjacent street or driveway.

7.0 TRAFFIC SIGNAL DESIGN STANDARDS

All traffic signal equipment, including signs, traffic signal foundations, controllers, junction boxes and conduit shall be placed within the road right-of-way. Design of traffic signals and related equipment shall conform to the current edition of the Manual on Uniform Traffic Control Devices and NJ DOT standards and guidelines.

7.1 Vehicle Detection

Video cameras and/or other overhead vehicle detection devices shall be utilized as the primary type of detection. Use of loop and microwave detectors shall be minimized. Design shall be in accordance with current NJDOT standards and guidelines.

7.2 Maintenance and Protection of Traffic

Section 110.01 of the 2007 Standard Specifications for Road and Bridge Construction and amendments thereto as published by the New Jersey Department of Transportation and as amended herein shall apply for the maintenance and protection of traffic. The following is added to **Section 110.01 Maintenance and Protection of Traffic.**

Camden County Route [route number] will not be permitted to be closed to traffic at any time during the contract period. Alternate lane closings will be permitted as described below.

The hours of construction operations at each site will be determined by the county.

Work which will interfere with traffic or restrict the width of travelled way available for traffic shall not be performed on Saturdays, Sundays, or legal holidays, unless otherwise directed or approved by the county.

7.3 Detours

Written approval of the county traffic engineer and consent of Local Authorities having jurisdiction shall first be obtained for rerouting traffic over detours, whether such detours are shown or not on the contract plans or in the specifications. All necessary arrangements shall be made with such authorities regarding the establishment, maintenance, and repair of such detours, the regulation and direction of traffic thereon, and signing. Adequate directional and detour signs in accordance with MUTCD and local police department and approved by the County Engineer, shall be furnished and erected at the location where such authorities may direct.

Any detours used exclusively for hauling materials and equipment shall be constructed and maintained at no cost to the county.

Wherever and whenever a detour may be established, the contractor shall obtain written approval from the County Engineer at least two weeks in advance and shall provide construction warning signs as necessary in accordance with the current edition of the Manual of Uniform Traffic Control Devices. The contractor will be responsible for signing and maintaining the detour and will assume all costs thereof.

8.0 COUNTY BRIDGE OR CULVERT ONSTRUCTION/RECONSTRUCTION DESIGN CRITERIA/ DESIGNSTANDARDS

8.1 Bridge and Culvert Hydraulic Design

County bridges and culverts must be designed to convey the peak runoff from a 25- year storm under full flow conditions. One (1) foot of freeboard (1' above the water surface elevation of the 25-year storm to the bottom of the bridge deck structure or bottom side of the top of the culvert) is to be provided in determining the ultimate design of the county bridge or culvert. Minimum design velocity at flowing full conditions shall be three feet per second. Maximum design velocity shall not exceed fifteen feet per second.

The hydraulic design of bridges and culverts shall be based on current New Jersey Department of Environmental Protection permit requirements. Therefore, all designs shall be sufficient to obtain all necessary permits.

8.2 Water Surface Profiles (HEC II)

At the discretion of the County Engineer, any bridge or culvert replacement along a waterway must be accompanied by a HECII analysis of the upstream and downstream water surface elevation.

8.3 Standards and Specifications

Design specifications shall be the current edition of the American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges as modified by the appropriate sections of the most current edition of the New Jersey Department of Transportation Design Manual for Bridges and Structures. Concrete classes shall conform to current Camden County standards.

- All structures shall be designed for current AASHTO HS20-44 truck plus 25%overload or tandem 24 kip axles at 4' centers whichever governs or as revised by most current AASHTO standards.

- Dead load shall include 25 pounds per square foot for future overlay on bridge deck.

- All structural design shall be performed using the Working Stress Method

- All reinforcing steel shall be hot dip galvanized after fabrication except mild reinforcing steel in pre-stressed concrete planks or beams shall not be hot dip galvanized. Exposed composite action stirrups and all cuts in galvanized reinforcing steel shall be coated with two coats of Galvanox or approved equal.

- The substructure shall consist of either cast-in-place concrete or timber bulkhead as determined by the Camden County Engineer. If a timber substructure is used, the bridge shall have cast-in-place concrete caps.

- The superstructure shall consist of cast-in-place concrete or pre-stressed concrete depending on the design span. Steel shall only be used upon the approval by the Camden County Engineer.

- The deck, sidewalks, safety walks and parapets shall consist of cast-in-place concrete. A minimum of one five-foot wide sidewalk shall be provided on the structures. Two sidewalks may be required depending upon site conditions.

- Railings shall conform to current New Jersey Department of Transportation approved details or Federal Highway Administration (FHWA) approved details subject to review and approval by the Camden County Engineer.

- Soil borings or other geotechnical services may be required as necessary for the design of the proposed structure.

- If site conditions permit the use of precast concrete box culvert sections, every attempt shall be made to design the structure as a single span. The use of more than one box culvert will be subject to review and approval of the Camden County Engineer and the applicant is advised that Camden County reserves the right to require the use of a bridge if more than one box culvert section is required.

- The design of bridge railings, parapets and other architectural treatments shall be compatible with the surrounding area. The use of special details, including textured concrete may be required. All architectural treatments shall be approved by the Camden County Engineer prior to incorporation into the design.

- Approach slabs shall be used for structures with concrete substructures and shall be designed in accordance with

appropriate geotechnical parameters.

- Approach roadway transitions shall be designed to obtain the best achievable horizontal and vertical alignments. The minimum cross slope shall be 2.5%. The minimum centerline and gutter grades shall be 0.5%. Careful consideration shall be given to the impacts on existing intersections, driveways and sidewalks.

- Minimum cast in place, composite deck slab thickness for pre-stressed box beams or voided slabs shall be 6".

- Minimum cover from the top of pavement (bituminous) to the top of the box culvert shall be two (2) feet. A reinforced concrete deck slab shall be used if the cover is less than two (2) feet. Minimum slab thickness shall be 6".

- Curb face on the proposed structure shall be 8".

- The specified compressive strength of concrete (non-prestressed) used in design shall be 3,000 psi. The extreme fiber compression used in design shall be 1,200 psi.

9.0 AS-BUILT PLANS

At the discretion of the County Engineer, as-built plans of road, drainage and traffic control devices may be required.
As-built plans of all traffic signal installations shall be provided within seven (7) days of the activation of the traffic signal.

10.0 NEW BRIDGES, CULVERTS, AND OTHER DRAINAGE STRUCTURES TO BE CONSIDERED FOR MAINTENANCE BY THE COUNTY

11.0 COUNTY RESPONSIBILITY FOR BRIDGES

The Board of Chosen Freeholders may by resolution, assume responsibility for the future maintenance of new culverts and bridges on new public roads within developments subject to the following conditions:

(a) Drainage Area

The drainage basin upstream of proposed bridge or culvert exceeds one-half (1/2) square mile (320 acres) in areas and the bridge or culvert has a span greater than 20 feet.

(b) New Jersey Department of Environmental Protection Permit Application has been made and a permit issued by the New Jersey Department of Environmental Protection for the proposed structure.

(c) Structure Loading

The structure is designed to carry A.A.S.H.T.O. H2O-44 + 25% loading. Deck width meets the following requirements:

(i) Culverts - Full width of road right-of-way.

(ii) Bridges - Planned pavement width plus 2 - 5’ wide sidewalks.

(d) The construction plans and specifications for the structure have been approved by the County Engineer prior to construction.

(e) Construction Supervision Notification of commencement of construction is given so that periodic inspections can be made by county.

(f) Final inspection and certification of County Engineer stating that the new structure was constructed in accordance with the approved plans and specifications.

(g) The municipal governing body has adopted a resolution requesting that the county assume maintenance responsibility of the new structure.

APPENDIX

APPENDIX A:

INDEMIFICATION AGREEMENT

APPENDIX B:

PROCEDURES FOR MUNICIPALITIES
REQUESTING CHANGES TO STRIPING PLAN
ON CAMDEN COUNTY HIGHWAYS

APPENDIX C:

CAMDEN COUNTY PLANNING BOARD
APPLICATION

APPENDIX D:

CAMDEN COUNTY ROADWAY EASEMENT
INDENTURE SAMPLE SHEET

APPENDIX E:

CAMDEN COUNTY ENGINEERING DETAIL
SHEETS

APPENDIX A

INDEMIFICATION AGREEMENT

Camden County Planning Division

INDEMNIFICATION AGREEMENT
(Non-permanent portable seating)

Making It Better, Together.

BY: _____, having an address of _____, New Jersey _____, hereinafter referred to as the "Grantor".

TO: County of Camden, having offices at 520 Market Street, Camden, New Jersey 08102.

The parcel of real property which is the subject of this Indemnification Agreement is Block _____, Lot _____, as shown on the Tax Map of the Township of _____, County of Camden, New Jersey.

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the Grantor does hereby agree to defend, indemnify and hold harmless, the County of Camden, its officials, officers, employees and agents from any and all claims, suits, actions, damages, losses or costs of any nature whatsoever, whether for personal injury, property damage or other liability, including attorney fees and court costs, arising out of or in any way connected with the non-permanent portable seating located within the right of way of County Route _____ (_____ Road) and on the parcel identified as Block ____, Lot ____, _____, New Jersey. Said non-permanent portable seating is defined as that seating which cannot be permanently affixed to the real property.

The Grantor does hereby agree that it will remove the aforementioned non-permanent portable seating at its own cost and expense at such time in the future as the County of Camden determines in its sole and exclusive discretion such non-permanent portable seating must be

removed; and where Grantor has failed to remove the non-permanent portable seating, upon notice by the County of Camden, the County shall then have the right to remove the non-permanent portable seating at the Grantor's cost and expense.

This Agreement shall at all times be deemed to be and shall be a continuing Agreement running with the land and shall be binding upon the Parties and their officers, trustees, directors, employees, agents, attorneys, successors and assigns.

Witness: Name of Entity

_____ By: _____
Name: Name:
Title:

ACKNOWLEDGEMENT

STATE OF NEW JERSEY :
COUNTY OF CAMDEN : SS:

I certify that on _____, 2013, _____ personally came before me and stated to my satisfaction that this person (or if more than one, each person): (a) was the maker of the attached instrument; (b) was authorized to and did execute this agreement as the _____ of _____, the entity named in this agreement; and (c) executed this agreement as the act of the entity named in this agreement.

_____

APPENDIX B

PROCEDURES FOR MUNICIPALITIES REQUESTING CHANGES TO STRIPING PLAN ON CAMDEN COUNTY HIGHWAYS

CAMDEN COUNTY

PROCEDURE FOR MUNICIPALITIES REQUESTING CHANGES TO STRIPING PLAN ON CAMDEN COUNTY HIGHWAYS

1. Local municipalities shall analyze proposed changes to roadway striping and pavement markings using the Manual of Uniform Traffic Control Devices (MUTCD) and all applicable regulations and requirements.

2. If changes to roadway striping are warranted a local municipality shall submit to the County a Striping Plan. This plan shall include but is not limited to the following:

    a. A north arrow

    b. Scale of plan (written and graphic)

    c. Existing painted centerlines, traffic islands, cross hatching, lane lines, shoulder lines/edge lines and stop bars, existing designated turn lanes, painted arrows, words and/or symbols, existing passing and no passing zones, existing crosswalks, existing parking spaces and no-parking zones existing loading zones and reflective pavement markers on the existing County roadway and within 200’ of the requests starting and end points.

    d. Proposed painted centerlines, traffic islands, cross hatching, lane lines, shoulder lines/edge lines and stop bars, designated turn lanes, painted arrows, words and/or symbols, passing and no passing zones, existing crosswalks, parking spaces and no- parking zones, loading zones and reflective pavement markers on the proposed County roadway and within 200’ of the requests starting and end points.

    e. Dimensions of existing and proposed traffic lanes, shoulders and transitions.

    f. The location and length of existing traffic line striping to be removed and grinding specified as the method used for removal.

    g. The width, color and material of all proposed traffic line striping

    h. Engineers signed and sealed certification that the changes warranted are in conformance with the MUTCD and municipal ordinance establishing the changes in the municipal traffic code.

3. County Engineer will review the municipal submission.

4. If acceptable, County Freeholders will pass a consenting resolution and forward copy to the local municipality.

5. The County will keep a record of the plan on file.

APPENDIX C

CAMDEN COUNTY PLANNING BOARD APPLICATION

CAMDEN COUNTY PLANNING BOARD APPLICATION
SUBMISSION REQUIREMENTS

Making It Better, Together.

Documents must be submitted to the Planning Division Staff at least thirty (30) working days prior to the scheduled Planning Board meeting. No provisional approvals will be issued at Planning Board meeting.

Subdivision Requirements:

- ◯ Two (2) Copies of the County Planning Board Application (Municipal use section must be filled out and bottom of this page must be signed)
- ◯ One (1) Copy of Local Municipal Application
- ◯ One (1) Copy of the Fee Schedule, Filled Out and Signed (Checks made payable to *Camden County Treasurer*)
- ◯ One(1) Set of Plans
- ◯ Two (2) Copies of the Affidavit of Ownership
- ◯ One (1) Copy of Pinelands Certificate of Filing (If applicable)

Site Plan & Site Plan Revision Requirements

- ◯ Two (2) Copies of the County Planning Board Application (Municipal use section must be filled out and bottom of this page must be signed)
- ◯ One (1) Copy of Local Municipal Application
- ◯ One (1) Copy of the Fee Schedule, Filled Out and Signed (Checks made payable to *Camden County Treasurer*)
- ◯ Two (2) Sets of Plans of Signed and Sealed Plans (Only 24" x 36" Site plans will be accepted)

  (Plans must reflect all requirements contained in Subdivision and Site Plan Procedures, Engineering and Planning Standards Vol. 1 & Development Regulations Vol. 2)
- ◯ Two (2) Copies of County Road Improvement Plans (If applicable and not included in Original Set of Plans)
- ◯ Two (2) Copies of a Signed and Sealed Survey

  (Conducted by a licensed surveyor if existing documents are referenced in accordance with NJAC 13:40-7.2 (a.)1)
- ◯ Two (2) Sets of Drainage Calculations (Data based upon 10 YEAR-PRE & 25 YEAR-POST Year Storm Event)
- ◯ Two (2) Sets of Traffic Impact Study (If available)
- ◯ Two (2) Copies of the Local Engineer Report
- ◯ Two (2) Copies of the Affidavit of Ownership
- ◯ One (1) Copy of Pinelands Certificate of Filing (If applicable)
- ◯ One (1) Copy of All Dedication, Easement, Deed, and Other Relevant Documents

Please Submit the Following Additional Items:

- ◯ Map or Most Recent Aerial Photo of Site
- ◯ Digital Copy of the Site Plan, Subdivision Plan or Major Subdivision

*X*_____
Certification of Completeness
Signature By Local Official

*X*_____
Signature of Agent or Applicant

CAMDEN COUNTY PLANNING BOARD APPLICATION

Making It Better, Together.

Application for County Approval of Subdivision, Site & Development Plans

Camden County Planning Board
Charles J. DePalma Public Works Complex
2311 Egg Harbor Road
Lindenwold, NJ 08021

Phone: 856.566.2978 Fax: 856.566.2988
E-mail: planningdivision@camdencounty.com

This application must be completed in full, duplicated, signed and filed with the municipality. Please also submit a copy of local application and approval. See County Submission requirement list for all documents necessary for a complete application.

(PLEASE TYPE OR PRINT LEGIBLY)

Project Information:

Project Name: _____

Project Address (if applicable) & Municipality: _____

Abuts County Road: _____ County Route No.:_____

Type of Submission (please check one):

- ◯ New Site Plan
- ◯ New Minor Subdivision
- ◯ New Major Subdivision
- ◯ Request for Letter of No Impact or Waiver Review
- ◯ Revision to Prior Site Plan
  - Original Site Plan Application No.: _____ Date Originally Approved: _____
- ◯ Resubmission of Major Subdivision
  - Original Major Subdivision Application No.: _____ Date Originally Approved: _____

Tax Map Data:

Plate(s): _____

Block(s): _____

Lot(s): _____

Existing Zoning: _____

Variance(s) Required: _____

_____

The Camden County planning process concerns itself primarily with a review of factors that directly impact county facilities such as County owned roads and stormwater management systems. This application as well as Subdivision and Site Plan Procedures, Engineering and Planning Standards Vol. 1 & Development Regulations Vol. 2 can be found on the Camden County Planning Division website: http://www.camdencounty.com/government/offices-departments/planning-division . If you have any questions please call 856-566-2978.

CAMDEN COUNTY PLANNING BOARD APPLICATION

Applicant & Agent Contact Information (please type or print legibly or your application may be delayed):

Applicant: _____ Phone: _____ Fax: _____

Address: _____ Town & State: _____

Email: _____ Zip.:_____

Attorney: _____ Phone: _____ Fax: _____

Address: _____ Town & State: _____

Email: _____ Zip.:_____

Engineer: _____ Phone: _____ Fax: _____

Address: _____ Town & State: _____

Email: _____ Zip.:_____

Proposed Use (please check all that apply):

Residential	Commercial	Industrial
◯ Single Family Detached	◯ Retail	◯ Maintenance/ Repair Shop
◯ Town Homes	◯ Office	◯ Flex Space
◯ Duplex	◯ Restaurant/ Food Establishment	◯ Storage/ Warehouse
◯ Apartments	◯ Hospitality/ Hotel Space	◯ Distribution Center
◯ Condominiums	◯ Medical Use	◯ Manufacturing
◯ Medical Care Residential	◯ Sports or Entertainment	◯ **Other**:_____

Project Description & Statistics:

Short Description of Project: _____

_____

_____

_____

_____

_____

Increase in Impervious Coverage?: YES / NO Total Increase or Decrease: _____

Total Amount of Land Disturbed: _____

Total Gross SF of all Buildings/ Development: _____

Total New Residential Units: _____

Total New Jobs Created: _____

CAMDEN COUNTY PLANNING BOARD APPLICATION

Subdivision Description (if applicable):

Does this application include a lot consolidation? YES / NO

Will new lots be created? YES / NO How Many New Lots? _____

Size of Existing Lot(s): _____
_____
_____

Portion to be Subdivided: _____
_____
_____

Municipal Use:

Title of Municipal Official: _____

Authorized Municipal Signature: _____ Date: _____

Transmittal Date (if applicable): _____

Phone Number: _____

Signatures Required:

Name of Applicant: _____

Signature of Applicant: _____ Date:_____

Agent Completing Application: _____

Signature of Agent: _____ Date:_____

For County Use:	*Stamp Date Received Below*
Classification of Application: _____ Fees Included with Application: YES / NO County Plan Number: _____	

CAMDEN COUNTY PLANNING BOARD APPLICATION
FEE SCHEDULE

camden county
Making It Better, Together.

