MetaWorld Civil Consulting, LLC
444 Seabreeze Blvd., Suite 715
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AMIR MALEK, P.E.

PRINCIPAL / PROJECT MANAGER / PROJECT ENGINEER

Amir Malek has 9 years of professional experience in the Civil Engineering field and is a Florida Licensed Professional Engineer. During his career he has worked on both public and private land and infrastructure improvement projects, with capabilities ranging from civil site, drainage, roadway, and wet utility design. Amir has played a primary role in several high profile projects including two land development projects which won awards from the Austin Business Journal, the relocation and campus design of a major University, safety improvements to a local interstate to interstate interchange which has nearly eradicated accidents, the construction of a new intersection and traffic signal on an FDOT roadway near an airport which was commissioned by a private University, etc. His range of projects have left him with technical knowledge in different environments and varying characteristics, which contribute to his versatility and ability to design across several related disciplines. The range of clients and projects give Amir exceptional insight on the needs of all parties involved with improvement projects, and thus the ability to effectively communicate project specifics in a manner that his audience understands.

EDUCATION

- B.S. in Civil Engineering, Utah State University, 2005

PROFESSIONAL WORK EXPERIENCE

- **MetaWorld Civil Consulting, LLC**
  Daytona Beach, FL
  Principal / Project Manager / Project Engineer
  February 2013 to Present

- **Ghyabi & Associate, Inc.**
  Ormond Beach, FL
  Project Manager / Project Engineer
  February 2009 to February 2013

- **Bury + Partners, Inc.**
  Austin, TX
  Project Manager / Project Engineer
  November 2006 to October 2008

- **Alliance Transportation Group, Inc.**
  Austin, TX
  Traffic Analyst
  July 2005 to November 2006

PROFESSIONAL CERTIFICATIONS AND AFFILIATIONS

- Volusia County Association for Responsible Development (VCARD), Executive Council
- Florida Department of Transportation, Pre-Qualified in 3.1,13.6
- Florida Board of Engineers, Professional Engineer No. 72482
- Florida Board of Engineers, Authorized Engineering Company No. 30269
- American Society of Civil Engineers, Member

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PROJECT EXPERIENCE

Project Title: **Clyde Morris Boulevard Widening Project**
Project Location: **Daytona Beach, Florida**
Client: **FDOT – District 5**
Capacity Served: **Project Engineer**

Indicative of experience in FDOT Work Types, for which we are requesting qualification:

7.1 – Signing, Pavement Marking and Channelization
7.3 – Signalization
13.3 – Policy Planning
13.4 – Systems Planning
13.5 – Subarea / Corridor Planning

This project is an ongoing project for the widening and reconstruction of Clyde Morris Boulevard for a stretch of over 2 miles. The project involves reconstructing an existing undivided 4-lane roadway into a divided 6-lane roadway with a higher profile, a 12' multi-use path, a 5' foot sidewalk and associated drainage design. The project extends roadway limits such that a large series of canals requires piping.

In addition to impacting drainage and utility infrastructure, this project proposed taking of Right of Way from private land owners for both pond sites, and wherever the proposed alignment would take a good portion of property. As such, this project included collection of various types and disciplines of data, and cost / benefit analyses to determine if the taking of Right of Way was justified. Additionally, this process required consideration of the proper allocation of resources given the available budget.

The responsibilities of our qualifying representative for this project were to assist in all aspects of the design process. This included active involvement in generating the proposed alignment and profile of the roadway given limiting criteria and existing conditions, in conjunction with meeting drainage criteria hydraulically. This also included active involvement in hydrological studies to determine where ponds were needed and how they needed to be sized. As this project required several Project Engineers, each was required to maintain active involvement in all aspects. In addition to the active involvement described above, our qualifying representative was put in responsible charge of creating a Maintenance of Traffic Plan and associated temporary drainage plan for use during construction.

The drainage design on this project was particularly challenging due to the number of separate non-permitted drainage systems in the area which contributed to the canals, and the amount of permitted systems which could not be negatively affected by the proposed improvements. The temporary drainage plan for this project required creating a full MOT plan according to specifications for extended duration work periods, in order to determine where drainage inlets could be placed. This included modifying the temporary alignment of the road within limited ROW such that Signage, Pavement Marking, and Channelization requirements were met, as well as the temporary drainage requirements; all while providing the space required to construct the new road. The project has been shelved by the FDOT in anticipation of funds.

