

Planning for Large Subdivisions: The Land Use and Transportation Connection

A workshop series offered by the
University of Delaware
Institute for Public Administration
in conjunction with the
Delaware Department of Transportation
and the
Kent and Sussex County Planning Divisions



DelDOT

Kent Co. &
Sussex Co.

prepared by the

Institute for Public Administration
College of Human Services, Education & Public Policy
University of Delaware

www.ipa.udel.edu

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Introduction

The Planning for Large Subdivisions workshop series was a joint venture of the University of Delaware Institute for Public Administration and the Delaware Department of Transportation (DelDOT). The purpose of the series was to facilitate improved communication between DelDOT and the planning divisions in both Kent and Sussex County. Coordination between these entities is essential to the planning process. The workshop series focused specifically on planning for large subdivisions and the course of action that both DelDOT and each respective county planning division take in dealing with the subdivision process. There was a workshop held on May 22, 2002, in Kent County and one on October 16, 2002, in Sussex County. In each workshop, a case study was developed, which followed the process by which an actual subdivision was considered and approved by both DelDOT and the respective county planning division. The workshop presentations are found in this report, as well as notes that accompanied the presentations. The last section of this report comprises the final recommendations that were compiled after analyzing both workshops.

Workshop Credits and Contacts

Kent County Workshop Wednesday, May 22, 2002

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Planning for Large Subdivisions: The Land Use and Transportation Connection

University of Delaware
Paradee Center
Dover, Delaware

Wednesday, May 22, 2002

A workshop offered by the University of Delaware Institute for Public Administration
in conjunction with the Delaware Department of Transportation

Tonight's Agenda

- Issue Presentations
 - The Subdivision Planning Context
 - The Kent County Subdivision Review Process
 - The DelDOT Subdivision Review and TIS process
 - The State's Role – Agency Coordination
- Dinner
- Moderated Discussion

Workshop Objectives

- To understand the land use and transportation planning ***process***.
- To understand the ***roles*** of various levels of government.
- To understand the ***responsibilities*** of your agency.
- To develop ideas to ***improve the coordination*** of land use and transportation planning.

The Subdivision Planning Context

The planning and regulatory
framework that guides residential
development

Delegation of Authority

- State of Delaware delegates authority over land use issues to the counties and municipalities
 - Title 9, Sections 48-49, Del. C. (Kent County)
 - Title 22, Chapters 3 & 7 (municipalities)
 - Town Charters

The Comprehensive Plan

- Establishes Vision
- Linkage between Land Use and Transportation
 - Transportation element
- Sets future agenda through implementation recommendations

The Zoning Ordinance

- Regulates land use, intensity of use and residential density
- Zoning is a tool to be used to implement the land use recommendations found in the Comprehensive Plan
- Zoning Districts should be consistent with the land use plan
 - H.B. 255

Kent County “Memorandum of Understanding”

- DelDOT / Levy Court Highway Impact Resolution
 - June 30, 1988
 - Covers rezoning activities (changes from one zone to another)
 - Calls for analysis of traffic impacts
 - TIS required in some cases

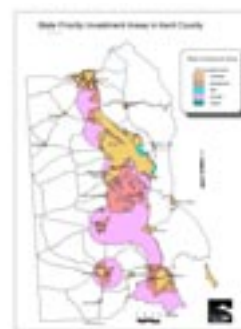
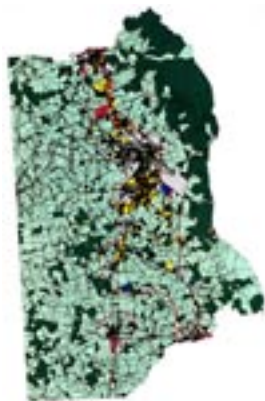
Subdivision Regulations

- Regulates how land is divided into parcels, typically for sale
- Describes relationship between new parcels and the surrounding area
- Does not regulate land use
- Land subdivision is an administrative action – the decision to allow residential uses has already been made (via Comp. Plan and Zoning)

Transportation Planning

- Kent County Comprehensive Plan, Chapter 13
- Dover / Kent MPO, Long Range Transportation Plan
- DelDOT, Long Range Transportation Plan
 - Implemented annually through the CTP
- Livable Delaware – Strategies for State Policies and Spending

Kent County
Comprehensive Plan



Dover Kent/MPO Plan



Strategies for State Policies
and Spending

Workshop Objectives

- To understand the land use and transportation planning *process*.
- To understand the *roles* of various levels of government.
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- To develop ideas to *improve the coordination* of land use and transportation planning.

The Subdivision Review Process

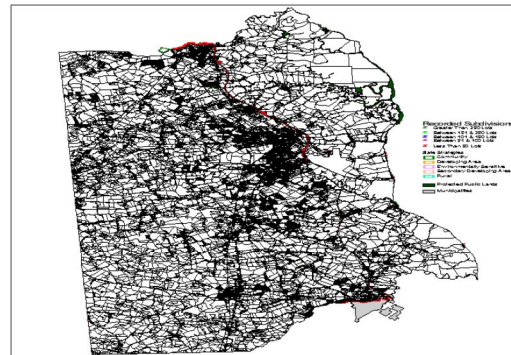
How a subdivision is approved and built

D. Reed Macmillan

Director, Kent County Division of Planning

Kent County Subdivision Process

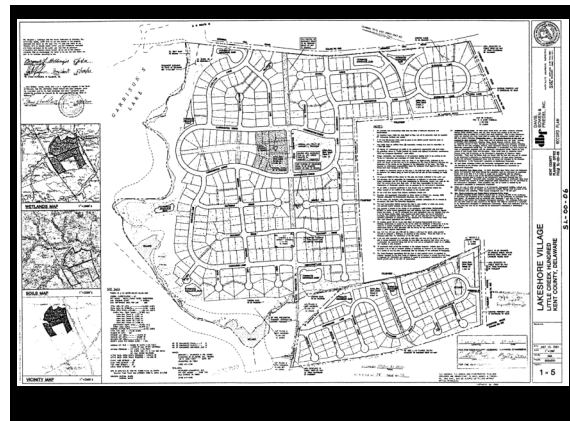
- Subdivision enabling legislation:
 - Delaware Code Title 9, Section 4810
 - Kent Count Code Chapter 187 (Subdivision of Land) and Chapter 205 (Zoning)

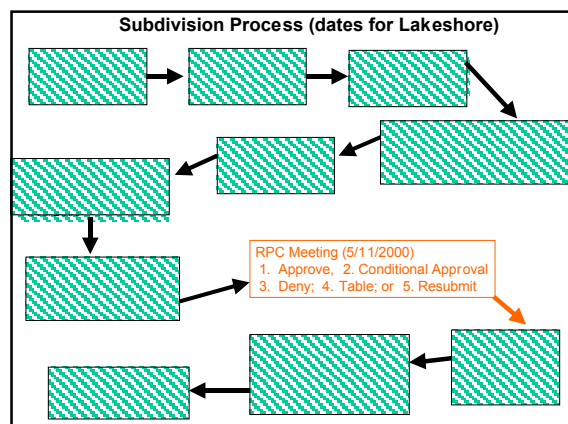
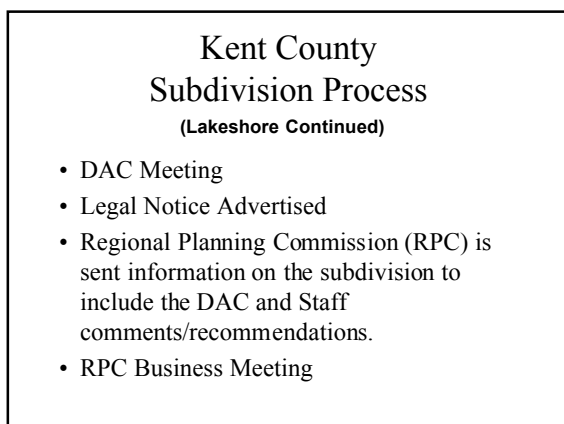
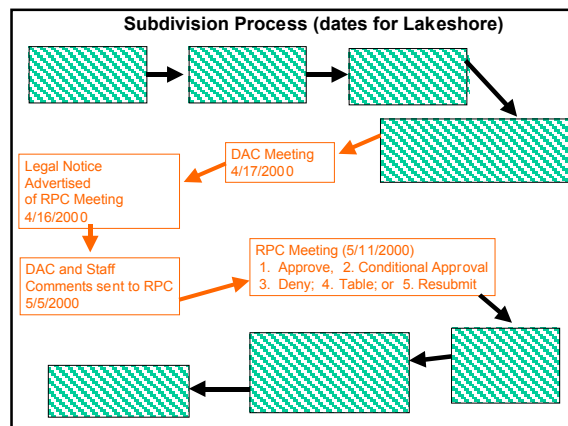
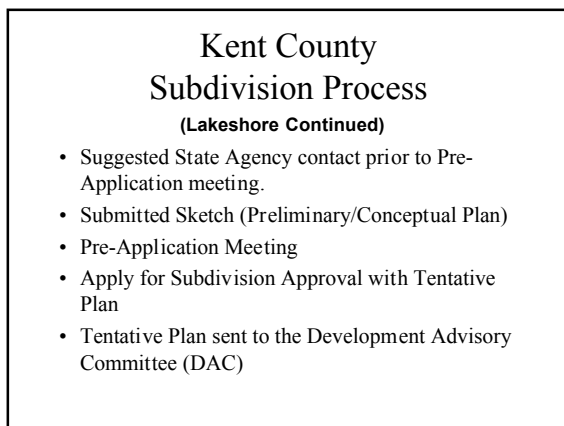
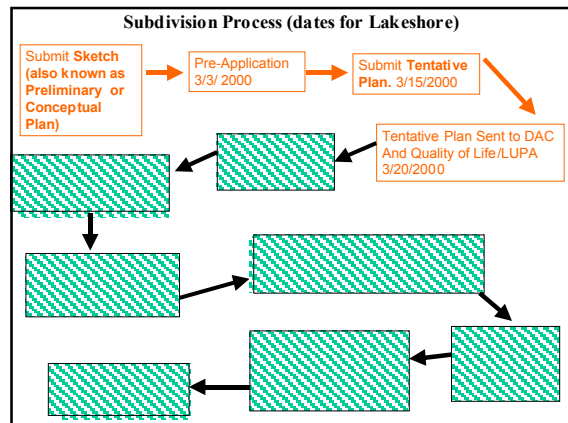
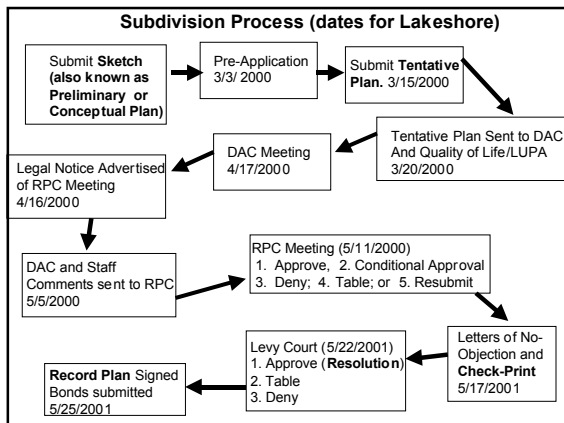


Recorded Subdivisions in Kent County

Lakeshore Village Subdivision Case Study

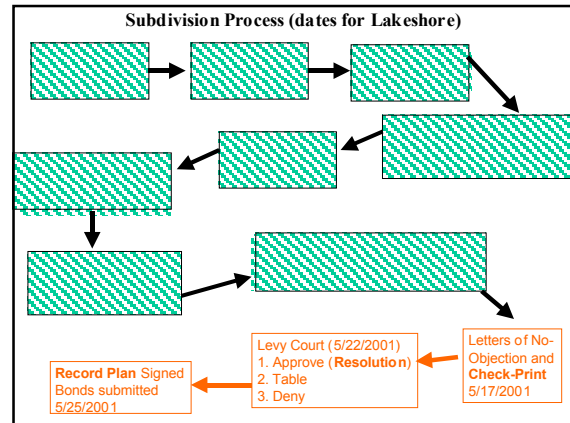
- Lakeshore Subdivision Description
 - North and South side of Goldinger Road, west of Route 13, South side of Garrison's Lake, just North of Cheswold, Delaware.
 - 273.20 acres in Agricultural Conservation Zoning (3 dwellings/acre allowed)
 - 451 lots (= 1.65 DU's/acre density)
 - Open Space (10.8 acres Active; 49.8 Private; and 19.4 storm water management area)
 - Subdivision is within the Kent County Growth Zone





Kent County Subdivision Process

- RPC Action
 - Approve
 - Approve with Conditions
 - Deny
 - Table
 - Resubmit



Kent County Subdivision Process (Lakeshore Continued)

- Letters of No-Objection
- Levy Court Action
 - Approve (with or without conditions)
 - Table
 - Deny
- Final Step

DelDOT's Subdivision Review Process

Traffic Impacts, Entrances, and
Construction
David DuPlessis
Manager, DelDOT Division of Planning

DelDOT Subdivision Review: General Procedures

- Traffic Impact Study Determination
- Site Plan Review (through Kent County DAC)
- Construction Plan Review
- Our reviews are guided by:
 - Rules and Regulations for Subdivision Streets
 - DelDOT Entrance Manual

DelDOT Subdivision Review:

- Traffic Impact Study
- Determine need (>2,100 avg. daily trips)
 - Determine study area
 - Count existing traffic
 - Add future traffic
 - Analyze level of service
 - Recommend transportation improvements

DelDOT Subdivision Review: Site Plan Review Criteria

- Access Location/Design
- Street Design
- Coordination with other developments and DelDOT projects
- Traffic Impact Study
- Transit
- Pedestrian Facilities
- Bicycle Facilities
- Future Signals

DelDOT Subdivision Review: Site Plan Review

- Final Step - Letter of No Objection
 - Issued to Kent County once all conditions met

DelDOT Subdivision Review: Construction Plan Review

Once Site Plan approved, we will begin review of detailed construction plans for:

- Subdivision Streets
- Entrances
- Off-site improvements

DelDOT Subdivision Review: Construction Plan Review

Our review entails:

- Lane geometry/design
- entrance design
- roadway drainage
- traffic control
- signing/stripping
- pavement design
- construction details

Results in Design Approval

DelDOT Subdivision Review: Other Review Steps

Once Design Approved, then

- Construction by developer with inspection by DelDOT
- Acceptance by DelDOT

Lakeshore Village Traffic Impact Study Process

- Prior to 12/99 – Developer's engineer recognized that a TIS would be required (over 210 homes or 2100 ADT)
- 12/08/99 – Scoping meeting
 - DelDOT staff and developer's engineer attended
 - The scope of work identified what was to be studied, including: the future year (2008), the intersections (5 existing plus the entrances), the times of day (week day a.m. & p.m. peak hours) and the committed developments (none treated explicitly)

Lakeshore Village

Traffic Impact Study Process

- 12/16/99 - Developer's engineer counted traffic at intersections
- 01/17/00 - Developer's engineer sent traffic counts to DelDOT.
- 01/24/00 - DelDOT approved counts and provided growth factors to calculate 2008 volumes.
- 01/28/00 - Developer's engineer sent Preliminary TIS to DelDOT, presenting the information to be used in the intersection analyses.
- 02/07/00 - DelDOT approved the Preliminary TIS with minor corrections.

