east side of the existing bridges and to both sides of the existing bridges assuming that the General Sullivan Bridge (GSB) was rehabilitated for a future use. Replacing the Little Bay Bridges (LBB) with a new bridge that includes a multi-use path (assuming the removal of the GSB) was also considered. Such a new bridge could be of a signature type structure, e.g. a cable-stayed or concrete arch. He noted that widening or replacing the LBB to the west of the existing bridges would minimize potential impacts to Hilton Park and the shoreline near Bloody Point. Frank also stated that double decking of the existing bridges was also considered in hopes of minimizing the footprint of the bridges and reducing private property and environmental resource impacts on the bridge approaches. Preliminary analysis indicated that these impacts were not significantly reduced in comparison to the previously described west side bridge widening or bridge replacement alternatives, and the double-decker alternative had the additional impacts of higher cost, difficult traffic control during construction and adverse visual aesthetics.

With respect to the General Sullivan Bridge, Frank described several reuse alternatives including a multi-use path for pedestrians and bicyclists; a pedestrian, bicyclist and restricted (6 ton) vehicle or unrestricted vehicle open to local traffic; and a pedestrian, bicyclist and transit vehicle only use. Rehabilitation costs would range from $19 M to $22 M. To replace the GSB would cost approximately $36 M, and to remove it, approximately $5 M. If rehabilitated, periodic (every 25 years) repainting and structural repairs would cost approximately $4.3 M (in 2004 dollars), and deck replacement (every 35 years) would cost approximately $1.4 M (in 2004 dollars). Frank concluded his description of bridge alternatives by reviewing a cost summary matrix of LBB and GSB combined alternatives. The LBB alternatives, which included rehabilitation of the GSB, ranged in cost from $68 M to $90 M. The LBB alternatives which entailed removal of the GSB ranged in construction cost from $57 M to $100 M.

Frank then proceeded to summarize the conceptual roadway alternatives, beginning in Dover. He reviewed three (3) Dover roadway alternatives noting that two-way flow on the Turnpike overpass and the provision of a new NB on-ramp at exit 6 were common to all alternatives. He noted that Alternative 1 provided a two-lane loop ramp for the NB Turnpike connection to WB US4, and that the at-grade connection from Hilton Park and the Wentworth Terrace neighborhood to Dover Point Road resulted in a relatively high number of property impacts in comparison to Alternatives 2 and 3. Frank stated that the E-W connection of Hilton Park for local motorized and non-motorized traffic is an important element from the City of Dover's perspective. Also, the City would consider accepting less efficient traffic operation at Exit 6 if property impacts could be reduced. Frank then described Alternative 2, which provides a grade-separated E-W connection of Hilton Park, and provides the NB Turnpike connection to WB US4 via a diamond-type signal controlled intersection. In comparison to Alternative 1, property impacts are substantially reduced and traffic operation at the four (4) signalized intersections are satisfactory. Alternative 3 modifies Alternative 2 by providing a grade-separated connection between Spur Road and Boston Harbor Road. This connection – under the US 4 overpass and the SB on-ramp to the Turnpike – enables local traffic to connect with Boston Harbor Road and Hilton Park without traversing the interchange area, and allows elimination of the Spur Road traffic signal by restricting turning movements to right-turns only.

Frank then reviewed the Newington roadway alternatives reminding all that Newington representatives had initially indicated community support for Alternatives 6 and 7 contained in the 2000 Spaulding Turnpike Feasibility Study. Alternative 6 maintains interchanges at both Exits 3 and 4, provides a right-of-way for a future railroad connection (paralleling Patterson Lane) to the Tradeport at Exit 3, and would provide an ideal at-grade location for a crossover between the NB and SB barrels of the Turnpike for incident management. He noted that Alternative 6 lacked a connection between the Turnpike and the industrial area located between Shattuck Way and the riverfront, and that local traffic from Nimble Hill Road to Woodbury Avenue is required to use the Turnpike (assuming that drivers decline to use the circuitous back route of River Road and Shattuck Way).

Frank noted that the SB off-ramp to Woodbury Avenue at Exit 3 had been relocated slightly to the north (revising the original concept) to avoid impacting access to the City of Portsmouth's water tower. Alternative 7 combines Exits 3 and 4 at a new single point diamond interchange. This alternative provides roadway connections to both the Tradeport and the River Road-Shattuck Way industrial area, free-flow connections between the Turnpike and Woodbury Avenue, right-of-way for a future rail connection to the Tradeport that parallels Patterson Lane, and a local connector between Nimble Hill Road and Woodbury Avenue. Local access to future development at the former drive-in site could also be provided. Projected traffic volumes require a double NB on-ramp, which is problematic given the limited distance to merge prior to the bridge. The elevated structure of the Turnpike will present a visual impact, and the cost of the interchange (based on the 2000 Feasibility Study) will be approximately 50 percent higher than Alternative 6 Revised.

Alternative 9 combines the current Exits 3 and 4 at the location of the existing Exit 3 via a SB two-lane loop off ramp and a NB diamond type interchange. The local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area is provided adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. A local roadway connects Nimble Hill Road to Exit 3 and Woodbury Avenue. The distance between the two-lane NB on-ramp at Exit 3 and the Little Bay Bridges is adequate for traffic merging prior to the bridge. Access to the former drive-in site could be provided from the local connector. Frank noted that the ATF reviewed Alternatives 6, 7, and 9 at the March 31 workshop meeting, and advised VHB to drop Alternative 7, and to focus on combining the best elements of Alternatives 6 and 9 into a new concept. To that end, he then described Alternatives 10 and 11.

Alternative 10 is similar to Alternative 9 in that it combines the current Exits 3 and 4 at the location of the existing Exit 3 for SB traffic, and maintains the local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. The local roadway connection from Nimble Hill Road to Exit 3 and Woodbury Avenue is also maintained. However, the SB off-ramp at Exit 3 has been converted from a loop ramp under Alternative 9 -- to a diamond configuration, and Alternative 10 also provides NB off- and on-ramps at Exit 4 (River Road). Alternative 11 is similar to Alternative 10, with the exception that the local connector to the industrial area and the preservation of a future rail right-of-way connection to the Tradeport has been relocated south to the Exit 3 interchange/Patterson Lane area. This results in a tri-level interchange area with the rail corridor and industrial access road running under Woodbury Avenue and the Turnpike, and the Woodbury Avenue extension traversing above the Turnpike to intersect the new connecting roadway to Nimble Hill Road.

Another alternative, Alternative 12 modifies Alternative 11 by simplifying the roadway connection from Woodbury Avenue and Exit 3 to the Tradeport, and by modifying the SB on-ramp from Exit 3 to reduce wetland impacts and increase traffic weaving distance between the SB Exit 3 on-ramp and the SB Exit 1 off-ramp. Frank concluded by noting that Alternatives 10, 11 and 12 could be modified to provide a SB off-ramp to Nimble Hill Road for the convenience of Newington residents.

At this point, Frank paused and solicited questions or comments on any of the alternatives that were presented. Eleanor Hendricks, Dover Point Road, suggested that the woods in the median of the Turnpike obstructed driver sight distance on the NB approach to the bridge. Chris Waszczuk responded that driver sight distance would be reviewed during the design and construction of the Interim Safety Improvement Project.

A Dover Point Road resident questioned the need for the new NB on-ramp at Exit 6 under Alternatives 1, 2 and 3. In his view, locals are very familiar with the area and won't need nor use the new ramp. He also felt that the only major problems along the Turnpike in Newington are the Exxon driveway and exit 4N. Frank responded that those unfamiliar with the area would find the ramp convenient; otherwise unfamiliar drivers would have to be directed south on the Turnpike (as is the case today) and forced to reverse direction in Newington and cross back over the bridge. Chris Waszczuk added that given the investment in reconstructing the interchange, the NB on-ramp, at a relatively low-cost, should be provided.

Nora Kelley, Dover Point Road, stated her opposition to the proposed grade-separated connection linking the east and west sides of Hilton Park. Frank responded that City representatives and other ATF members have been very clear about the need and desirability of providing a grade-separated connection. Bruce Woodruff concurred, citing the local traffic safety advantages of the proposed grade-separated connection as opposed to Turnpike access and egress at Exit 5. Frank added that the park connection is proposed to be as close to the channel as possible which would offer some landscape design alternatives to enhance the park in proximity to the connector's location. Another resident asked if the grade-separated connector would impact Hilton Park. Frank replied that the bridge alternatives located on the west side of the existing LBB would minimize any impact to Hilton Park. Chris Waszczuk added impacts to Hilton Park would be minimized and any impacts that could not be avoided would be mitigated.

Ray Bardwell stated that the rail alternative that paralleled the Turnpike between Dover and Newington could have significant right-of-way impacts on Spur Road residents. He recommended that the existing free-flow loop ramp from the northbound Turnpike to US 4 westbound be retained. He felt that forcing the large volume of vehicles (including many trucks) to stop at a signal would not be prudent. He also suggested relocating the Toll Plaza south of Exit 6 to pick up the US4 traffic. Chris responded that toll issues are beyond the scope of this project and have statewide ramifications. As such, toll issues are a legislative matter.

Judith Nowack asked if consideration had been given to relocating the bridges, perhaps to their original crossing location between Fox Point and Cedar Point. Chris Waszczuk responded that topography dictates the bridge location, which is located at the narrowest point of the channel. To relocate the bridges and the Turnpike approaches would result in significantly greater impacts than widening or replacing the existing bridges in the existing location.

Representative Pelletier asked if 4-lanes in each direction would be required north of the Toll Plaza. Frank responded that the Turnpike had sufficient capacity north of the Toll Plaza, and that the Toll Plaza has sufficient capacity to process future travel demands.

Ray Bardwell asked if Spur Road right-of-way was being acquired, and if abutters had been approached for right-of-way? Chris Waszczuk responded that no one has been contacted vis-à-vis right-of-way acquisition and indicated that the ROW needs for the project have not developed as of yet.

At this point Frank O'Callaghan presented a preliminary summary table of bridge and roadway impacts and construction costs by alternatives. He explained that the table represented a work in progress, and attempts to provide a quick relative comparison of alternatives vis-à-vis impacts and costs. He cited several examples. In comparing the Dover Roadway Alternatives 1, 2 and 3, Frank noted that wetland impacts ranged from 5.1 acres (Alternative 3) to 7.0 acres (Alternative 1), Local Connectivity ranged from Low (Alternative 1) to High (Alternative 3) and the Total Construction

Costs ranged from a low of $17.8 M (Alternative 2) to a high of $25.9 M (Alternative 1). In Newington, wetland impacts among Alternatives 6R, 7, 9, 10, 11 and 12 ranged from 7.8 acres (Alternative 9) to 10.2 acres (Alternative 10), Total Construction Costs ranged from $28.4 M (Alternative 6R) to $42.7 M (Alternative 7). Frank noted that, depending on which alternatives are combined for Newington, the bridges, and Dover, the estimated total project construction costs could range from $119.6 M to $175.6 M.

