**Central York County Connections Study**

**Advisory Committee Meeting**

**August 8, 2012 11:00 AM – 2:00 PM**

**York County Community College**

*In attendance*: Ken Creed, YCCAP; Diane Robbins, Arundel; Geoff Titherington, Sanford; Tom Reinauer, SMRPC; Donna DerKinderen, Arundel; Don Gobeil, KKW Water District; Don Allen, Wells Regional Transportation Center; Stephen Rolle, Parsons Brinkerhoff; Sara Devlin, Maine Turnpike Authority; Gerry Audibert, MDOT; Tom Errico, TY Lin; Carol Morris and Scott Hastings, Morris Communications.

The meeting began at 11:10 am.

Carol opened the meeting by welcoming everyone, and went over the agenda. She noted that the meeting would focus on the local strategies developed at the conceptual level for the study area. She explained that there was no PowerPoint presentation, but that attendees should refer to their pre-meeting materials as Steve reviewed the conceptual strategies one by one.

***Steve then presented the following conceptual strategies for the Biddeford Interchange Area***

**Implement adaptive traffic control on Route 111**

Adaptive traffic control (ATC) involves state-of-the art, computer controlled operation of traffic signal timing. ATC allows traffic signals to monitor traffic conditions in real time and adjust traffic signal timing instantaneously. Each signal is operated considering the local traffic conditions as well as conditions and signal operations at upstream and downstream intersections. Upgrading to ATC would require addition of video traffic detection, upgrading traffic signal controllers, interconnecting signals along the Route 111 corridor, and developing and testing signal-timing parameters.

ATC is recommended on the Route 111 segment extending from the western Biddeford Crossing entrance to the Shaw’s supermarket entrance east of Exit 32, Precourt Street (five signalized intersections over a nearly-mile long segment). Should this initial implementation prove successful, ATP could be extended to the east toward Route 1.

* *Benefits*: Maximize operating efficiency of existing highway capacity, reduce travel delay/congestion, reduces stops at signalized intersections. Some ATP systems can also positively affect intersection safety by extending green time to avoid changing from green to yellow when a vehicle is entering the intersection.
* *Cost:* Approximately $250,000 to $500,000 for upgrading five intersections (assumes existing signals retained with controller and detection upgrades).
* *Natural and physical resources potentially impacted:* No adverse impacts expected.
* *Implementation timeframe*: Near- to mid-term. Could be implemented as a test corridor to study effectiveness and gauge potential for implementation elsewhere in Maine.

Diane Robbins: How far did you go on Route 111?

Steve: We went to the Biddeford Crossing intersection and proposed the Home Depot and Wal-Mart intersections, the Interchange at Exit 32 as well as the Shaw’s intersection. We suggested those five but in the future you could look at expanding eastward. We are still finalizing this with MTA and MaineDOT so this is not a final list but it is where we sit today and it is pretty close.

Carol: If you have any issues let us know, as we will incorporate that into the Public Meeting presentation.

**Biddeford Route 111 to Exit 32 interchange connector**

*Steve presents graphics showing Partial Exit 32 Connection (southbound off only) and Full Exit 32 Connection (southbound off, northbound and southbound on)*

Steve: Expand the Exit 32 interchange and construct a new connecting highway north of Route 111 to allow traffic destined for Sanford, Alfred, Lyman and other points north/west of I-95 to avoid the Route 111/Precourt intersection.

Two options have been identified. A Partial Exit 32 Connection would involve construction of the new highway corridor north of Route 111 in the Biddeford Crossing area and a connection from the SB off ramp only. A second option – Full Exit 32 Connection – would reconfigure the interchange to include access from the new connecting highway to the southbound onramp and northbound onramp as well. This second option may not be feasible unless MTA toll collection systems evolve to not require tollbooths at ramps (e.g. – all electronic tolling or mainline only tolling). The options could potentially be phased (partial implemented initially, and the full connection at a later time).

Under either option, the southbound channelization from Exit 32 could be modified to allow two dedicated left turn lanes, two through lanes, and a single right turn lane, since either option would divert much of the former right-turning traffic to the new connector roadway.

* *Benefits*: Reduce delay and congestion on Route 111 at Precourt (details below). Additional circulation in the Biddeford Crossing area. Possibly opens new development opportunities (depending on access controls and zoning).
	+ Partial Connection (potentially first phase of a Full Connection):
		- Daily traffic: Traffic on Route 111 reduced by about 14 percent (Biddeford Crossing to Precourt St/Exit 32).
		- AM Peak: Minor improvement in delay for traffic exiting the Turnpike during the AM Peak, but other traffic movements not improved.
		- PM Peak: Reduces delay at the Rte 111/Precourt intersection by 12 percent during the PM Peak. All intersection movements improved to LOS D or better (three LOS E movements for the baseline), and intersection to LOS C (from LOS D baseline).

Carol: Will this be limited access?

Steve: That would have to be determined by MaineDOT and MTA. The first section would be limited access. From the first intersection west, that is open to discussion.

Donna DerKinderen: Will there be a need for an additional traffic light?

Steve: The first option might not necessitate a traffic signal. The second option would need one, as there is traffic moving in both directions along that road.

Gerry: These ideas are conceptual. If they move forward we would have to talk about benefits and cost as well as a specific alignment study. We are aware of the environmental concerns in that area as well. This is a very broad first look, so the details would have to be looked at very closely if any of these moved forward.

Donna: In the 2002 study, one recommendation that was made was to increase the number of lanes on Route 111 in this area.

