

TPD NEWS

APA

American Planning Association
Making Great Communities Happen

A Publication of the Transportation Division
of the American Planning Association

From the Chair: ROI is King

A few years ago, transportation was king. While money was always tight, transportation funding flowed a little more easily than some other areas. Communities also saw the immediate value of transportation projects, and embraced the field as a priority.

Times have changed. The last few years have been rough throughout the planning industry, including transportation. Federal funds are still funding projects, but the community interest has shifted. Across the country, transportation planners are learning a new measure: Return On Investment. If a community is going to support a transportation project, with time, money, effort, and political capital, there must be a quantifiable, easily explainable financial return. That means the role of transportation planning is changing. We're no longer responsible for just determining demand, planning routes, identifying improvements, and involving the public. We're now responsible for proving the social, environmental, plus the economic value of our projects. It's a wake-up call for all of us: prove our value by proving the value of our projects.

Let's heed this call and expand our knowledge base. Let's learn from our counterparts in economic development and finance, and be able to offer the proof of both our projects and ourselves. Identify performance measures and quantify for the world the value of our projects. Transportation may no longer be king, but transportation planning can always be.

-David Fields, AICP, Chair

E-mail your thoughts to me at
planman72@yahoo.com.

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Mastering Mobility through Better Connectivity

Michael Lauer, AICP and Don Kostelec¹

Simply put, mobility is the ability to move from one place to another. Beginning with one-time highway advocate Lewis Mumford², there is increasing awareness that building bigger, wider, and faster roads and disintegrating land use and transportation decisions have failed to improve mobility. While there are many elements of mobility, this article focuses on transportation network design to improve connectivity between origins and destinations (see highlighted row in Table 1). Interesting developments in the ways planners evaluate connectivity provide valuable tools to planners on the front lines of improving mobility.

¹ Much of the content of this article is drawn from a series of presentations by the author, Don Kostelec and Andy Mortensen on Mastering Mobility. Many thanks for their guidance in drafting this article.

² Mumford, *The Highway and the City*, 1963.

Table 1 – Elements of Mobility

	Mobility Element	Description
Private Realm	Density	The concentration of residents, employees and others, typically measured in terms of dwellings per acre or floor area ratios
	Diversity of Uses	The mix of residential and non-residential land uses
	Site Design	The configuration of individual sites, including building location, building orientation, parking, access and other design factors
Public Realm	Transportation Network Design	The configuration of streets, bike/ pedestrian facilities and transit routes
	Accessibility	The relative ease of moving between uses
	Modal Choice	The availability of safe and convenient options for travel
	Capacity	The carrying capacity of streets, sidewalks, bikeways and transit facilities

After solving the problems of getting people from the private realm (building and site design) to the public realm (sidewalks, bikeways, streets, transit stops), communities must address mobility through the public realm. The post-World War II evolution from grid streets to curvilinear grids to cul-de-sac and single-entrance subdivisions has increased our

dependence on automobiles because it has dramatically increased the effective distances between land uses. Davis, California has managed to improve connectivity to non-gridded subdivisions through an extensive bikeway system, but most communities have not been as farsighted and have found that retrofitting bicycle/pedestrian

Table 2: Connectivity Measurement Tools

Strategy	Description	Strengths	Limitations
Cul de Sac Limits	The number or length of dead-end streets or the amount of development allowed on them	Easily measured on the project or large area basis	Focuses primarily on street connectivity and ignores potential benefits of bike and pedestrian connections
Link: Node Ratios	Comparison of the number of links (road segments) to the number of nodes (intersections and cul de sac ends)	Easy to calculate	High internal link node ratios may be achieved even though a subdivision is poorly connected with the rest of the transportation system
Block Length/ Perimeters	Maximum lengths of blocks and/or the perimeters of blocks	Easy to calculate	Must have process to address natural (waterways, topography) and built (railroads, limited access roads) barriers, must address perimeters of infill parcels
Intersection Density	The number of intersections per square mile	Easy to calculate	High internal intersection densities may be achieved even though natural or built barriers limit connectivity between developments
Rate Directness Index (RDI)	The ratio of the direct travel distance to the actual travel distance	Greatest potential to measure the actual connectivity resulting from public or private projects	Requires complex GIS-based calculations and careful attention to natural and man-made barriers

improvements is challenging at best. It is far easier to establish connectivity as development occurs than to make future connections.

