



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR

IAN A. BOWLES
SECRETARY

June 22, 2007

Tel: (617) 626-1000
Fax: (617) 626-1181
<http://www.mass.gov/envir>

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
NOTICE OF PROJECT CHANGE

PROJECT NAME : Lakeshore Center
PROJECT MUNICIPALITY : Pleasant Street (Route 104) - Bridgewater & Raynham
PROJECT WATERSHED : Taunton River
EOEA NUMBER : 4959
PROJECT PROPONENT : Claremont Companies
DATE NOTICED IN MONITOR : May 23, 2007

Pursuant to the Massachusetts Environmental Policy Act (G. L., c. 30, ss. 61-62H) and Sections 11.10 of the MEPA regulations (301 CMR 11.00), I have reviewed the Notice of Project Change (NPC) submitted on this project and determine that it **requires** the preparation of a Supplemental Draft Environmental Impact Report (DEIR).

Previous MEPA Review

The project, as described in the Second Supplemental DEIR (SSDEIR), consisted of the development of 930,000 square feet (sf) of mixed-use space. It included approximately 735,000 sf of general office space, a 75,000 sf hotel, and a 120,000 sf warehouse. The total area of the project site was approximately 153 acres. The proponent estimated that the project would generate approximately 9,424 new weekday vehicle trips and it proposed 3,477 surface parking spaces. The project would alter about 57 acres and create approximately 46 acres of impervious area. The proponent estimated that the project would consume approximately 43,000 gallons per day (gpd) of water, and it would generate approximately 36,000 gpd of wastewater. On December 16, 2002, the Secretary determined that the SSDEIR was adequate. However, the Secretary noted that significant issues remained to be resolved in the FEIR. The issues identified in the Certificate included: adequate mitigation for traffic impacts; reduction of stormwater detention basins within the buffer zone; and a detailed conservation plan to mitigate impacts on rare species.

NPC Project Change Description

As described in the NPC, the proposed changes to the project include the addition of some abutting parcels of land (approximately 18 acres) and a change in the overall mix of uses. The proponent is proposing to alter another six acres of the site, and it will create 47 acres of impervious area at the site. The proposed project now consists of the construction of approximately 686,300 sf of mixed-use development with 3,010 surface parking spaces. The project includes approximately 449,000 sf of retail/restaurant space, an approximately 112-room hotel (83,300 sf), and 154,000 sf of general office space. The project site contains an existing 77,000 sf general office building, which will remain. The site is adjacent to Route 24 and I-495. It is comprised of approximately 173 acres and is located within the Hockomock Swamp Area of Critical Environmental Concern (ACEC). Approximately 163.4 acres are in Bridgewater and 9.6 acres are within Raynham.

The project requires a mandatory EIR. It will require an Access Permit and Traffic Signal Permits from the Massachusetts Highway Department (MassHighway). It may require a Conservation and Management Permit under the Massachusetts Endangered Species Act (MESA) from the Natural Heritage and Endangered Species Program (NHESP). The project may require a Limited Air Plan Approval/Fossil Fuel Emission Permit and a potential Superseding Order of Conditions from the Department of Environmental Protection (MassDEP). The project must comply with the National Pollutant Discharge Elimination System (NPDES) General Permit for stormwater discharges from a construction site. Orders of Conditions may be required from the Bridgewater and Raynham Conservation Commissions for impacts to buffer zones. MEPA jurisdiction extends to land alteration, traffic, air quality, wetlands, stormwater, and historical/archaeological issues that may have significant environmental impacts.

Using the unadjusted Institute of Traffic Engineers Trip Generation land use codes (310, 710, and 820), the proponent has estimated that the project will generate approximately 20,837 average weekday (unadjusted) vehicle trips. Access to the project site from the regional highway system would be provided from Pleasant Street (Route 104) to Route 24 and via Elm Street and Route 138 in Raynham to I-495. The proponent has estimated that the project will require 3,010 shared parking spaces in surface facilities.

The proposed project will be connected to existing municipal water and sewer service. It will consume approximately 38,700 gallons per day (gpd) of water and will generate approximately 32,700 gpd of wastewater flow.