Steve: Some of those recommendations have been implemented, such as adding lanes on Route 111 through Biddeford Crossing. Triple left turn lanes are not very efficient and we felt from a capacity standpoint the corridor is already built out to capacity along this stretch as there are numerous different movements happening here.

Gerry: I agree, the incremental benefits compared to the impacts would not pass a cost-benefit analysis.

Steve: We were concerned with the intersection in front of Biddeford Crossing and what would happen with capacity if we didn’t have the final leg that meets Route 111 near Andrews Road, so that will be something that will continue to need to be looked at in more detail if it moves forward for further consideration. The next option is the full connection option.

* + Full Connection (potential second phase):
		- Daily traffic: Traffic on Route 111 reduced by about 28 percent (Biddeford Crossing to Precourt St/Exit 32).
		- AM Peak: Reduces delay at the Rte 111/Precourt intersection by 28 percent during the PM Peak. All intersection movements improved to LOS D or better (westbound through-movements are LOS F for the baseline), and intersection to LOS C (from LOS D baseline).
		- PM Peak: Additional 10 percent reduction in delay at Rte 111/Precourt intersection during the PM Peak.
* Impacts (Applies both to Partial and Full Connection)
	+ - *Cost*: Approximately $8 to $10 million, depending on alignment.
		- *Natural and physical resources potentially impacted:* Would impact undeveloped lands between Route 111 and existing utility corridor to the north. Would impact residential property on north side of Route 111 at the western entrance to the shops at Biddeford Crossing if a connection were provided at that location, as shown on concept sketches.
		- *Implementation timeframe*: Long-term. Adaptive signal control should be implemented first as a lower-cost method of managing traffic on the Route 111 corridor approaching Exit 32. Additionally, improvements in toll collection may reduce tollbooth-induced congestion and lessen the need for capacity improvements such as these. The Full Exit 32 Connections option may be infeasible as long as manual toll collection is needed at this interchange.

Tom Errico: There is a bit of a grade where that new intersection with Route 111 would be, so there is some concern with sight distance issues; we may have to re-grade Route 111.

Carol: When you get over that hill and you get around to the Agway, it can be dangerous as speed increases.

Diane: A light there would be dangerous in the winter as well as people would have to stop there and it would be very slippery. What about changes in tolls?

Steve: This option would need either electronic tolling, or another tollbooth.

Tom Reinauer: Does MTA have any plan for the Exit 32 interchange?

Sara Devlin: There is nothing in our 30-year plan for that interchange. If the bridge needed rehabilitation or some other infrastructure had a pressing need, we would try to bring the interchange up to that standard but there are no plans for that currently in our 30-year plan.

Donna: Could the Andrews Road problem be eliminated if you made the main exit and entry at the Biddeford Crossing?

Steve: We felt that would create a capacity problem at that intersection.

Tom Errico: That would just shift the problem from the current intersection to the new intersection at Biddeford Crossing.

Diane: A lot of people turn into the businesses along Route 111 even during the peak times. So even if you were bringing the traffic out at Biddeford Crossing, you would remove a lot of traffic on the existing stretch of Route 111.

Gerry: These are all good points. We aren’t quite at that level of detail. We would look at this in more detail after this study and that will have its own public process. We would have to look at how to avoid environmentally sensitive areas. There would be a very detailed look at this if it were to move forward.

Steve: We will capture your ideas today in the meeting report, but this conceptual level is as far as we will carry these ideas in this study. So do you folks think these have potential?

*The Advisory Committee felt that the Connector Concepts have potential*

Tom Reinauer: What about phasing it in so it would be more feasible?

Gerry: From a MaineDOT perspective, funding is going to be a challenge, so the more doable would be the first option, which is signal control (ATC).

Diane: Signal timing should be looked at along that stretch of Route 111, as that is one of the biggest issues.

Steve: That is exactly what an Adaptive Traffic Control (ATC) system is designed to do, reduce the number of stops.

Diane Robbins: If the money is not there you should approach Biddeford and get them to coordinate the lights better.

**Adjust signage westbound Route 111 approaching Precourt/I-95 exit 32**

*Steve presented a graphic of Route 111 Signage Plan*

Steve: To help drivers select the appropriate lane while approaching the entrance to the Maine Turnpike at exit 32, add additional signing designating the left lane for Turnpike and Park-and-Ride traffic, and the right lane for Biddeford/Rte 111 traffic. Signs to clarify that the Turnpike entrance is the second left, after the Biddeford park-and-ride, are recommended too.

* Benefits: Reduce driver confusion; potentially reduce collisions approaching Precourt Street.
* Cost: Approximately Under $25,000, unless additional overhead sign supports needed.
* Natural and physical resources potentially impacted: No adverse impacts.
* Implementation timeframe: Near-term.

Diane: There is an issue with the lane that changes into a turning lane for Wal-Mart. Once you start traveling up that bridge on Route 111 in that lane, if you are trying to travel straight through, you get stuck.

Steve: Thanks; we will take a look at that.

Tom Reinauer: Have you looked at adding signage in the other direction? During high traffic times there is a conflict on Route 111 west toward Biddeford Crossing. Everyone stays in the left lane and the right lane that is for through traffic gets underutilized.

Steve: Yes additional signage may help there.

**Other signage improvements**

Add speed limit signs on Route 111 following intersections with major crossroads (where missing). Verify locations where icing occurs and add MUTDC W8-5 with W8-5aP (“Ice”) signs.

* *Benefits*: Improve driver awareness of conditions.
* Cost: Minimal.
* Natural and physical resources potentially impacted: No adverse impacts.
* Implementation timeframe: Near-term.

