County of Hernando
Procurement Department
Carla Rossiter-Smith, Chief Procurement Officer
15470 Flight Path Drive, Brooksville, FL 34604

[HDR ENGINEERING, INC.] RESPONSE DOCUMENT REPORT

RFQ -A/E No. 23-RFQ00414/CR

Continuing Traffic Engineering Services

RESPONSE DEADLINE: December 4, 2023 at 10:00 am

Report Generated: Monday, October 28, 2024

HDR Engineering, Inc. Response

CONTACT INFORMATION

Company:
HDR Engineering, Inc.

Email:
mari.bonbrest@hdrinc.com

Contact:
Mari Bonbrest

Address:
4830 W Kennedy Blvd, Suite 400
Tampa, FL 33609

Phone:
N/A

Website:
www.hdrinc.com

Submission Date:
Dec 4, 2023 9:06 AM (Eastern Time)

ADDENDA CONFIRMATION

Addendum #1
Confirmed Nov 27, 2023 10:53 AM by Mari Bonbrest

QUESTIONNAIRE

1. Acknowledgement and Attestation*

Pass

By responding to this RFQ, the respondent(s) certify that he/she has reviewed the sample contract, and its exhibits contained herein, and is familiar with their terms and conditions and finds them expressly workable.

We certify and declare that the foregoing is true and correct.

Please acknowledge below that you confirm the above statement:

Confirmed

2. Download Drug Free Workplace Certificate *

Pass

I have read and attest to, in accordance with Florida Statute 287.087 (current version), hereby certify that,

Publishes a written statement notifying that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace named above, and specifying actions that will be taken against violations of such prohibition.

Informs employees about the dangers of drug abuse in the workplace, the firm's policy of maintaining a drug free working environment, and available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug use violations.

Gives each employee engaged in providing commodities or contractual services that are under proposal a copy of the statement specified above.

Notifies the employees that as a condition of working on the commodities or contractual services that are under proposal, the employee will abide by the terms of the statement and will notify the employer of any conviction of, pleas of guilty or nolo contendere to, any violation of Chapter 893, or of any controlled substance law of the State of Florida or the United States, for a violation occurring in the workplace, no later than five (5) days after such conviction, and requires employees to sign copies of such written statement to acknowledge their receipt.

Imposes a sanction on, or requires the satisfactory participation in, a drug abuse assistance or rehabilitation program, if such is available in the employee's community, by any employee who is so convicted.

Makes a good faith effort to continue to maintain a drug free workplace through the implementation of the Drug Free Workplace Program.

"As a person authorized to sign this statement, I certify that the above named business, firm or corporation complies fully with the requirements set forth herein".

Please Confirm that you have read and attest to Download Drug Free Workplace Certificate

Confirmed

3. Affidavit of Non Collusion and of Non-Interest of Hernando County Employees*

Pass

Certification that Vendor/Contractor affirms that the bid/proposal presented to the Owner is made freely, and without any secret agreement to commit a fraudulent, deceitful, unlawful or wrongful act of collusion.

I have read and attest that I am the Vendor/Contractor in the above bid/proposal, that the only person or persons interested in said proposal are named therein; that no officer, employee or agent of the Hernando County Board of County Commissioners (BOCC) or of any other Vendor/Contractor is interested in said bid/proposal; and that affiant makes the above bid/proposal with no past or present collusion with any other person, firm or corporation.

Please confirm that you have read and attest to Affidavit of Non Collusion and of Non-Interest of Hernando County Employees

Confirmed

4. Sworn Statement

SWORN STATEMENT 287.133 (3) (A)*

Pass

I have read and attest that I understand that a "public entity crime" as defined in Paragraph 287.133 (1)(g), Florida Statutes (current version), means a violation of any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

I have read and attest that I understand that "convicted" or "conviction" as defined in Paragraph 287.133 (1)(b), Florida Statutes (current version), means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any Federal or State trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

I have read and attest that I understand that an "affiliate" as defined in Paragraph 287.133 (1)(a), Florida Statutes (current version), means:

A. A predecessor or successor of a person convicted of a public entity crime; or

B. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one (1) person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one (1) person

controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding thirty-six (36) months shall be considered an affiliate.

I have read and attest that I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statutes (current version), means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which proposals or applies to proposal on contracts for the provisions of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

I have read and attest that based on information and belief, the statement which I have confirmed below is true in relation to the entity submitting this sworn statement:

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH ONE (1) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31, OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT.

Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

IF YOU CHOOSE OPTION 3, PLEASE ATTACH A COPY OF THE FINAL ORDER
The entity submitting this sworn statement, or one (1) or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted Vendor/Contractor list

Please attach a copy of the final order

No response submitted

5. Authorized Signatures/Negotiators

AUTHORIZED SIGNATURES/NEGOTIATORS *
Pass

Please provide the information to support the statement below:

The Vendor/Contractor represents that the following persons are authorized to sign and/or negotiate contracts and related documents to which the Vendor/Contractor will be duly bound:

Name(s)

Title(s)

E-mail(s)

Phone no (s)

Melanie Fowler, PE

Project Principal/Tampa Office Principal

melanie.fowler@hdrinc.com

813.282.2315

Katie E Duty

Vice President

katie.duty@hdrinc.com

813.282.2300

TYPE OF ORGANIZATION *
Pass

Please select your organization type:

Corporation

COMPANY ID*
Pass

Please Provide Your:

State of Incorporation:

Federal I.D. NO.:

47-0680568

W9 FORM*
Pass

Please upload your company's W9 information

HDR_Engineering_Inc_W-9_2023.pdf

ACH ELECTRONIC PAYMENT*
Pass

An ACH electronic payment method is offered as an alternative to a payment by physical check. Please select one of the options.

Yes, ACH electronic payment method is acceptable.

6. Local Vendor Affidavit of Eligibility

7. E-Verify Certification

E-VERIFY CERTIFICATION *
Pass

Vendor/Contractor acknowledges and agrees to the following:

Vendor/Contractor shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

All persons employed by the Vendor/Contractor during the term of the Contract to perform employment duties within Florida; and

All persons, including subcontractors, assigned by the Vendor/Contractor to perform work pursuant to the Contract with the department.

Confirmed

REFERENCES *
Pass

Proposer must provide a minimum of three (3) references in format shown below. References must be individuals that can be readily contacted and have first-hand knowledge of the Proposer's performance on the specific project performed by the Proposer. Each reference project must meet the following criteria:

Project at Substantial Completion or completed within the last seven (7) years.

Similar in size, dollar value and scope as this project.

Please provide information for 3 required References:

Business/Owner Name

Reference Contact Person

Reference Address

Reference Phone No.

Reference Email Address

Project Name

Project Location

Contract Project Manager

Site Superintendent

Contract Amount

Date Project Commenced

Date of Substantial Completion

Date of Final Completion

Description of Work Performed

Note: Experience shall be related to successfully completed projects within the last seven (7) years (i.e., the project must have been Substantially Complete within seven (7) years of the due date of this RFQ. Only projects that are complete or substantially complete as of the bid due date will be considered).

By submitting this information, I certify that the qualifications questionnaire information is true and correct to the best of my knowledge.

7.2_References.pdf

KEY SUBCONTRACTORS*
Pass

Each Proposer must submit with its response a list of subcontractors who will perform the work in each of the following categories (key subcontractors). List the name of the proposed subcontractor, or “Proposer” if the Proposer will perform the work, after each work category:

Example:

(1) Earthwork construction

(2) Earthen dike construction

(3) Soil bentonite backfill cut-off wall installation

(4) Wet excavation/dredging work

(5) Concrete form work

(6) Equipment installation

(7) Electrical and instrumentation installation

(8) Control system integration

(9) Wetland planting and establishment

If no subcontractors will be employed please state "NONE"

7.3_Key_Subconsultants.pdf

VENDOR/CONTRACTOR'S LICENSE*
Pass

The Proposer must be a registered to do business in the State of Florida. All Proposers and/or subcontractors performing work requiring a specialty license must be licensed in the State of Florida.This includes but is not limited to electrical and mechanical trades, as well as any other earthwork Contractor on the Proposer's team. Provide license information (as required in Paragraph 27) below for Proposer and all subcontractors identified herein.

Classification

Issuing Government License

Issue Date:

License Number:

7.4_Vender.Contractor_Licenses.pdf

ORGANIZATION CHART*
Pass

Proposer must provide an organization chart showing Proposer’s team identifying specific responsibilities of Proposer and subcontractors.

7.5_OrganizationalChart_HDR.pdf

PROJECT MANAGER QUALIFICATIONS*
Pass

Proposer must provide resume of Project Manager listing qualifications, experience, education and training. The Project Manager must have adequate experience, generally considered as a working Project Manager on a minimum of two (2) projects, similar in size and scope to the Continuing Traffic Engineering Services, within the past seven (7) years.

7.6_PM_Resume.pdf

8. Vendor/Contractor's License

VENDOR/CONTRACTOR'S LICENSE*
Pass

Please upload all contractors and subcontractors license(s) required for this project.

8.1_Vendor.Contractor_Licenses.pdf

9. Additional Required Forms

CORPORATE AFFIDAVIT *
Pass

Please download the below documents, complete, and upload.

- Corporate_Affidavit.pdf

9.1_Corporate_Affidavit_(HDR).pdf

VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES*
Pass

Section 287.135 (Current Edition), Florida Statutes, prohibits agencies from contracting with companies for goods or services of $1,000,000.00 or more, that are on either the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector Lists which are created pursuant to s. 215.473 F.S. (Current Edition), or the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725 F.S. (Current Edition), or companies that are engaged in a boycott of Israel or companies engaged in business operations in Cuba or Syria.

As the person authorized to bind on behalf of respondent, I hereby certify that the company identified above in the section entitled “Respondent Vendor Name” is not listed on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List. I further certify that the company is not engaged in a boycott of Israel. I understand that pursuant to section 287.135 (Current Edition), Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney’s fees, and/or costs and does not have business operations in Cuba or Syria.

I have read and attest that I confirm the above is acknowledged.

Confirmed

10. Hernando County Employment Disclosure Certification Statement

IS ANY OFFICER, PARTNER, DIRECTOR, PROPRIETOR, ASSOCIATE OR MEMBER OF THE BUSINESS ENTITY A FORMER EMPLOYEE OF HERNANDO COUNTY WITHIN THE LAST TWO (2) YEARS? *
Pass

No

IS ANY OFFICER, PARTNER, DIRECTOR, PROPRIETOR, ASSOCIATE OR MEMBER OF THE BUSINESS ENTITY A RELATIVE OR MEMBER OF THE HOUSEHOLD OF A CURRENT HERNANDO COUNTY EMPLOYEE THAT HAD OR WILL HAVE ANY INVOLVEMENT WITH THIS PROCUREMENT OR CONTRACT AUTHORIZATION?*
Pass

No

RELATIVES AND FORMER HERNANDO COUNTY EMPLOYEES - ROLES AND SIGNATURES
If you answered yes to the either of the two prior questions regarding relatives or Hernando employees, please download the below documents, complete, and upload.

- Relatives_and_Former_Hernan...

No response submitted

11. Vendor Survey

VENDOR SURVEY *
Pass

Please provide information on where you received the knowledge of the bid/request for Qualifications (mark all that apply):

County's eProcurement Portal (Open Gov Procurement)

VENDOR SURVEY - OTHER
If you choose Other please list how you received the knowledge of the bid/request for Proposals.

No response submitted

ANTICIPATES SERVICES OUTSIDE THE UNITED STATES OR FLORIDA*
Pass

Anticipates Services outside the United States or Florida

If the respondent anticipates services under the contract or any subcontracts will be performed outside the United States or Florida, the respondent shall provide in a written statement which must include, but need not be limited to the type of services that will be performed at a location outside the United States or Florida and the reason why it is necessary or advantageous to go outside the United States or Florida to perform such services. (Does not apply to any project that receives federal moneys)

No

12. Submittal Requirements

Firms will be judged not only on their past experience for the type of work involved, but also on their ability to address issues critical to the success of the project requirements outlined in this RFQ document. Following are elements that will be used to evaluate each firm's qualifications:

PROJECT TEAM *
Pass

Identify the project principal, the project manager, key staff and subconsultants. Present a brief discussion regarding how the team's qualifications and experience relate to the specific project.

- Qualifications and relevant individual experience.
- Unique knowledge of key team members relating to the project.
- Experience on projects as a team.
- Key staff involvement in project management and on-site presence.
- Time commitment of key staff.
- Qualifications and relevant subconsultant experience.

A.ProjectTeam__HernandoCo_23-RFQ00414CR_HDR.pdf

FIRM/TEAM CAPABILITIES*
Pass

- Are the lines of authority and coordination clearly identified?
- Are essential management functions identified?
- Are the functions effectively integrated? (e.g., subconsultants' role delineated)?
- Current and projected work load.

Note: Organization charts and graphs depicting your capacity may be included.

B.FirmTeamCapabilities__HernandoCo_23-RFQ00414CR_HDR-2.pdf

PRIOR EXPERIENCE*
Pass

Use this portion of your submittal to describe relevant experiences with the project type described in this RFQ document and various services to be provided.

- Experience of the key staff and firm with projects of similar scope and complexity.
- Demonstrated success on past projects of similar scope and complexity.
- References.

Note: Include the name and current telephone number of the owner's project manager for every project listed.

C.PriorExperience__HernandoCo_23-RFQ00414CR_HDR.pdf

PROJECT APPROACH - BUDGET METHODOLOGY/COST CONTROL*
Pass

For the project and services outlined in the RFQ document, describe how you plan to accomplish the following project control and management issues:

- Budget Methodology/Cost Control.
  - Establish and maintain estimates of probable cost within owner's established budget.
  - Control consultant contract costs
  - Coordinate value engineering activities

D.ProjectApproach_Budget_HernandoCo_23-RFQ00414CR_HDR.pdf

PROJECT APPROACH - QUALITY CONTROL METHODOLOGY*
Pass

For the project and services outlined in the RFQ document, describe how you plan to accomplish the following project control and management issues:

- Quality Control Methodology.
  - Insure County procedures are followed
  - Improve energy efficiency through the use of an integrated design process, life cycle costing, the use of an energy standard (current OSA energy code) and the specification of energy efficient materials, systems, and equipment
  - Insure the project is designed for durability and maintainability

D.ProjectApproac_QualityControl__HernandoCo_23-RFQ00414CR_HDR.pdf

PROJECT APPROACH - SCHEDULE*
Pass

For the project and services outlined in the RFQ document, describe how you plan to accomplish the following project control and management issues:

- Schedule.
  - Manage the required work to meet the established schedule

D.ProjectApproach_Schedule__HernandoCo_23-RFQ00414CR_HDR.pdf

WORK LOCATION*
Pass

Describe where the prime and subconsultants will do the key work elements of this project.

- Proximity of firms office as it may affect coordination with the County's project manager and the potential project location.
- Firm's familiarity with the project area.
- Knowledge of the local labor and material markets.

E.WorkCoordination__HernandoCo_23-RFQ00414CR_HDR.pdf

13. Additional Uploads

ADDITIONAL UPLOADS
Pass

Please upload any optional/additional information not requested elsewhere. Respondent will also supply a full pdf of their proposal here and this should be done in addition to responding above to questions 12.1 through 12.7.

_HernandoCo_23-RFQ00414CR_HDR.pdf

EXCEPTIONS
Pass

1. Proposers may take exception to certain requirements in this RFQ. All exceptions shall be clearly identified in this section, with a written explanation of the exception and an alternate proposal (if applicable). The County, at its sole discretion, may reject any exceptions or specifications within the proposal.
2. The Contract that the County intends to use for award is attached for reference. Any exceptions to this standard Contract must be clearly indicated by return of the standard Contract with the Proposal, with exceptions clearly noted. The County has the right to require the selected Proposer to sign the attached Contract or to negotiate revisions to the Contract language prior to execution of the Contract, at its sole discretion.

13.2_Exceptions_(HDR).pdf

PROPOSER'S CERTIFICATION*
Pass

I have carefully examined the Request for Proposals (RFQ), Instructions to Proposers, General and/or Special Conditions, Specifications, RFQ Proposal and any other documents accompanying or made a part of this invitation.

I agree that my RFQ will remain firm for a period of up to one hundred and eighty (180) days in order to allow the County adequate time to evaluate the Proposals. Furthermore, I agree to abide by all conditions of the Proposal.

I certify that all information contained in this RFQ is truthful to the best of my knowledge and belief. I further certify that I am a duly authorized to submit this RFQ on behalf of the Consultant/Firm as its act and deed and that the Consultant/Firm is ready, willing and able to perform if awarded the Contract.

I further certify that this RFQ is made without prior understanding, agreement, connection, discussion, or collusion with any person, firm or corporation submitting a RFQ for the same product or service; no officer, employee or agent of the Hernando County BCC or of any other Proposer interested in said RFQ; and that the undersigned executed this Proposer's Certification with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

I further certify that having read and examined the specifications and documents for the designated services and understanding the general conditions for Contract under which services will be performed, does hereby propose to furnish all labor, equipment, and material to provide the services set forth in the RFQ.

I hereby declare that the following listing states any clarifications, any and all variations from and exceptions to the requirements of the specifications and documents. The undersigned further declares that the "work" will be performed in strict accordance with such requirements and understands that any exceptions to the requirements of the specifications and documents may render the Proposer's Proposal non-responsive.

I take exceptions, explained in the subsequent answer

7.2 References

REFERENCE 1

Business/Owner Name: Hernando County
Reference Contact Person: Scott Herring, PE
Reference Address: 1525 E. Jefferson St. Brooksville, FL 34601
Reference Phone No.: 352.754.4060
Reference Email Address: ScottH@co.hernando.fl.us
Project Name: Continuing Traffic Engineering Services (18-R00006)
Project Location: Hernando County, FL
Contract Project Manager: Bijan Behzadi, PE, PTOE
Site Superintendent: N/A
Contract Amount: N/A, ~$340K to date (latest contract cycle)
Date Project Commenced: 2018 (latest contract cycle)
Date of Substantial Completion: 2023
Date of Final Completion: 2023
Description of Work Performed: HDR has served Hernando County on the previous Continuing Traffic Engineering Services contract. We have accomplished a wide variety of task order assignments including traffic control and design, signal retiming, ATMS plans and traffic impact analysis projects.

REFERENCE 2

Business/Owner Name: Hillsborough County
Reference Contact Person: Bryan Zayas
Reference Address: 601 E Kennedy Blvd Tampa, FL 33602
Reference Phone No.: 813.778.4535
Reference Email Address: zayasb@hillsboroughcounty.org
Project Name: Transportation Design & General Engineering Services (17-0686)
Project Location: Hillsborough County, FL
Contract Project Manager: Scott Blaisel, PE
Site Superintendent: N/A
Contract Amount: $3M contract limit
Date Project Commenced: 2017
Date of Substantial Completion: 2023
Date of Final Completion: 2023
Description of Work Performed: HDR has provided general/civil engineering services to Hillsborough County to support transportation capital improvements for several years. Our team supports the County with transportation engineering services from concept, through design and specifications, through bidding and construction.

REFERENCE 3

Business/Owner Name: Pasco County
Reference Contact Person: Panos Kontses, PE
Reference Address: 5418 Sunset Rd, New Port Richey, FL 34652
Reference Phone No.: 727.834.3604
Reference Email Address: pkontses@pascocountyfl.net
Project Name: Miscellaneous Professional Engineering Services (15-009)
Project Location: Pasco County, FL
Contract Project Manager: Tom Quinn, PE
Site Superintendent: N/A
Contract Amount: N/A, ~$1.1M
Date Project Commenced: 2015
Date of Substantial Completion: 2023
Date of Final Completion: 2023

Description of Work Performed: HDR has provided professional engineering services to Pasco County for 20 years. Tasks included roadway design, drainage systems, traffic design, structures design, traffic control, environmental, utility coordination and much more.

