OHIO DEPARTMENT OF TRANSPORTATION
CENTRAL OFFICE, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

February 4, 2003

Mr. Aaron G. Grilliot, P.E.
TranSystems Corporation
5747 Perimeter Drive Suite 240
Dublin OH 43017

RE: SCI-823-0.00 Portsmouth Bypass

Dear Mr. Grilliot:

In reply to your letter dated January 23, 2003, Technical Services certifies the 2008 and 2028 projected daily traffic plates. The design factors listed at the bottom of the first page of that letter are indeed those discussed on October 16, 2002. They are certified as well.

If you have any questions, please contact me at (614) 644-8195.

Respectfully,

Robert A. Burgett
Project Analyses Administrator
Office of Technical Services

RAB:rb

c: J. McQuirt, OTS–D. Norris, D9–File

TRANSYSTEMS CORPORATION

January 23, 2003

Mr. James E. McQuirt, P.E.
Administrator
ODOT Office of Technical Services
1980 West Broad Street
Columbus, OH 43223

Attn: Bob Burgett

Re: SCI-823-0.00 Portsmouth Bypass
Request for Traffic Recertification

Gentlemen:

This request for traffic recertification is being made for the proposed SR 823 Portsmouth bypass in Scioto County, Ohio. Conceptually, the 16-mile bypass will connect US 52 east of Portsmouth with US 23 north of Lucasville. Interchanges are anticipated in the US 52/SR 140 area, near the Scioto County Airport and on US 23 near SR 348 and SR 728. In a letter dated October 1, 2001, ODOT Technical Services certified 2025 design year average daily traffic (ADT) volumes for use in this project. This original certification was based on year 2025 planning model forecasts and other related information contained in the *Feasibility Study Report for US Route 23 Portsmouth Transportation Study* ("feasibility study") prepared by Gannett Fleming. Subsequent to the initial date of certification, various changes have taken place resulting in the need to recertify the traffic volumes for use in this project.

Since the project has moved into the Environmental and Preliminary Engineering phase, specific interchange locations have been identified for analysis in place of the junction areas previously assumed for consideration. Closer examination of the potential economic development areas shows that the proposed interchanges will influence the location, magnitude and geographic distribution of new development traffic accessing the bypass. With respect to other notable changes, according to David Norris of ODOT District 9, the opening and design years for this project have shifted from 2005 and 2025 to 2008 and 2028, respectively. Additionally, Mr. Norris also suggested using a directional distribution value (D) of 0.55, which was not specifically discussed in our original certification submittal.

Attached for your review are the new 2008 and 2028 ADT schematics for the project study area. The information presented in the following paragraphs is intended to explain the assumptions and reasoning behind the projected opening and design year traffic volumes. In addition, as per our telephone conversation on October 16, 2002, the following factors were agreed upon as part of the SR 823 design designation criteria for this project:

K = 0.10	T_{24} = 14%
D = 0.55	T_D = 8%

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These factors will be used in subsequent project-related tasks, including the determination of design hour traffic volumes and capacity analyses.

Initially, it was assumed that an interchange would be present at SR 139 near Minford. During the alternatives analysis task, the proposed SR 139 interchange was relocated south to Shumway Hollow near the Scioto County Airport. In addition, the ramp configuration at the US 23 interchange near SR 348 and SR 728 was modified following discussions with the ODOT Office of Roadway Engineering Services. However, preliminary engineering in the US 52/SR 140 interchange area has progressed without any significant modifications.

The feasibility study included documentation on origin-destination (O-D) studies, traffic forecasts, future development and travel demand modeling. Traffic assigned to the bypass represents a combination of diverted through trips, identified from the previous O-D studies and demand modeling, and new trips associated with future economic development in areas near the proposed bypass – the demand modeling results from the feasibility study did not account for the new trips generated by potential economic development areas. Collectively, the economic development areas will generate approximately 11,600 new trips on a daily basis. These development areas can be grouped into three general locations: Lucasville (8% of new trips), Airport (66%) and Ohio River (26%). These trips were geographically assigned to the bypass and adjacent road network using recent traffic counts combined with familiarity of the area and engineering judgment. Figures 1 and 2 show the locations of the new economic development areas (see attachments). This information alters the assumptions used previously to account for new development. The original certification request assumed that all new development was concentrated in the vicinity of the Airport, whereas the information presented herein identifies development sites throughout the study area. The relocation of the SR 139 interchange to Shumway Hollow also impacted the assignment of these trips to the road network. As a result of changing these assumptions, traffic assigned to the network was increased in some areas and reduced in others.