***Steve presented the following conceptual strategies for* Other Biddeford Area Actions**

**Recommended city-led actions**

Develop additional local roadways connecting Route 111 to Route 1 to improve local circulation and access, and reduce traffic at key highway intersections (concept map under development). Corridor development would be a city-led action; the links shown are suggestions for further consideration by the City. They include:

* Connect W Cole Road to Cole Road (requires grade separated crossing of railroad track).
* Realign Edwards Road to avoid St. Demetrius Cemetery and extend to connect to Route 1 or Precourt Street.
* Connect Mountain Road with Medical Center Drive
* Extend Mariner Way (Biddeford Crossing) to Old Alfred Road
* Connect Old Alfred Road/Mountain Road to Route 1
* Access management approaches (see Access Management section of final report for options).

Carol: Did we look at connecting anything off of Route 111 onto South Street?

Steve: We haven’t looked at that but we can look at that on the local concept map.

Carol: We know about Biddeford’s desire to have more direct access to the downtown and the High School.

Donna: What about entering and exiting I-95 on South Street?

Steve: The interchange spacing is an issue as well as the fact that there is a river there.

Donna: What if it was only an exit ramp?

Tom Errico: There is a little bit of a grade issue between the river and South Street.

Sara: The problem with that is that MTA will generate no extra revenue for that so the extra cost to build that would be a tough sell. You also have to look at the proximity between interchanges as the closer they are the more safety infrastructure is needed and that makes this even more costly.

Tom Errico: What about a parallel road to the turnpike going north on the west side of the highway to South Street? We would have to look at that in much greater detail to understand if it would work but it might be worth looking at.

Steve: There are a lot of potential environmental issues there as well.

Donna: The parallel road idea doesn’t have to necessarily be another road; it could be another lane on the highway that is separated by a barrier. That would create a back road that could connect South Street all the way to the interchange and connect it with the earlier suggested road behind Home Depot.

Sara Devlin: This area of the Turnpike may need to be widened over the next 25 years so we would have to account for that possibility.

***Steve presented the following conceptual strategies for Route 111/202 Corridor (Biddeford – Sanford)***

**Passing Lanes**

Traffic volumes on the Route 111 corridor are highest to the east in Arundel and Biddeford. In Arundel, the two-lane highway section operates at LOS E conditions in the peak direction of travel during the PM peak period today (westbound), while all other two-lane segments operate at LOS D. By 2035, both directions in Arundel and westbound traffic in Lyman, Alfred and Sanford are projected to degrade to LOS E conditions. The poor level of service is largely driven by lack of passing opportunities during peak periods. Passing lanes provide opportunities to pass slower moving traffic and could maintain LOS C/D conditions through 2035 on the corridor.

A total of two passing lane segments are recommended in each direction. Preferred passing lane locations have relatively few driveways and cross streets (especially those requiring left turns) and are a minimum of 1/2-mile in length. As practical, they should be located exiting from built up areas or speed zones. Recommended locations on the Route 111 corridor are:

* Westbound starting at Route 35 (Lyman) and extending 1-mile to east of Kennebunk Pond Rd (currently programmed for construction).
* Westbound New Rd (Arundel) to Drew’s Mill Rd (0.5 miles), as recommended in the prior Route 111 study.
* Eastbound EITHER starting at Howitt Road (Lyman) and extending 1-mile east to beyond Boulder Lane, OR starting near Down/Clark/Blueberry Lane (Alfred) and extending 1-mile east to near Graves Road (Lyman), as recommended in the prior Route 111 study.
* Eastbound from Route 35 extending 1-mile to near Thompson/Trout Brook Road, as recommended in the prior Route 111 study.

Should any of the segments between Route 35 and Biddeford prove infeasible in the future, other potential viable passing lane options are:

* Thompson/Trout Brook Road to Hill Road.
* Hill Rd to Limerick Road.
* Limerick Rd to New Road.

While full shoulders (8 feet) do not need to be provided in the direction of the passing lane, adequate paved shoulders should be maintained for safety purposes and to allow for bicycle use. Five-foot minimum shoulders are therefore recommended adjacent to passing lanes.

* Benefits: Allows traffic to pass slower moving vehicles, reduced delay and improved travel reliability; improved peak level of service to LOS C/D (from projected LOS E in 2035); reduces incidence of head-on collisions.
* Costs and impacts: Approximately $2.2 million per mile.
* Natural and physical resources potentially impacted: Could be accommodated within existing right-of-way, but may require modification of access at some locations (e.g. driveway relocations or adjustments).
* Implementation timeframe: Near to mid-term. Segments east of Route 35 are the most congested are merit initial consideration.

Donna: There is a development planned near Ledge Cliff Drive with the same entrance but will generate more trips. There is going to be commercial and residential uses.

Steve: If there were a lot of left turns we would have to look at a turn lane.

Tom Reinauer: There have been conversations about purchasing easements and some where looked at or purchased in conjunction with where passing lanes would be. Can you check on that?

Steve: Yes, thanks, I will check with Uri about that.

Gerry: As a low-cost first step, the recommendation would be to purchase the land.

Donna: From Drew’s Mills Road to Limerick Road, there is a nasty turn by the pond. You also have an incline and this is an icy spot, so it would not be a good place for a passing lane. Kate’s Butter is building a plant there as well. A better spot is from New Road to Drew’s Mills Road.

Steve: That is the primary recommendation.

Donna: The two lanes coming from Biddeford should be extended as a two-lane road for a while into Arundel.

Steve: If the new intersection were to move forward we would look at extending that in more detail. My guess is that the lane ends where it does based on sight distance issues.

