WASHINGTON -- A Californian's proposal of an urban gravity-vacuum transit system, in which a train would be pushed through a tunnel as a change-carrier is shot through a pneumatic tube, has attracted the attention of federal transportation officials and regional planners.

The project advanced a step recently through issuance of a patent to Lawrence K. Edwards, president of the Transit Tube Corporation, Palo Alto, Calif. He regards the patent (3,438,337) as the most important in a series of which he has applied.

Air is evacuated from the duct ahead of the cylindrical train and delivered in back of it. Gravity is used by sloping the tunnel downward to help propel the train after it leaves one station and sloping it upward to limit the speed as it approaches the next stop.

Edwards says a key feature of the patent is the “dynamic airlock” it covers. This permits a train to be surrounded by normal atmosphere in a station. Passengers are protected between stations, as the train is airtight.

The Regional Plan Association, considering the need for high speed subways in metropolitan New York, approved the gravity-vacuum idea last November. Edwards says with minor modification the system would connect downtown Washington and mid-town Manhattan in 73 minutes with numerous intermediate stops.

Several weeks ago Edwards demonstrated a small model before John A Volpe, secretary of transportation, who said he was fascinated by it.

The largest model so far demonstrated was a “test tube” 300 feet long, operated in California last November. The inventor estimates that a full-scale prototype nearly two miles long, providing a maximum speed of 170 miles per hour, could be built for not more than $10-million.

Edwards was formerly assistant chief engineer for satellites of Lockheed Missiles and Space Company. He directed the preliminary design for the Polaris missile. A patent granted him last October on the gravity-vacuum system was assigned to Lockheed but acquired by Tube Transit Corporation.
A vacuum-propelled underground tube train system that would be more like a below-the-ground roller coaster than a railroad or subway was proposed Monday at Cong. Donald J. Irwin’s day-long conference of mayors and the first selectmen from the towns in his district.

Its originator, Lawrence K. Edwards of Tube Transit Inc. of Palo Alto Calif., claimed it could:
--Make the 460 mile haul from Boston to Washington, with six stops along the way, in only 90 minutes.
--Take 1,500 passengers from the Norwalk area to New York City in seven minutes.
--And accomplish these feats of speed with less acceleration on passengers than would be generated by a six-cylinder car.