By Alex Marshall

I teach a course on infrastructure at the New Jersey School of Architecture in Newark, which offers a master’s degree in infrastructure planning. Harvard’s Graduate School of Design has the Zofnass Program for Sustainable Infrastructure. Meanwhile, planners and architects talk about “green infrastructure,” and presidential candidates debate the merits of an “infrastructure bank.”

But this word “infrastructure,” which I just managed to use five times in one paragraph without explanation, was not in common discourse 35 years ago in the U.S. and was just about unknown 50 years ago. Where did it come from, and what does its rise mean?

First of all, let’s put some evidence behind my claim. Using Google’s Ngram Viewer, one can search millions of books published over the last two centuries for the prevalence of words or terms. This miraculous tool shows that, in English at least, “infrastructure” was hardly used until about 1960, after which it climbed steadily, taking off after 1980.

Another Google search, this time of books published in French, shows the word beginning to be used in that language in the 1880s, and thereafter being employed at a steady rate before exploding in usage in the 1940s after World War II. This data appears to confirm what I have read elsewhere, which is that “infrastructure” was originally a French word, one that first made its appearance in railroad planning in France in the late 19th century. Military planners with NATO began using it in Europe, and it then gradually migrated over to civilian usage. But it was still several decades before even professionals outside of Europe began using the term.

A search of Google Books shows that references to “infrastructure” have increased dramatically over the past 50 years, while published uses of “public works” have declined.

A search of Google Books shows that references to “infrastructure” have increased dramatically over the past 50 years, while published uses of “public works” have declined.

Why, you may be asking at this point, should we care? After all, it’s just a word. But words, of course, are powerful things, and as they change so do our perceptions of what they represent. For me, the way this new word rose up and replaced older terms like “public works” is quite another. “The emergence of ‘infrastructure’ as a generic concept and prominent item on the public agenda is a phenomenon of the eighties,” wrote Alan Altshuler, former secretary of transportation for Massachusetts, in a 1989 book review for The Journal of Policy Analysis and Management.

You can see that emergence onto the public agenda pretty clearly with another dive into the archives. In searching The New York Times’ past articles, I found that the word “infrastructure” appeared just one time in 1950, then 19 times in 1960 and 27 times in 1970. Most of these occurrences were for specialized purposes that did not really conform to modern usage.

In 1980, the term was used in the Times 134 times, and that was the first year I found it being used in the way we do today. For example, Clyde Haberman reported on a proposal for the New York City Economic Development Corp., writing that one official had said “he had no objection to an agency to deal only with rebuilding the city’s infrastructure.” Haberman then felt the need to define the word as “a bureaucratic term for such projects as bridges, sewers and roads.”


Continued on page 2


Why the Word ‘Infrastructure’ Replaced ‘Public Works’

Continued from page 1

By comparison, “public works” was gradually declining in popularity. It was used 754 times in the Times in 1940, 554 times in 1980, 246 times in 1981 and just 184 times in 2000. “Infrastructure” had shoved “public works” almost out of the arena of public discourse. By comparison, “public works” was gradually declining in popularity. It was used 754 times in the Times in 1940, 554 times in 1980, 246 times in 1981 and just 184 times in 2000. “Infrastructure” had shoved “public works” almost out of the arena of public discourse.

Robert Moses, New York’s master builder, titled his 1970 autobiography Public Works: A Dangerous Trade. Today Moses would be talking about “infrastructure.” Personally I prefer “public works” because it has both “public” and “work” in it, a combination that economically describes both what we build and who it benefits. But while I dislike the bureaucratic sound of “infrastructure,” it really is a useful term for a broader view of these systems. In my last book, The Surprising Design of Market Economies, I use it to describe not only roads, power lines and water pipes, but also systems of law, policing and education that societies and business operate within.

Whatever you call these systems, building, nurturing and managing them has always been inherently political and controversial because they represent the public coming together to do something collectively. Some of the largest debates in our country’s history have turned on them, and still do.