Lakeshore Village

Traffic Impact Study Process

- 02/18/00 - Developer's engineer sent Final TIS to DelDOT.
- 03/14/00 - DelDOT completes review of Final TIS

Lakeshore Village TIS Results

- On Lynnbury Woods Road and Goldinger Road, the development traffic would make delays for drivers turning left onto Messina Hill Road noticeably longer during the evening peak hour, but they would still be short.

Lakeshore Village TIS Results

- On Messina Hill Road, the development traffic would make delays for drivers turning left onto Route 13 noticeably longer during both peak hours. Even without the development traffic, the TIS showed that by 2008 the delays would be longer than drivers would find acceptable. With the development traffic added, the delays would be longer still.

Lakeshore Village TIS Results

- On visiting the Route 13 intersections, DelDOT staff found that the situation is less severe than the TIS indicates because there are larger gaps in the through traffic than would have been expected.

Lakeshore Village TIS Results

- TIS recommended and DelDOT concurred that better striping was needed on Messina Hill Road at the Route 13 to separate left-turn and right-turn traffic.

Lakeshore Village Traffic Impact Study Process

- 03/30/00 – DelDOT sends comments and recommendations to Kent County Planning

Lakeshore Village

Transportation Review Timeline

Kent County DAC Comments – March 30, 2000

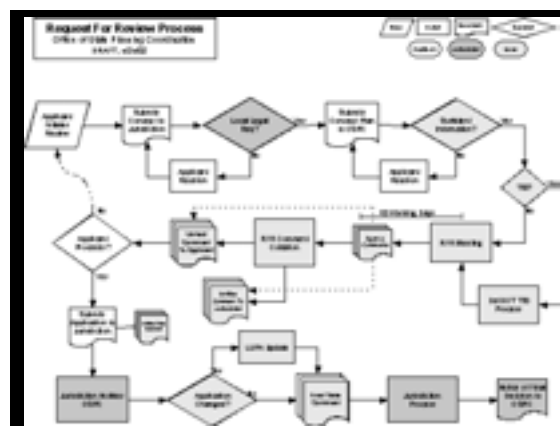
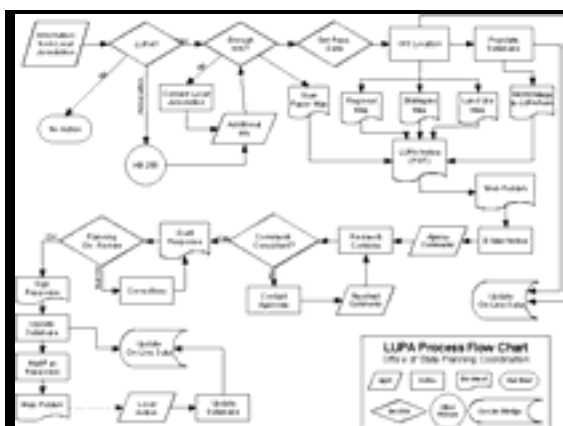
- Address TIS recommendations
- Upgrade Goldinger Road to DelDOT standards
- Add interconnection to adjacent property
- Increase r/w width of Ryhill Drive

Lakeshore Village Transportation Review Timeline

- May 2000 – April 2001: developer and engineer finalize plans
- April 27, 2001 – Letter of No Objection
- August 21, 2001 – Pre-Construction meeting held on site

The State's Role: Agency Coordination and the LUPA Process

Constance Holland
State Planning Coordinator
Office of State Planning Coordination

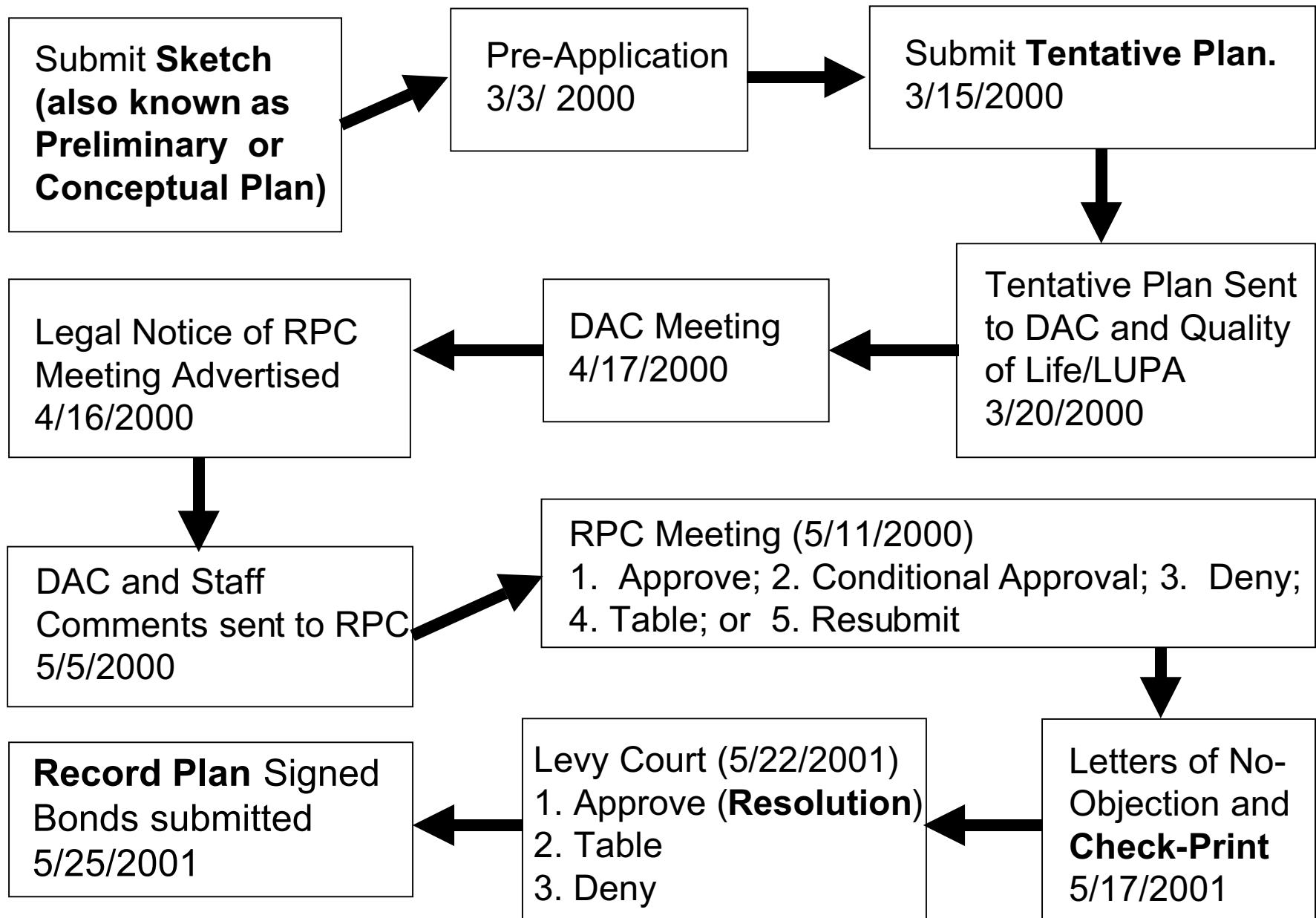


Workshop Objectives

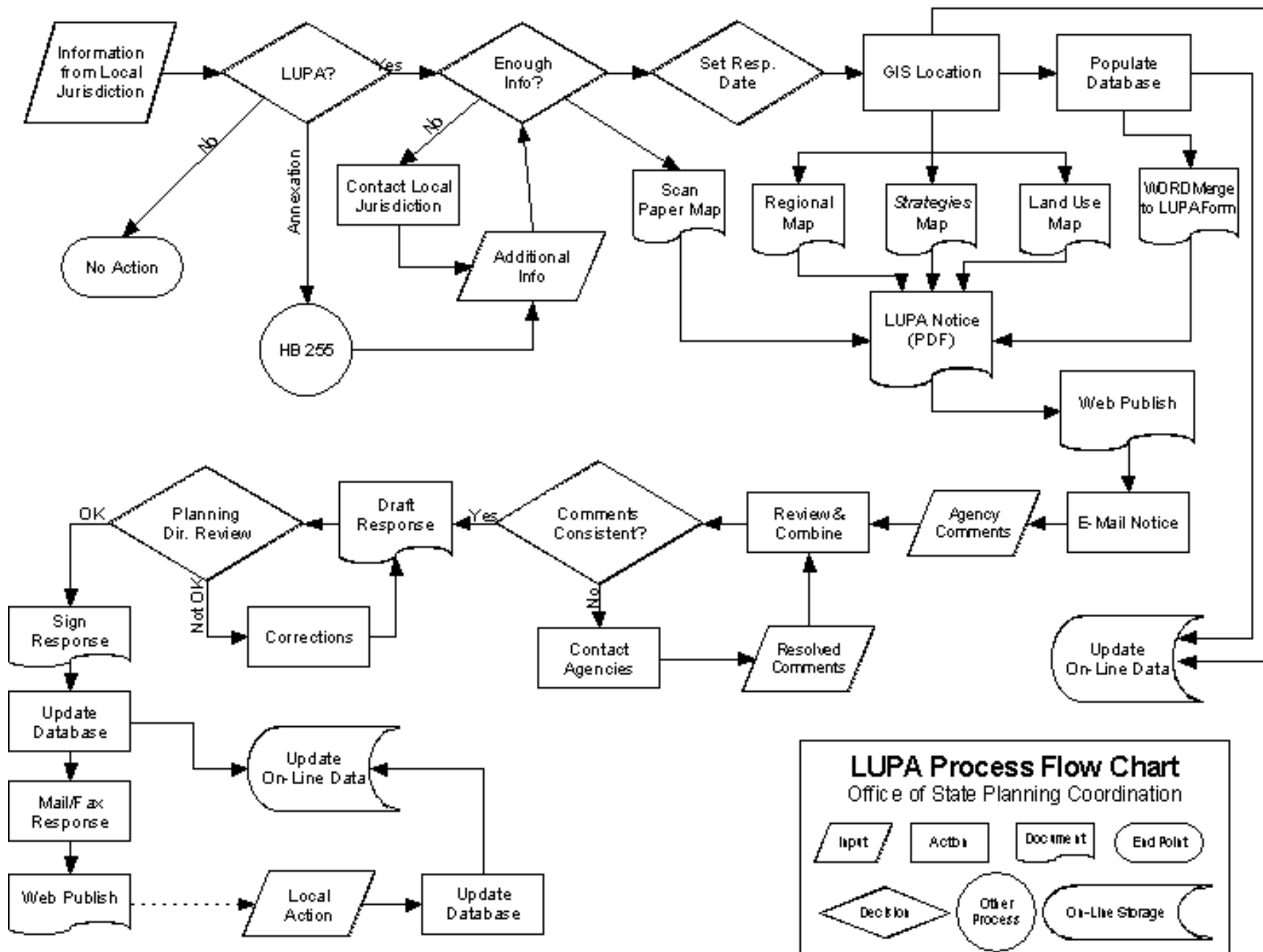
- To understand the land use and transportation planning *process*.
- To understand the *roles* of various levels of government.
- To understand the *responsibilities* of your agency.
- To develop ideas to *improve the coordination* of land use and transportation planning.

Enjoy your dinner!