7.3 Key Subcontractors

Fiber Optic-Based Communication Design

Precision Contracting Services, Inc. (SBE): Fiber Optic Cable Discovery and Inventory

Traffic Data Collection

Adams Traffic, Inc. (DBE, MBE, SBE): Traffic Data Collection
Marr Traffic, Inc. (SBE): Traffic Data Collection

All other related services

Florida Bridge and Transportation, Inc. (SBE): Miscellaneous Structures
Tierra, Inc.: Geotechnical Services
Cumbey and Fair, Inc. (SBE): Survey/ROW mapping/SUE/Utility Relocation

HDR Staff Licenses

Licensee Information

Name:	FOWLER, MELANIE EDWARDS (Primary Name)
Main Address:	3715 W WATROUS AVENUE TAMPA Florida 33629
County:	HILLSBOROUGH

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	56133
Status:	Current,Active
Licensure Date:	07/25/2000
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Environmental	07/25/2000

Alternate Names

LICENSEE DETAILS *10:39:37 AM 11/22/2023*

Licensee Information

Name:	ADAMS, ZACHARY CLAY (Primary Name)
Main Address:	3064 OSPREY LANE CLEARWATER Florida 33762
County:	PINELLAS

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	69122
Status:	Current,Active
Licensure Date:	01/29/2009
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Civil	08/12/2008

Alternate Names

View Related License Information

Licensee Information

Name:	CASTILLO, GREY NOEMI (Primary Name)
Main Address:	30623 SUMMER SUN LOOP WESLEY CHAPEL Florida 33545
County:	PASCO

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	87233
Status:	Current,Active
Licensure Date:	05/01/2019
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Environmental	05/01/2019

Alternate Names

Licensee Information

Name:	GONZALEZ, JOSE A. (Primary Name)
Main Address:	4422 CYPRINA PL APT. 04 TAMPA Florida 33615
County:	HILLSBOROUGH

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	58896
Status:	Current,Active
Licensure Date:	08/02/2002
Expires:	02/28/2025

Special Qualifications	Qualification Effective

Alternate Names

Licensee Information

Name:	BEHZADI, BIJAN (Primary Name)
Main Address:	4541 ROSLYN COURT LAND O' LAKES Florida 33647
County:	PASCO

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	43868
Status:	Current,Active
Licensure Date:	03/15/1991
Expires:	02/28/2025

Special Qualifications	Qualification Effective

Alternate Names

Licensee Information

Name:	ATTA-ARMAH, RICHARD (Primary Name)
Main Address:	5070 OTTERS DEN TRAIL SANFORD Florida 32771
County:	SEMINOLE

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	57961
Status:	Current,Active
Licensure Date:	02/01/2002
Expires:	02/28/2025

Special Qualifications	Qualification Effective

Alternate Names

Licensee Information

Name:	ELLIS, BENJAMIN B. (Primary Name)
Main Address:	315 E. ROBINSON STREET SUITE 400 ORLANDO Florida 32801
County:	ORANGE

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	72469
Status:	Current,Active
Licensure Date:	01/29/2011
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Civil	07/29/2010

Alternate Names

Licensee Information

Name:	GU, XIAOJUN (Primary Name)
Main Address:	4903 NW 59TH ST TAMARAC Florida 33319
County:	BROWARD

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	69874
Status:	Current,Active
Licensure Date:	06/26/2009
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Civil	02/05/2009
Electrical & Computer	01/01/2016

Alternate Names

Licensee Information

Name:	HEMINGWAY, JAKE B. (Primary Name)
Main Address:	818 S OREGON AVE APT 4 TAMPA Florida 33606
County:	HILLSBOROUGH

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	90468
Status:	Current,Active
Licensure Date:	12/17/2020
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Civil	01/07/2020

Alternate Names

Licensee Information

Name:	KEENAN, TRACY WILLIAM (Primary Name)
Main Address:	5121 HARTWELL LOOP LAND O LAKES Florida 34638
County:	PASCO
License Mailing:	5121 HARTWELL LOOP LAND O LAKES FL 34638
County:	PASCO

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	50608
Status:	Current,Active
Licensure Date:	08/01/1996
Expires:	02/28/2025

Special Qualifications	Qualification Effective

Alternate Names

Licensee Information

Name:	MORENCY, STEVENSON (Primary Name)
Main Address:	3250 W COMMERCIAL BLVD STE 100 FORT LAUDERDALE Florida 33309
County:	BROWARD

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	94787
Status:	Current,Active
Licensure Date:	09/08/2022
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Civil	09/08/2022

Alternate Names

Licensee Information

Name:	OATES, MICHAEL J. (Primary Name)
Main Address:	2400 FEATHER SOUND DRIVE, # 613 CLEARWATER Florida 33762
County:	PINELLAS
License Mailing:	2400 FEATHER SOUND DRIVE, # 613 CLEARWATER FL 33762
County:	PINELLAS
License Location:	4830 W KENNEDY BLVD SUITE 400 TAMPA FL 33609
County:	HILLSBOROUGH

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	49282
Status:	Current,Active
Licensure Date:	07/13/1995
Expires:	02/28/2025

Special Qualifications	Qualification Effective

Alternate Names

Licensee Information

Name:	JOHNSTON, JAMES WALTER (Primary Name)
Main Address:	5662 SAMTER COURT TAMPA Florida 33611
County:	HILLSBOROUGH

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	57064
Status:	Current,Active
Licensure Date:	03/20/2001
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Civil	03/20/2001

Alternate Names

Licensee Information

Name:	KRZEMINSKI, JAMES M. (Primary Name)
Main Address:	942 CAMELLIA AVE. WINTER PARK Florida 327890000
County:	ORANGE

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	56143
Status:	Current,Active
Licensure Date:	07/25/2000
Expires:	02/28/2025

Special Qualifications	Qualification Effective

Alternate Names

Licensee Information

Name:	NGUYEN, NGUYEN THUC (Primary Name)
Main Address:	5054 16TH ST N ST. PETERSBURG Florida 33703
County:	PINELLAS

License Information

License Type:	Engineering Intern
Rank:	Eng Intern
License Number:	1100023469
Status:	Current
Licensure Date:	02/03/2020
Expires:	

Special Qualifications	Qualification Effective

Alternate Names

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Licensee Information

Name:	POPE, SHAWN M. (Primary Name)
Main Address:	9540 CULLOWHEE CT ORLANDO Florida 32817
County:	ORANGE

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	90478
Status:	Current,Active
Licensure Date:	12/17/2020
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Civil	01/14/2020

Alternate Names

Licensee Information

Name:	PRABAHARAN, NAGULASINGARATN (Primary Name)
Main Address:	3402 W. GRANADA STREET UNIT # 2 TAMPA Florida 33629
County:	HILLSBOROUGH
License Location:	3402 W. GRANADA STREET UNIT # 2 TAMPA FL 33629
County:	HILLSBOROUGH

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	60916
Status:	Current,Active
Licensure Date:	01/13/2004
Expires:	02/28/2025

Special Qualifications	Qualification Effective

Alternate Names

Licensee Information

Name:	QUINN, THOMAS ALBERT (Primary Name)
Main Address:	6712 ROCKY PARK ST TAMPA Florida 33625
County:	HILLSBOROUGH

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	45353
Status:	Current,Active
Licensure Date:	03/27/1992
Expires:	02/28/2025

Special Qualifications	Qualification Effective

Alternate Names

Licensee Information

Name:	ST. GEORGE, BRYAN THOMAS (Primary Name)
Main Address:	641 NORTH AVE NE 4309 ATLANTA Georgia 30308
County:	OUT OF STATE
License Location:	641 NORTH AVE NE 4309 ATLANTA GA 30308
County:	OUT OF STATE

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	86496
Status:	Current,Active
Licensure Date:	01/11/2019
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Civil	06/28/2018

Alternate Names

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Licensee Information

Name:	THOMPSON, ALFRED J JR (Primary Name)
Main Address:	1941 GRIFFIN'S GREEN PLACE BARTOW Florida 33830
County:	POLK

License Information

License Type:	Real Estate Broker or Sales
Rank:	Broker Sales
License Number:	BK3215250
Status:	Current,Active
Licensure Date:	10/03/2008
Expires:	03/31/2024

Special Qualifications	Qualification Effective

Alternate Names

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Licensee Information

Name:	QIANG, HUIJING (Primary Name)
Main Address:	10830 SW 72ND ST. APT. 11 MIAMI Florida 33173
County:	DADE

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	79199
Status:	Current,Active
Licensure Date:	05/28/2015
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Electrical & Computer	05/28/2015

Alternate Names

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Licensee Information

Name:	REGISTER, MARLIN A. II (Primary Name)
Main Address:	208 4TH AVE. NW RUSKIN Florida 33570
County:	HILLSBOROUGH

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	55452
Status:	Current,Active
Licensure Date:	02/11/2000
Expires:	02/28/2025

Special Qualifications	Qualification Effective

Alternate Names

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LICENSEE DETAILS

10:32:05 AM 11/22/2023

Licensee Information

Name:	STEVANUS JR, GREGORY ALLEN (Primary Name)
Main Address:	4830 W KENNEDY BLVD SUITE 400 TAMPA Florida 33609
County:	HILLSBOROUGH

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	96562
Status:	Current,Active
Licensure Date:	06/02/2023
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Civil	06/02/2023

Alternate Names

LICENSEE DETAILS

10:46:17 AM 11/22/2023

Licensee Information

Name:	WIESENFELD, MATTHEW TORR (Primary Name)
Main Address:	1500 DELANEY AVENUE ORLANDO Florida 32806
County:	ORANGE

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	73065
Status:	Current,Active
Licensure Date:	06/04/2011
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Civil	01/26/2011

Alternate Names

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LICENSEE DETAILS

10:36:36 AM 11/22/2023

Licensee Information

Name:	**ZHANG, ZHAOHAN** (Primary Name)
Main Address:	9500 E PLUM HARBOR WAY TAMARAC Florida 33321
County:	BROWARD

License Information

License Type:	**Professional Engineer**
Rank:	**Prof Engineer**
License Number:	**89255**
Status:	**Current,Active**
Licensure Date:	**03/10/2020**
Expires:	**02/28/2025**

Special Qualifications	Qualification Effective
Civil	03/10/2020

Alternate Names

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9:04:19 AM 11/28/2023

Licensee Information

Name:	**ZIMMERMAN, BRIAN L.** (Primary Name)
Main Address:	5128 HOLLAND AVE. TAMPA Florida 33617
County:	HILLSBOROUGH

License Information

License Type:	**Professional Engineer**
Rank:	**Prof Engineer**
License Number:	**78557**
Status:	**Current,Active**
Licensure Date:	**01/01/2015**
Expires:	**02/28/2025**

Special Qualifications	Qualification Effective
Civil	07/03/2014

Alternate Names

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Subconsultants Licenses

Licensee Information

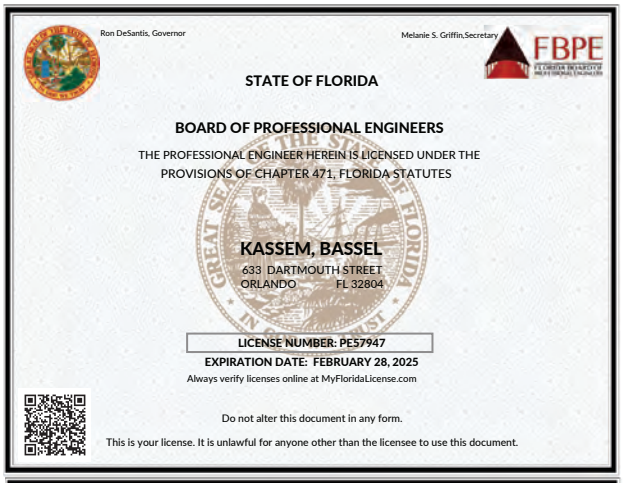
Name:	ADAMS, NANCY D. (Primary Name)
Main Address:	PO BOX 997 PLANT CITY Florida 33564
County:	HILLSBOROUGH

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	49288
Status:	Current,Active
Licensure Date:	07/13/1995
Expires:	02/28/2025

Special Qualifications	Qualification Effective

Alternate Names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KASSEM, BASSEL
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ORLANDO FL 32804
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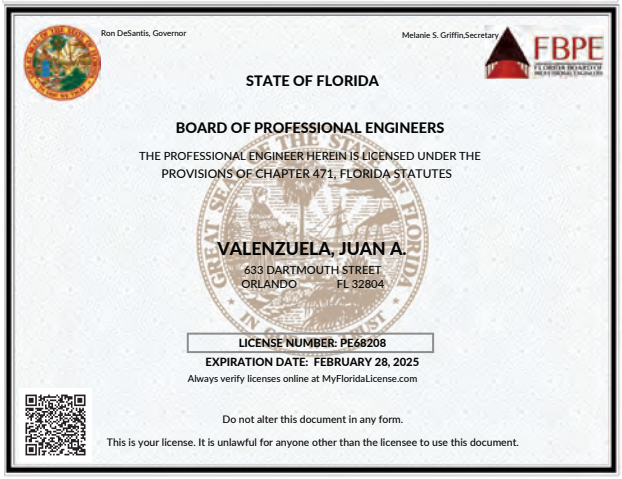
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FBPE
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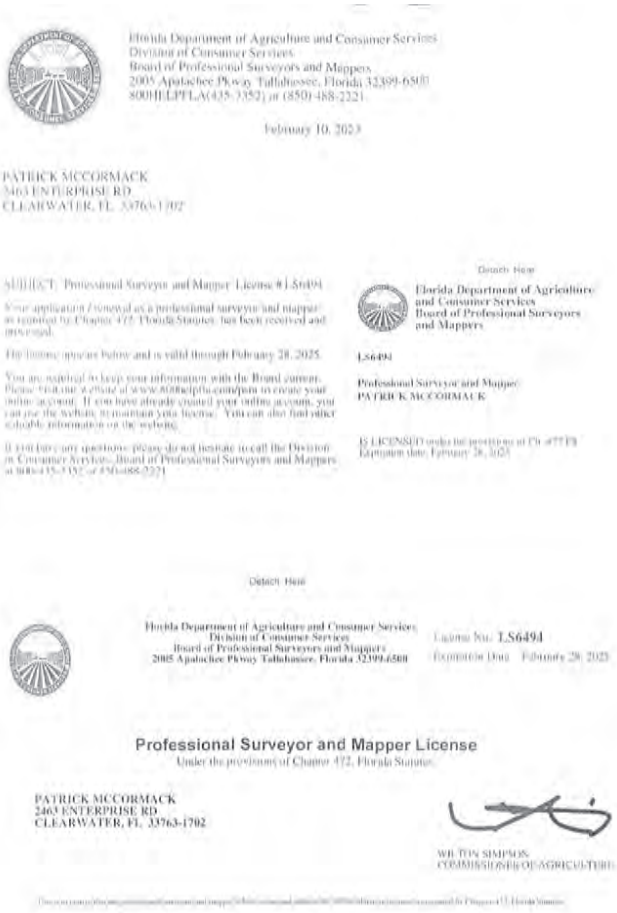
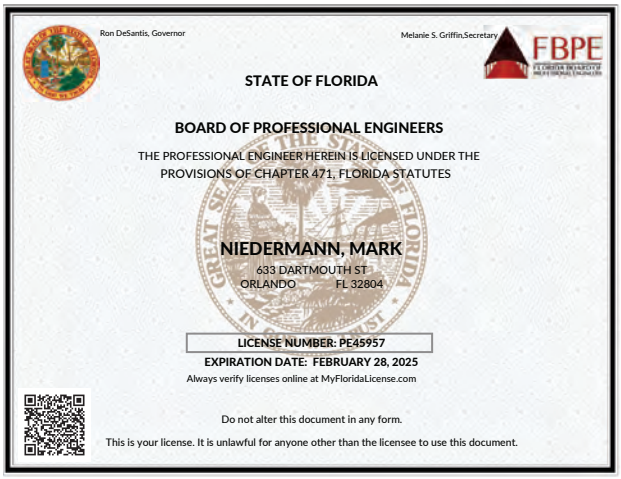

Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway, Tallahassee, Florida 32399-6500
February 10, 2023
PATRICK MCCORMACK
2463 ENTERPRISE RD
CLEARWATER, FL 33763-1702
Detach Here
Florida Department of Agriculture and Consumer Services
Board of Professional Surveyors and Mappers
LS6494
Professional Surveyor and Mapper
PATRICK MCCORMACK
Detach Here
Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500
License No: LS6494
Expiration Date: February 28, 2025
Professional Surveyor and Mapper License
Under the provisions of Chapter 472, Florida Statutes
PATRICK MCCORMACK
2463 ENTERPRISE RD
CLEARWATER, FL 33763-1702
WILTON SIMPSON
COMMISSIONER OF AGRICULTURE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Melanie S. Griffin,Secretary
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Licensee

Name:	**GENTRY, BRIAN THOMAS**	License Number:	**72948**
Rank:	**Professional Engineer**	License Expiration Date:	**02/28/2025**
Primary Status:	**Current**	Original License Date:	**06/04/2011**
Secondary Status:	**Active**		

Related License Information

License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
36868	Current	MARR TRAFFIC, INC DBA:MARR TRAFFIC	Registry		Registry	

Licensee Information

Name:	SCOTT, KEVIN HUNT (Primary Name)
Main Address:	7107 S. TRASK STREET TAMPA Florida 33616
County:	HILLSBOROUGH

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	65514
Status:	Current,Active
Licensure Date:	01/18/2007
Expires:	02/28/2025

Special Qualifications	Qualification Effective
Civil	02/14/2005

Alternate Names

Project Principal
Melanie Fowler, PE ☆

Project Manager
Bijan Behzadi, PE, PTOE ☆

Quality Assurance
Tom Quinn, PE ☆

Quality Control
Marlin Register, PE ☆
Huijing Qiang, PE ☆

Deputy Project Manager
Greg Stevanus, PE ☆

Traffic Engineering Studies
Task Lead: N. Prabaharan, PE, PTOE ☆

Access Management
N. Prabaharan, PE, PTOE

Roadway Safety & Studies
Matthew Wiesenfeld, PE
Steve Morency, PE

Signal Warrant Analysis
N. Prabaharan, PE, PTOE

Speed Limit Studies
Kevin Dunn
Steve Morency, PE

Intersection Modeling & Analysis
Bryan St. George, PE
Heather Hubbard, PE

Traffic Impact Studies
N. Prabaharan, PE, PTOE

Review Development of Regional Impact Applications & Reports
Jamie Krzeminski, PE, PTOE ☆

Traffic Data Collection: Volume, Speed, Bicycles, Pedestrians, Trucks, Origin & Destination
Brian Gentry, PE, PTOE (MT)
Nancy Adams, PE (AT)

Intersection Control Evaluation (Roundabouts, RCUT)
Heather Hubbard, PE ☆
Bryan St. George, PE

Traffic Engineering Design
Task Lead: Michael Oates, PE, PTOE ☆

Signal Systems Design
Michael Oates, PE, PTOE
Greg Stevanus, PE

Corridor-Wide Signal Retiming
Richard Atta-Armah, PE ☆
Shawn Pope, PE

Intelligent Transportation Systems Design & Integration
Greg Stevanus, PE
Alex Zhang, PE

Fiber-Optic & Wireless Communication Design
Jim Gu, PhD, PE, PTOE
Greg Stevanus, PE

Roadway & Intersection Lighting & Signing/Pavement Markings
Jose Gonzalez, PE ☆
Greg Stevanus, PE
Steve Morency, PE

Transportation Systems Management & Operations
Richard Atta-Armah, PE
Jim Gu, PhD, PE, PTOE

Roadway & Intersection Design
Brian Zimmerman, PE ☆
Jake Hemingway, PE

Drainage
Jim Johnston, PE ☆
Adam Mitchum, PE

Specifications & Estimates
Tom Quinn, PE

Plans Review
Bijan Behzadi, PE, PTOE
Tom Quinn, PE
Marlin Register, PE
Kevin Dunn
Michael Oates, PE, PTOE

☆ *Resumes included for key personnel*

Support Services

Miscellaneous Structures
Juan Valenzuela, PE (FBT)
Mark Niedermann, PE (FBT)
Bassel Kassem, PE (FBT)

Survey/ROW Mapping, SUE/Utility Locates
Patrick McCormack, PSM (C&F)

Utility Coordination/Relocation
Jake Phillips
Heather Manganiello, PE

CEI/Constructability/Bidability
Tracy Keenan, PE

Geotechnical Services
Kevin Scott, PE (TI)
Michael Bair, ASP, LEP (TI)
Christopher Garth, LEP (TI)

Construction Cost Estimates
Tom Quinn, PE
Tracy Keenan, PE

Agency Coordination/Public Involvement/ Special Events
Stefanie McQueen, AICP

Environmental Permitting
Barry Lenz

Wetlands/Species
Noemi Castillo, PE, PMP

Right of Way Services
Joe Thompson

Civil Engineering
Ben Ellis, PE

Fiber Optic Cable Discovery & Inventory
Bruce Boyd, RCDD (PCS)

Subconsultants

AT - Adams Traffic, Inc. (DBE, SBE)
C&F - Cumbey and Fair, Inc. (SBE)
FBT - Florida Bridge and Transportation, Inc. (SBE)
TI - Tierra, Inc.
MT - Marr Traffic, Inc. (SBE)
PCS - Precision Contracting Services, Inc. (SBE)

Bijan Behzadi, PE, PTOE

Project Manager

Bijan Behzadi is a recognized leader in transportation engineering with 38 years of dedicated professional service to enhancing travel safety and efficiency in Florida. He has invested a significant portion of his professional career, 20 years, with the FDOT while contributing to safety, design, operations, and management of both conventional and advanced traffic control strategies, systems, technologies, and devices.

EDUCATION

Post Graduate Study, University of Florida and Florida International University, Civil Engineering-Transportation (emphasis in highway safety, airport planning and design, and mass transit)

M.S., Civil Engineering-Transportation, University of South Florida

B.S., Civil Engineering, Roger Williams University

REGISTRATIONS

Professional Engineer: Florida, 1991 (43868); Colorado, Georgia, Louisiana, South Carolina, North Carolina, US Virgin Islands

CERTIFICATIONS

Professional Traffic Operations Engineer, 2001 (544), Advanced Maintenance of Traffic Certification

PROFESSIONAL AFFILIATIONS

Institute of Transportation Engineers (ITE): Florida Section, ITE; ITS Florida;

RELEVANT EXPERIENCE

Hernando County, Continuing Traffic Engineering Services

Hernando County, FL

Contract/Project Manager for this multi-task contract that includes services for traffic studies and report preparation; traffic impact analysis, design and specifications; roadway and intersection improvements; ATMS plans; and signal retiming.