This project change has the potential to result in environmental impacts in addition to those evaluated in earlier documents, in particular traffic, air quality and drainage impacts. The project change exceeds the mandatory threshold of 3,000 new vehicle trips by the addition of

11,413 new trips since the Second Supplemental DEIR. A Third Supplemental DEIR is needed to address these impacts.

SCOPE

The Supplemental DEIR should also follow Section 11.07 of the MEPA regulations for outline and content, as modified by this scope. It should include a copy of this Certificate and all comment letters.

Project Description, History, & Regulatory Environment:

The Supplemental DEIR should include a detailed description of the project with a summary/history of the project. It should briefly describe each state agency action required for the project. The DEIR should demonstrate how the project is consistent with the applicable performance standards. It should contain sufficient information to allow the permitting agencies to understand the environmental consequences related to the project.

The DEIR should identify and explain any project phasing. It should explain the time frame for each phase of the project. The DEIR should discuss how this project is compatible with Executive Order 385 – Planning for Growth, by discussing its consistency with local zoning, and the Old Colony Planning Council (OCPC)'s Long Range Plan.

Alternatives Analysis:

In addition to the No-Build Alternative and the Preferred Alternative (686,300 sf), the Supplemental DEIR should develop the following additional alternatives:

- an Alternative Site Layout that avoids or minimizes the relocation of the Eastern Box Turtle;
- an Alternative Site Layout that avoids or minimizes impacts to archaeological sites; and
- an Undisturbed 100-foot buffer zone Alternative that maximizes site layout and sustainable design/Low Impact Development (LID) opportunities to minimize water, wastewater, stormwater and wetland impacts to the buffer zone.

The DEIR should identify the impacts of each of the alternatives, on traffic, parking, transit, pedestrian/bicycle facilities, transportation demand management (TDM), air quality, wetlands, drainage, drinking water, wastewater, construction, visual/ aesthetics, and sustainable design. It should provide a comparative analysis that clearly shows the differences between the environmental impacts associated with each of the alternatives.

Traffic:

Because the project has the potential to generate an additional 20,837 daily vehicle trips in a congested area, and because these daily vehicle trips may cause traffic impacts, the Supplemental DEIR should develop a traffic study to address potential impacts. The traffic study should be prepared in conformance with the EOEA/EOTC Guidelines for EIR/EIS Traffic Impact Assessment. Proposed trip generation numbers should be explained from the Institute of Traffic Engineers' land use codes. The use of adjustments for internally captured trips, non-vehicle trips to the site (transit mode share) and pass-by and diverted linked trips should be clearly explained within the DEIR. The DEIR should present the credit assumptions for existing, internal captured, pass-by and diverted link and specify which land use they are applied to, and explain their assignment to the roadway system. It must explain how the trip generation numbers were developed in laymen's terms and should contain the necessary background data. The proponent should seek MassHighway concurrence of the credit assumptions to be taken for the shared trips among the various land uses for the proposed project.

The DEIR should provide for the analysis of impacts on the level of service (LOS) at the intersections listed below:

- Pleasant Street/Lakeside Drive/Fruit Street;
- Western Site Drive/Pleasant Street/Elm Street (Raynham);
- Eastern Site Drive/Pleasant Street;
- Office/Hotel Site Drive/Old Pleasant Street;
- Pleasant Street/Route 24 Southbound Ramps;
- Pleasant Street/Route 24 Northbound Ramps;
- Pleasant Street/Elm Street/Old Pleasant Street;
- Center Street/North Main Street/Mill Street (Raynham);
- Elm Street/Broadway (Route 138) (Raynham);
- Broadway/I-495 Eastbound Ramps (Raynham); and
- Broadway/I-495 Westbound Ramps (Raynham).

The LOS analysis in the Traffic Study should include the a.m. and p.m. peak weekday peak hours, Saturday midday peak hour, volume to capacity ratios, a traffic distribution map, and background growth from other proposed developments in the area. The DEIR should present the traffic generated by the other projects undergoing MEPA review in the background traffic numbers as well as other projects identified by Bridgewater and Raynham. The proponent should use 2012 as a build year, unless MassHighway recommends a different build year. For each intersection in the study area, the DEIR should include with its LOS analysis: time delay, capacity, and a summary of the average and 95th percentile vehicle queues. The DEIR should include a traffic signal warrant analysis for any proposed traffic signals.