Moderated discussion after dinner



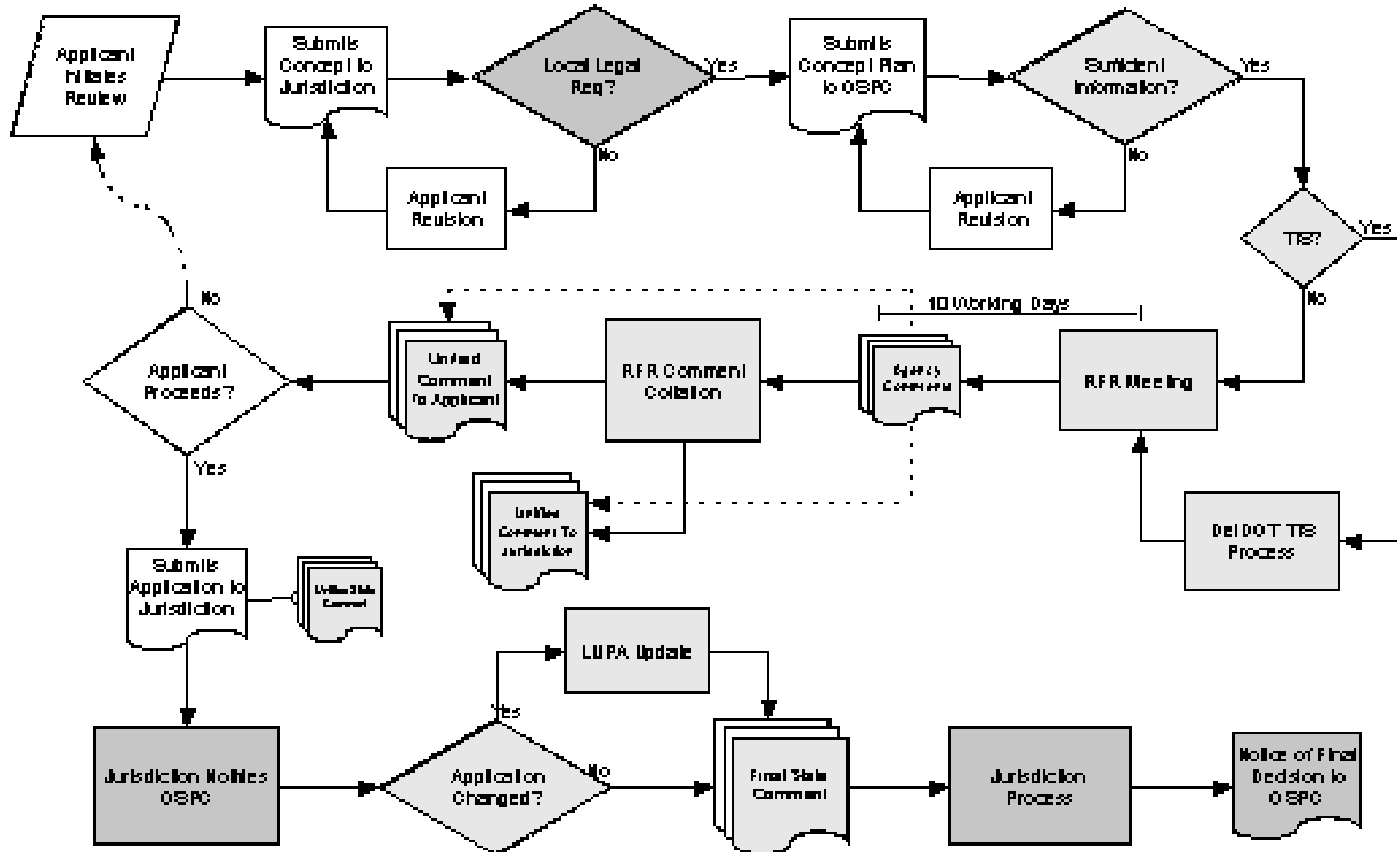
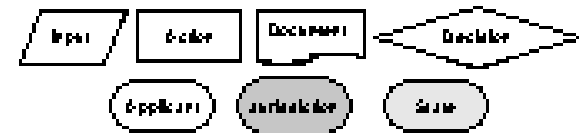
Subdivision Process (dates for Lakeshore)