In the early 19th century, the drive to build canals, ports, dams and roads, spearheaded by the brilliant Albert Gallatin under President Thomas Jefferson, was known as “internal improvements.” Debates over internal improvements were one of the causes of the Civil War: Southern planters opposed them because they feared that public investments in systems like railroads, particularly when accompanied by giving away Western land to settlers, would build a “free labor” system that would make slave labor less viable. Congress passed the national railroad and homestead acts in 1862 only after the South had left the Union and so could not block their passage.

Putting aside civil wars, infrastructure projects require, in a democracy at least, some measure of consensus to move forward. Generating that consensus is difficult, particularly in our system of government where localities, states and the feds operate almost independently of one another. But it’s a good fight to have, choosing what projects we put our collective will into — whatever one calls them.

Source: http://www.governing.com

California Sub-Bid Request Ads

ATKINSON CONTRACTORS, LP
Requests
Sub-bids from All Qualified & Certified DBE Subcontractors/Suppliers for:
Caltrans Contract No. 08-3555V4
Construction on Rte 15 in San Bernardino County
in Victorville
from 0.5 Mile North of Mojave Drive to 1.5 Mile
North of Stoddard Wells Road Overcrossing
Bids Thursday, August 27, 2015

Description of Work and Material Supply (but not limited to):
Aggregate Base, Architectural Treatment, Asphalt Paving, Biological, Clear & Grub, Concrete Barrier, Concrete Paving, Construction Area Signs, Demolition, Drainage, Earthwork, Drilled Piling, Driven Piling, Electrical, Environmental Services, Erosion Control, Fencing & Railing, Flatwork, Guardrail, Imported Borrow, Irrigation, Joint Seal, Landscaping, Pavement Marking, Maintenance of Traffic, Minor Concrete, Misc Iron & Steel, Overhead Sign Structures, Painting, Pipe Supply, Precast Prestressed Concrete Girders, Rebar, Retaining Wall, Road Barrier, Roadway Joint Seal, Roadway Sign, Rock Slope Protection, Sewer, Shotcrete, Signal and Lighting, Soil Nail Wall, Soundwall (Masonry Block), Street Sweeping, Structural Concrete, Structural Steel, Survey, SWPPP, Traffic Control System, Traffic Monitoring Stations, Trucking, Tubular Handrailings, Wireless Vehicle Detection System (Refer to project specs and addenda 1-4 for complete bid item list). This project has a 12% DBE Goal.

Please go to http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/08/08-3555V4/
DeSilva Gates Construction, L.P. is soliciting for DBEs for the following project:
CALTRANS ROUTE 13 – CONSTRUCTION ON STATE HIGHWAY IN ALAMEDA COUNTY FROM ROUTE 13/S80 SEPARATION TO ROUTE 13/24 SEPARATION, Contract No. 04-1J1904, Federal Aid Project ACNP-P013(027)E

OWNER:
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
1727 30th Street, Bidder's Exchange, MS 26, Sacramento, CA 95816
BID DATE: August 26, 2015 @ 2:00 P.M.

We hereby encourage responsible participation of local Disadvantaged Business Enterprises, and solicit their subcontractor or materials and/or suppliers quotation for the following types of work including but not limited to:

- AC DIKE, COLD PLANE, CONSTRUCTION AREA SIGNS, ELECTRICAL, EMULSION Supplier, STRIPING, SWPPP/WATER POLLUTION CONTROL PLAN PREPARATION, TEMPORARY EROSION CONTROL, TRUCKING, WATER TRUCKS, STREET SWEEPING, HOT MIX ASPHALT (TYPE A) MATERIAL, RUBBERIZED HMA (GAP GRADE) MATERIAL.

100% Performance and Payment Bonds may be required for full amounts of the subcontract price. Surety company will have to be approved by DeSilva Gates Construction. DeSilva Gates Construction will pay bond premium up to 2%. Subcontractors must possess current insurance and workers compensation coverage meeting DeSilva Gates Construction's requirements. Please call if you need assistance in obtaining bonding, insurance, equipment, materials and/or supplies. Plans and specifications are available for review at our Dublin office.