Applicant's Name: _____

Project Name: _____ Municipality: _____

Project Address: _____ Plate: ____ Block: _____ Lot: _____

Type of Plan

◯ Minor Subdivision (3 lots or less) ◯ Major Subdivision (4 lots or more) ◯ Site Plan

Subdivision Fees

◯ Minor Review Fee ($200.00)..... $ _____

◯ Major Review Fee ($500.00) ..... $ _____

Site Plan Fees

◯ Design Review Fee ($500.00)..... $ _____

◯ Total Parking Spaces ($8.00/Space) ..... $ _____

◯ Dwelling Units ($16.00/Unit) ..... $ _____

◯ Dedication, Easement, Deed, Etc. Review Fee ($150.00) ..... $ _____

◯ Inspection Fee ($200.00) ..... $ _____

Additional/ Other Fees

◯ Preliminary / Concept Drawing Review Fee ($200.00)..... $ _____

◯ Site Plan Revision($200.00) ..... $ _____

◯ Request for Waiver Review or Letter of No Impact ($200.00) ..... $ _____

◯ Large Size Site Plan/Subdivision Map submission and filing/storage fee ($250.00)..... $ _____
To be used by applicants filing site and subdivision plans larger than 24' x 36' as required by development regulations

◯ Signing of Filing Plats ($150.00)..... $ _____

*X*_____ _____
Signature of Agent or Applicant ***Date***

SPECIAL PROVISIONS

The Fee Schedule Check is Payable to the Camden County Treasurer after Applications are Deemed Complete and Consistent with Municipal Review and Regulations. Fees paid are non-refundable once the review process begins. All Plans, Applicatons,Dedicatons, Easements, Deeds, etc. MUST be submited to the Planning Board at Least Thirty (30) Working Days Prior to the Scheduled Planning Board Meetng.

CAMDEN COUNTY PLANNING BOARD APPLICATION
AFFIDAVIT OF OWNERSHIP

camden county
Making It Better, Together.

Company/ Organization Information

Name of Company/Organization: _____

Is the Company a Corporation? YES / NO

If yes, what State is the Corporation incorporated in? _____

Is the Company a Partnership? YES / NO

Is Company an Individual Owner? YES / NO

Please list any/all individuals who are owners (*full/ part*) / (*individual/multiple*) of the Company/Organization.
If applicant is a Non-Profit Organization, please list all Board Members.

Name	Address	Title

I certify that the above information is true and correct to the best of my knowledge:

X_____ _____
Signature of Owner & Title ***Date***

X_____ _____
Signature of Owner & Title ***Date***

APPENDIX D

CAMDEN COUNTY ROADWAY EASEMENT INDENTURE SAMPLE SHEET

Prepared By:_____

ROADWAY EASEMENT

THIS INDENTURE made this _____day of _____, 20____, between _____, hereinafter known as the Grantor, with its address at _____, in the municipality of _____, and the State of New Jersey and the COUNTY OF CAMDEN, a municipal corporation of the State of New Jersey, with principal offices at 520 Market Street, Camden, New Jersey 08102, hereinafter known as the Grantee.

WITNESSETH that it is in the interest of the general public and the welfare of the County of Camden that the lands hereinafter described shall be burdened with an easement of right-of-way for the purpose of constructing, improving, operating and maintaining a public road upon and across such land.

NOW, THEREFORE, in consideration of the benefits accruing to the Grantor and to the public and One Dollar ($1.00), the Grantor does hereby dedicate to public use the following land, situate, lying and being in the municipality of _____, County of Camden and State of New Jersey, and being bounded and described as follows on the metes and bounds description attached hereto and made a part hereof as Exhibit A (one page).

AND BEING known as portion of Block _____, Lot _____, on the tax map of _____, which property is the subject of an application for development submitted to the Camden County Development Review Committee and County File No(s) _____, and subject to existing easements and rights of record.

IN WITNESS WHEREOF the Grantor signs this Easement on this _____day of _____, 200___. If the Grantor is a corporation, this Easement is signed and attested to by its proper corporate officers and its corporate seal is affixed.

ATTEST/WITNESS NAME OF GRANTOR

_____ By:_____
Name of Witness *Name of Grantor, Title*

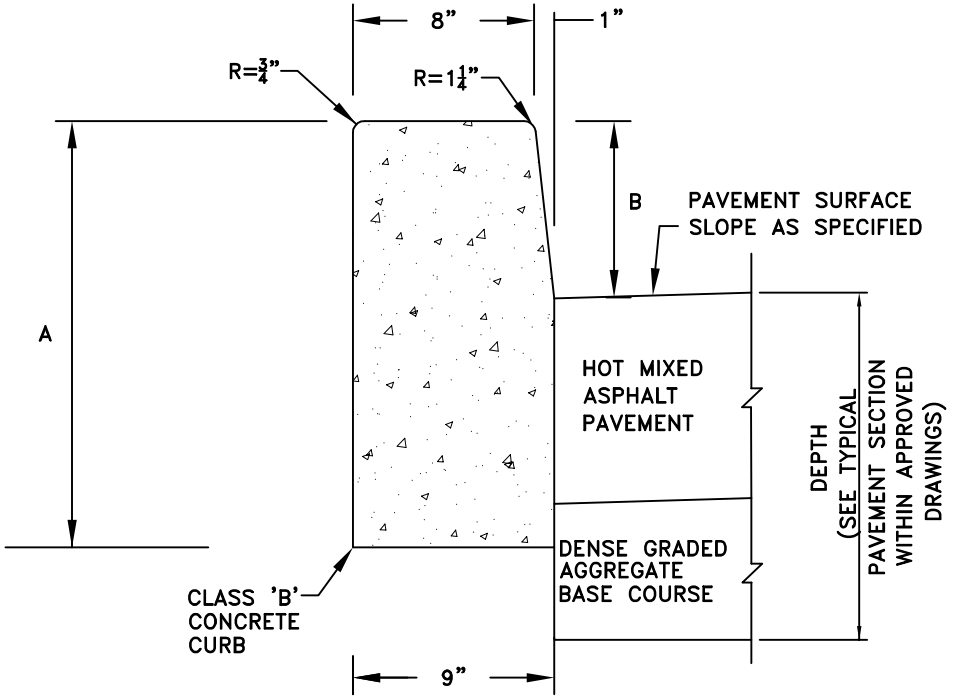
STATE OF NEW JERSEY)
) SS:
COUNTY OF CAMDEN)

BE IT REMEMBERED that on this _____day of _____, 20___, before me the subscriber, a Notary Public, personally appeared _____
(Name of Grantor)
who being by me sworn on his/her oath, deposes and makes proof to my satisfaction that he is the _____of _____, the corporation
(Owner/President) *(Name of Corporation)*
named in the within instrument; that he signed the same as the officer; that such instrument is sealed with the corporate seal; that the instrument is made by virtue of the authority of the Board of Directors of said corporation for the uses and purposes therein expressed, and that the full and actual consideration as defined in P.L. 1968 C.49 Sec. 19(c), is $1.00.

Easement acknowledged by: _____
(*Notary Public)*

APPENDIX E

CAMDEN COUNTY ENGINEERING DETAIL SHEETS



CURB SIZE	DIM "A"	DIM "B"
9"x 18"	18"	4"
9"x 18"	18"	6"

NOTES:

1. EXPANSION JOINTS ½" WIDE IN THE CURB SHALL BE PROVIDED AT APPROXIMATELY EQUAL DISTANCES OF NOT MORE THAN 20' BETWEEN THE JOINTS.

2. THE COST OF EXPANSION JOINTS IN THE CURB AND DENSE GRADED AGGREGATE BEDDING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CURB.

3. CONCRETE SHALL BE CLASS B WITH 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI, AND 6% ±1.5 AIR ENTRAINMENT.

DETAIL 1 STANDARD 8"X9"X18" CONCRETE VERTICAL CURB DETAIL

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

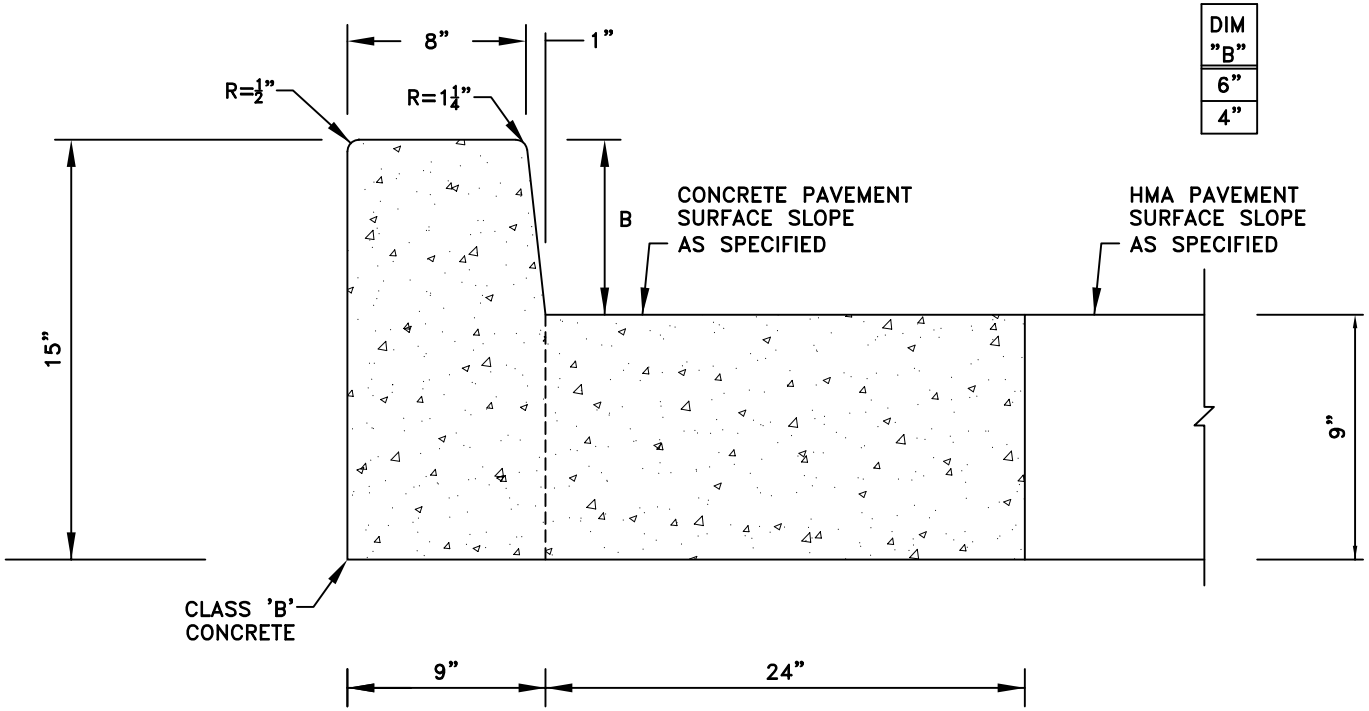
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
8"X9"X18" CONCRETE
VERTICAL CURB DETAIL

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/12/2014 7:15 AM File Names: F:\Engineering\County Standards\DTL-1-Conc-Curb-8.5X11.dwg



NOTES:

1. TRANSVERSE JOINTS ½" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS FOR TYPE III FILER IN A.A.S.H.T.O. SPECS M-153, RECESSED ¼" IN FROM FRONT FACE AND TOP OF CURB.

2. JOINT MATERIAL IN THE CURB SHALL BE AS SPECIFIED FOR CONCRETE VERTICAL CURB. THE TRANSVERSE EXPANSION JOINT MATERIAL SHALL NOT EXTEND THRU THE CURB.

3. CONCRETE SHALL BE CLASS B WITH 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI, AND 6% ±1.5 AIR ENTRAINMENT.

DETAIL 2 — STANDARD MONOLITHIC CONCRETE CURB AND GUTTER DETAIL

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

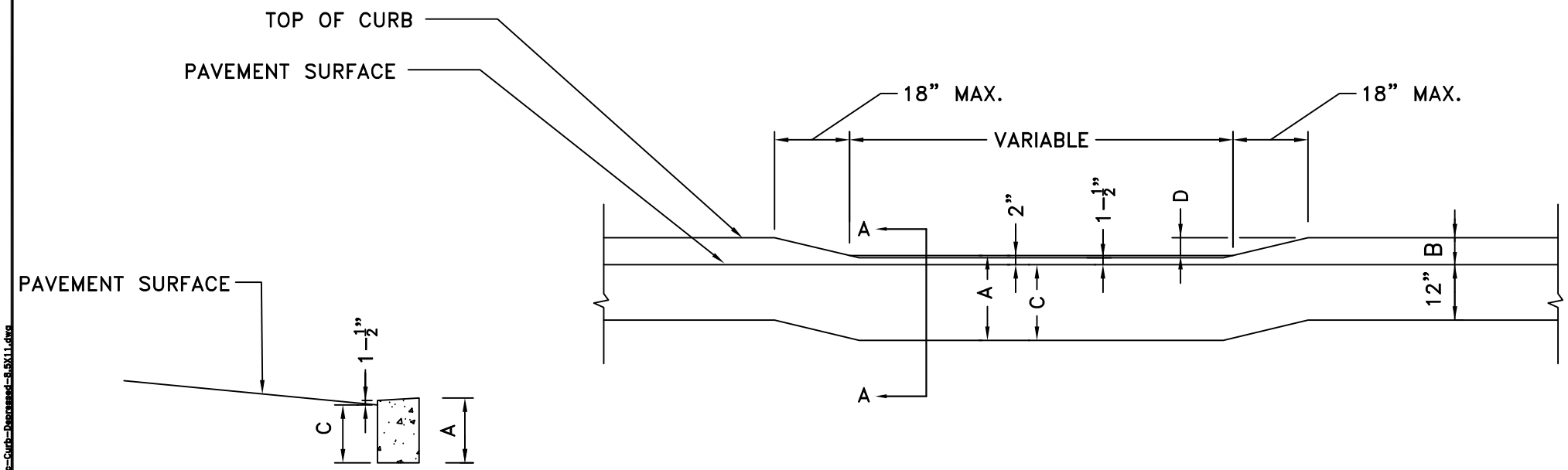
TITLE
COUNTY STANDARD
MONOLITHIC CONCRETE
CURB AND GUTTER DETAIL

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/12/2014 7:16 AM File Name: F:\Engineering\County Standards\DTL-2-Conc-Curb&Gutter-8.5X11.dwg

CURB SIZE	DIM. A	DIM. B	DIM. C	DIM. D
9"x18"	18"	6"	16"	4"



SECTION A–A

METHOD OF DEPRESSING CURB

NOTES:

1. CONCRETE SHALL BE CLASS B WITH 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI, AND 6% ±1.5 AIR ENTRAINMENT.

DETAIL 3 STANDARD DEPRESSED CONCRETE CURB DETAIL

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

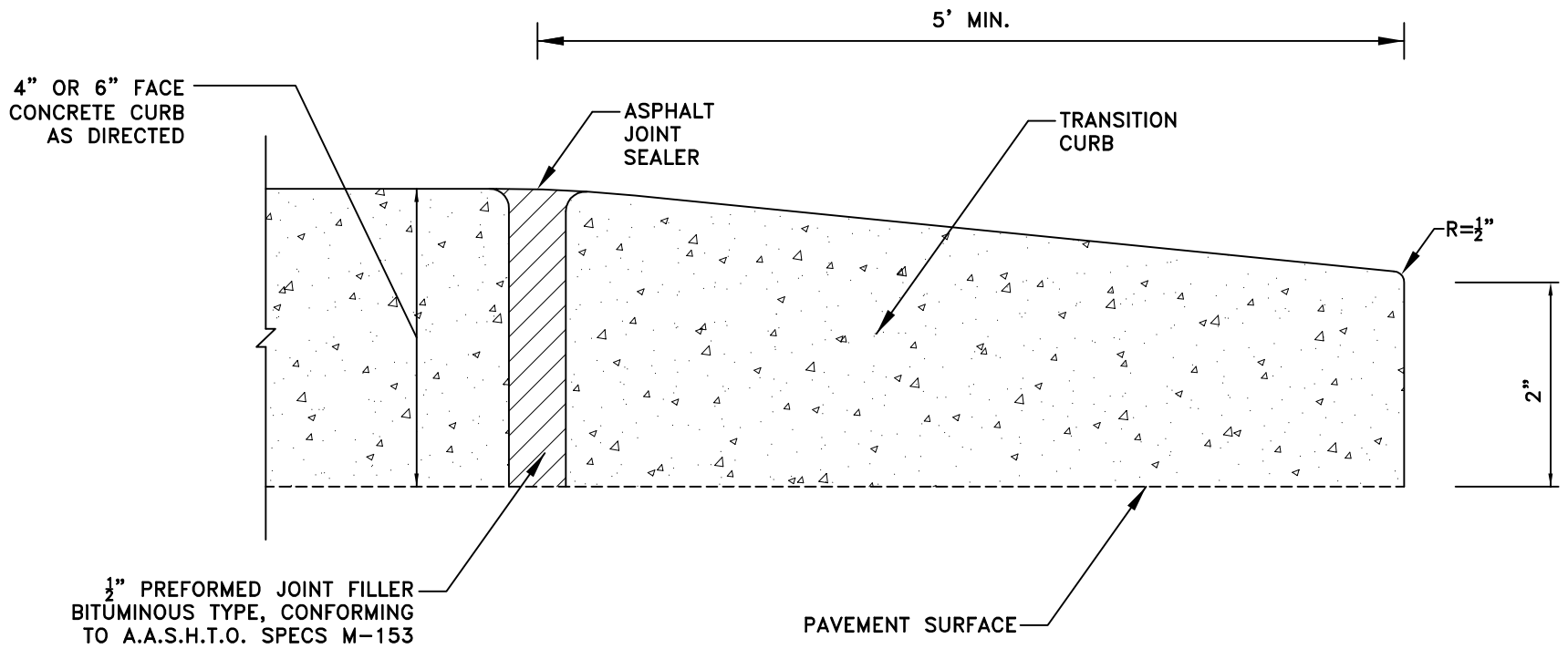
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
DEPRESSED CONCRETE
CURB DETAIL

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/12/2014 7:16 AM File Names: F:\Engineering\County Standards\DTL-3-Conc-Curb-Depressed-8.5X11.dwg



NOTES:

1. CONCRETE SHALL BE CLASS B WITH 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI, AND 6% ±1.5 AIR ENTRAINMENT.

DETAIL 4 — STANDARD VERTICAL CONCRETE CURB TAPER DETAIL

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

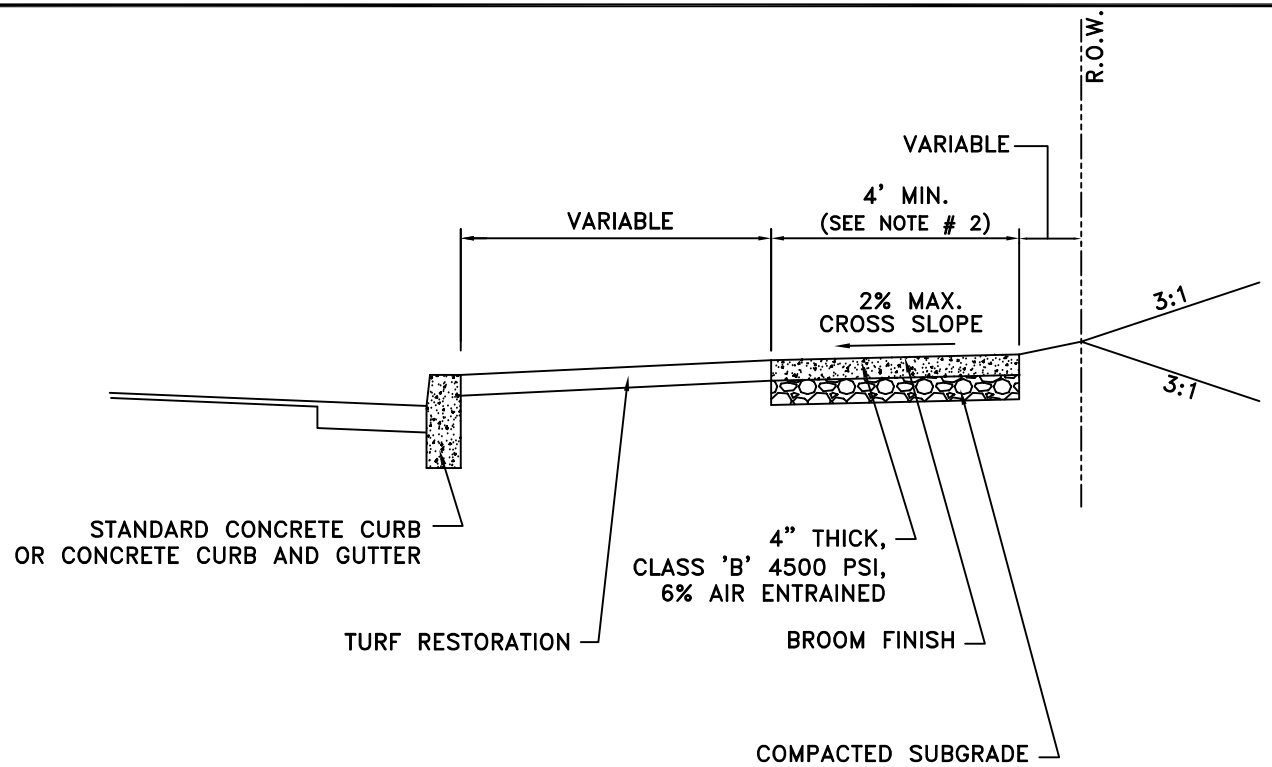
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD VERTICAL CONCRETE CURB TAPER DETAIL

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/12/2014 7:18 AM File Name: F:\Engineering\County Standards\DTL-4-Conc-Curb-Vertical-Taper-8.5X11.dwg



NOTES:

1. TURF RESTORATION TO CONSIST OF A MINIMUM OF 4" OF SELECT TOPSOIL, FERTILIZER AND SEED AS PER SPECIFICATIONS.
2. IF SUBGRADE MATERIAL IS UNSUITABLE, CONTRACTOR TO REMOVE PER COUNTY ENGINEER'S DISCRETION AND REPLACE WITH SELECT FILL AT NO EXTRA COST TO THE COUNTY.
3. SIDEWALK WIDTH SHALL BE 4'-0" MINIMUM UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.
4. CONCRETE SHALL BE CLASS B WITH 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI AND 6% ±1.5% AIR ENTRAINMENT.

DETAIL 5 STANDARD CONCRETE SIDEWALK

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

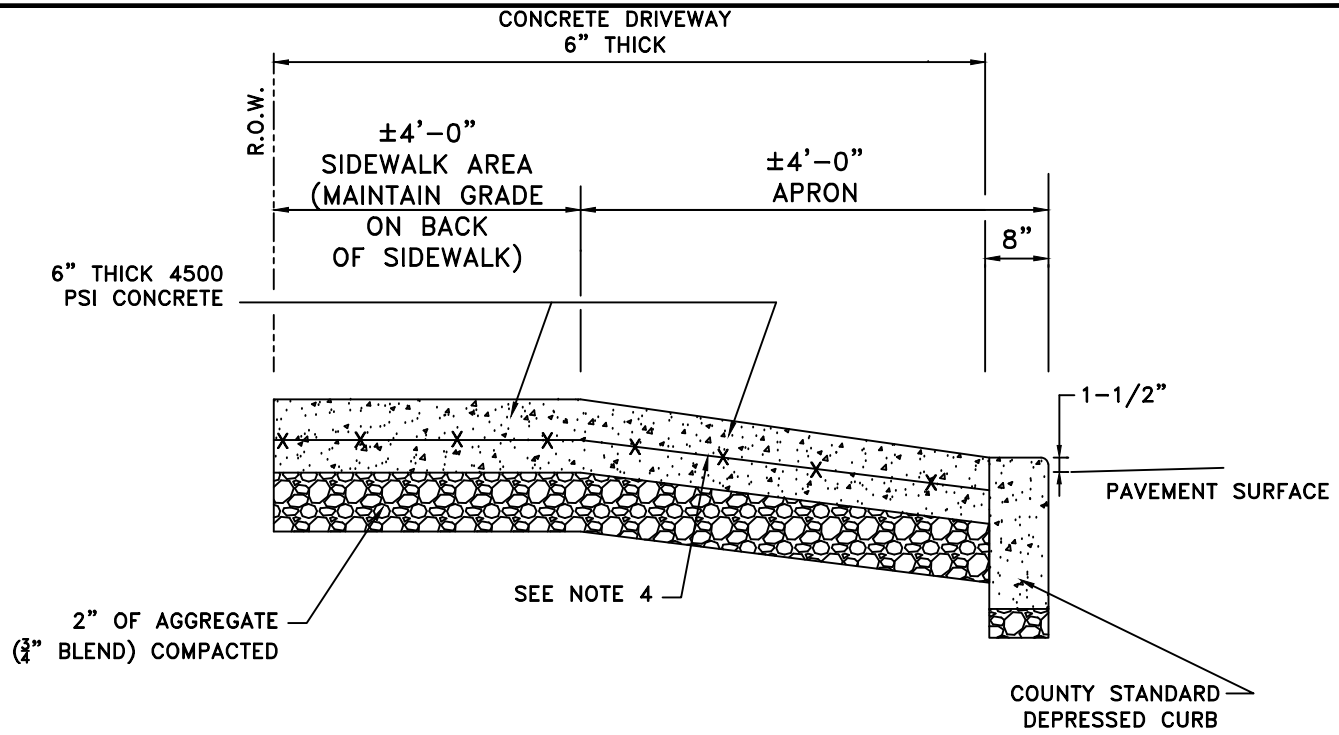
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
CONCRETE SIDEWALK
DETAIL

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/11/2014 7:48 AM File Names: F:\Engineering\County Standards\DTL-5-Conc-Sidewalk-8.5X11.dwg



NOTES:

1. CONCRETE COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 4500 PSI AFTER 28 DAYS AT 6% ±1.5% AIR ENTRAINMENT.
2. CURB JOINT SHALL BE TROWELED WITH A MIN 1/2" RADIUS ALONG BACK OF CURB.
3. EXPANSION AND CONTRACTION JOINTS SHALL BE 1/2" PREMOLDED ASPHALT IMPREGNATED MATERIAL OR EQUAL EXTENDING FROM SUBGRADE TO FINISH GRADE.
4. PROVIDE 6" X 6" W1.4/W1.4 GALVANIZED MESH AT COMMERCIAL DRIVEWAYS ONLY. PROVIDE 6" X 6" W1.4/W1.4 NON GALVANIZED WELDED WIRE MESH AT RESIDENTIAL DRIVEWAYS.

DETAIL 6 STANDARD CONCRETE DRIVEWAY AND CONCRETE APRON

N.T.S.

No.	DATE	REVISIONS
1	03/06/2015	REINFORCEMENT SIZE REQUIREMENTS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

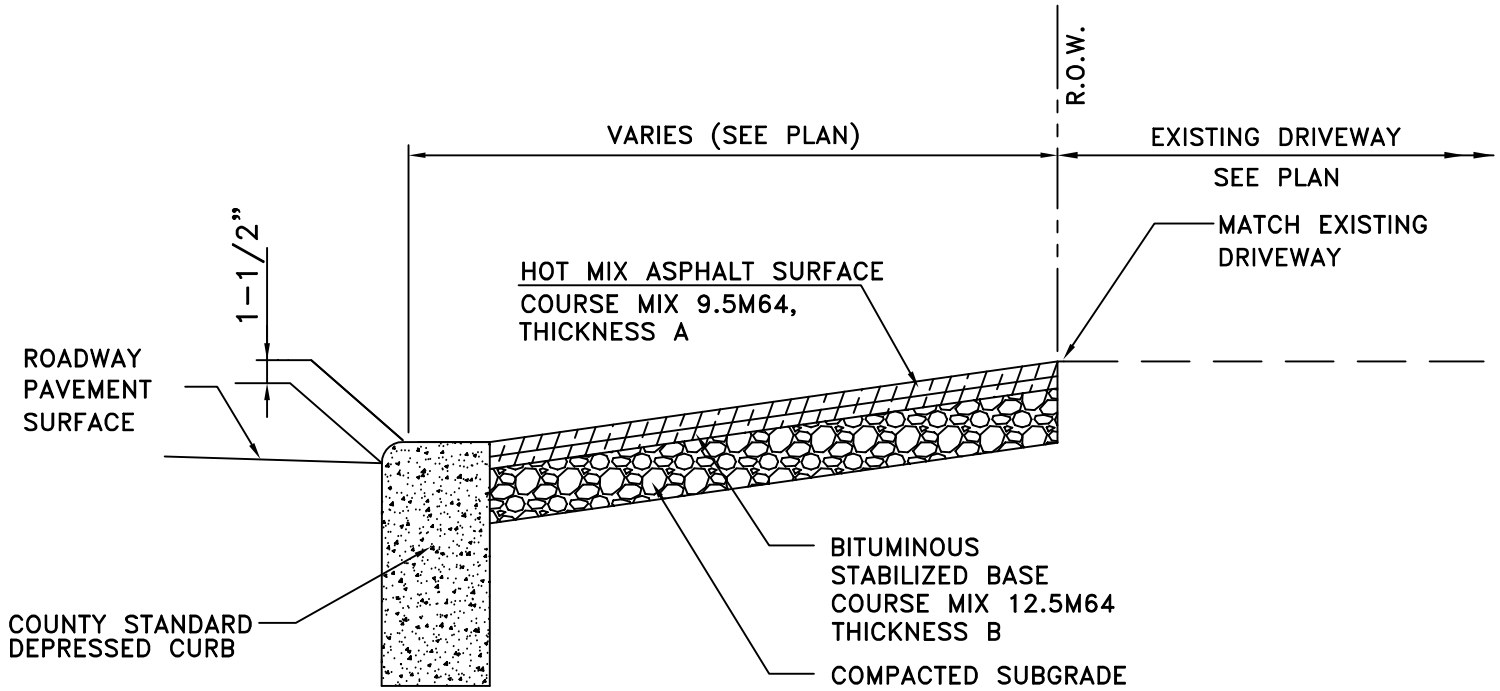
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
CONCRETE DRIVEWAY
DETAIL

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/6/2015 1:58 PM File Name: F:\Engineering\County Standards\07)--6--Conc--Driveway--8.5X11.dwg



BIT. CONCRETE	INCHES	INCHES
TOP PAVE A	1½	2
BASE PAVE B	2½	2
TOTAL THICKNESS	4	4

NOTES:

1. THE DRIVEWAY IN THE COUNTY RIGHT-OF-WAY SHALL BE COMPOSED OF TOP COURSE AND BASE COURSE WITH A TOTAL THICKNESS OF 4 INCHES (SEE TABLE).
2. CURB JOINT SHALL BE TROWELED WITH A MIN 1/2" RADIUS ALONG BACK OF CURB. COUNTY RIGHT-OF-WAY.
3. A DRIVEWAY APRON MAY NOT IMPEDE THE FLOW OF STORMWATER.
4. A ROAD OPENING PERMIT IS REQUIRED BEFORE START OF CONSTRUCTION IN THE COUNTY RIGHT-OF-WAY.

DETAIL 7 STANDARD BITUMINOUS DRIVEWAY APRON TYPE 1

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

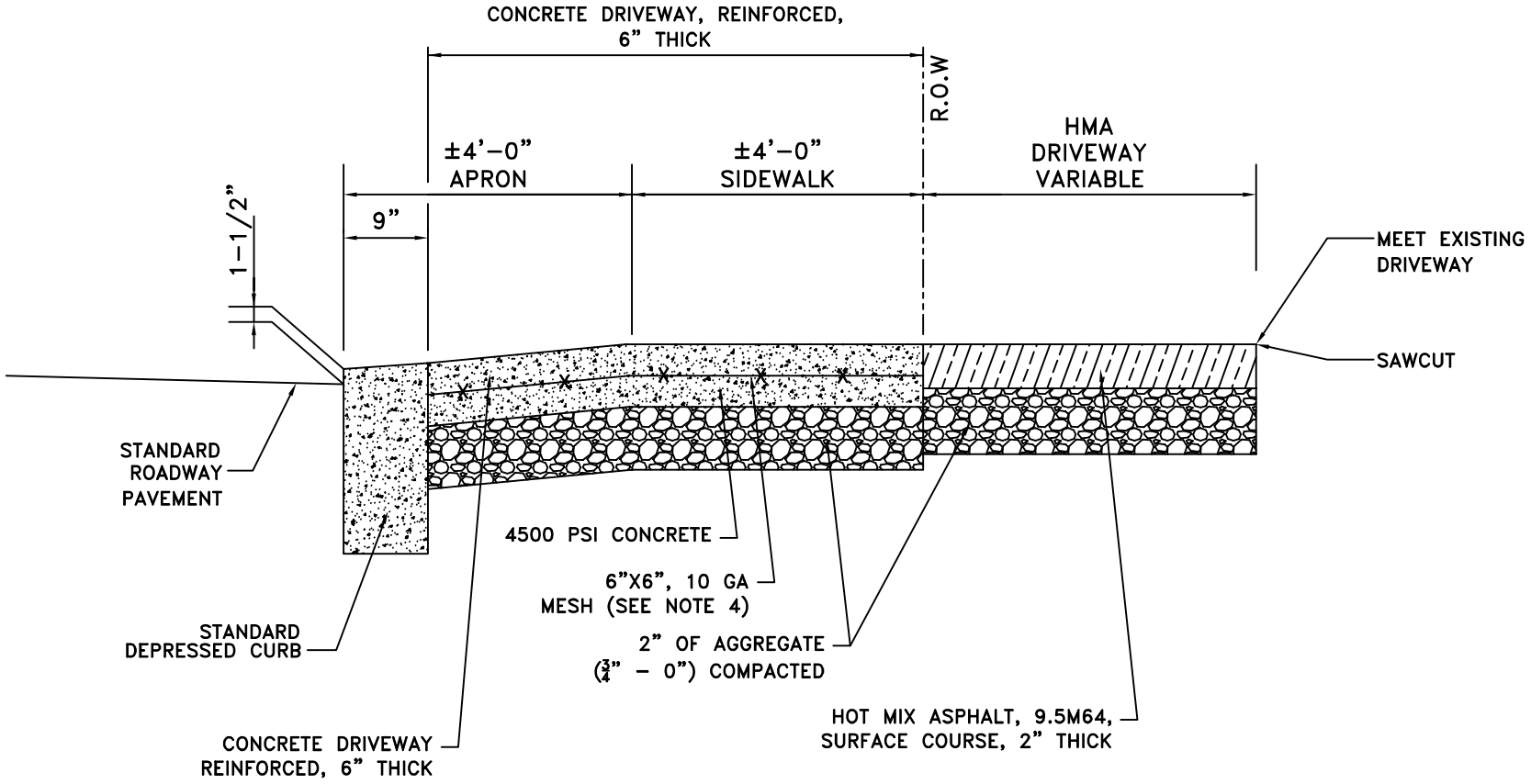
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
BITUMINOUS DRIVEWAY
APRON DETAIL

DATE MARCH 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/12/2014 7:22 AM File Names: F:\Engineering\County Standards\DTL-7-Bituminous-Driveway Apron-8.5X11.dwg



NOTES:

1. CONCRETE SHALL BE CLASS B WITH 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI, 6% ±1.5% AIR ENTRAINMENT.
2. CURB JOINT SHALL BE TROWELED WITH A MIN 1/2" RADIUS ALONG BACK OF CURB.
3. EXPANSION AND CONTRACTION JOINTS SHALL BE 1/2" PREMOLDED ASPHALT IMPREGNATED MATERIAL OR EQUAL EXTENDING FROM SUBGRADE TO FINISH GRADE.
4. 6" X 6" 10 GA MESH REQUIRED FOR COMMERCIAL DRIVEWAYS ONLY,
   6" X 6" WELDED WIRE MESH REQUIRED FOR RESIDENTIAL DRIVEWAYS.

DETAIL 8 STANDARD HOT MIX ASPHALT DRIVEWAY SECTION

N.T.S.