- Forest Oaks at Deltona Blvd
- County Line Road and Linden Drive Signal Warrant Study
- Citizens Center for Success Development Traffic Impact Analysis
- Spring Hill Drive from Aerial Way to US 41
- Mariner Blvd from County Line Road to Northcliff Blvd

Manatee County, Transportation Engineering Consulting Services

Manatee County, FL

Traffic Project Manager for this multi-task contract that includes services for transportation studies and report preparation; roadway analysis, design and specifications; bidding and construction; record drawings; and permitting. The contract also provides for operational analysis, modeling and plan evaluations; feasibility studies; environmental evaluations; landscape architecture; and property acquisition services.

- US 41 at 23rd Street
- SR 70 at 15th Street East Signal
- 15th St E at 301 Blvd
- 26th Avenue East Sidewalk
- 115th Street West Sidewalk
- SR 70 at Lakewood Ranch Intersection Improvements
- University Parkway at Waterview Boulevard Intersection Improvements
- University Parkway ATMS – Market Street to Lorraine Road

Hillsborough County DPW, CR 581 from Bearss Avenue to I-75

Hillsborough County, FL

Engineer of Record, HDR was responsible for design of the ITS system as part of the reconstruction and widening of CR 581 from a six-lane divided to an eight-lane divided facility. The specific ITS elements include CCTV cameras with lowering devices, 72

National Committee on Uniform Traffic Control Devices, GM/I Committee since 2000; Peer-to-Peer Program with the Federal Highway Administration.

Adjunct Faculty at University of South Florida since 2002 teaching Capstone Design- CEG 4850, and Advanced Geometric Design of Highways- CGN 6933

National Council of Examiners for Engineering & Surveying (NCEES), Subject Matter Expert and serving on transportation committee for exam development since 1998

AASHTO Leadership Academy, 2001

Graduate Leadership Academy, 2002

Research Associate @ Center for Urban Transportation Research of the University of South Florida since 2010

AWARDS

Two times Recipient of Davis Productivity Award Granted by the Florida Tax Watch

Recipient, Bill Gartner Award, Granted by FDOT

Recipient of several Special Achievement Awards as Value Engineering team member saving over a $100 million

strands of single mode fiber optic cables, advanced signal controllers and cabinets at six intersections, and video detection at all signalized intersection as part of non-intrusive detection technology. The communication topology leverages point-to-point and point to-multipoint communication. Served as the signing, pavement marking, and signalization engineer of record for this project.

FDOT District 7, US 19 from Northside Drive to County Road 95

Pinellas County, FL

Engineer of Record for signing, marking, signalization and ITS plans. HDR was selected for the reconstruction of 1.21 miles of US 19 in Pinellas County. The design includes a modified single point urban interchange (SPUI) at Curlew Road to replace the existing at-grade signalized intersection. US 19 will be reconstructed from an eight-lane divided arterial to a six-lane controlled access roadway with frontage roads. It includes full design services, including roadway and urban interchange design, stormwater design and permitting, utilities coordination, structural steel bridge design, signal design, intelligent transportation system (ITS) implementation and public involvement services.

FDOT District 5, I-4 Ultimate

Orlando, FL

Served as the system-wide Traffic Technical Lead for signing and markings, signalization, ITS, highway lighting and temporary traffic control components of the 22 miles of I-4 reconstruction valued at $2.5 billion. I served as the engineer of record for all major guide signs and ITS signs on a corridor-wide basis. The project encompassed the following major features: barrier wall separated managed lanes, myriad of ITS and traffic control devices including 9 tolling points, 10 emergency access gates, 350 overhead major guide signs ramp signaling system, detection stations, and incident management surveillance cameras, toll and status dynamic message signs, 18 interchanges, aesthetic lighting, self-healing communication ring topology, temporary overhead guide signs for various construction phases of the I-4. This is a Public Private Partnership project and the largest design-build-finance-operate-maintain and terminate project in Florida.

FDOT District 1, I-75 at University Parkway Interchange

Sarasota, FL

ITS Engineer of Record. HDR is responsible for the design of the existing I-75 at University Parkway Interchange to provide for a Diverging Diamond Interchange that provides for the ultimate I-75 typical section. The ultimate typical section provides for a ten-lane facility with two express lanes and three general use lanes in each direction. The Interchange improvements will also require two bridge widenings, and two bridge replacements and the widening / reconstruction of University Parkway including Cattleman Road / Cooper Creek intersection and Market Street intersection. MOT, signing and pavement marking, signals, utility coordination, miscellaneous structures, noise barrier, lighting, environmental/permitting, landscaping, ITS, public involvement, and engineer's estimates are also included in the project scope.

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Licensee

Name:	DUTY, KATIE S.	License Number:	67816
Rank:	Professional Engineer	License Expiration Date:	02/28/2025
Primary Status:	Current	Original License Date:	03/19/2008
Secondary Status:	Active		

Related License Information

License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
4213	Current	HDR ENGINEERING, INC.	Registry		Registry	

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Licensee

Name:	ADAMS, NANCY D.	License Number:	49288
Rank:	Professional Engineer	License Expiration Date:	02/28/2025
Primary Status:	Current	Original License Date:	07/13/1995
Secondary Status:	Active		

Related License Information

License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
0959	Current	ADAMS TRAFFIC, INC.	Registry	06/28/2004	Registry	

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Licensee Information

Name:	CUMBEY & FAIR, INC. (Primary Name)
Main Address:	2463 ENTERPRISE ROAD CLEARWATER Florida 337631790
County:	PINELLAS

License Information

License Type:	Engineering Business Registry
Rank:	Registry
License Number:	2168
Status:	Current
Licensure Date:	04/13/1981
Expires:	

Special Qualifications	Qualification Effective

Alternate Names

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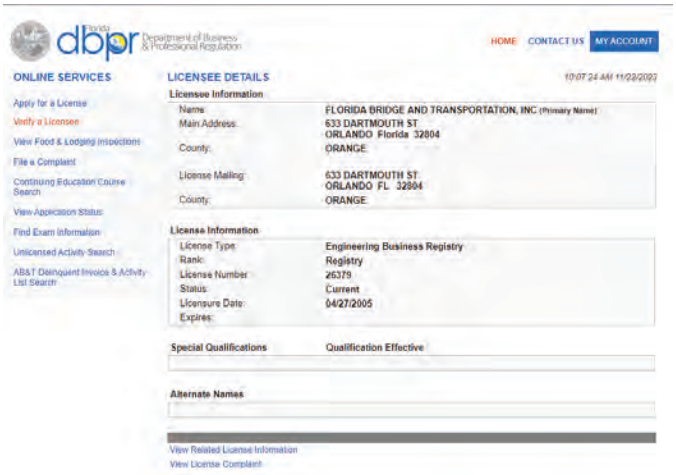

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Licensee Information

Name:	FLORIDA BRIDGE AND TRANSPORTATION, INC (Primary Name)
Main Address:	633 DARTMOUTH ST ORLANDO Florida 32804
County:	ORANGE
License Mailing:	633 DARTMOUTH ST ORLANDO FL 32804
County:	ORANGE

License Information

License Type:	Engineering Business Registry
Rank:	Registry
License Number:	26379
Status:	Current
Licensure Date:	04/27/2005
Expires:	

Special Qualifications	Qualification Effective

Alternate Names

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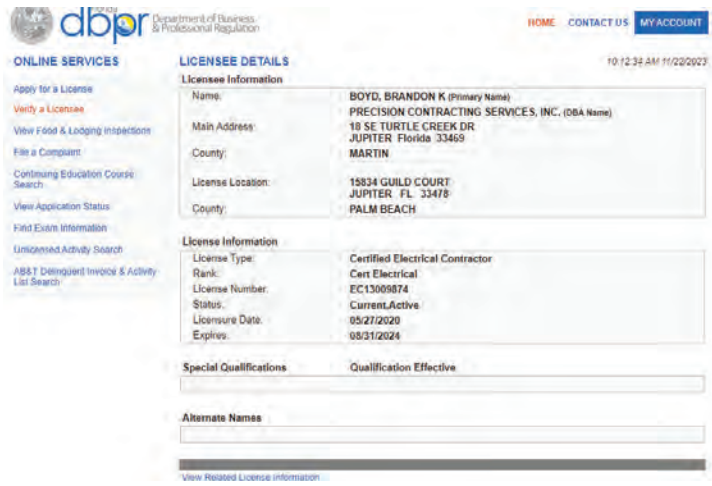

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Licensee Information

Name:	BOYD, BRANDON K (Primary Name)
	PRECISION CONTRACTING SERVICES, INC. (DBA Name)
Main Address:	18 SE TURTLE CREEK DR JUPITER Florida 33469
County:	MARTIN
License Location:	15834 GUILD COURT JUPITER FL 33478
County:	PALM BEACH

License Information

License Type:	Certified Electrical Contractor
Rank:	Cert Electrical
License Number:	EC13009874
Status:	Current,Active
Licensure Date:	05/27/2020
Expires:	08/31/2024

Special Qualifications	Qualification Effective

Alternate Names

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AB&T Delinquent Invoice & Activity List Search

LICENSEE DETAILS

10:13:07 AM 11/22/2023

Licensee Information

Name:	BOYD, BRANDON K (Primary Name)
	PRECISION CONTRACTING SERVICES, INC. (DBA Name)
Main Address:	18 SE TURTLE CREEK DR JUPITER Florida 33469
County:	MARTIN
License Location:	15834 GUILD COURT JUPITER FL 33478
County:	PALM BEACH

License Information

License Type:	Certified Specialty Contractor
Rank:	Cert Specialty
License Number:	ES12001801
Status:	Current,Active
Licensure Date:	09/20/2019
Expires:	08/31/2024

Special Qualifications	Qualification Effective
Limited Energy Systems Specialty	03/20/2019

Alternate Names

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dbpr Department of Business & Professional Regulation

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Licensee

Name:	TIERRA, INC.	License Number:	6486
Rank:	Registry	License Expiration Date:	
Primary Status:	Current	Original License Date:	02/17/1993

Related License Information

License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
37119	Current, Active	MAHIQUEZ, LUIS FELIPE	Registry	01/06/2005	Professional Engineer	02/28/2025

Page 1 of 1

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Return to License Details

Detail by Entity Name

Foreign Profit Corporation
HDR ENGINEERING, INC.

Filing Information

Document Number	P06487
FEI/EIN Number	47-0680568
Date Filed	06/20/1985
State	NE
Status	ACTIVE
Last Event	AMENDMENT
Event Date Filed	06/03/2022
Event Effective Date	NONE

Principal Address

1917 S. 67th Street
Omaha, NE 68106

Changed: 05/28/2020

Mailing Address

1917 S. 67th Street
Omaha, NE 68106

Changed: 05/28/2020

Registered Agent Name & Address

CT CORPORATION SYSTEM
1200 S. PINE ISLAND ROAD
PLANTATION, FL 33324

Name Changed: 06/02/1992

Address Changed: 06/02/1992

Officer/Director Detail

Name & Address

Detail by Entity Name

Florida Profit Corporation
ADAMS TRAFFIC, INC.

Filing Information

Document Number	P04000077500
FEI/EIN Number	34-1993664
Date Filed	05/12/2004
State	FL
Status	ACTIVE

Principal Address

2404 Airport Road
Suite #2
PLANT CITY, FL 33563

Changed: 02/01/2015

Mailing Address

P.O. BOX 997
PLANT CITY, FL 33564

Changed: 02/13/2005

Registered Agent Name & Address

ADAMS, NANCY D
2404 Airport Road
Suite #2
PLANT CITY, FL 33563

Address Changed: 02/01/2015

Officer/Director Detail

Name & Address

Detail by Entity Name

Florida Profit Corporation
CUMBEY AND FAIR, INC.

Filing Information

Document Number	493691
FEI/EIN Number	59-1636137
Date Filed	12/31/1975
State	FL
Status	ACTIVE
Last Event	AMENDMENT
Event Date Filed	10/22/2019
Event Effective Date	NONE

Principal Address

2463 ENTERPRISE RD
CLEARWATER, FL 33763

Changed: 01/23/1998

Mailing Address

2463 ENTERPRISE RD
CLEARWATER, FL 33763

Changed: 01/23/1998

Registered Agent Name & Address

BOURNE, TIMOTHY E
2463 ENTERPRISE RD
CLEARWATER, FL 33763

Name Changed: 02/27/2015

Address Changed: 03/03/1999

Officer/Director Detail

Name & Address

Detail by Entity Name

Florida Profit Corporation
FLORIDA BRIDGE AND TRANSPORTATION, INC.

Filing Information

Document Number	P05000012052
FEI/EIN Number	20-2206043
Date Filed	01/24/2005
Effective Date	01/24/2005
State	FL
Status	ACTIVE

Principal Address

633 DARTMOUTH ST.
ORLANDO, FL 32804

Changed: 12/10/2009

Mailing Address

633 DARTMOUTH ST.
ORLANDO, FL 32804

Changed: 12/10/2009

Registered Agent Name & Address

WEATHERFORD, WILLIAM PJR.
3203 Lawton Road
Suite 100
Orlando, FL 32803

Address Changed: 01/11/2023

Officer/Director Detail

Name & Address

Detail by Entity Name

Foreign Profit Corporation
MARR TRAFFIC, INC.

Filing Information

Document Number	F21000001493
FEI/EIN Number	81-1076862
Date Filed	03/17/2021
State	DE
Status	ACTIVE
Last Event	REINSTATEMENT
Event Date Filed	12/01/2022

Principal Address

41 PEABODY ST.
NASHVILLE, TN 37210

Mailing Address

1800 PEMBROOK DR., STE. 300
ORLANDO, FL 32810

Registered Agent Name & Address

REGISTERED AGENTS INC
7901 4TH ST N
SUITE 300
ST. PETERSBURG, FL 33702

Name Changed: 03/17/2023

Address Changed: 03/17/2023

Officer/Director Detail

Name & Address

Detail by Entity Name

Florida Profit Corporation
PRECISION CONTRACTING SERVICES, INC.

Filing Information

Document Number	S12602
FEI/EIN Number	59-3057681
Date Filed	11/14/1990
State	FL
Status	ACTIVE
Last Event	AMENDMENT
Event Date Filed	10/16/2000
Event Effective Date	NONE

Principal Address

15834 GUILD COURT
JUPITER, FL 33478

Changed: 01/18/2009

Mailing Address

15834 GUILD COURT
JUPITER, FL 33478

Changed: 01/18/2009

Registered Agent Name & Address

BOYD, Brandon
15834 GUILD COURT
JUPITER, FL 33478

Name Changed: 06/17/2022

Address Changed: 01/18/2009

Officer/Director Detail

Name & Address

Detail by Entity Name

Florida Profit Corporation
TIERRA, INC.

Filing Information

Document Number	P92000006561
FEI/EIN Number	59-3154723
Date Filed	11/20/1992
State	FL
Status	ACTIVE
Last Event	AMENDMENT
Event Date Filed	05/12/2014
Event Effective Date	NONE

Principal Address

7351 TEMPLE TERRACE HWY.
TAMPA, FL 33637

Changed: 07/15/2008

Mailing Address

7351 TEMPLE TERRACE HWY.
TAMPA, FL 33637

Changed: 07/15/2008

Registered Agent Name & Address

CT CORPORATION SYSTEM
1200 SOUTH PINE ISLAND
PLANTATION, FL 33324

Name Changed: 03/31/2015

Address Changed: 03/31/2015

Officer/Director Detail

CORPORATE AFFIDAVIT

(To be filled in and executed if the Vendor/Contractor is a Corporation)

STATE OF ~~FLORIDA~~ NEBRASKA]
COUNTY OF ~~HERNANDO~~ DOUGLAS]

Elizabeth C. Buell being duly sworn, deposes and says that ~~he~~ she is assistant secretary of

Engineering, Inc., a corporation organized and existing under and by

virtues of the laws of the State of ~~Florida~~ Nebraska, and having its principal office at:

4830 W Kennedy Blvd, Suite 400 Tampa, FL 33609 (Address)

Affiant further says that ~~he~~ she is familiar with the records, minute books and bylaws of

HDR Engineering, Inc. (Name of Corporation) of the

corporation, is duly authorized to sign Katie E. Duty, Vice President (Title)

the Bid for Hernando County Continuing Traffic Engineering Services Contract for said corporation by virtues of:

by Consent and Agreement of the Board of Directors

(State whether a provision of bylaws or a Resolution of the Board of Directors. If by Resolution, give date of adoption).

August 15, 2022

HDR ENGINEERING, INC. & NEBRASKA CORPORATION CORPORATE SEAL

Elizabeth C Buell
Affiant

Sworn to before me this 8 day of November, 2023.

GENERAL NOTARY - State of Nebraska
LAURIE S. VIK
My Comm. Exp. March 5, 2027

Laurie S Vik
Notary Public

This document should be completed and returned with your submittal.

A.

Project Team

A. Project Team

• Qualifications & Relevant Individual Experience

The HDR Team is comprised of local and regional experts with a proven record of successfully providing professional engineering solutions to local government clients and the Florida Department of Transportation. We have provided an organizational chart at the end of Section B as well as qualifications for key team members of our project team in the pages that follow.

TRUSTED LOCAL LEADERS SUPPORTED BY COMMITTED RESOURCES

Our Project Manager, Bijan Behzadi, PE, PTOE and key team members have proven performance in providing quality and efficient services in the past, and we have demonstrated in our proposal the level of staffing, service, relevant experience and abilities we will bring to the County on the Continuing Traffic Engineering Services contract (CTESC). HDR requests your favorable response to continue to serve as your trusted partner and successfully deliver all required management, traffic engineering design, traffic engineering studies, fiber optics, ITS, technical assistance and construction services. Our deep pool of experienced resources should provide the County with a comfort level that we will be able to meet the peak staffing demands and provide back-up for emergency, critical or unforeseen situations on any task assignment.

The HDR team offers an excellent cross section of the traffic engineering design, traffic engineering studies and support disciplines needed to successfully complete any assignment required under this task-based contract, and we will require no learning curve. Our project team's current and projected workload will allow us to continue providing Hernando County with quality services. We are available to begin working immediately on new assignments upon receiving Notice-to-Proceed. We will continue to commit the necessary resources to meet the requirements of each task assignment in a cost-effective manner. All HDR team members are committed to exceeding Hernando County's expectations on each task issued under this contract.

Tom Quinn, PE
Quality Assurance

Melanie Fowler, PE
Project Principal

Bijan Behzadi, PE, PTOE
Project Manager

Marlin Register, PE
Quality Control

Huijing Qiang, PE
Quality Control

Greg Stevanus, PE
Deputy Project Manager

Key Team Members

N. Prabaharan, PE, PTOE
Traffic Engineering Studies Task Lead

Michael Oates, PE, PTOE
Traffic Engineering Design Task Lead

Jamie Krzeminski, PE, PTOE
Review Development of Regional Impact (DRI) Applications & Reports

Richard Atta-Armah, PE
Corridor-Wide Signal Retiming

Heather Hubbard, PE
Intersection Control Evaluation (Roundabouts, RCUT)

Brian Zimmerman, PE
Roadway & Intersection Design

Jose Gonzalez, PE
Roadway & Intersection Lighting

Jim Johnston, PE
Drainage

Key Staff

MELANIE FOWLER, PE

PROJECT PRINCIPAL

Melanie has extensive civil engineering experience, specializing in permitting, compliance review, stormwater management, utility design, and land development projects. She has provided project management, planning, design, and construction phase services for various projects. She has completed numerous water resources, solid waste, and site development projects for a variety of private, local, and state clients in Florida. Melanie is a registered professional engineer in Florida. She has served as quality assurance manager for both traditional and alternative delivery projects.

Credentials: Professional Engineer, FL, No. 56133
Education: B.S. Civil Engineering
Office Location: Tampa, FL

- Hernando County, Continuing Traffic Engineering Services
- Hernando County, Continuing Professional Engineering Services
- Hillsborough County, Transportation Design & General Engineering Services
- Pasco County, Miscellaneous Professional Engineering Services
- FDOT District 7, General Engineering Consultant
- Manatee County, Transportation Engineering Consulting Services
- Polk County, Professional Engineering Services for Roads & Drainage
- FDOT District 7, US 19 from Northside to CR 95
- FDOT District 7, Districtwide Traffic Operational Studies for Innovative Intersections & Interchange Treatments (III)

BIJAN BEHZADI, PE, PTOE

PROJECT MANAGER

Bijan is a recognized leader in transportation engineering with 38 years of dedicated professional service to enhancing travel safety and efficiency in Florida. He has invested a significant portion of his professional career, 20 years, with the FDOT while contributing to safety, design, operations, and management of both conventional and advanced traffic control strategies, systems, technologies, and devices.

