



NEWSLETTER

President's Message



We are looking forward to a new and exciting year at the AAAEA. But before we look ahead, I offer some highlights of the past year:

Contact: We have completed the transition to our new mailing address and phone number. They are:
 AAAEA
 P.O. Box 1536
 Chicago, IL 60690-1536

Activities: Semi-Annual Meeting was held last December in Oak Brook. It was a very good turn-out by both members and non-members. We were very pleased to have Secretary Timothy Martin of the Illinois Department

of Transportation as our Keynote Speaker. The Family Bowling event held in January had its best attendance ever and was enjoyed by all. An Engineers Networking Evening was held in March, which gave new members a chance to

interact. The Annual Dinner Social, another first class event, was held in April at the Oak Brook Drury Lane. The Professional Networking Reception was held in May at the Chicago Athletic Club. Also, four family picnics were held last summer at various locations. We hope all had the opportunity to enjoy these activities. Thanks to Activity Chairman Omar Alsharbini and his family for their work on these activities. Omar continues as Activity Chair this year.

Education: We continued with the PE/EIT review classes under PESO and with Math Tutoring for our grade school and high school students. A great thanks to our Math tutoring volunteers for their commitment to the children of our community. A Field Trip to Argonne National Lab was done in April. Thanks to Ahmad Basrawi for making the arrangements. A return trip to Argonne is in plans for later this year. Also, Dr. Ghaffar Kazkaz offered to make a presentation in the near future. A Technical Seminar by Dr. Maher Abu-Mallouh was held in February. Maher continues as Education` Chair this year.

Career: Career workshops were conducted throughout the year by Eyad Elqaq.

Membership: We had 15 new members and 12 new student members this last year.

Webpage: The website has greatly improved under the guidance of IT Officer Mohammad Kleit, and has many new features. One of which is that members can now post their resumes on the website at no cost. Mohammad continues as Webmaster this year.

Womens Committee: A Women Engineers committee was established with a networking meeting held in March at UIC. Dr. Hiba Abdalla is the chair of this new committee.

By-Laws: Mr. Hasan Al-Gholeh has returned as chair of the By-Laws committee. The current By-Laws are on the website.

Finance: Many Meeting sponsorships and Scholarship Award donations were received this year. A thanks again to all the individuals and companies for their generosity. I would like to thank two individuals who were not acknowledged previously for their generous donations: Mohammad Khalil of Swaby Pump Co. and Ghaffar Kazkaz of ITW. A reminder that all contributions are tax-deductible. We look forward to awarding a Scholarship to a student member this year.

On AAAEA thanks all of you that have participated in our activities, and look forward to your participation in our upcoming activities. See the calendar of events.

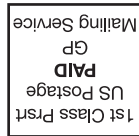
I would like to welcome Muhammad Mikbel, Izeddin Awaidah, Suha Saber and Ibrahim Shillo, our new members to this year's Board. We thank them for giving a commitment to serve this Association. I encourage all to volunteer in some way to the AAAEA by joining a Committee. This can mean helping all year or for just one activity. E-mail us if interested.

I would also like to thank Dr. Hiba Abdalla, Hanie Miri, Issam Abozir, Mohammed Rashed and Dr. Eyad Elqaq for their past service.

Again, we look forward to seeing you at our upcoming summer family picnics and the Science & Technology Conference.