ADJACENT TO REINFORCED CONCRETE SIDEWALK AND APRON

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

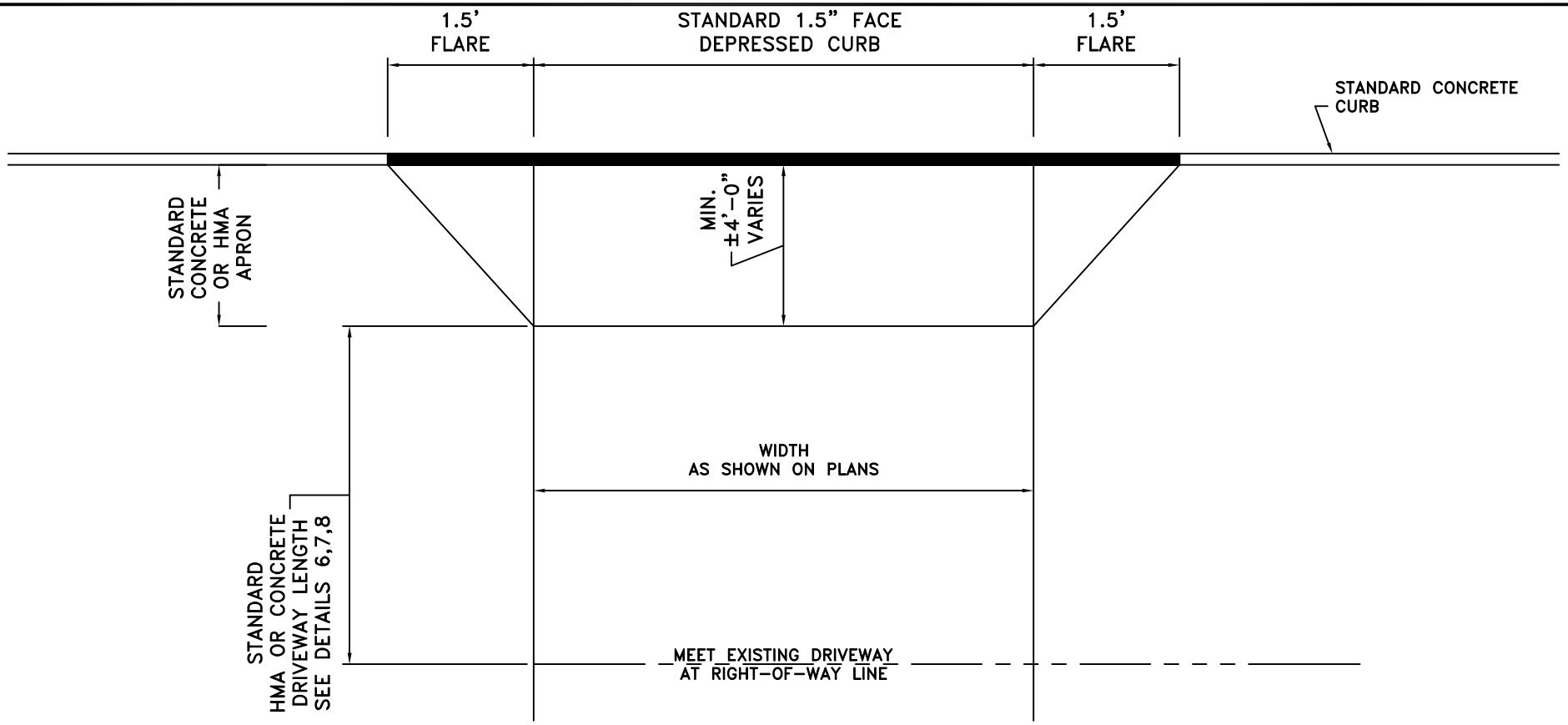
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
HOT MIX ASPHALT DRIVEWAY
ADJACENT TO REINFORCED CONCRETE
SIDEWALK AND APRON

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/11/2014 9:45 AM File Name: F:\Engineering\County Standards\DTL-8-Bituminous-Driveway Adjacent to Conc Sdwlk and Apron-8.5X11.dwg



NOTES:

1. LENGTH AND WIDTH OF DRIVEWAY SHALL BE SHOWN ON THE PLANS OR AS DIRECTED.
2. DEPRESSED CURB SHALL BE CONSTRUCTED AS PER COUNTY DEPRESSED CURB DETAIL.
3. A DRIVEWAY APRON MAY NOT IMPEDE THE FLOW OF STORMWATER.

DETAIL 9 STANDARD DRIVEWAY TREATMENT

N.T.S.

APRON AND FLARE (PLAN VIEW)

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE: COUNTY STANDARD DRIVEWAY TREATMENT APRON AND FLARE (PLAN VIEW)

DATE: MAR 2014
DRAWN BY: T.A.P
APPROVED BY: K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/11/2014 10:19 AM File Name: FA\Engineering\County Standards\DTL-9-Driveway Apron and Flare-8.5X11.dwg

PAVEMENT MARKING LEGEND

UNLESS OTHERWISE SHOWN, PAVEMENT MARKINGS SHALL CONFORM TO THE FOLLOWING:

STOP LINE (24" SWL)	–24" WIDE WHITE LINE
CENTER LINE (4" CL)	–2–4" WIDE YELLOW LINES
TWO WAY LEFT TURN LANE LINES (4" SYL)	–4" WIDE YELLOW LINE
(4" DYL)	–4" WIDE YELLOW LINE, 10' LONG AT 30' INTERVALS
DASHED LANE LINE (4" DWL)	–4" WIDE WHITE LINE, 10' LONG AT 30' INTERVALS
LANE EXTENSION GUIDE LINES	–4" WIDE WHITE LINE, 2' LONG AT 4' INTERVALS
SOLID LANE LINE–EXCLUSIVE MOVEMENT (8" SWL)	–8" WIDE WHITE LINE
SOLID LANE LINE– ALL OTHERS (4" SWL)	–4" WIDE WHITE LINE
CROSSWALK LINES (6" SWL)	–6" WIDE WHITE LINES
MEDIAN CROSS HATCH LINES (24" CHL)	–24" WIDE YELLOW LINES AT 45° SPACED 12' O.C.
GORE CROSS HATCH LINES (24" CHL)	–24" WIDE WHITE LINES AT 45° SPACED 12' O.C.
ISLAND CHANNELIZATION LINE	–8" WIDE WHITE LINE
RIGHT SHOULDER LINE	–4" WIDE WHITE LINE
LEFT SHOULDER LINE	–8" WIDE YELLOW LINE

1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE 2009 EDITION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

2) NEAREST CROSSWALK LINE IS TO BE LOCATED A MINIMUM OF 4' FROM THE STOP LINE.

3) W = WHITE STRIPE
   Y = YELLOW STRIPE

4) ALL DIMENSIONS SHOWN ARE FROM THE CENTER OF ALL PAVEMENT MARKING LINES.

DETAIL 10 STANDARD PAVEMENT MARKING LEGEND

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

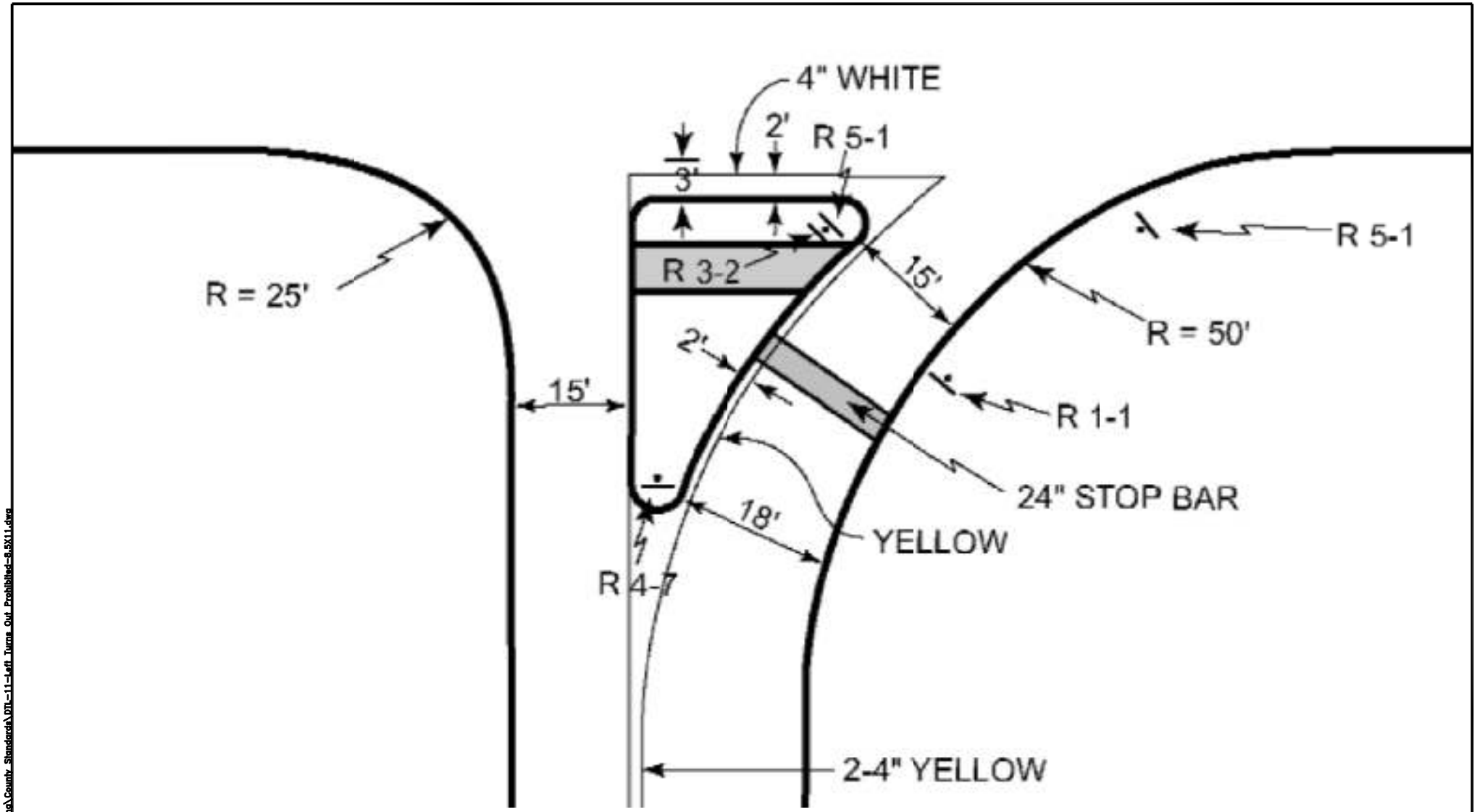
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD PAVEMENT MARKING LEGEND

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/11/2014 1:33 PM File Name: F:\Engineering\County Standards\DTL-10-Pvmt Marking Legend-8.5X11.dwg



NOTES:

1. THE RADIUS SHOWN AT ALL CURB RETURNS ARE FOR REFERENCE PURPOSE ONLY. THE ARCHITECT/ENGINEER TO ADJUST THE RADIUS PER SITE CONDITIONS AND STANDARD DESIGN VEHICLE.
2. THE SIGN DESIGNATIONS SHOWN ON THE DETAIL ARE STANDARD SIGNS PER MUTCD. REFER MUTCD SECTION 2 FOR STANDARD SIGN AND PLAQUE SIZES AND FURTHER DETAILS.
3. THE LANE WIDTHS SHOWN ON THE DETAIL IS FOR REFERENCE PURPOSE ONLY. THE ARCHITECT/ENGINEER TO ADJUST LANE WIDTHS PER SITE CONDITIONS AND STANDARD DESIGN VEHICLE.

DETAIL 11 STANDARD LEFT TURN OUT PROHIBITED DETAIL

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

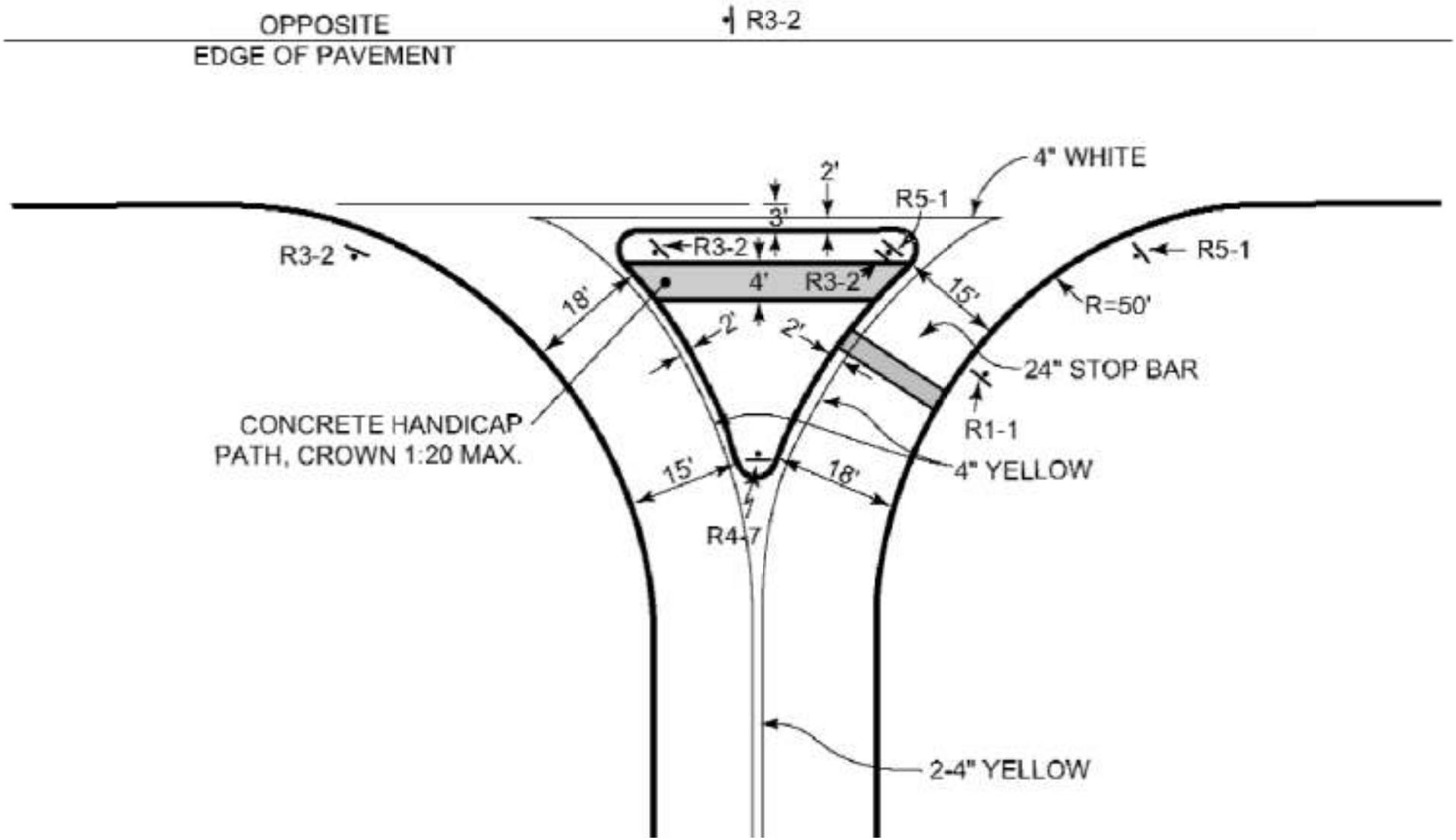
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
LEFT TURN OUT
PROHIBITED DETAIL

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/11/2014 10:26 AM File Name: P:\Engineering\County Standards\DTL-11-Left Turn Out Prohibited-8.5X11.dwg



NOTES:

1. THE RADIUS SHOWN AT ALL CURB RETURNS ARE FOR REFERENCE PURPOSE ONLY. THE ARCHITECT/ENGINEER TO ADJUST THE RADIUS PER SITE CONDITIONS AND STANDARD DESIGN VEHICLE.
2. THE SIGN DESIGNATIONS SHOWN ON THE DETAIL ARE STANDARD SIGNS PER MUTCD. REFER MUTCD SECTION 2 FOR STANDARD SIGN AND PLAQUE SIZES AND FURTHER DETAILS.
3. THE LANE WIDTHS SHOWN ON THE DETAIL IS FOR REFERENCE PURPOSE ONLY. THE ARCHITECT/ENGINEER TO ADJUST LANE WIDTHS PER SITE CONDITIONS AND STANDARD DESIGN VEHICLE.

DETAIL 12 STANDARD LEFT TURN IN AND LEFT TURN OUT PROHIBITED DETAIL

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

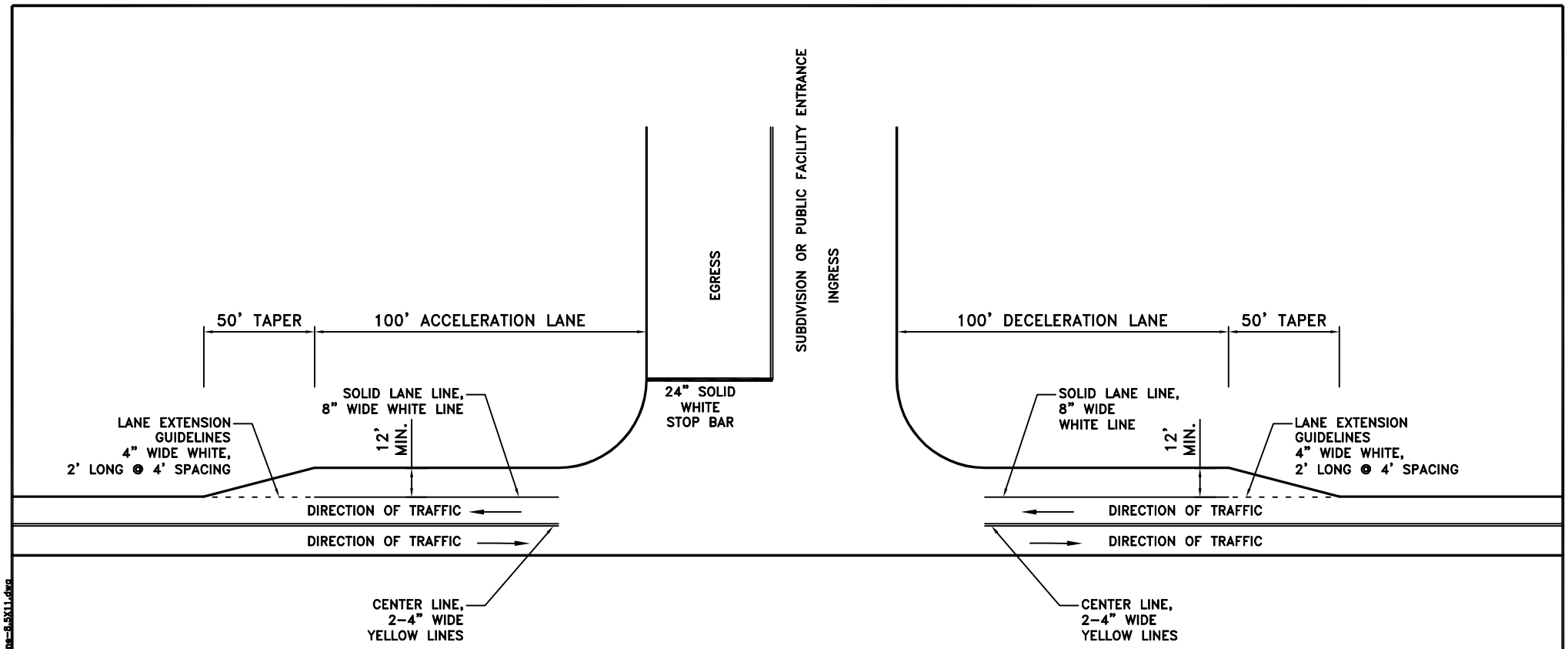
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
LEFT TURN IN AND LEFT TURN OUT
PROHIBITED DETAIL

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/11/2014 10:52 AM File Name: FA Engineering\County Standards\DTL-12-Left Turn In and Out Prohibited-8.5X11.dwg



NOTES:

1. ACCELERATION LANES SHALL ONLY BE REQUIRED IN SPECIAL CIRCUMSTANCES WHERE TRAFFIC OR OTHER CONDITIONS INDICATE THE NEED PER AASHTO STANDARDS.
2. FULL DEPTH SAWCUT THE EDGE OF EXISTING PAVEMENT TO RECEIVE THE NEW ACCEL/DECEL PAVEMENT. SEE TYPICAL COUNTY ROADWAY WIDENING DETAIL.
3. ACCEL/DECEL LANES SHALL CONTINUE THE SLOPE OF ADJACENT ROADWAY (2% MIN).