Donna: Not too far down the road, the New Road and Day Road intersection is there and is being worked on in the future. There is going to be development in that area as well. Having that section of the road expanded is worth looking at.

**Center and Edge-Line Rumble Strips on Route 111/202**

Steve: Route 111/202 has the highest rate of head-on crashes of major highways within the CYCCS study area, and a relatively high rate of run off the road crashes as well. Add rumble strips on Route 111/Route 202 corridor at the center line (double yellow line locations only) and edge line. Edge lines should be located under the painted edge line, or immediately adjacent to preserve shoulder width for use by bicyclists. Rumble strips should be avoided in more densely populated areas, and are not recommended where the posted speed is 35 mph or under.

* Benefits: Reduces incidence of head-on collisions (center rumble strip) and run off the road crashes or crashes related to over-correction (edge line).
* Cost: Minimal cost.
* Natural and physical resources potentially impacted: Increased noise for abutters when vehicles cross center or edge line, which can be minimized by temporarily interrupting rumble strips in front of residential properties that are located near the roadway and in more densely developed areas.
* Implementation timeframe: Near-term (with next scheduled line painting maintenance).

Donna: In terms of rumble strips, I do not think they should be in areas where there are houses as they are loud.

Steve: MaineDOT would have to develop a protocol on how to decide where to put rumble strips and that would probably be worth documenting in the study report. There doesn’t necessarily have to be a continuous rumble strip.

Gerry: That is something that we would need to look into.

Diane: People tend to hug the white line on Route 111. I don’t want to listen to the rumble strips.

Gerry: I understand, rumble strips appear to work and they are relatively low cost.

Don Allen: If you get complaints will you remove the rumble strips?

Gerry: We don’t like to remove workable infrastructure once we install it.

Donna: Will there be an opportunity for public input on locations of rumble strips?

Gerry: Yes, we are presenting these alternatives to you for feedback and then we will go to the public for more specific feedback. We will then go back and do cost-benefit and after all of that work we will come back with the draft report, and then we will take public comment on the draft report. Then we will come out with the final report. If we were to put in rumble strips we would have a public meeting with a public notice in the paper and work with the town and that would be separate from this study effort.

Carol: If this is in the recommendations, we suggest you speak with your town and find out what the process will be so you can be alerted.

Steve: Another option is edge-line rumble strips; the problem is that bicyclists don’t like those.

**Reconstruct Route 202 near Goodall Hospital**

The existing crest on Route 202 at the entrance to the Goodall Hospital impacts sight distance for westbound vehicles turning into or existing the hospital. This is compounded by the lack of a left turn pocket, which means turning traffic must slow or come to a stop in the through travel lane.

Reconstruction of the roadway to create a left turn pocket and minor regrading of the vertical profile to improve sight distance and separate turning traffic is recommended. The two existing driveways should be consolidated to a single driveway, with the easternmost entrance closed or restricted to right-turn in/out only. Additional access is provided to June Street. A walkway is recommended on the south side of the highway bordering the hospital property.

* Benefits: Reduce potential for crashes at the Goodall Hospital; improve access to the hospital, extend pedestrian network.
* Costs and impacts: TBD.
* Natural and physical resources potentially impacted: Some grading may affect undeveloped areas of adjacent parcels. The walkway may require some undeveloped hospital property bordering the roadway.
* Implementation timeframe: Longer-term. This is a lower priority improvement, as the location is not a current high crash location. This improvement could be deferred until major maintenance/reconstruction of the roadway is needed.

Tom Errico: There are some improvements that the town of Sanford is looking at with the entrance and exits of Goodall.

**Reconstruct Route 202 between Brook Street and River Street**

Steve: This segment of US Route 202 is a narrow, downhill stretch of two-lane highway entering central Sanford. Sidewalks are poorly defined and utility poles are located on the edge of the south side of the roadway (in front of the sidewalk). The right-of-way is constrained to 40 feet here, and abutting houses are located close to the roadway.

(Option 1) Per applicable standards, the current 40-foot right-of-way allows for five foot wide sidewalks directly abutting the highway, with two eleven foot travel lanes and four foot shoulders. Further narrowing is not recommended due to truck use of the corridor, the grade, and to allow space for bicyclists. In either case, raised curbs would provide better separation of pedestrians and traffic. Utilities should be relocated underground (preferred) or on the sidewalk (maintaining a minimum four-foot clear walk zone). This approach would not allow for the introduction of landscaping or street trees, though decorative period street lighting and other hardscaping such as colored crosswalks at River Street and Brook Street could potentially be incorporated into the design.

(Option 2) Introducing street trees or other landscaping here would help establish a gateway into town and better buffer both pedestrians and adjacent residences from the highway. However, a right-of-way acquisition of six additional feet would be necessary to provide space needed to establish a planting strip between the sidewalk and roadway. While adjacent dwellings would not be directly impacted, a three-foot taking on either side of the roadway would further reduce front yard sizes and necessitate reconstructing a number of private retaining walls. The resulting 46-foot right-of-way would allow this segment to be reconfigured as a gateway to the town, with the following elements:

* Two 15-foot travel lanes (same as existing)
* 8-foot sidewalk/planting strip on each side of the roadway. The increased width would better separate pedestrians from traffic, create a more visually appealing gateway, and allow for plantings that would have a traffic calming effect. Street trees could be introduced in four-foot wide tree wells, or a continuous four-foot wide planting strip.
* Utility poles should be located in line with the landscaping strip, or (preferable) located underground for this segment. If above ground wires are maintained, street tree selection should be limited to shorter, decorative varieties.
* Benefits: Improved definition of vehicle, bicycle (shoulder) and pedestrian (sidewalk) space. Removal of obstructions from the edge of the roadway. Improved separation of travel way and sidewalk, especially under Option 2. Landscaping under Option 2 would further provide some traffic calming effect and improved visual appearance, forming an eastern gateway to town.
* Costs: TBD.
* Natural and physical resources potentially impacted: Option 1 would be constructed within the existing right-of-way. Utility connections to abutting properties would need to be relocated if utilities are placed underground. Option 2 would require acquisition of 3 feet of right-of-way from front yards of abutting properties. Several yards have short retaining walls that would need to be replaced or modified.
* Implementation timeframe: Mid- to Longer-term. Potential candidate for grant funded programs. Should be coordinated with Route 202/River Street intersection improvements.