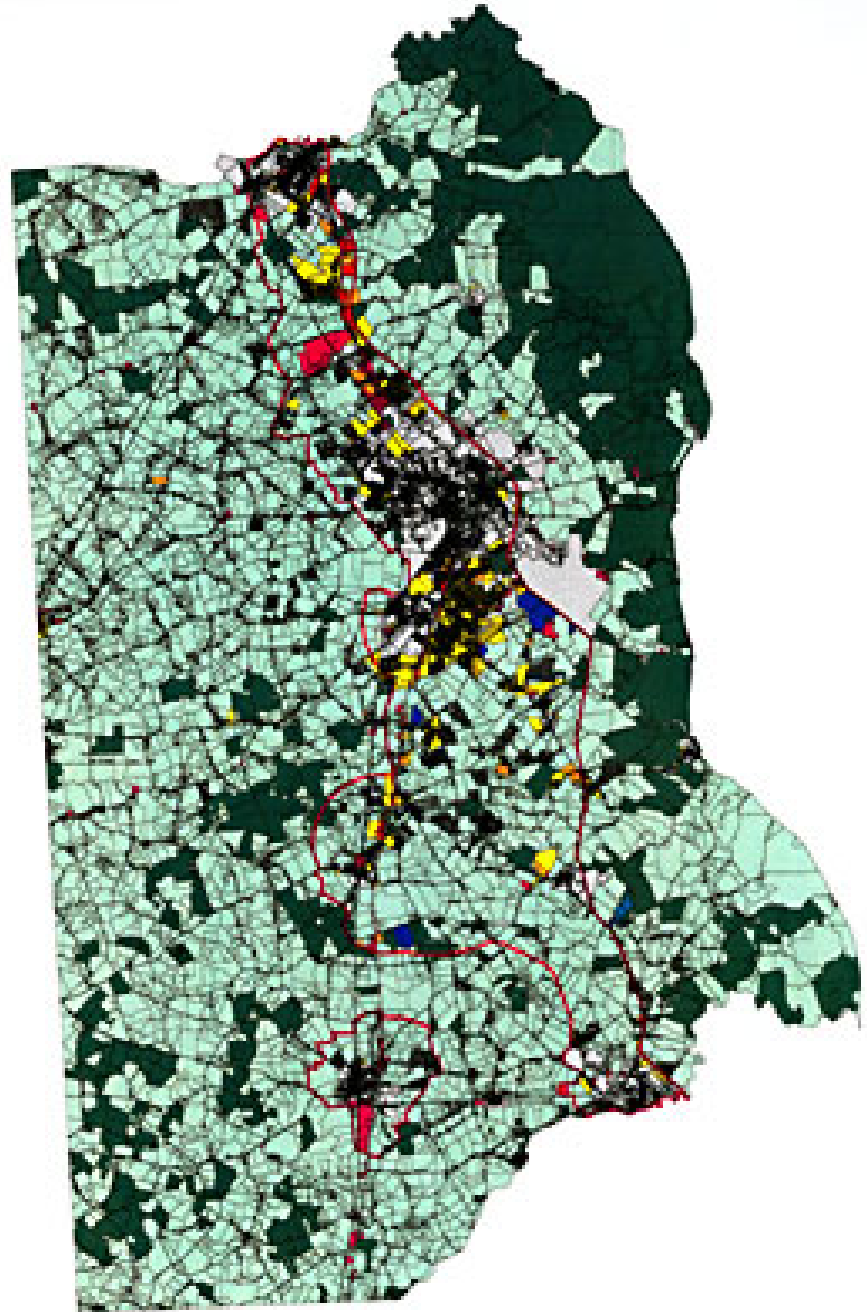
Request For Review Process

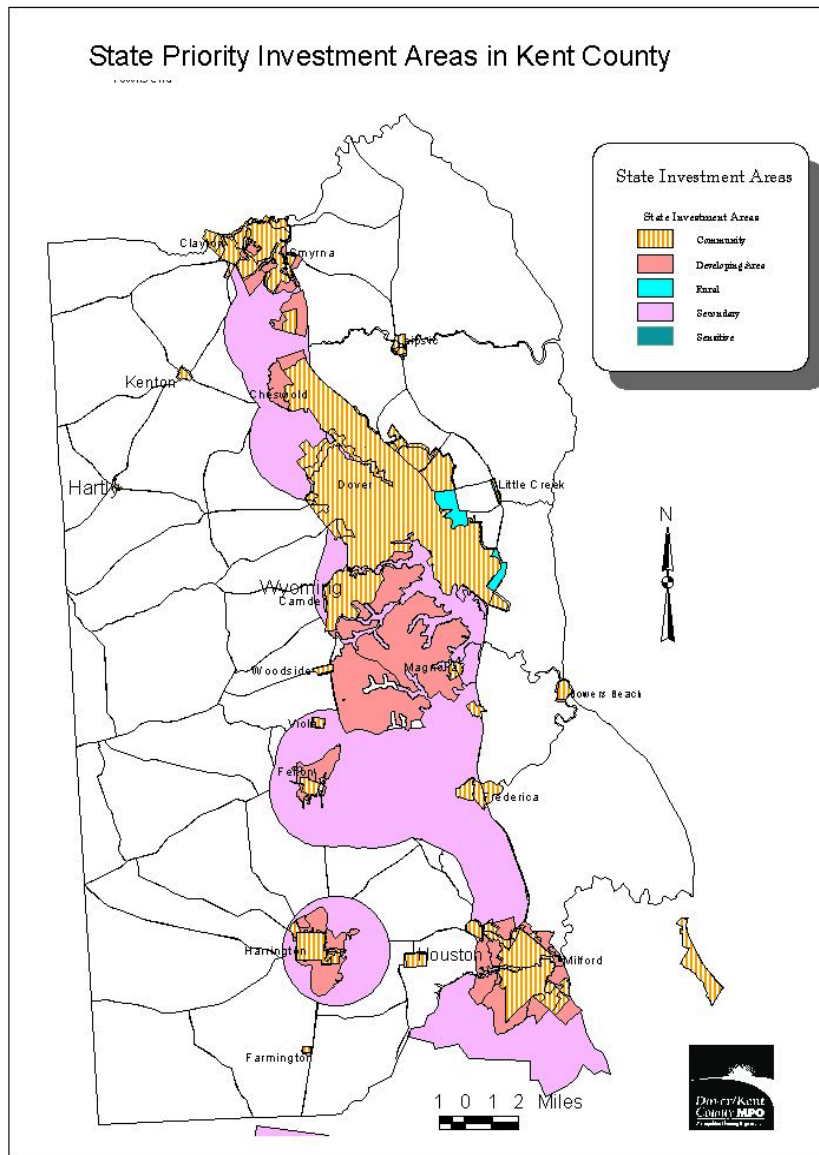
Office of State Planning Coordinator

DRAFT, 4/24/02

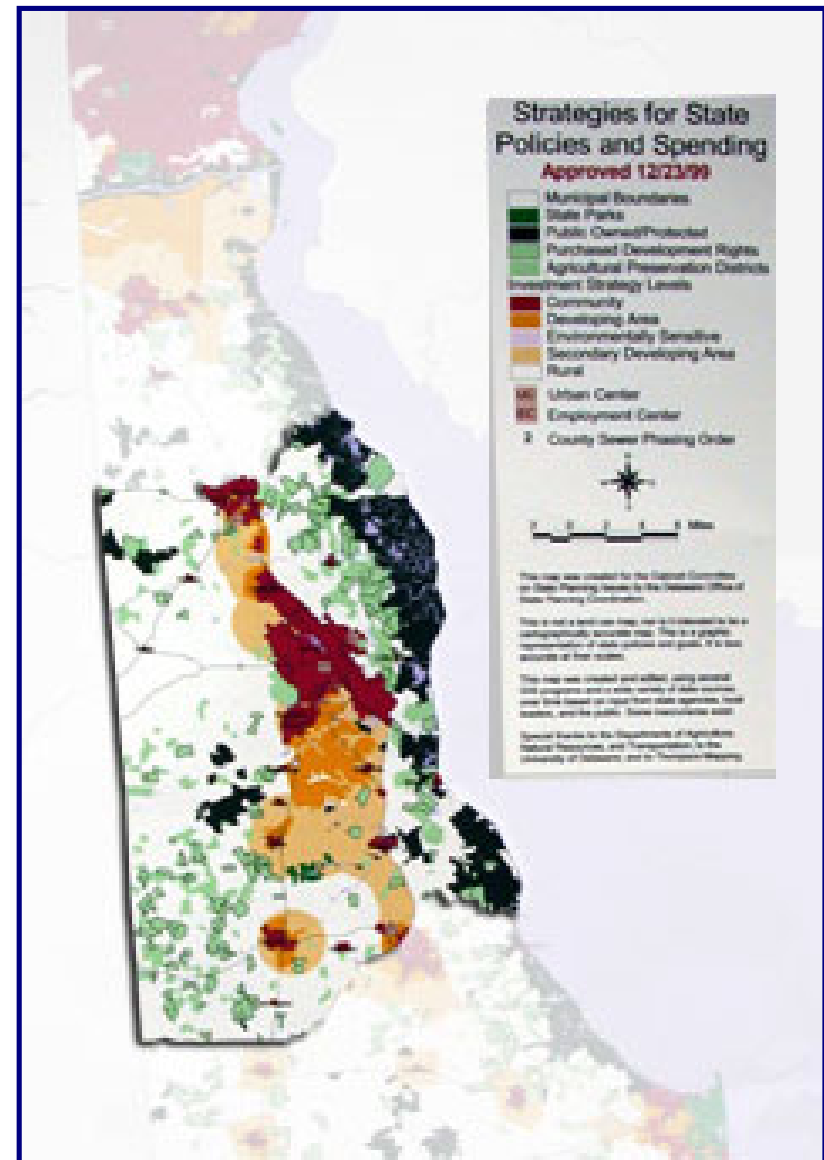


Kent County Comprehensive Plan

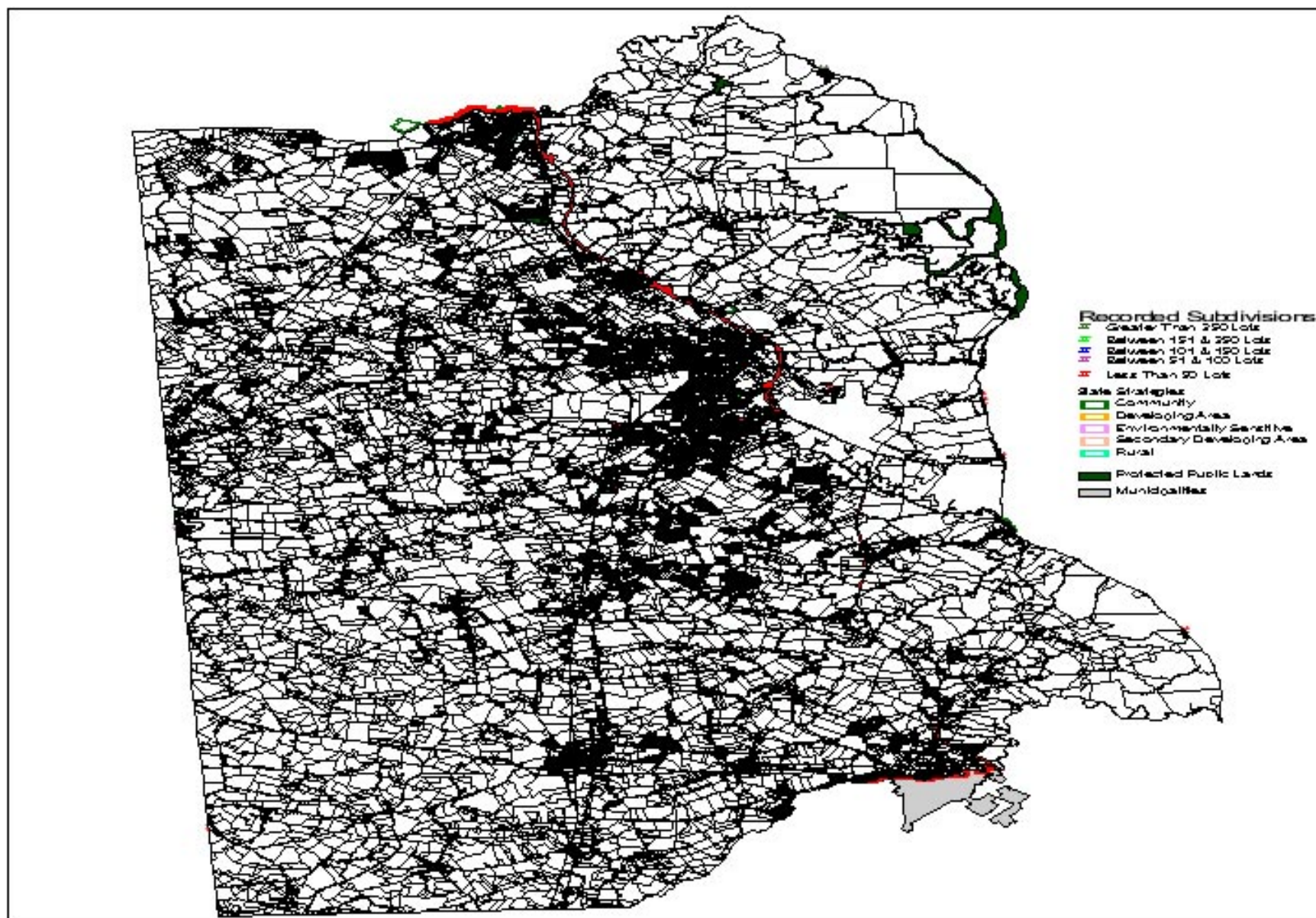




Dover/Kent MPO Plan



Strategies for State Policies and Spending, Kent County



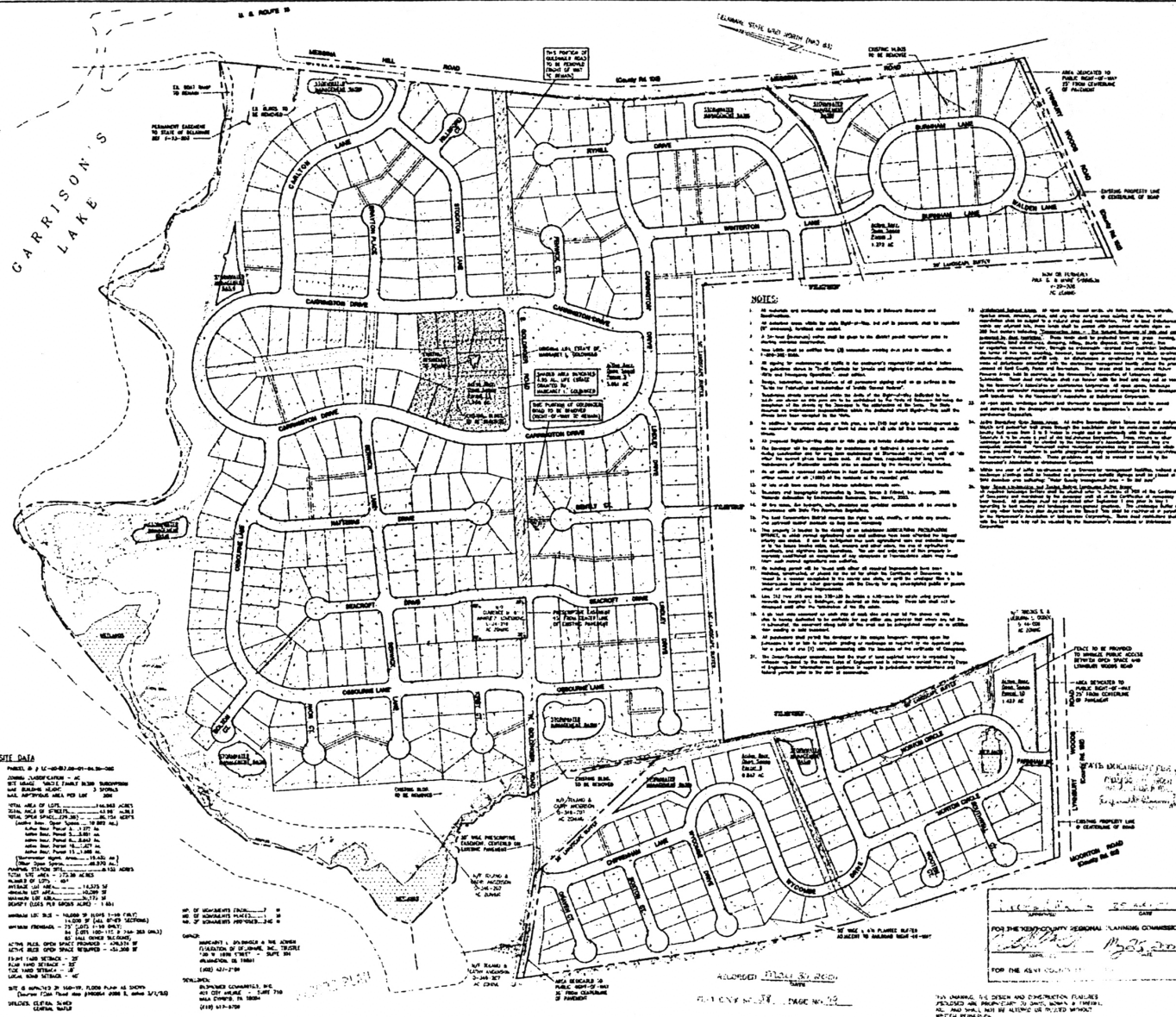
Recorded Subdivisions in Kent County

1. John Doe hereby certifies that John Doe is a registered engineer in the State of California. The information herein furnished is true and correct to the best of my knowledge and to my best knowledge and belief represents good engineering practice as required by the applicable laws and rules of the State of California.

John Doe

1963-1964

Seal: State of California, Board of Engineers, Surveyors and Architects, No. 12345, State of California, 1963-1964.



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**DAVIS,
BOWEN &
FRIEDEL, INC.**

KENT COUNTY
PLANNING OFFICE
TEL 4 51-00-08

LAKESHORE VILLAGE
LITTLE CREEK HUNDRED
KENT COUNTY, DELAWARE

24/10/2014

Date	MAY 10, 2001
Scale	1"=200'
Drawn by	RBA
Project No.	900A001

1 of 5

90-00-75



Lakeshore Village, May 2002

Presentation Notes

Kent County Workshop

The Subdivision Review Process

D. Reed Macmillan, Director
Kent County Division of Planning

1. In 1953, the State of Delaware passed legislation for the Kent County Levy Court that authorized a Regional Planning Commission (RPC). One of the RPC's charters is to review subdivision plats per **Delaware Code Title 9**, Chapter 48 (Regional Planning Commission), Section 4810 (Subdivision Plans; land development plans; road plats; submission to Commission; recording; fees; regulations).
 - Kent County adopted a Subdivision Ordinance in 1973 and Zoning Ordinance in 1972 later amended in 1991. The Subdivision Ordinance sets forth the language annotated within the Delaware Code. In December 2000, both the Kent County Subdivision and Zoning Ordinances were codified into the Kent County Code.
2. The size of Kent County is approximately 367,146 acres, 22,678 of which lie within the 20 municipalities. This leaves approximately 344,468 acres in the unincorporated land area that Kent County regulates for subdivisions. Kent County's population is approximately 126,643 (this includes municipal population).
3. The County has approximately 138,083 acres zoned AC; 131,130 zoned AR; 1,964 zoned RMH; 6,455 zoned RS1; 178 zoned RM and 0 acres zoned RS5. This totals approximately 277,810 acres out of the 344,468 unincorporated acres. The remaining 66,643 acres are in the AP/10 program (26,838); PDR program (31,657); BN (131); BG (1,263); IG (746); IL (604); and multi-zoned parcels (5,414).
4. Currently, Kent County has approximately 542 subdivisions, which comprises 20,901 parcels (7,765 of these parcels are recorded but not yet built). This represents approximately 14,551 acres of land.
5. Within the planning office there are now 14 major subdivisions, numbering a total of 1,106 parcels, that are in the review and approval process.
6. Kent County approves approximately 16 major subdivisions and processes approximately 750 single-family home construction permits per year.

7. The Kent County Growth Zone is approximately 79,084 acres. This represents 22% of land within Kent County. If a subdivision is developed within a growth zone and has central sewer and water, there is a density bonus of one additional dwelling unit per acre.
8. In the Lakeshore project, staff assumed the number of proposed parcels would require a Traffic Impact Statement, and in this case, DelDOT was contacted prior to the Official Kent County Pre-Application Meeting. In the Lakeshore subdivision, a Traffic Impact Study (TIS) was required and completed around March 2000.
9. A developer applies for the Kent County Pre-Application Meeting by completing a submittal form and must submit his/her “**Sketch (preliminary/conceptual) Plan**” to the Kent County Planning Office at least five days prior to the pre-application meeting. Cost for this meeting is \$200.00. These forms and subdivision information can be found at www.co.kent.de.us.
10. The Pre-Application Meeting is annotated in the Kent County Code Chapter 187-10. A developer must have this meeting at least five working days (Kent County Planning Policy) prior to the subdivision filing deadline, which is usually the third Wednesday of each month. Lakeshore had their meeting on March 3, 2000.
11. A developer makes formal subdivision application by submitting the “**Tentative Plan**,” as annotated in the Kent County Code 187-25. Cost is \$400.00 for the first ten lots and \$10.00 for each subsequent lot. Lakeshore made formal subdivision application on March 15, 2000 at a cost of \$4,810.00.
12. The Development Advisory Committee (DAC) is annotated with the Kent County Code 187-5 and consists of State and Kent County officials. The Delaware Code Title 9, Chapter 49 (Zoning), Section 4952-4960 requires all County re-zonings and subdivision applications be submitted to state agencies for review and comment. This process is called the “Quality of Life” mailing after the 1988 Quality of Life Act signed by then Governor Castle. Kent County utilizes this mailing to notify the DAC members. The Lakeshore Quality of Life mailing was on March 20, 2000. In addition, Kent County is required to comply with Delaware Code Title 29, Chapter 92 (Land Use Planning), Section 9211 (Local land use planning actions subject to process). This process is called the Land Use Planning Act (LUPA) mailing. Kent County combines both Quality of Life and LUPA mailings, which are sent to approximately 50 agencies.

13. Kent County also utilizes the Quality of Life mailings to comply with Title 9, Section 4819 of the Delaware Code, requiring notice to local school districts of residential development plans. This allows the school districts to make formal comment.
14. To facilitate comments, Kent County sponsors a meeting for all DAC members to attend along with the developer. This meeting allows DAC members to ask additional questions or formally submit their comments regarding the subdivision. The DAC meeting for Lakeshore was held on April 17, 2000.
15. Delaware Code Title 9, Sections 4908 and 4910 require notice of the public hearing and business meeting date, time, and location be advertised in a newspaper of general circulation in the County. This is called the Legal Notice. The Legal Notice for Lakeshore was published on April 16, 2000.
16. The DAC and staff recommendation report, which includes copies of the tentative plan, is sent to the RPC. This is accomplished at least one week prior to the RPC public business meeting.
17. Because subdivision of land is a “first” permitted use within Kent County, it does not require a public hearing. However, the developer or his/her representative must appear in front of the RPC to answer questions. The RPC is authorized under the Delaware Code Title 9, Section 4811 (Approval or disapproval of plat by Commission; hearing) to either approve or deny the subdivision based on Section 4802 for the purpose of promoting health, safety, prosperity, and general welfare of the citizens. The RPC business meetings are usually held on the second Thursday night of each month.
18. The RPC can approve, approve with conditions, deny, table, or resubmit the tentative subdivision plan. This language is annotated within Delaware Code Section 4811 and the Kent County Code Section 187-12 and 187-15.
19. If the RPC approves the subdivision with or without conditions, the developer has one year to obtain required “Letters of No Objection” from the Kent Conservation District; the Kent County 911, community services, and engineering offices; the State Fire Marshal; and DelDOT.
20. If the RPX denies, the developer may appeal that decision to the Kent County Levy Court within 30 days of such decision.

21. The RPC may table the subdivision for one month in order to get additional information or allow the developer to review potential conditions.
22. The RPC may also require that the subdivision tentative plan be resubmitted through the process if the plan does not meet the intent of the Kent County Comprehensive Plan or the intent and purpose of the Kent County subdivision regulations.
23. If the RPC approves the tentative plan, the developer has one year to obtain the “Letters of No Objection.” The developer may be granted a one-year extension should he/she have difficulty getting the letters. This language is annotated in the Kent County Code 187-12 (B).
24. Once Kent County Planning Staff has ensured all “Letters of No Objection” have been submitted and all RPC conditions have been included in the revised tentative subdivision plan, the plan becomes a “**check print**” or “**Record Plan**” and is placed on the Levy Court agenda for review.
25. Levy Court may:
 - Approve the Record Plan with or without conditions. This is accomplished by Levy Court adopting a “**Resolution**,” thus approving the plan; or
 - Table the Record Plan if there are pending issues requiring additional information; or
 - Deny the Record Plan. The developer may appeal the Levy Court’s denial no later than 10 days after such decision to the Superior Court of Kent County per Delaware Code Title 9, Section 4818.
26. If Levy Court approves the subdivision, the developer submits the Record Plat to the County Planning Office for signatures of the Planning Director and Kent County Administrator. The developer must also submit a Road Bond of 149% of estimated road cost. The developer gets this bond back once Kent County receives notice from DelDOT that the roads have been formally turned over to the state.

Presentation Notes

Kent County Workshop

DeIDOT's Subdivision Review Process

William Brockenbrough

Delaware Department of Transportation

Division of Planning

- I. How the Traffic Impact Study (TIS) process begins
 - A. In this case, the developer's engineer initiated it.
 - B. Other possible sources
 - 1. County or municipal government
 - 2. DeIDOT through Support Facilities Report, plan review comment, or Land Use Planning Act (LUPA) review
- II. Scoping Meeting—See memorandum dated 12/8/99
 - A. Purpose—To define the parameters of the study for the developer's engineer.
 - B. Who attends
 - 1. DeIDOT Staff
 - 2. Developer's Engineer
 - 3. Other who might have attended but did not in this case (Developer or representatives, Local government staff)
 - C. What is discussed
 - 1. Background
 - a. Identify the subject land.
 - b. Establish what is proposed.
 - c. Establish what approvals have been obtained and what approvals are still needed.
 - 2. Cases to be evaluated
 - a. This study evaluated the three that are a minimum (existing, no-build, build). Sometimes more are necessary.
 - b. Establishing buildout year- This study assumed 2008 but there is no firm rule.
 - c. When to count traffic
 - i. This study looked at morning and evening peaks, which is typical for non-retail.
 - ii. This study counted 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m., but the hours vary.