Facing traffic congestion that is at least partially due to the lack of good street connectivity, local governments are pursuing a variety of strategies to ensure that new development and redevelopment projects foster better mobility. Table 2 lists the key connectivity measurement tools:³ While each measurement tool has strengths and weaknesses, street patterns that improve each of these indicators have been correlated with safer streets⁴, reduced automotive vehicle miles traveled⁵, vehicle emissions,⁶ congestion-based delay,⁷ modal choice and health benefits, in addition to the more qualitative improvements to community character.

Research is mixed on the costs and benefits of connectivity retrofits. While automotive traffic modeling is relatively well developed, we lack the ability to reliably project other modes of traffic, particularly at the corridor, neighborhood or project level. In addition to the dearth of tools to quantify the transportation impacts of connectivity improvements (particularly the ones involving bikes, pedestrians or mix of modes), reliable methodologies to project the full range of benefits are lacking. Also, most indices do not have the ability to weigh the mobility benefits of connectivity based on land use type, density and connectivity to other uses. GIS-based Rate Directness Index (RDI) analysis offers a powerful way to quantify the cumulative connectivity benefits of automotive, bike, pedestrian and transit connections.

³ The table does not include [Walk Score](http://www.walkscore.com) (www.walkscore.com), which is an easy to use application that measures the distance as the crow flies between specific locations and common residential services. While this is an interesting tool, it currently does not provide a way to measure the connectivity of a proposed development.

⁴ Marshall and Garrick, *Street Network Types and Road Safety: A Study of 24 California Cities*, Urban Design International, August 2009.

⁵ Marshall and Garrick, *The Effect of Street Network Design on Walking and Biking*, Paper submitted for 89th Annual Meeting of the Transportation Research Board, January 2010.

⁶ Smart Growth Index Model, U.S. Environmental Protection Agency, 2002.

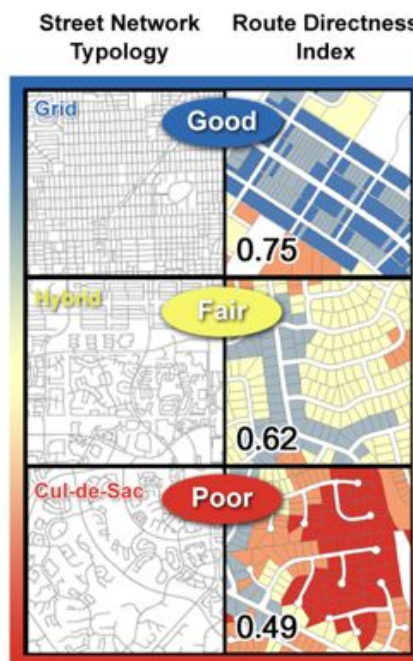
⁷ Ibid.

Figure 1 shows the change of RDI calculations resulting from the establishment of a shared use path. Figure 2 shows the relative RDI calculations between all potential origins and destinations for typical street patterns. As expected, better connected street typologies create more direct routes.