Gerry: The poles are in the MaineDOT right of way. If we were to widen the road, they would have to relocate the polls. This would be a good project to try and get a grant for, though burying the wires would not be inexpensive.

Diane: This would need to be maintained by the town as well.

Gerry: There are also historically eligible houses along Route 202.

**Reconstruct Route 202/River Street intersection**

Steve: Widen the intersection to create left turn pockets on Route 202 at the intersection. Ensure safe pedestrian crossings are included in the intersection improvements.

* Benefits: Increased capacity at Route 202/River Street. Reduced potential for crashes on US Route 202 due to separation of left turning traffic.
* Costs: TBD
* Natural and physical resources potentially impacted: Would require 52-foot right-of-way, likely requiring the taking of the property on the northeast corner of the intersection and undeveloped land on the northwest corner. Based on aerial photography, a two to four foot strip of property would be needed to the northwest, while a wider 12-foot strip would be needed to the northeast (taking the existing three story building). The historic eligibility of the northeast property (currently vacant) will be investigated.
* Implementation timeframe: Medium-term to long-term. This is a moderate priority improvement, but the potential right-of-way needed on the northwest property should be preserved should abutting properties redevelop (approximately 2 feet needed on the northwest side, and up to 12 feet on the northeast side).

**Reconstruct Route 202/Route 109 intersection in downtown Sanford**

Widen and realign US Route 202 to improve intersection alignment and add an eastbound left turn pocket. Also add a narrow center island on the south leg of Route 109 to enforce right-in/right-out turns at Twombley Road. Provide well-marked, safe pedestrian crossings through the intersection.

* Benefits: Reduced congestion and LOS improved from LOS D to LOS C. Two AM peak and three PM peak LOS E movements improved to LOS D or better. Reduced potential for crashes on US Route 202 due to separation of left turning traffic. Reduced incidence of collisions on Route 109 near Twombley Road (current high crash location).
* Costs: Approximately $1.1 million
* Natural and physical resources potentially impacted: Would require acquisition of right of way to the south of Route 202 (currently a vacant restaurant and parking) and elimination of on street parking in front of the church at the northwest corner of the intersection.
* Implementation timeframe: Near- to Mid-term. This is a moderate priority improvement. Property should be acquired while undeveloped/unused.

Geoff Titherington: They just put a Walgreens in at that intersection and they allowed a left hand turn out off that road towards the intersection and that causes problems.

Tom Errico: That is a messy intersection and even with improvements it will continue to be a messy intersection. The town has struggled with this intersection and they have spent a lot of time and effort thinking about how to improve it. It is a very difficult intersection.

Geoff: It does work most of the time, though it appears to be a scary intersection. If the phasing was more effective it would be better.

Steve: As a whole, that intersection works alright, it’s just a few specific turning movements that are problematic.

Tom Reinauer: Would there be dedicated phasing for the left turn?

Tom Errico: At that location we could continue the permissive phasing with some protection. We would have to look at that more closely. You generally get more capacity with permissive phasing, but there tends to be more safety issues. That’s the tradeoff.

Tom Reinaur: The blinking yellow arrow may help slightly, though it won’t fix the problem.

**Spot safety improvements at Rte 111/Day Rd/Kennebunk Pond Road (Lyman)**

Steve: Install curbing/landscape to formalize access to developed property on the northwest corner of the intersection, creating one driveway on Kennebunk Pond Rd, and one on Route 111. Clear vegetation in the right-of-way to improve sight lines. Relocate the stop sign on Kennebunk Pond Road from the utility pole to a freestanding sign. Install “stop ahead” signs on cross street (MUTCD WB-3) or (preferred) a flashing beacon at the intersection (red for side streets, yellow for Route 111).

* Benefits: Reduced potential for crashes at this current High Crash Location.
* Cost: Approximately $50k.
* Natural and physical resources potentially impacted: None.
* Implementation timeframe: Near-term.

Tom Reinauer: There are “jughandles” in Vermont that might work there. They are not supposed to be used as a U-Turn.

Steve: Those are typically used in an area with heavy turning movements. A light is not warranted by traffic volumes but maybe a flashing light would be.

Diane: If people are not familiar with the roads, they get into accidents because it is very dark in this area.

**Improve and formalize U-turn at Rte 111/Rte 35 intersection (Lyman)**

Steve: An informal U-turn space has been constructed for eastbound traffic that wishes to reverse direction east of Route 35. U-turns are currently prohibited at the intersection itself, and traffic exiting adjacent developments is restricted to right-out exit maneuvers today.

Ideally, backage roads or side streets would provide the necessary additional access to accommodate these movements. Establishment of a local roadway bordering the rear of existing developments would provide this access and open additional land near the highway to development.