Credentials: Professional Engineer, FL, No. 43868; Professional Traffic Operations Engineer, FL, No. 544; Advanced Maintenance of Traffic Certification
Education: Post Graduate Study Civil Engineering-Transportation; M.S. Civil Engineering-Transportation; B.S. Civil Engineering
Office Location: Tampa, FL

- Hernando County, Continuing Traffic Engineering Services
- Hernando County, Continuing Professional Engineering Services
- Hillsborough County, Transportation Design & General Engineering Services
- Pasco County, Miscellaneous Professional Engineering Services
- FDOT District 7, General Engineering Consultant
- Manatee County, Transportation Engineering Consulting Services
- Polk County, Professional Engineering Services for Roads & Drainage
- FDOT District 7, US 19 from Northside to CR 95
- FDOT District 5, Districtwide TSM&O Retiming
- FDOT District 7, Districtwide Traffic Operational Studies for Innovative Intersections & Interchange Treatments (III)

Tom Quinn, PE
Quality Assurance

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 35
Office Location: Tampa, FL

Tom has experience in Project Development and Environmental (PD&E) Studies, corridor studies, conceptual design, final design and bidding/construction assistance for the State, various counties and municipalities.

- Hernando County, Cont. Traffic Engineering Services
- Hernando County, Cont. Professional Engineering Services
- Hernando County, Barclay Ave Phase 1 & 2, Final Design
- Hernando County, SR 50 from Windmere Rd to US 98 Final Design
- Hillsborough County, Transportation Design & GEC
- Pasco County, Misc. Professional Engineering Services
- FDOT District 7, GEC
- Manatee County, Transportation Engineering Consulting Services
- FDOT District 7, US 19 from Northside to CR 95

Marlin Register, PE
Quality Control

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 27
Office Location: Tampa, FL

Marlin has experience in Florida performing project management and design of transportation infrastructure projects. His professional career has been devoted primarily to roadway design and engineering studies in roadway and drainage design, hydraulic and hydrologic modeling.

- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- FDOT District 7, US 19 from Northside to CR 95
- FDOT District 7, US 19 from North of CR 95 to South of Pine Ridge Way
- Pinellas County, Professional Engineering Services for San Martin Blvd over Rivera Bay Bridge Replacement PD&E
- FDOT District 7, US 41 / Florida Ave RRR

Huijing Qiang, PE
Quality Control

Credentials: Professional Engineer, FL; Project Management Professional
Education: M.S. Civil Engineering; B.S. Electrical Engineering
Years' Experience: 17
Office Location: Doral, FL

Huijing is an experienced professional well versed in Connected and Autonomous Vehicle (CAV) and Smart Mobility including TSM&O planning and implementation, CAV planning, design, and deployment, and ITS in all project phases. Also experienced in TMC Operations, ITS maintenance, project and task management for technology-oriented projects such as ITS and TSM&O on-call projects, TMC Operations, GEC and TWO based projects, conventional and alternate delivery projects.

- FDOT District 7, GEC
- FDOT District 5, Districtwide TSM&O Retiming
- FDOT District 6, Traffic Signal Retiming & Fine Tuning on various Corridors
- FDOT District 6, Palmetto Express Lanes Phases 1 & 2

Greg Stevanus, PE
Deputy Project Manager

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 16
Office Location: Tampa, FL

Greg is a hands on traffic engineer with experience on multiple transportation projects ranging from complex interstate /interchange design to resurfacing and intersection improvement projects. He is proficient and skilled in design and preparation of traffic plans including signalization, lighting, signing and pavement markings and ITS.

- Hernando County, Cont. Traffic Engineering Services
- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- Manatee County, Transportation Engineering Consulting Services
- Polk County, Professional Engineering Services for Roads & Drainage
- FDOT District 7, US 19 from Northside to CR 95

N. Prabaharan, PE, PTOE
Traffic Engineering Studies Task Lead

Credentials: Professional Engineer, FL; Professional Traffic Operations Engineer, FL
Education: M.S. Civil Engineering; B.S. Civil Engineering
Years' Experience: 24
Office Location: Tampa, FL

Praba is a senior traffic engineer with experience working on projects related to transportation Project Development and Environmental (PD&E) studies, corridor traffic studies, Intersection Control Evaluations (ICE), interchange traffic studies, traffic impact studies, travel demand modeling, traffic operation and transit planning. His technical expertise includes conducting traffic operational analysis, developing corridor, intersection and interchange design alternatives, and preparing traffic technical reports.

- Hernando County, Cont. Traffic Engineering Services
- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- FDOT District 7, US 19 from Northside to CR 95
- FDOT District 7, Districtwide Traffic Operations Studies for III
- FDOT District 5, Districtwide TSM&O Retiming

Michael Oates, PE, PTOE
Traffic Engineering Design Task Lead

Credentials: Professional Engineer, FL; Professional Traffic Operations Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 34
Office Location: Tampa, FL

Michael has an extensive background in transportation engineering. He has managed and designed traffic plans and prepared studies for FDOT for signalization, signing and pavement marking, lighting, ITS and traffic control to enhance the safety and capacity of Florida roadways. He is proficient at reviewing traffic plans and has reviewed over 600 plan sets for FDOT.

- Hernando County, Cont. Traffic Engineering Services
- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- Pasco County, Misc. Professional Engineering Services
- Manatee County, Transportation Engineering Consulting Services
- Polk County, Professional Engineering Services for Roads & Drainage

Jamie Krzeminski, PE, PTOE
Review DRI Applications & Reports

Credentials: Professional Engineer, FL; Professional Traffic Operations Engineer, FL
Education: M.E. Civil Engineering; B.S. Civil Engineering
Years' Experience: 27
Office Location: Orlando, FL

Jamie is a senior transportation engineer with extensive experience in transportation planning and traffic engineering, much of which has been focused on the provision of Complete Streets. Jamie has worked with both public and private clients including cities, counties and MPOs in 20 states around the U.S. on projects ranging from intersection and corridor-level multimodal improvement projects to region-wide bicycle and pedestrian master plans.

- FDOT District 7, GEC
- FDOT District 5, Districtwide TSM&O Retiming
- Seminole County, Rolling Hills Area Corridor Study
- Orange County, Complete Streets Policy & Implementation Plan
- Orange County, Ped/Bike Safety Action Plan

Richard Atta-Armah, PE
Corridor-Wide Signal Retiming

Credentials: Professional Engineer, FL
Education: M.E. Civil Engineering; C.E. Technology; B.S. Civil Engineering
Years' Experience: 28
Office Location: Orlando, FL

Richard has served as a project manager in several traffic related projects including signalization, signing and pavement markings projects for FDOT and other public agencies. Recent projects include the E-W and Parramore Bus Rapid Design and implementation projects, I-4 Ultimate Signal systems design, active arterial management, traffic adaptive design, signing and marking, ITS, and ATMS projects.

- Hernando County, Cont. Traffic Engineering Services
- Hernando County, Cont. Professional Engineering Services
- FDOT District 5, Districtwide TSM&O Retiming
- FDOT District 5, I-4 Ultimate

Heather Hubbard, PE
Intersection Control Evaluation (Roundabouts, RCUT)

Credentials: Professional Engineer, FL
Education: M.S. Civil Engineering; B.S. Civil Engineering
Years' Experience: 13
Office Location: Tampa, FL

Heather is experienced providing traffic engineering, multi-modal transportation planning, and PD&E services throughout the State of Florida and throughout the country. Her core areas of focus are in innovative intersection concept development through microsimulation and macroscopic operational analysis, travel demand modeling, GIS mapping and complete streets development. She has served as a key member on numerous projects in both technical and lead capacities.

- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- Manatee County, Transportation Engineering Consulting Services
- FDOT District 7, Districtwide Traffic Operations Studies for III

Brian Zimmerman, PE
Roadway & Intersection Design

Credentials: Professional Engineer, FL
Education: M.E. Civil Engineering; B.S. Civil Engineering; Certified Public Manager
Years' Experience: 19
Office Location: Tampa, FL

Brian has civil engineering experience with 14 years of design experience in Florida. His diverse work experience includes working as roadway engineer for FDOT making his knowledge of FDOT and local agency policies invaluable. Brian is proficient with coordinating design efforts with multiple disciplines and stakeholders.

- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- Manatee County, Transportation Engineering Consulting Services
- FDOT District 7, US 19 from Northside to CR 95

Jose Gonzalez, PE
Roadway & Intersection Lighting

Credentials: Professional Engineer, FL
Education: B.S. Electrical Engineering
Years' Experience: 31
Office Location: Tampa, FL

Jose has provided electrical construction and design services for commercial, industrial, governmental and institutional clients. He is proficient in the design of roadway lighting systems, site and streetscape lighting systems, medium voltage primary and secondary electrical power distribution systems, lift, stormwater and leachate pump stations and emergency stand by systems.

- Hernando County, Cont. Professional Engineering Services
- Hillsborough County, Transportation Design & GEC
- Pasco County, Misc. Professional Engineering Services
- FDOT District 7, GEC
- Manatee County, Transportation Engineering Consulting Services

Jim Johnston, PE
Drainage

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 33
Office Location: Tampa, FL

Jim is a chief drainage engineer with experience in drainage and stormwater management analysis and design. His experience includes scope development, quality control / assurance reviews, peer reviews, and construction plan and drainage documentation reviews.

- Hernando County, Cont. Traffic Engineering Services
- Hernando County, Cont. Professional Engineering Services
- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- Pasco County, Misc. Professional Engineering Services
- Manatee County, Transportation Engineering Consulting Services
- Polk County, Professional Engineering Services for Roads & Drainage
- FDOT District 7, US 19 from Northside to CR 95

• Unique Knowledge of Key Team Members Relating to the Project

Our Project Manager, **Bijan Behzadi**, began working with the County as the Project Manager on the initial Continuing Traffic Engineering Services Contract in 2018. Bijan has had the privilege of working with the County on a wide variety of task order assignments including intersection improvements on Forest Oaks Blvd at Deltona Blvd., traffic impact analysis on the Citizens Center for Success Development, and signal retiming along Mariner Blvd from County Line Road to Northcliffe Blvd.

Our Deputy Project Manager, **Greg Stevanus**, has continuously been involved with Hernando County task order assignments providing traffic engineering services over the past 5 years.

HDR's Task Leads, **N. Prabaharan** and **Michael Oates**, bring significant experience leading diverse technical teams, drawing on the right expertise to deliver successful projects and value to Hernando County. Task Leads will be selected and assigned based on the project type to bring leadership based on the most relevant experience. They will be responsible for the day-to-day performance of the project(s) they manage and will work collaboratively with Bijan to provide consistency across all HDR projects for Hernando County.

HDR's Project Principal, **Melanie Fowler**, will work with Bijan, Greg and the Task Leads to provide the appropriate staffing resources to meet Hernando County's expectations for technical innovation and project efficiency. As HDR's Tampa Office Principal, Melanie has the authority and internal network to assign the right technical and managerial resources to Hernando County to deliver high-quality, efficient capital improvement projects.

• Experience on Projects as a Team

Our dynamic and integrated team lives here and works here, recognizing the importance of adding value to our local community by solving difficult challenges and inspiring positive change. Having provided services in Florida since 1974, we have built solid working relationships with the majority of state agencies. As the table below shows, HDR's key team members have worked together to deliver on a number of continuing services contracts across the state, and we will bring this wealth of experience to deliver tasks for Hernando County.

Project Experience of HDR Staff

Name	Role	CONTRACTS 1	2	3	4	5	6	7	8	9
Melanie Fowler, PE	Project Principal	●	●	●	●	●	●	●		●
Bijan Behzadi, PE, PTOE	Project Manager	●	●	●	●	●	●	●	●	●
Tom Quinn, PE	Quality Assurance	●	●	●	●	●	●	●		
Marlin Register, PE	Quality Control		●		●		●			
Huijing Qiang, PE	Quality Control				●				●	
Greg Stevanus, PE	Deputy Project Manager	●	●		●	●	●	●		
N. Prabaharan, PE, PTOE	Traffic Engineering Studies Task Lead	●	●		●		●		●	●
Michael Oates, PE, PTOE	Traffic Engineering Design Task Lead	●	●	●	●	●		●		
Jamie Krzeminski, PE, PTOE	Review DRI Applications & Reports				●				●	
Heather Hubbard, PE	Intersection Control Evaluation (Roundabouts, RCUT)		●		●	●				●
Richard Atta-Armah, PE	Corridor-Wide Signal Retiming	●							●	
Brian Zimmerman, PE	Roadway & Intersection Design		●		●	●	●			
Jose Gonzalez, PE	Roadway & Intersection Lighting		●	●	●	●				
Jim Johnston, PE	Drainage	●	●	●	●	●	●	●		

CONTRACT KEY

NO.	TITLE OF PROJECT	NO.	TITLE OF PROJECT
1	Hernando County, Continuing Traffic Engineering Services	6	FDOT District 7, US 19 from Northside Dr to CR 95
2	Hillsborough County, Transportation Design & General Engineering Services	7	Polk County, Professional Engineering Services for Roads & Drainage
3	Pasco County, Miscellaneous Professional Services	8	FDOT District 5, Districtwide TSM&O Retiming
4	FDOT District 7, General Engineering Consultant	9	FDOT District 7, Districtwide Traffic Operations Studies
5	Manatee County, Transportation Engineering Consulting Services		

• Key Staff Involvement in Project Management & On-site Presence

The proposed key staff has been carefully chosen based on their extensive track record of successful projects with Hernando County spanning several decades. Bijan will be the contract PM, and internally weekly meetings will keep Greg, Praba, Michael and other key staff involved with the project management decisions and specific details of the contract and tasks. At the start of a project, the key staff assigned to that particular task will go in the field for an on-site review. Subsequent on-site field reviews will also take place throughout the duration of the projects as needed to gather and verify information.

Our entire Team has demonstrated expertise including involvement in as-needed engineering service contracts and task-specific projects, many for Hernando County.

• Time Commitment of Key Staff

The HDR Team has ample capacity to support Hernando County's Continuing Traffic Engineering Services over the life of the contract, and will provide prompt, responsive, quality service throughout the contract term. HDR employee-owners are keenly aware of the importance for providing stellar client service; in fact, a cornerstone of our continued success has been the commitment to "Clients for Life", which is symbolic of the importance placed on earning repeat business from our clients – a direct measure of HDR's responsiveness, service, and value.

Time Commitment for Key HDR Staff

KEY STAFF | ROLE	12 M AVAIL.
Melanie Fowler, PE | Project Principal	30%
Bijan Behzadi, PE, PTOE | Project Manager	55%
Tom Quinn, PE | Quality Assurance	40%
Marlin Register, PE | Quality Control	40%
Huijing Qiang, PE | Quality Control	40%
Greg Stevanus, PE | Deputy Project Manager	50%
N. Prabaharan, PE, PTOE | Traffic Engineering Studies Task Lead	45%
Michael Oates, PE, PTOE | Traffic Engineering Design Task Lead	60%
Jamie Krzeminski, PE, PTOE | Review DRI Applications & Reports	55%
Heather Hubbard, PE | Roundabouts	30%
Richard Atta-Armah, PE | Corridor-Wide Signal Retiming	50%
Brian Zimmerman, PE | Roadway & Intersection Design	30%
Jose Gonzalez, PE | Roadway & Intersection Lighting	40%
Jim Johnston, PE | Drainage	40%

• Qualification & Relevant Subconsultant Experience

We hand-selected trusted subconsultants for this contract that have successfully worked with HDR in the past, and their specific work history is well-tailored to support this contract. We are confident that we will provide the County with a full-service, responsive, and experienced Team for this contract.

Adams Traffic, Inc. has provided traffic data collection services in Florida for over 22 years. Adams Traffic serves as the traffic data collection subconsultant on numerous FDOT districtwide contracts including traffic and safety studies, statistics annual counts, signal retiming, and PD&E studies.

Cumbey & Fair, Inc. (C&F) is a progressive firm based in Clearwater, Florida providing quality transportation engineering and land surveying services for over 48 years (since 1975). C&F is a full service Professional Engineering, Survey and Subsurface Utility firm with the in-house skilled professionals to perform subsurface utility engineering (SUE), survey & mapping, construction management, biddability. With a total staff of 35, C&F has four (4) licensed Professional Engineers and three (3) licensed Professional Surveyors & Mappers on staff, all of whom have extensive experience working on task driven assignment contracts.

Florida Bridge & Transportation, Inc. (FBT) specializes in the design of transportation-related structures and has been in business since 2005. FBT has designed over 170 bridges, including all types of bridges ranging from low-level water crossings and long-span bridges over interstate routes to an award-winning curved steel bridge along Wekiva Parkway. FBT's traditional design projects include bridge replacements, widening, new construction and repair projects. They have designed many miscellaneous structures including sheet pile walls, retaining walls, box culverts, bridge barrier retrofits, overhead sign structures and mast arm/span wire signal structures.

Tierra, Inc. is a full-service consulting geotechnical, environmental and construction materials testing engineering firm that was formed with the intent of building upon the many years of combined experience of their founding principals. Tierra is committed to providing quality, responsive service, establishing a reputation for sound approaches and professional competence in a wide range of technically demanding areas.

Marr Traffic, Inc. is a privately owned traffic data collection firm. Their leadership team has over 60 years of traffic data collection and project management experience combined and has completed tens of thousands of data collection projects throughout the Southeast. Over 150 clients across 15 states have trusted Marr Traffic as their traffic data collection partner. Marr Traffic currently provides traffic data for many counties, municipalities, and DOTs throughout the Southeast.

Precision Contracting Services, Inc. (PCS) is a multi-faceted professional services firm registered as a corporation in the State of Florida, providing design, installation, integration, maintenance and asset management services for fiber optic communication infrastructures supporting various network and low voltage applications. PCS has been providing continued quality service to Florida clients since 1990.

Subconsultants

Nancy Adams, PE
(Adams Traffic, Inc.)
Traffic Data Collection

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 33
Office Location: Plant City, FL

Nancy has extensive experience in traffic data collection. She has been responsible for hundreds of data collection assignments for the Florida DOT and many local government agencies. She provides hands-on service and is personally involved in the management, scheduling, collection, reporting and quality review of each Adams Traffic assignment.

- Hernando County, Cont. Professional Engineering Services
- Hernando County, Cont. Traffic Engineering Services
- Hillsborough County, Transportation Design & GEC
- Pasco County, Misc Professional Engineering Services
- FDOT District 7, GEC
- FDOT District 5, Districtwide TSM&O Retiming
- Polk County, Professional Engineering Services for Roads & Drainage

Pat McCormack, PSM
(Cumbey & Fair, Inc.)
Survey/SUE/Utility Locates

Credentials: Professional Land Surveyor & Mapper, FL
Education: B.S. Geomatics
Years' Experience: 28
Office Location: Clearwater, FL

Pat's experience in Surveying and Mapping includes Boundary Surveys, Topographic Surveys, Subsurface Utility Engineering, Right of Way Maps, Control Surveys, Wetland Jurisdictional Surveys, Construction Layout and Route Surveys. He presently serves as Vice President and Senior Survey/SUE Manager for Cumbey & Fair. In this capacity, he develops and negotiates scope of services, establishes, and maintains project budgets, generates schedules and quality assurance procedures.

- Hernando County, Cont. Traffic Engineering Services
- Hillsborough County, Transportation Design & GEC
- Hernando County, LAP Contract
- Hernando County, Miscellaneous Services for Geomatics
- FDOT District 7, GEC
- FDOT District 7, Districtwide Traffic Operation Studies for III

Mark Niedermann, PE
(Florida Bridge & Transportation, Inc.)
Miscellaneous Structures

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 36
Office Location: Orlando, FL

Mark's 36 years of experience as a Bridge Engineer have included all phases of continuing service projects including QA-QC review, peer review, design, repair and construction design assignments. His bridge design experience includes continuous steel girder bridges, precast and cast-in-place flat slab bridges, prestressed girder bridges, bridge widenings, RRR projects with ADA retrofits, Value Engineering Studies, steel and concrete pedestrian bridges, post-tensioned substructure units and various bridge load ratings.

- FDOT District 1, SR 37 over Alafia River
- Florida's Turnpike Enterprise, Widening Neptune Rd to Osceola Parkway
- Lake County, Wekiva Parkway Section 3B (SR 46 to US 441)
- Lake County, Lois Drive Bridge Replacement

Juan Valenzuela, PE
(Florida Bridge & Transportation, Inc.)
Miscellaneous Structures

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 22
Office Location: Orlando, FL

Juan currently serves as the Director of Engineering for FBT and is responsible for the design, analysis and verification of a wide variety of transportation structures. Juan possesses a strong design knowledge of foundation, substructure and superstructure components for new bridges, bridge widenings and bridge replacements. He has participated in other structural design assignments including ITS structures, mast arm and strain pole signal structures, overhead sign structures, sound walls, box culverts, steel sheet pile walls and concrete retaining walls.

- FDOT District 1, SR 37 over Alafia River
- Hillsborough County, CR 582 (Knights Griffin Rd) over Itchepackesassa Creek
- Lake County, Wekiva Parkway Section 3B (SR 46 to US 441)
- Lake County, Lois Drive Bridge Replacement

Bassel Kassem, PE
(Florida Bridge & Transportation, Inc.)
Miscellaneous Structures

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 26
Office Location: Orlando, FL

Bassel has 26 years of extensive structural engineering experience and has worked on several types of bridges, miscellaneous structures, inspections, and underwater inspection projects throughout the nation. His experience is in the design and management of engineering projects. His duties include preparing and maintaining project schedules and budgets, serving as the point-of-contact for the client, supervising and directing the project team(s), and coordinating efforts and issues with agencies and facility owners.