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Project Title: **I-4 / I-95 Interchange Skid Hazard Safety Project**
Project Location: **Daytona Beach, Florida**
Client: **FDOT – District 5**
Capacity Served: **Project Engineer**

Indicative of experience in FDOT Work Types, for which we are requesting qualification:

7.1 – Signing, Pavement Marking and Channelization
7.3 – Signalization
13.3 – Policy Planning
13.4 – Systems Planning
13.5 – Subarea / Corridor Planning

This project was a safety project for ramps of the I-4 / I-95 interchange that experiences high crash rates. The project improved upon safety by correcting superelevation deficiencies, installing guard rail, providing new warning signage and resurfacing with a granite friction course. The project also involved reconfiguring the existing pavement markings, as one lane was completely removed. The justification, review and documentation of these tasks were extensive.

Our qualifying representative served as the Project Engineer responsible for the permitting and design of all of the improvements including utility coordination. For this project that task entailed conducting a cost-to-benefit analysis to justify the use of guardrails, performing a highway capacity study to justify the reduction of one lane throughout the ramp, and generating a Maintenance of Traffic and Detour Plan. Additionally, this project required the design of a combination of several overhead guide signs (to match the new lane configurations) on the existing structure; which required knowledge of how the sizes and locations of the sign affect the forces on the structure.

One particularly unique aspect of this project was that the construction time was extensive due to the number and nature of changes that were needed while keeping the roadway open. Our qualifying representative proposed an alternative method of construction which involved detouring traffic and closing the ramps during construction (which was only allowed overnight). Although the method was initially denied by the FDOT, upon presentation it was determined that the cost savings severely outweighed the benefits of maintaining traffic throughout construction. The persistence to permit this construction method not only saved the public money, but it allowed a crucial safety improvement to be constructed in weeks rather than months.

Ultimately, the project received high grades from the FDOT Project Manager and the improvements have nearly eradicated accidents; and they were implemented as quickly and efficiently as possible.

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Project Title: **Aerospace Blvd. @ Clyde Morris Blvd. Intersection**
Project Location: **Daytona Beach, Florida**
Client: **Embry Riddle Aeronautical University**
Capacity Served: **Project Engineer**

Indicative of experience in FDOT Work Types, for which we are requesting qualification:

7.1 – Signing, Pavement Marking and Channelization
7.3 – Signalization
13.3 – Policy Planning
13.4 – Systems Planning
13.5 – Subarea / Corridor Planning

This project was for the introduction of a new intersection providing access to Embry Riddle Aeronautical University (ERAU) along Clyde Morris Boulevard. The project included widening a state road to a width sufficient for the intersection, signalization design and the approval of a Signal Warrant Analysis. The responsibilities of our qualifying representative for this project were the design and permitting of all roadway and signalization elements including Utility Coordination and FDOT access permitting; as well as coordination with another design firm for the drainage design and connectivity with private improvements.

This project was particularly unique because of its location, the parties involved and the fact that the proposed work was by a private entity on a public facility and required the dedication of land for Right of Way. The new intersection is located at the border between the Daytona Beach International Airport and ERAU, near a Runway Protection Zone. It is also located within Daytona Beach city limits, but is being maintained by Volusia County. As such, the project required diligent and effective coordination between the University, the County, the City and all private utilities.

Furthermore, the new intersection did not meet some of the suggested design guidelines of the governing agencies but was warranted due to its effectiveness in alleviating a known and documented traffic safety issue on the roadway. This task involved analyzing existing travel demand models and incorporating location specific transportation demand forecasts given the anticipated future development in the area.

The project included a dual left turning lane into campus from the FDOT roadway, and therefore required widening of nearly 1/3 of a mile of roadway around a curve along with new pavement markings and signage. The alignment of the road included analysis of the channelization criteria to ensure that vehicles were able to line up perpendicular to the intersecting street and able to smoothly transition back to the original alignment with sufficient spacing before the next intersection.