Short of constructing a new local road(s), modification of the existing informal U-turn is recommended. This would shift the eastbound travel lane to the right to maintain sufficient width for a left turn lane, and reconfiguring the center island to extend the existing left turn pocket. The paved receiving area on the north side of the roadway is limited in depth by the highway right-of-way, but could be widened to 125 feet long to provide more turn around space for vehicles (currently 75 feet). A sign prohibiting trucks from using the U-turn should be considered.

* Benefits: Improves access from adjacent properties. Reduced potential for crashes compared to existing configuration.
* Cost: Approximately $50,000 to $75,000 to formalize the U-turn route.
* Natural and physical resources potentially impacted: None.
* Implementation timeframe: Near-term.

Geoff: Who would pay for that? The only reason people make that turn is to go to Dunkin Donuts.

Steve: The developer would have to pay for this.

Diane: This intersection does not work any better than before it was done. At Biddeford Crossing you can pull across four lanes through the median strips, yet at Jackson’s Corner you can’t. That doesn’t make sense to me.

Steve: The crash rate is lower than it used to be at this location. It is the signal that makes the island necessary, as there will be traffic stacked up in the turn lane.

Gerry: This is a classic situation where developers and towns negotiate infrastructure and it generally does not turn into a situation where either side is happy with the outcome. The solution would be shared access with other businesses but that is not something that the other businesses are interested in, understandably.

***Steve presented the following conceptual strategies for Other Sanford Area Recommendations***

**Rehabilitation and shoulder widening on Route 11A and Route 224**

Steve: Routes 11A and 224 are supplemental highway connections linking Route 202 with Routes 11/109 in Springvale, allowing traffic traveling north to bypass downtown Sanford. Average daily traffic on Rte 11A (Oak St) is about 2500 vehicles. Route 11A has unpaved shoulders, and travel lanes vary between 10 and 11 feet in width. As the highway enters Springvale near Whipple Street, the cross section widens and incorporates sidewalks.

Route 224 carries between 6,600 to 8,800 vehicles daily. Route 224 typically has unpaved shoulders, although some 4-foot shoulder sections are present. Travel lanes on Route 224 are typically 11 feet. Sidewalks are provided north of Railroad Avenue into Springvale.

Maintenance of these routes should be given high priority given the potential for these routes to relieve and supplement Route 202. Repaving/rehabilitating pavement on these highways should include widening travel lanes to 11 feet minimum (12 feet preferred), and shoulder paving is recommended (four-foot minimum). The Route 224 intersection with River Street/Carl Lamb Elementary School should be improved to reduce the current skew of River St and provide pedestrian crosswalks. Sidewalks should be provided north to Railroad Avenue.

* Benefits: Improved accommodation of traffic. Improved safety. Shoulders provide space for bicycle use.
* Cost: TBD
* Natural and physical resources potentially impacted: Work to be conducted in right-of-way.
* Implementation timeframe: Near- to medium-term. Pedestrian aspects may be eligible for Safe Routes to Schools funding programs.

Tom Reinaur: A large section of Route 224 is slated for reconstruction from Railroad Avenue to Route 202. It is being looked at through the municipal partnership program. From the Urban Compact to Route 202 is a MaineDOT project.

Diane: There are issues with ATVs on the side of the road on Route 224. Parking on Route 224 is an issue for the soccer field as well by Shaw’s Mill Road.

Tom Reinaur: Howard Street to Hanson Ridge Road is in poor shape as well and part of it (the intersection) is slated to be reconstructed as a MaineDOT safety project, and part of that is a town project as well.

Steve: The connection that we had talked about regarding a Sanford bypass through Mount Hope Road was something that was not very successful so we did not carry it forward. There was not enough demand.

**Town-led actions**

* Widen shoulders on Old Mill (1800 AADT)/Mt Hope Road (3700 AADT). Similar to Route 11A and Route 224, this corridor provides a supplemental route for trips between Route 202 (west of Sanford) and the 109 corridor in South Sanford. The demand for this movement is fairly low, which is reflected in the existing traffic volumes (1,800 to 3,700 vehicles daily, depending on location). Mt Hope Road has a High Crash Location segment east of its intersection with Route 202. These roads were recently repaved. Nonetheless, expanding the existing cross section (generally 20 feet) to provide 11-foot minimum lanes with 4-foot shoulders (30 foot cross section) is recommended over the longer-term. Additionally, the intersections of these roads with Twombley Road should be realigned to create a four-way intersection.
* Develop local grid (Concept map under development). As described below, the capacity of Route 109 though downtown is constrained by existing development. Therefore, further development of the local street grid is needed to provide additional route choices for local circulation and traffic relief for the Route 109 corridor. Corridor development would be a town-led action; the links shown are suggestions for further consideration by the town. They include:
	+ New road linking Jagger Mill Rd to Route 109 at Old Mill Road, possibly extending to School Street.
	+ New road linking Route 109/Old Mill Rd to School Street and possibly High Street (access to Route 4).
	+ Other new streets parallel to Route 109.
	+ Emphasize River Street for access to Route 202 eastbound and eastern areas of the town.

***Steve presented the following conceptual strategies for Route 109 Corridor (Sanford-Wells)***

**Plan for ultimate Cross Sections of Route 109 in Sanford**

Two/Three lanes between Downtown Sanford and Old Mill Road

North of Old Mill Road, existing development essentially constrains the highway to a 2-lane cross section, with turn lanes provided at some intersections. Sufficient space exists to add additional turn lanes as needed; either at intersections or major driveway entrances. Where left turn lanes are not needed, raised medians could be established at crosswalk locations to provide pedestrians with safe refuge when crossing the highway. Candidate locations include Route 109 intersections with Park St/Jackson St, Avon St/Berwick Rd, Schuler St, or other intersection locations where new crosswalks are merited.