- FDOT District 2, CR 361 over Spring Warrior Creek South
- FDOT District 2, SR 200 (US 301) over Alligator Creek
- Central Florida Expressway Authority, SR 429 over Lust Rd Bridge
- St. Lucie County, 25th St over Ten Mile Creek Bridge

Brian Gentry, PE, PTOE
(Marr Traffic, Inc.)
Traffic Data Collection

Credentials: Professional Engineer, FL; Professional Traffic Operations Engineer
Education: B.S. Chemical Engineering
Years' Experience: 18
Office Location: Orlando, FL

Brian is a Florida-licensed professional engineer with almost 20 years of traffic engineering, traffic analysis, transportation planning, and expert witness testimony. His track record includes traffic signal engineering studies, traffic data collection, traffic operational studies, Active Traffic Management, Active Arterial Management, special event Traffic Control Plans, performing CEI services, and conducting signal warrant studies.

- Hillsborough County Public Works, Traffic Management Program
- City of Tampa, Transportation & Stormwater Services
- FDOT District 7, Traffic Operations
- City of Tampa, Transportation Division - Traffic Engineer

Bruce Boyd, RCDD
(Precision Contracting Services, Inc.)
Fiber Optic Cable Discovery & Inventory

Credentials: Registered Communications Distribution Designer, #151603R
Education: B.S. Technology
Years' Experience: 40
Office Location: Tampa, FL

Bruce has experience working in communication construction management and more than 15 years of financial management in the construction, mergers and acquisition marketplace for government and private sectors.

Contract Engineering, Systems Design, Estimating, and Inspection for PCS fiber optic projects. Lead all PCS activities for project engineering, estimating, management and sales. Developed award winning FiberTrak Network Design/Asset Management model.

Kevin Scott, PE
(Tierra, Inc.)
Geotechnical Services

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 22
Office Location: Tampa, FL

Kevin's experience includes shallow and deep foundation analyses, retaining wall design, settlement analyses, and pavement evaluation. Kevin also has extensive experience with Pile Integrity Testing (PIT) and Cross-Hole Sonic Logging (CSL).

- Hernando County, Cont. Professional Engineering Services
- Hernando County, Broad St. & Croom Rd Signalization Improvements
- Hernando County, Lake Lindsey Rd & Ponce de Leon Blvd Intersection Improvements

Michael Bair, ASP, LEP
(Tierra, Inc.)
Geotechnical Services

Credentials: Associate Safety Professional; Licensed Environmental Professional
Education: B.A. Biology
Years' Experience: 27
Office Location: Tampa, FL

Michael's progressive experience has included all phases of a typical project from the laboratory to the field work to all of the required office tasks. He also reviewed work products for compliance with quality assurance/quality control objectives. His Program Management experience includes the Florida Department of Environmental Protection (Preapproval, PRP, LSSI), Florida Department of Transportation, several large private clients, and multiple municipal contracts.

- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC

Christopher Garth, LEP
(Tierra, Inc.)
Geotechnical Services

Credentials: Licensed Environmental Professional
Education: B.A. Geography
Years' Experience: 21
Office Location: Tampa, FL

Christopher's experience includes Due Diligence Services, FDOT Level 1 and Level 2 Contamination Screening Evaluations, Developments of Regional Impact (DRI) groundwater and surface water monitoring and reporting, soil and groundwater sampling and monitoring activities for various land acquisition, development, construction and design projects.

- Hillsborough County, Taylor Rd Drainage Improvements
- Polk County, US 27 Highlands County Line to N of SR 60
- Hillsborough County, US 92 PD&E Study from E of I-4 to County Line Rd

Team's Experience

Name	Role	Years of Experience	EXPERIENCE	Preparation of Plans	Specifications	Engineer's Reports	Cost Estimating and Scheduling	Cost-Benefit Analysis	Technical Studies	Master Plans	Permitting	Bidding and Award	Construction Administration	Resident Engineering Inspection	Project Record Keeping & Close-out	Environmental Assessments
Melanie Fowler, PE	Project Principal	28		●	●	●	●	●	●	●	●	●	●		●	
Bijan Behzadi, PE, PTOE	Project Manager	38		●	●	●	●	●	●	●	●	●	●		●	
Greg Stevanus, PE	Deputy Project Manager	16		●	●	●	●	●	●			●	●		●	
Tom Quinn, PE	Quality Assurance	35		●	●	●	●	●	●	●	●	●	●		●	
Marlin Register, PE	Quality Control	27		●	●	●	●	●	●	●	●	●	●		●	
Huijing Qiang, PE	Quality Control	17		●	●	●	●	●	●	●	●	●	●		●	
N. Prabaharan, PE, PTOE	Traffic Engineering Studies Task Lead	24		●	●	●	●	●	●	●		●	●		●	
Mike Oates, PE, PTOE	Traffic Engineering Design Task Lead	34		●	●	●	●	●	●	●	●	●	●		●	
Matthew Wiesenfeld, PE	Roadway Safety & Studies	18		●	●	●	●	●	●	●	●	●	●		●	
Steve Morency, PE	Roadway Safety & Studies/Roadway & Intersection Lighting	7		●	●	●	●	●	●			●	●		●	
Kevin Dunn	Speed Limit Studies/Plans Review	41		●	●	●	●	●	●			●	●	●	●	
Bryan St. George, PE	Intersection Modeling & Analysis/Intersection Control Evaluation (Roundabouts, RCUT)	10		●	●	●	●	●	●	●		●	●		●	
Jamie Krzeminski, PE, PTOE	Review Development of Regional Impact Applications & Reports	27		●	●	●	●	●	●	●	●	●	●		●	
Heather Hubbard, PE	Intersection Control Evaluation (Roundabouts, RCUT)	13		●	●	●	●	●	●	●		●	●		●	
Richard Atta-Armah, PE	Corridor-Wide Signal Retiming/Transportation Systems Management & Operations	28		●	●	●	●	●	●	●	●	●	●		●	
Shawn Pope, PE	Corridor-Wide Signal Retiming	8		●	●	●	●	●	●			●	●		●	
Alex Zhang, PE	Intelligent Transportation Systems Design & Integration	9		●	●	●	●	●	●			●	●		●	
Jim Gu, PhD, PE, PTOE	Fiber-Optic & Wireless Communication Design/Transportation Systems Management & Operations	18		●	●	●	●	●	●	●	●	●	●		●	
Jose Gonzalez, PE	Roadway & Intersection Lighting	31		●	●	●	●	●	●		●	●	●		●	
Brian Zimmerman, PE	Roadway & Intersection Design	19		●	●	●	●	●	●	●	●	●	●		●	
Jake Hemingway, PE	Roadways & Intersections Design	7		●	●	●	●	●	●	●	●	●	●		●	
Jim Johnston, PE	Drainage	33		●	●	●	●	●	●	●	●	●	●		●	
Adam Mitchum, PE	Drainage	11		●	●	●	●	●	●	●	●	●	●		●	
Jake Phillips	Utility Coordination	10		●	●		●								●	
Heather Manganiello, PE	Utility Relocations	21		●	●	●	●	●	●	●	●	●	●		●	
Tracy Keenan, PE (HDRC)	Constructability/Bidability & CEI Task Lead	34		●	●	●	●	●	●			●	●	●	●	
Stefanie McQueen, AICP	Agency Coordination/Public Involvement/Special Events	21					●	●	●	●		●			●	
Barry Lenz	Environmental Permitting	40		●	●	●		●	●	●	●				●	●
Noemi Castillo, PE, PMP	Wetlands/Species	24		●	●	●		●	●	●	●				●	●
Joe Thompson	Right of Way Services	48					●	●	●							
Ben Ellis, PE	Civil Engineering	18		●	●	●	●	●	●			●	●		●	

B.

Firm/Team Capabilities

B. Firm/Team Capabilities

• Are the Lines of Authority & Coordination Clearly Identified?

HDR, through the partnership with carefully selected firms, has assembled a team of experts who have a long history of working collaboratively, provide redundancy of staff and have extensive experience working with Hernando County. The project manager and the primary point of contact for tasks is Bijan Behzadi.

For over 15 years Hernando County has entrusted HDR with improving transportation infrastructure in various local roadway networks and adjacent state highway systems. We have been fortunate to hold continuing services contracts with Hernando County since 2008, and we pride ourselves on the services we have provided over these years. We have thoroughly enjoyed working on the current Continuing Traffic Engineering Services Contract, and we are very excited about the opportunity to continue our partnership with the County because it allows us to act on our passion - to help make a real difference in the communities where we work.

HDR's prior experience with Hernando County has afforded us a solid understanding of the unique challenges the County proactively prepares for – finding the right balance of mobility and livability for our communities, and the cost and schedule limitations that come with every project. This creates exciting opportunities for County staff to partner with the consulting community to help facilitate the advancement of projects from concept-to-concrete to benefit the County residents. The HDR team is a part of this community, and we will leverage our unique perspective and experience to continue to serve as your trusted consultant-of-choice.

AUTHORITY & COORDINATION

As Project Manager for this contract, Bijan will oversee all project management activities including coordination, scoping of work orders, scheduling, design development, plans production, traffic engineering reports, progress reporting, budgets, invoicing, quality control and quality assurance. Bijan will work directly with the

County's Project Manager and other County staff as approved to initiate, manage, and monitor all work activities. Working in collaboration with Hernando County staff, HDR is committed to completing individual or multiple projects efficiently to maximize the infrastructure investment value the County and the public receive. Effective communication and coordination will maintain that HDR and Hernando County staff share a common understanding of the goals and objectives for each work order. HDR understands the key to successful project delivery is a full understanding of the scope for each work order and a commitment to the associated budget and schedule. Continuous communication with the County will promote project success and enable us to accommodate minor changes that may occur during the design concept development without adversely impacting the overall budget or schedule.

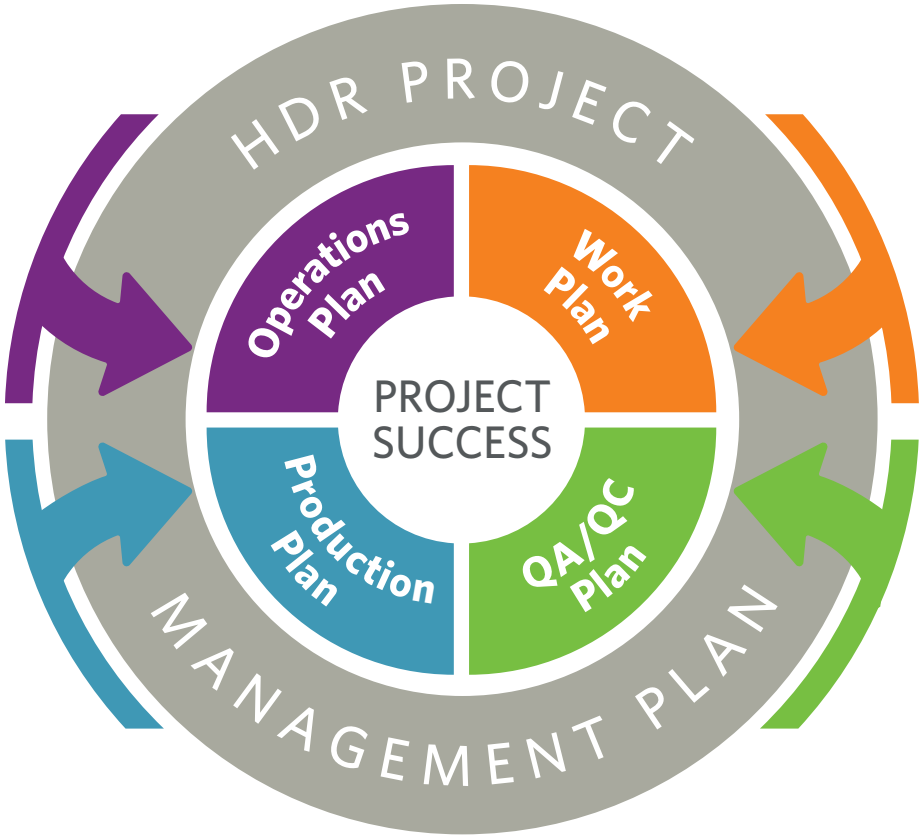
• Are Essential Management Functions Identified?

The core function of HDR's multidisciplinary team is to bring together a cooperative group of traffic and transportation engineering professionals from different fields of expertise with overarching goal of determining how best a specific work order should be treated.

HDR's effective approach to successfully controlling schedules and budgets begins with upfront planning by the project manager to develop a scope of work and schedule that meets the County's requirements. HDR's effective project management strategies are detailed below.

Upon notification by the County Project Manager regarding a new work order, Bijan will begin compiling relevant project information, pull in the appropriate HDR lead discipline staff and schedule a meeting or conference call with County staff to confirm a common understanding of the scope of work. Bijan will provide the key discipline leads with a draft scope of work which they will further develop in coordination with Bijan and Hernando County. The refined scope of work will be provided to the County for review and final approval.

Figure 1: HDR's Project Management Plan



A detailed Work Breakdown Structure (WBS) and staffing projection that shows the breakdown of tasks and identifies the estimated staff-hours and resources required will be jointly developed by Bijan and the discipline leads. The staff-hour and fee proposal will be submitted as part of the final work order for County approval. Any final scope or fee modifications can be made quickly to expedite County approval and issuance of a Notice to Proceed.

Once the staffing projection is developed with the necessary resources to execute the assignment, Bijan will develop a final Critical Path Method type schedule for the work orders. Schedules will be reviewed during periodic management meetings with the County and HDR staff to demonstrate that all work tasks are sufficiently staffed to deliver projects on or ahead of schedule. Monthly progress reports will document the progress for each major work order subtask. HDR assigns a dedicated in-house project accountant that is responsible for working with the project manager to develop monthly invoicing and progress reports.

HDR's proprietary software, E-Business Suite (EBS), is utilized by the project manager and task managers to assess workload and schedule requirements, staff availability and the associated costs to complete work assignments. EBS, and associated HDR systems, also support analysis of cost to date by task, remaining budgets vs. outstanding workload, accounts receivable, QC scheduling, project management reviews, etc.

For all work order projects, we will develop and utilize a Project Management Plan (PMP) as illustrated in Figure 1 above, the foundation for HDR's Project Approach that defines key scope items and milestone dates, identifies key contacts and lines of communication, teaming assignments, includes the work breakdown structure with staff-hours and budgets for each task, along with a project-specific QA/QC Plan and QC Schedules.

A key element of our approach to a typical transportation work order, will be to conduct a 60% level Design Concept Meeting with Hernando County, following development of the initial design. The purpose of these meetings is to verify that the County concurs with the preliminary design approach and concept early in the design process.

For complex projects, the Design Concept Meeting may be followed by a meeting with key stakeholders and/or by an advanced submittal of documentation to the County to verify that there is full consensus on design concepts and preliminary alignments. HDR has utilized this protocol during development of the projects with potential right of way and major utility impacts. The Design Concept Meeting also provides a venue for confirming that all key stakeholder requirements and interests are appropriately addressed. Conducting these Design Concept meetings will confirm direction for development for the 90% design and final plans submittal and streamline plans reviews by the County and other involved agencies.

• Are the Functions Effectively Integrated?

DELINEATION OF SUBCONSULTANT ROLES

As listed in the County's Scope of Services for this contract, the areas of discipline are wide-ranging and will require specific individual expertise to deliver the comprehensive services the County will require. HDR's approach to meeting the County's objectives includes the identification of the right staff with the appropriate level of expertise in the early stage of the project's scoping under the Operations Plan phase of the PMP.

HDR will be teaming with highly a recognized and experienced team of subconsultants with including several with DBE and SBE certification. Over the past 35 years since the opening of our office in Tampa, HDR has developed successful working relationships with a wide network of qualified DBE and SBE firms and has a proven track record of utilizing these firms whenever possible.

Traffic Data Collection

Survey/ROW, Utility Exploration & Utility Locates

Miscellaneous Structures

Geotechnical Services

Fiber Optic Cable Discovery & Inventory

Traffic Data Collection: **Adams Traffic, Inc.** (DBE) and **Marr Traffic, Inc.** (SBE) located in Plant City and Orlando, respectively, to perform a variety of traffic data collection with focus on data accuracy and having capabilities to undertake all types and sizes of video surveillance traffic data collection, intersection turning movement counts, queue length and delay studies, ADT clarification, and speed counts. Marr Traffic will be assigned to use their Drone Artificial Intelligence technology software as needed allowing us to overlay the drone footage with heat maps identifying with detail the counts, track vehicle movements, origin and destination studies. Nancy Adams, PE, and Brian Gentry, PE, PTOE will be the task leads.

Survey/Right of Way, Subsurface Utility Exploration and Utility Locates: **Cumbey & Fair, Inc.** (SBE) certified and a progressive firm based in Clearwater, Florida will provide a variety of land surveying services such as topographic survey, GPS survey, legal descriptions and sketches, route location survey, subsurface utility locations, aerial photogrammetry control, boundary survey, right of way mapping, horizontal and vertical control survey, digital terrain model survey, and as-built survey under supervision of Pat McCormack, PSM, the survey manager.

Miscellaneous Structural Engineering and Design: **Florida Bridge & Transportation, Inc.** (SBE), an award-winning civil engineering firm with extensive experience and specialization in structural engineering. HDR worked with FBT on I-4 Ultimate to design miscellaneous structures such as overhead sign structures, signal mast arm and span wire signal strain poles. Juan Valenzuela, PE, will serve as the task lead for design and production of the structural components of traffic plans.

Geotechnical Services: **Tierra, Inc.**, provides experienced personnel to perform geotechnical support services during the planning and design stages of a project work order requiring soil analysis. Tierra laboratory facilities provide specialized testing services associated with geotechnical engineering and construction materials projects including the physical testing of soil, rock, concrete, aggregate, and asphalt. Kevin Scott, PE has extensive experience in geotechnical engineering, shallow and deep foundation analysis and retaining wall design will be the task lead to provide all geotechnical services for the projects requiring soil strata investigation, and foundation design recommendations.

Fiber Optic Cable Discovery and Inventory: **Precision Contracting Services, Inc.** (SBE), provides services related to locating and providing fiber optic cable routes, budget loss of the existing optical fibers for attenuation and determining the additional bandwidth allocation and transmission capacity. PCS has developed tools to track and assess the current fiber optic infrastructure. In cases where Hernando County staff needs additional support for discovery of the existing communication legacy, HDR with the aid of PCS can accurately provide the fiber optic discovery services. Bruce Boyd will serve as the task lead.

▪ Current & Projected Workload

The HDR team has ample capacity to support Hernando County's Continuing Traffic Engineering Services Contract and historically have demonstrated our reliability and quality service on previous Hernando County work. HDR's company leadership, project management staff, and key technical resources all receive state of the art resource management and leadership training and are provided with the necessary project and resource management tools for implementation and successful delivery of any assigned work order.

CURRENT & PROJECTED COMMITMENT

The contract's team has immediate availability and capacity to handle this assignment from Hernando County. Our availability to commit resources to serve the County has never been greater.

Projected backlog and availability for key staff and support staff that will be providing core services are shown in figure 2 to the right.

These professionals are leading the elements of work that HDR is proposing to self-perform. Our Project Manager and key staff identified on our organizational chart have substantial availability. The reported numbers represent approximate, projected total availability for January 2024 through January 2025, based on existing backlog as of November 2023. Projected backlog varies with time, as with all consultant firms, as work is completed, and clients' needs change over time. HDR will remain engaged and committed to each task, near, mid, and long term, for the duration of this contract.

DEPTH OF RESOURCES

HDR's Organizational Chart (provided at the end of this section) identifies our core team for this Contract. These local professionals and specialists, including our subconsultant partners, will be devoted to Hernando County throughout the entirety of the Contract. Furthermore, the County has immediate access to more than 160 total HDR staff based in our local Tampa office and more than 600 employee-owners throughout Florida.

Throughout the State of Florida, HDR has more than 40 traffic engineers with expertise in traffic modeling, forecasting, design, and corridor signal retiming experience and has performed these types of functions for every FDOT district, central office and over a dozen local and county highway agencies.

HDR's multi-disciplined team (see our Organizational Chart) of competent, experienced professionals and specialists will provide the required expertise for this Contract. We formulated our team based on previous Hernando County project experience, individual expertise, capabilities, and availability. HDR's experienced team will require no learning curve and we bring a deep understanding of the Contract's history and needs. Our project team's current and projected workload will allow us to continue providing Hernando County with efficient and quality services for the project's duration. We are available to begin working immediately upon receiving Notice to Proceed (NTP). The HDR team will provide both depth and breadth of resources and are committed to meeting Hernando County's expectations on this Contract.