Figure 1: RDI Improvement from a Shared-Use Path



Figure 2: Relative Impact of Typical Street Patterns on RDI



RDI measurement offers great potential to evaluate multi-modal connectivity and the flexibility to examine the benefits of connections serving distinct purposes at the project, neighborhood, community or regional level. Applying RDI analysis to the City of Davis using the Transpo Group's ViaCity software shows relatively poor connectivity when evaluating the city's street system alone. However, when the city's bikeways are added, the RDI score improves by almost 18 percent (from 54.3 to 64.9). RDI is used to evaluate general connectivity, connectivity to transit, safe connections to schools and connectivity to the City's trails and shared-use paths. Some case studies which explore the use of RDI Analysis include: the benefits of improved connectivity to and between transit facilities (Bellingham, WA), (Redmond, Lynnwood, Seattle and Lakewood, WA, Tustin, CA and Abu Dhabi, UAE), and the benefits of greenway trails (Asheville, NC) and fire station access (Charlotte, NC).⁸

An increasing body of research is beginning to document the benefits of incorporating multi-modal connectivity into street connectivity analysis. Most communities have the regulatory authority and the tools to improve mobility in both the public and private realms. It is promising to see increased coordination between the transportation planners who focus on the public realm and land use planners who focus on the connections from the private realm to the public realm. Much work still needs to be done to clearly demonstrate cost benefit ratios from specific connectivity projects, and GIS-based RDI analysis provides a meaningful foundation on which to build further research.

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⁸ Mortensen, Kostelec, Turley and Parast, Evaluating Connectivity Projects: Using Point-to-Point GIS Routing to Measure the Benefits of New Transportation Connections, 2010.

Student Paper Competition

The Transportation Planning Division is looking for outstanding student papers on current transportation planning or policy issues. Our purpose is to recognize and reward work completed for courses in accredited masters and undergraduate planning programs. Please nominate and encourage your students to participate in APA's student paper contest. Winners will be announced at the APA National Conference in Los Angeles, CA.

The grand prize for the best student paper is \$1,000 and the second prize is \$500. Winning papers (or summaries) will be published in the TPD's quarterly newsletter. The TPD may also submit full versions of the winning paper for peer review and possible presentation at the Annual Meeting of the Transportation Research Board and for publication in APA's Planning Magazine.

<http://apa-tpd.org/competition.html>

Study Guides for the Certificate in Transportation Planning

TPD is working on study material for APA's Certificate in Transportation Planning. We will be posting material over the next few months on our website, and are looking for transportation professionals to help us develop these guides.

http://apa-tpd.org/aicp_cm.html

Contact Catherine for more information: vice-chair-or@apa-tpd.org

Rebuilding America Revisited

Robert A. Leiter, FAICP

In 2009, the American Planning Association's (APA) National Infrastructure Investment Task Force, *Rebuilding America*, was created to evaluate the current conditions and challenges affecting the nation's vital infrastructure, develop a new vision for that infrastructure, and identify recommendations for changes in public policy and planning practice. The *Rebuilding America* initiative began with a National Design Professionals Forum in Washington DC, conducted as a partnership between APA, the American Institute of Architects, and the American Society of Landscape Architects, followed by a series of Regional Field Hearings to collect information on infrastructure issues across the country.

Next, sub-task forces were charged with developing recommendations specific to individual infrastructure systems. The work of these sub-task forces culminated in the publication of a [final report](http://www.planning.org/policy/infrastructure/pdf/finalreport.pdf) (<http://www.planning.org/policy/infrastructure/pdf/finalreport.pdf>) in October 2010, which included recommendations for transportation, energy, green infrastructure, water and wastewater, technology and telecommunications, and other public facilities.

I had the honor of co-chairing the Transportation Infrastructure Sub-Task Force with Diana Mendes, AICP, and together we worked with a dedicated group of transportation planners from all over the country for several months to conduct research, identify best practices, and put together a chapter that we hoped would stimulate discussion about meeting the Nation's daunting transportation challenges.

According to the final report, "it is APA's position that we can no longer just engineer our way out of our infrastructure problems. Rather we need to recognize the connection between how we plan for the growth and development of our communities with the impact it has on the infrastructure needed to serve it. In many communities planners are not involved in the capital improvement planning process. Through *Rebuilding America*, APA hopes to provide our members and their communities with new models for planning for infrastructure to ensure that investments are made strategically, in keeping with a vision for the future, and that they promote sustainability."