This project was fully constructed in 2013.

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Project Title: **State Road 15 Lighting Project**
Project Location: **Sanford, Florida**
Client: **FDOT – District 5**
Capacity Served: **Utility Coordinator**

Indicative of experience in FDOT Work Types, for which we are requesting qualification:

13.5 – Subarea / Corridor Planning

This is a Highway Safety Improvement Program project featuring removing the existing roadway lighting system and replacing with a complete new system for a stretch of about a mile. The 17-92 Corridor Redevelopment Agency and the City Of Sanford partnered on the project, providing local funds to upgrade the light poles to a painted product that matches the surrounding area.

Our qualifying representative was contracted as the Utility Coordinator to bring the Utility Adjustment Schedule up to date, after it had been fully neglected throughout the design process. This responsibility included contacting all five private utility owners in the area and negotiating design adjustments under an extremely abbreviated schedule; due to the fact that funding would be lost if the project was not bid on schedule.

This was challenging given the new lighting system was to include underground wiring and none of the existing poles or pole locations were to be used. This greatly complicated things as the Right of Way was cluttered with active and abandoned utilities, as well as a drainage swale and culvert system which severely limited space.

The planning required for this project was also made more difficult as FPL was scheduled to be installing new poles and lines concurrently. This meant that each potential conflicting location had to be noted such that should field conditions cause the poles to be constructed in a place where it was not designed, the field crew had alternatives or instructions to contact our representative.

Despite the scheduling and design challenges, the Utility Adjustment Schedule was available before the pre-bid conference, the project was bid on schedule and construction was completed prior to the estimated completion date.

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Project Title: **John Anderson Drive Roadway Improvements**
Project Location: **Ormond Beach, Florida**
Client: **City of Ormond Beach**
Capacity Served: **Project Engineer**

Indicative of experience in FDOT Work Types, for which we are requesting qualification:

7.1 – Signing, Pavement Marking and Channelization
13.3 – Policy Planning
13.4 – Systems Planning
13.5 – Subarea / Corridor Planning

This project is an ongoing project for the resurfacing of roughly 2 miles of John Anderson Drive from SR 40 to the northern limit of Ormond Beach, the widening of N. Halifax Drive to accommodate bike lanes for nearly 500', and several drainage improvements. This stretch of John Anderson Drive consistently experiences flooding and is considered unsafe. This stretch also has a long history of citizen concerns over tree preservation and is a part of the Ormond Beach Scenic Loop and had been subject to more than a decade of public involvement workshops and meetings.

This project was originally scoped and designed as a roadway reconstruction project in which the roadway was to be realigned and the profile raised. Additionally, the scope and design originally included the addition of a meandering 4' sidewalk which avoided trees requiring preservation. By the 90% plans phase of design, the citizens of the City were successful in causing the change of scope such that construction time and inconvenience would be greatly minimized and the sidewalks would not be constructed.

The responsibilities of our qualifying representative for this project were the roadway design, sections of the drainage design and coordination of utility adjustments with both private and public utilities; as well as leading two different public involvement meetings and being prepared to present information at several City council meetings.

Because this project had been the subject of numerous studies and public planning workshops, it was necessary to be in very frequent communication with the City Engineer and City Manager. It was also required that the engineer be available for individual property owner meetings at their properties to discuss the proposed impacts to them.

This project is currently in the construction phase and is expected to be complete in 2014.

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Project Title: **Gables at Park Plaza**
Project Location: **Austin, Texas**
Client: **Gables Residential / City of Austin**
Capacity Served: **Project Engineer**

Indicative of experience in FDOT Work Types, for which we are requesting qualification:

7.1 – Signing, Pavement Marking and Channelization
7.3 – Signalization
13.3 – Policy Planning
13.5 – Subarea / Corridor Planning

This project was a joint venture between the City of Austin and Gables Residential and consisted of roughly five acres of mixed use land improvement centrally located in downtown Austin. This project was particularly unique because of the diligent coordination required to ensure that all stakeholders' needs were being met, since a portion of the improvements were on public land and for public use. This project required compliance with Austin's Sub-Chapter E Standards which focus on streetscaping, beautification and pedestrian and vehicular connectivity. Utility design included the relocation of City of Austin water and wastewater lines. The project also consisted of the design of four streets that would be within the City Right of Way and round-about intersection connecting them.