Abder R. Ghoulah, PE

AAAAEA
 P. O. Box 1536
 Chicago, IL 60690-1536



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Visit our Website

www.AAAEA.org



AAAEA CALENDAR OF EVENTS

July 2005

- ISPE Conference

August 2005

- Picnic #2
- Newsletter
- Career Workshop

September 2005

- Picnic #3
- IEC Banquet
- Technical Conference
- Math Tutoring Begins

November 2005

- Semi-Annual Meeting (TBA)
- PE Classes Begin
- Newsletter

October 2005

- Scholarship Interviews
- Career Workshop

December 2005

- Technical Seminar
- Career Workshop

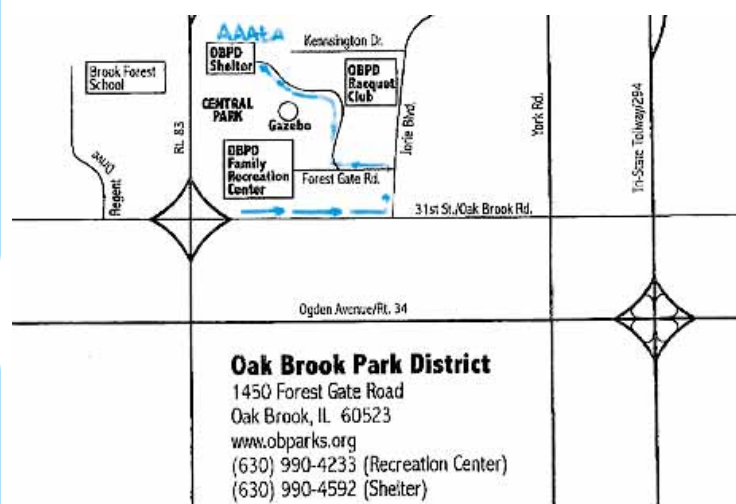
UPCOMING EVENT

AAAEA 2005 Picnic #2
(In Conjunction with the Arab American Medical Association – Illinois Chapter)

Date: Sunday August 7th, 2005

Time: 11:00am – 6:00pm
(indoor shelter)

Place: Oak Brook Park District
1450 Forest Gate Rd
Oak Brook, IL 60523



For more information visit the AAAEA Website @
www.aaaea.org

CAUCUS NEWS

A meeting of the "Caucus" was held on July 10 in Oak Brook. The Caucus comprises of the Arab American Medical Association-Illinois, the Arab American Bar Association, the Arab Medical Association, the Arab-American Business & Professional Association and the AAAEA. Thanks goes to NAAMA-Illinois President Dr. Anton Fakhouri who hosted the meeting. The representatives of the 4 groups discussed ways we all can work together more; especially in regards to more networking, joints events and projects, and a shared office.

Attending were Dr. Anton Fakhouri (NAAMA President), Talat Othman (ABPA President), Bill Haddad (AABAR Director), Bilal Almasri (AAAEA Trustee) and Abder R. Ghoulleh (AAAEA President). One proposal of the meeting was more joint activities, such as a joint picnic in the Summer and a joint Reception in the Fall or Winter. Currently there is the well established Networking Reception every spring which will continue. Also, to continue to assist in community activities such as the Health Fair. Another result of the meeting was for each group to inform the others of its events.

And the last proposal was for the Caucus to coordinate our administrative work in a shared office. Hopefully in the near future, the AAAEA and NAAMA will share an office and an administrative assistant. (AABAR and ABPA will consider participating in the future if the need arises.) The first step is locating an office. If anyone knows of an adequate office space available for rent, please contact us with the information for our consideration. Also, any donated space would be considered tax-deductible.

OUTREACH - JORDAN

By Abder R. Ghoulleh
AAAEA President

While in Amman, Jordan, I met with the representatives of the Jordan Engineers Association (JEA) and was very impressed with their organization. It was established in 1958 is the largest professional association in Jordan with over 40,000 members. They provide many benefits to their members and in addition to their headquarters, which has offices, conference area, computer center and an engineering library; they also have a full time engineering training center (ETC) and social/athletic facility. The ETC performs training and Continuing Education functions.

They encourage any engineer with Jordanian citizenship to become a member of the JEA. For more information on the JEA, its programs and benefits, go to: www.jea.org.jo or <http://www.jea.org.jo/Jea/english/index.htm>

A specific request to the AAAEA was if an engineer visiting Jordan could provide a seminar or presentation in his field of expertise. If you will be spending time in Jordan and would like to make a presentation to the JEA, please contact us and we will help set it up with their Training Center coordinator.