The DEIR should present merge, diverge, and weaving analysis for each ramp junction at the Route 24/Pleasant Street and the I-495/Broadway interchanges. It should identify if there is sufficient bridge capacity over Route 24 to handle queue storage. The traffic study should examine present and future build and no-build traffic volumes for all impacted roadways and intersections. A full Roadway Segment Analysis (RSA) for Pleasant Street (Route 104) between Old Pleasant Street/Elm Street and Elm Street/North Main Street in Raynham should be conducted by the proponent. The RSA should include access management along the corridor, traffic signal warrant analysis at the major driveway intersections, traffic signal coordination/interconnection, and providing sufficient capacity in either direction with left/right turning lanes) along Pleasant Street. The DEIR should address whether there is sufficient capacity in this area to handle the proposed traffic from the project along with the other development.

Any plans for the major reconstruction of the roadways in the study area should be discussed in the DEIR. The DEIR should identify the proponent's coordination efforts with MassHighway, and the Towns of Bridgewater and Raynham. It should describe the traffic mitigation improvements for each phase of the project. The DEIR should identify appropriate mitigation measures for areas where the project will have a direct impact on traffic operations.

Parking:

Parking at the site will include a total of approximately 3,010 spaces in surface lots. The Supplemental DEIR should provide a breakdown of parking needs by land use category/use, time of day, and employee/customer/hotel guest/visitor category to demonstrate the need for the proposed 3,010 spaces. It should identify Bridgewater's parking supply recommendations (zoning requirements). The parking needs assessment should take into account the turnover rates for employees, customers, and visitors. The DEIR should describe how the number of parking spaces needed was determined. Parking demand management should be a key component of the overall mitigation analysis. The DEIR should identify taxi-parking areas along curbs and parking for public transit buses.

Transit:

The Supplemental DEIR should identify the local bus routes and their scheduled hours. Transit services are operated by the Brockton Area Transit (BAT). If the proponent creates demand for bus services with its project, the DEIR should propose mitigation. The proponent should consider providing monthly transit pass subsidies to all employees at the site to encourage transit use. The DEIR should identify private shuttle bus routes in the area. It should evaluate opportunities for a transit connection to Bridgewater center and Bridgewater State College.

Pedestrian and Bicycle Facilities:

The Supplemental DEIR should show existing and proposed pedestrian facilities in the study area. It should show where traffic calming measures are proposed.

The DEIR should identify the proposed bicycle facility improvements included with this project. It should show where temporary and longer visit bicycle parking would occur on the project site. The EIR should show the number of bicycle parking spaces and their location on the project site.

Transportation Demand Management:

The Supplemental DEIR should present a comprehensive Transportation Demand Management (TDM) Program designed to minimize reliance on single passenger vehicle trips for employees at the project site. The TDM measures that the proponent develops may be the most significant items to reduce single passenger vehicle trips.

Air Quality:

The Supplemental DEIR should provide a mesoscale air quality analysis. A mesoscale air quality analysis for ozone will be needed for this project to assess the total ozone precursor (volatile organic compounds and nitrogen oxides) emissions associated with all project-related vehicle trips and to demonstrate that the ozone precursor emissions associated with the preferred alternative are less than those from the no-build case, in the short- and long-term. If ozone precursor emissions from the preferred alternative are greater than the no-build case, reasonable and feasible ozone precursor reduction/mitigation measures must be included. The proponent should consult the "Guidelines for Performing Mesoscale Analysis of Indirect Sources" and MassDEP's Division of Air Quality Control to determine the appropriate study area.

While the project was filed with MEPA prior to the adoption of the EOEEA Greenhouse Gas (GHG) Emissions Policy, I encourage the proponent to voluntarily quantify GHG emissions generated by the proposed project and identify measures to avoid, minimize, or mitigate GHG emissions.

