

March 27, 2014

Stephen J. Bradstreet  
Senior Project Manager  
RANSOM CONSULTING, INC.  
400 Commercial Street, Suite 404  
Portland, ME 04101

RE: Town of York Police Station – Traffic Peer Review

Dear Steve:

In accord with your request, T.Y. Lin International (TYLI) is pleased to submit the following traffic peer review comments in conjunction with Town of York Police Station project located off Ridge Road in York. The following outlines our review of the project as it relates to the Town's Site Plan and Subdivision Regulations. In addition, we have reviewed the Traffic Assessment prepared by Gorrill-Palmer Consulting Engineers, Inc. and the Site Plan prepared by SMRT.

The traffic assessment prepared by GPCEI does not include the construction of the Access Road to Route 1 (all movements from the Police Station enter and exit via Ridge Road and through traffic between Ridge Road and Route 1 is not permitted at this time). The Site Plan illustrates the construction of the Access Road fully between Ridge Road and Route 1 and thus the application materials are inconsistent from a program perspective. It would be my suggestion that the Site Plan materials be revised such that it only includes the construction of the Access Road to the Police Station with appropriate turnaround design provisions (cul-de-sac or hammerhead layout). This recommendation is based on the fact that acceptable traffic data for evaluating realistic peak season traffic impacts at the Route 1 intersection cannot be collected until the summer. An amended application or new application would then be submitted after a credible traffic study is completed, and if deemed acceptable, include the construction of the Access Road from the Police Station to Route 1.

The following comments reflect my review of conditions with the construction of the Access Road to Ridge Road ONLY.

### **Town's Approval Standards and Criteria**

#### **1.2 CRITERIA OF APPROVAL**

1.2.5 Traffic. The development will not cause unreasonable highway or public road congestion or unsafe conditions with respect to use of the highways or public roads existing or proposed, and if the proposed development requires driveways or entrances onto a state or state-aid highway located outside the urban compact area of an urban compact municipality as defined by Title 23 §754, the Maine Department of

Transportation has provided documentation indicating that the driveways or entrances conform to Title 23 §704 and any rules adopted under that section;

***Comment: Based upon the information contained in the traffic assessment, it is my professional opinion that the proposed project will not cause unreasonable congestion or safety issues.***

1.2.19 Impact on Adjoining Municipality. For any proposed development that crosses municipal boundaries, the proposed development will not cause unreasonable traffic congestion or unsafe conditions with respect to the use of existing public ways in an adjoining municipality in which part of the development is located.

***Comment: No impacts are anticipated.***

6.3.33 For Site Plans or Subdivision Plans involving 40 or more parking spaces or projected to generate more than 400 vehicle trips per day, a traffic impact analysis, prepared by a Registered Professional Engineer with at least 3 years experience in traffic engineering, shall be submitted. The analysis shall indicate the expected average daily vehicular trips, peak hour volumes, access conditions at the site, distribution of traffic, types of vehicles expected, effect upon the level of service of the street giving access to the site and neighboring streets which may be affected, and recommended improvements to maintain the required level of service on the affected streets. Trip generation rates used shall be the mean value reported in Table 3 of Development and Application of Trip Generation Rates, Kellerco, Inc. published by the Federal Highway Administration, January, 1985. (MAJOR)

***Comment: A traffic assessment has been prepared for the project. It should be noted that the trip generation for the project was based upon employee information at the Police Station. The Institute of Transportation Engineers (ITE) does not provide data for a Police Station.***

8.1.1 Provision shall be made for vehicular access to the development and circulation within the development in such a manner as to safeguard against hazards to traffic and pedestrians in existing streets and within the development, to avoid traffic congestion on any street and to provide safe and convenient circulation on public streets and within subdivisions. More specifically, access and circulation shall conform to the standards and design criteria in this Article, as well as Article 9.

***Comment: Access to the development is well planned and meets Town Standards.***

8.1.2 The vehicular access to the subdivision shall be arranged to avoid traffic congestion of existing local residential streets.

***Comment: Not Applicable***

8.1.3 Where a lot has frontage on two or more streets, the access to the lot shall be provided from the street where there is lesser potential for traffic congestion and lesser potential for hazards to traffic and pedestrians. In general, all new driveways should access from the new subdivision street, rather than an existing street, so as to minimize curb cuts on the more heavily traveled street.