There being no questions on the preliminary summary table of bridge and roadway impacts and construction cost estimates, Frank summarized the recommended range of reasonable alternatives to carry forward for detailed analysis in the next phase (DEIS) of the project. He began by noting that the No-Build alternative is required by the federal environmental process to be carried forward as a base case condition that forms the framework for other Alternatives to be measured against. With respect to Transportation System Management (TSM) actions, the following alternatives are recommended to be carried forward:

- NB Exit 6W Deceleration Lane Improvement
- SB Exit 6 On-Ramp Improvement
- Interim Safety Improvement Plan in Newington
- SB Deceleration Lane Improvement at Exit 3
- NB Auxiliary Lane Improvement from Exit 3 to Exit 4

Transportation Demand Management (TDM) alternatives recommended to be carried forward include:

- Expand Downeaster Service (without double tracking Main Line West)
- Restoration of Pease Spur
- Expand Intercity Bus Service (Rochester-Boston)
- Enhance Express Bus Service (Rochester-Portsmouth)
- Enhance Local Bus Services
- Promote Employer-Based Measures

Bridge Alternatives recommended to be carried forward include:

- Rehabilitation and Widening of Little Bay Bridges with General Sullivan Bridge Rehabilitation
- Rehabilitation and Widening of Little Bay Bridges with General Sullivan Bridge Removed
- Replace Little Bay Bridges with General Sullivan Bridge Removed

All of these bridge alternatives are proposed to be located to the west of the existing LBB to avoid/minimize impacts to Hilton Park and the Bloody Point shoreline .

Recommended Roadway Alternatives to be carried forward include:

- Alternative 2 (Dover)
- Alternative 3 (Dover)
- Alternative 10 (Newington)
- Alternative 11 (Newington)
- Alternative 12 (Newington)

Following Frank O'Callaghan's presentation of recommended alternatives to carry forward, there was another round of questions and comments.

A resident asked if the Powerpoint presentation of the meeting could be placed on the project website. Frank responded that the presentation would be posted, following compression of the electronic files since they are very large.

A resident inquired as to the scheduling of some of the TSM and TDM Alternatives. Frank provided clarification: the express COAST service between Rochester and Portsmouth is scheduled for 2006. CMAQ funding has been secured. The park and ride facility at Exit 9 in Dover was recently awarded a CMAQ grant and is scheduled for construction in 2006. The Interim Safety Improvement Plan in Newington is under final design and scheduled for construction in 2005. The recommended TSM improvement of providing an auxiliary lane NB between Exits 3 and 4 will be incorporated into the Interim Safety Improvement Plan. Chris Waszczuk added that the recommended signage improvements on the bridges and at Exit 6, in conjunction with the proposed improvement to the Exit 6W deceleration lane would be implemented this year. In response to a question from Marilyn Follansbee, Dover Point Road, regarding the desirability to expedite the scheduling/implementation of all the bus-related recommendations, Chris stated that a schedule or timeline for these improvements has not been established. Ms. Follansbee added that she agreed with the recommendation to reduce the headways of the local bus service during the 7:00–9:00 AM and 3:00–5:00 PM weekday peak commuter periods. Steve Wells, Executive Director of COAST, responded that additional buses are envisioned beginning at 6:30 AM.

A resident asked if Alternatives 2 and 3 can be modified or tweaked as they progress through the detailed analysis of the next phase of study. Chris Waszczuk responded in the affirmative. Chris then asked attendees if the project team had overlooked anything, or if anyone had any other improvement ideas.

Ray Bardwell identified the need for state police to increase their presence on the bridge approaches so that drivers would obey the law and not switch lanes on the bridges and their approaches. Chris responded that this concern had previously been passed along to the local and state public safety officials, while noting that the confined area of the bridges and approaches make roadside enforcement difficult and challenging. Mr. Bardwell also suggested consideration of a loop ramp instead of the signalized diamond configuration under Alternatives 2 and 3 where the NB off-ramp meets Dover Point Road. The project team will re-review the suitability of a loop ramp.

There being no further questions or concerns, Chris Waszczuk thanked the attendees for coming, and adjourned the meeting at 9:30 PM

cc: J. Brillhart,
C. Waszczuk
M. Dugas
M. Laurin
H. Goodwin (Bureau of Turnpikes)
B. O'Donnell (FHWA)
F. O'Callaghan (VHB)
Paul Beecher, Dover City Manager
Town of Newington Selectboard
Newington-Dover ATF

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING
DOVER CITY HALL
JUNE 30, 2004

Name Brian Greene
Affiliation
Address 393 Dover Pt Rd.
Dover, NH

Phone /Email 742-8561 /

Name Bob + Alice Briggs
Affiliation
Address 10 Cote Dr
Dover NH

Phone /Email 749-9455 /

Name RICHARD A COUTURE
Affiliation 3 Cemetery Rd
Address Somersworth NH

Phone /Email /

Name Steve Wells
Affiliation COAST
Address 42 Sumner Dr
Dover, NH

Phone /Email 743-5777 /

Name Dean Trefethen
Affiliation Dover city Council
Address

Phone /Email /

Name Marilyn Follansbee
Affiliation
Address 25 Dover Pt Rd
Dover

Phone /Email 749-3777 /

Name Norman & Eleanor Hendricks
Affiliation
Address 401 Dover Pt Rd

Phone /Email 749 3948 / mh@hendricks.mv.com

Name
Affiliation
Address

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING
DOVER CITY HALL
JUNE 30, 2004

Name Joyce Mackay
Affiliation Abutter
Address 412 Dover Pt Rd.
Dover N.H.

Phone /Email 742-1675Q

Name Betty Mackay
Affiliation Abutter
Address 390 Dover Pt Rd
Dover, NH 03820

Phone /Email 742-3054

Name ROLAND HOFEMANN
Affiliation STATE REP
Address 18 WELLINGTON AVE
DOVER, NH 03820-2002
MAILING LIST.

Phone /Email 749-4154 RHOFEMANN @AOL.COM

Name JAY MACKEY
Affiliation Abutter
Address 337 Dover Pt. Rd.

Phone /Email 749-5905 /

Name Iris Estabrook
Affiliation State Senate
Address 8 Burnham Ave
Durham NH 03824

Phone /Email /

Name Dean Buttner
Affiliation
Address 354 Dover Pt Rd.
DOVER, N.H
please place me on
mailing list

Phone /Email /

Name Nora Kelley
Affiliation
Address 348 Dover Pt Rd
Dover NH 03820

Please place me on mailing list
Phone /Email nkelley@tiac.net

Name MaryAnn Charos
Affiliation
Address 1 Center Dr
Dover NH 03820
add to mailing list

Phone /Email 749 9173 / Bldbnkr@Aol.com

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING
DOVER CITY HALL
JUNE 30, 2004

Name RAYMOND BORDWELL
Affiliation HOMEOWNER
Address 199 SPEAR ROAD
PLEASE SEND UPDATED INFO. THANKS.
Phone /Email 603-749-6422

Name STEVE MARCHAND
Affiliation PORTSMOUTH CITY COUNCIL / RPC
Address 117 CASS ST.
PORTSMOUTH, NH 03801
Phone /Email 431-5007 /

Name TIM ROACHE
Affiliation SRPC
Address
Phone /Email TROACHE@STRAFFORD.ORG

Name WILLIAM + CASSANDRA MINER
Affiliation
Address 27 BOSTON HARBOR RD
DOVER NH
Phone /Email 742-7057

Name John Burke
Affiliation Portsmouth / RPC
Address
Phone /Email 766-1415 /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name Tom & Jean Keegan
Affiliation
Address 19 Boston Harbor Rd
Dover, NH 03820

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Bill O'Donnell, FHWA
Peter Walker, VHB
Frank O'Callaghan, VHB

Date/Time: July 1, 2004

Project No.: 51425.00

Place: Newington Town Hall

Re: Newington-Dover, 11238
Public Informational Meeting

Notes taken by: Frank O'Callaghan

Chris Waszczuk, NHDOT Project Manager, called the meeting to order at 7:05 PM by introducing himself and welcoming those in attendance. He noted that this meeting was the second of two (2) public informational meetings on the Newington-Dover Spaulding Turnpike Improvement project, and that over 40 persons had attended a similar meeting last evening (June 30, 2004) at Dover City Hall. He stated that the project team is looking for feedback, and that public input is important to the success of the project. He reminded all that project information packets were available that would assist them in following and understanding the presentation of project information, and asked everyone to sign in before they leave the meeting. He also noted that a project newsletter was available that included project contacts for additional information.

Chris then introduced Mike Dugas, NHDOT, Marc Laurin, NHDOT, and Frank O'Callaghan, VHB, as members of the project team. He reviewed the composition of the Advisory Task Force (ATF), noting community representation and its purpose of providing guidance to the project team and acting as a conduit for disseminating project information to project stakeholders. Chris noted that the ATF meets regularly, usually every 2 to 3 months, and has met to date seven times over the course of the study.

Chris then reviewed the meeting agenda, noting that it would be interactive in nature, and that four (4) question and answer periods are scheduled during the presentation to make the digestion of information and dialogue with the public as convenient and effective as possible. He then reviewed the project's purpose which is to reduce safety problems and improve transportation efficiency for an approximately 3.5 mile long section of the Spaulding Turnpike beginning at the Gosling Road Interchange in Newington and extending across the Little Bay Bridges to the toll plaza in Dover. Chris then reviewed the project need citing the importance of the Spaulding Turnpike from commuter, commerce, and tourist perspectives; its designation as part of the National Highway System (NHS); and its function as a limited access highway linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. He cited the historic growth of traffic and future projections, the poor levels of traffic service, existing geometric constraints and deficiencies and the history of traffic accident experience. Chris also noted that the Turnpike bisects local

residential, recreational and commercial areas, and that there exists a need for local connectivity of motorists, pedestrians and bicyclists between the east and west sides of the Turnpike in both Newington and Dover. He stated that the Little Bay Bridges are major structures located on an important highway in a moderate seismic area and were not designed to meet the current seismic criteria for this region. He noted that the Newington-Dover Spaulding Turnpike project was included in the State's Ten-Year Transportation Improvement Program and was the highest long-term transportation priority of the Seacoast Metropolitan Planning Organization. He stated that as the area continues to develop and future traffic volumes increase, traffic operations and safety conditions would worsen.