- iii. Summer counts were not required but might have been before SR 1.
- 3. Facilities to be evaluated
 - a. We identified five existing intersections plus the site entrances.
 - b. Factors that might have prompted us to identify more would include the presence of a signal system, such as on Route 13 through Dover, or the existence of an Adequate Public Facilities Ordinance that mandated more.
 - c. We also identified three roads that we wanted evaluated for geometric and other deficiencies, including one with a railroad grade crossing.
- 4. Highway Capacity Software
 - a. There are several programs available, which produce similar but not identical results. We specify one called HCS, which we use as a standard.
 - b. HCS is revised periodically, so we also specify what version we are currently using.
 - c. When this study was done there were problems with the HCS program for intersections without signals, so we required manual worksheets as a check on the software.
- 5. Seasonal Adjustment Factors
 - a. Vary with month and type of road.
 - b. Their purpose is to change counts to annual average volumes.
- 6. Growth factors and committed developments
 - a. Two methods of projecting future traffic, this way or a network model. Network models are generally better for large-scale long-term developments; sometimes used where major road improvements will change traffic in ways we cannot otherwise estimate. They are done by DelDOT staff.
 - b. Growth factors—Based primarily on past traffic growth but can be increased to account for committed developments where that impact is sufficiently simple.
 - c. Committed developments—Other development in the area that has already been approved and will almost certainly be present in the buildout year.
- 7. Transit, Bicycle, and Pedestrian Facilities—Only discussed in the TIS. No numerical analysis.
- 8. General Notes—Updating Section 15 of Rules and Regulations.
- D. Sometimes there is no meeting—Where there is no need for a meeting, DelDOT will sometimes provide a scope of work by letter.

- III. Traffic Counts—These are the engineer’s first submission after the scoping meeting.
 - A. Check for irregularities.
 - B. Develop growth factors or forecast volumes.
- IV. Preliminary TIS
 - A. Purpose: To establish agreement on the numbers that will be used in the final TIS.
 - B. Contents
 - 1. Project Description
 - 2. Study Area
 - 3. Existing Traffic
 - 4. Trip Generation—How much traffic in and out?
 - a. Institute of Transportation Engineers’ Trip Generation report is the standard reference and was used here.
 - b. Other methods, where ITE is not usable, include counts at similar uses and estimates based on interviews with the proposed tenant.
 - 5. Trip distribution and assignment—Where will the traffic go?
 - a. Knowledge of area
 - b. Use of traffic counts
 - c. Network models
 - 6. Future Traffic with and without sites
- V. Final TIS—Preliminary TIS plus
 - A. Capacity Analysis
 - 1. These analyses yield levels of service (LOS).
 - 2. LOS is defined by the Transportation Research Board (a national body) and is used to describe a driver’s satisfaction with a facility on a scale from A to F, somewhat like a report card. We design facilities using a 20-year forecast and trying to obtain LOS C, or in urban areas LOS D. For a TIS, we consider LOS D in the buildout year to be minimally acceptable.
 - 3. For intersections, LOS is a function of delay, how long a driver is delayed by having to pass through the intersection.
 - 4. Where the intersection is controlled by stop signs on only the side streets, drivers on the through street theoretically experience no delay and there is no LOS for them or for the intersection as a whole.
 - B. Recommendations
 - 1. This TIS found LOS D or better except for left turns onto US 13. For left turns from a minor street, we often accept a poor LOS at peak hours. Often the only way to remedy such a situation is to install a signal and we cannot reasonably install them at all locations where they would be needed to achieve LOS D or better. In this case, the TIS found correctly, that there were

bigger gaps in traffic on Route 13 than the HCS analysis assumed and that therefore the Messina Hill Road delays were not and would not be as severe as the analysis predicted. The HCS has since been revised to account for this situation.

2. The TIS recommended that lane striping would be needed on the Messina Hill Road approaches to Route 13.

C. Conclusions

VI. DeIDOT Review

- A. Rerun Capacity Analyses—In this study, there were no significant errors in the analyses.
- B. Verify that all infrastructure deficiencies were identified- In this study they were.
- C. Verify that all recommendations are sufficient and buildable. The only recommendation was for a striping change.
- D. Recommend different or additional improvements as necessary—Bicycle and pedestrian issues were not identified in the TIS and still remained to be addressed.
- E. Review Comments—Because this project was a subdivision in Kent County, the review was documented in an internal DeIDOT memorandum. If a county or local government, through part of its zoning or land development process, has required the study, then the review is documented in a letter to that government.

Workshop Credits and Contacts

Sussex County Workshop Wednesday, October 16, 2002

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Planning for Large Subdivisions

The Land Use and Transportation Connection

Sussex County Council Chambers
Wednesday, October 16, 2002

A workshop offered by the University of Delaware's
Institute for Public Administration
in conjunction with the Delaware Department of Transportation and
the Sussex County Department of Planning

Agenda

Issue Presentations

- The Subdivision Planning Context
- The DelDOT Subdivision Review and TIS Process
- The Sussex County Subdivision Review Process
- The State's Role- Agency Coordination
- Dinner
- Moderated Discussion

Workshop Objectives

- To understand the land use and transportation planning *process*.
- To understand the *roles* of various levels of government.
- To understand the *responsibilities* of your agency.
- To develop ideas to *improve the coordination* of land use and transportation planning.

The Subdivision Planning Context

The planning and regulatory framework that guides residential development.

Delegation of Authority

State of Delaware delegates authority over land use issues to the counties and municipalities

- Title 9, Sections 68-69, Del. C. (Sussex County)
- Title 22, Chapters 3 & 7 (Municipalities)
 - Town Charters

The Comprehensive Plan

- Establishes Vision
- Linkage between Land Use and Transportation
 - Transportation element
- Sets future agenda through implementation recommendations

The Zoning Ordinance

- Regulates land use, intensity of use and residential density
- Zoning is a tool to be used to implement the land use recommendations found in the Comprehensive Plan
- Zoning Districts should be consistent with the land use plan
 - H.B. 255

Subdivision Regulations

- Regulates how land is divided into parcels, typically for sale
- Describes relationship between new parcels and the surrounding area
- Does not regulate land use
- Land subdivision is an administrative action – the decision to allow residential uses has already been made (via Comp. Plan and Zoning)

Transportation Planning

- DelDOT, Long Range Transportation Plan
 - Implemented annually through the CTP
- Livable Delaware – Strategies for State Policies and Spending

Sussex County Comprehensive Plan



Workshop Objectives

- To understand the land use and transportation planning *process*.
- To understand the *roles* of various levels of government.
- To understand the *responsibilities* of your agency.
- To develop ideas to *improve the coordination* of land use and transportation planning.

Red Mill Village Subdivision *Case Study*

- Development of 324 dwellings and 27, 000 of commercial space.
 - Specifically, 162 single-family detached houses, 24 apartments, 42 duplexes, and 96 townhouses.
- 103 acres of land.
- Located on the south side of Cave Neck Road (Sussex Road 88) near the west side of Delaware Route 1, to the north of Red Mill Pond.
- All access to the subdivision would be from Cave Neck Road, although the property also has frontage to the south on Best Lane.

Red Mill Village Subdivision *Case Study, Continued*

- Development is across two adjoining properties, the 40.59 acre Millman Farm, currently zoned General Residential (GR), and the 61.62 acre Lowe Farm, currently zoned Agricultural Residential (AR-1).
- The project would be developed over a five-year period.
- The developer is also seeking a Residential Planned Community (RPC) overlay zone for both sections of land in order to build a more dense mixed use development.

DelDOT's Subdivision Review Process

Traffic Impacts, Entrances, and Construction

Bill Brockenbrough
DelDOT Division of Planning

DelDOT Subdivision Review General Procedures

- Traffic Impact Study Review
- Site Plan Review (through Sussex County DAC)
- Construction Plan Review
- Our reviews are guided by:
 - [Rules and Regulations for Subdivision Streets](#)
 - [DelDOT Entrance Manual](#)

DelDOT Subdivision Review

Traffic Impact Study

- Determine need (>2,100 avg. daily trips)
- Determine study area
- Count existing traffic
- Add future traffic
- Analyze level of service
- Recommend transportation improvements

DelDOT Subdivision Review Site Plan Review Criteria

- Access Location/Design
- Street Design
- Coordination with other developments and DelDOT projects
- Traffic Impact Study
- Transit
- Pedestrian Facilities
- Bicycle Facilities
- Future Signals

DelDOT Subdivision Review Site Plan Review

- Final Step - Letter of No Objection
 - Issued to Sussex County once all conditions met

DelDOT Subdivision Review Construction Plan Review

Once Site Plan approved, we will begin review of detailed construction plans for:

- Subdivision Streets
- Entrances
- Off-site improvements

DelDOT Subdivision Review Construction Plan Review

Our review entails:

- Lane geometry/design
- entrance design
- roadway drainage
- traffic control
- signing/stripping
- pavement design
- construction details

Results in Design Approval

DelDOT Subdivision Review Other Review Steps

Once Design Approved, then

- Construction by developer with inspection by DelDOT
- Acceptance by DelDOT

Red Mill Village Traffic Impact Study Process

- 7/11/00: Scoping Meeting
 - DelDOT staff, engineer, and developer attended.
 - The scope of work identified what was to be studied, including: the future years (2005 and 2020), the intersections (5 existing plus 1 site entrance), the times of day (Saturday midday, weekday a.m. and p.m. peak hours), growth factors, transit, bicycle, and pedestrian facilities, and the 3 committed developments.

Red Mill Village Traffic Impact Study Process

- 6/17/00, 8/26/00, and 9/19/00: Engineer counted traffic at intersections.
- 10/5/00: Engineer sent traffic counts to DelDOT.
- 10/31/00: DelDOT accepted traffic counts and pointed out minor errors to be fixed. Also provided seasonal adjustment factors to calculate seasonally adjusted weekday volumes and growth factors to calculate weekday future traffic volumes.

Red Mill Village Traffic Impact Study Process

- 1/16/01: DelDOT received preliminary TIS from project manager.
- 3/15/01: DelDOT asked for a revised preliminary TIS to be resubmitted based on several corrections.
- 3/29/01: Project manager submitted revised preliminary TIS to DelDOT.
- 4/6/01: DelDOT approved preliminary TIS with other corrections.

Red Mill Village Traffic Impact Study Process

- 6/1/01: Project manager sent final TIS to DelDOT.
- 8/23/01: DelDOT contacts Sussex County with comments on the final TIS.

Red Mill Village TIS Results

- Site traffic from the proposed development significantly impacts only the intersection of Cave Neck Road and Route 1. Future CCPP improvements to the intersection would remedy this issue. However, these improvements are not yet in the six-year Capital Improvement Program. Limiting left turns is another option for the intersection.

Three Existing Corridor Capacity Preservation Programs



Sussex County Capital Transportation Improvement Program

- 1 North-South Limited Access Highway
- 2 East-West Improvements
- 3 SR 1 Dewey Beach Improvements
- 4 SR 30 and SR 5 from SR 24 north to Route 1
- 6 Georgetown - Park Avenue SR 318 east of Georgetown and SR 321 south of SR 9
- 6 US 13 Corridor Capacity Improvements
- 8 Stationary Message Information System
- 8 Indian River Inlet Bridge
- 8 Sussex County Aviation
- 8 County Road Concerns



Red Mill Village TIS Results

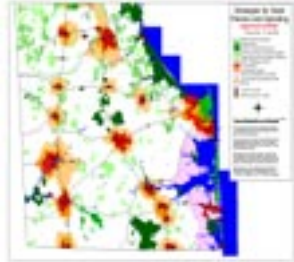
- The development is consistent with the Statewide Long-Range Transportation Plan (SLRTP) and Delaware's State Policies and Spending Map.