**Comment: *Not Applicable***

8.1.4 The street giving access to the development, and neighboring streets which can be expected to carry traffic to and from the development, shall have sufficient traffic carrying capacity and shall be suitably improved by the developer to accommodate the amount and types of traffic generated by the proposed development. No development shall increase the volume: capacity ratio of any street above 0.8 nor reduce the street's Level of Service to "D" or below, as defined by the most recent edition of the *Highway Capacity Manual* (published by the Transportation Research Board).

**Comment: *As noted in the traffic assessment, level of service 'B' conditions is projected at the Ridge Road intersection with the Access Road during the time period evaluated. Accordingly this standard is met.***

8.1.5 Where necessary to safeguard against hazards to traffic and pedestrians and/or to avoid traffic congestion, provision shall be made for turning lanes, traffic directional islands, frontage streets, and traffic controls within public streets. Traffic control devices shall conform to the most recent edition of the *Manual on Uniform Traffic Control Devices* (MUTCD), unless otherwise specified in Subsection 8.4.

**Comment: *The intersection of the Access Road and Ridge Road provides for separate left and right lanes exiting the site. The applicant has evaluated warrants for a left-turn lane on Ridge Road. The analysis indicates a left-turn lane is not warranted. Accordingly, I find this standard to be met.***

8.1.6 Access to the development shall be of a design and have sufficient capacity to avoid queuing of entering vehicles on any street.

**Comment: *The project has been designed to avoid queuing issues, accordingly I find this standard to be met.***

8.1.7 Where topographical and other conditions allow, provisions shall be made for circulation access connections to adjoining lots of similar existing or potential use. These shall be required:

8.1.7.1 When such access connection will facilitate fire protection services; or

8.1.7.2 When such access will enable the public to travel between two existing or potential uses, generally open to the public, without the need to travel upon a street outside the development.

***Comment: The Police Station driveways seem reasonable. The lot at the northeast corner of the Ridge Road intersection should have primarily access/egress movements via the proposed Access Road. The plans illustrate a future curb cut, but removal or turn limitations should be considered for the Ridge Road driveway.***

8.1.8 All non-residential sites shall provide off-street loading facilities sufficient to meet the need of the use. The loading facility shall be located and designed so that delivery vehicles can be parked completely on site. The loading area shall not obstruct on-site traffic flow, but may allow for temporary use or blocking of some on-site parking spaces.

***Comment: The site plan appears to meet this standard.***

## **8.2 SITE PLAN DRIVEWAY DESIGN STANDARDS**

8.2.2 Access design shall be based on the estimated volume using the access classification defined below.

- Low Volume Access Less than 25 vehicle trips per day.
- Medium Volume Access Any access that is not a low volume or a high volume access.
- High Volume Access Peak hour volume of 400 vehicles or greater.

***Comment: Based upon the traffic assessment the project will generate 33 peak hour trips and therefore is classified as a Medium Volume Access***

8.2.3 Sight Distances - Accesses shall be designed in profile and grading and shall be located to provide the required sight distance measured along the street in each direction. Sight distances shall be measured from the driver's seat of a vehicle standing on that portion of the exit with the front of the vehicle a minimum of 10 feet behind the curb line or edge of shoulder, with the height of the eye 3 ½ feet, to the top of an object 4 ¼ feet above the pavement. A sight distance of ten feet for each mile per hour of posted speed limit shall be maintained or provided. Where necessary, corner lots shall be cleared of all growth and sight obstructions, including ground excavation, to achieve the required visibility.

***Comment: The traffic assessment assumes use of MaineDOT sight distance standards, which is 200 feet for a roadway with a posted speed limit of 25MPH. The applicant shall confirm that 250 feet of sight distance will be provided (the Town's standard).***

8.2.4 Vertical Alignment - Accesses shall be flat enough to prevent the dragging of any vehicle undercarriage. Accesses shall have vertical of alignments which conform to current Maine Department of Transportation driveway standards. In addition, low volume accesses shall not have, at any point, a slope greater than 15%, and medium and high volume accesses shall not have, at any point, a slope greater than 8%.

***Comment: This standard appears to be met.***

#### 8.2.6 Medium Volume Accesses

8.2.6.1 Angle of Intersection - Medium volume accesses may be either one-way or two-way operation and shall intersect the street at an angle as nearly equaling 90 degrees as site conditions permit. Under special site conditions, the Planning Board may waive this requirement to no less than 70 degrees.