Chris then reviewed the five (5) phases of an Environmental Impact Statement (EIS) noting that the EIS is the highest order of study required by the National Environmental Policy Act (NEPA). The project Scoping Report, published in March 2004, summarizes the Phase 1 activities, which included the project's purpose and need statement, inventories of environmental resources, analysis of existing traffic conditions and projections of future travel demands, and the identification of the range of typical alternatives that would be considered. Currently, Phase 2 activities include the development and screening of potential alternatives to carry forward into Phase 3, the Draft EIS, for detailed analysis. Phase 4 is the FHWA/ACOE/NHDES/NHDOT joint Public Hearing on the Preferred Alternative, and Phase 5, the Final EIS, will respond to comments on the DEIS as well as identify the least environmentally damaging practicable alternative (LEDPA). He then reviewed the overall project schedule target dates including September 2004 for completion of Phase 2, and the fall of 2005 for the joint-public hearing. Assuming the availability of funding, construction – which would be phased – could begin as early as 2008. Prior to pausing for any questions on project purpose and need, or the phasing and schedule of the project, Chris noted the importance of public participation in the study, and emphasized the openness of the process. He identified the ATF as a 2-way conduit for stakeholder input and feedback. The ATF meets regularly and Chris noted that the next scheduled ATF meeting will be on August 25, 2004 at Newington Town Hall. He reminded all that there are public information meetings scheduled for each phase of the study, and that meetings with federal and state Resource Agencies are also regularly held to solicit their input. Project newsletters are also prepared at the conclusion of each phase of study, and the project website, www.newington-dover.com, provides a wealth of project related information and another means of public input to the project team.

At this point, Chris paused and asked for questions and/or comments.

Doug Mahoney, Thermo Electron, asked if the completion date for construction of the Newington Interim Safety Improvements was August 2005. Chris Waszczuk responded that it was a separate project and targeted to be completed by the end of 2005.

State Rep. Paul McEachern inquired as to the coordination of the Newington-Dover Turnpike project with the Portsmouth traffic circle and Route 1 Bypass improvement project. Chris responded that both projects are utilizing the same regional travel demand model. Mike Dugas added that with respect to the traffic circle project, there is an active ATF, but the project is not as far along as the Turnpike project. He added that the project includes funding available for the bridges, but not yet for any roadway improvements.

Dave Holden, Portsmouth Planning Department, noted that the City of Portsmouth sees the linkage between the projects and understands that project coordination is on-going.

Cameron Wake, SABR, raised the issue of maintaining bicycle connectivity over the channel during a 4-year or longer construction schedule. Chris Waszczuk responded that traffic management during construction will be challenging at times and result in some additional delays, but that two lanes of traffic are envisioned to be maintained in each direction at all times. While moving traffic safely during construction will be the first priority, Chris stated that every reasonable effort would also be made to accommodate bicycles during construction.

Bill Burtis, Clean Air/Cool Planet, commented on the volume of daily traffic on the Turnpike. Frank O'Callaghan noted that peak hour volumes were more critical than daily volumes from a design perspective.

At this point, Chris Waszczuk reminded the attendees that their input was important. He then introduced Frank O'Callaghan to review the project background. Frank began by describing the project study area as extending north from Exit 1 (Gosling Road/Pease Boulevard) of the Turnpike on the south, traversing the Little Bay Bridges to a point just south of the Dover Toll Plaza, and bounded by the Piscataqua River on the east and Little Bay on the west. He noted many study area issues such as marine habitat, navigation, water quality, tidal and surface wetlands, floodplains, ground water, hazardous materials, visual resources, park and recreational activities, historic and cultural resources and potential residential and commercial property impacts. He stated that air quality and noise were also relevant issues, and each would be analyzed in detail during Phase 3 (DEIS) of the study. He also noted that indirect and cumulative socio-economic impacts would also be identified in the next phase (DEIS) of the study. He stated that the March 2004 Scoping Report summarized many of the inventories of environmental resources.

In summarizing safety conditions, Frank noted that study area traffic accidents during the 1997-2001 period (908 total) increased by approximately 58 percent in comparison to the previous 5-year, 1992-1996, period (575 total). During the 1997-2001period, accidents increased at approximately 11 percent per year in comparison to the average annual traffic volume growth of 3 percent per year. He also reviewed traffic volume growth where average daily traffic (ADT) volume has increased from approximately 30,000 vehicles in 1980, to over 70,000 in 2003, and is projected to grow to over 101,000 vehicles per day by the year 2025. He noted that current weekday peak hour capacity constraints extended from Exit 6 southbound to Exit 3 (Woodbury Avenue) in the morning, and from Exit 4N northbound through Exit 6 in the evening. These capacity conditions are compounded by a number of geometric deficiencies including substandard shoulder width on the Little Bay Bridges, substandard turning radii at many of the interchange on and off ramps, and inadequate weaving distances in both the northbound (River Road) and southbound (Nimble Hill Road) Exit 4N - Exit 4 area. As traffic volumes grow, the safety and traffic operational conditions, which are currently constrained, will worsen.

Frank O'Callaghan then presented some general bridge information for both the Little Bay Bridges and the General Sullivan Bridge. He noted the length, width, main navigation span and vertical clearance of each bridge. The Little Bay Bridges are characterized by substandard shoulder widths and a 3.5 percent grade which limits driver sight distance to a 60 mph design speed (design speed being the maximum safe operating speed governed by the vertical alignment or profile). The 2-lane bridges have minor deterioration and the substructure for both bridges – composed of reinforced concrete – was designed and constructed in 1966 prior to seismic resistance requirements. Frank then enumerated several factors which would affect the rehabilitation alternatives for the General Sullivan Bridge. A 4 percent grade limits driver sight distance to a 45 mph design speed. The cross-section is limited to 24' of pavement and 2'-11" sidewalks on each side. These geometric characteristics and the continuous truss nature of the structure will preclude the rehabilitation and reuse of the bridge to function as two freeway/turnpike lanes to complement the function and operation of the Little Bay

Bridges and Turnpike. In addition, the deck, girders and truss members exhibit major deterioration, and there is extensive substructure deterioration. He noted that the piers are composed of unreinforced granite block and mortar, and in conjunction with the low internal redundancy of the truss design and the fatigue associated with the age (1935 construction) of the structure, the General Sullivan Bridge is more vulnerable to a seismic event than the Little Bay Bridges. The General Sullivan Bridge is also historic – being the second highest-ranking historic bridge in the state -- and subject to costly lead paint removal and re-painting.

At this point Frank paused for questions and comments. A resident asked if the GSB was safe for pedestrian and bicycle travel. Chris Waszczuk responded that the bridge is safe for pedestrians and bicyclists, and would be closed if it were unsafe. It is not safe for carrying vehicular traffic.

There being no further questions or comments, Frank proceeded to review the range of conceptual alternatives that have been developed including Transportation System Management (TSM), Transportation Demand Management (TDM), Bridge Alternatives and Roadway Alternatives. With respect to TSM improvements, Frank noted that these improvements are generally low cost in nature and usually implemented within the existing right-of-way, or require minor right-of-way, to improve safety and/or increase traffic operating efficiency. Examples of TSM-type actions are adding turning lanes and/or increasing traffic control at intersections, or changing pavement markings or increasing regulatory or directional signage.

Within the study area, Frank noted that signage on the bridge approaches that reminds drivers to stay in their lane has already been upgraded, and directional signage for NB travelers connecting to US4 at Exit 6W will be upgraded as part of a construction project this year. He then referred to conceptual graphics and described several TSM alternatives.

Dover TSM 1

This action involves extension of the NB deceleration lane to the loop ramp leading to US 4 at Exit 6W. Restriping of the shoulder area under the overpass will extend the deceleration lane by approximately 400' without impacting the bridge abutment. This measure will prevent peak hour exiting traffic from backing up on the loop ramp onto the Turnpike and blocking NB through traffic on the Turnpike.

Dover TSM 2

This action involves merging the 2-lane SB on-ramp at Exit 6 to a single lane prior to the merge with the main line, coupled with carrying two (2) through lanes on the Turnpike through the Exit 6 interchange to merge with the single SB on-ramp. Currently, the 2 Turnpike through lanes merge to a single lane. The proposed changes will make it safer and easier for drivers to be in the proper lanes (either inside or outside) when planning to exit at Nimble Hill Road or Woodbury Avenue.

Interim Safety Plan (Newington)

The Interim Safety Plan will address the current safety and traffic operational problems at Nimble Hill Road and at River Road due to inadequate weaving distances between these roadways and the median SB to NB turnaround on the Turnpike. By providing a two-way, grade-separated connection under the Turnpike, between Nimble Hill Road and River Road, the median turnaround can be eliminated, thus making the current weaving conditions unnecessary. The existing SB on-ramp from the grade-separated turnaround from River Road will also be eliminated which will remove another safety and traffic operational problem. This project is under final design and scheduled for construction in 2005.

Other Newington TSM Actions

Upon completion of the Interim Safety Plan, the SB deceleration lane to Woodbury Avenue can be extended to provide improved operations. In addition, a NB auxiliary lane can be developed between Woodbury Avenue and River Road to provide a better merging and weaving condition for traffic entering the Turnpike from Woodbury Avenue and for traffic exiting at River Road. In addition, access from Woodbury Avenue to Shattuck Way/River Road via the River Road/Patterson Lane connection would be restricted to emergency vehicles only to preclude NB traffic from diverting to River Road in an attempt to bypass Turnpike traffic and rejoin the Turnpike at Exit 4. The NB auxiliary lane will be included as part of the Interim Safety Project

While reducing the level of traffic turbulence and improving the safety of current traffic operations on both sides of the bridges, Frank reminded all that the basic capacity constraints of the bridges and Turnpike remain, resulting in peak hour congestion and vehicular delay.

Frank then reviewed the Transportation Demand Management (TDM) strategies that have been considered to reduce the overall travel demand within the corridor including rail, bus, park and ride facilities, high occupancy vehicle (HOV) lanes and employer-based measures. He noted that the project team had met with transit operators and regional planning staff in developing these alternatives. With respect to rail, he presented several alternatives.

Expansion of the Downeaster Service

The first rail alternative examined would involve expanding the Downeaster service by one train set. Currently, the Downeaster makes four round trips per day through the study area. However, only one of these trips coincides with the morning peak hour commuter time. Thus, the existing service is really not providing commuter service. By adding an additional train, it is expected that the service would be more convenient to commuters in the study area. The additional train set would run from Dover station to Boston during the weekday AM peak hour, and return from Boston during the PM peak hour. This alternative would require construction of a new layover facility in Dover in addition to the purchase of a new train set.

Based on a conceptual design, the infrastructure investment for this option is expected to cost between $11.5 and $17 million. It was assumed that there would not be a need to double track the existing rail corridor to the Massachusetts state line. If that double tracking is in fact required, then the capital investment would increase to about $110-$115 million. Frank noted that these estimates (for all rail and transit alternatives) did not include operational costs.

Regional Commuter Rail Service

A second rail alternative would involve development of a new commuter rail line to carry passengers between Rochester and Portsmouth. This alternative would utilize the existing Conway Branch line south from Rochester and then run along the Main Line West to Dover. From Dover there are two (2) options: continuing along the MLW to Rockingham Junction, and then running east to Portsmouth along the Portsmouth Branch line; or running south from Dover on new right-of-way paralleling the Turnpike and crossing the channel to meet the Newington Branch Line.