Wetlands:

The Wetland Section of the Supplemental DEIR should contain an alternatives analysis to ensure that impacts to buffer zones are avoided, and where unavoidable impacts occur, impacts are minimized and mitigated. It should quantify the amount of temporary and permanent impacts to buffer zones, and there should be a plan to go along with the discussion. The DEIR should

illustrate that the impacts have been minimized and that the project will be accomplished in a manner that is consistent with the Performance Standards of the Wetlands Regulations (310 CMR 10.00). The NPC has proposed a significant increase in work proposed within the buffer zones since the project proposed in 2002. I ask the proponent to consider reducing the areas of its proposed impacts into the buffer zone of wetland resource areas because of the importance of the Hockomock Swamp within this ACEC. I hold this project to a higher standard because of its location within this ACEC. If parking is reduced at the site, more upland areas will be available for stormwater retention areas.

The DEIR should address the significance of the wetland resources and buffer zones on site, including public and private water supply; riverfront areas; flood control; storm damage prevention; fisheries; shellfish; and wildlife habitat. It should identify the location of nearby public water supplies and wells.

All resource area boundaries, riverfront areas, applicable buffer zones, and 100-year flood elevations should be clearly delineated on a plan. Bordering vegetated wetlands that have been delineated in the field should be surveyed, mapped, and located on the plans. Each wetland resource area and riverfront area should be characterized according to 310 CMR 10.00. Three streams flow through the project site and they are described as intermittent by the proponent in the NPC. The DEIR should provide evidence that these streams are intermittent, or the project plans should be revised to demonstrate compliance with 310 CMR 10.58 regarding riverfront areas to perennial streams. The text should explain whether the local conservation commissions have accepted the resource area boundaries, and any disputed boundary should be identified. The DEIR should provide an accurate measurement of the wetland resource areas and buffer zones that will be affected by the project. The project site contains an area of Coastal Atlantic White Cedar Swamp, an Exemplary Natural Community, which has been designated by the NHESP. It also contains four potential vernal pools. The DEIR should specify how this project will avoid impacting this Exemplary Natural Community and the four potential vernal pools.

Wildlife Habitat & Conservation:

The project site is mapped as Priority Habitat for the Eastern Box Turtle. The proponent has completed an on-site habitat study and radio telemetry study of the Eastern Box Turtle. This study has identified two Eastern Box Turtles on the site. The Supplemental DEIR should describe the proponent's efforts to address NHESP's endangered species permitting issues. It should outline its efforts to provide an on-site Eastern Box Turtle habitat protection and management area, a turtle barrier, and a plan to protect turtles during construction. The proponent should also identify any funding to be provided to NHESP for off-site habitat protection. The proponent should consider ongoing monitoring (radio telemetry) to determine whether the mitigation measures perform as intended. The plans submitted with the NPC showed

a turtle habitat easement of 9.6 acres. However, NHESP has indicated that the proponent has committed to permanently protecting all portions of the site outside of the proposed limits of work. The DEIR should resolve the total area for an easement/conservation restriction for habitat protection. It should describe the proposed wildlife corridor along I-495, which would connect two wetland areas. DCR recommends that the 1.9 acre parcel on the north side of Pleasant Street should be included in the conservation restriction, and I recommend that the proponent consider this suggestion. If the proponent eliminated impacts to buffer zones, this action would support other wildlife species such as the Spotted Turtle.

Drainage:

The Supplemental DEIR should present drainage calculations and detailed plans for the management of stormwater from the proposed project. It should include a detailed description of the proposed drainage system design, including a discussion of the alternatives considered along with their impacts. The DEIR must contain stormwater alternatives that reduce or eliminate stormwater detention basins within the 100-foot buffer zone, either by reducing total parking, placing some parking in structures, or using alternative stormwater technologies. It should investigate LID techniques to reduce the need for stormwater detention basins and stormwater runoff flowing to buffer zones. The DEIR should identify the quantity and quality of flows. It should describe the rates of stormwater runoff for the 2, 10, 25 and 100-year storm events. If the proponent ties into the existing municipal stormwater system or the MassHighway system, the DEIR should clarify the permits required and if there will be a recharge deficit on-site.

The DEIR should address the performance standards of MassDEP's Stormwater Management Policy. It should address the groundwater recharge issues and demonstrate that the project will meet the Stormwater Management Policy. The DEIR should demonstrate that the design of the drainage system is consistent with this policy, or in the alternative, why the proponent is proposing a drainage system design not recommended by MassDEP. The proponent should use the MassDEP Stormwater Management Handbook when addressing this issue.