DETAIL 13 ACCELERATION AND DECELERATION LANES

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

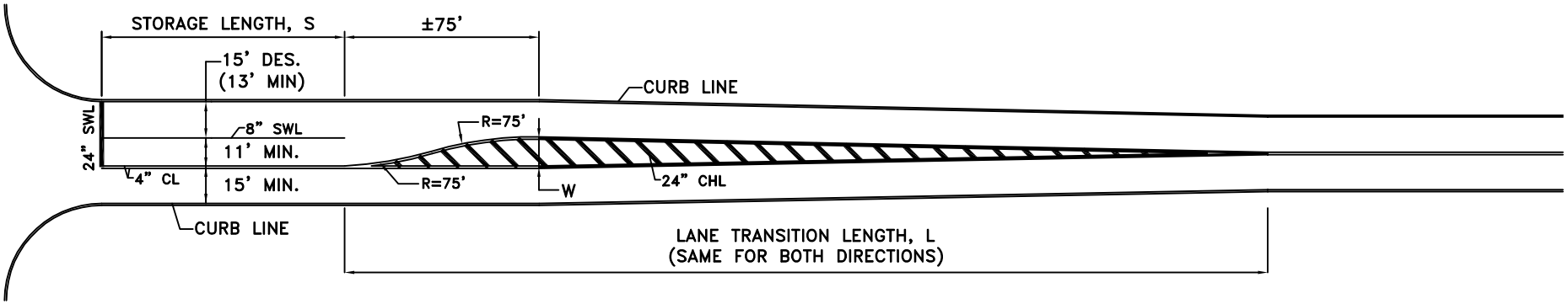
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
ACCELERATION AND DECELERATION
LANES

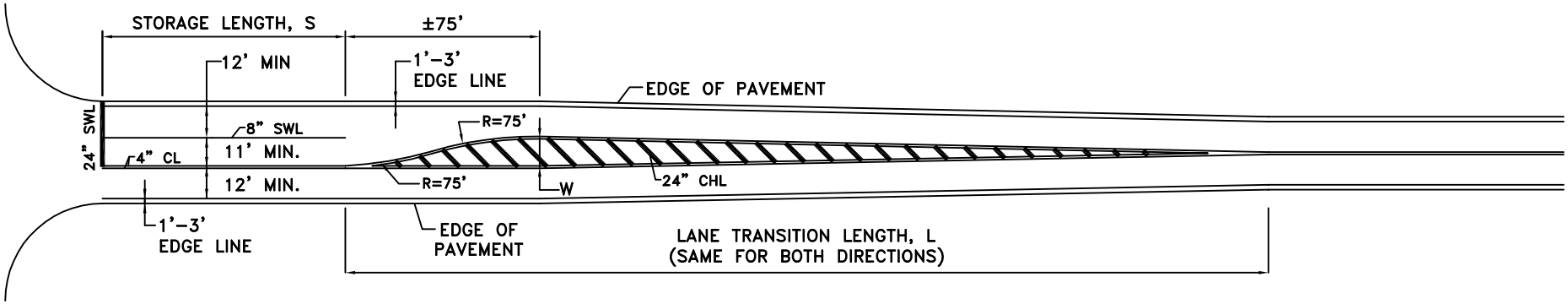
DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/11/2014 10:53 AM File Name: F:\Engineering\County Standards\07I-13-Accel-Decel-Lane-8.5X11.dwg



STRIPING PLAN WITH CURB



STRIPING PLAN WITHOUT CURB

NOTES:

1. FOR SIGNALIZED INTERSECTIONS, STORAGE LENGTH S IS BASED ON QUEUE ANALYSIS. FOR UNSIGNALIZED INTERSECTIONS MINIMUM RECOMMENDED STORAGE LENGTH IS 75'
2. FOR LANE TRANSITION LENGTH, L: SEE FIGURE:4-L, NJDOT ROADWAY DESIGN MANUAL
3. FOR ALL PAVEMENT MARKINGS, SEE CAMDEN COUNTY PAVEMENT MARKING LEGEND DETAIL

DETAIL 14 LEFT TURN LANE AND TRANSITION DETAIL

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

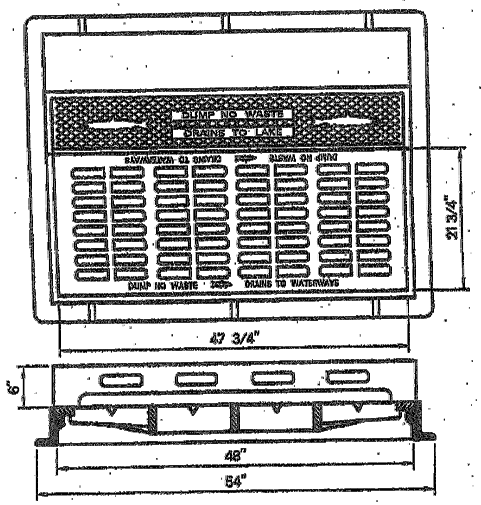
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

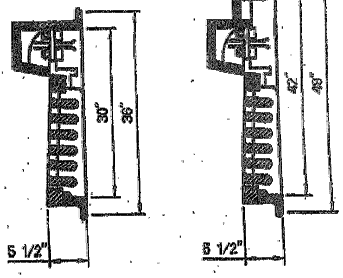
TITLE
COUNTY STANDARD
LEFT TURN LANE AND
TRANSITION DETAIL

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/11/2014 10:54 AM File Name: F:\Engineering\County Standards\DTL-14-Left Turn Lane & Transition-8.5X11.dwg





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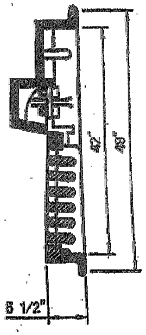

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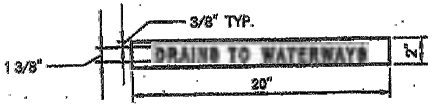
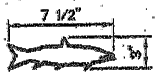


NAME PLATE OPTION

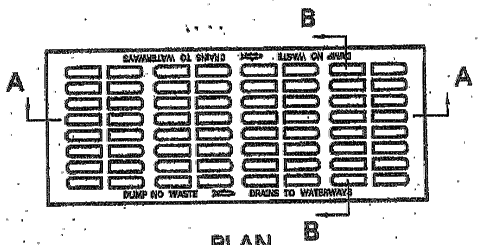


3D BROOK TROUT DESIGN

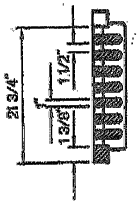
NOTE:
INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN NO. 2618 BICYCLE SAFE GRATES OR APPROVED EQUAL.

CURB INLET WITH BICYCLE SAFE GRATE AND TYPE 'N-ECO' CURB PIECE

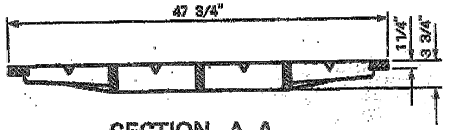
NOT TO SCALE



PLAN



SECTION B-B



SECTION A-A

NOTE:
INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN NO. 2618 BICYCLE SAFE GRATES OR APPROVED EQUAL.

HEAVY DUTY BICYCLE SAFE GRATE

NOT TO SCALE

DETAIL 15 — CURB INLET WITH BICYCLE SAFE GRATE AND TYPE 'N-ECO' CURB PIECE

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

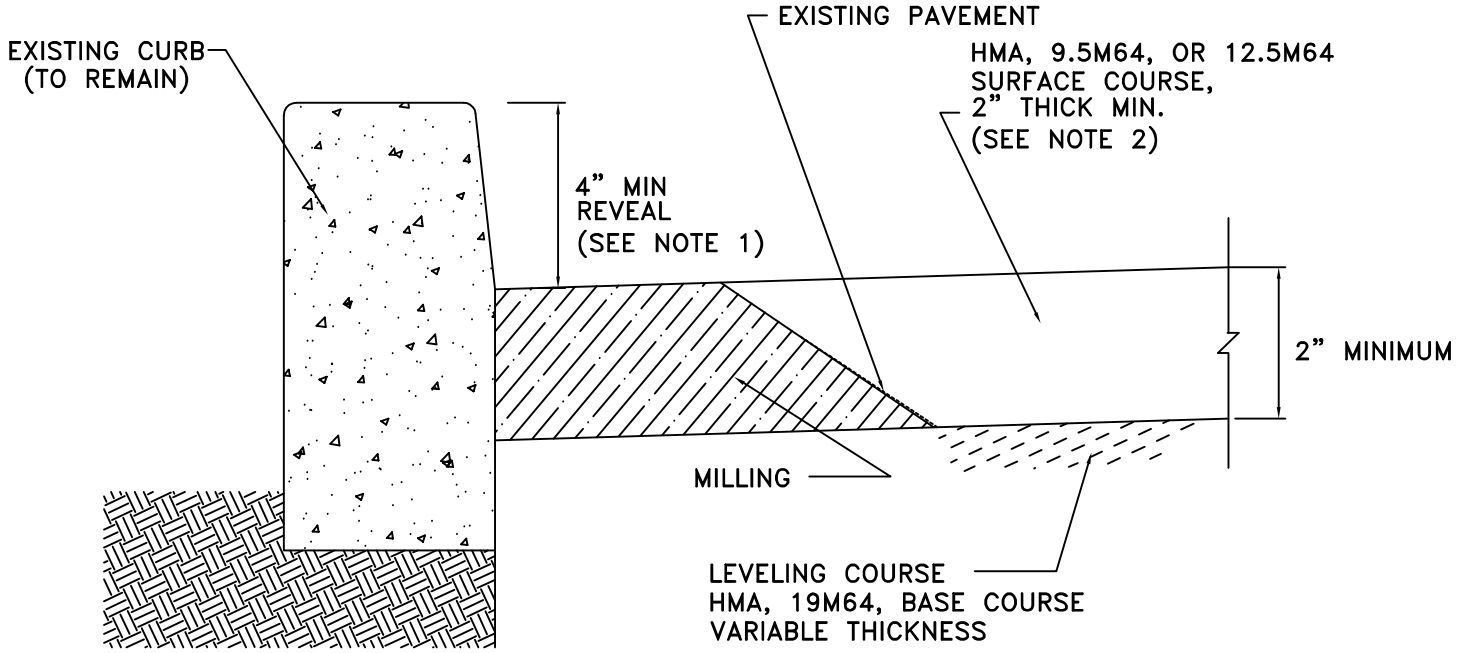
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
CURB INLET WITH BICYCLE SAFE GRATE
AND TYPE 'N-ECO' CURB PIECE

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/11/2014 10:55 AM File Name: P:\Engineering\County Standards\DTL-15-N-ECO CURB PIECE-8.5X11.dwg



NOTES:

1. PROVIDE $1\frac{1}{2}$" MINIMUM REVEAL AT DEPRESSED CURBS DURING MILL & RESURFACING.
2. SURFACE COURSE MAY BE 9.5M64 FOR COUNTY ROADS WITH LESS THAN 5,000 AADT, SURFACE COURSE MUST BE 12.5M64 FOR COUNTY ROADS WITH EQUAL OR GREATER THAN 5000 AADT.

DETAIL 16 MILLING AND RESURFACING

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

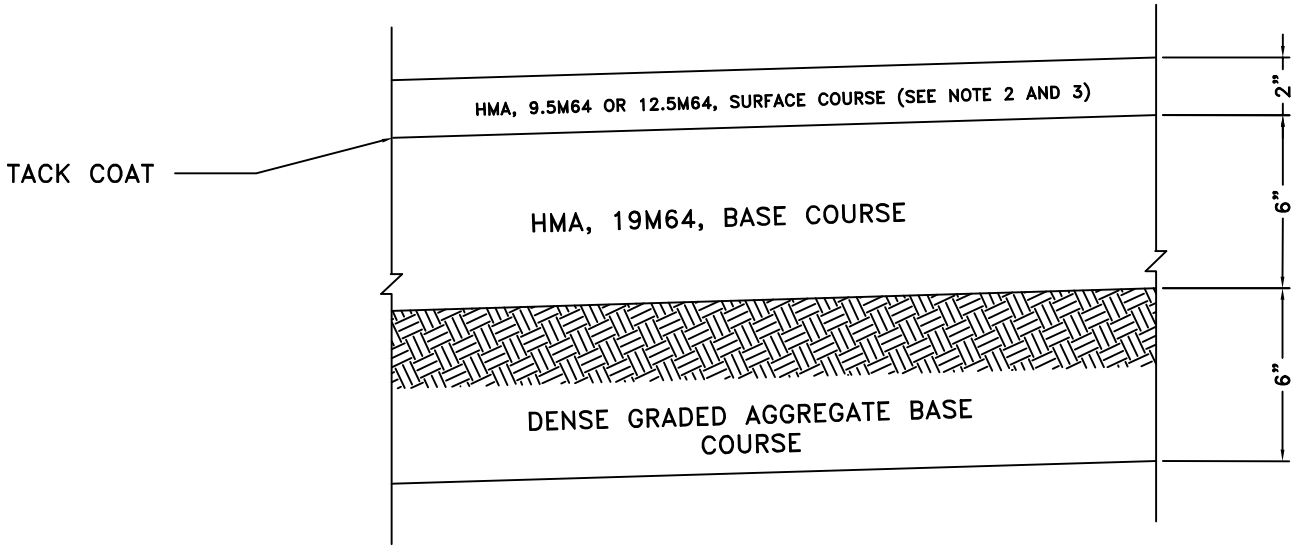
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE: COUNTY STANDARD MILLING AND RESURFACING DETAIL

DATE: MAR 2014
DRAWN BY: T.A.P
APPROVED BY: K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/12/2014 7:25 AM File Names: F:\Engineering\County Standards\DTL-16-Milling & Resurfacing-8.5X11.dwg



NOTE:

1. MIX NUMBERS ARE IN ACCORDANCE WITH NEW JERSEY DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
2. SURFACE COURSE MAY BE 9.5M64 ON COUNTY ROADS WITH AADT LESS THAN 5,000.
3. SURFACE COURSE MUST BE 12.5M64 ON COUNTY ROADS WITH AADT EQUAL OR GREATER THAN 5,000.

DETAIL 17 HOT MIX ASPHALT PAVEMENT

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

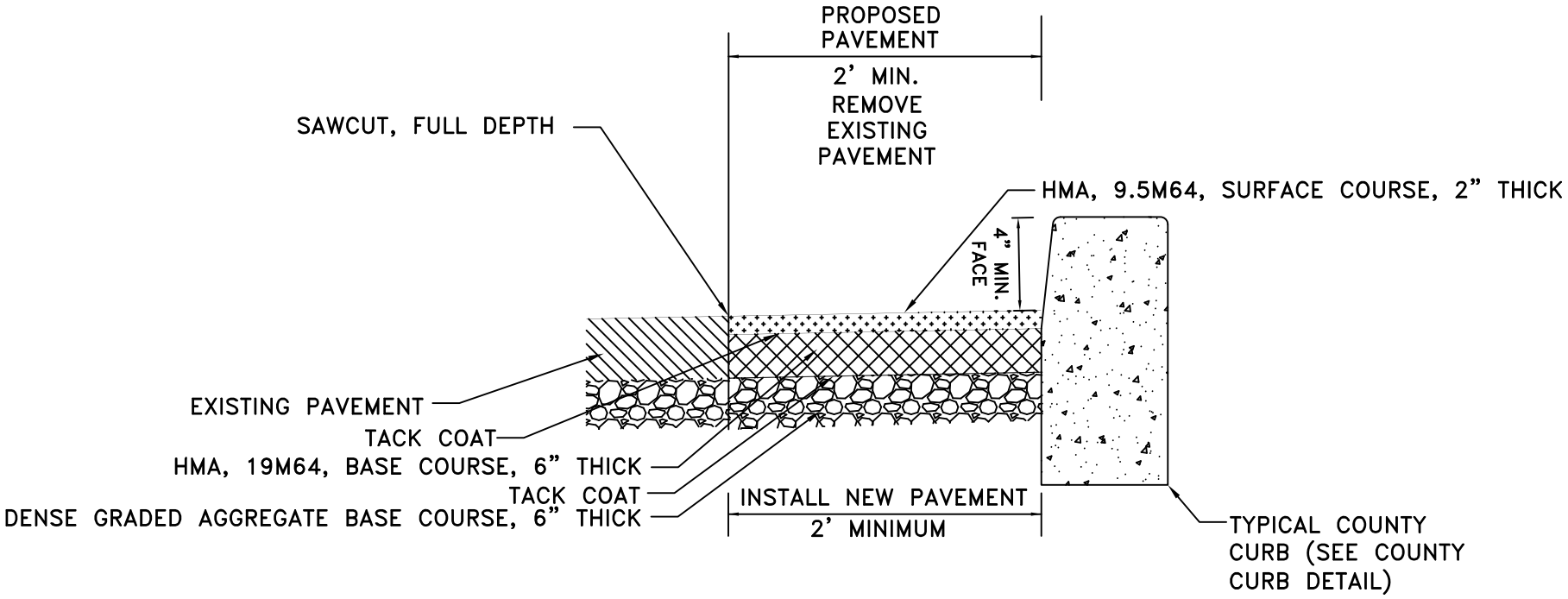
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
HOT MIX ASPHALT
PAVEMENT DETAIL

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/12/2014 7:26 AM File Names: F:\Engineering\County Standards\DTL-17-HMA PVMT-8.5X11.dwg



DETAIL 18A TYPICAL ROADWAY RESTORATION FOR CURB INSTALLATION

N.T.S.