EDITOR'S NOTE

I would like to thank Bilal Almasri, Dr. Soliman Khudeira and Dr. Mustafa Mahamid for their contributions to the Newsletter. Due to space limitations, look for Dr. Mahamid's article on "The 2005 AISC Specification for Structural Steel Buildings" in the next issue.

We are always in need of articles for the Newsletter, so we strongly encourage you to send in material to us.

Thank you,
Ibrahim Shillo
Publication Committee

aaaea@aaaea.org



DETROIT ENGINEERS

The Arab-American Engineers & Architects Association of Michigan (AAEA) are part of the large community of Arab Professionals in the Detroit metropolitan area. They have reached out to the AAAEA for advice on getting their new organization off the ground. They have had two meetings and have chosen a steering committee. Their Third Meeting is on Thursday, August 4. They are concentrating on networking together to build a strong membership base for their organization. Preliminary discussions broached the topic of Detroit being a chapter of the AAAEA or being independent. For the time being, they will work on establishing their Association. The AAAEA will help and maintain communications with Detroit. Currently, Jomaa Ben-Hassine has been our liaison to the Michigan engineers. We look forward to working more with him and Sermed Saif in the future.

They are hoping to have a website soon. When they do, we will have a link to it for those interested in their progress.

MILWAUKEE ENGINEERS

There are many engineers in Wisconsin who are AAAEA members or are interested in the AAAEA. Currently, there are preliminary plans for activities or meetings to be organized in Milwaukee, WI. We encourage the Milwaukee engineers to network more together, and there has been some discussion on making Milwaukee a chapter of the AAAEA. For any Arab American engineer, architect or computer science professional who might be interested in future AAAEA Milwaukee events, please contact: aaaaa@aaaaa.org.

Any news Milwaukee engineers have will be posted on our website.

TEXAS ENGINEERS

On March 30, 2005, AAAEA President Abder R. Ghoulh met with members of the new Arab-American Engineers & Architects Association of Texas (AAEAA) in Houston, Texas. They discussed the Texas engineers' future plans. Mr. Ghoulh offered many suggestions for them to build on. Houston being a chapter of the AAAEA was also discussed. They were encouraged to increase networking and build their membership base. The Texas Engineers are still in their beginning stages, but there is much potential for them to grow and become a viable professional engineering organization. We will be monitoring their progress. AAAEA former committee member Tareq Ismail (San Antonio) and Ayman Shannak (Houston) will be AAAEA liaisons to the Texas engineers. The AAAEA will help and maintain communications with Texas, and look forward to working more with steering committee members Ahmad Boorenien and Hosam Salman. Until they have their own website, any news Texas engineers have will be posted on our website.

Roadway Planning and Design Topics –Part I

By Dr. Soliman Khudeira, PE

This is the first article in a series of articles to follow that discuss various topics related to roadway planning and design topics which include: roadway classification, needs assessment, project scope and timeline, stakeholders participation, project phases, funding sources, projects' environmental process, value engineering, right-of-way acquisition, cost methodologies, and maintenance of roadway elements. Each topic will be discussed in limited detail and is illustrated by citing a typical roadway project. Part I of this series discusses roadway classifications.

Roadway Classifications

Classification of roadways into different types is necessary for communication among engineers, planners, and the general public. Different classification schemes have been applied for different purposes in different rural and urban regions. Normally, roadways are classified by design type, route numbering, administrative classification, or functional classification.

Classification by design type: Roadway classification by design is based on the major geometric features (e.g., freeways and conventional streets and highways). This classification is useful for highway location and design procedure.

Classification by route numbering: Roadways are numbered by the agency having jurisdiction over the roadway (e.g., Federal, State primary, State secondary and County numbering system). This classification is useful for traffic operation.