***Comment: One of the proposed driveways will intersect the Access Road at a 90 degree angle. The second driveway is close to a 90 degree angle and thus I find this standard to be met.***

8.2.6.2 Curb Radius - Curb radius will vary depending on whether the access is one-way or two-way operation. On a two-way access the curb radii shall be no less than 15 feet and no more than 30 feet. On one-way accesses, the curb radii shall be no less than 15 and no more than 30 feet for right turns into and out of the site, with a 5 foot radius on the opposite curb.

***Comment: The project proposes 25-foot radii and thus the project meets this standard.***

8.2.6.3 Access Width - On a two-way access the width shall be no less than 24 feet and no more than 36 feet. However, where truck traffic is anticipated, the width may be no more than 40 feet. On a one-way access the width shall be no less than 16 feet and no more than 20 feet.

***Comment: The project is proposing two 24-foot wide driveways and accordingly the project meets this standard.***

### 8.3 ACCESS LOCATION AND SPACING

8.3.1 Minimum Corner Clearance - Corner clearance shall be measured from the point of tangency (PT) for the corner to the point of tangency for the access. In general the developer should provide the maximum practical corner clearance possible based on site constraints. Minimum corner clearances are listed below based upon access or minor street volume and intersection type.

***Comment: The proposed driveway nearest Ridge Road is greater than 50 feet away and accordingly this standard is met.***

8.3.2 Access Spacing - Accesses and street intersections shall be separated from adjacent accesses, streets and property lines as indicated in the table below, in order to allow major through routes to effectively serve their primary function of conducting through traffic. The distance shall be measured from the access point of tangency to the access point of tangency for spacing between accesses and from the access point of tangency to a projection of the property line at the edge of the roadway for access spacing to the property line.

***Comment: The proposed driveways have separation in excess of 75 feet and no adjacent driveways are within 75 feet. This standard is met.***

8.3.3 Number of Accesses - The maximum number of accesses onto a single street is controlled by the available site frontage and the table above. In addition, the following criteria shall limit the number of accesses independent of frontage length.

8.3.3.2 No medium or high volume traffic generator shall have more than two two-way accesses or three accesses in total onto a single roadway.

***Comment: Two access drives are proposed and thus this standard is met.***

**General Comments on the Traffic Assessment and Site Plan**

- As noted in the traffic assessment, the Institute of Transportation Engineers Trip Generation Manual does not provide data for a Police Station. The applicant estimated traffic levels from projected staff levels. The applicant has estimated the AM peak hour to be the worst-case trip generating time period. The applicant should provide documentation on why the morning is the highest trip generation period. Given the level of traffic volumes expected, it is unlikely the conclusions of the assessment will change.
- Existing traffic volumes were based upon Saturday traffic counts conducted in the summer of 2010. While these volumes are somewhat old, I suspect they would not be significantly different and thus would not change the conclusions of the assessment. Town staff should confirm that area changes since 2010 have not significantly impacted traffic volumes on Ridge Road.
- The applicant used an AM peak hour trip generation estimate with an estimated Saturday PM peak hour volume on Ridge Road. This analysis likely provides a worst-case assessment of traffic conditions entering the site, but underestimates delay from the Access Road in the afternoon. While I don't expect the conclusions to change, the applicant should provide a response to this comment. While I suspect the Saturday time period is the highest volume time period, some documentation or feedback from the Town confirming this is suggested.
- Based upon the traffic volume estimate in the assessment, I concur that a left-turn lane is not warranted on Ridge Road at the Access Road. I would note that if the Access Road is connected to Route 1, the left-turn warrant analysis will need to be revised.
- The proposed Access Road typical section illustrates two 12-foot travel lanes. If there is expected use of the road by bicyclists, shoulder space should be provided. The provision of an 8-foot sidewalk should not preclude the need for on-road bicycle accommodations.
- If the 8-foot sidewalk is being designed to be a shared-use facility, the 8-foot width should be carefully reviewed. National standards suggest a minimum width of 10 feet. It is noted that in rare circumstances a reduced width of 8 feet may be used.

- The plans do not indicate the installation of STOP signs and STOP bars at the driveways and the Access Road approach to Ridge Road. It is also unclear what pavement markings will be implemented on the Access Road, particularly at the Ridge Road intersection.
- It is unclear how the sidewalk will transition from the Access Road to Ridge Road, particularly how it complies with ADA requirements.

Please contact me if you have any questions.

Best regards,

T.Y. LIN INTERNATIONAL

A handwritten signature in black ink that reads "Thomas A. Errico". The signature is written in a cursive style with a large initial 'T' and a stylized 'A'.

Thomas A. Errico, PE  
Senior Associate