The DEIR should discuss consistency of the project with the provisions of the National Pollutant Discharge Elimination System (NPDES) General Permit from the U.S. Environmental Protection Agency for stormwater discharges from construction sites. It should include a discussion of best management practices employed to meet the NPDES requirements, and it should include a draft Pollution Prevention Plan. Any discrepancies between the stormwater management plan for this project and the Town of Bridgewater's stormwater program needs to be resolved before proceeding with this project. Because approximately 60 percent of the upland portions of the site may contain impervious surfaces, the DEIR should consider Low Impact Development (LID) measures that minimize the volume of stormwater runoff to be treated and controlled by maintaining the existing hydrologic functions. The DEIR should consider LID

tools to reduce the amount of impervious areas.

In addition, a maintenance program for the drainage system will be needed to ensure its effectiveness. This maintenance program should outline the actual maintenance operations, sweeping schedule, responsible parties, and back-up systems. I recommend that the proponent commit to use a non-sodium based deicer on pavement surfaces.

Any dewatering of the construction site should include monitoring to ensure that there is no impact to the groundwater level. The DEIR should outline the monitoring program of groundwater levels. It should summarize existing pre-construction groundwater conditions, and propose groundwater monitoring to address any proposed impacts.

The project site is located within an Aquifer Protection Zone for Raynham's municipal water wells. The DEIR should discuss how this project will be constructed and maintained so that this critical water supply is not impacted by the above project. It should describe the measures that the proponent will undertake to protect this vital resource. The proponent should develop a spill prevention program in the DEIR.

Drinking Water:

The Supplemental DEIR should explain any impacts from the project on the drinking water supply and distribution system. It should propose mitigation as appropriate. If alternative water supply sources are being considered; they should be fully evaluated in the DEIR. The project site is within the wellhead protection area (Zones II and III) for Raynham's public water supply wells. The DEIR should explain the subsurface conditions where stormwater infiltration is proposed in the wellhead protection area to demonstrate that the project impacts are within regulatory compliance. It should evaluate the potential and need for irrigation wells.

Wastewater:

The Supplemental DEIR should outline the proponent's efforts to reduce water consumption and thereby reduce wastewater generation. In addition, the proponent should consider implementing other Low Impact Design (LID) features, as discussed below. The DEIR should identify if the proponent will be requested to eliminate Infiltration/Inflow (I/I) prior to connecting to the wastewater system. The proponent should consider the installation of High Efficiency Toilets throughout the project to reduce water demand. The DEIR should identify any capacity deficiencies within the municipal wastewater system to handle the project's additional wastewater flows. It must address the I/I issue and work closely with MassDEP, and the Town of Bridgewater.

Construction/Community Disruption:

The Supplemental DEIR should present a discussion on potential construction period impacts (including but not limited to noise, vibration, dust, and traffic maintenance) and analyze feasible measures, which can avoid or eliminate these impacts. It should outline how this proponent will coordinate its construction program with other nearby projects and maintain access to all abutters. The DEIR should estimate the amount of fill to be removed or brought to the site. It should identify the number of truck trips required to handle the filling operation and the truck routes for fill removal. The DEIR should describe any blasting proposed at the project site.

Visual/Aesthetics:

The Supplemental DEIR should include an analysis of the visual impacts of the proposed project, including renderings of the proposed buildings. A landscaping plan should be provided in the DEIR. The proponent should incorporate native plants and low water using landscape materials in this plan.

Hazardous Waste:

The Supplemental DEIR should present a summary of the results of hazardous waste studies and remediation efforts undertaken at the project site by the proponent and others to comply with the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000.

Historical/Archaeological Issues:

The project site contains two significant Native American archaeological sites that are included in MHC's Inventory of Historic and Archaeological Assets of the Commonwealth. It appears that the project will adversely affect both the Tomb Road Area B Site and the Bassett Site. If after consultation with MHC, the proponent determines that there are no feasible alternatives, the DEIR should identify what the adverse effects of the project are, potential mitigation options, and describe the archaeological data recovery process. The proponent should undertake an intensive (locational) archaeological survey of the 18 acres that have been added to the project site.