Administrative classification: Roadways are classified based on maintenance and funds responsibilities (e.g., State Federal aid primary, State Federal aid secondary, State primary, and State secondary). This classification is used to denote the levels of government responsible for the highway facilities and the method of financing.

Functional classification: The functional classification is the predominant method of classifying highways which was developed for transportation planning purposes. Functional classification groups streets and highways according to the character of service they are intended to provide. Functionally, roads are classified as: local roads and streets, collector roads and streets, rural and urban arterials, freeways, at-grade intersections, and grade separation and interchanges. Exhibit 1 represents the relationship between local, collector, and arterial streets. Exhibit 2 outlines the Federal classification terminology for rural and urban roadways.

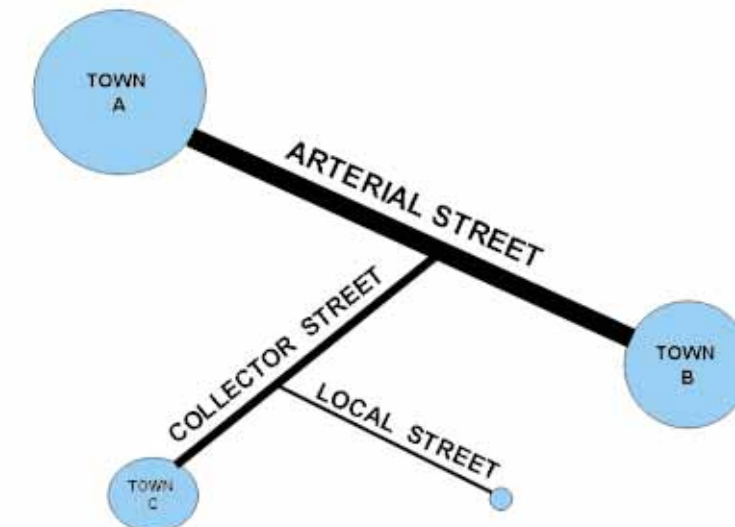


Exhibit 1: Local, Collector, and Arterial Streets

- 1. Local Roads and Streets:** primarily serves as access to the farm, residence, business, or other abutting property. On these roads, the through traffic is local in nature, rather than regional or interstate.
- 2. Collector Roads and Streets:** Collector road is the road between the local and the arterial streets.
- 3. Arterial Streets:** Arterial streets generally provide direct service between cities and larger towns.
- 4. Freeways:** Freeways are the highest type of Arterial Street. It is defined as an expressway with full control of access. Full control of access means that the authority to control access is exercised to give preference to the through traffic.
- 5. At-Grade Intersections:** At-Grade intersection is defined as the general area where two or more roadways join or cross at the same grade.
- 6. Grade Separations:** The greatest efficiency, safety, and capacity are attained when the intersecting through-traffic lanes are separated in grades.

Continued on next page



FEDERAL CLASSIFICATION TERMINOLOGY OF ROADWAYS

RURAL	URBAN
Principal Arterial System: Σ Interstate Σ Other Principal Arterials	Principal Arterial System: Σ Interstate Σ Freeways and Expressways Σ Other Principal Arterials
Minor Arterials	Minor Arterials
Collector Streets Σ Major Collectors Σ Minor Collectors	Collector Streets
Local Streets	Local Streets

Exhibit 2: Roadway Classification Terminology

NOW YOU KNOW WHY

Does the expression, "We've always done it that way" ring any bells? The U.S. standard railroad gauge (distance between the rails), is 4 feet, 8.5 inches. That's an exceedingly odd number. Why was that gauge used? Because that's the way they built them in England, and English expatriates built the US Railroads. Why did the English build them like that? Because the first rail lines were built by the same people who built the pre-railroad tramways, and that's the gauge they used. Why did "they" use that gauge then? Because the people who built the tramways used the same jigs and tools that they used for building wagons, which used that wheel spacing.