NOTES:

1. SEE CONSTRUCTION PLANS FOR LOCATIONS WHERE PAVEMENT RESTORATION ADJACENT TO CURB IS GREATER THAN 2' MINIMUM

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

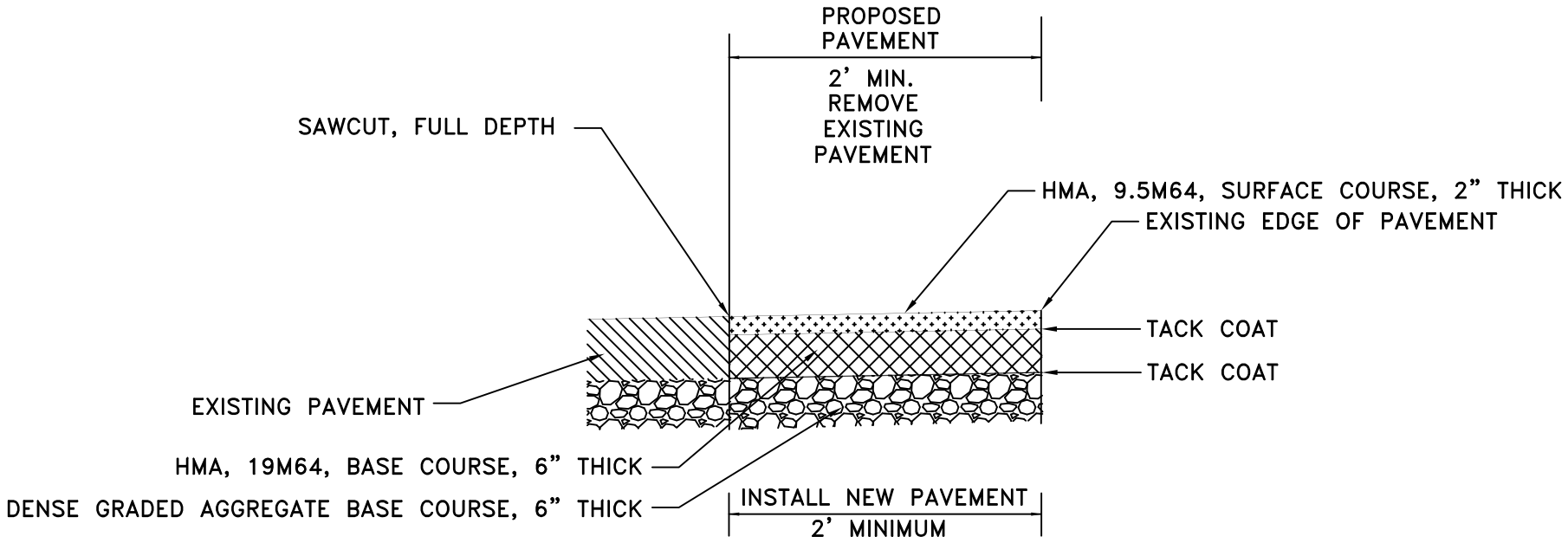
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
ROADWAY WIDENING SECTIONS

DATE JAN 2017
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 1/31/2017 11:55 AM File Name: \\CCDPW-LIND\A Engineering\County Standards\DTL-18A-Roadway Widening-8.5X11.dwg



DETAIL 18B TYPICAL ROADWAY WIDENING WHERE NO CURB IS PRESENT

N.T.S.

NOTES:

1. SEE CONSTRUCTION PLANS FOR LOCATIONS WHERE PAVEMENT RESTORATION ADJACENT TO EXISTING EDGE OF PAVEMENT IS GREATER THAN 2' MINIMUM

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

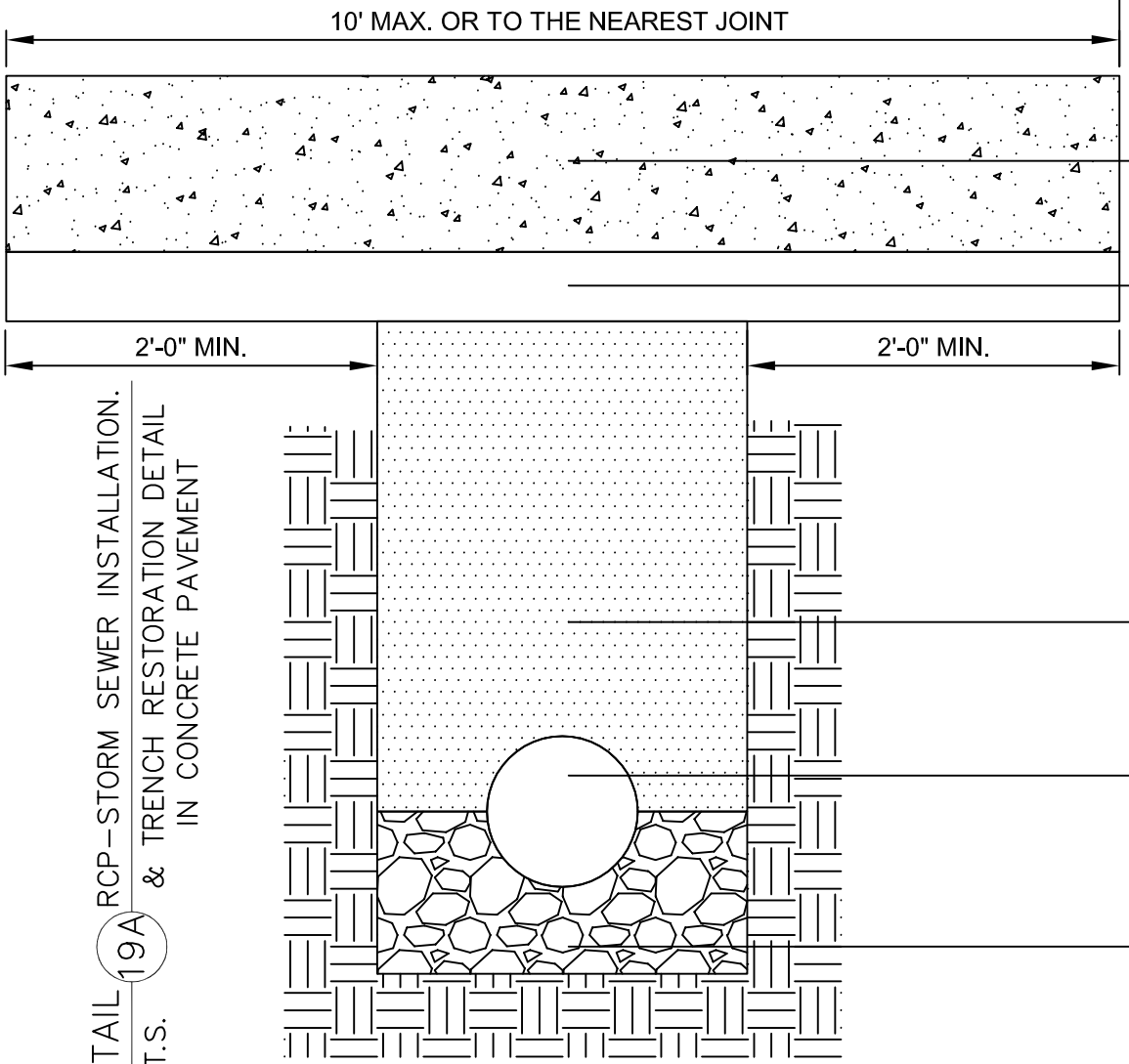
TITLE
COUNTY STANDARD
ROADWAY WIDENING SECTIONS

DATE JAN 2017
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 1/31/2017 11:55 AM File Name: \\CCDPW-LND\Engineering\County Standards\DTL-18B-Roadway Widening-8.5X11.dwg

NOTES:
BACKFILLING WITH EXCAVATED MATERIAL SHALL NOT BE PERMITTED IN TRENCHES FOR STORM SEWER & ALL OTHER UTILITIES.



EXISTING PAVEMENT TO BE SAWCUT AND ALL EDGES TACKED (TYPICAL)

CONCRETE SURFACE COURSE, 9" THICK WITH DOWELS PER NJDOT DETAIL CD-453-1

SUBBASE, 6" MIN., NON-STABILIZED OPEN GRADED DRAINAGE LAYER OR DGA BASE COURSE

SUITABLE EXCAVATED MATERIAL OR SELECT FILL AS DIRECTED BY THE ENGINEER COMPACTED TO 95% DENSITY

REINFORCED CONCRETE PIPE (VARIOUS DIAMETERS) ALL LIFT HOLES MUST BE SEALED WITH APPROVED MATERIAL, ALL JOINTS MUST BE SEALED WITH APPROVED MORTAR, AND JOINTS MUST BE WRAPPED WITH GEOTEXTILE FROM THE SPRING LINE ACROSS TOP OF PIPE

N.J.D.O.T. COARSE AGGREGATE NO. 57 COMPACTED TO 95% MAXIMUM DENSITY

DETAIL 19A
N.T.S.
RCP–STORM SEWER INSTALLATION.
& TRENCH RESTORATION DETAIL
IN CONCRETE PAVEMENT

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

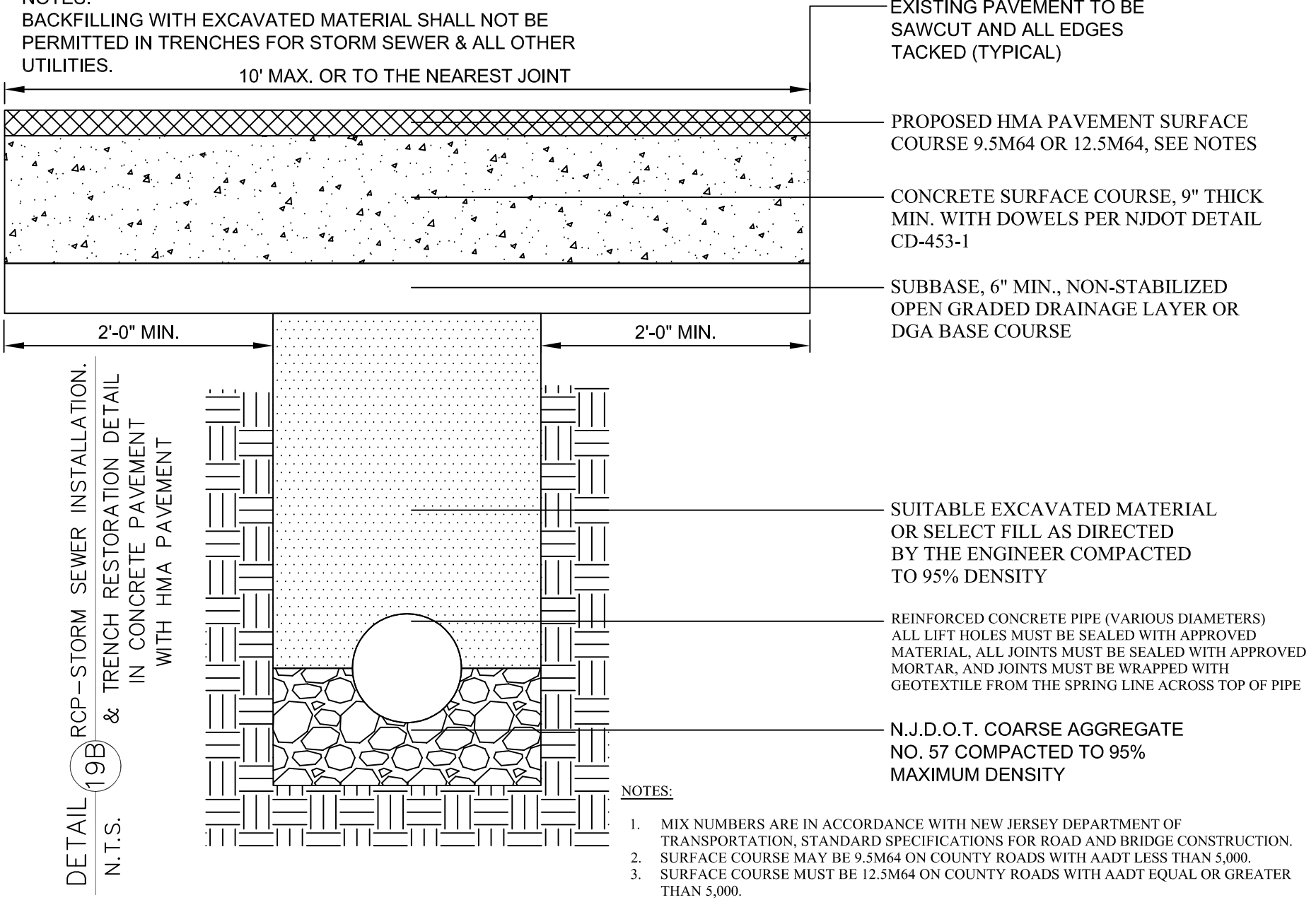
TITLE
COUNTY STANDARD TRENCH RESTORATION DETAIL IN CONCRETE PAVEMENT AREA (NO HMA PRESENT)

DATE MAY 2016
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 5/12/2016 7:01 AM File Name: F:\Engineering\County Standards\DTI-19A- STORM SEWER INSTALL DETAIL CONC NO HMA.dwg

NOTES:
BACKFILLING WITH EXCAVATED MATERIAL SHALL NOT BE PERMITTED IN TRENCHES FOR STORM SEWER & ALL OTHER UTILITIES.



DETAIL 19B RCP–STORM SEWER INSTALLATION & TRENCH RESTORATION DETAIL IN CONCRETE PAVEMENT WITH HMA PAVEMENT
N.T.S.

NOTES:

1. MIX NUMBERS ARE IN ACCORDANCE WITH NEW JERSEY DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. SURFACE COURSE MAY BE 9.5M64 ON COUNTY ROADS WITH AADT LESS THAN 5,000.
3. SURFACE COURSE MUST BE 12.5M64 ON COUNTY ROADS WITH AADT EQUAL OR GREATER THAN 5,000.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

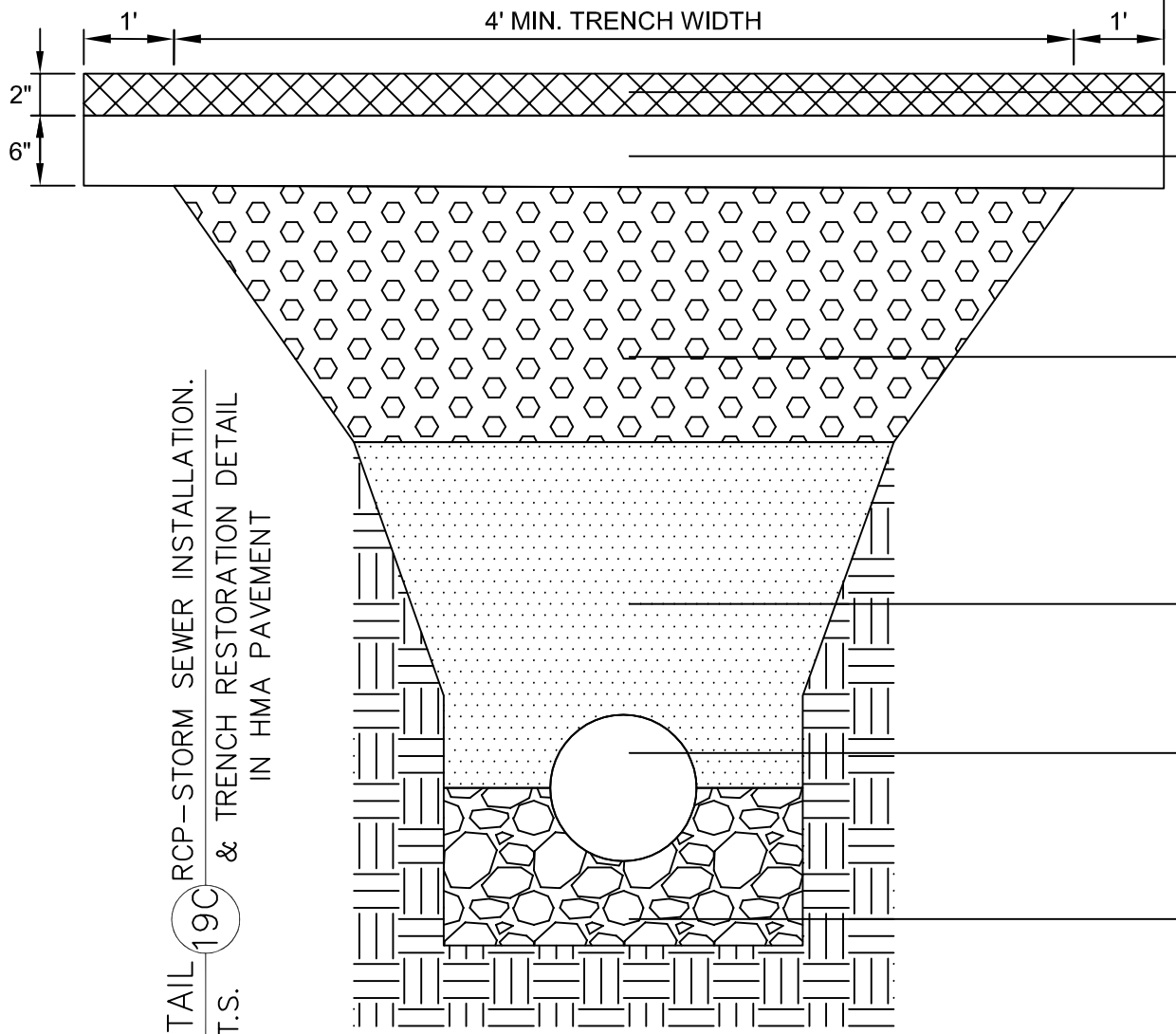
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD TRENCH RESTORATION DETAIL IN CONCRETE PAVEMENT AREA (WITH HMA PRESENT)

DATE: MAY 2016
DRAWN BY: T.A.P
APPROVED BY: K.B/A.L.
SHT. NO.: 1 / 1

Plotted: 5/12/2016 7:03 AM File Name: F:\Engineering\County Standards\DTL-19B-STORM SEWER INSTALL DETAIL CONC WITH HMA.dwg

NOTES:
BACKFILLING WITH EXCAVATED MATERIAL SHALL NOT BE PERMITTED IN TRENCHES FOR STORM SEWER & ALL OTHER UTILITIES.