Statewide Long-Range Transportation Plan



Sussex
County:
Anticipate
d Problem
Areas
in 2015

Strategies for State Policies and Spending



Red Mill Village TIS Results

- DelDOT recommends that if the County is otherwise inclined to grant the requested rezoning then it should do so if the developer:
 - Improves the southbound deceleration lanes
 - Submits a plan for improvements intended to prohibit left turns from Cave Neck Road onto Route 1
 - Incorporates pedestrian and bicycle facilities into the plans for the site entrance
 - Dedicates sufficient rights-of-way at the northeast corner of the site to accommodate construction of DelDOT's proposed interchange

The Subdivision Review Process

How a Subdivision is Approved and Built
Lawrence Lank

Sussex County Subdivision Review Process

- 5/16/01: Technical Advisory Committee (TAC) meeting to discuss Paynter's Purchase; DelDOT sends comments on TAC meeting to Sussex County Planning and Zoning
- 5/16/01: Development Advisory Service (DAS) sends comments on the subdivision to Sussex County Planning and Zoning
- 11/12/01: Change of zone application filed to change zones from GR and AR-1 to MR-RPC

Sussex County Subdivision Review Process

- 3/12/02: DelDOT informs Sussex County Planning and Zoning of the developer's preference for the interchange at the subdivision's location; Approves developer's choice
- 3/18/02: Sussex County Planning and Zoning Office receives complete Paynter's Purchase Plan
- 3/20/02: State Planning Office sends LUPA comments to Sussex County Planning and Zoning; Recommends approving the change of zone, given several conditions

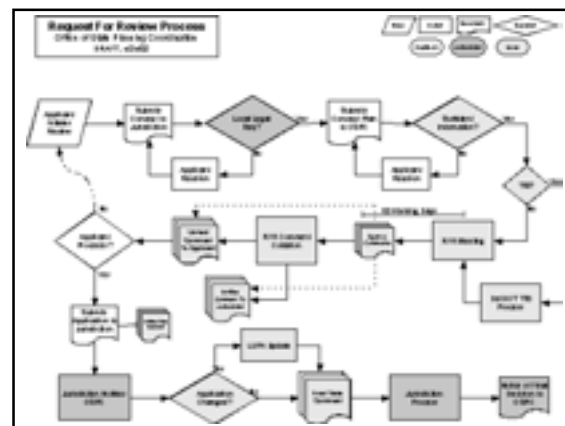
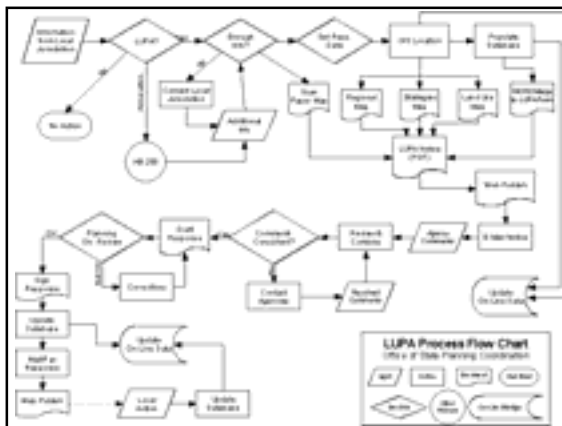
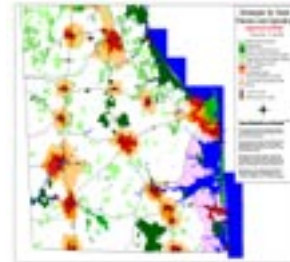
Sussex County Subdivision Review Process

- 3/21/02: Public hearing held before Planning and Zoning Commission of Sussex County, who recommend approval of change of zone
- 4/16/02: Public hearing held before County Council, who determined the change of zone was in accordance with the Comprehensive Development Plan
- 4/30/02: Ordinance #1538 *with conditions* is adopted and changes the zoning of the lots to MR-RPC

The State's Role Agency Coordination and the LUPA Process

Constance Holland
State Planning Coordinator
Office of State Planning Coordination

Strategies for State Policies and Spending

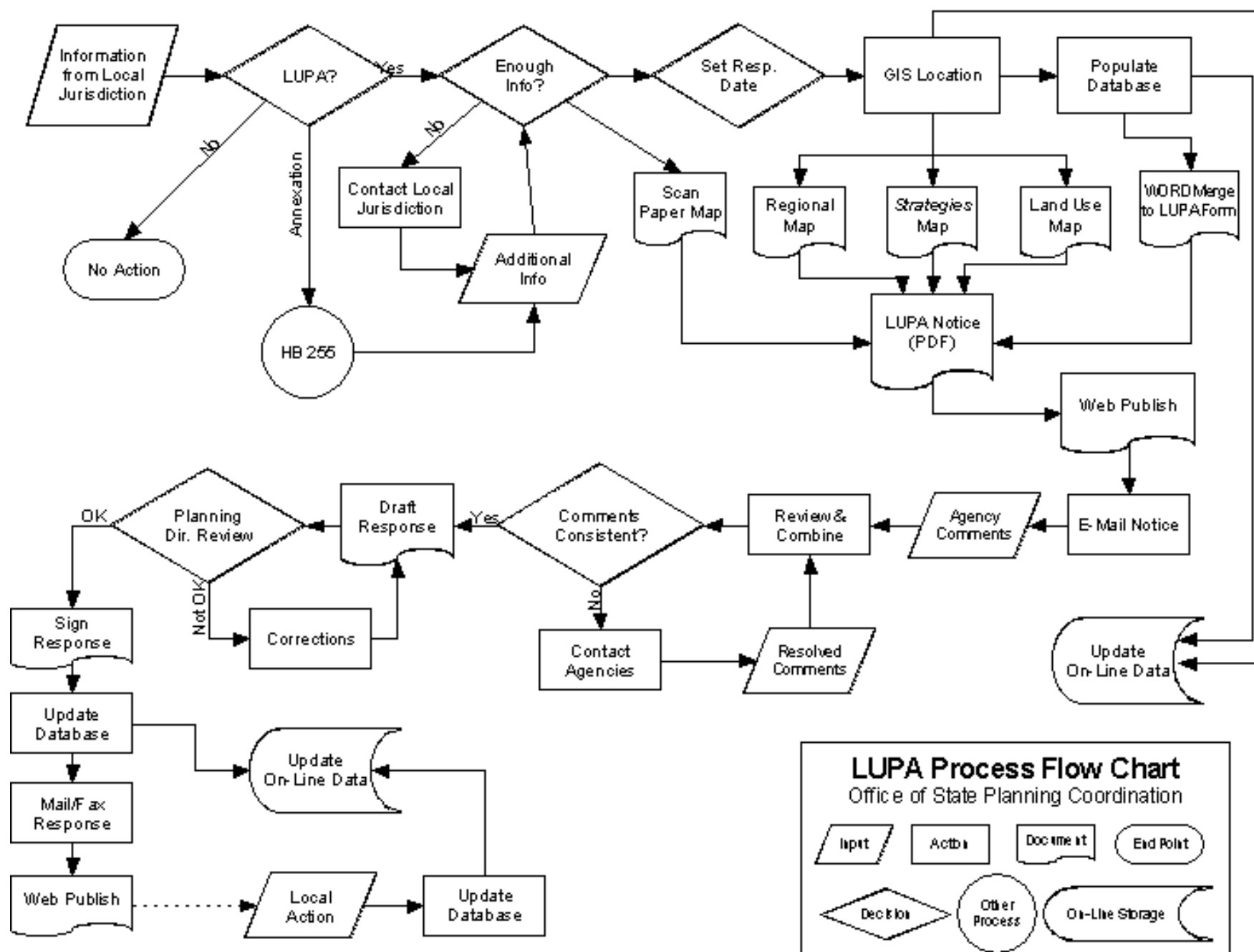


Workshop Objectives

- To understand the land use and transportation planning *process*.
- To understand the *roles* of various levels of government.
- To understand the *responsibilities* of your agency.
- To develop ideas to *improve the coordination* of land use and transportation planning.

Dinner

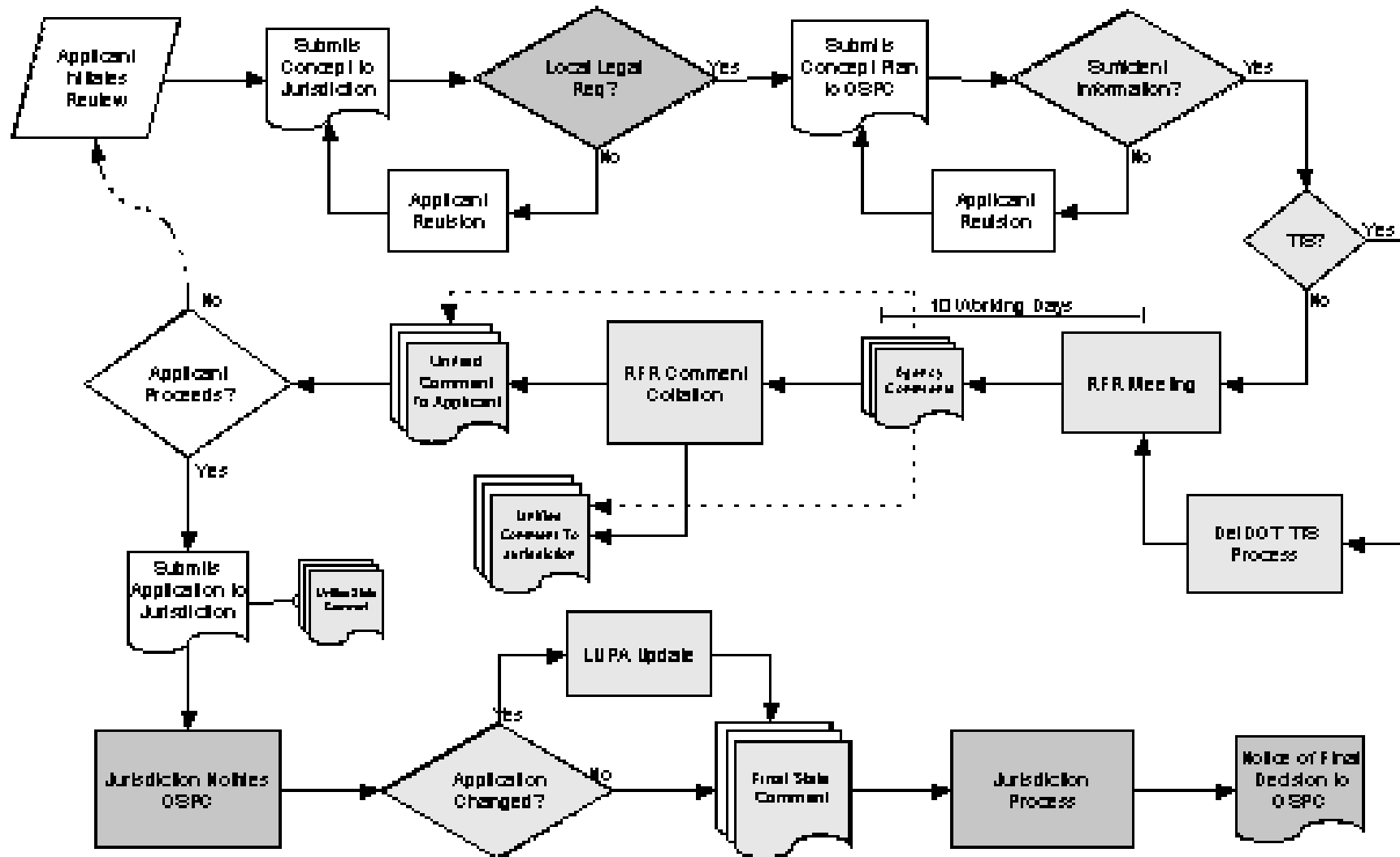
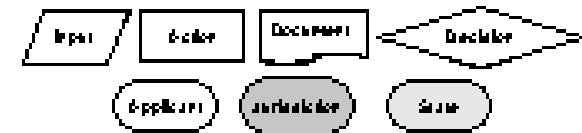
Moderated discussion after dinner.