Our qualifying representative served as the Project Civil Engineer responsible for the permitting and design of all civil related aspects including site grading, drainage and pond design, wet and dry utility design, road and sidewalk design, and erosion control measures.

A major portion of this project dealt with properly managing traffic in the area, as the site is located at the cross-roads of two major thoroughfares. The project required link and intersection Level of Service analyses to justify the use of a round-about. It was also required to create several Maintenance of Traffic Plans on high traffic roadways, for each phase of construction.

A unique aspect of this project was the necessity to change the FEMA flood maps with a CLOMR-F. The task was very difficult because the flood zone being modified was along the banks of the Colorado River, and also removed a major public thoroughfare and a portion of railroad out of the flood zone. This required lengthy coordination and justification with City Officials, the Railroad Commission and FEMA to update official documentation.

Ultimately, the project won an award from the Austin Business Journal for the Best Multi-Family Project of the Year in 2010. The public park built as a part of the project has been the venue for many events and the project has benefited the community greatly.

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Project Title: **The Domain**
Project Location: **Austin, Texas**
Client: **Endeavor Real Estate Group, Inc.**
Capacity Served: **Project Engineer**

Indicative of experience in FDOT Work Types, for which we are requesting qualification:

7.1 – Signing, Pavement Marking and Channelization
7.3 – Signalization
13.3 – Policy Planning
13.4 – Systems Planning
13.5 – Subarea / Corridor Planning

This project is an ongoing project where approximately 450 acres of land that have been master planned for redevelopment, with the ultimate goal of becoming the "mid-town" of Austin. The redevelopment included water and wastewater design, general layout design for a master planned mixed used development, shared parking design, drainage design, and for the design of a community water quality/detention pond. This project was unique because the initial stage was to design the infrastructure and then each individual lot required its own permit. This project required compliance with Austin's Sub-Chapter E Standards which focus on streetscaping, beautification and pedestrian and vehicular connectivity. Utility design included upgrading the City of Austin chilled water, water, and wastewater systems.

Our qualifying representative served as the Project Civil Engineer responsible for the permitting and design of all civil related aspects including site grading, drainage and pond design, wet and dry utility design, road and sidewalk design, and erosion control measures.

Due to the scope and size of this project, several engineers were required, each of whom was required to maintain active involvement in all aspects of the project. In addition to the general involvement, our qualifying representative was put in responsible charge of initial infrastructure design.

This task required intensive coordination with the City and the MPO to designate the proper ROW corridors and widths required. It was required to generate an estimated travel demand using the ITE Trip Generation manual, and to estimate a Level of Service for the links and intersections throughout the 450 acre development. The task was daunting because the model used for this purpose required constant modification as a result of leasing agreements that were going on concurrently. As the project was being built out, it was our representative's responsibility to suggest land use modifications for the remaining lots while other lots were being leased, to ensure that agreements made with the City and MPO regarding traffic demand were not exceeded.

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Project Title: **Various Maintenance of Traffic Plans**
Project Location: **Austin, Texas**
Client: **Various**
Capacity Served: **Project Engineer**

Indicative of experience in FDOT Work Types, for which we are requesting qualification:

7.1 – Signing, Pavement Marking and Channelization
13.4 – Systems Planning
13.5 – Subarea / Corridor Planning

Our qualifying representative has been responsible for several Maintenance of Traffic Plans as an individual service provided to clients. The majority of these MOT Plans were designed for the proper maintenance of traffic during construction activities or special events. The plans range from individual lane closures to full detours on local and DOT roadways. The plans were produced in accordance with standards described in the Manual on Uniform Traffic Control Devices, the AASHTO Geometric Design of Highways Manual and local government standards.

In addition to requiring in depth knowledge of the urban traffic environment, many of the MOT Plans (particularly those for special events) required extensive signage on limited access roadways such as I-35 and State Highway 1 (MoPac) in Austin, TX. This is because entire stretches of roadways were closed between the two highways; meaning that detours and proper warning signage were required to direct traffic away from the affected exits.