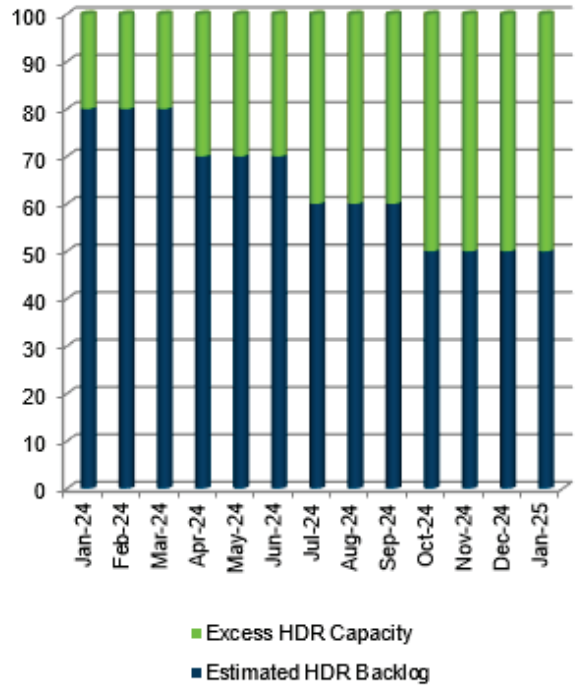


Figure 2: HDR's Projected Backlog

UNDERSTANDING OF SCOPE ITEMS

The Scope of Services highlights the various task assignments that are expected to be completed by the consultant under the Continuing Traffic Engineering Services Contract. The HDR Team currently provides similar services under various task based contracts with municipalities throughout the Tampa Bay region and also with FDOT Districts throughout the State.

Engineering Design

The core traffic design support services include, but are not limited to: design of traffic signals, design of fiber optic interconnections between existing and/or proposed traffic signals and Intelligent Transportation Systems (ITS) facilities, design of ancillary intersection improvements including turn lanes associated with signal design, design of traffic calming devices including roundabouts, design of signage and pavement marking plans to include compliance with the most current edition of the Manual of Uniform Traffic Control Devices (MUTCD), design of Temporary Traffic Control (TTC) plans for planned events and emergency situations, design projects including utility locations/relocations, drainage, determination of right of way requirements and maintenance of traffic/detour plan, design of project deliverables including sign and sealed plans and specifications, any applicable regulatory approvals and permits and tabulation of quantities and cost estimates to enable the County to competitively bid out the project. We will base traffic designs on current standards including MUTCD, Florida Design Manual & Standard Plans, FHWA Highway Safety Manual and Safety Performance Functions, Hernando County Facility Design Guidelines, Manual on Uniform Traffic Studies, 23 Code of Federal Regulations Related to Systems Engineering Management, and Florida Green Book. A brief description of HDR's understanding of each of these support services is provided on the following pages.

A. Traffic Signal Design

Development of traffic signal design plans compatible with the proposed geometric design is critical to ensuring the safety and efficiency of the traveling public is addressed. Our approach to individual intersection and signal systems design begins with advance engineering data collection including condition and collision diagrams, and collision severity rates. While these critical items are being gathered, other key factors as described below will be established as the basis for design:

- Intersection users and human factors
- Establishing Design vehicle, design and operating speeds
- Topographical survey of the existing geometry
- Determination of signal operating plan & turn lane treatment
- Determination of preemption, and method of detection
- Location & configuration of the controller and cabinet
- Selection of type and location of traffic signal support structures
- Determination of signing and locating the stop line and crosswalks
- Identification of the communication design and interconnectivity
- Future intersection expansion and signal loads
- Location of power service source and feeder design
- Offset turn lanes and alignment
- Pedestrian accessibility, detection, and display
- Signal head display and visibility
- Determination of Ethernet based communication equipment
- Addressing detection for different approach speeds
- Close coordination with the County staff in various design stages
- Utility coordination and subsurface utility and soil exploration
- Determination of OSHA circle of safety near overhead power lines
- Elimination of pedestrian-vehicular conflicts
- Computation for intersection clearance intervals
- Queuing calculations and turn lane design
- Scheduling field reconnaissance during various design stages

Partial listing of intersection and signal systems design projects prepared in Hernando County are provided herein:

- SR 50 corridor east of I-75
- Forest Oaks Blvd and Deltona Blvd
- Barclay Ave. Phases I & II (Powell Rd and SR 50)
- US 19 at Forest Oaks Blvd

HDR traffic engineers have designed and successfully implemented signal systems throughout the State for all of FDOT districts and many neighboring and local government agencies. We have the critical mass to handle multiple assignments with difficult deadlines. Goals of the design approach are:

1. Field review of the project with the involved design team.
2. Early identification of design issues by all parties.
3. The ability to break out critical path components for fast-tracked final design.
4. Throughout design, assure the project remains consistent with the scope and construction budget.

Signals

HDR has designed signalized intersections, including pedestrian signals and school beacons, locally and throughout Florida on both major reconstruction and minor design projects. These signal systems range from span-wire supported flashing beacons at rural intersections to multi-signal advance arterial management traffic systems for major urban reconstruction projects. Team members have completed approximately 100 signal projects for FDOT alone.

Using SYNCHRO, SIMTRAFFIC, and TSPP Draft application programs, HDR has optimized, implemented and fine-tuned signals along arterial and network systems with diamond interchanges. The work efforts have included system and field programming LMD, PEEK, ECONOLITE, EAGLE, and NAZTEC traffic signal controllers. With these tools, our traffic engineers make decisions based on field traffic observation and engineering judgment, while taking into consideration the strengths and limitations of the traffic signal controllers and the timing models. Our signal timing engineers understand the importance of accurate controller programming and testing of complex phasing sequences before they are implemented. Implemented timings have yielded positive feedback from the FDOT, the maintaining agencies and the public.

Transportation & Transit Network Modeling & Traffic Signal Retiming

Traffic and transportation network analysis is a core service offered by our Tampa-based team of modelers and data analysts. Our projects involve extensive use of modeling and simulation to test multimodal project alternatives, identify corridor and network impacts, refine ideas and strategies, and drive design innovation. Our team is well-versed in utilizing state-of-the-art simulation software, and we've built in-house tools to streamline workflows for data collection, integration, analysis, and presentation. HDR also implemented numerous corridor-wide signal retiming projects in several FDOT districts successfully. We have implemented twice per cycle left turn (TPCLT) strategies at the interstate ramp-street signals, resulting in a more efficient utilization of the left turn storage lanes. We have deep experience simulating intersection, corridor, and system performance using VISSIM, VISUM, CUBE, AIMSUN, SIDRA, HCS, SYNCHRO, TrU Traffic, TACTICS, ATMS.NOW, and CENTRACs. Through our Innovative Interchange and Intersection contract with FDOT District 7, we're the "go to" firm for developing and testing solutions to address especially complex corridor and intersection challenges. SYNCHRO model development and calibration, timing

optimization, draft and final reports, implementation, and fine tuning and "before" and "after" travel time studies are part of the efforts we perform in signal retiming projects. HDR analyzed and implemented system timings where the control sections operated as one system for all timing plans with intersections equipped with NAZTEC, PEEK 3000, PEEK LMD 8000, and ECONOLITE traffic signal controllers.

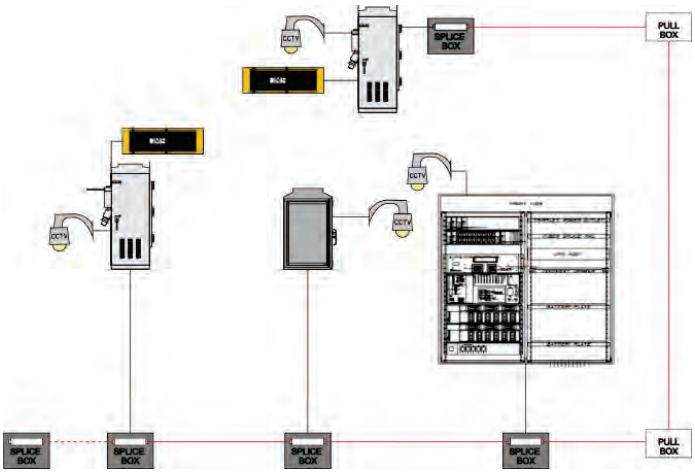
B. Fiber Optic-Based Communication Design

Our approach to wire-based communication design is to draw the communication overview depicting the field devices, intersections, local hubs, 1 Gbps Layer II Ethernet switches, and to ensure field-to-center (F2C) connectivity is achieved. Fiber is the least expensive, most reliable method for high speed and/or long distance communications.

The key objectives of our design approach is to improve reliability of the communication topology comprised of dedicated Layer I (Physical) and Layer II (Network Interface), and updating the aging communication infrastructures for the assigned intersections or corridors. The key factors as described below will establish the basis for design approach:

- Field review of the project with the involved design team
- Defining the ITS subsystems that will be constructed
- Identifying existing communication legacy for end-to-end tie backs.
- Identifying the buffer tube(s) to be used to perform midspan fusion splicing
- Drawing the communication overview
- Determining the ITS subsystems being on FDOT Approved Product Lists (APL)
- Preparing the base plans depicting conduit sizes, number and fiber optic cable counts
- Depicting the ITS subsystems with stations and offsets
- Showing the pay item numbers using the FDOT Basis Estimates Manual
- Drawing the cross sections for ITS poles and in most cases for the local hubs to ensure they are in dry areas
- Drawing the block diagrams showing the connections and equipment
- Drawing the fiber optic cable splicing diagrams
- Soil and underground utility exploration for location of ITS poles
- Multiple coordination efforts with the County's traffic operations staff, and FDOT

HDR traffic & ITS engineers have designed and successfully implemented interstate management and arterial management corridors for FDOT and multiple local government agencies statewide and nation-wide.



C. Design of Ancillary Intersection Improvements Including Turn Lanes Associated with Signal Design

The Florida Strategic Highway Safety Plan (SHSP) identifies intersection safety as one of the top emphasis areas for the state. In response to this call to action, FDOT has developed an Intersection Control Evaluation (ICE) manual to aid in this effort.

When the County decides to study an intersection for signal control to regulate the movements, HDR traffic engineers will consider the ICE process to quantitatively evaluate several intersection control scenarios (alternatives) and rank these alternatives based on their operational and safety performance. Implementing a "performance-based" procedure such as ICE creates a transparent and consistent approach to consider intersection alternatives based on metrics such as safety, operations, cost, and social, environmental, and economic impacts.

Turning movement counts with projected traffic to an acceptable time horizon will be performed to compute the number and queue lengths at both signalized and unsignalized intersections. Computer programs such as HCS and Synchro will be used to document the recommendations. We will use the FDOT standard plans in designing the anatomy of the turn (auxiliary) lanes.

A list of the intersection safety and innovative techniques that may be considered depending on the specific location and conditions are listed below:

- Roundabouts
- U-turn-based intersections and the Median U-Turn (MUT)
- Restricted Crossing U-Turn (RCUT)

Intersection Improvements

HDR's project team has designed numerous urban and rural intersection improvements for Florida cities, counties and State agencies, as part of major reconstruction projects and under stand-alone task order assignments. Typical assignments may incorporate these operational and safety improvements:

- Modification of intersection geometry, increasing radii
- Addition and/or extension of auxiliary lanes

- Incorporation of raised medians/traffic separator
- Incorporation/upgrade of pedestrian/ADA features and amenities - sidewalks, curb ramps bike lanes, etc.
- Access Connection Permitting per FAC 14-96 (if project impacts FDOT system)
- Minor drainage improvements – replacement of damaged or non-functioning drainage structures, addition or relocation of inlets (out of the returns), regrading or relocation or piping of existing ditches or swales
- Drainage Connection Permitting per FAC 14-86 (if project impacts FDOT system)
- Maintenance of traffic
- Utility coordination/relocation and SUE locates
- Signalization, signing & pavement marking and lighting per MUTCD, FDOT and HCDPW standards

HDR has assisted Hernando County with the design of the Lake Lindsey Rd. Widening, Forest Lakes Blvd/Deltona Blvd Intersection, US 19 at Forest Oaks Blvd and Barclay Avenue Final Design, all of which included various intersection design considerations. The HDR team is familiar with the County's practices and preferences for development of designs, plans and project specifications. This knowledge helps facilitate cost effective delivery.

D. Traffic Calming Devices Including Roundabouts

Hernando County's Residential Traffic Control Program allows residents and business owners within the County to express their concern regarding various traffic engineering issues, including: vehicle speeding, insufficient roadway capacity, excess traffic volumes, deficient signing and marking and general traffic calming concerns. HDR's traffic calming experience includes stand-alone traffic calming projects, and numerous projects that include traffic calming elements.

Innovative Intersections

Our team has the expertise to evaluate innovative treatments of intersections to determine modifications that realize capacity and safety improvements of existing intersections to meet the challenges of rapid developments around the existing intersections within Hernando County. HDR has been serving FDOT District 7 under the Innovative Intersections contract where HDR staff have evaluated intersections throughout the Tampa Bay Area for application of new intersection configurations including roundabouts, continuous flow intersections, diverging diamond interchanges, restricted crossing u-turns, and median u-turn intersections. We have completed over 35 assignments which include roundabout screenings using the FDOT three-step screening process and Intersection Control Evaluation (ICE), Hard Shoulder Running (HSR) analysis, Median U-Turn (MUT) and Displaced Left-Turn (DLT) intersection analyses and designs, interchange reconfiguration analyses and designs, and other miscellaneous tasks. Through our evaluations, our team uniquely understands when applications of these alternative intersection treatments can realize a benefit to Hernando County.

E. Design of Signing & Pavement Markings

Signing and pavement marking plays an imperative role in traffic operations by establishing the rules of the roads for all road users.

All proposed signing and pavement marking associated with a specific project will comply with the FDOT standard plans, Traffic Engineering Manual, FDM and the MUTCD.

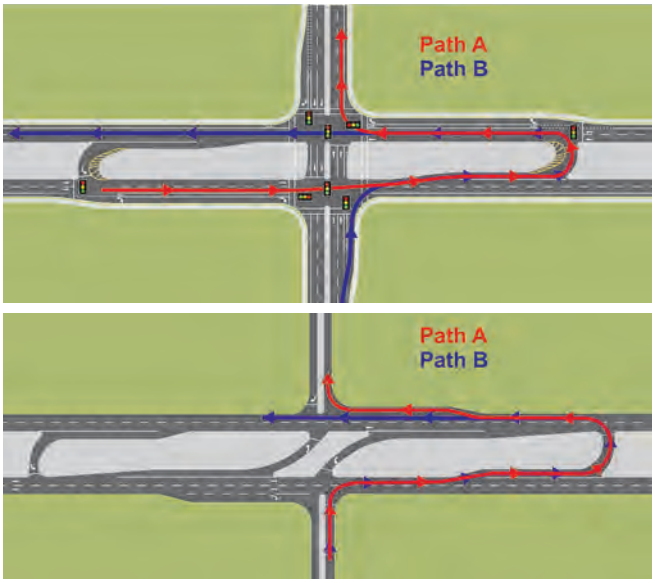
HDR traffic engineers will consider the concept of positive guidance as a guiding principle for providing information to drivers. Positive guidance philosophy leveraged by HDR consists of creating and maintaining a driving environment that has the following characteristics:

- Motorists are provided with the maximum amount of useful visual information
- Information is presented in such a way that it is prioritized in importance
- Information is presented uniformly, allowing drivers to develop expectations about the location of information
- Information is visible under most, if not all, environmental conditions

Photo: US 19 - Broadway, Roundabout Options 1, 2 & 3, FDOT District 7

Signing & Pavement Marking Plans

HDR has designed signing and pavement marking for numerous roadway projects from complex interstate mega projects to intersection improvement projects. No-passing zone studies of substandard 2-lane highways have been performed on resurfacing projects with upgrades to current standards. We have designed electrically powered enhanced signing for curved alignments, and at pedestrian crossings on numerous local and state highway systems for safety improvements. HDR was the first design consultant to prepare signing and pavement markings plans for non-conventional intersections such as DDI and CFI in the State of Florida. The I-75 interchange with Colonial Blvd., in Lee County is a prime example of HDR setting best practices.



F. Design of Maintenance of Traffic (MOT) Plans for Planned Events and Emergency Situations

We will utilize the standard plans published by FDOT to show the **Temporary Traffic Control Plans** (TTCP) for simple construction projects with minimum alterations to the roadway. We will provide more details of TTCP for any work over the travel lanes and lane closure or detour of traffic. We will perform lane closure computations to restrict the duration when travel lane(s) can be closed. For the special events, and catastrophic weather conditions when evacuation of mass people becomes mandatory, we will provide template detour plans and Transportation Management Plan (TMP) for these cases so the various pre-established and pre-approved TMP templates can be utilized by the County or Contractors. The TMP for the emergency situations addresses traffic safety and control in the project specific work zone, and leverages strategies to manage the work zone impacts of a project. We will use field observations, available work zone crash data and operational information to design and manage work zone impacts for specific projects during the implementation.

In addition, HDR traffic and ITS engineers have significant experience in the **Maintenance Of Communication** (MOC) plans for the projects where the existing field-to-center connectivity is impacted by major widening, but it is essential to remain intact and devices remain operational with minimum down time.

G. Accompanying Utility, Drainage, Right of Way Requirements, MOT/ Detour Plans

As part of the Capital Improvement Projects (CIP) where utility locate functions or relocation of underground infrastructures are necessary, HDR has assigned an experienced team leader to perform all necessary utility coordination with the affected utility owners during the early stages of the design activities. Site visits and assessments by the HDR utility coordinator accompanied by a representative from each of the utility owner agencies will be conducted and the findings will be assessed in the next phase of design submittals. We will work to identify existing utility facilities early during design development and to consider design alternates that avoid impacts to facilities. By minimizing the "footprint" of potential impacts early in the design process, the turnaround time required for existing facility mark-ups by UAO's, field designating and verification/vertical/horizontal (VVH) work and the need for relocation plans can all be reduced. We are familiar with the major UAO's located in Hernando County. HDR has prepared design plans for dozens of roundabouts for municipalities in west central Florida.

Utility Coordination

Facilitating proper communication with utility owners impacted by transportation infrastructure projects is vital to the successful completion of construction on schedule and within budget. HDR's approach to effective utility coordination includes the following steps:

1. Identifying Utility Owners – To accomplish this during scoping the HDR team research Sunshine One Call tickets, existing design plans and conducts 0% field reviews to determine what facilities are located within the project limits.
2. Initial Contacts – Once preliminary plan information is obtained from field survey, initial base plans are forwarded to the utility owner for verification of their facilities.
3. Phase II (60%) Design Coordination – During development of the 60% design plans HDR design team will identify potential utility impacts and document the impacts in a Utility Conflict Matrix (UCM). In coordination with Hernando County's Utility Coordinator the UCM will be submitted with the design plans to the utility owners for review prior to a design conference. During the Phase II Design Conference impact to the facilities will be discussed with each utility owner and their proposed means of resolution identified for incorporation into their proposed relocation RGB's. Any needed subsurface utility engineering (SUE) locates will be identified for collection to assist in resolution of conflicts.
4. Phase III (90%) and Phase IV (100%) Coordination – During these phases an updated UCM, SUE data and design plans denoting the utility owners proposed resolutions will be distributed to each utility owner for confirmation of conflict resolutions. Utility work schedules will be developed as needed by the utility owners and reviewed by HDR's design staff.

Using this approach HDR has been able to significantly minimize utility conflicts encountered during construction. This approach encourages open communication between the County, HDR and the utility owners throughout the development of the design.

Utility Relocation

HDR has water and wastewater design engineers and technical professionals in our Tampa office to support the designs of any Hernando County wastewater or reclaimed water relocations. We designed 12,000 feet of 8-in/12-in potable water and 10-in sanitary sewer on the SR 50 widening project under the County's Continuing Professional Engineering contract.

Drainage/Stormwater

Our experienced drainage staff performs designs for smaller transportation projects (minor widening and resurfacing) as well as larger projects (major reconstruction and interstate) along with assisting the Planning/PD&E groups with the development of the drainage study documents. This experience with performing multiple task order assignments on various local government projects, FDOT projects and FDOT drainage investigation tasks makes HDR well suited to support the County's drainage and stormwater management needs by providing sound drainage design solutions. On similar contracts, we have performed drainage studies to find solutions to existing drainage problems, reviewed other consultant's designs, assisted in drainage connection permit reviews, and provided technical advice on drainage problems encountered during construction. HDR's construction knowledge is a cornerstone of our drainage designs to confirm construction is the most cost effective and efficient. Our knowledge and experience with the Southwest Florida Water Management District, the Florida Department of Environmental Protection and the FDOT drainage connection permit requirements will expedite the project permitting process.

Hydraulic/Hydrologic Modeling

HDR's drainage staff has experience with hydraulic and hydrologic surface water modeling. HDR has worked with regional SWMM and ICPR watershed models maintained by SWFWMD and/or Counties to analyze existing versus proposed conditions. Each given task order associated with an outfall system, stream, watershed, or other surface water will be assessed to determine the need and suitability of the applicable stormwater model software for the project. We will provide the County with an evaluation and comparison of the various models to make the appropriate selection. Each model selected for review will be evaluated for its merits and drawbacks and for its capability to manage critical conditions. These models will include those used for both water quantity and quality including those in the EPA "toolbox" for TMDL (nutrient loading) assessment as well as those models recognized by FDEP for use in TMDL evaluations. We have worked extensively with the Watershed Assessment Model, a model currently accepted by the FDEP for TMDL development.