When the report was published last fall, the co-chairs of the Task Force thanked "the countless volunteers who poured their hearts into this report, particularly those that served on the sub-task forces [and] organized or participated in regional field hearings..." They indicated that APA would continue to "gain input into this report, refine it, improve it and finalize it as a guide for communities across the country to use in addressing their infrastructure issues. APA also intends for the report and its findings to inform development of new legislation to fund construction of the infrastructure of the future, recognizing that we have no choice but to evolve away from the inefficient and unsustainable practices of the past."

Since that time, a few state chapters have held post-release sessions on the report, and Bruce Knight, past President of APA, has presented the report at national conferences of the American Institute of Architects and the American Society of Landscape Architects. In addition, it was announced at the recent APA "Federal Policy and Program Briefing" in Washington DC that the report will be used as a resource in APA's new *Sustaining Places* initiative. APA has also recently partnered on an infrastructure summit with the American Society of Civil Engineers, Natural Resources Defense Council, the US Chamber of Commerce, the Bipartisan Policy Center, and the Laborers' International Union of North America. The next phase of that effort is the creation of the new "National Partnership for Infrastructure Improvement." The groups, APA included, are working with the Rockefeller Foundation on funding for an aggressive public outreach effort.

In the meantime, the *Rebuilding America* report can serve as a valuable resource to planners who are engaged in the heated debates regarding Federal Transportation Reauthorization, jobs plans, national infrastructure banks, and other strategies to meet our transportation needs. With that in mind, I would encourage you to review this report, share it with your colleagues in the transportation planning field, and encourage them to get involved in the discussion.

World Town Planning Day Online Conference

1-2 November 2011

The World Town Planning Day Online Conference Committee topic for the 2011 conference is Going Public: Spaces in Our Communities.

We've put together an exciting line-up of speakers from around the world – Canada, USA, Dubai, China, and many more. What better way to celebrate the planning profession than to engage in a worldwide conversation on-line?

To learn more about the conference schedule, speakers and how to register, please visit www.planningtheworld.net.

Registration fees range from \$20 to \$50 USD depending on your country of residency and day rates also are available. Students with proof of status can register for the conference at the rate of \$10 USD.

We hope you'll join us for this our third annual event in honor of World Town Planning Day! Registration closes on Saturday, 29 October at midnight.

Partner Organizations

- * APA's International Division
- * Commonwealth Association of Planners
- * Canadian Institute of Planners
- * The Chinese University of Hong Kong
- * European Council of Spatial Planners-Conseil européen des urbanistes
- * Hong Kong Institute of Planners
- * Hong Kong Institute of Urban Design
- * International Federation for Housing and Planning
- * New Zealand Planning Institute
- * Planning Institute of Australia
- * Royal Town Planning Institute
- * South African Council for Planners

Transportation's Role in Creating Child-Friendly Cities

Scott Ulrich

It's no secret that there is a transformation taking place before our eyes on New York City's streets. Whether it be infrastructure changes like bike lanes, pedestrian plazas and pop-up cafes, or events like block parties, [Weekend Walks](#) and [Summer Streets](#) festivals, the re-engineering and re-purposing of the city's most iconic streets and squares represents a broader shift in the goals of – and approach to – transportation planning.

The origins of this shift from asking "How do we move people from one destination to another?" to "How can we make the street a destination itself?" can be traced to the catalytic NYC Streets Renaissance Campaign. Founded in 2005 by Transportation Alternatives, OpenPlans and Project for Public Spaces (PPS), the campaign advocated that the city plan less for cars and traffic and more for people and places. And, as PPS' saying goes, [you get what you plan for](#). Indeed, New York is finally embracing the oft-quoted words of Jane Jacobs: "streets and their sidewalks, the main public places of a city, are its most vital organs." And although Jacobs herself has long been held as the reigning champion over Robert Moses in the Battle for Gotham, the city's policies – and its streets themselves – have only recently begun to reflect the values she set forth more than a half-century ago.