Each MOT plan required justification in the form of capacity analysis, link level of service and/or intersection level of service. The following table indicates the location and project name for each MOT produced as an individual service.

Project	Location
Forest Creek	**Austin, TX**
Senior Games of Texas	**Austin, TX**
Aids Walks	**Austin, TX**
Ride for the Roses	**Elgin, TX**
Convention Center Parking Garage	**Austin, TX**
Pavement and Waterline Rehab	**Georgetown, TX**
Intersection Beautification	**Temple, TX**
Hobby Building Roofing	**Austin, TX**
Gattis School Road	**Round Rock, TX**
21st Street	**Georgetown, TX**
Rosey Films	**Taylor, TX**
Rio Grande Street Closures	**Austin, TX**
Old Settler's Boulevard	**Round Rock, TX**
Boy Scouts Parade	**Austin, TX**
Go for the Gold Race	**Austin, TX**
Cactus Challenge Race	**Austin, TX**
The Magnolia	**Austin, TX**
MS 150 Triathlon	**Austin, TX**
St. Patrick's Day Parade	**Austin, TX**

Cristo Ray Catholic Church	**Austin, TX**
San Antonio Street Closures	**Austin, TX**
ROT Rally	**Austin, TX**
Peace Officer's Parade	**Austin, TX**
8110 Springdale Road	**Austin, TX**
Asian Market	**Austin, TX**
Brodie Ranch	**Austin, TX**
Kinney Plumbing	**Austin, TX**
SDI Tech	**Austin, TX**
Wildlife Expo	**Austin, TX**
Lago Builders	**Austin, TX**
Live Oak	**Austin, TX**
Killeen Hike and Bike Trail	**Killeen, TX**
Stassney @ Congress Bore	**Austin, TX**
8th @ Congress Building Demolition	**Austin, TX**
Driveway Installation	**Austin, TX**
The Sage	**Austin, TX**
Pro Line: Woodland @ I-35	**Austin, TX**
Rolling Stones Concert	**Austin, TX**

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Project Title: **Various Traffic Impact Analyses**
Project Location: **Austin, Texas**
Client: **Various**
Capacity Served: **Project Engineer**

Indicative of experience in FDOT Work Types, for which we are requesting qualification:

7.1 – Signing, Pavement Marking and Channelization
7.3 – Signalization
13.3 – Policy Planning
13.4 – Systems Planning
13.5 – Subarea / Corridor Planning

Our qualifying representative has been responsible for several Traffic Impact Analyses as an individual service provided to clients. The goal of the Traffic Impact Analyses was to investigate the impacts that a new development or re-development of an existing location would have on existing transportation systems. The methods for conducting such an analysis are outlined in the Institute of Traffic Engineers' Trip Generation Manual.

Our qualifying representative's responsibilities were to conduct the analysis, determine the level of impact and generate a report summarizing findings and reporting whether or not traffic operations would meet requirements. If the requirements would not be met, the report also included indicating the improvements necessary to meet them.

The improvements suggested as a part of these analyses range from additions of turn lanes, to additions of signalized intersections, to additions of new links. Each analysis required coordination with the MPO to obtain relevant transportation models and justify the distribution of traffic from the proposed development. Depending on the location of the proposed development, the improvements suggested involved local scale and/or macro-scale modeling. All macro-scale modeling required update information to the MPO, so that their models were consistent with land use changes. The following table indicates the location and project name for each Traffic Impact Analysis conducted as an individual service.

Project	Location
Riverscape Apartments	Marble Falls, TX
Sienna Hills	Round Rock, TX
Fairfield Hyatt	Austin, TX
Dakota Springs	Austin, TX
Paloma Lake	Austin, TX
Texas X Park	Cedar Park, TX
Corpus Christi HEB	Corpus Christi, TX
3M Farms	Austin, TX
Moore and Avery Tract	Austin, TX
High Point Village	Austin, TX
Decker Lake Center	Austin, TX
Wildhorse Creek	Elgin, TX
Waterside	Marble Falls, TX
Oak Creek	Austin, TX