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McGuire and Hester is seeking qualified subcontractors in the following trades: SWPPP; clearing & grubbing; dewatering; shoring; hydroseeding; reinforcing steel; misc. metals; painting & coating; joint sealant; electrical & instrumentation; trucking; and cathodic protection. We will pay up to and including one and one-half percent (1-1/2%) of your bonding cost. Certification assistance is available, as well as viewing plans and specs.

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DeSilva Gates Construction
11555 Dublin Boulevard • P.O. Box 2909
Dublin, CA 94589-2909
(925) 829-9220 / FAX (925) 803-4263
Estimator: Victor Le
Website: www.desilvagates.com
An Equal Opportunity Employer

DeSilva Gates Construction, L.P. is soliciting for DBEs for the following project:
CONSTRUCTION ON STATE HIGHWAY IN BUTTE COUNTY IN AND NEAR CHICO FROM 0.5 MILE SOUTH OF SKYWAY OVERCROSSING TO 0.2 MILE SOUTH OF GARNER LANE, CONTRACT NO. 03-2F3304, FEDERAL AID PROJECT ACNP-P099(SBE)

OWNER:
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
1727 30th Street, Bidder's Exchange, MS 26, Sacramento, CA 95816
BID DATE: September 1st, 2015 @ 2:00 P.M.

We hereby encourage responsible participation of local Disadvantaged Business Enterprises, and solicit their subcontractor or materials and/or suppliers quotation for the following types of work including but not limited to:

- AC Dike, Concrete Barrier, Construction Area Sign, Crack Sealing, Crash Cushion, Electrical, Erosion Control, Irrigation, Lead Compliance Plan, Metal Beam Guardrail, Minor Concrete Structure, Grind Concrete Pavement, Rapid Set Concrete, Roadside Signs, Delineator, Markers, Rumble Strip, Stamped/Textured Paving, Striping, SWPPP Prep/ Water Pollution Control Plan Prepare, Underground, Vegetation Control, Trucking, Water Trucks, Class 2 Aggregate Base Material, Hot Mix Asphalt (Type A) Material, Rubberized HMA (Gap Grade) Material

100% Performance and Payment Bonds may be required for full amounts of the subcontract price. Surety company will have to be approved by DeSilva Gates Construction. DeSilva Gates Construction will pay bond premium up to 2%. Subcontractors must possess current insurance and worker's compensation coverage meeting DeSilva Gates Construction's requirements. Please call if you need assistance in obtaining bonding, insurance, equipment, materials and/or supplies. Plans and specifications are available for review at our Dublin office.
RGW Construction, Inc.
Contractors License A/B 591940
550 Greenville Road • Livermore, CA 94550 • Phone: 925-606-2400 • Fax: 925-961-1925
An Equal Opportunity Employer

RGW Construction Inc. is seeking all qualified DBE (Disadvantaged Business Enterprises) for the following project:

State Highway in Alameda County in Oakland at 0.1 Mile South of Carson Street Undercrossing
Contract No. 04-1SS414

Federal Aid Project No. ACHP-P013(026)E
Engineer Estimate: $1,780,000 – 210 Working Days
Goal: DBE 11%
Bids: September 9th, 2015 @ 2:00 PM


Scope of Work: Construction soldier pile retaining wall and reconstruct shoulder.

RGW is willing to breakout any portion of work to encourage DBE participation. Contact us for a specific item list. Plans and Specs are available to view and copy at our office or the Caltrans website www.dot.ca.gov/hq/esc/oe/. Contact Dan Schultz 925-606-2400 dan.schultz@rgwconstruction.com for any questions, including bonding, lines of credit, or insurance or equipment or material suppliers. Subcontractors should be prepared to submit payment and performance bonds equal to 100% of their quotation. For bonding and other assistance, please call.