A compound growth rate of 1.0% per year was applied to the background traffic to obtain the opening and design year traffic volumes. This growth rate is comparable to the ODOT-supplied rates of 1.0% for external-external (E-E) trips and 0.50% for all other trips as specified in the Portsmouth bypass feasibility study. Trips associated with the new economic development areas were added to the projected design year background volumes; based on current economic patterns in Portsmouth and the surrounding areas, new economic development was not assumed to occur by 2008, thus, additional trips were not added to the opening year traffic forecasts.

In conclusion, the 2008 opening year traffic volumes were determined by assimilating data from the 1999 O-D studies and the 2025 demand models. Traffic was increased using a 1.0% growth rate and smoothed across the network to eliminate mismatches at intersections and interchanges. Manual adjustments were made to the assignments generated by the demand models since actual interchange locations had not been verified during the feasibility study. The design year volumes were generated using the same approach except that new traffic associated with the economic development areas was added to the network prior to applying the smoothing process. This process generated the final 2008 and 2028 ADT volumes presented on the attached schematics.

TranSystems is requesting certification of the design designation criteria and opening year ADT volumes along with recertification of the design year traffic data. If you have any questions regarding the information presented in this submittal, please do not hesitate to contact me by phone at (614) 336-8480.

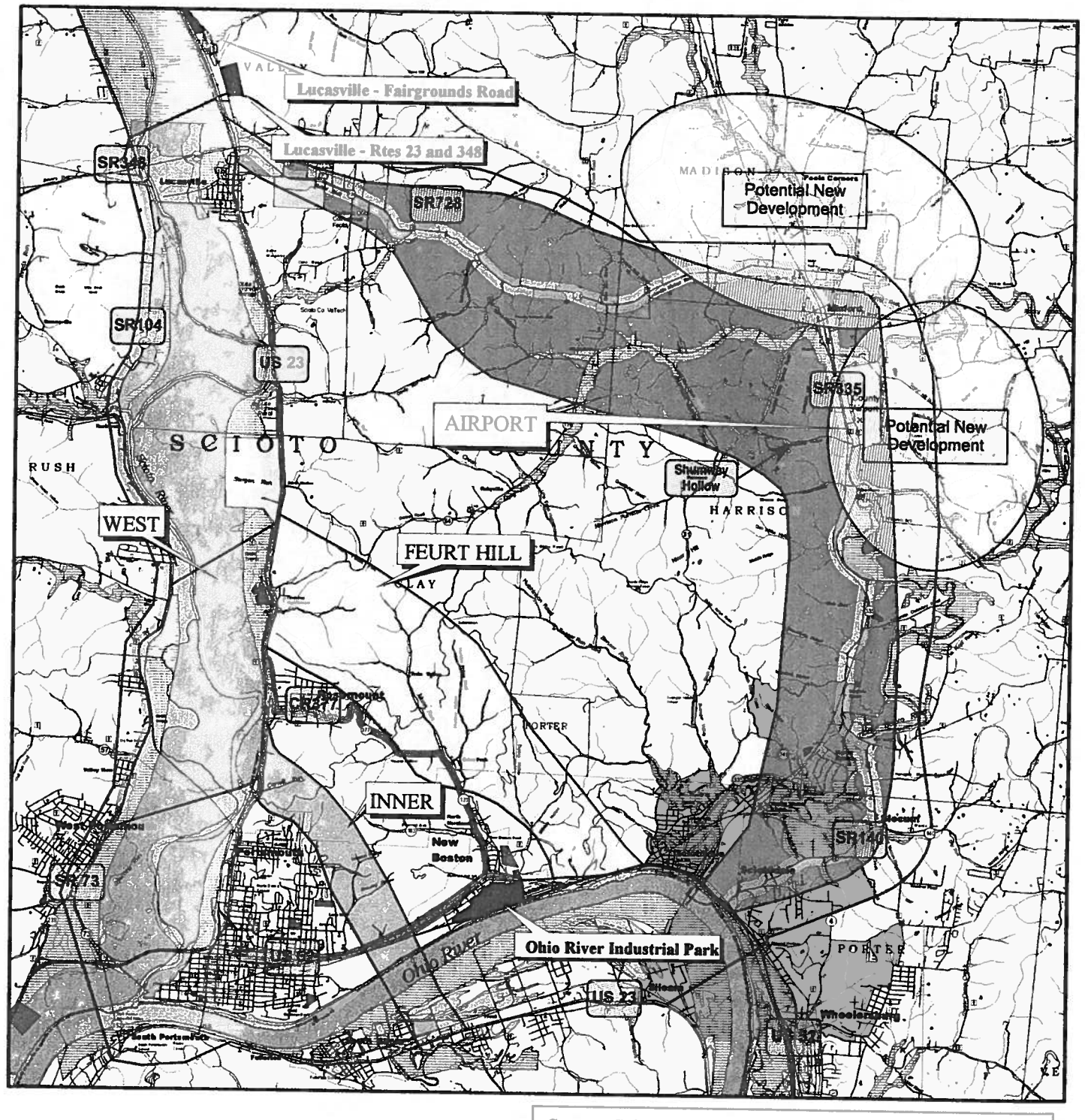
Sincerely,

TranSystems Corporation

Aaron G. Grilliot, P.E.
Traffic Engineer

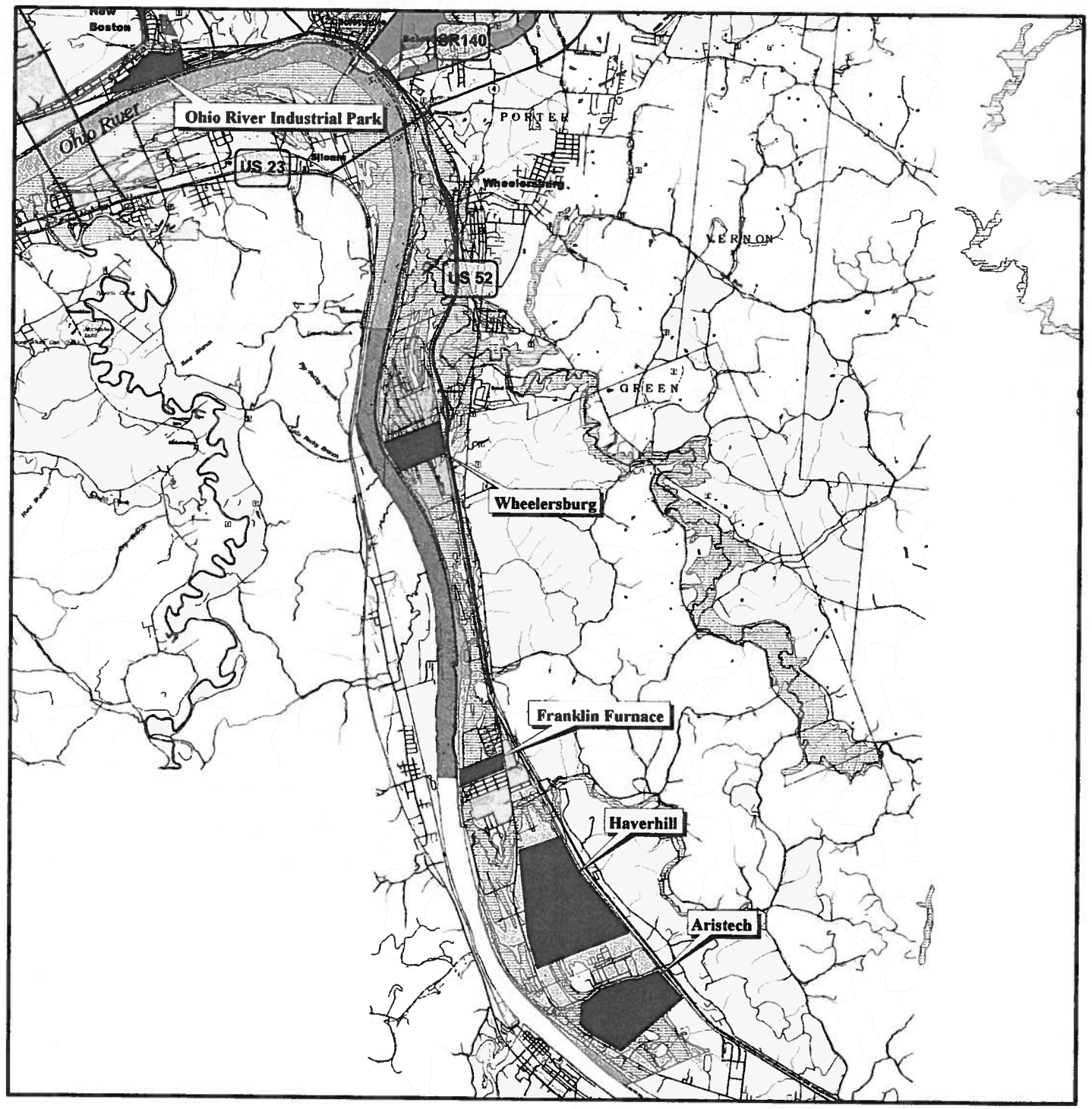
Attachments

Figure 1: Northern Map of Economic Development Areas, Existing and New



Source: Scioto County Economic Development Office, 2000

Figure 2: Southern Map of Economic Development Areas, Existing and New



Source: Scioto County Economic Development Office, 2000

Legend for Economic Development Area Maps (Figures 1 & 2)

Political Boundaries
- State Boundary
- Township Boundary
- City Boundary
- County Boundary
- State Forest Boundary

Road Classifications
- Four Lane Freeway
- Four Lane Divided Highway
- US Road
- State Roads
- State Roads
- Local Collector
- Township Roads
- Private Drive
- City Roads
- Access Roads
- Unimproved Roads
- USGS 7.5 Minute Quad
- Marketed Industrial Sites
- Potential Economic Development Sites
- Study Area Boundary

Floodplains / Floodways
- Floodway
- 100 Year Floodplain
- 500 Year Floodplain

- Airport Corridor
- Feurt Hill Corridor
- Inner Corridor
- West Bypass Corridor

Source: Scioto County Economic Development Office, 2000

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N.T.S.