Capital cost estimates for these options range from approximately $145 to $170 million. This would involve upgrading the existing rail lines, purchasing new train sets and building new train stations in Rochester, Somersworth, Newmarket and Portsmouth. The cost estimate does not include operational costs. Preliminary ridership estimates would result in fewer than 100 peak hour vehicles

being removed from the Turnpike for the Rockingham Junction option, and fewer than 150 vehicles being removed for the more direct route paralleling the Turnpike.

Commuter/Tourist Service to Conway

A third rail option would involve extension/upgrading of rail service from Dover along the Conway Branch to Rochester and then north to Conway. This option assumes that the NHDOT would restore the 22 miles of missing track in Ossipee, and could be developed to handle freight service and also serve as a connection for tourists visiting the North Country or Boston. A preliminary cost estimate is approximately $40 million.

Frank explained that ridership numbers are very preliminary and that these rail options appear to remove approximately 50 to 150 peak hour vehicle trips from the Turnpike, a relatively low number in relation to the total traffic volume along the Turnpike.

Pease Spur

A now inactive rail right-of-way exists in Newington which runs from the industrial area on the south and east portion of the study area (the Newington Branch Line), across the Turnpike and then into the Pease Tradeport. The rail right-of-way is at-grade and was active when Pease was used as a military base. Frank pointed out that all of the Newington conceptual roadway alternatives maintain a grade-separated right-of-way corridor for future restoration of this rail service.

Frank then described the three (3) bus alternatives that had been developed and preliminarily assessed:

Expand Intercity Service (Rochester-Boston)

C & J Trailways currently operates a coach service between Dover and Boston via Portsmouth. This service could be expanded by adding coaches and extending the service area to Rochester. The cost of this alternative would be approximately $11.5 million in capital investment.

COAST Express Service

Frank explained that COAST plans to operate new express service between Rochester and Portsmouth along the Turnpike. This service is being funded through a CMAQ grant and is scheduled to begin in 2006. He noted that the express service could be further enhanced by adding Park and Ride facilities at Exit 9 in Dover and at Exit 12 in Rochester. The cost estimate for these Park and Rides is approximately $5 million. The Park and Rides would allow commuters a place to transfer between their private vehicles and the bus service, as well as support ride sharing and van-pooling.

Enhance Local Bus Service

Wildcat Transit and COAST, specifically COAST Route #2 (Rochester-Portsmouth), Wildcat Route #4 (Dover-Portsmouth) and COAST'S Tradeport Trolley operate local bus routes in the study area. These services could be enhanced by adding additional buses to reduce headways and by providing an interconnection/transfer point at Exit 1 which would allow riders to transfer among the local bus operators. In addition, a new Park and Ride facility could be constructed at the intersection of Route 108 and US4 in Durham, which would support the Wildcat #4 route, encourage ride sharing and van-pooling and allow the capture of some traffic that would otherwise go to or from the UNH campus. Capital cost for this enhancement is expected to be about $6.5 million.

There is some overlap among these bus alternatives. Therefore, if the three (3) alternatives were bundled and implemented together, the capital cost of the entire package would be about $16 million. Preliminary analysis indicates that ridership for these bus alternatives would be equal to the rail alternatives - at a fraction of the cost. Frank noted that analysis of ridership continues. He concluded by stating that new park and ride facilities were proposed at Exit 9 in Dover, at Exit 12 in Rochester and at the US4/NH108 interchange in Durham. Such a site would also benefit Durham and UNH by allowing UNH visitors to park remotely and be shuttled to the campus.

With respect to High Occupancy Vehicle (HOV) and Reversible Lane alternatives, Frank described two (2) main options that were examined, in comparison to a standard 8-lane (4 NB and 4 SB) roadway cross-section, to potentially reduce the scale of future roadway and bridge infrastructure improvements. He reminded all that future travel demands require 4-lanes in each direction assuming current travel characteristics (i.e. mode split, vehicle occupancy rates, work hours, travel patterns, etc.).

Frank used a graphic to illustrate the cross-section of each of the options. The first option would be a 2+2+2 lane cross section, with the center two lanes intended as HOV or reversible lanes. The total cross-section of this alternative would be approximately 132 feet. However, the results of the traffic modeling completed to date indicate that a minimum of three lanes in the off-peak direction during summer and fall peak hours would be needed to meet future travel demands. Therefore, this option was not being pursued..

A second HOV concept would involve a 3+1+3 lane cross-section. The center lane would be an HOV or a reversible lane. Frank explained that in order for HOV lanes to be effective, they must be used by approximately 800 vehicles or more per peak hour. However, the traffic model predicts approximately 300 vehicles per hour would use the HOV lane assuming it would start at the Dover Toll Plaza and extend to I-95 in Portsmouth. Since potential traffic volumes would not justify this alternative, a second option was explored running from just south of Exit 6 to just north of Exit 1. This alternative would potentially maximize HOV ridership by extending HOV access to traffic from US4, Dover Point Road, and the Pease Tradeport. Unfortunately, given the compactness of the study area, the relatively short distance between Exits 6 and 1, and the distance necessary to safely accommodate the merging and weaving of traffic to enter and exit the HOV lane, this alternative was infeasible from a traffic safety and operations perspective. A third alternative was considered which assumed an HOV lane running from the Dover Toll Plaza to Exit 1. Similar to Alternative 1, the potential ridership estimate falls approximately 40% below the necessary threshold to justify its use.

In light of the infeasibility of HOV use, the 3+1+3 lane concept was tested from a reversible lane use perspective. Under this concept, the reversible lane would be utilized by the peak flow in the peak hour (i.e., southbound in the AM and northbound in the PM) and open to all vehicles. If this reversible lane extended from the Toll Plaza to Exit 1, approximately 1,500 vehicles per peak hour would use the lane, which is enough ridership to justify its use. Frank explained that this 3+1+3 cross-section would be approximately 152 feet in pavement width due to the shoulders and barriers that would need to be constructed between the reversible lane and the adjacent northbound and southbound lanes. He noted that this cross-section would actually be wider than the approximately 146-foot cross-section required for a typical 8-lane (4 NB and 4 SB) cross-section. As such, VHB concluded that the 3+1+3 reversible lane concept failed to offer a significant advantage over the traditional 8-lane cross-section -- the 3+1+3 cross-section was wider than the typical 8-lane section and presented additional operational and maintenance costs. Frank added, however, that the 8-lane cross-section affords the flexibility to convert the inside shoulder/lanes to HOV or exclusive transit use in the future.

Frank then reviewed employer-based TDM strategies which could include transit subsidies, ride sharing, vanpools, alternative work schedules, bike and pedestrian facilities, on-site amenities (daycare, cafeteria, showers, bicycle storage areas) and a guaranteed ride home program.

Frank next reviewed bridge alternatives. Conceptually speaking, he noted that widening the existing Little Bay Bridges from 4 to 8 lanes had been considered to the west side of the existing bridges, to the east side of the existing bridges and to both sides of the existing bridges assuming that the General Sullivan Bridge (GSB) was rehabilitated for a future use. Replacing the Little Bay Bridges (LBB) with a new bridge that includes a multi-use path (assuming the removal of the GSB) was also considered. Such a new bridge could be of a signature type structure, e.g. a cable-stayed or concrete arch. He noted that widening or replacing the LBB to the west of the existing bridges would minimize potential impacts to Hilton Park and the shoreline near Bloody Point. Frank also stated that double decking of the existing bridges was also considered in hopes of minimizing the footprint of the bridges and reducing private property and environmental resource impacts on the bridge approaches. Preliminary analysis indicated that these impacts were not significantly reduced in comparison to the previously described west side bridge widening or bridge replacement alternatives, and the double-decker alternative had the additional impacts of higher cost, difficult traffic control during construction and adverse visual aesthetics.

With respect to the General Sullivan Bridge, Frank described several reuse alternatives including a multi-use path for pedestrians and bicyclists; a pedestrian, bicyclist and restricted (6 ton) vehicle or unrestricted vehicle open to local traffic; and a pedestrian, bicyclist and transit vehicle only use. Rehabilitation costs would range from $19 M to $22 M. To replace the GSB would cost approximately $36 M, and to remove it, approximately $5 M. If rehabilitated, periodic (every 25 years) repainting and structural repairs would cost approximately $4.3 M (in 2004 dollars), and deck replacement (every 35 years) would cost approximately $1.4 M (in 2004 dollars). Frank concluded his description of bridge alternatives by reviewing a cost summary matrix of LBB and GSB combined alternatives. The LBB alternatives, which included rehabilitation of the GSB, ranged in cost from $68 M to $90 M. The LBB alternatives which entailed removal of the GSB ranged in construction cost from $57 M to $100 M.

Frank then proceeded to summarize the conceptual roadway alternatives, beginning in Dover. He reviewed three (3) Dover roadway alternatives noting that two-way flow on the Turnpike overpass and the provision of a new NB on-ramp at exit 6 were common to all alternatives. He noted that Alternative 1 provided a two-lane loop ramp for the NB Turnpike connection to WB US4, and that the at-grade connection from Hilton Park and the Wentworth Terrace neighborhood to Dover Point Road resulted in a relatively high number of property impacts in comparison to Alternatives 2 and 3. Frank stated that the E-W connection of Hilton Park for local motorized and non-motorized traffic is an important element from the City of Dover's perspective. Also, the City would consider accepting less efficient traffic operation at Exit 6 if property impacts could be reduced. Frank then described Alternative 2, which provides a grade-separated E-W connection of Hilton Park, and provides the NB Turnpike connection to WB US4 via a diamond-type signal controlled intersection. In comparison to Alternative 1, property impacts are substantially reduced and traffic operation at the four (4) signalized intersections are satisfactory. Alternative 3 modifies Alternative 2 by providing a grade-separated connection between Spur Road and Boston Harbor Road. This connection – under the US 4 overpass and the SB on-ramp to the Turnpike – enables local traffic to connect with Boston Harbor Road and Hilton Park without traversing the interchange area, and allows elimination of the Spur Road traffic signal by restricting turning movements to right-turns only.

Frank then reviewed the Newington roadway alternatives reminding all that Newington representatives had initially indicated community support for Alternatives 6 and 7 contained in the 2000 Spaulding Turnpike Feasibility Study. Alternative 6 maintains interchanges at both Exits 3 and 4, provides a right-of-way for a future railroad connection (paralleling Patterson Lane) to the Tradeport at Exit 3, and would provide an ideal at-grade location for a crossover between the NB and SB barrels of the Turnpike for incident management. He noted that Alternative 6 lacked a connection between the Turnpike and the industrial area located between Shattuck Way and the riverfront, and that local traffic from Nimble Hill Road to Woodbury Avenue is required to use the Turnpike (assuming that drivers decline to use the circuitous back route of River Road and Shattuck Way). Frank noted that the SB off-ramp to Woodbury Avenue at Exit 3 had been relocated slightly to the north (revising the original concept) to avoid impacting access to the City of Portsmouth's water tower. Alternative 7 combines Exits 3 and 4 at a new single point diamond interchange. This alternative provides roadway connections to both the Tradeport and the River Road-Shattuck Way industrial area, free-flow connections between the Turnpike and Woodbury Avenue, right-of-way for a future rail connection to the Tradeport that parallels Patterson Lane, and a local connector between Nimble Hill Road and Woodbury Avenue. Local access to future development at the former drive-in site could also be provided. Projected traffic volumes require a double NB on-ramp, which is problematic given the limited distance to merge prior to the bridge. The elevated structure of the Turnpike will present a visual impact, and the cost of the interchange (based on the 2000 Feasibility Study) will be approximately 50 percent higher than Alternative 6 Revised.