Five lanes between Old Mill Road and Route 4

Old Mill Road and Westview Drive: Two northbound and one southbound lane are provided from approximately Old Mill Road to Westview Drive, in addition to a left turn lane.

Ultimately, a second southbound lane could be constructed to create a continuous 5-lane section between Old Mill Road and Route 4. The existing traffic signal at Marden’s may be relocated to the Old Mill Road intersection, and the performance of this intersection over time would determine the need for an additional southbound lane. Should congestion in the future here warrant a second southbound lane at the Old Mill intersection, it should be continued to Westview Drive.

Westview Drive and Route 4: The existing cross section between Westview Drive and Route 4 is four lanes, with left turn lanes provided north of the Sanford Center for Shopping. Right-of-way should be preserved to accommodate a left turn lane (5-lane cross section) between the Center for Shopping and Route 4 as well, which could be constructed when needed as adjacent parcels develop.

Three lanes between Route 4 and Route 99

A 3-lane section (with center turn lane) should be constructed between Route 4 and Airport Road to reduce conflicts with turning vehicles on this segment, and right-of-way preserved to extend to the current 3-lane section near Route 99 should future development warrant it. Roadway widening can be completed concurrent with future development projects, with missing segments ultimately constructed without developer participation to complete a continuous 5-lane segment. Inclusion of sidewalks and shoulders (or bike lanes) is recommended as these segments are improved.

* Benefits: Reduced congestion and queuing on the exit ramp. LOS improved from LOS D to LOS C. Eliminates projected LOS E and LOS F movements.
* Cost: Varies depending on phasing and developer participation. Typically $2 to 2.5 million per lane-mile.
* Natural and physical resources potentially impacted: TBD.
* Implementation timeframe: Near-term.

**Add second left turn lane from Exit 19 to southbound Route 109 (Wells)**

Add a second left turn lane from Maine Turnpike exit 19 to Route 109 and extend the existing two-lane receiving segment beyond the I-95 Bridge.

* Benefits: Reduced congestion and queuing on the exit ramp. LOS improved from LOS D to LOS C. Eliminates projected LOS E and LOS F movements. Allows some green time to be reallocated to the left turn from Route 109 to the Exit 19 tollbooth.
* Cost: Approximately $1 million.
* Natural and physical resources potentially impacted: None.
* Implementation timeframe: Near-term.

Tom Reinauer: SMRPC has a proposal from a consultant for immediate actions that can improve signal timing at the interchange in Wells. Within a month or so they will be working on that.

**Construct passing lanes on Route 109**

Steve: Passing lane placement is complicated by intersections and driveways. Two 1-mile segments are recommended as being potentially feasible:

* Northbound starting near Route 9A and extending approximately 1-mile.
* Southbound starting near Route 99 and extending approximately 1-mile.

The segment between Meetinghouse Road and Bragdon Road is another option for a shorter (0.5 mile) southbound passing lane.

* Benefits: Improves travel speed and reliability, and reduced peak LOS from LOS D/E to LOS C/D. Potentially reduces crash rates, particularly for head-on collisions.
* Costs: Approximately $2.2 million each.
* Natural and physical resources potentially impacted: Could be accommodated within existing right-of-way, but may require modification of access at some locations (e.g. driveway relocations or adjustments).
* Implementation timeframe: Long-term.

Tom Reinauer: How do these options compare to the Route 111 options from a cost-benefit standpoint?

Steve: The Level of Service is satisfactory on Route 109. There is growth forecasted on this road. We have not done a cost-benefit analysis on these concepts and if they were to be carried forward they would be looked at more closely in subsequent study efforts.

***Steve presented the following conceptual strategies for Route 4/US Route 202 (Waterboro to North Berwick)***

**Construct passing lanes on Route 4**

Most segments of Route 4 are forecast to operate at LOS D or better through 2035. The segment between Grammar Road and Route 109 is more congested, however, and is projected to degrade to LOS E conditions in the peak (eastbound) direction. Passing lane placement is complicated by intersections and driveways; two segments are recommended as being potentially feasible:

* Northbound starting at Grammar Road and extending approximately 1-mile.
* Southbound starting at Old Post Road and extending to Rustic Lane (approximately 0.65 miles)
* Benefits: Improves travel speed and reliability, and reduced peak LOS from LOS E to LOS C/D. Potentially reduces crash rates, particularly for head-on collisions (note that crash rates on Route 4 are relatively low, however).
* Costs: Approximately $2.2 million for northbound lane, $1.5 million for southbound lane.
* Natural and physical resources potentially impacted: Could be accommodated within existing right-of-way, but may require modification of access at some locations (e.g. driveway adjustments).
* Implementation timeframe: Long-term. Lower priority than passing lanes on Route 111/202 or Route 109.

**Spot safety improvements and monitor School Street/Gavel Road**

Sight distance is limited from School Street and Gavel Road, which meet Route 4 at the crest of a vertical curve. Electronic warning signs have been implemented to warn drivers of approaching traffic, but this location remains a High Crash Location with high degree of severity. Further improving the safety of this intersection would require regrading Route 4 to reduce its profile, as well as grading to increase the clear zones on either side of the highway to improve sight distance from School Street and Gavel Road.

* Benefits: Improve safety and reduce potential for crashes at this current High Crash Location.
* Cost: TBD.
* Natural and physical resources potentially impacted: Would require considerable regrading and modification of access to property on the northeast corner of the intersection. Further engineering study needed to determine extent of work.
* Implementation timeframe: Long-term. If future development in Sanford increases traffic on School Street, this may become a higher priority improvement.