MINFORD

BYPASS

LUCASVILLE

AIRPORT

SHUMWAY HOLLOW RD

FACTORS
K= 0.10
D= 0.55

TO PORTSMOUTH

GALLIA ST.

WHEELERSBURG

823 Portsmouth Bypass

An Appalachian Development Highway

Average Daily Traffic 2008

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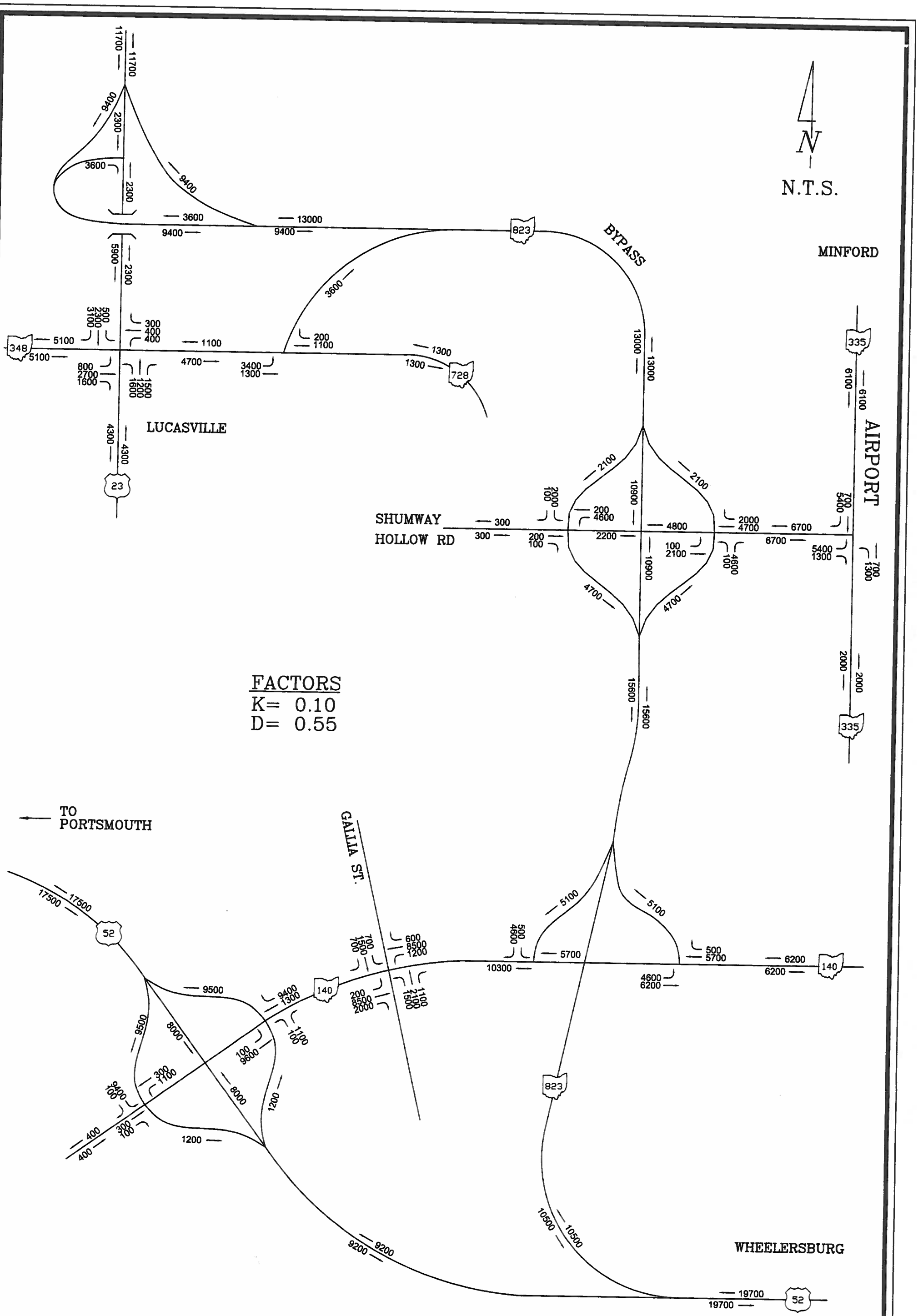

823 Portsmouth Bypass

An Appalachian Development Highway

Average Daily Traffic 2028