Alternative 9 combines the current Exits 3 and 4 at the location of the existing Exit 3 via a SB two-lane loop off ramp and a NB diamond type interchange. The local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area is provided adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. A local roadway connects Nimble Hill Road to Exit 3 and Woodbury Avenue. The distance between the two-lane NB on-ramp at Exit 3 and the Little Bay Bridges is adequate for traffic merging prior to the bridge. Access to the former drive-in site could be provided from the local connector. Frank noted that the ATF reviewed Alternatives 6, 7, and 9 at the March 31 workshop meeting, and advised VHB to drop Alternative 7, and to focus on combining the best elements of Alternatives 6 and 9 into a new concept. To that end, he then described Alternatives 10 and 11.

Alternative 10 is similar to Alternative 9 in that it combines the current Exits 3 and 4 at the location of the existing Exit 3 for SB traffic, and maintains the local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. The local roadway connection from Nimble Hill Road to Exit 3 and Woodbury Avenue is also maintained. However, the SB off-ramp at Exit 3 has been converted from a loop ramp under Alternative 9 -- to a diamond configuration, and Alternative 10 also provides NB off- and on-ramps at Exit 4 (River Road). Alternative 11 is similar to Alternative 10, with the exception that the local connector to the industrial area and the preservation of a future rail right-of-way connection to the Tradeport has been relocated south to the Exit 3 interchange/Patterson Lane area. This results in a tri-level interchange area with the rail corridor and industrial access road running under Woodbury Avenue and the Turnpike, and the Woodbury Avenue extension traversing above the Turnpike to intersect the new connecting roadway to Nimble Hill Road.

Another alternative, Alternative 12 modifies Alternative 11 by simplifying the roadway connection from Woodbury Avenue and Exit 3 to the Tradeport, and by modifying the SB on-ramp from Exit 3 to reduce wetland impacts and increase traffic weaving distance between the SB Exit 3 on-ramp and the SB Exit 1 off-ramp. Frank concluded by noting that Alternatives 10, 11 and 12 could be modified to provide a SB off-ramp to Nimble Hill Road for the convenience of Newington residents.

At this point, Frank paused for questions and comments.

Doug Wilhelm, Thermo Electron Corp., asked if, under the Newington Interim Safety Improvement Plan, the Turnpike on-ramp from Nimble Hill Road was longer than the existing on-ramp. Chris Waszczuk responded that the proposed on-ramp is longer, in comparison to the existing condition, by approximately 1,000 feet. Also, a curbed island will be constructed as part of the interim project to preclude direct egress from the Exxon driveway to the Turnpike travel lane.

Gail Klanchesser, Coleman Drive, commented that park and ride facilities should be considered as close as possible to the origin of traffic, and that the proposed facility at the NH108/US4 interchange was too close to the UNH destination. Frank responded that the primary function of the three (3) proposed park and ride facilities – Exit 12 (Rochester), Exit 9 (Dover) and US4/NH108 was, in fact, to intercept traffic prior to reaching the study area and traversing the bridges. With respect to the US4/NH108 proposal, its function as a remote parking area for UNH related traffic is secondary in nature, yet is of benefit to UNH and Durham by potentially reducing local parking and traffic circulation pressures.

Jack Pare, a Newington resident suggested that moving goods by rail might be more cost-effective than by truck if one considers a regional area, in comparison to the smaller project area. Chris Waszczuk replied that the project need is focused on the project area.

Scott Bogle, RPC, noted that the transit ridership estimates were for 2025. He asked why the bus rapid transit alternative was higher in construction cost that the commuter rail alternative running between Rochester and Portsmouth. Frank responded that the fixed guideway construction was more costly (approximately $10 million).

Donna Callahan, noting that Alternative 1 was not included in the informational handout, asked if Alternative 1 was being dropped from further consideration. Frank O'Callaghan replied that Alternative 1 was not being recommended as one of the alternatives to carry forward.

With respect to the Newington alternatives, Bill Verge asked if reconstructing Fox Run Road could serve as an industrial connector. Frank responded that grade separation of Fox Run Road with the Turnpike would affect access to roadside abutters on both sides of the Turnpike. He added that using Fox Run Road as the industrial traffic connector to Exit 3 and the Turnpike would be counter to the town of Newington's goal to segregate industrial traffic from local residential and retail shopping related traffic. Frank then reviewed the Newington alternatives noting the Town's desire to segregate the industrial related traffic from retail generated and local traffic. Newington Fire Chief, Roy Greenleaf, asked if consideration had been given to transporting hazardous materials. Frank replied that reconstruction of existing facilities and construction of new facilities would reflect current engineering design standards which will accommodate heavy commercial vehicles, and that the aforementioned industrial connector is planned to segregate industrial related traffic from local traffic. The Chief also noted the gas line running parallel to Patterson Lane. Frank acknowledged that the project team was aware of the utility corridor and would plan accordingly.

Ed Fish expressed concern over potential emissions and noise protection. Frank noted that detailed air quality and noise impact analyses would be conducted during the next phase of the study. If air quality or noise standards are exceeded, mitigation plans will be developed. Chris Waszczuk added that base condition data has been collected so that future alternatives may be modeled.

Bill Burtis, Clean Air/Cool Planet, asked if the air quality analysis will include an analysis of CO_2 impacts. Frank replied that the project would meet all federal air quality requirements. With respect to transit alternatives, Bill inquired as to the assumptions reflected in the preliminary ridership estimates. Frank responded that the ridership estimates reflect comparisons of driver and transit trip impedance factors related to travel time and cost (e.g. cost of time, fuel, parking, transit fare).

Cameron Wake, SABR, asked if four lanes were being planned for both NB and SB bridges. Chris Waszczuk responded that the existing two lanes in each direction are over capacity, and that future travel demand projections require four lanes in each direction. He noted that one of the four lanes functions as an auxiliary lane to facilitate the safe and efficient merging and weaving of traffic as drivers enter and exit the Turnpike between Woodbury Avenue (Exit 3) and US4/Dover Point Road (Exit 6). Cameron suggested that a harder look at TDM alternatives might avoid the need for four lanes in each direction. Frank responded that the challenge is to develop a smart solution that meets the project purpose and need, and is also practical, permitable, affordable and supported by the communities. He stated that at this point in time, the project team is not convinced that a 3-lane alternative in conjunction with a package of TDM actions will meet the projected travel demand. Cameron asked if four lanes were inevitable. Chris Waszczuk replied that it appears at this time that four lanes in each direction are needed.

Cameron Wake also questioned the potential disposition of the General Sullivan Bridge (GSB), noting the need to retain a bicycle and pedestrian connection across the channel. Chris Waszczuk replied that all of the bridge alternatives provide for a bicycle/pedestrian connection, and that an entire group of alternatives provides this connection by rehabilitation of the GSB.

Bill Verge inquired as to historic property impacts. At this point, Frank referred to a preliminary summary table of bridge and roadway impacts and construction costs by alternatives. He explained that the table represented a work in progress, and attempts to provide a quick relative comparison of alternatives vis-à-vis impacts and costs. He cited several examples. In comparing the Dover Roadway Alternatives 1, 2 and 3, Frank noted that wetland impacts ranged from 5.1 acres (Alternative 3) to 7.0 acres (Alternative 1), Local Connectivity ranged from Low (Alternative 1) to High (Alternative 3) and the Total Construction Costs ranged from a low of $17.8 M (Alternative 2) to a high of $25.9 M (Alternative 1). Frank then reviewed the six Newington alternatives, each of which identified the impact of a single historic property – the Isaac Dow House, located on Woodbury Avenue. Chris Waszczuk noted that the historic impact issues would be addressed in the 4(f) process. He added that Mr. Verge could request to become a consulting party in this process, and that the project team would explore the feasibility of alternatives that may avoid or minimize impact to this property.

Before proceeding to present the alternatives recommended to carry forward, Frank noted that, depending on which alternatives are combined for Newington, the bridges, and Dover, the estimated total project construction costs could range from $119.6 M to $175.6 M.

Frank then summarized the recommended range of reasonable alternatives to carry forward for detailed analysis in the next phase (DEIS) of the project. He began by noting that the No-Build alternative is required by the federal environmental process to be carried forward as a base case condition that forms the framework for other Alternatives to be measured against. With respect to Transportation System Management (TSM) actions, the following alternatives are recommended to be

carried forward:

- NB Exit 6W Deceleration Lane Improvement
- SB Exit 6 On-Ramp Improvement
- Interim Safety Improvement Plan in Newington
- SB Deceleration Lane Improvement at Exit 3
- NB Auxiliary Lane Improvement from Exit 3 to Exit 4

Transportation Demand Management (TDM) alternatives recommended to be carried forward include:

- Expand Downeaster Service (without double tracking Main Line West)
- Restoration of Pease Spur
- Expand Intercity Bus Service (Rochester-Boston)
- Enhance Express Bus Service (Rochester-Portsmouth)
- Enhance Local Bus Services
- Promote Employer-Based Measures

Bridge Alternatives recommended to be carried forward include:

- Rehabilitation and Widening of Little Bay Bridges with General Sullivan Bridge Rehabilitation
- Rehabilitation and Widening of Little Bay Bridges with General Sullivan Bridge Removed
- Replace Little Bay Bridges with General Sullivan Bridge Removed

All of these bridge alternatives are proposed to be located to the west of the existing LBB to avoid/minimize impacts to Hilton Park and the Bloody Point shoreline.

Recommended Roadway Alternatives to be carried forward include:

- Alternative 2 (Dover)
- Alternative 3 (Dover)
- Alternative 10 (Newington)
- Alternative 11 (Newington)
- Alternative 12 (Newington)

Following Frank O'Callaghan's presentation of recommended alternatives to carry forward, there was another round of questions and comments.

A resident asked, in comparing the relative construction costs of Alternatives 10, 11 and 12, why is Alternative 10 the lowest? Frank responded it was due in part to lower bridge costs; Chris Waszczuk added that the location of the Pease rail spur was also a cost factor.

Bill Burtis asked if the Interim Safety Plan was reflected in the Newington alternatives. Frank confirmed that it was.

Jack Pare, a Newington resident expressed concern about the strong currents in the channel, and the affect the new or widened piers and footings could have on the currents and channel navigation. Chris responded that the project team has experts from UNH who are developing a hydrodynamic model of the channel to assess such impacts.