EXISTING PAVEMENT TO BE SAWCUT AND ALL EDGES TACKED (TYPICAL)

HOT MIX ASPHALT 9.5M64 SURFACE COURSE

HOT MIX ASPHALT 19M64 BASE COURSE

6" DENSE GRADED AGGREGATE OR APPROVED EQUAL

SUITABLE EXCAVATED MATERIAL OR SELECT FILL AS DIRECTED BY THE ENGINEER COMPACTED TO 95% DENSITY

REINFORCED CONCRETE PIPE (VARIOUS DIAMETERS) ALL LIFT HOLES MUST BE SEALED WITH APPROVED MATERIAL, ALL JOINTS MUST BE SEALED WITH APPROVED MORTAR, AND JOINTS MUST BE WRAPPED WITH GEOTEXTILE FROM THE SPRING LINE ACROSS TOP OF PIPE

N.J.D.O.T. COARSE AGGREGATE NO. 57 COMPACTED TO 95% MAXIMUM DENSITY

DETAIL 19C
N.T.S.
RCP–STORM SEWER INSTALLATION.
& TRENCH RESTORATION DETAIL IN HMA PAVEMENT

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

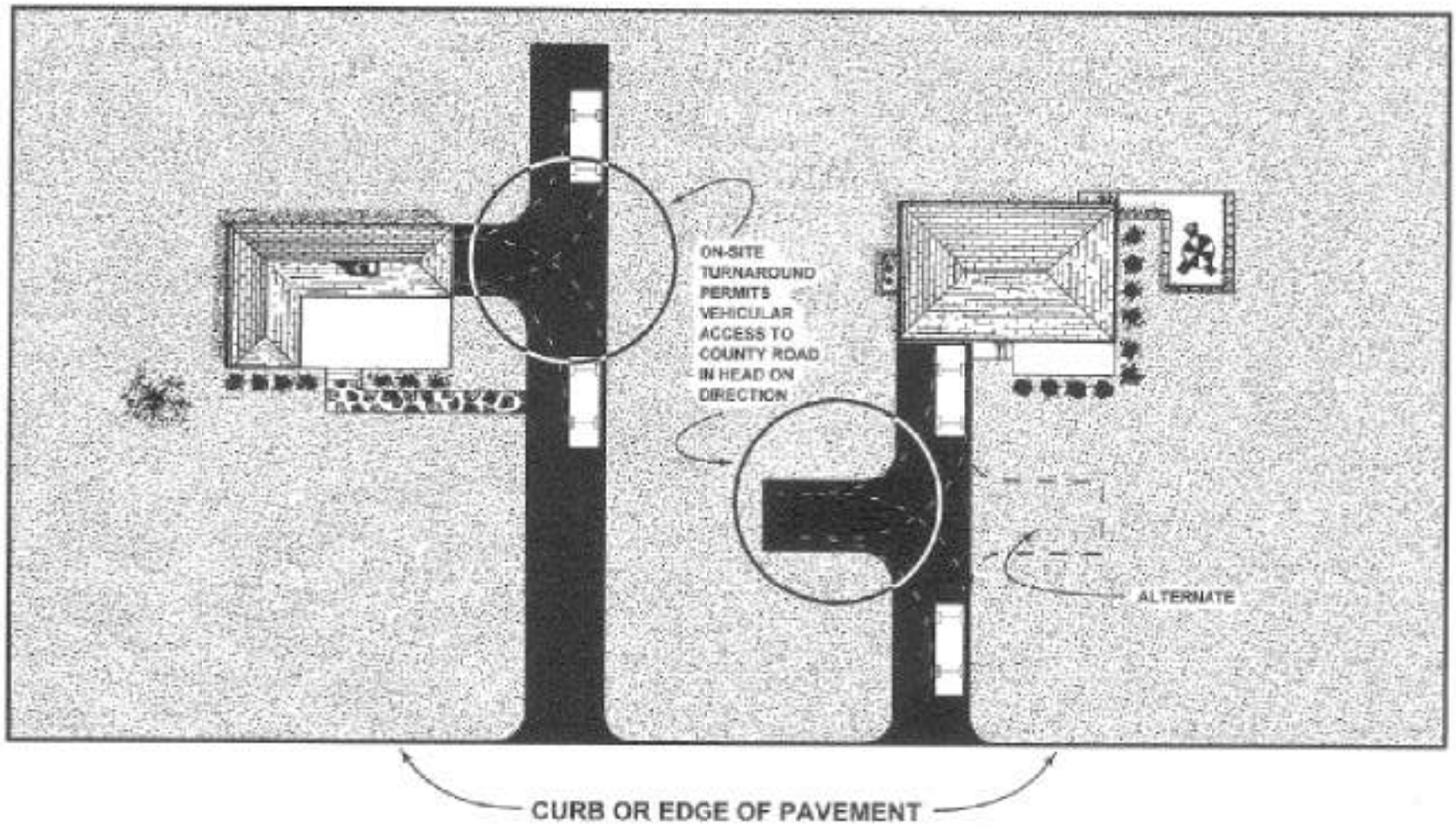
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD TRENCH RESTORATION DETAIL IN HMA PAVEMENT AREA (NO CONCRETE PRESENT)

DATE MAY 2016
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 5/12/2016 7:04 AM File Name: F:\Engineering\County Standards\DTI-19C-STORM SEWER INSTALL DETAIL HMA .dwg



DETAIL 20 STANDARD DRIVEWAY TURNAROUNDS

N.T.S. (K – TURN DETAIL)

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
DRIVEWAY TURNAROUNDS
(K–TURN DETAIL)

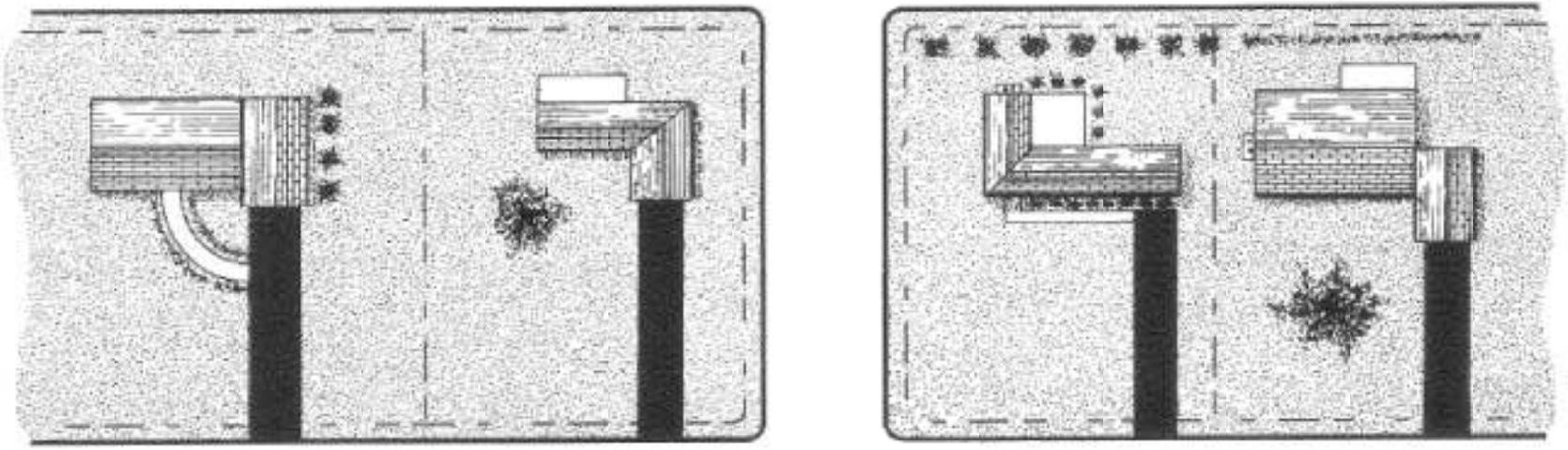
DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/11/2014 10:42 AM File Name: F:\Engineering\County Standards\DTL-20-DRIVEWAY TURNAROUNDS (K-TURN)-8.5X11.dwg

REVERSE FRONTAGE

COUNTY ROAD



DETAIL 21 STANDARD REVERSE FRONTAGE LOT DETAIL

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

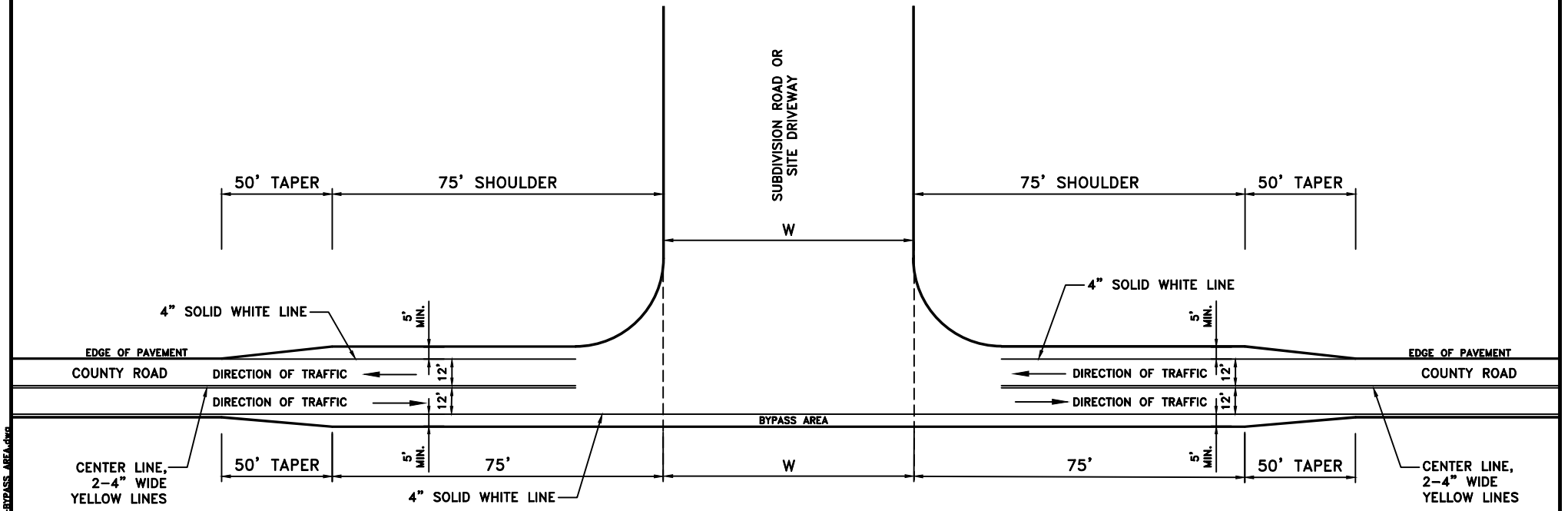
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
REVERSE FRONTAGE
LOT DETAIL

DATE MAR 2014
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 3/11/2014 10:51 AM File Name: F:\Engineering\County Standards\DTL-21-REVERSE FRONTAGE-8.5X11.dwg



NOTES:

1. BYPASS AREA SHALL ONLY BE REQUIRED IN SPECIAL CIRCUMSTANCES WHERE TRAFFIC OR OTHER CONDITIONS INDICATE THE NEED.
2. FULL DEPTH SAWCUT THE EDGE OF EXISTING PAVEMENT TO RECEIVE THE NEW BYPASS AREA PAVEMENT. SEE TYPICAL COUNTY ROADWAY WIDENING DETAIL.

DETAIL 22 BYPASS AREA

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

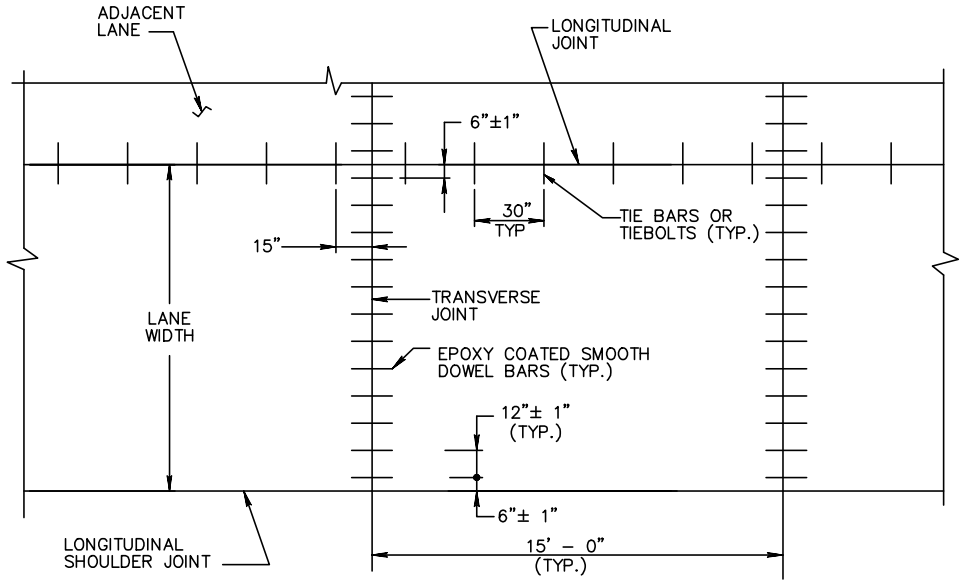
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
BYPASS AREA

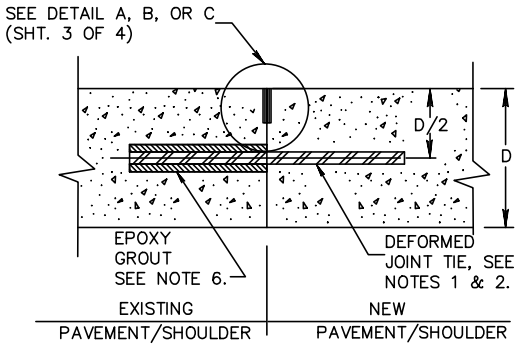
DATE JUNE 2015
DRAWN BY T.A.P/K.J.S.
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 7/10/2015 3:02 PM File Name: \\CCDFW-LIND\A Engineering\County Standards\DTL-22-BYPASS AREA.dwg



TYPICAL LAYOUT



LONGITUDINAL JOINT
WHEN TYING INTO EXISTING
CONCRETE PAVEMENT/SHOULDER

NOTES :

1. SPECIFY #6 TIE BARS 30"± 1/4" LONG, SPACED 30" CENTER TO CENTER MAXIMUM. FOR JOINT TIES SPECIFY #6 BARS 18"±1/4" LONG, SPACED 30" CENTER TO CENTER MAXIMUM. PLACE PERPENDICULAR TO AND CENTERED OVER THE LONGITUDINAL JOINT ±1". WHEN ADJOINING TO AN UNEQUAL PAVEMENT OR SHOULDER DEPTH, D IS THE DEPTH OF THE THINNER SECTION.
2. DO NOT FIELD BEND TIE BARS, TIE BOLTS, AND JOINT TIES.
3. USE REBAR COUPLING DEVICE THAT IS LISTED ON THE QPL.
4. TEMPORARILY SECURE THE TIE BOLT TO THE FORM DURING PLACEMENT OF THE CONCRETE USING A METHOD ACCPETABLE TO THE R.E..
5. PLACE TIE BOLTS AT 30" CENTER TO CENTER MAXIMUM SPACING. WHEN ADJOINING TO AN UNEQUAL PAVEMENT OR SHOULDER DEPTH, D IS THE DEPTH OF THE THINNER SECTION. SCREW TIE BOLTS UNTIL SNUG.
6. USE AN APPROVED EPOXY GROUT MATERIAL TO WITHSTAND THE NECESSARY MINIMUM PULL–OUT RESISTANCE. TIE BAR HOLE DIAMETER IN EXISTING PAVEMENT SHOULD BE AS PER MANUFACTURER'S RECOMMENDATION. USE ROTARY IMPACT DRILL TO AVOID IMPACTING FINES INTO HOLE.
7. DO NOT USE THE HOOK COMPONENT OF THE TIE BOLT ASSEMBLY WHEN SLIP FORMING.
8. WHEN COLD–POURED JOINT SEALER IS SELECTED FOR USE IN TRANSVERSE JOINTS, USE THE SAME JOINT SEALING MATERIAL IN THE LONGITUDINAL JOINTS.

DETAIL 23 CONCRETE PAVEMENT REPAIR CONSTRUCTION DETAILS

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

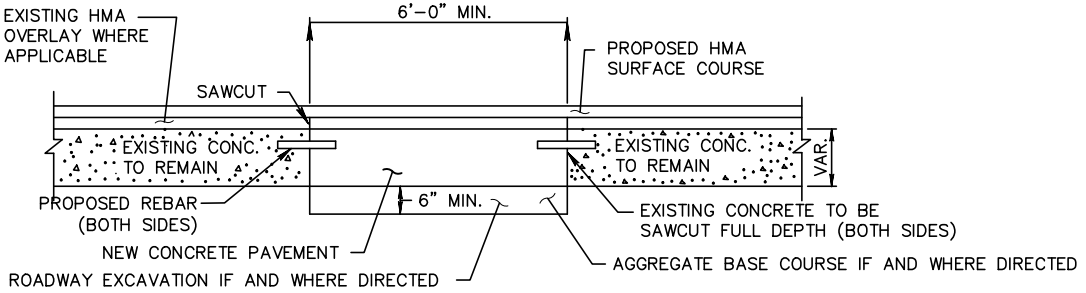
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
CONCRETE PAVEMENT REPAIR
CONSTRUCTION DETAILS

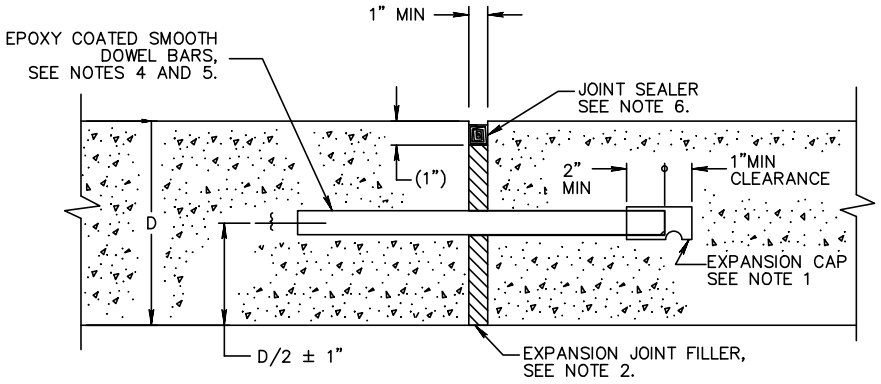
DATE JULY 2015
DRAWN BY T.A.P/K.J.S.
APPROVED BY K.B/A.L.

SHT. NO. 1 / 4

Plotted: 7/10/2015 3:05 PM File Name: \\CCDEW-LIND\A Engineering\County Standards\DTL-23-Concrete Pavement Repair Const Details.dwg



FULL DEPTH CONCRETE PAVEMENT REPAIR



TRANSVERSE EXPANSION JOINT

NOTES :

1. PLACE A CLOSED-END EXPANSION CAP OVER THE LUBRICATED END OF ALL DOWEL BARS USED IN TRANSVERSE EXPANSION JOINTS AND PROVIDE A MINIMUM 1" CLEARANCE POCKET ASSURED BY MEANS OF A POSITIVE SPACING DEVICE.
2. CUT EXPANSION JOINT FILLER MATERIAL TO CONFORM TO THE CROSS SECTION OF THE PAVEMENT AND FURNISH IN STRIPS EQUAL TO THE WIDTH OF THE PAVEMENT SLAB. MAKE THE TOP SURFACE SMOOTH AND HAVE HOLES PUNCHED FOR THE DOWEL BARS PROVIDE A SNUG FIT WITHOUT LOSS IN THICKNESS OF THE MATERIAL.
3. CONSTRUCT ALL TRANSVERSE JOINTS PERPENDICULAR TO THE CENTERLINE.
4. USE MINIMUM 11/4"~ x18" LONG EPOXY COATED SMOOTH DOWEL BARS FOR PAVEMENT DEPTHS 10" OR LESS, AND MINIMUM 11/2" ~ X 18" LONG DOWEL BARS FOR PAVEMENT DEPTHS GREATER THAN 10". APPROVED ALTERNATE DOWEL BARS HAVING EQUIVALENT PROPERTIES TO CONVENTIONAL ROUND DOWEL REINFORCEMENT STEEL MAY BE PROPOSED FOR USE.
5. PLACE EPOXY COATED SMOOTH DOWEL BARS PARALLEL TO THE CENTERLINE AND SURFACE OF THE SLAB.
6. MAKE THE TOP OF THE JOINT SEALING MATERIAL1/4"±1/8" BELOW THE SURFACE OF THE PAVEMENT.
7. THE INITIAL SAW CUT RELIEF JOINT IS NOT REQUIRED FOR CONSTRUCTION JOINTS.
8. WHEN COLD-POURED JOINT SEALER IS SELECTED FOR USE IN TRANSVERSE JOINTS, USE THE SAME JOINT SEALER IN THE LONGITUDINAL JOINTS.