Bridge hydraulics is another one of our specialized drainage expertise. We have performed numerous bridge hydraulic evaluations for bridge repair and replacement projects, along with providing scour evaluations of riverine and tidal systems. Our staff is highly proficient with HY-8, HEC-RAS and ICPR software and knowledgeable in FHWA Hydraulic Engineering Circular publications for stream stability and bridge design.

Geotechnical/Contamination

Geotechnical and Contamination services to support the HDR team on assignments under this contract will be performed by Tierra. Tierra is a full-service consulting geotechnical, contamination assessments and construction materials testing engineering firm with more than 28 years of experience serving governmental agencies. Tierra has provided geotechnical and contamination support services on numerous Hernando County continuing services contracts.

Our approach to providing geotechnical engineering services begins with having a thorough understanding of the overall project objectives including a desired schedule for completing the work. This is best accomplished by having initial discussions as part of the design team with the County to understand the issues associated with the project and then developing a scope of services which detail the work to be performed including a schedule and associated fees.

Right of Way Services

Projects under this contract may include right of way issues, such as appraisal, cost estimates, establishment of right of way requirements, easements or license agreements necessary to accommodate roadway, drainage and traffic components. HDR offers the full range of appraisal services, including a team of land planners, engineers and other experts with extensive eminent domain experience. HDR's right of way staff handle acquisitions for FDOT District 7, so they are very familiar with eminent domain issues within Hernando County. All proposed staff maintain the appropriate licensure and certifications required to perform the right of way services. HDR is currently providing Hernando County with right of way services on the Barclay Ave at SR 50 Project.

Maintenance of Traffic/Detour Plans

Our Project Manager, Bijan Behzadi is Advanced MOT Certified and will verify that safe MOT practices are followed. Given the very high traffic volumes on many of the County roads and numerous active construction projects along county roads, we understand the importance of Temporary Traffic Control (TTC) for each work assignment. Our design professionals understand that project-specific Maintenance of Traffic (MOT) plans are essential to construct the project safely, on schedule and without claims. We recognize that TTC is a critical design component that must be considered during design development. Our approach is to evaluate potential TTC needs as part of the alternatives evaluation during scoping then developing the necessary design details to provide a comprehensive safe MOT plan as part of the construction documents. We have worked closely with the Hernando County and FDOT Traffic Operations and Construction personnel on prior projects and are fully familiar with specific MOT and constructability requirements. Our roadway design staff assigned to the development of MOT plans for this Contract are all MOT certified in accordance with FDOT requirements. Additionally, our design group maintains a regular dialogue with construction and consultant CEI personnel regarding current issues relating to MOT and safe construction practices.

The detour plans will be prepared using the MUTCD and the specific project condition and roadway network system to ensure clear guidance is provided to the motorists. The detail of the detour plan can be designed for utility work that requires closure of a roadway segment.

H. Design Project Delivery, Plans Specifications & Estimate (PS&E), Cost Estimating, Permitting & Bid Support Services

The production of construction plans for the highway agencies has been the core strength of HDR The policies and procedures contained in the FDOT publications for the Plans, Specifications and Estimate (PS&E) phase of local projects off the State Highway System (SHS) will be followed. The procedures for any project PS&E as a minimum will cover the following items:

- Project management, personnel and procedures
- Highway design standards (and any other technical standards as appropriate)
- Review and approval procedures
- Oversight procedures if a State highway is involved
- Maintenance of records and access

The preliminary design defines the general project location and design concepts known as 60% plans. It includes, but is not limited to, preliminary engineering and other activities and analyses, such as environmental assessments, topographic surveys, metes and bounds surveys, geotechnical investigations, hydraulic analysis, utility engineering, traffic studies, contamination assessments, general estimates of the types and quantities of materials, and other work needed to establish parameters for the final design. The final design plans and specifications will encompass the signed and sealed drawings, cost estimate, technical special provisions, and permits.

Environmental & Permitting

HDR's experience with numerous infrastructure projects has made us keenly aware that state and federal regulatory requirements, such as permitting, wildlife concerns, potential archaeological involvement, and wetland mitigation are directly tied to a project's critical path. Our highly experienced team of environmental professionals is dedicated to working with state and federal regulatory agencies to minimize any project delays and cost overruns that may result from environmental issues. Our experience has shown that the client's best interest and a project's critical path are best maintained through effective coordination with these agencies.

Our team has fostered excellent working relationships with regulatory supervisors and staff of the key agencies exerting jurisdiction over the ecological aspects of projects. Agencies that will review and issue permits for County projects include the Southwest Florida Water Management District (SWFWMD), the U.S. Army Corps of Engineers (USACE), the Florida Fish and Wildlife Conservation Commission (FWC), the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS) and, in some cases, the U.S. Coast Guard (USCG).

In addition, our team is exceptionally qualified to coordinate, negotiate, and resolve permitting issues, consult on wildlife matters, prepare and analyze complex maps, provide mitigation strategies, and address monitoring and management aspects of any infrastructure improvement project.

Construction Cost Estimates, Project Specifications & Bidding

HDR is familiar with Hernando County's Contract Specifications Package, and we have assisted with preparation of many of these packages for both FDOT LAP projects as well as Hernando County CIP projects. We are also familiar with the review process required by the Hernando County Purchasing and Contracts Division and the Hernando County Legal Offices.

HDR will prepare bid pay items and quantities that include all items comprising the project design. We will assist the County with development of bid proposal sheets to be included in the Contract Specifications Package.

Preliminary bid quantities will be submitted with the 60% design review submittal. The quantities and associated cost will be submitted in the Engineer's Construction Cost Estimate, which will be submitted with the 90% and 100%/final submittals. Construction costs will be based on the most current cost data available from FDOT or Hernando County.

Traffic Control Investigations

The proper investigation and documentation of the performance of existing traffic controls and their compliance with current MUTCD/ FDOT standards is increasingly important with respect to safe operations and owner liability. Similarly, when modifications or upgrades to existing traffic controls or new devices are incorporated, documentation of the project's needs and the development of reasonable alternatives must be based on proper engineering assessments and sound judgment.

HDR has researched and documented the existing conditions for numerous roadway and intersection locations and have developed appropriate design recommendations for signal, signing & pavement marking and lighting upgrades to improve operations and safety.

3rd-Party Traffic Design & Plan Reviews

It is very important that traffic design plans address safety and operational challenges while meeting all the design standards and HCDPW preferences. Our first step in the plan review process will be to review the original project scope as well as all issues and citizen complains documented by HCDPW and other agencies (e.g. FHP, City Public Works, local law enforcement, etc.) and then conduct a thorough field review with the plans in hand. Any special challenges or design constraints will be noted and marked-up on the plans. Our plan reviews will be based on FHWA MUTCD, ITE, FDOT and Hernando County Standards and requirements, with a focus on practical design concepts, constructability and operations and maintenance. We will provide written comments, plan markups, photos and video to facilitate feedback to the 3rd Party designer/ EOR and to document our findings. Once the 3rd Party designer/

EOR provides responses to our review comments, we will review the responses to close out the comment or if the response is deemed inappropriate, coordinate with designer/EOR and HCDPW to reach resolution. In subsequent plan submittals, we will verify that responses to prior comments have been properly implemented. HDR has reviewed numerous standalone intersection improvement plans, RRR plans and complete roadway reconstruction plans under our FDOT District 7 GEC Contract.

Plans & Documents Review Services

Our team of experienced design leads has over 100 years of combined Florida design experience that includes development of technical manuals, codes and specifications for FDOT and various City, County and Municipal clients. HDR is a local firm with national expertise available to the County to assist with review and development of any transportation or development related design and construction standards.

HDR has provided plans review services for FDOT Districts 1, 2, 6, 7, Central Office and various Counties within west-central Florida. Our plans review focus areas include roadway, drainage, traffic, utilities, structures, survey/mapping, signing/pavement marking, signalization, ITS, lighting, right of way, cost estimates and appraisals.

From our experience on all of these contracts, HDR understands the importance of clear and concise review comments that result in elimination of errors, decreased costs, and improved safety. We understand we need to provide reviewers who have a clear understanding of County and State policies and procedures. HDR will assign one key reviewer from each Discipline to develop and document County-focused checklists for 60%, 100% and Final Plans; constructability/biddability; route study reports and traffic reports; and County preferences/standards. Once the checklists have been established and documented, they will be circulated to all HDR reviewers.

We understand the importance of "timely comments" at Preliminary (60%) Plans or First Draft Reports – meeting the design intent, uncovering utility conflicts, identifying right of way issues and accurate cost estimates.

Our plan reviews will focus on construction issues, claims avoidance, improving safety (Vision Zero), pedestrians, bicycles and bus infrastructure; and curb ramp ADA. Our report reviews will focus on traffic analysis, alternatives analysis (engineering); drainage, hydraulics and pond siting; environmental issues, R/W & construction costs; and documenting decisions. The selected alternative must be based on the Five-Factors for eminent domain – safety, cost, alternative alignments, long-range planning and environmental factors.

Development Reviews and Traffic Impact Analysis Reviews

The HDR Team has thorough knowledge and extensive experience in assisting numerous municipal governments within the Tampa Bay region and FDOT with the review of traffic impact studies for newly planned unit developments and Developments of Regional Impact (DRIs).

Our approach to development review related tasks are as follow: First, when requested by the County, HDR staff will be present at the methodology meeting between the applicant, the applicant's transportation consultant and the County to clearly define and reinforce the County's expectations for the technical analysis to be prepared in support of the proposed development. This is the first opportunity for HDR, while working on behalf of the County, to guide the traffic impact assessment. Secondly, very early in the review process (generally the first review of the applicant's Traffic Impact Study report), we will identify the information that the County needs to define it's position on the issues with an acceptable degree of certainty, and then, if needed, formulate a request for additional information that is sufficiently specific to ensure that the needed information will be provided. If this is not successful, or sometimes in lieu of requesting additional information from the applicant, HDR will conduct the analysis needed to provide the information to the degree of accuracy required by the County. In most cases, this will result in much lower costs than proceeding through numerous iterations of comment and response in the quest for the required information.

Construction Engineering & Inspection (CEI) Services

HDR's construction group (HDRCCC) has worked on many projects throughout Florida during the past 32 years, including providing construction management and inspection staff for County and municipal clients. HDR has construction staff who are FDOT CTQP certified with extensive construction management experience in Florida on both large highway/interstate projects and local roadways. Our staff is thoroughly familiar with Hernando County processes and procedures.

The consultant selected for the CTESC must possess the depth and quality of construction support resources to effectively respond to the various task assignments initiated under the contract, as well as provide the necessary construction administration, inspection and record keeping for CEI projects.

We understand construction schedules are critically important to the County, it's citizens and the general public – not only the duration of the schedule but the time of year various construction activities will take place. Tracy Keenan, PE, our construction management lead, will review and approve the contractor's baseline schedule following discussions with the County and will verify the accuracy of the construction schedule on a regular basis.

HDR's construction personnel assigned to each project will coordinate with County staff and the contractor for scheduling, permits and other documents. A pre-construction conference and a utility conference will be held so everyone will fully understand the requirements of the task. As applicable to each project, HDR's construction activities will include:

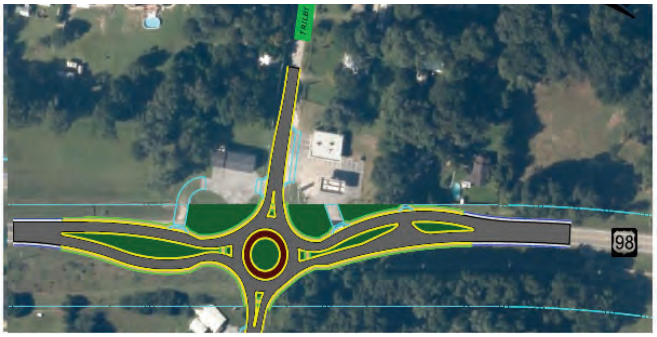
- Preparation of record keeping documents prior to the actual execution of the project.
- Weekly meetings and other project coordination meetings, as required.
- Recording construction progress by daily reports. All documents will be prepared for the monthly estimate.
- Documenting any change in the work plan and coordination with the County.
- Preparing documentation to verify activities for EEO/DBE/OJT, as the County requires.
- Fully documenting permit related activities and utility conflicts. HDR will be proactive in resolving any construction related issues.
- Verifying that shop drawings and sample submittals are checked and approved per FDOT CPAM, Job Guide Schedules and applicable County requirements.
- Monitoring and implementing the MOT Plan for the safety of workers and the public. Any changes or concerns with the plan will be coordinated with HDR and the County.

In addition to CEI services, HDR has extensive experience providing post design services which typically include construction assistance, responding to Requests for Additional Information (RAI's), etc., on many local government projects.

Technical Assistance - Residential Traffic Control Program & Road Safety Audits

HDR traffic engineers are prepared to provide support and technical services associated with the Residential Traffic Control Program (RTCP) based on a two-phase approach. Phase I includes community education, enforcement, less restrictive traffic management measures, such as improved pavement markings and enhanced signage. These relatively simple, and often effective, approaches to solving neighborhood traffic problems are attempted first. If necessary, and only with neighborhood concurrence, Phase II solutions may be tried. These involve more complex physical construction measures -- speed humps and traffic circles, for example. If Phase I actions fail to reduce excessive speeds or traffic volumes, HDR will pursue more restrictive measures pending approval from the County staff, based on certain threshold criteria.

Average daily traffic volumes of at least 200 but less than 7,000 vehicles per day; where speed is an issue, 15% of the vehicles must be exceeding the posted speed limit by at least 5 miles per hour as determined by speed studies. Roadway characteristics such as hills, curves and sight distance will also be considered as safety remains paramount in the decision-making process, including access for public safety vehicles.



HDR has certified Road Safety Audit (RSA) engineers that have significant experience in Florida. A keystone to the RSA process is that prevention of a safety problem is more effective than a cure. Traffic accidents can be reduced by proactively addressing road safety issues at the time the road is conceptualized, designed, constructed, or in service. HDR recently completed an RSA for Pasco County along Old Pasco Rd.

Lighting

HDR has designed numerous lighting systems for City, County and State Highway System projects. We have designed architectural lighting systems as part of streetscape projects, bridge aesthetic lighting over waterways, parking lot lighting, tunnel lighting, intersection and continuous lighting for several municipalities and FDOT. Team members have performed lighting justification reports that determine if a system should be funded and constructed and also to prioritize the installation of lighting systems. Our licensed electrical professional engineers perform power design analysis and prepare the design report containing electrical load, voltage drop, and control panel board sizing and details. We have extensive experience with the industry standard software called AGi32 in modeling the intersections, corridors, and special applications for accurate photometric predictions that can compute illuminance in any situation involving luminaire placement, aiming, and luminiare height to validate adherence to any number of lighting criterion. Results will be presented in 3D rendering format to show the effects of the lighting design in real world, light and surface interaction.

Miscellaneous Structures

We anticipate most of the miscellaneous structures work for this Contract will include concrete and steel strain poles and mast arm systems for numerous signals, signing and lighting projects. Our structures professionals have designed ground-mount, overhead and bridge-mount sign structural supports for traffic plans for dozens of the area's roadways and bridges. It is important to determine a conceptual layout early in the design to estimate mast arm lengths. If mast arm lengths exceed maximum allowable distance, a variance may be required to allow a span-wire system. For this contract, HDR will be supported by Florida Bridge and Transportation, Inc. for design of miscellaneous structures.

Project Principal
Melanie Fowler, PE ☆

Project Manager
Bijan Behzadi, PE, PTOE ☆

Quality Assurance
Tom Quinn, PE ☆

Quality Control
Marlin Register, PE ☆
Huijing Qiang, PE ☆

Deputy Project Manager
Greg Stevanus, PE ☆

Traffic Engineering Studies

Task Lead: N. Prabaharan, PE, PTOE ☆

Access Management
N. Prabaharan, PE, PTOE

Roadway Safety & Studies
Matthew Wiesenfeld, PE
Steve Morency, PE

Signal Warrant Analysis
N. Prabaharan, PE, PTOE

Speed Limit Studies
Kevin Dunn
Steve Morency, PE

Intersection Modeling & Analysis
Bryan St. George, PE
Heather Hubbard, PE

Traffic Impact Studies
N. Prabaharan, PE, PTOE

Review Development of Regional Impact Applications & Reports
Jamie Krzeminski, PE, PTOE ☆

Traffic Data Collection: Volume, Speed, Bicycles, Pedestrians, Trucks, Origin & Destination
Brian Gentry, PE, PTOE (MT)
Nancy Adams, PE (AT)

Intersection Control Evaluation (Roundabouts, RCUT)
Heather Hubbard, PE ☆
Bryan St. George, PE

Traffic Engineering Design

Task Lead: Michael Oates, PE, PTOE ☆

Signal Systems Design
Michael Oates, PE, PTOE
Greg Stevanus, PE

Corridor-Wide Signal Retiming
Richard Atta-Armah, PE ☆
Shawn Pope, PE

Intelligent Transportation Systems Design & Integration
Greg Stevanus, PE
Alex Zhang, PE

Fiber-Optic & Wireless Communication Design
Jim Gu, PhD, PE, PTOE
Greg Stevanus, PE

Roadway & Intersection Lighting & Signing/Pavement Markings
Jose Gonzalez, PE ☆
Greg Stevanus, PE
Steve Morency, PE

Transportation Systems Management & Operations
Richard Atta-Armah, PE
Jim Gu, PhD, PE, PTOE

Roadway & Intersection Design
Brian Zimmerman, PE ☆
Jake Hemingway, PE

Drainage
Jim Johnston, PE ☆
Adam Mitchum, PE

Specifications & Estimates
Tom Quinn, PE

Plans Review
Bijan Behzadi, PE, PTOE
Tom Quinn, PE
Marlin Register, PE
Kevin Dunn
Michael Oates, PE, PTOE

☆ *Resumes included for key personnel*

Support Services

Miscellaneous Structures
Juan Valenzuela, PE (FBT)
Mark Niedermann, PE (FBT)
Bassel Kassem, PE (FBT)

Survey/ROW Mapping, SUE/Utility Locates
Patrick McCormack, PSM (C&F)

Utility Coordination/Relocation
Jake Phillips
Heather Manganiello, PE

CEI/Constructability/Bidability
Tracy Keenan, PE

Geotechnical Services
Kevin Scott, PE (TI)
Michael Bair, ASP, LEP (TI)
Christopher Garth, LEP (TI)

Construction Cost Estimates
Tom Quinn, PE
Tracy Keenan, PE

Agency Coordination/Public Involvement/ Special Events
Stefanie McQueen, AICP

Environmental Permitting
Barry Lenz

Wetlands/Species
Noemi Castillo, PE, PMP

Right of Way Services
Joe Thompson

Civil Engineering
Ben Ellis, PE

Fiber Optic Cable Discovery & Inventory
Bruce Boyd, RCDD (PCS)

Subconsultants

AT - Adams Traffic, Inc. (DBE, SBE)
C&F - Cumbey and Fair, Inc. (SBE)
FBT - Florida Bridge and Transportation, Inc. (SBE)
TI - Tierra, Inc.
MT - Marr Traffic, Inc. (SBE)
PCS - Precision Contracting Services, Inc. (SBE)

C.

Prior Experience

C. Prior Experience

Continuing Traffic Engineering Services

Hernando County, FL

Contract Duration:
2018-Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Intersection Improvements
- Traffic Control
- Traffic Design
- Signalization
- ITS/ATMS

Client Information:
Hernando County
Scott Herring, PE
1525 E. Jefferson St.
Brooksville, FL 34601
352.754.4060
ScottH@co.hernando.fl.us

Key Staff Involved:

- Richard Atta-Armah, PE
- Bijan Behzadi, PE, PTOE
- Melanie Fowler, PE
- Tom Quinn, PE
- Greg Stevanus, PE
- Michael Oates, PE, PTOE
- Jim Johnston, PE
- N. Prabaharan, PE, PTOE

Subs:

- Adams Traffic, Inc.
- Cumbey and Fair, Inc.
- Tierra, Inc.