Chris Waszczuk asked attendees if the project team was on the right track vis-à-vis the range of recommended alternatives. Bill Burtis asked, assuming construction of eight lanes, when would the new facility reach capacity. Frank O'Callaghan responded that capacity would be reached sometime after 2025. He noted that new or improved bridge and highway infrastructure is usually designed for level of traffic (LOS) 'C' operations (with levels of service ranging from 'A' at best to 'F' at worst, and LOS 'E' representing capacity). Given the sensitive environmental resources of the study area, and the desire to minimize potential impacts, LOS 'D' is being used as a design criterion. Chris Waszczuk added that it is NHDOT's policy not to widen beyond four through lanes in each direction.

Scott Bogle asked if the induced growth results of the regional econometric model would be worked back into the overall travel demand projections. Chris Waszczuk responded that the traffic model has a land use component, which the planning commissions used to forecast the future growth in the region, and as such induced growth impacts should be accounted for. Scott asked if there would be travel demand projections and analysis beyond the 2025 planning horizon. Frank replied that there are no plans to project travel demand beyond 2025.

Given that the 2025 travel demand projections require four lanes in each direction assuming current travel characteristics, Bill Burtis suggested modeling the TDM alternatives assuming only three lanes in each direction. By providing less roadway capacity (3 lanes) than required (4 lanes), potential ridership for TDM alternatives should be maximized. Frank responded that the current TDM analysis of alternatives does, in fact, assume only three lanes of travel in each direction, and as such, is capacity constrained.

Jack Pare suggested that it would be prudent to reflect the planning for future rail or transit into the bridge and roadway design plans for travel beyond 2025.

There being no further questions or comments, Chris Waszczuk thanked all for attending and offering their input, and adjourned the meeting at 9:45 PM.

cc: J. Brillhart
C. Waszczuk
M. Dugas
M. Laurin
H. Goodwin (Bureau of Turnpikes)
B. O'Donnell (FHWA)
F. O'Callaghan (VHB)
Paul Beecher, Dover City Manager
Town of Newington Selectboard
Newington-Dover ATF

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING
NEWINGTON TOWN HALL
JULY 1, 2004

Name Donald E Black
Affiliation
Address 33 Fox Run Rd, Newington, NH
Phone /Email /

Name BILL BURRS
Affiliation CLEAN AIR - COOL PLANET
Address 100 MARKET ST. PORTSMOUTH, NH
Phone /Email bburns@cleanair-coolplanet.org

Name Brad Loomis
Affiliation Newington PD
Address 71 Fox Pt Rd Newington NH 03801
Phone /Email 431-5461 / bloomis@Newingtonnhpd.com

Name Jack Pare
Affiliation Newington Planning Board
Address 188 Little Bay Rd Newington NH 03801
Phone /Email 436-6415 / JackPare@comcast.net

Name Gail Klanchesser
Affiliation Resident
Address 18 Coleman Dr. Newington, NH 03801
Phone /Email 431-5033 / gklanchesser@comcast.net

Name Roy Greenleaf
Affiliation Newington Fire
Address 80 Fox Point rd Newington, N.H
Phone /Email 436-9441 / RGreenleaf@Newingtonfire.org

Name John Klanchesser
Affiliation Resident
Address 18 Coleman Dr Newington NH 03801
Phone /Email 431-5033 /

Name Doug Wilhelm
Affiliation Thermo Electron Corp
Address 25 Nimble Hill Rd. Newington, NH
Phone /Email 430-2206 / doug.wilhelm@thermo.com

Name PHIL & BARBARA TOOMIRE
Affiliation
Address 48 NIMBLE HILL RD
NEWINGTON, NH 03801

Phone /Email /

Name JOHN FRINK
Affiliation PLANNING BD
Address 272 NIMBLE HILL RD
NEWINGTON

Phone /Email /

Name FRANK SHEPARD
Affiliation DAV
Address 5 SEWALL Road
Portsmouth NH

Phone /Email /

Name ED FISH
Affiliation DAV CHAPTER
Address 272 COLONIAL DR
PORTSMOUTH

Phone /Email /EDFishJR@AOL.COM

Name Dave Daniels
Affiliation
Address 27 Wentworth Terrace

Phone /Email /

Name JACK BERNIER
Affiliation 25 WENTWORTH TERRACE
Address

Phone /Email /

Name DONALD GRASS
Affiliation DAV 19 River Rd
Address 4 Boyce Rd
EliOT ME 03903

Phone /Email /

Name CHRIS ABBOTT
Affiliation
Address HANNAH LANE
Newington

Phone /Email SKIP28408@HOTMAIL.COM

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name Chris CROSS
Affiliation Newington Resident
Address on file

Phone /Email ____ / ____

Name Chris Bellmare
Affiliation Newington Resident
Address 165 Little Bay rd.

Phone /Email ____ / Cbellmar@yahoo.com

Name Conrad J. Morin
Affiliation DAV
Address 93 Woodlawn Cir
Portsmouth, NH

Phone /Email 603 431-8685

Name Bud O'Donnell
Affiliation PWSA NH
Address ____

Phone /Email ____ / ____

Name CAMERON WAKE
Affiliation SABR
Address PO Box 412
Durham, NH 03824

Phone /Email ____ / ____
info@seacoastbikes.org

Name RAS Nichols
Affiliation COAST
Address 42 Summer DR.
Dover, NH 03820

Phone /Email 743-5777 / rnichols@coastbus.org

Name Dorothy M WATSON
Affiliation Newington Resident
Address 133 Fox Point Rd
Newington, NH 03801

Phone /Email ____ / ____

Name ____
Affiliation ____
Address ____

Phone /Email ____ / ____

Name ____
Affiliation ____
Address ____

Phone /Email ____ / ____

Name ____
Affiliation ____
Address ____

Phone /Email ____ / ____

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Bill Cass, NHDOT
Doug DePorter, NHDOT
Ed Woolford, FHWA
Bill O'Donnell, FHWA
Pete Walker, VHB
Tom Wholley, VHB
Frank O'Callaghan, VHB

Date/Time: May 18, 2005

Project No.: 51425

Place: Dover City Hall

Re: Public Information Meeting
Newington-Dover, 11238

Notes taken by: Frank O'Callaghan

Chris Waszczuk, NHDOT Project Manager, called the meeting to order at 7:10 PM. He welcomed those in attendance and introduced the project team: Mike Dugas, Marc Laurin, Bill Cass and Doug DePorter from the NHDOT, Bill O'Donnell and Ed Woolford from FHWA, and Frank O'Callaghan, Pete Walker and Tom Wholley from VHB. He reviewed the meeting agenda, noting that the project team was looking for input, and that there were three (3) scheduled breaks in the presentation of material for public comment and questions.

Chris reviewed the project's purpose which is to reduce safety problems and improve transportation efficiency for an approximately 3.5 mile long section of the Spaulding Turnpike beginning at the Gosling Road Interchange in Newington and extending across the Little Bay Bridges to a point just south of the toll plaza in Dover. Chris then reviewed the project need citing the importance of the Spaulding Turnpike from commuter, commerce, and tourist perspectives; its designation as part of the National Highway System (NHS); and its function as a limited access highway linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. He cited the historic growth of traffic and future projections, the poor levels of traffic service, existing geometric constraints and deficiencies and the history of traffic accident experience. He noted that the compactness of the 3.5 mile study area and short spacing between the six (6) interchanges within this section of the Turnpike constrain traffic operations, and exacerbate the impacts of a traffic accident, given the lack of suitable alternate routes to the Turnpike. Chris also noted that the Turnpike bisects local residential, recreational and commercial areas, and that there exists a need for local connectivity of motorists, pedestrians and bicyclists between the east and west sides of the Turnpike in both Newington and Dover. He stated that the Little Bay Bridges are major structures located on an important highway in a moderate seismic area and were not designed to meet the current seismic criteria for this region. He noted that the Newington-Dover Spaulding Turnpike project was included in the State's Ten-Year Transportation Improvement Program and was the highest long-term transportation priority of the Seacoast Metropolitan Planning Organization. He stated that as the

area continues to develop and traffic volumes increase, traffic operations and safety conditions would worsen. If nothing is done to improve the Turnpike, it is estimated that 2025 weekday periods of traffic congestion will lengthen to more than three times the existing congested periods.

Chris then reviewed the five (5) phases of an Environmental Impact Statement (EIS) noting that the EIS is the highest order of study required by the National Environmental Policy Act (NEPA). The project Scoping Report, published in March 2004, summarizes the Phase 1 activities, which included the project's purpose and need statement, inventories of environmental resources, analysis of existing traffic conditions and projections of future travel demands, and the identification of the range of typical alternatives that would be considered. The Rationale Report, published in January 2005, and available on the project website, summarizes the development, screening and range of reasonable alternatives to be carried forward into Phase 3 of the study. Current Phase 3 activities include the detailed evaluation and impact analysis of alternatives, and the identification of a preferred alternative. He noted that there would be Public Information Meetings scheduled for the fall (2005) to discuss the preferred alternative. At the conclusion of Phase 3 in January 2006, a draft Environmental Impact Statement (DEIS) will be published. A joint FHWA/ACOE/NHDES/NHDOT Public Hearing (Phase 4) on the Preferred Alternative is targeted for April 2006. Phase 5, which is scheduled for September 2006 – June 2007, will focus on finalizing the EIS by responding to comments on the Draft EIS and comments from the Public Hearing. Assuming the availability of funding and procurement of the necessary approvals and permits, construction could begin as early as 2008.

Chris concluded his introductory remarks by noting the importance of public participation, and the openness of the process. He explained that a project Advisory Task Force – comprised of representatives of the municipalities of Newington, Dover, Portsmouth and Durham, the Rockingham and Strafford Regional Planning Commissions, COAST, the Pease Development Authority, the Great Bay Estuarine Research Reserve, and the Greater Dover and Portsmouth Chambers of Commerce, FHWA and NHDOT – has met 12 times during the course of the study and acts as a forum for communication, providing early and continuous input to the project team and feedback to their respective constituencies. In addition, Public Information Meetings are planned during each phase of the project in both Dover and Newington locations, and a project website, www.newington-dover.com, is maintained that provides a wealth of project related information, and is another means of public input to the project team.

At this point, Chris paused and asked for questions or comments. There being none, he introduced Frank O'Callaghan to review the project background, Frank began by describing the project study area as extending north from Exit 1 (Gosling Road/Pease Boulevard) of the Turnpike on the south, traversing the Little Bay Bridges to a point just south of the Dover Toll Plaza, and bounded by the Piscataqua River on the east and Little Bay on the west. He noted many study area resources and issues such as marine habitat, navigation, water quality, tidal and surface wetlands, floodplains, ground water, hazardous materials, visual resources, park and recreational activities, historic and cultural resources and potential residential and commercial property impacts. He stated that air quality and noise were also relevant issues, and each is being currently analyzed in detail during Phase 3 (DEIS) of the study. He noted that his colleague, Tom Wholley, would present some preliminary findings on noise impacts later in the presentation. He also noted that direct and indirect and cumulative socio-economic impacts are also being currently identified and analyzed during the current phase (DEIS) of the study. He stated that the March 2004 Scoping Report summarized many of the inventories of environmental resources.