Cahill Contractors, Inc.
State License Number 507561
8/31/15 at 2:00 PM

Requesting Sub & Supplier Bids
From All Qualified
Disadvantaged Business Enterprises (DBE) Subcontractors/Sub-consultants/Suppliers/Vendors registered as a DBE for:
La Palma Recharge Basin
Contract No. LPRB-2015-1
Owner: Orange County Water District
Reyes Construction is requesting bids for:
SUBCONTRACTORS: Traffic Control, SWPPP, Surveying, Shoring, Dewatering, Earthwork, Structural Excavation & Backfill, Trucking, Wet Utilities, Monitoring Well, Minor Concrete Structure, Structural Concrete, Reinforcing Steel, Structural Steel, Masonry, Roofing, Doors, HVAC, Mechanical, Fiber Optics, Cathodic Protection, Electrical, instrumentation & Controls, Guardrail, Fencing, Paint & Coating, Landscaping.

BID DATE: August 27, 2015 @ 2:00 PM

Assistance will be available for obtaining Bonds, Lines of Credit, and/or Insurance, necessary equipment, supplies, materials or related assistance services.

Plans and Specifications can be viewed online at no additional cost at:
1.) http://www.bidmail.com/Sublogin.aspx
   (To request an invite please email estimating@reyesconstruction.com)
2.) Via email by requesting to estimating@reyesconstruction.com
3.) Ocwdplanroom.com – registration required
   Please fax quotes to: 909.622.3053

Contact: Julie Park
estimating@cahill-sf.com, (415) 986-0600

Bid Requests from Certified SBE Subcontractors and Suppliers for the following Trades:
Earthwork, Soil Cement Columns, Structural Concrete, Structural Steel, Metal Stairs, and Elevators.
TRANSBAY BLOCK 7 (SELECT TRADES)

This is a OCCI project with construction workforce and prevailing wage requirements.

Transbay Block 7
255 Fremont Street
San Francisco, CA 94105
Bid Date: 9/14/15 @ 2 PM
Voluntary Pre-bid Meeting on 8/31/15 at 2:00 PM at Cahill Contractors, 425 California Street, Suite 2200, San Francisco, CA 94104.

There will not be a job walk.
California Sub-Bid Request Ads

RGW Construction, Inc.
Contractors License A/B 591940
550 Greenville Road • Livermore, CA 94550 • Phone: 925-606-2400 • Fax: 925-961-1925
An Equal Opportunity Employer

RGW Construction Inc. is seeking all qualified DBE (Disadvantaged Business Enterprises) for the following project:

Bay Point Sewer Repairs – Phase 3
Delta Diablo Project No. 15123
CWSRF Project Number: XC-06-8007-130
Engineer Estimate: $1,360,000 - 130 Days
DBE Outreach

Bids: September 17, 2015 @ 10:00 AM


Scope of Work: Remove & replace 6, 8 & 10” diameter sewer, replace manholes, point repairs, Sewage flow control, pre & post construction survey, post construction CCTV.

RGW is willing to breakout any portion of work to encourage DBE participation. Contact us for a specific item list. Plans and Specs are available to view and copy at our office or the Bidsync website: http://www.bidsync.com, or from the District Office, 2500 Pittsburg-Antioch Highway, Antioch. Contact Dan Schultz 925-606-2400 dan.schultz@rgwconstruction.com for any questions, including bonding, lines of credit, or insurance or equipment or material suppliers. Subcontractors should be prepared to submit payment and performance bonds equal to 100% of their quotation. For bonding and other assistance, please call.