But I'd like to focus on something New York City is doing in sync with another Jane Jacobs quote:

"Children in cities need a variety of places in which to play and learn...[T]hey need an unspecialized outdoor home base from which to play, to hang around in, and to help form their notions of the world. It is this form of unspecialized play that the sidewalks serve."

Street play and street games are age-old ingredients of New York City life. In a city as dense and built-up as New York, streets serve as the "front yard" where parents and neighbors can supervise through windows while relaxing or doing domestic work. Streets must also serve this essential function because to this day, about half of the city's neighborhoods fail to meet access standards for parks and playgrounds.¹ Jacobs goes

¹ PlaNYC 2030. PlaNYC: A greener, greater New York. New York, NY: Mayor's Office of Long Term Planning and Sustainability, 2007.

on to point out how such parks and playgrounds are a far less-effective substitute for the street:

“When this home-based play is transferred to playgrounds and parks it is not only provided for unsafely, but paid personnel, equipment and space are frittered away that could be devoted instead to... other various and specific outdoor uses...To waste the normal presence of adults on lively sidewalks and to bank instead on hiring substitutes for them, is frivolous in the extreme.”²

Unfortunately, the street play environment was too fragile to withstand the advent of the automobile. To be sure, the biggest victims of the automobile’s proliferation on city streets have been children. Street games today are virtually nonexistent. The extent of our children’s worlds – once limited only by their curiosity or the “[popsicle effect](#)” – is now mostly confined to indoors. And it is because the world in front of our children’s doorstep has become deadly: between 2001 and 2005, motor vehicle-related deaths represented the single largest contributor to injury deaths among children aged 1-12, and most of those children (84%) were pedestrians.³ There is a drastic need in most of our cities to plan better for our most vulnerable citizens. The Safe Routes to School program is flourishing, but again, what about safe places to play?

That’s where New York’s Play Streets program enters the equation. Play Streets (also known as “[Pop-Up Playgrounds](#)”) are exactly what they sound like – streets where people can play. Play Streets are regularly scheduled, temporary street closures that reclaim residential streets from cars and repurpose them as play spaces. The program is a collaborative effort of the NYC Department of Health and Mental Hygiene (DOHMH), the Strategic Alliance for Health (SAfH) and Transportation Alternatives (T.A.).

To a certain extent, the concept of closing streets to automobile traffic has only recently re-emerged as an innovative livability tactic in cities throughout the world, revived after many failed attempts in decades past. But in fact, Play Streets are a nearly century-old part of New York City life. In 1914, the City Police Commissioner instituted the policy in order to provide safe street space for children to play, declaring that “children must play, and children, if they live in the cities, must play in the streets.” He then proceeded to close 29 blocks of

city streets to serve as playgrounds, prohibiting traffic in the afternoons every day during summer except Sunday.

Since then, the Police Athletic League has been the primary Play Street organizer in the city – at least until the DOHMH-SAfH-T.A. partnership. The program has grown from two pilot locations in 2009 (one of the city’s ostensible “pilot projects”⁴) to include twelve Play Streets in 2011. Most of the Play Streets are organized by community organizations, neighborhood and block associations or schools.



The 78th Street Play Street in Jackson Heights, Queens, transformed this street and brought the community together. Photo by Scott Ulrich.

The partnership works like this: T.A. and SAfH work within their networks to identify community-based organizations interested in hosting Play Streets. DOHMH handles the application and permitting processes necessary for getting a street closure approved by DOT. The whole group works together to identify grants and other sources of funding to support the Play Street organizers’ operating budgets, as well as groups that can provide fun-filled activities. Finally, T.A. and SAfH follow up with program evaluation and create a detailed set of policy recommendations for the City.