DETAIL 24 CONCRETE PAVEMENT REPAIR CONSTRUCTION DETAILS

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

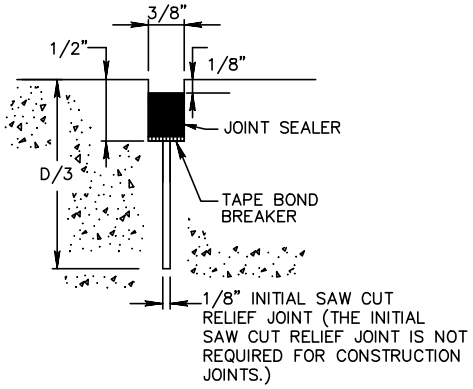
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
CONCRETE PAVEMENT REPAIR
CONSTRUCTION DETAILS

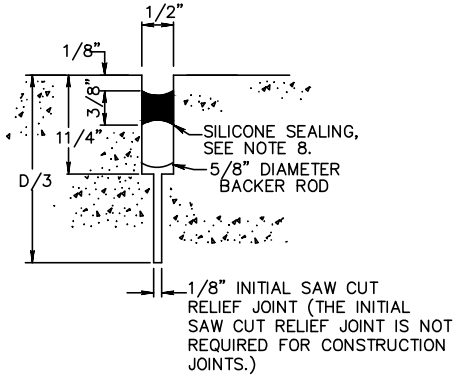
DATE JULY 2015
DRAWN BY T.A.P/K.J.S.
APPROVED BY K.B/A.L.

SHT. NO. 2 / 4

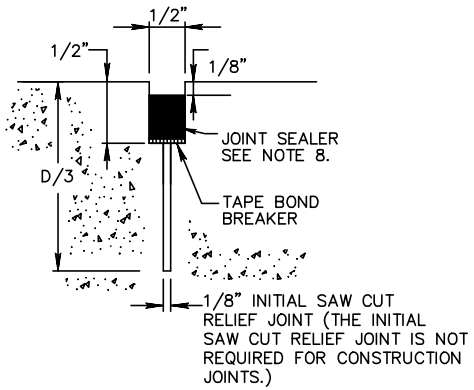
Plotted: 7/10/2015 3:06 PM File Name: \\CCDEW-LIND\A Engineering\County Standards\DTL-24-Concrete Pavement Repair Const Details.dwg



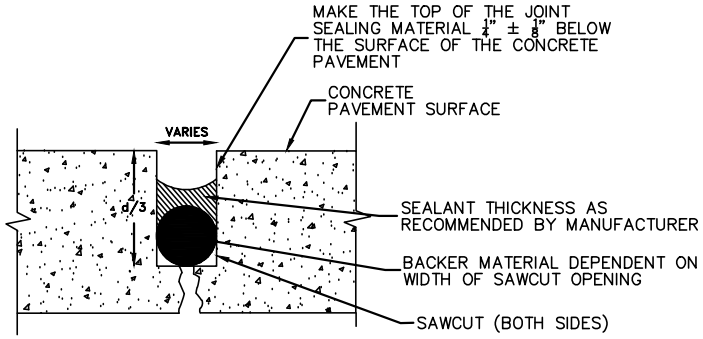
DETAIL A
HOT–POURED JOINT SEALER



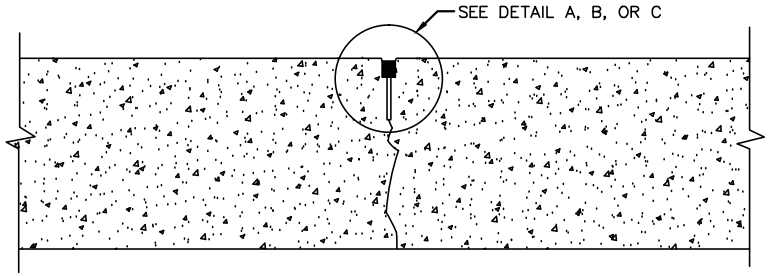
DETAIL B
COLD–POURED JOINT SEALER
WITH BACKER ROD
(CAMDEN COUNTY
PREFFERED TREATMENT)



DETAIL C
COLD–POURED JOINT SEALER
WITHOUT BACKER ROD



CRACK REPAIR DETAIL FOR CRACKS
OVER 0.5 INCHES TO 2.0 INCHES IN WIDTH



CRACK REPAIR DETAIL FOR CRACKS
LESS THAN 0.5 INCHES WIDE

DETAIL 25 CONCRETE PAVEMENT REPAIR CONSTRUCTION DETAILS

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

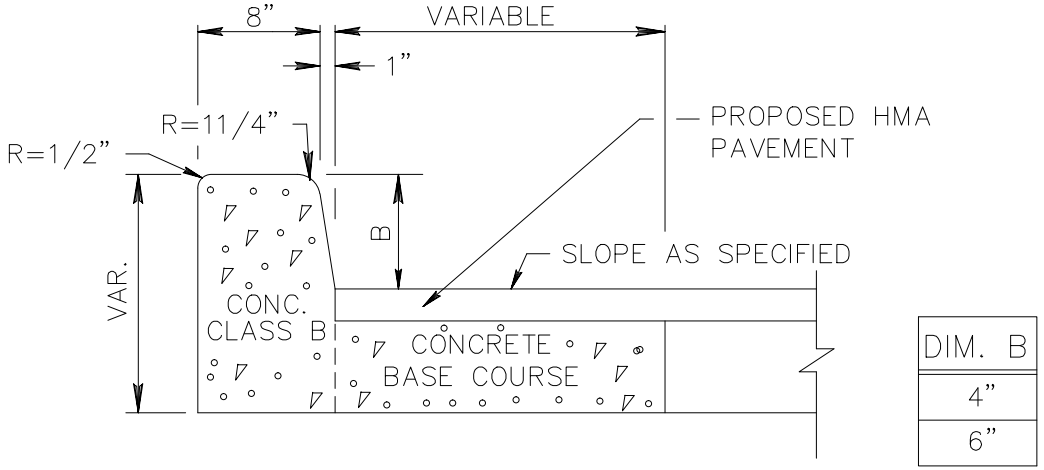
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
CONCRETE PAVEMENT REPAIR
CONSTRUCTION DETAILS

DATE JULY 2015
DRAWN BY T.A.P/K.J.S.
APPROVED BY K.B/A.L.

SHT. NO. 3 / 4

Plotted: 7/10/2015 3:07 PM File Name: \\CCDEW-LIND\A Engineering\County Standards\DTL-25-Concrete Pavement Repair Const Details.dwg



DIM. B
4"
6"

NOTES:
EXPANSION JOINTS 1/2 INCH WIDE IN THE CURB, AND EXPANSION JOINT ASSEMBLY IN THE MONOLITHIC PAVEMENT STRIP SHALL BE DIRECTLY OPPOSITE EVERY TRANSVERSE JOINT IN THE CENTRAL PAVEMENT STRIPS.

JOINT MATERIAL IN THE CURB SHALL BE AS SPECIFIED FOR CONCRETE VERTICAL CURB. THE TRANSVERSE EXPANSION JOINT MATERIAL SHALL NOT EXTEND THRU THE CURB.

CONCRETE VERTICAL CURB MONOLITHIC WITH CONCRETE BASE COURSE

DETAIL 26 CONCRETE PAVEMENT REPAIR CONSTRUCTION DETAILS

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

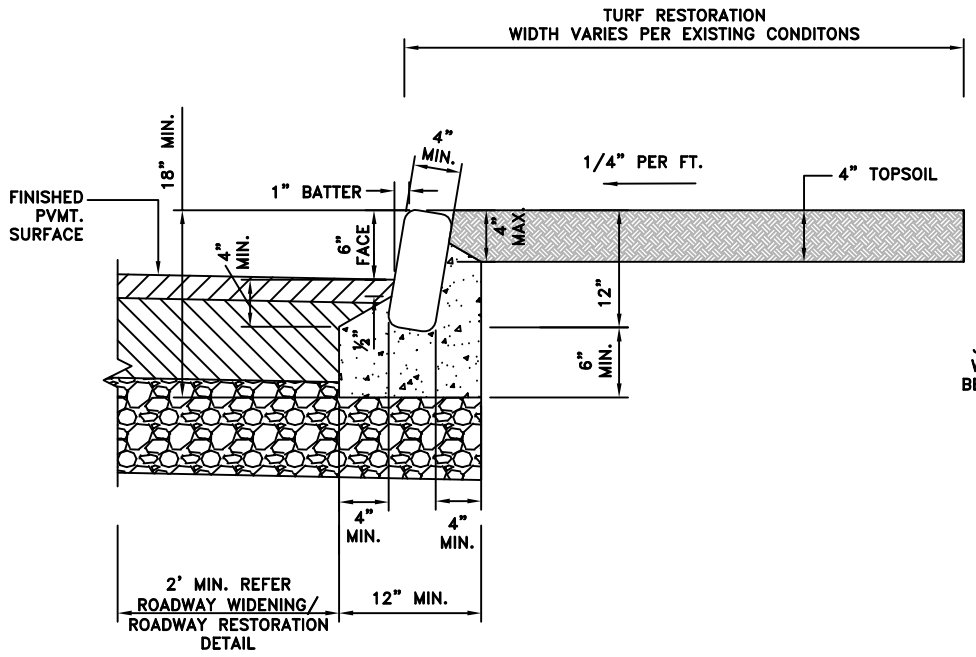
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

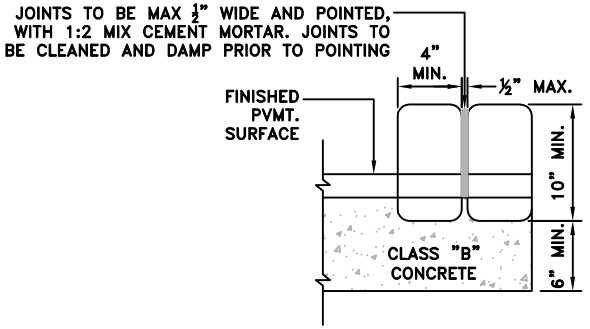
TITLE
COUNTY STANDARD
CONCRETE PAVEMENT REPAIR
CONSTRUCTION DETAILS

DATE JULY 2015
DRAWN BY T.A.P/K.J.S.
APPROVED BY K.B/A.L.

SHT. NO. 4 / 4

Plotted: 7/10/2015 3:09 PM File Name: \\CCDEW-LIND\A Engineering\County Standards\DTL-26-Concrete Pavement Repair Const Details.dwg





DETAIL 27 BELGIUM BLOCK CURB

N.T.S.

NOTE:

1. TURF RESTORATION TO CONSIST OF A MINIMUM OF 4" SELECT TOPSOIL, FERTILIZER AND SEED AS PER SPECIFICATIONS.
2. IF SUBGRADE MATERIAL IS UNSUITABLE, CONTRACTOR TO REMOVE PER COUNTY ENGINEER'S DISCRETION AND REPLACE WITH SELECT FILL AT NO EXTRA COST TO THE COUNTY.
3. CONCRETE SHALL BE CLASS B WITH 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI AND 6% ±1.5% AIR ENTRAINMENT.
4. EXPANSION JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20' APART AND BEHIND THE CONCRETE PORTION OF THE CURB WHEN CONSTRUCTED ALONG A CONCRETE SIDEWALK OR DRIVEWAY APRON. EXPANSION JOINTS SHALL BE FILLED WITH CELLULAR COMPRESSION MATERIAL AS SPECIFIED AND RECESSED 1/4" FROM FACE AND TOP OF CURB.
5. CONTROL JOINTS SHALL BE CUT MID-WAY BETWEEN EXPANSION JOINTS IN THE CONCRETE PORTION OF THE CURB TO MATCH THE NEAREST MORTAR JOINT LOCATION.
6. EXPANSION AND CONTROL JOINTS SHALL BE INCLUDED IN PRICE BID FOR CURB.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

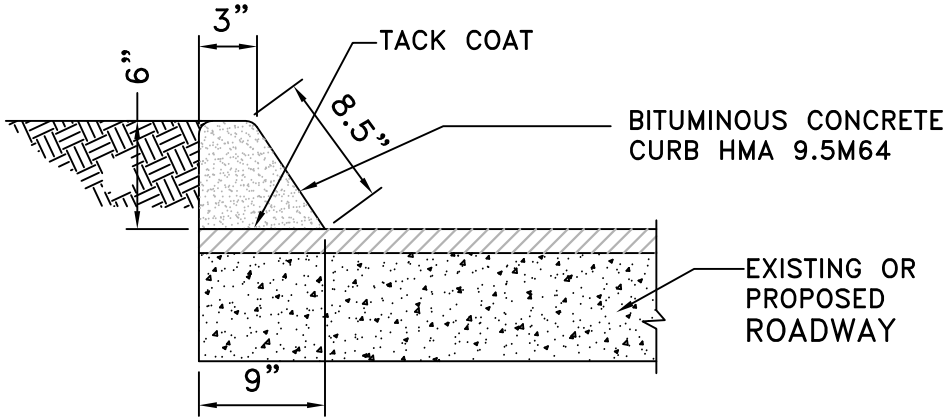
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
BELGIUM BLOCK CURB DETAIL

DATE MAY 2016
DRAWN BY T.A.P
APPROVED BY K.B/A.L.

SHT. NO. 1 / 1

Plotted: 5/10/2016 7:14 AM File Name: F:\Engineering\County Standards\DTL-27-BELGIUM BLOCK CURB-8.5X11.dwg



6" REVEAL

NOTES

1. HAND FORM CURB TO CROSS SECTION SHOWN OR MODIFY TO SUIT EXISTING CONDITIONS. ADJUST RATE OF PLACEMENT TO INSURE BONDING AND COMPACTION OF MIXTURE AS IT IS PLACED.

2. PROVIDE FINISHED CURB HAVING A SMOOTH AND TRUE LINE OF GRADE. COMPLETED CURB SHALL HAVE A SMOOTH SURFACE AND SHALL CONFORM TO PRESCRIBED AND/OR EXISTING CROSS SECTION.

DETAIL 28 BITUMINOUS CURB

N.T.S.

Plotted: 1/19/2017 2:32 PM File Name: \\CCDPW-LND\A Engineering\County Standards\DTL-28-HMA-Curb-8.5X11.dwg

No.	DATE	REVISIONS

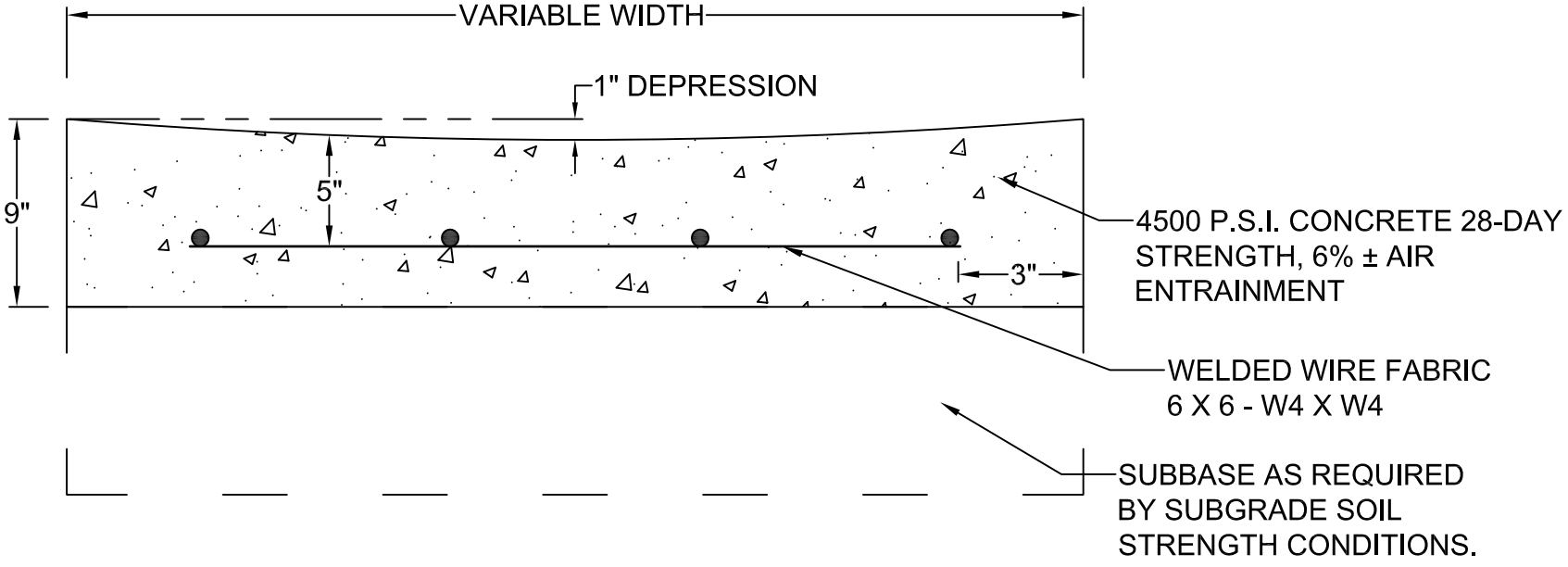
CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
BITUMINOUS CURB
(6" REVEAL)

DATE
AUG 2016
DRAWN BY
T.A.P
APPROVED BY
K.B/A.L.

SHT. NO.
1
1



DETAIL 29 CONCRETE GUTTER

N.T.S.

No.	DATE	REVISIONS

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF PLANNING
CHARLES J. DEPALMA PUBLIC WORKS COMPLEX
2311 EGG HARBOR ROAD
LINDENWOLD
NEW JERSEY 08021

CAMDEN COUNTY
DEPARTMENT OF PUBLIC WORKS
SAM MARTELLO, DIRECTOR
KEVIN BECICA, PE, PP, CME, CFM
COUNTY ENGINEER
2311 EGG HARBOR ROAD
LINDENWOLD, NEW JERSEY 08021

TITLE
COUNTY STANDARD
CONCRETE GUTTER

DATE
JAN 2017
DRAWN BY
K.S.
APPROVED BY
K.B/A.L.

SHT. NO.
1
1

Plotted: 1/25/2017 9:01 AM File Names: \\CCDPW-LIND\A Engineering\County Standards\DTL-29-Concrete Gutter Detail.dwg