In summarizing safety conditions, Frank noted that study area traffic accidents during the 1997-2001 period (908 total) increased by approximately 58 percent in comparison to the previous 5-year, 1992-

1996, period (575 total). During the 1997-2001period, accidents increased at approximately 11 percent per year in comparison to the average annual traffic volume growth of 3 percent per year. He also reviewed traffic volume growth where average daily traffic (ADT) volume has increased from approximately 30,000 vehicles in 1980, to over 70,000 in 2003, and is projected to grow to over 94,000 vehicles per day by the year 2025. He noted that current weekday peak hour capacity constraints extended from Exit 6 southbound to Exit 3 (Woodbury Avenue) in the morning, and from Exit 3 northbound through Exit 6 in the evening. These capacity conditions are compounded by a number of geometric deficiencies including substandard shoulder width on the Little Bay Bridges, substandard turning radii at many of the interchange on and off ramps, and inadequate weaving distances in both the northbound (River Road) and southbound (Nimble Hill Road) Exit 4N - Exit 4 area. As traffic volumes grow, the safety and traffic operational conditions, which are currently constrained, will worsen. For example, if the Turnpike is not improved, current weekday peak hour periods of congestion will double in the morning and more than triple in the evening by 2025.

Frank O'Callaghan then presented some general bridge information for both the Little Bay Bridges and the General Sullivan Bridge. He noted the length, width, main navigation span and vertical clearance of each bridge. The Little Bay Bridges are characterized by substandard shoulder widths and a 3.5 percent grade which restricts driver sight distance to a 60 mph design speed (design speed being the maximum safe operating speed governed by the vertical alignment or profile). The 2-lane bridges have minor deterioration and the substructure for both bridges – composed of reinforced concrete – was designed and constructed in 1966 prior to the current, more stringent seismic resistance requirements. Frank then enumerated several factors which would affect the rehabilitation alternatives for the General Sullivan Bridge. A 4 percent grade limits driver sight distance to a 45 mph design speed. The cross-section is limited to 24' of pavement and 2'-11" sidewalks on each side. In addition, the deck, girders and truss members exhibit major deterioration, and there is extensive substructure deterioration. The General Sullivan Bridge is also historic – being the second highest-ranking historic bridge in the state -- and subject to costly lead paint removal and re-painting.

At this point Frank paused for questions and comments. There being none, Frank proceeded to review the alternatives that have been carried forward for further study. In addition to the No-Build, Transportation System Management (TSM), Transportation Demand Management (TDM), Bridge Alternatives, Roadway Alternatives and combinations thereof have been progressed. With respect to TSM improvements, Frank noted that these improvements are generally low cost in nature and usually implemented within the existing right-of-way, or require minor right-of-way, to improve safety and/or increase traffic operating efficiency. Examples of TSM-type actions are adding turning lanes and/or increasing traffic control at intersections, or changing pavement markings or increasing regulatory or directional signage.

Within the study area, Frank noted that signage on the bridge approaches that reminds drivers to stay in their lane has already been upgraded, and directional signage for NB travelers connecting to US4 at Exit 6W are being upgraded as part of a current construction project. He then referred to conceptual graphics and described several TSM alternatives.

Dover TSM 1

This action involves the extension of the NB deceleration lane to the loop ramp leading to US 4 at Exit 6W. Restriping of the shoulder area under the overpass will extend the deceleration lane by approximately 400' without impacting the bridge abutment. This measure will prevent peak hour exiting traffic from backing up on the loop ramp onto the Turnpike and blocking NB through traffic on the Turnpike. *[Note: This was implemented in 6/2005.]*

Dover TSM 2

This action involves merging the 2-lane SB on-ramp at Exit 6 to a single lane prior to the merge with the main line, coupled with carrying two (2) through lanes on the Turnpike through the Exit 6 interchange to merge with the single SB on-ramp. Currently, the two (2) Turnpike through lanes merge to a single lane. The proposed changes will make it safer and easier for drivers to be in the proper lanes (either inside or outside) when planning to exit at Nimble Hill Road or Woodbury Avenue.

Interim Safety Plan (Newington)

The Interim Safety Plan will address the current safety and traffic operational problems at Nimble Hill Road and at River Road due to inadequate weaving distances between these roadways and the median SB to NB turnaround on the Turnpike (Exit 4N). By providing a two-way, grade-separated connection under the Turnpike, between Nimble Hill Road and River Road, the median turnaround will be eliminated, thus eliminating the current weaving conditions. The existing SB on-ramp from the grade-separated turnaround from River Road will also be eliminated which will remove another safety and traffic operational problem. This project is designed and construction will be initiated by next month (June 2005).

Other Newington TSM Actions

Upon completion of the Interim Safety Plan, the SB deceleration lane to Woodbury Avenue can be extended to provide improved operations. In addition, a NB auxiliary lane can be developed between Woodbury Avenue and River Road to provide a better merging and weaving condition for traffic entering the Turnpike from Woodbury Avenue and for traffic exiting at River Road. In addition, access from Woodbury Avenue to Shattuck Way/River Road via the River Road/Patterson Lane connection could be restricted to emergency vehicles only to preclude NB traffic from diverting to River Road in an attempt to bypass Turnpike traffic and rejoin the Turnpike at Exit 4. The NB auxiliary lane will be included as part of the Interim Safety Project

While reducing the level of traffic turbulence and improving the safety of current traffic operations on both sides of the bridges, Frank reminded all that the basic capacity constraints of the bridges and Turnpike would remain.

Frank then reviewed the Transportation Demand Management (TDM) strategies that have been considered to reduce the overall travel demand within the corridor including rail, bus, park and ride facilities, high occupancy vehicle (HOV) lanes and employer-based measures. He noted that the project team had met with transit operators and regional planning staff in developing these alternatives.

From a rail perspective, expansion of the Downeaster service by adding a fifth round trip to run southbound during the AM peak period and northbound during the PM peak period is being considered. [Current daily service includes four (4) round trips between Portland and Boston, with stops at Dover, Exeter and Durham. However, current service does not stop in Dover, Exeter and Durham during weekday peak commuter periods.] This additional peak period train set would run either between Boston and Dover, or Boston through Dover to Rochester, and include a new layover facility in Dover. A second rail alternative involves the inactive Pease Spur rail right-of-way (R.O.W.) in Newington which runs from the industrial area (the Newington Branch Line), across the Turnpike to the Pease Tradeport. The rail R.O.W. is at-grade and was active in the late 1950's and 1960's when Pease was a military base. Frank noted that all of the Newington roadway alternatives maintain a grade-separated R.O.W. corridor for possible future restoration of this rail service.

Frank then discussed three (3) bus alternatives that are under consideration. C & J Trailways currently operates a coach service between Dover and Boston via Portsmouth. This service could be expanded by adding coaches and extending the service area to Rochester. COAST plans to operate new express service between Rochester and Portsmouth along the Turnpike. This service is being funded through a CMAQ grant and is scheduled to begin in 2006. He noted that the express service could be further enhanced by adding buses to reduce headways and by adding Park and Ride facilities at Exit 9 in Dover and at Exit 12 in Rochester. The park and ride facilities would allow commuters a place to transfer between their private vehicles and the bus service, as well as support ride sharing and van-pooling.

Wildcat Transit and COAST [specifically COAST Route #2 (Rochester-Portsmouth), Wildcat Route #4 (Dover-Portsmouth) and COAST's Tradeport Trolley] operate local bus routes in the study area. These services could be enhanced by adding buses to reduce headways and by providing an interconnection/transfer point at Exit 1 which would allow riders to transfer among the local bus operators. In addition, a new Park and Ride facility could be constructed at the intersection of Route 108 and US 4 in Durham, which would support the Wildcat #4 route, encourage ride sharing and van-pooling and allow the capture of some traffic that would otherwise go to or from the UNH campus. Since there is some overlap among the three bus alternatives, consideration is being given to bundling the three alternatives together which would reduce overall costs, improve system efficiency and maximize ridership.

Frank next referred to 6-lane, 7-lane, and 8-lane HOV (high occupancy vehicle) alternatives that were evaluated, in comparison to the standard 8-lane (4 NB and 4 SB) roadway and bridge cross section, to potentially reduce the scale and impact of future roadway and bridge infrastructure improvements. He noted that four lanes of travel in each direction, combined with expanded transit service and employer-based actions – such as ride sharing and flexible work hours – are required to meet future 2025 travel demands. Given the need for a minimum of three lanes in each direction during summer weekends, the 6-lane concept – with two lanes northbound and southbound and two (2) reversible center lanes – is infeasible. Given the compactness of the study area (relatively short distance between Exits 3 and 6), HOV ridership estimates of barely 50 percent of the minimum volume necessary to justify an HOV lane, and cross-section widths that are greater than the standard 8-lane roadway section, both the 7-lane (single HOV contra-flow lane) and 8-lane concurrent HOV lane alternatives were also deemed infeasible and dropped from further consideration.

Frank reviewed employer-based TDM strategies which could include transit subsidies, ride-sharing, vanpools, alternative work schedules, bicycle and pedestrian facilities, on-site amenities (day care, showers, bicycle storage racks, etc.) and a guaranteed ride home program. He noted that these programs are usually promoted and coordinated with employers through a Transportation Management Association (TMA).

He then described the Little Bay Bridge alternatives which include rehabilitation and widening of the Little Bay Bridges (LBB) with the General Sullivan Bridge (GSB) rehabilitated, rehabilitation and widening of the LBB with the GSB removed, and replacement of the LBB with the GSB removed. All of the alternatives (either 6 or 8 lanes) would build to the west of the existing bridges to minimize the impacts on Hilton Park and the shoreline at Bloody Point. Frank then proceeded to discuss the profile of the Little Bay Bridges in the context of design criteria. He referred to a graphic depicting the existing profile of the LBB which corresponds to a 60 MPH design speed, and a 70 MPH design speed profile overlayed on the existing (60 MPH) profile. He noted that the 70 MPH profile provided slightly more stopping sight distance for the driver, and that the grades on the bridge would be approximately 3.3 percent in comparison to the 3.5 percent grades on the existing profile. He stressed that the driver's sight distance associated with 60 MPH is not a safety deficiency, in comparison to the

narrow shoulders (2'-0" to 2'-3") on the existing bridges which are safety deficiencies. He noted that the 60 MPH design speed is 10 MPH greater than the 50 MPH posted speed for the bridges and study area, and that the 50 MPH posted speed was appropriate for the study area. The Turnpike study area is in a zone of transition where abutting land use is developed, interchange spacing is close, and there are relatively high volumes of traffic entering and exiting the Turnpike and changing lanes. Under these conditions, drivers expect reduced speeds, similar to comparable sections of urban roadways such as I-93 through Manchester and Concord, I-293 in Manchester and I-95 in Portsmouth and Kittery, Maine. The Little Bay Bridge rehabilitation/widening alternatives maintain the 60 MPH design speed profile, address the substandard shoulder deficiencies, improve the traffic weaving conditions which are prevalent on the existing approaches to the bridges, increase capacity on the Turnpike and bridges and have significantly less impacts to Hilton Park and property owners than the Little Bay Bridge replacement and GSB removal alternative to the west of the existing LBB that provide a 70 MPH design speed. Frank noted that under current PM peak hour conditions, traffic flows freely northbound across the bridge, which is constrained by the narrow shoulders and density of traffic, yet, at the same time, traffic congestion and long delays are prevalent from Exit 1 north to the bridge approach. This congestion and delay are due, not to the profile of the bridge, but to the lack of auxiliary lanes to accommodate traffic entering, exiting and changing lanes.