Play Streets are meant to expand access to open space, slow motor vehicle traffic and provide a refuge for neighbors to get to know each other. But most importantly, they are meant to improve public health. Obesity is on the rise throughout the

² Jacobs, Jane: *The Death and Life of Great American Cities*. New York: Random House, 1961.

³ New York City Child Fatality Report. New York, NY: NYC Department of Health and Mental Hygiene, 2007.

⁴ Chen, David and Michael Grynbaum. [‘Pilot’ Label Lets Mayor’s Projects Skip City Review](#). The New York Times, 26 June 2011.



During the summer months, many children attend day camps through organizations such as YMCA. Play Streets have become popular destinations that camp-goers look forward to each week. Photo by Scott Ulrich.

country, and New York City is no exception: 24 percent of kids are considered obese.⁵ Three neighborhoods in the city with the highest rates of obesity, diabetes and asthma – the South Bronx, North and Central Brooklyn, and East and Central Harlem – have been assigned District Public Health Offices (DPHOs) to try and address this imbalance. Many of the early Play Streets have been focused in DPHO areas as a tool to address this crisis, often in coordination with existing farmer’s markets (which can share their street-closure permits with the Play Streets).

In fact, the two pilot locations were farmers market-based Play Streets hosted by Harvest Home Farmer’s Market (HHFM) in East Harlem and the Melrose section of the South Bronx. The HHFM Play Streets provided over 1,200 children and their caretakers with safe, car-free spaces to play.

A broad coalition of twenty local organizations led a variety of activities across the two Play Street sites that encouraged kids to run, jump, learn new sports, eat fresh and local foods and engage with their neighborhoods. Survey results indicated that 64 percent of the attendees reported that if not at the Play Street, they would have been engaged in a sedentary activity.⁶

⁵ PlaNYC 2030. PlaNYC: A greener, greater New York. New York, NY: Mayor’s Office of Long Term Planning and Sustainability, 2007.

⁶ Play Streets Best Practices. New York, NY: Transportation Alternatives, 2011.

But Play Streets have proven to be much more than a tool to improve public health. In some cases, like the 78th Street Play Street in Jackson Heights, Queens, they have become 24/7 gathering spaces and catalysts for community improvement. Tim Tompkins, president of the Times Square Alliance said that the pedestrian plazas on Broadway “shifted the paradigm for what a street and sidewalk experience is supposed to be like in New York City.”⁷ Likewise, Play Streets can shift the paradigm for what a child’s play experience is supposed to be like in New York City – or any city, for that matter. This is the kind of low-cost, high-impact project that gets municipalities working across agency boundaries to accomplish a wide variety of goals with a single program while leveraging both public and private funds. With the new, harsh realities facing many city budgets, this is the kind of project that can enhance municipal efficiency. After all, a street is much more than just a piece of infrastructure. In the words of Alex Marshall of Regional Plan Association, “we can use our public streets for whatever benefits our populace, and increasingly, that is not personal car use.”⁸

What we need now is for city governments to stop standing in the way of great ideas like Play Streets. That’s something even New York struggles with: except for funding and organizational capacity issues, the most significant obstacles cited by Play Street organizers were regulatory hurdles and navigating the bureaucratic approval process. Such obstacles are sure sign that the paradigm shift toward “streets for people” is far from complete.

Scott Ulrich is a young planner who is passionate about placemaking and has an interest in how transportation systems affect sustainability and livability at the regional and neighborhood scale. He has worked in the public, private and nonprofit sectors and is currently doing freelance work in New York City while seeking a full-time planning position. During the summer of 2011, he worked with Transportation Alternatives supporting its Play Streets program.

⁷ Grynbaum, Michael. [New York Traffic Experiment Gets Permanent Run](#). The New York Times, 11 February 2010.

⁸ Marshall, Alex. [Drivers in the Urban Hierarchy](#). The New York Times, 28 June 2011.