Sustainable Design/Low Impact Design (LID):

To the maximum feasible extent, the proponent should incorporate sustainable design elements into the project design. The Supplemental DEIR should summarize the proponents' efforts to ensure that this project includes Leadership in Energy and Environmental Design

(LEED) Certified buildings or the equivalent. The basic elements of a sustainable design program may include, but not be limited to, the following measures:

- optimization of natural day lighting, passive solar gain, and natural cooling;
- use of energy efficient HVAC and lighting systems, appliances and other equipment, and use of solar preheating of makeup air;
- favoring building supplies and materials that are non-toxic, made from recycled materials, and made with low embodied energy;
- provision of easily accessible and user-friendly recycling system infrastructure into building design;
- development of a solid waste reduction plan;
- development of an annual audit program for energy consumption, waste streams, and use of renewable resources;
- LID principles that reduce stormwater, potable water, wastewater, and wetland impacts and that provide water conservation and the reuse of wastewater and stormwater; and
- LEED certification.

Mitigation:

The Supplemental DEIR should include a separate chapter on mitigation measures. It should develop transportation and parking demand management measures to reduce single passenger automobile trips to the project and encourage ridesharing to the site through the use of preferential parking. I encourage the proponent to identify measures to increase transit usage to the project site. This chapter on mitigation should include a Draft Section 61 Finding for all state permits. The Draft Section 61 Finding should contain a clear commitment to mitigation, an estimate of the individual costs of the proposed mitigation, and the identification of the parties responsible for implementing the mitigation. A schedule for the implementation of mitigation should also be included.

I urge the proponent to participate in any discussions and studies, which evaluate the feasibility of traffic, transit, pedestrian and bicycle improvements within this area.

Response to Comments:

The Supplemental DEIR should respond to the comments received to the extent that the comments are within the subject matter of this scope. Each comment letter should be reprinted in the DEIR. I defer to the proponent as it develops the format for this section, but the Response to Comments section should provide clear answers to questions raised.

Circulation:

The Supplemental DEIR should be circulated in compliance with Section 11.16 of the MEPA regulations and copies should also be sent to the list of "comments received" below and to local officials in Bridgewater and Raynham. A copy of the DEIR should be made available for public review at the Bridgewater and Raynham Public Libraries. The proponent should provide a hard copy of the DEIR to each state agency from which the proponent will seek permits or approvals and to Bridgewater's commenting agencies.

June 22, 2007

DATE



Ian A. Bowles

Comments received:

H.W. Moore Assoc., 5/31/07
H.W. Moore Assoc., 6/5/07
Stephen H. Kaiser, 6/8/07
Albert C. & Edna May Meserve, 6/9/07
Robert B. Boudreau, 6/9/07
Melissa Ramondetta, 6/10/07
Linda M. Schmuck, 6/11/07
William M. Maltby, 6/11/07
Randall Carlson & Susan Glazier, 6/11/07
MHC, 6/11/07
Chuck Operferkoch, 6/11/07
Karen Jackson, 6/11/07
Bridgewater Fire Chief, 6/11/07
David & Elizabeth Cachopa, 6/11/07
Albert C. & Edna May Meserve, 6/11/07
Kent Kreutler, 6/11/07
Don & Marcia DiNunno, 6/11/07
Alexandrine Fillion, 6/11/07
James & Marjorie Warren, 6/11/07
Lake Nippenicket Assoc., 6/11/07
Stephen H. Elliott, 6/11/07
DCR, 6/12/07
Raynham Center Water District, 6/12/07
Kelly Cannizzaro, 6/12/07

Marion Estabrook, 6/12/07
Pat Neary, 6/12/07
Robin & Kevin Burns, 6/12/07
Raynham Town Planner, 6/12/07
MassDEP/SERO, 6/12/07
EOT, 6/12/07
Bridgewater Office of Selectmen, 6/12/07
Thomas & Barbara Morrissey, 6/12/07
Mass Audubon, 6/12/07
MassWildlife, 6/12/07
Greenman-Pedersen, Inc., 6/12/07
Maryhelen Shuman-Groh, 6/12/07
Bernice E. & David F. Morrissey, 6/12/07
Michelle Morey, 6/12/07
Andrea Monteith, 6/12/07
OCPC, 6/12/07
H.W. Moore Assoc., 6/14/07

4959npc
IAB/WTG/wtg