O.C. Jones & Sons, Inc.
1520 Fourth Street • Berkeley, CA 94710 • Phone: 510-526-3424 • FAX: 510-526-0990
Contact: Donat Galicz • An Equal Opportunity Employer

REQUEST FOR MBE/WBE/SBE Subcontractors and Suppliers for:
Main Wastewater Treatment Plant Engineers Road Widening
Specification SD-357A
East Bay Municipal Utility District
BID DATE: September 16, 2015 @ 1:30 PM

We are soliciting quotes for (including but not limited to): Trucking, Construction Staking, Waterline, Fencing, Striping, Signs, Minor Concrete Curb & Gutter, Street Lighting - Electrical and Construction Materials

100% Performance & Payment Bonds may be required. Worker’s Compensation Waiver of Subrogation required. Please call OCJ for assistance with bonding, insurance, necessary equipment, material and/or supplies. OCJ is willing to breakout any portion of work to encourage MBE/WBE/SBE participation. Plans & Specs are available for viewing at our office.

O.C. Jones & Sons, Inc.
1520 Fourth Street • Berkeley, CA 94710 • Phone: 510-526-3424 • FAX: 510-526-0990
Contact: Donat Galicz • An Equal Opportunity Employer

REQUEST FOR DBE SUBCONTRACTORS AND SUPPLIERS FOR:
Charles M. Schulz-Sonoma County Airport
Runway Safety Area Service Roads
Santa Rosa
Sonoma County Project No.: APMC09
BID DATE: August 27, 2015 @ 2:00 PM

We are soliciting quotes for (including but not limited to): Trucking, Airfield Safety and Traffic Control, SWPPP, Silt Fence, Fiber Roll, FSA Fence, Hydroseeding, Inlet Protection, Testing and Construction Materials

100% Performance & Payment Bonds may be required. Worker’s Compensation Waiver of Subrogation required. Please call OCJ for assistance with bonding, insurance, necessary equipment, material and/or supplies. OCJ is willing to breakout any portion of work to encourage DBE participation. Plans & Specs are available for viewing at our office.
McGuire and Hester
9009 Railroad Avenue • Oakland, CA 94603 • Phone: (510) 632-7676 • Fax: (510) 562-5209
Contact: John Gasiorowski • An Equal Opportunity Employer

Sub Bids Requested From Qualified DBE Subcontractors & Suppliers for
Delta Diablo - Pittsburg Forcemain Improvements
Location: Pittsburg, CA • Project No. 14116
Bid Date: September 24, 2015 @ 10:00 AM

McGuire and Hester is seeking qualified subcontractors in the following trades: trucking; electrical; sawcutting; and jack & bore.
We will pay up to and including one and one-half percent (1-1/2%) of your bonding cost. Certification assistance is available, as well as viewing plans and specs.

O.C. Jones & Sons, Inc.
1520 Fourth Street • Berkeley, CA 94710
Phone: 510-526-3424 • FAX: 510-526-0990
Contact: Jean Sicard
An Equal Opportunity Employer

REQUEST FOR DBE SUBCONTRACTORS AND SUPPLIERS FOR:
San Tomas Expressway Projects
El Camino Real to Homestead Road
County of Santa Clara

BID DATE: September 10, 2015 @ 2:00 PM

We are soliciting quotes for (including but not limited to): Trucking, Traffic Control System, Type III Barricade, SWPPP, Adjust Utilities, Clearing & Grubbing, Hydroseeding, Roadside Signs, Untreated Lumber & Timber, Concrete, Storm Drain Manhole, Concrete Paver, Fencing, Removable Bollard, Transition Railing, Terminal System, Concrete Barrier, Striping & Marking, Signal Pole and Foundation, Electrical, Detector Loop, Cold Plane AC, Structure Excavation, Structure Backfill, Crack Seal/Filler, AC Dike, Retaining Wall, Microsurfacing, Sound Wall – Precast Panels & Columns, Misc. Iron & Steel, and Construction Materials.
100% Performance & Payment Bonds may be required. Worker’s Compensation Waiver of Subrogation required. Please call OJC for assistance with bonding, insurance, necessary equipment, material and/or supplies. OJC is willing to breakout any portion of work to encourage DBE Participation. Plans & Specs are available for viewing at our office.