Real-Time Freight Tracking using GPS and Cellular Transceiver for Transportation and Community Planning

Teresa Brewer and Jeffrey Miller

As part of a strategy to implement policy recommendations to create and develop an efficient and integrated intermodal freight system in the Anchorage area, the Municipality of Anchorage Freight Advisory Committee worked with the University of Alaska Anchorage Computer Systems Engineering Department to install real-time GPS units in commercial freight vehicles. Freight is a major economic engine for the Anchorage region; the Port of Anchorage handles about ninety percent of all freight that comes into the State. This freight is then moved via tractor trailer, train, barge, pipeline, or by air to regional centers. Equally, Ted Stevens Anchorage International Airport led the nation in cargo tonnage landed from 2000 to 2007 and remains a major US cargo trans-shipment facility¹.

Anchorage is also home to the Elmendorf Air Force Base, Fort Richardson Army Base, and many natural resource development interests such as British Petroleum, Petro Star, Tesoro, Veco, Denali Gas Pipeline, and Alyeska Pipeline, among others. Several local freight handlers and private carriers like UPS, FedEx, Carlile Transportation, Lynden Transportation, Totem Ocean, Weaver Brothers, and the Alaska Railroad serve these organizations. Due to the proprietary and confidential information regarding freight commodities and movement, very limited data is available about freight circulation in Alaska.

Because of topographical constraints, much of Anchorage's freight moves through the downtown core causing impacts not only to travel times for freight delivery, but also delay and congestion to passenger vehicles. Only two primary National Highway System facilities—the Glenn Highway and the Seward Highway (located in downtown Anchorage and within the commercial business district)—connect and extend to the rest of the State. These facilities are owned and maintained by the State of Alaska. Real time traffic reporting helps the Municipality of Anchorage to assess and evaluate regional freight corridor needs and

capacity, obtain accurate travel times for travel demand modeling input, along with examining how to minimize traffic congestion within the business district and pinpoint network deficiencies. Some major benefits of real time traffic reporting and the associated real-time website include:

- Identifies bottlenecks and problem areas.
- Allows for in-depth data collection about freight movements (speed, volumes, route choices) for analysis and use in calibrating the travel demand model, producing valid forecasts, and planning future transportation infrastructure and projects.
- Estimates the amount of travel time savings to commercial freight.
- Affords the opportunity to develop a synchronized signalization and traffic control system.
- Provides immediate feedback and input from drivers.
- Shows preferred freight routes; may help to establish new routes.
- Helps industry to re-route freight from busy areas, effectively use resources, and offer reliable estimated delivery time; thereby reducing fuel costs and travel times.
- Gives potential ancillary economic and community benefits, such as improved air quality and decreased exhaust emissions.
- Improves mobility and safety for all modes of travel.
- Measures system performance and mobility.
- Permits emergency responders to quickly communicate and detour travelers from accidents, hazardous materials incidents, etc.
- Promotes positive public outreach and is a practical tool for travelers.
- Encourages federal, state, regional, and local agency coordination to effectively manage existing facilities and plan viable intermodal connections.

¹ Freight Facts and Figures, US DOT, 2009. http://ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/docs/09factsfigures/table3_11.htm