Okay! Why did the wagons have that particular odd wheel spacing? Well, if they tried to use any other spacing, the wagon wheels would break on some of the old, long distance roads in England, because that's the spacing of the wheel ruts. So who built those old rutted roads? Imperial Rome built the first long distance roads in Europe (and England) for their legions. The roads have been used ever since. And the ruts in the roads? Roman war chariots formed the initial ruts, which everyone else had to match for fear of destroying their wagon wheels. Since the chariots were made for Imperial Rome, they were all alike in the matter of wheel spacing.

The United States standard railroad gauge of 4 feet, 8.5 inches is derived from the original specifications for an Imperial Roman war chariot. And bureaucracies live forever!

So the next time you are handed a specification and wonder what horse's rear came up with it, you may be exactly right, because the Imperial Roman war chariots were made just wide enough to accommodate the back ends of two war horses. Now the twist to the story...

There's an interesting extension to the story about railroad gauges and horses' behinds. When we see a Space Shuttle sitting on its launch pad, there are two big booster rockets attached to the sides of the main fuel tank.

These are solid rocket boosters, or SRBs. The SRBs are made by Thiokol at their factory at Utah. The engineers who designed the SRBs might have preferred to make them a bit fatter, but the SRBs had to be shipped by train from the factory to the launch site. The railroad line from the factory happens to run through a tunnel in the mountains. The SRBs had to fit through that tunnel. The tunnel is slightly wider than the railroad track, and the railroad track is about as wide as two horses' behinds.

So, a major Space Shuttle design feature of what is arguably the world's most advanced transportation system was determined over two thousand years ago by the width of a horse's behind.

... and you thought being a HORSE'S REAR wasn't important!

Welcome New AAAEA Members

Asad Abu-Failat
Dolfen Rasho
Elyas Boundaoui
Hasan Damra
Hiba Sabani
Husein Armouti
Jawad Khalil
Khaled Salameh
Khaled Shouman
Luai Hodi
Majdi Arman

Mohd Adi
Mustafa Awwad
Naim Mansour
Najla Baeshen
Salaheddin Ali
Sami Alnadi
Ayman Shannak
Belal Abu Sad
Basem Radi
Osman Meah

ANNOUNCEMENTS AND NEWS

Congratulations to Eyad Elqaq for defending his Ph.D. thesis in electrical engineering at University of Illinois at Chicago.

Congratulations to Mohammad Faraj and his wife on their new baby born boy Ali.

Congratulations to Moussa Issa and wife for their new born baby boy Ibrahim.

Congratulations to Raed Abu-shukhaidem on his engagement.

Congratulations to the Omar Alsharbini & family on the wedding of daughter Ayat.

Congratulations to Sudud Mahmoud on passing the EIT exam.

Congratulations to Ahmad Laban on his recent promotion.

Congratulations to Muhammad Mikbel on his new position.

Congratulations to Nidal Rabie on being re-elected President of the Lifta Association.

The Illinois Engineering Council's Awards Banquet will be held on Friday, September 16th 2005 at 5:30 p.m. at the White Eagle Banquet Hall located at 6839 N. Milwaukee Ave. Niles, IL.

For more information, email haniemiri@hotmail.com .

If you have an announcement or news on any member, please email it to us at aaaea@aaaea.org



BOWLING - JANUARY 2005



ELECTIONS 2005



NEWLY ELECTED ON MAY 14, 2005

President: Abder Rahman Ghouleh

Membership Committee: Suha Saber

Vice-President: Jamal Grainawi

Publications Committee:
Ibrahim Shillo

Secretary: Muhammad Mikbel

Financial Committee:
Izeddin Awaidah, P.E

Treasurer: Abdul Basrawoui

IT Officer: Mohammad Kleit

Activity Committee: Omar Alsharbini

Education Committee: Dr. Maher Abu-Mallouh



JUNE 2005 PICNIC



HAFLEH - APRIL 2005