Request For Review Process

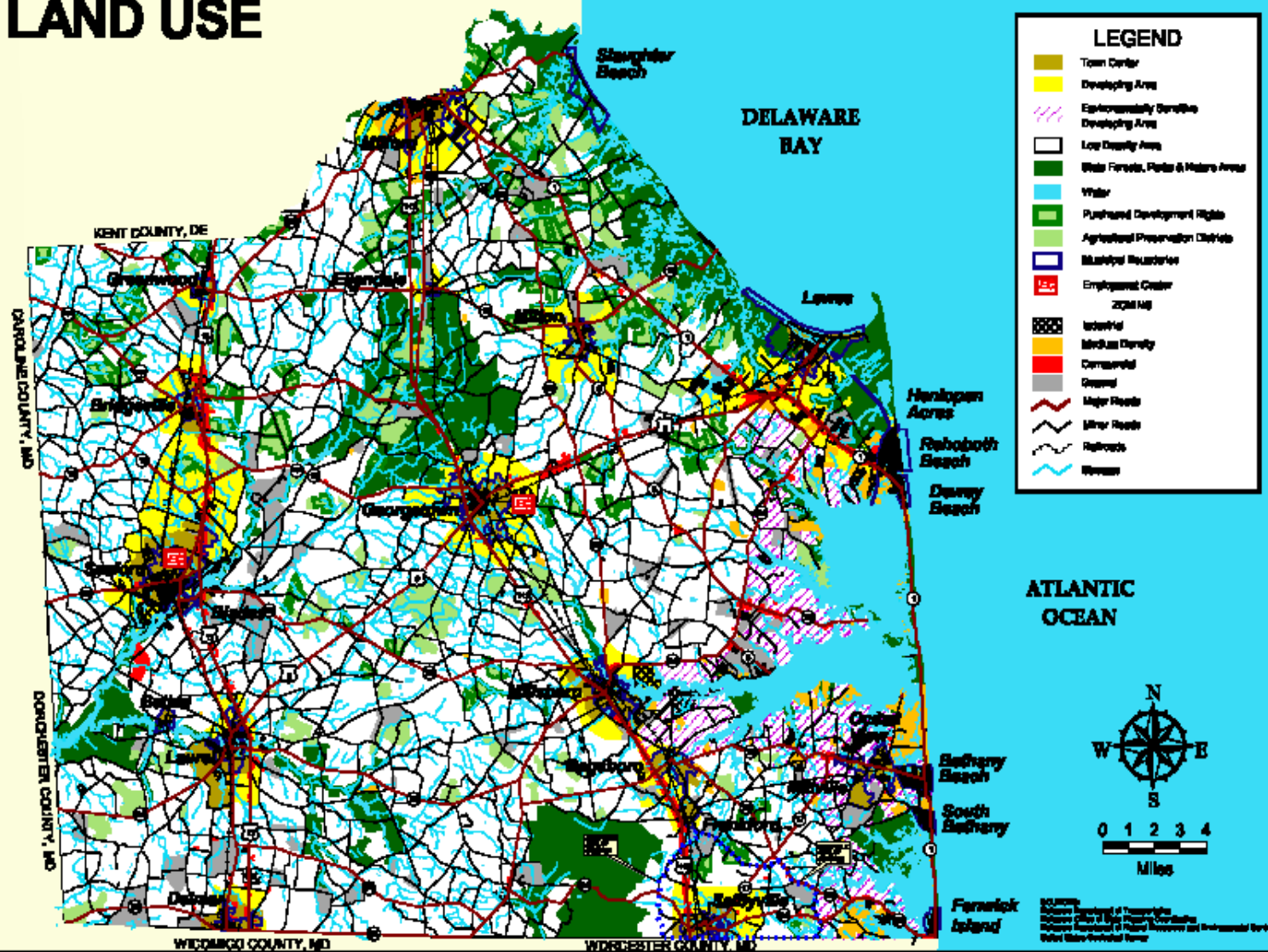
Office of State Planning Coordination

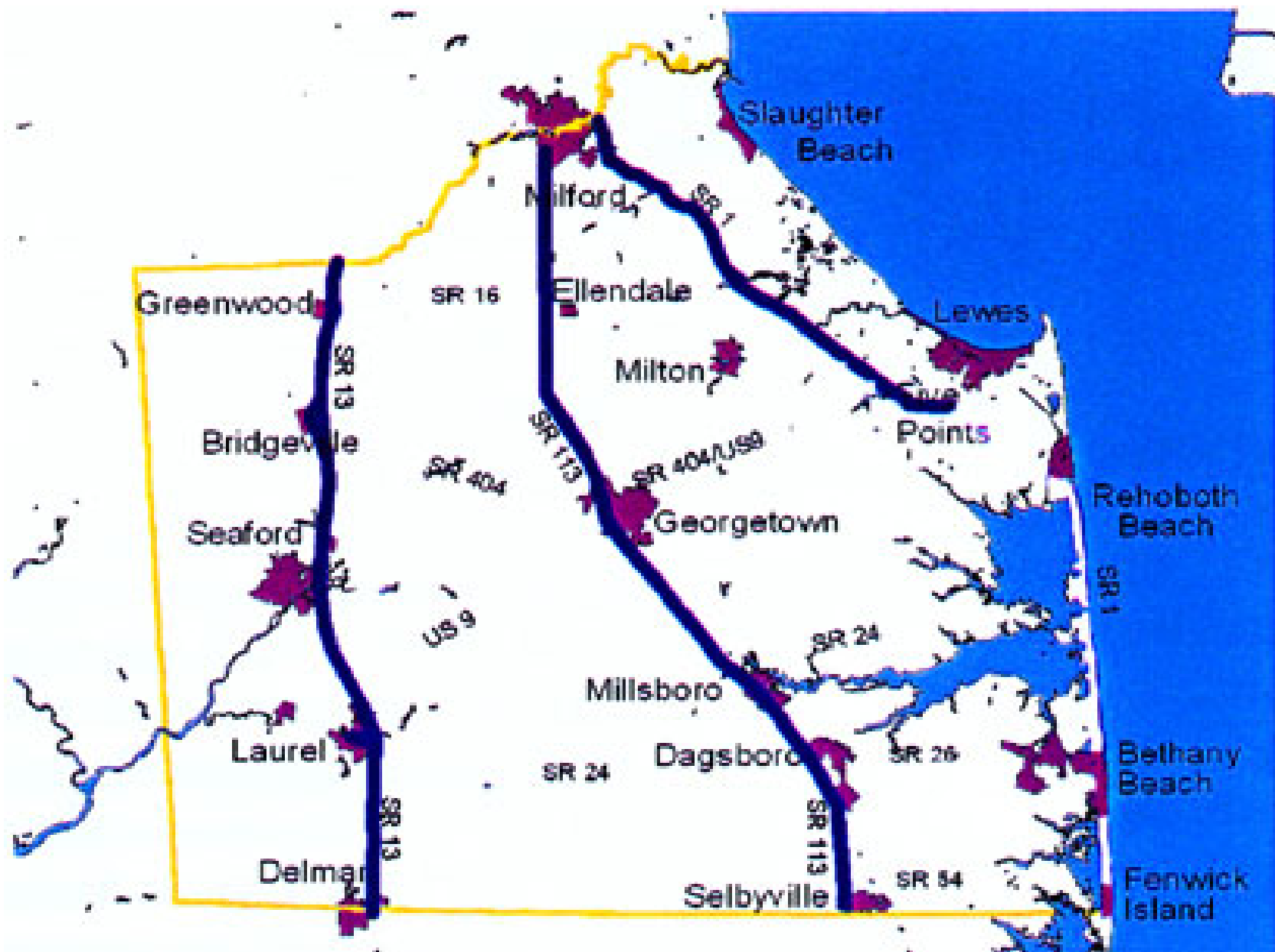
DRAFT, 4/24/02



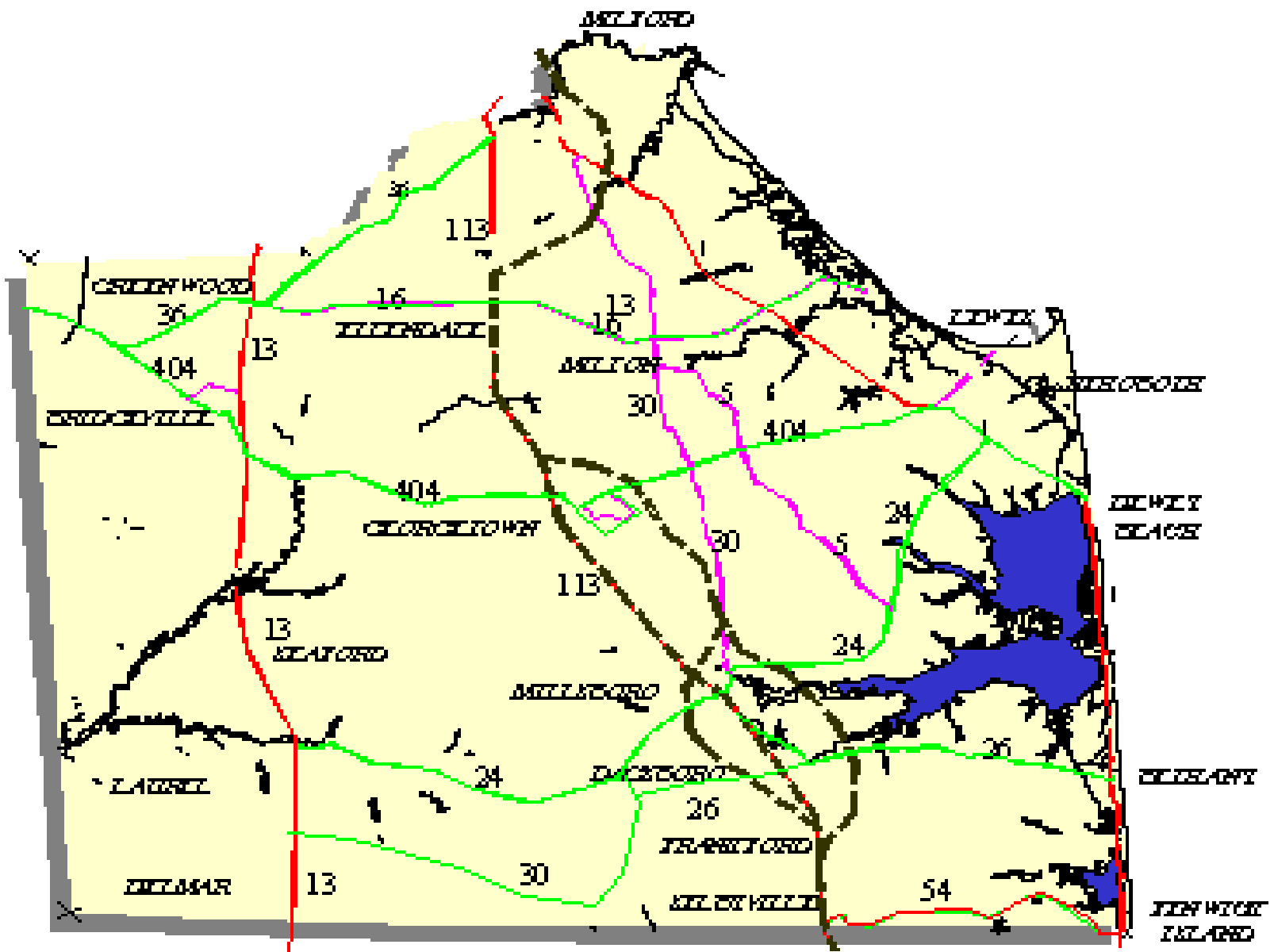
SUSSEX COUNTY COMPREHENSIVE PLAN FUTURE LAND USE

FIGURE 2

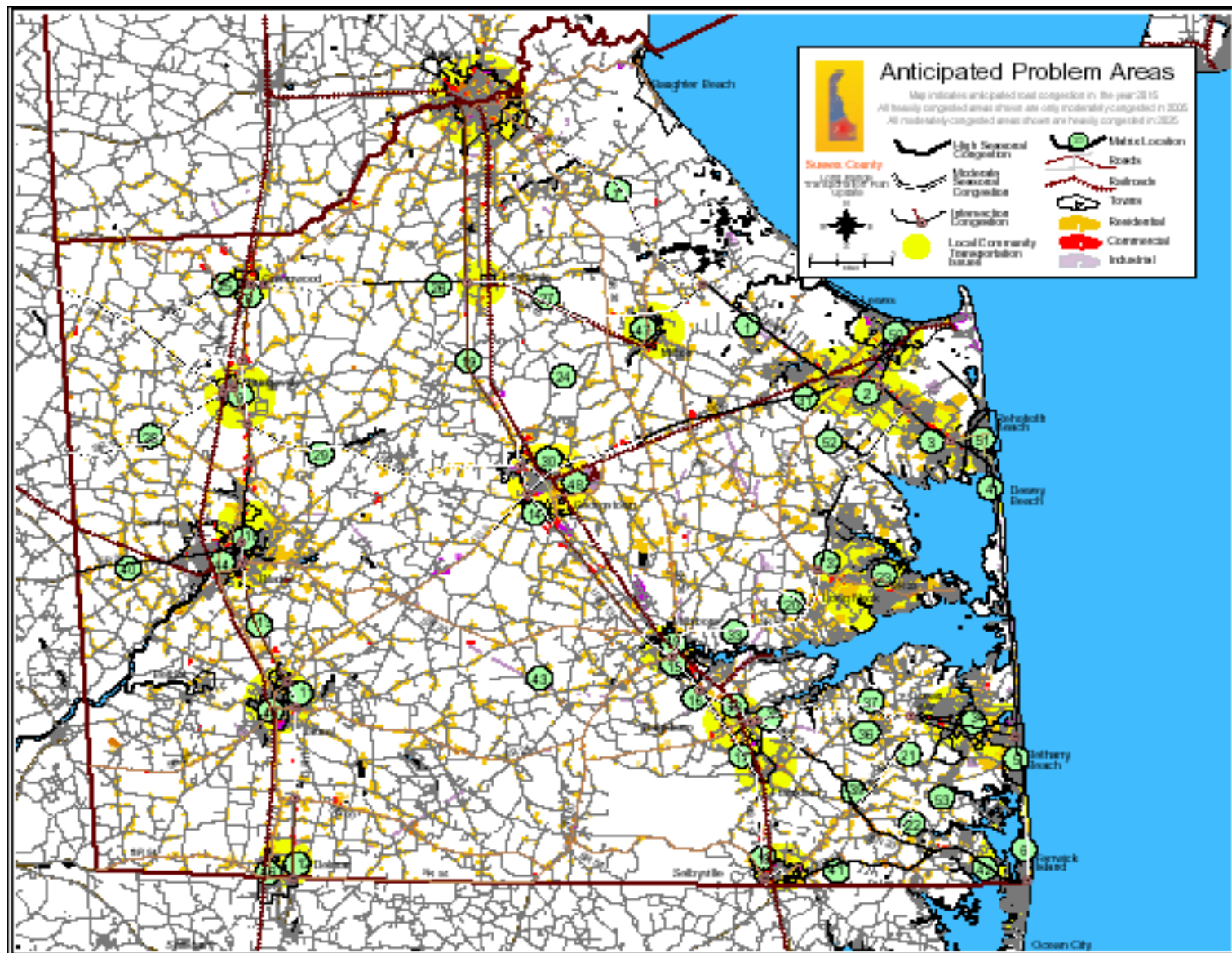




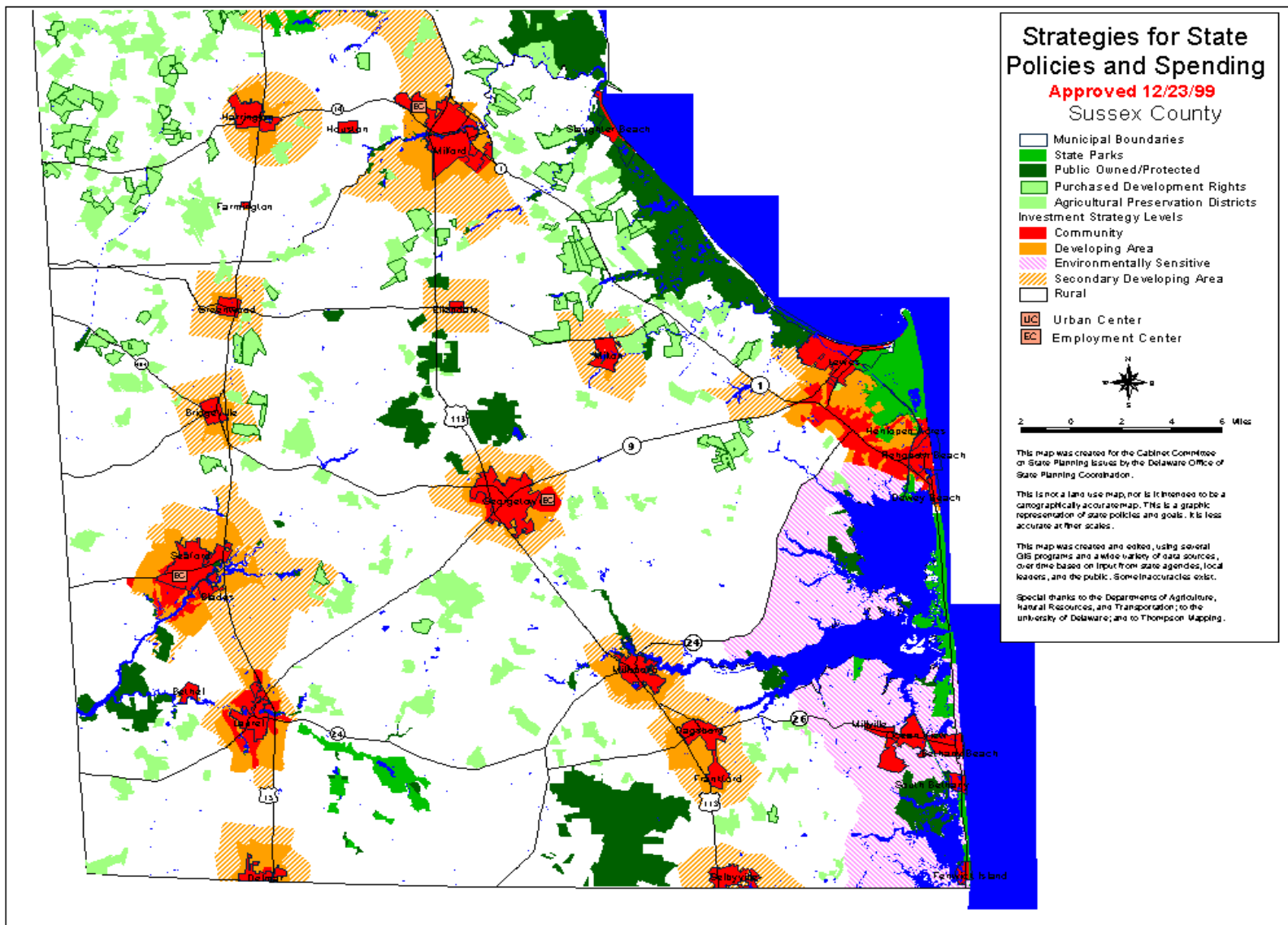
Three Existing Corridor Capacity Preservation Programs, Sussex Co.