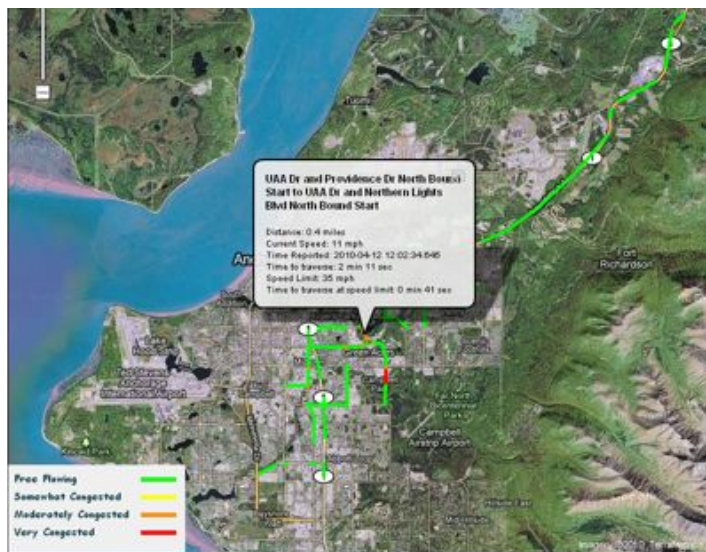
The devices that have been installed in vehicles are very non-intrusive and plug directly into the vehicle's on-board diagnostics (OBD) port. This is the same port used by mechanics to diagnose problems with vehicles. The devices include a GPS receiver, a cellular transceiver, and a microprocessor. At predetermined times (i.e. every 10 seconds), the device retrieves the GPS location, the speed, the rate of acceleration/deceleration, the engine revolutions per minute, the rate of fuel consumption, and the GPS timestamp. This data is transmitted as a text message over the cellular network to a central server that is hosted at the University of Alaska Anchorage.



OBD vehicle tracking device, consisting of a GPS receiver, cellular transceiver, and microprocessor. Image by author.

The data that is transmitted is stored in a database and aggregated to show a map of the current congestion in the city. The roads are color-coded based on speeds compared to the speed limit on the roadways, where green indicates free-flowing, yellow is somewhat congested, orange is moderately congested, and red is very congested.

As the devices installed in vehicles are quite costly, and the use of smartphones has spread rapidly, smartphone applications for Blackberry, iPhone, and Android phones have been developed. The application that runs on these phones only transmits location and time, but speed can be determined and mapped from those two pieces of data. Data from a sample of vehicles is then used



Screenshot of FreeSim showing the flow of traffic on roadways in Anchorage. Image by author.

to help with routing of freight vehicles, as well as allowing other users to see real-time roadway speeds based on live, distributed data.

Freight distribution and circulation is an integral part of the daily economic activity of Anchorage and the entire State of Alaska. In order to balance the needs of businesses, freight, and the public, a close examination of actual travel times and delays through a real-time traffic reporting system provides transportation planners and decision-makers with actual facts about the system's performance. These facts give stakeholders the ability to better plan and understand the consequences of freight infrastructure investments.

Congratulations!

The following Division members passed the ASC exam for Transportation and can use the designation AICP-CTP:

- | | |
|--------------------|-----------------|
| Elizabeth Federico | Jennifer Stults |
| Thomas Murphy | Theodore Orosz |
| Dharm Guruswamy | Michael Larson |
| Daniel Prevost | |

And the winner of our TPD Survey (receiving 1 year of free membership): Tom Smyth, Certified Economic Developer, Honolulu, HI



FHWA / FTA Transportation Planning Excellence Awards

Open For Nominations:
Oct. 1, 2011 – Dec. 1, 2011

The Transportation Planning Excellence Awards (TPEA) Program recognizes outstanding initiatives across the country to develop, plan, and implement innovative transportation planning practices.

Winners represent a variety of planning organizations from across the country, and will receive awards at the Transportation Research Board (TRB) Summer Meeting in 2012 on the West Coast (location TBD).

This biennial awards program is sponsored by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), in partnership with the TRB (www.planning.dot.gov/tpea2012).

TPD Webinar Program

TPD is putting together a series of webinars for CM credit for 2012. Let us know if you have a good idea for a webinar!

Contact Madhu at madhunara@gmail.com.

Free Jobs Postings on TPD!

Reach a targeted audience of experienced transportation and planning professionals by posting your job on the APA Transportation Planning Division Website.

Send your job descriptions to webmaster@apa-tpd.org

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We are always looking for newsletter content, volunteers, ideas and suggestions about our involvement in transportation policy and programs. Email David Fields for details.

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