

POTENTIAL IMPACT OF TELECOMMUNICATION INFRASTRUCTURE

OVERVIEW: The City of Tulsa assesses Right of Way (ROW) fees for telecommunication delivery infrastructure. 2014 saw \$4.5 million in general fund telecom ROW fees. **Recent and ongoing changes in telecommunication infrastructure could have long-term impact on ROW revenue, economic development, local business operations, education quality and citizen daily life.**

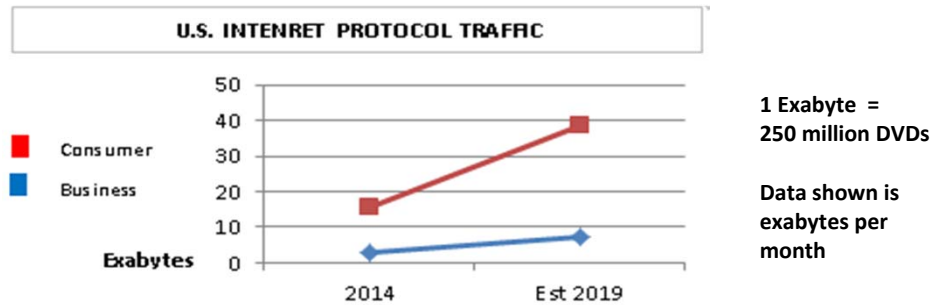
CITY HISTORY: ROW Telecom fee revenue has been increasing every year since 2010, and has increased 10% over the past 3 years.

TECHNOLOGY TRENDS

'BIG GIG' INTERNET DEVELOPMENT

1 Gigabit per second internet speed - Tulsa's current average top download is 15% of 1G speed
Peer cities Kansas City & Austin - and recently Bixby- have 1G capability; Tulsa by Dec '16
KC's 'Start Up Village' 1Gig speed cut photo upload time from days to hours -
sportphoto.com, an online provider of sports event photos, relocated for this capability

BANDWIDTH APPETITE PREDICTED TO INCREASE



FUTURE OUTLOOK: City leadership and officials will need to monitor these changes and risks for their possible effect on revenue and economic development. Although use of 1G internet capacity remains largely untapped, many liken this situation to smartphones before apps were fully developed. High speed internet is playing an increasing role in cloud-based business needs, citizen life, and education.

AREAS OF POTENTIAL IMPACT

ECONOMIC DEVELOPMENT

Cloud-based operational platforms require speed
Online businesses need fast transaction processing
Media-driven business needs image/video speed
Tech/internet capability can trigger relocation
Higher speed supports innovation

EDUCATIONAL ACCESS

Internet-instructed courses benefit from speed
Cloud-based archived textbook content is optimized
Video/photo learning tools need speed

CITIZEN EXPECTATIONS

Multi-device use (tablets, smartphones)
Online purchasing - including service buying
Social media & entertainment (streaming video)
GPS/mapping tools
Mobile-based applications

CITY REVENUE

ROW Telecommunication fees based on:
% of revenue **OR** linear footage
High speed internet technology developments could change either measure over time, affecting revenue



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