Frank then proceeded to describe the roadway alternatives. In Dover, Alternatives 2 and 3 were very similar – both eliminated Exit 5, converted the overpass at Exit 6 to 2-way operation, reconfigured the Exit 6W off-ramp from a loop to a signalized diamond-type design, added the missing northbound on-ramp, and provided a grade-separated Hilton Park connector (under the Turnpike). Alternative 3 differed in that a grade-separated local connector is provided under US 4 connecting Spur Road with Boston Harbor Road, thus eliminating the need for a traffic signal at the Spur Road/US 4/Boston Harbor Road intersection. [With the local connector, turning movements at this intersection can be restricted to right turns.] In Newington, Alternatives 10, 11 and 12 combine Exits 3 and 4 in the southbound direction via a local traffic connector from Nimble Hill Road to a reconfigured Exit 3 at Woodbury Avenue, industrial traffic access to Exit 3 and the Turnpike is improved, a secondary access connection to the Tradeport is provided to Exit 3, and the existing rail spur right-of-way connecting the Newington Branch to the Tradeport is preserved, in grade-separated fashion, in the event that future rail operations become viable following Turnpike reconstruction. Alternative 10 locates the industrial traffic connector and the rail right-of-way along the existing rail R.O.W. Alternatives 11 and 12 locate the grade-separated industrial traffic connector and rail R.O.W. paralleling Patterson Lane at Exit 3. Both Alternatives 10 and 11 provide a diamond-type interchange at Woodbury Avenue (Exit 3). Alternative 12 is very similar to Alternative 11 except that the southbound on-ramp from Woodbury Avenue is reconfigured from a diamond-type layout (Alternative 11) to a loop ramp (Alternative 12). Frank noted that the cross-section of Woodbury Avenue under any of the alternatives would be limited to two lanes in each direction, separated by a median, with shoulders and sidewalk panels on each side, and would not substantially impact the Isaac Dow House or the Beane Farm building, both historic resources.

Frank then explained that feedback from the ATF and others, coupled with further engineering study, have resulted in recent modifications to Alternatives 10 and 12 in Newington and Alternatives 2 and 3 in Dover. He proceeded to describe the most recent modifications to Alternative 10, noting that the mainline of the Turnpike had been shifted approximately 80' to the west in order to simplify the construction of the Woodbury Avenue overpass and improve traffic management during construction; the Exit 3 SB on-ramp had been converted from a diamond-type configuration to a loop ramp in order to maximize traffic weaving distance between the Exit 3 on-ramp and the Exit 1 off-ramp; the elevation of the grade-separated railroad R.O.W. and industrial traffic connector to Exit 3 had been lowered by approximately 8 feet which lowered the mainline profile of the Turnpike; and that the limits of slope impacts had been calculated and

depicted on the plan. He referred to these revisions as Alternative 10A. Frank then reviewed the lowered profile of Alternative 10A.

Frank then described refinements to Alternative 12 noting similarities to Alternative 10A such as the slight horizontal shift in alignment to the west to improve constructability and traffic management at Exit 3, and the depiction of the limits of slope impacts due to construction. He also noted that the grade-separated railroad R.O.W. and industrial traffic connector to Exit 3 had been shifted approximately 900 feet to the north to improve the constructability of the Exit 3 interchange and to avoid an existing utility corridor paralleling Patterson Lane, and that the roadway connector to the Tradeport had been realigned to avoid the potential prime wetland area located west of Railway Brook. Frank referred to these modifications as Alternative 12A, and reviewed the mainline Turnpike profile of Alternative 12A, noting that the elevation of the grade-separated railroad R.O.W. and industrial traffic connector had been lowered in Alternative 12A, in similar fashion to Alternative 10A. He noted that the Turnpike, under Alternative 12A, would be approximately 18'-20' above the elevation of the existing NB barrel of the Turnpike at the point where the railroad R.O.W. and industrial traffic connector passed under the Turnpike.

With respect to Alternatives 2 and 3 in Dover, Frank stated that the only refinements pertain to the identification of the limits of potential slope impacts due to construction, and that the Boston Harbor Road/Spur Road intersection had been relocated approximately 150' to the east to increase vehicle storage lanes (Alternative 2) and transition areas for the westbound lane drop on US 4, prior to the Scammell Bridge. He also reviewed the Turnpike's profile between the Little Bay Bridges and Exit 6. He noted that the Hilton Park Connector was located approximately 1,200' north of the bridges, where the Turnpike would be approximately 18' above the existing elevation of the Turnpike to provide clearance for the Hilton Park Connector below. An alternative location for the connector had been considered adjacent to the channel, but Frank explained that potential impacts to parkland, flood plain issues, and additional cost ($5.5 M) deemed this location infeasible in comparison to the northerly alternative.

At this point, Frank paused to introduce Tom Wholley from VHB who is directing the noise impact analysis. Prior to Tom's summary of the preliminary noise impact analysis, there were several questions and comments pertaining to the roadway alternatives that had just been described. Matt Mayberry, Dover City Councilor, stated that it appeared to him that the Newington alternatives were being driven by economic development. Frank responded that, to the contrary, the local roadway connections, as proposed, would improve transportation efficiency and safety within the study area, the access to the Tradeport from Exit 3 would extend the service life of Exit 1 and improve area traffic operations, and planning to accommodate the future movement of goods into the Tradeport could potentially reduce the volume of heavy commercial vehicles on the Turnpike in the future. All of these concepts are directly related to the project's purpose and need. Frank did, however, acknowledge that the local roadway connectors could also provide access to future land development. Ray Bardwell, 199 Spur Road, Dover, questioned the operation of the proposed northbound signalized diamond-type interchange at Exit 6, in comparison to the existing loop ramp configuration for westbound exiting traffic bound for US 4. Frank responded that the signalized diamond interchange, which provides double left turn lanes, would operate at a satisfactory level of service, and that the queuing of off-ramp vehicles would be contained on the off-ramp and not spill back onto the Turnpike. Future traffic volumes require a 2-lane loop ramp [under the loop ramp alternative] which raises safety and operational issues. Frank added that the 2-lane loop ramp alternative would also add approximately $2M in bridge costs. Given the traffic operations adequacy of the signalized diamond proposal, and in light of the safety concerns and additional cost associated with the 2-lane loop ramp alternative, the project team believes that the signalized diamond interchange is the better alternative. Frank also mentioned that the signal operations at the northbound ramps

would provide gaps in the traffic stream along the overpass which would make it easier to exit Spur Road and enter and exit Dover Point Road in the absence of traffic signals at these locations. A final question was asked by Jack Pare, Newington Planning Board, as to the elevation of the Turnpike as it traverses over the proposed industrial traffic connector/railroad R.O.W. as depicted in Alternatives 10A and 12A. Would the elevation of the Turnpike be similar to the Turnpike as it passes over Exit 1 at Pease Boulevard/Gosling Road? Frank suggested that it would be similar – approximately 20' to 21' – and stated that he would check on the actual elevation/profile at Exit 1.

Frank next requested that further questions be held until after Tom Wholly presented a brief summary of the preliminary noise analysis that is currently under way. Tom began by reviewing the elements of noise – loudness, frequency and duration – noting that noise travels in a straight line, noise measurements in decibels are logarithmic in nature, and noise is subject to individual perceptions. He reviewed the NEPA process which includes determining existing noise levels, calculating future sound levels, determining noise impacts and evaluating noise mitigation where required. Tom also described FHWA's noise model and the factors – roadway geometry, traffic volumes and traffic speeds – calibration and calculations associated with the model. He noted noise abatement criteria, e.g. 67 dBA for residences, and stated that an increase of 15 dBA or more is considered a substantial noise increase. Tom also reviewed the criteria to evaluate noise mitigation measures; such criteria include: engineering, safety, acoustic performance, cost-effectiveness, development vs. highway timing, land use and views of impacted receptors (i.e. residents' opinions of the proposed mitigation). Tom then referred to a graphic which depicted noise impact areas within the study area. He identified three (3) areas in Newington and five (5) areas in Dover where existing sound levels exceed the noise abatement criteria. Construction of the Turnpike improvements – assuming 8-lanes under Alternatives 10A (Newington) and 3 (Dover), noise levels in the aforementioned areas would increase, at 2025 traffic volume levels, in the range of 1 to 4 dBA, depending on location. He explained that the project related impacts are considerably less than the NHDOT 15 dBA threshold for identifying a substantial noise increase, and that no new areas are created where sound levels exceed the noise criteria. In other words, the areas where existing sound levels exceed the noise criteria are the same areas in 2025 after the Turnpike is improved where sound levels exceed noise criteria. The increase in noise in these areas, due to the improvement project, ranges between 1 and 4 dBA. Tom concluded his presentation by stating that the NHDOT has no responsibility to mitigate existing noise conditions, but since the project is impacting the existing areas, these areas will be evaluated for mitigation.

A number of questions followed Tom's presentation. Gale Pare, 188 Little Bay Road, Newington, asked if the noise modeling and analysis of future conditions took into account the elimination of trees currently located in the median of the Turnpike. Tom responded in the affirmative, stating that the analysis is a worst-case condition. Matt Mayberry, Dover City Council, asked if the noise analysis extended beyond the Dover toll plaza. Tom referred to the plan depicting the noise impact areas and stated that the analysis included Area 13 located to the west of the toll plaza, and Area 14 located to the east of the toll plaza. Ray Bardwell, 199 Spur Road, asked if Tom was aware of any legislation that would prohibit truckers from applying jake brakes under certain circumstances. Tom replied that he was unaware of such legislation. Ray asked if the noise analysis was conducted during a noisy time of day as opposed to a quiet time of day. Tom stated that the analysis reflects the noisiest hour. He noted that noisy automobiles and motorcycles were considered as trucks as part of developing a worst-case analysis condition.

Jack Pare inquired about FAA noise models. Tom responded that the FAA utilizes specialized models to measure noise. These models include tree zones, and Tom pointed out that for tree zones to be effective at mitigating noise, wooded areas need to be at least 300' deep and full grown.