Ken Creed: The detector does not work there.

Steve: A short-term solution would be to replace that detector with something that covers more of the paved area.

**Steve presented the following conceptual strategies for Route 99 and Kennebunk Exit 25 Area**

**New Connection between Route 99 and Route 35**

Construct a new roadway connecting Route 35 with Route 99 in Kennebunk, including a new bridge over the Cat Mousam River. Two potential alignments have been identified; (Option 1) Intersect Route 35 at the current Route 35 (Alewive Rd)/Alfred Road intersection and cross the river just north of the I-95 bridge, or (Option 2) extend Alewive Park Rd to Alfred Road, and continue across the river to Route 99.

The new connection is forecast to attract about 9,200 daily trips. Most of these divert from Alfred Road/Mill St (about 4,500) or Main St (3,600), though the more direct connection (Option 2) would attract an estimated 1,100 additionally daily trips from the Sanford area.

* Benefits: Creates a more direct connection between Rte 99, Rte 35, and Maine Turnpike exit 25. Reduces traffic through the center of West Kennebunk (50 percent reduction in traffic on Alfred Road, 80 percent reduction on Mill St). Reduces traffic on Route 1 in downtown Kennebunk (17 percent). Additional river crossing improves local circulation in Kennebunk. Economic analysis conducted previously indicated a positive B/C ratio.
* Costs: Approximately $7.6M to $7.9M.
* Natural and physical resources potentially impacted: Option 1 would require reconfiguration of the access and parking area at Corning. Option 2 passes near a recreational field. Both options would introduce a new river crossing and pass through undeveloped habitat areas near the river.
* Implementation timeframe: Long-term.

*Steve presents graphics showing a New Route 35 to Route 99 Connection*

Carol: Would you signalize those options?

Steve: At 9,200 average daily trips you would probably have a light, but you are severely reducing through-traffic on the local roads in West Kennebunk.

Don Allen: On Option 2, Kennebunk is in the preliminary stages of building out the right of way from William Arthur road to Alfred road, to expand development in the industrial park. There may not be room to have a road too close to the Corning Building.

Carol: The town has invested considerable money in West Kennebunk area and they don’t want to see this section widened. Does this help this area or does it hurt it by drawing more through traffic on the new roadway.

Diane: I think it will be seen as a good thing as this will remove regional traffic from local roads.

Geoff: if people see it as just a throughway to Sanford it won’t happen.

***Steve presented the following conceptual strategies for Transit Service Improvements***

Recommendations are being finalized with participating transit agencies and will be detailed in the Transit Chapter of the Final Report (under development). Options being discussed are listed below.

**Access to Transit**

* Establish a downtown Sanford Transit Center
* Establish a park-and-ride lot near the transit center
* Lease-lot arrangements elsewhere in Sanford (Springvale).
* Park and Ride (lease lot) in Alfred.
* Covered Shelters and formalized stops
* Satellite Hub at Exit 32 Park and Ride lot (Covered waiting area and consolidation of services).
* Bike lockers/parking at transit centers and park-and-ride lots.
* Bike provisions on buses.

**Route-Specific Service Improvements**

* WAVE
	+ Increase service frequency on the WAVE to every hour.
	+ Transition WAVE service from a demand response service to either a fixed route/demand response hybrid or a standard fixed route service running along the Route 111 corridor from Sanford to Biddeford and Saco.
	+ Create timed transfer to the ZOOM Turnpike Express and ShuttleBus Intercity/Portland service so that WAVE riders can more easily access service to Portland.
* Sanford Transit
	+ Coordinate with other services at the newly created Sanford Transit Center
	+ Consider targeted increases in service frequency, along with extending service to run later in the afternoon and early evening.
* Sanford Ocean Shuttle
	+ Provide increased service frequency.
* ShuttleBus ZOOM
	+ New shuttle service connecting York County Community College, Wells Transportation Center, and Kennebunk park-and-ride to ZOOM Turnpike Express service at Biddeford.
* ShuttleBus Intercity/Portland
	+ Extend ShuttleBus Intercity/Portland service a short distance from the current terminal at Southern Maine Medical Center to the Biddeford park-and-ride at Exit 32 on the Maine Turnpike/I-95.

**Public Information/Travel Demand Management**

* Make greater use of real-time information throughout the Central York County transit network. Availability of real-time information is increasingly becoming an expectation for transit passengers, particularly with the growth of Smartphone and text message based tools for distributing information. In an environment such as Central York County, where transit services operate on a relatively limited schedule and long headways, having access to real-time information is critical, since missing the bus could result in a two hour wait in some cases. Providing enhanced real-time information could also allow for the creation of a hybrid demand response/fixed-route version of the WAVE, as described previously .
* Building on the service recommendations, create a new transit hub at the Biddeford park-and-ride, where the enhanced WAVE/Route 111 service, the ZOOM Turnpike Express, and the extended ShuttleBus Intercity/Portland service can interface. With the various service improvements proposed above, this will become a critical link in the transit network within the study area, with a variety of transfers available to different destinations.
* Improve transit information for Central York County, to create s single clearing house for transit service information. With multiple operators providing differing types of service (demand response, route deviation, fixed-route local, fixed-route express), the transit service options within York County can be somewhat difficult to understand. Creating a single source for transit information will make the services more legible, particularly for new or occasional users.

Donna: After the 2002 report, there was a recommendation for more enforcement and that has to be reemphasized here. The safety issues on Route 111 are not because of the highways, they are driver issues. Without enforcement you cannot make a highway safe enough.

Carol: Thanks for your time and comments today.

*Meeting adjourned at 1:08 pm.*