Sussex County Capital Transportation Improvement Program



Statewide Long-Range Transportation Plan: Anticipated Problem Areas in 2015, Sussex County



Strategies for State Policies and Spending, Sussex County

Presentation Notes

Sussex County Workshop

DeIDOT's Subdivision Review Process

William Brockenbrough

Delaware Department of Transportation

Division of Planning

- I. How the Traffic Impact Study (TIS) process begins
 - A. In this case, the developer's engineer initiated it.
 - B. Other possible sources
 - 1. County or municipal government
 - 2. DeIDOT through Support Facilities Report, plan review comment, or Land Use Planning Act (LUPA) review
- II. Scoping Meeting—See memorandum dated 7/12/00
 - A. Purpose—To define the parameters of the study for the developer's engineer.
 - B. Who attends
 - 1. DeIDOT Staff
 - 2. Developer's Engineer
 - 3. Others who sometimes attend (Developer did attend. Local government staff did not.)
 - C. What is discussed
 - 1. Background
 - a. Identify the subject land.
 - b. Establish what is proposed.
 - c. Establish what approvals have been obtained and what approvals are still needed.
 - 2. Cases to be evaluated
 - a. This study evaluated the three that are a minimum (existing, no-build, build). Sometimes more are necessary.
 - b. Establishing buildout year—This study assumed 2005 for all intersections but also looked at 2020 for the intersections on Route 1. There is no firm rule.
 - c. When to count traffic
 - i. This study looked at the weekday a.m. and p.m. peak hours and also the summer Saturday midday peak. Examination of the summer Saturday midday peak is typical for the resort area, but we have begun looking at other peak hours as well.

- ii. Away from the resort area, summer counts generally are not required and the Saturday midday peak hour is of interest only for retail developments.
 - iii. This study counted from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m. on weekdays and from 9:00 a.m. to 6:00 p.m. on Saturdays, but the hours vary.
- 3. Facilities to be evaluated
 - a. We identified five existing intersections plus the site entrance.
 - b. Factors that might have prompted us to identify more would include the presence of a signal system, such as on Route 1 between Lewes and Rehoboth, or the existence of an Adequate Public Facilities Ordinance that mandated more.
 - c. We did not but could have identified roads that we wanted evaluated for geometric and other deficiencies.
- 4. Highway Capacity Software
 - a. There are several programs available, which produce similar but not identical results. We specify one called HCS, which we use as a standard.
 - b. HCS is revised periodically, so we also specify what version we are currently using.
- 5. Seasonal Adjustment Factors
 - a. Vary with month and type of road.
 - b. Their purpose is to change counts to annual average volumes.
 - c. Cannot be used in a TIS to estimate summer season counts from off-season counts. While reasonably accurate for volumes on a segment of road, they may not reflect seasonal changes in turning movement volumes.
- 6. Growth factors and committed developments
 - a. Two methods of projecting future traffic, this way or a network model. Network models are generally better for large-scale, long-term developments; sometimes used where major road improvements will change traffic in ways we cannot otherwise estimate. They are done by DelDOT staff.
 - b. Growth factors—Based primarily on past traffic growth but can be increased to account for committed developments where that impact is sufficiently simple.
 - c. Committed developments—Other development in the area that has already been approved and will almost certainly be present in the buildout year.

- 7. Transit, Bicycle, and Pedestrian Facilities—Only discussed in the TIS. No numerical analysis.
 - 8. General Notes—Updating Section 15 of Rules and Regulations.
- D. Sometimes there is no meeting—Where there is no need for a meeting, DelDOT will sometimes provide a scope of work by letter.
- III. Traffic Counts—These are the engineer's first submission after the scoping meeting.
 - A. Check for irregularities.
 - B. Develop growth factors or forecast volumes.
- IV. Preliminary TIS
 - A. Purpose: To establish agreement on the numbers that will be used in the final TIS.
 - B. Contents
 - 1. Project Description
 - 2. Study Area
 - 3. Existing Traffic
 - 4. Trip Generation—How much traffic in and out?
 - a. Institute of Transportation Engineers' Trip Generation report is the standard reference and was used here.
 - b. Other methods, where ITE is not usable, include counts at similar uses and estimates based on interviews with the proposed tenant.
 - 5. Trip distribution and assignment—Where will the traffic go?
 - a. Knowledge of area
 - b. Use of traffic counts
 - c. Network models
 - 6. Future Traffic with and without sites
- V. Final TIS—Preliminary TIS plus
 - A. Capacity Analysis
 - 1. These analyses yield levels of service (LOS).
 - 2. LOS is defined by the Transportation Research Board (a national body) and is used to describe a driver's satisfaction with a facility on a scale from A to F, somewhat like a report card. We design facilities using a 20-year forecast and trying to obtain LOS C, or in urban areas LOS D. For a TIS, we consider LOS D in the buildout year to be minimally acceptable.
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 - B. Recommendations

This TIS found LOS D or better except for on Route 1. For left turns from a minor street, we often accept a poor LOS at peak hours. Often the only way to remedy such a situation is to install a signal or build an interchange, with ramps and bridges. We cannot reasonably do these things at all locations where they would be needed to achieve LOS D or better. In this case, we have a plan for an interchange on Route 1 at Cave Neck Road, but have no scheduled date when we plan to build it. As an interim measure, we may prohibit left turns out of Cave Neck Road to avoid the need for a signal there.

C. Conclusions

VI. DeIDOT Review

- A. Rerun Capacity Analyses—In this study, there were no significant errors in the analyses.
- B. Verify that all infrastructure deficiencies were identified—In this study they were.
- C. Verify that all recommendations are sufficient and buildable.
- D. Recommend different or additional improvements as necessary—Bicycle and pedestrian issues were not identified in the TIS and still remained to be addressed.
- E. Review Comments—Because this project was a rezoning in Sussex County, the review was documented in a letter to Planning and Zoning. If the TIS had been required by DeIDOT apart from a local land use process, the review would have been documented in an internal memorandum. For example, DeIDOT's agreement with Sussex County does not address subdivisions that are done without a rezoning or a conditional use, but DeIDOT could still require a TIS for such a subdivision under its own regulations.

Presentation Notes

Sussex County Workshop

The Subdivision Review Process

Lawrence Lank, Director
Sussex County Division of Planning

I. The Subdivision Review Process

1. Applicant or agent meets informally with the Planning Department staff.
2. The applicant files an application form and support documents. The application is required to be filed for scheduling with the Planning and Zoning Commission.
3. Public notices for public hearings before the Planning and Zoning Commission are advertised in two local newspapers for at least 20 working days prior to the scheduled meeting of the Planning and Zoning Commission.
4. Applicant and Planning Department staff meet with the Technical Advisory Committee (TAC) for agency comments on the application (preliminary plan).
5. The Planning and Zoning Commission holds a public hearing and receives public comments and a report on the Technical Advisory Committee meeting. The Commission may recommend approval or approval with stipulations, deny, or defer an application for additional comments from agencies. All decisions are advertised in a local newspaper.
6. If the subdivision is approved, the preliminary plan is valid for one year. The applicant may submit final plans of the entire subdivision or a phase within one year of the preliminary approval.
7. The Commission will consider the final plans after receipt of all appropriate agency approvals and/or permits. All decisions are advertised in a local newspaper.
8. Once approved as a final plan, the applicant has 60 days to record the record plat.
9. Once recorded in the Office of the Recorder of Deeds in and for Sussex County, any major subdivision shall be rendered null and void if

substantial construction is not commenced thereon within five years of the date of recordation.

10. An applicant aggrieved by a decision of the Commission may request reconsideration of the decision, or the applicant may appeal the decision to the County Council within 60 days.

11. Further appeals by the applicant or opposition shall be filed with the Delaware Superior Court.

II. The Zoning Change and Conditional Use Process

1. Applicant or agent meets informally with the Planning Department staff.
2. Data request is sent to DelDOT for a traffic summary report.
3. DelDOT reviews data and responds within 20 working days. If response is positive, the applicant may proceed with preparation of an application. If DelDOT recommends a Traffic Impact Study, the applicant must contact DelDOT to establish data needed to satisfy DelDOT. If DelDOT is satisfied with the data collected, a revised response will be forwarded to the Planning Department.
4. The applicant files an application form and support documents.
5. An Ordinance is prepared by the Planning Department for introduction by the County Council.
6. Once introduced, public notices for public hearings before the Planning and Zoning Commission and the Sussex County Council are advertised in two local newspapers for at least 20 working days prior to a scheduled public hearing with the Planning and Zoning Commission. Copies of the public notices are sent to property owners within 200 feet of the sites, the school districts, the fire companies, and municipalities within one mile of the sites. Copies of the public notices, a site location data sheet, and a site location map are sent to DelDOT, DNREC, the Office of State Planning Coordination, the Bureau of Archaeology and Historic Preservation, the Sussex Conservation District, the Department of Agriculture, the County Engineering Department, and the Commission.
7. The Planning and Zoning Commission holds a public hearing. The Commission may recommend approval, denial, or defer an application. The Commission has 45 days to make recommendations on an application. All decisions are advertised in a local newspaper.

8. Typically, two calendar weeks later the County Council holds a public hearing. The County Council cannot make a decision on an application unless the Commission has made a recommendation or 45 days have passed. The County Council has no time limit to act on an application. All decisions are advertised in a local newspaper.
9. If a change of zoning is approved, the approved zoning category is then linked to that parcel of land.
10. If a Conditional Use is approved, the use shall be substantially underway within one year, or the applicant may request up to two time extensions of one year each.
11. An applicant or opposition may file an appeal of the Sussex County Council decision with the Delaware Court of Chancery.

Final Recommendations

Short-Term / High-Priority Recommendations:

1) Revise the Memorandums of Agreement in Kent and Sussex Counties.

The current Memorandums of Agreement (MOAs) between DelDOT and the Counties required by the Delaware Code (Title 9, Sections 2661, 4961, and 6961) only consider rezonings. During the workshop discussions, we learned that many other land use activities need coordination with transportation planning. It is recommended that DelDOT and the counties revise their MOAs to include details of the TIS review process for all land use activities, including rezonings, site plans, conditional uses and subdivisions. Each MOA should be consistent with the individual county's subdivision and development review process.

2) Develop Memorandums of Agreement with Delaware Municipalities.

Unlike the counties, not many Delaware municipalities currently have MOAs with the Delaware Department of Transportation. There are many instances, particularly with large developments, when MOAs would lead to better coordination. It is recommended that DelDOT pursue the development of MOAs with municipalities in both counties. The MOAs should include details of the TIS review process for all land use activities, including annexations, rezonings, site plans, and subdivisions. Each MOA should be consistent with the review process in the municipality.

3) Implement the “Request for Review” Process (LUPA Revision). The proposed revisions to the Land Use Planning Act (LUPA) process are intended to provide for a coordinated review of large projects (such as subdivisions) by State Agencies (including DelDOT). The goal will be to give relevant comments to the developers and the local jurisdictions at an early stage in the project so that any issues that arise can be addressed through the design process. This may, in fact, be the ideal venue to coordinate land use and transportation reviews and issues.

Intermediate-Term Recommendations

4) Enhance intergovernmental coordination between Counties and Municipalities. County and or municipal governments should strive to involve each other in the review of large projects. Joint review of projects that affect both jurisdictions and the state is desirable. Municipalities should consider developing intergovernmental coordination zones through their comprehensive plans. The “Request for Review” process may be an ideal venue to facilitate this coordination.

5) Sidewalks and Bike Lanes / Paths. DelDOT, the counties, and the municipalities should plan for pedestrian and bicycle networks well in advance of

development. In this way sidewalks and bike paths can be provided where they are needed to complete a defined network within and between individual subdivisions.

6) Explore methods to support towns that don't have the administrative capacity to review and participate in land use decision making. Towns without the resources to employ full time, trained staff are often unable to adequately respond to development proposals. Methods to help these communities should be explored. Some options which may be useful for these towns are “circuit rider planners” through the OSPC, hiring town engineer/planning consultants on retainer to review development proposals, relinquishing zoning authority to the county, and counties providing review services to towns, especially in large projects likely to affect both jurisdictions.

7) Assist towns in developing model ordinances and procedures. Some small towns do not have up-to-date and consistent subdivision ordinances or review procedures. This puts them at a serious disadvantage when faced with large subdivision proposals. The Office of State Planning Coordination, in conjunction with the University of Delaware Institute for Public Administration, should continue their work assisting towns to update their ordinances and procedures. Specifically, model zoning ordinances, subdivision ordinances, and review procedures that can be applicable in a number of towns could be developed.

Longer-Term Recommendations

8) Area Planning. Encourage counties and municipalities to do more detailed sub-area plans for areas that are designated in comprehensive plans for residential or other urban development. DeIDOT can and should be included in this planning process. These sub-area plans could anticipate the future residential densities enabled by the comp plan, and seek to address the cumulative impacts of traffic and other utility, service, and natural-resource protection needs.

9) School Site Planning. The location of new schools has a significant impact on transportation planning and other land use activities. Schools often bring with them the need for road and other utility improvements that can and do influence residential and other urban development. DeIDOT and the OSPC should work with the school districts and the DOE to develop guidelines for school planning in areas experiencing population growth. Districts should consider the school’s location, transportation and infrastructure needs, and influence on surrounding land uses when selecting new school sites.

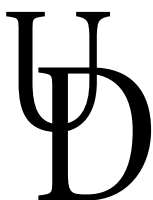


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