Mc McGuire and Hester
9009 Railroad Avenue • Oakland, CA 94603 • Phone: (510) 632-7676 • Fax: (510) 562-5209
Contact: Robert Herrera • An Equal Opportunity Employer

Sub Bids Requested From Qualified SBE Subcontractors & Suppliers for
Santa Clara Valley Water District - Stevens Creek Evelyn Bridge Fish Passage
Location: Mountain View, CA • Project No. 26044002 / Contract No. CO606
Bid Date: September 2, 2015 @ 2:00 PM

McGuire and Hester is seeking qualified subcontractors in the following trades: construction area signs, traffic control, SWPPP, hydraulic mulch, hydroseeding, cold plane AC, clearing & grubbing, microsurfacing, high friction surface treatment, minor concrete, metal beam guardrail, striping & signs, electrical, and trucking.
We will pay up to and including one and one-half percent (1-1/2%) of your bonding cost. Certification assistance is available, as well as viewing plans and specs.

McGuire and Hester
9009 Railroad Avenue • Oakland, CA 94603 • Phone: (510) 632-7676 • Fax: (510) 562-5209
Contact: Jim Falk • An Equal Opportunity Employer

Sub Bids Requested From Qualified MBE, WBE, DBE, SBE Subcontractors & Suppliers for
Delta Diablo - Pittsburg Forcemain Improvements
Location: Pittsburg, CA • Project No. 14116
Bid Date: September 24, 2015 @ 10:00 AM

McGuire and Hester is seeking qualified subcontractors in the following trades: trucking; electrical; sawcutting; and jack & bore.
We will pay up to and including one and one-half percent (1-1/2%) of your bonding cost. Certification assistance is available, as well as viewing plans and specs.

McGuire and Hester
9009 Railroad Avenue • Oakland, CA 94603 • Phone: (510) 632-7676 • Fax: (510) 562-5209
Contact: Robert Herrera • An Equal Opportunity Employer

Sub Bids Requested From Qualified DBE Subcontractors & Suppliers for
County of Placer - HSP Auburn Folsom Road Safety Improvement Project
Location: Granite Bay, CA • Project No. 000925
Bid Date: September 9, 2015 @ 11:00 AM

McGuire and Hester is seeking qualified subcontractors in the following trades: construction area signs, traffic control, SWPPP, hydraulic mulch, hydroseeding, cold plane AC, clearing & grubbing, microsurfacing, high friction surface treatment, minor concrete, metal beam guardrail, striping & signs, electrical, and trucking.
We will pay up to and including one and one-half percent (1-1/2%) of your bonding cost. Certification assistance is available, as well as viewing plans and specs.

Hunters Point Shipyard Phase I
in San Francisco
Opportunity to Perform

HPS1 – Construction of the Streetscape for all the Blocks (minus 50 and 51)
Within the Hilltop portion of Parcel A during the development of Hunters Point Shipyard Phase I in San Francisco.
Lennar Urban is requesting qualified, interested contractors to respond to a public request for proposals to perform
HPS1 Construction of Hilltop Streetscape
At Hunters Point Shipyard in San Francisco
For more information, please visit:
The Successor to the San Francisco Redevelopment Agency (SFRA) has established the 50% Small Business Enterprise (SBE) Participation goal for Contractors.
Respondents are encouraged to check this website regularly for updates.
Pre-Bid Coordination Meeting and Job Walk:
September 1, 2015 @ 10:00 AM (Tentative Date)
Building 101
101 Horne Ave., San Francisco, CA 94104
Proposals must be submitted by September 14, 2015 @ 2:00 PM (PST).
public String replace(char oldChar, char newChar). Returns a new string resulting from replacing all occurrences of oldChar in this string
with newChar. If the character oldChar does not occur in the character sequence represented by this String object, then a reference to
this String object is returned. Otherwise, a new String object is created that represents a character sequence identical to the character
sequence represented by this String object, except that every occurrence of oldChar is replaced by an occurrence of newChar. The
2nd version works for strings too. You are creating 2 substrings first from 0 to the index of the position you want to change and then
adding the new character & concatenating the 2nd substring from i+1 to the end. Hope it helps..