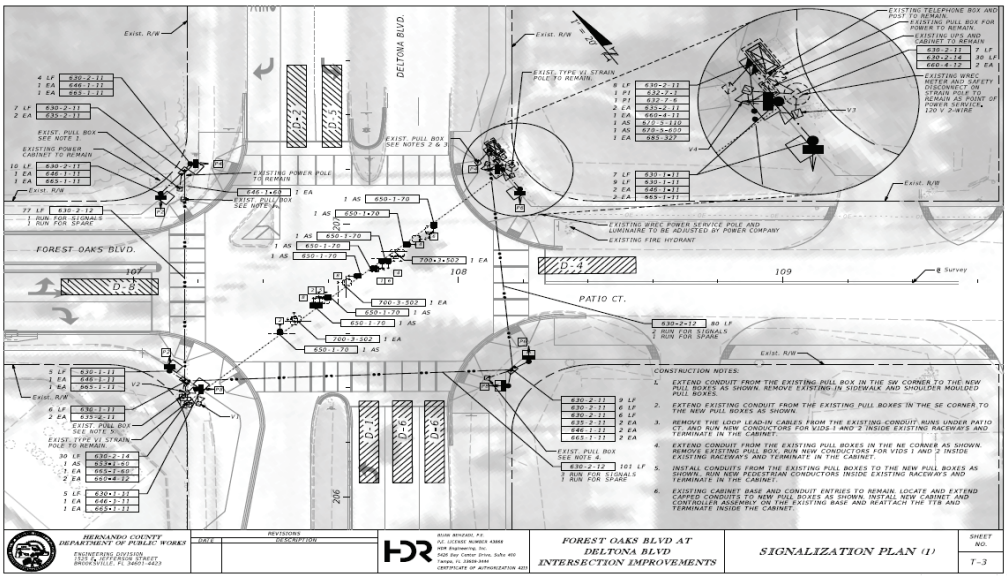
HDR has served Hernando County on multiple Continuing Services contracts including the 2018 Continuing Traffic Engineering Services contract. We have accomplished a wide variety of task order assignments including intersection improvement, traffic control and design, signal retiming, ATMS plans and traffic impact analysis projects for the County. Select projects from our most recent contract are shown below.

Forest Oaks Blvd at Deltona Blvd. HDR provided roadway and intersection improvement plans with successful construction completed in 2017. Under this contract, we provided post design services. This project included reconstructing the signalized intersection.

County Line Road and Linden Drive Signal Warrant Study. HDR performed the signal warrant study which was approved by the County in 2022.

Citizens Center for Success Development Traffic Impact Analysis. Citizens Center for Success development located on the south side of Spring Hill Drive between US 41 and Air Commerce Boulevard. The purpose of the Traffic Impact Analysis (TIA) is to identify the intersection and roadway improvements needed to accommodate the future traffic that would be generated by the development on the roadway network system and adjacent signalized intersections. The TIA report was prepared, signed, and sealed and submitted for review and approved by the county.

Spring Hill Drive from Aerial Way to US 41. HDR prepared the ATMS plans to equip the corridor with fiber optic communication subsystem and Ethernet-based Edge Switches for point-to-point connection.



Continuing Traffic Engineering Services - Continued

Hernando County, FL

Mariner Blvd Signal Retiming Project from County Line Road to Northcliffe Blvd. Hernando County requested HDR to provide services for retiming a total of eight (8) intersections, along Mariner Boulevard from County Line Road to Northcliffe Boulevard in the City of Spring Hill, Florida. Study methods and analyses were performed consistent with the Manual on Uniform Traffic Studies (MUTS), Manual on Uniform Traffic Control Devices (MUTCD), the Highway Capacity Manual (HCM), and FDOT guidelines and preferences. Signal retiming processes included:

- Data Collection (seven-day and turning movement counts, intersection inventories, and existing timing data).
- Field reviewed to observe and understand intersection and system-wide traffic flow, and intersection operational deficiencies.
- Modeled and calibrated existing conditions as the baseline for analyses.
- Updated local controller timings, develop coordination timing plans for weekday and weekend periods, implement, fine-tune, and post-implementation monitoring.
- Made immediate short-term recommendations where needed, to provide additional benefits.
- Documented work performed on this project.

Designed By:	J.M.	Section:		Mile Post:		Node:	1
Date:	2/26/2021	Sig ID:		Controller:	Econolite Cobalt	System ID:	
Checked By:	R.A.A.	Maj. Street:	Mariner Blvd	Orientation:	N-S	SOP:	10
Date:	2/26/2021	Min. Street:	County Line Rd	Orientation:	E-W		

Data Inputs

Movement # (Controller Phase Ø)	1	2	3	4	5	6	7	8	Notes
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB	
Speed Limit (mph)	45	45	45	50	45	45	50	45	
Vehicle Traversed Width	154	152	156	169	164	134	163	161	
Approach Grades	-0.3%	-0.3%	-2.1%	-2.1%	-0.3%	-0.3%	-2.1%	-2.1%	
Ped-X (curb to curb)		139		156		115		144	
Crossing Time		40		39		33		42	
Ped-X (button to curb)		11		11		8		10	
Ped-X (button to far curb)		150		147		123		154	
Crossing Time (to far curb)		50		49		41		52	

Controller Timings (seconds)

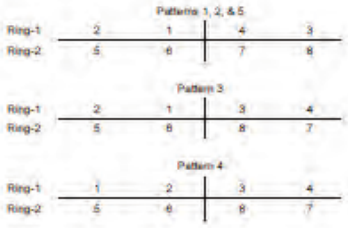
Movement # (Controller Phase Ø)	1	2	3	4	5	6	7	8	Notes
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB	
Turn Type	Prot.		Prot.		Prot.		Prot.		
Min Green	5	10	5	5	5	10	5	5	
Ext	3.0	6.0	5.0	5.0	3.0	6.0	5.0	5.0	
Yellow Change Interval	4.8	4.8	5.0	5.0	4.8	4.8	5.0	5.0	
Red Clearance Interval	3.8	3.8	4.0	4.0	4.1	3.8	4.0	4.0	
Max I	15	50	15	30	20	50	15	30	
Max II	10	30	10	20	10	30	10	20	
Walk		7		7		7		7	
Flashing Don't Walk		40		39		33		42	
Min Splits	14.0	56.0	14.0	55.0	14.0	49.0	14.0	56.0	
Detector Memory									
Det. Cross Switch									
Recall		Min		Min		Min		Min	
CNA									
Coord Phase				ON				ON	

Coordination Timings (seconds)

Plan	Pattern	C-O-S	Splits								Cycle Length	Offset	Seq
AM	1		20	44	22	34	20	44	20	36	120	109	2
MIDDAY	2		22	41	22	35	20	43	22	35	120	92	2
PM	3		30	37	26	37	21	46	24	39	130	50	1
NT	4		20	30	20	30	20	30	20	30	100	33	3
WKN	5		25	35	24	36	22	36	22	36	120	58	2

Notes:

1. Offset referenced to end of main street green
2. Use Fixed Force-offs
3. Use Max Inhibit during coordination
4. Min Recall phases 2, 4, 6, & 8 during coordination



Time of Day Plan

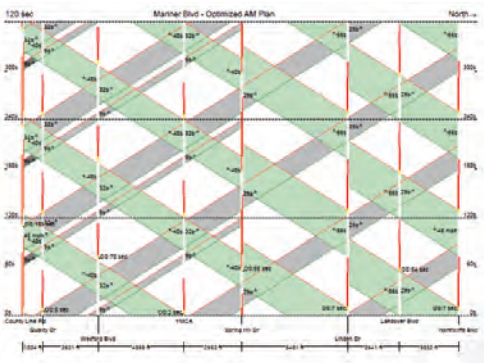
Designed By:	JM
Date:	2/22/2021
Checked By:	RAA
Date:	2/22/2021

Section:	
Corridor:	Mariner Blvd
From:	County Line Rd
To:	Northcliffe Blvd

TIME OF DAY

Day	Plan	Time		Pattern	Cycle Length
Monday Thru Friday	FREE	0:00	6:30	-	FREE
	AM/AM School*	6:30	7:45	7	120/FREE
	AM	7:45	9:30	1	120
	MIDDAY	9:30	14:30	2	120
	MD School*	13:50	15:00	8	FREE
	PM	14:30	19:00	3	130
	NT	19:00	20:15	4	100
	FREE	20:15	0:00	-	FREE
Saturday	FREE	0:00	9:00	-	FREE
	WEEKEND	9:00	18:00	5	120
	FREE	18:00	0:00	-	FREE
Sunday	FREE	0:00	9:30	-	FREE
	WEEKEND	9:30	18:00	5	120
	FREE	18:00	0:00	-	FREE

* Applies to Mariner Blvd at Landover Blvd only



Transportation Design & General Engineering Services

Hillsborough County, FL

Contract Duration:
2003 - Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Preparation of Plans & Specifications
- Scope Support
- Master Plan Preparation
- Fiber Optic Cable Allocation
- Utility Coordination
- PERs
- Strategic Communications
- Intersection Improvements
- Signal & SPM
- Traffic Signal Interconnect
- Drainage
- Environmental
- Sidewalks/Trails
- Technical Studies

Client Information:
Hillsborough County
Bryan Zayas
601 E Kennedy Blvd
Tampa, FL 33602
813.778.4535
zayasb@hillsboroughcounty.org

Key Staff Involved:

- Melanie Fowler, PE
- Tom Quinn, PE
- Bijan Behzadi, PE, PTOE
- Greg Stevanus, PE
- Michael Oates, PE, PTOE
- Jose Gonzalez, PE
- Marlin Register, PE
- Jim Johnston, PE
- N. Prabaharan, PE, PTOE
- Brian Zimmerman, PE
- Heather Hubbard, PE

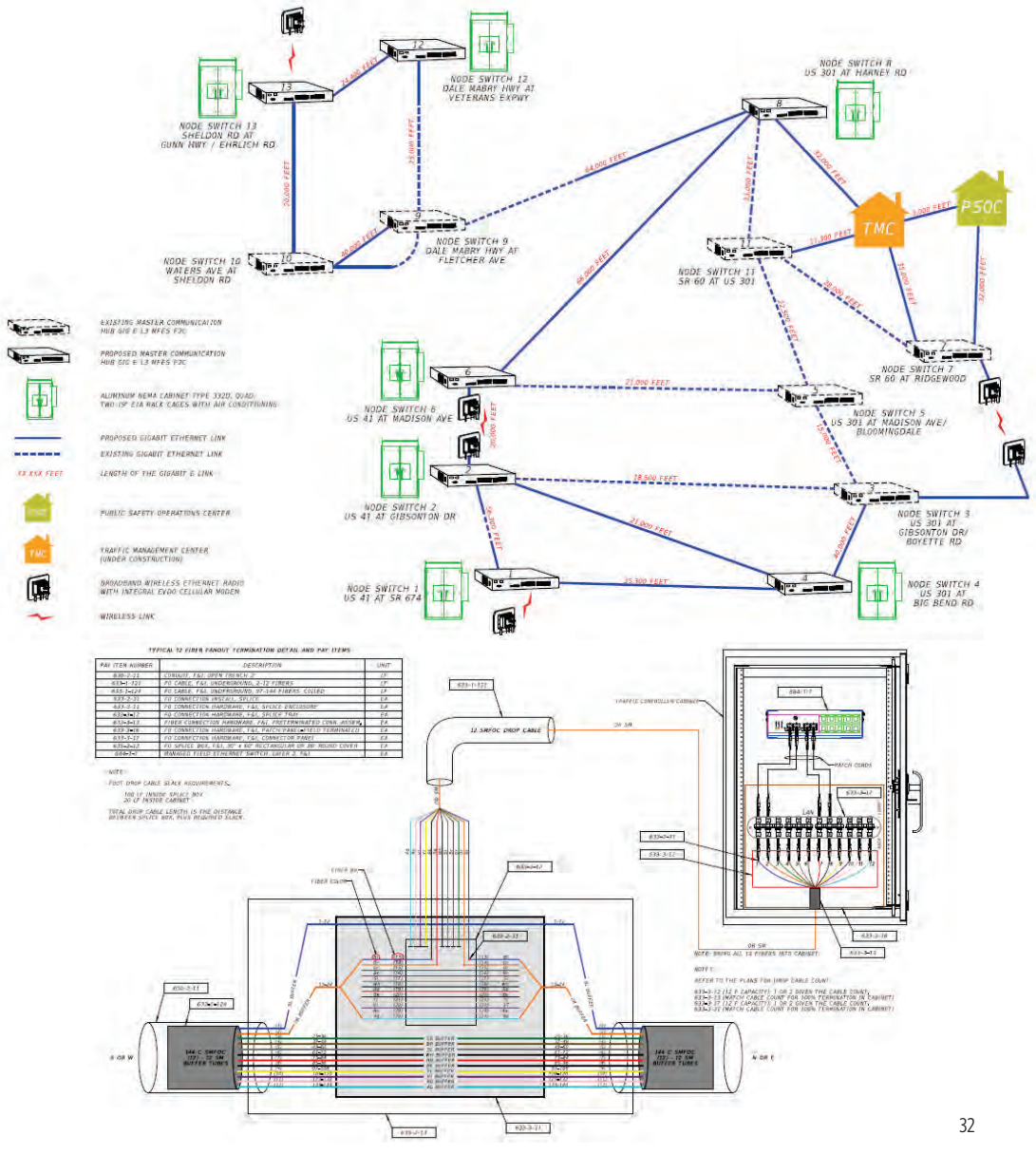
Subs:

- Adams Traffic, Inc.
- Cumbey and Fair, Inc.
- Tierra, Inc.

Since 2003, HDR has provided general/civil engineering services to Hillsborough County to support transportation capital improvements. Our team supports the County with transportation engineering services from concept, through design and specifications, bidding and construction. Projects include but are not limited to intersection improvements, new signals, traffic signal interconnection, fiber optic network design on county-wide basis, road diets, complete streets, road widening, road resurfacing and reconstruction, record drawings, permitting, modeling and plan evaluation, GIS, biological and ecological evaluations, and landscape architecture. Select projects from our most recent contract are shown below.

ATMS Expansion & Improvement Projects Program. Since 2017, we have completed fiber optic network upgrade planning and design on county-wide basis for 40 corridors for the County.

- CIP 69602659 (Fiber Optic Network Planning and Design)- County-Wide - Served as the technical advisory role and communication designer to perform the preliminary fiber-optic-based communication network design, forming a robust and reliable dedicated self-healing ring communication topology for the County to manage, operate and maintain their traffic signal systems, and participate in the broader Transportation Systems Management and Operations (TSM&O) functions.



Transportation Design & General Engineering Services - Continued

Hillsborough County, FL

Intersection Improvements Program. Select tasks include:

- CIP 69679009 (Traffic Study & Design) - George Road at Memorial Highway Intersection Improvements
- CIP 69600314 (PD&E & Design) - Symmes Rd. at East Bay Road Intersection Improvements – Project to analyze the existing and design year traffic, existing features, right of way impacts, etc. to recommend the optimum intersection improvement / configuration (roundabout). Prepared Preliminary Engineering Report and design phase for the preferred alternative (spiral roundabout) is underway.
- CIP 69679028 (PD&E); 69645134 (Design) - Boyette Road at Dorman Road Intersection Improvements - Safety improvement project that will reconstruct the existing 4-way stop controlled intersection with a roundabout.
- CIP 69639002 Cypress Village Blvd Mobility Improvements from N of CR 674 to 19th Ave. - Mobility improvements to re-purpose the outside lane of Cypress Village Blvd to accommodate golf carts.
- CIP 69679041 - Big Bend Road Interim Improvements Phase I from E of Bullfrog Creek to Simmons Loop - Evaluated corridor to provide recommendations for interim operational improvements from US 41 to US 301.

ATMS - Master Communication Hubs Upgrade. Bijan served as the EOR to perform the civil, electrical and mechanical design of the proposed master communications hubs at suitable locations inside the County right of way. The design included the following key components:

- Civil site design with Type B fencing and leveling pad for the locations requiring new field equipment enclosure.
- Electrical design including power service feeder, transformer, service disconnect, riser diagram and the electrical panel board with calculations.
- Air conditioner design for the master hub cabinet based on the heat loading requirements, the cooling and ambient temperature with calculations.

Managed Field Ethernet Switch / 10 Gbps Core Router. Designed the plan details depicting communication rack, rack units, existing equipment, conduit entry, fiber optic cables and sizes, Corning Distribution Housing Patch Panels, remote power management unit, UPS, port assignments, patch cords for each Master Communication Hub depicting the Pre-Connectorized Patch Panels, and Connections to the Layer 3 Ethernet Core Switch ports and the optical fiber allocations / assignments approved by the County. During this time, the COUNTY built their Traffic Management Center (TMC) and this project connected all of the signal system, and supporting intelligent devices to the TMC .

Miscellaneous Professional Engineering Services

Pasco County, FL

Contract Duration:
2015 - Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Roadway Design
- Drainage Systems
- Traffic Design
- Structures Design
- Traffic Control
- Environmental
- Utility Coordination
- Route Studies
- Traffic Analysis
- Post Design Services
- Grant Application Support

Client Information:
Pasco County
Panos Kontses, PE
5418 Sunset Rd
New Port Richey, FL 34652
727.834.3604, ext 1623
pkontses@pascocountyfl.net

Key Staff Involved:

- Melanie Fowler, PE
- Tom Quinn, PE
- Jim Johnston, PE
- Bijan Behzadi, PE, PTOE
- Jose Gonzalez, PE
- Michael Oates, PE, PTOE

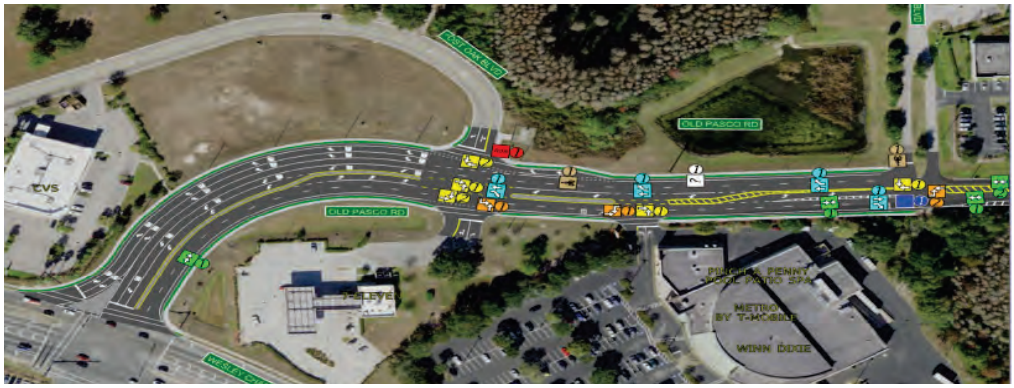
Subs:

- Adams Traffic, Inc.
- Tierra, Inc.

HDR has provided professional engineering services to Pasco County for 20 years. Select projects from our most recently completed continuing services contract include:

Road Safety Audit - Old Pasco Road from CR 54 to Overpass Road. HDR conducted a Road Safety Audit (RSA) on Old Pasco Road from CR 54 to north of Overpass Road (3.6 miles).The Road Safety Audit project was initiated by the Pasco County Traffic Operations, to perform a full RSA study in conformance with the FHWA and FDOT guidelines. The RSA Team comprised of multiple County agencies was formed and remained active during the investigation period. The final RSA report provided recommendations with phased implementation encompassing short-term, mid-term, and long-term improvements. The cost to construct including design, construction and time frame for completion of each improvement terms were provided in the RSA Report.

The findings of the concentrated efforts of the Old Pasco Road RSA were based on the following analytical procedures: selected RSA team, conducted pre-audit meeting to review project information, performed field observations under various conditions, conducted audit analysis and prepared report of findings, performed review of the as-built plans, presented audit findings to Project Manager and Design Team and incorporated findings into project.



Old Pasco Road at SR 52 Final Design. This project included widening Old Pasco Road from 2 lanes to a 4-lane divided urban section south of SR 52 (0.34 mi), constructing a stormwater pond, medians and left turn lanes, SWFWMD and FDOT permitting and preparing plan revisions for FDOT's SR 52 widening project to accommodate proposed roadway, drainage, signing/marking and signal modifications during construction. HDR's services included roadway/intersection design, drainage design, environmental, traffic control, signing & pavement marking plans, signal plans, utility coordination, computation books, contract documents, bidding & post design services. During the bidding and 12-month construction phases, HDR provided post design construction assistance services.

CR 579 (Prospect Road/Happy Hill Road) Route Study. HDR conducted a Route Study and Pond Siting Analysis Report (RSPSAR) in order to investigate potential roadway and drainage improvements along 4,200 feet of CR 579 (Prospect Road/Happy Hill Road) from south of Clinton Avenue to north of the existing SR 52 intersection to accommodate future traffic volume increases anticipated to occur by the Design Year 2041. The study area also includes approximately 2,200 feet along the existing SR 52 (approximately 1,600 feet east and 600 feet west of CR 579). In addition to the No-Build Alternative, three (3) Build Alternatives were developed and considered for this project.

Ossie Murphy Road Route Study. HDR was tasked with performing a route study for Ossie Murphy Road. This project included analysis of new roadway alignments and pond sites for Old Pasco Road Extension and Ossie Murphy Road located northwest of the I-75/SR 52 interchange. HDR's services included preliminary design, pond siting, environmental analysis, cost estimates, draft and final reports, alternative concept plans and typical sections, public meeting displays (typical sections, alignment alternatives on aerial background, evaluation matrix), public involvement and BCC presentation of recommendations. The study evaluated alternatives based on six factors: long-range planning, safety, environmental impacts, property impacts, costs and public opinion. Concept plans were developed for the recommended west-shifted alignment.

General Engineering Consultant (GEC)

District 7 Counties, FL

Contract Duration:
1987 - Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Project Management
- Environmental
- Roadway Design
- Drainage Systems
- Structures Design
- Traffic Analysis
- Traffic Control
- Landscape Design
- Architecture
- Permitting
- Utilities
- Right of Way Cost Estimating, Appraisal, Acquisition & Relocation
- Plans Review
- Cost Estimating
- Work Program

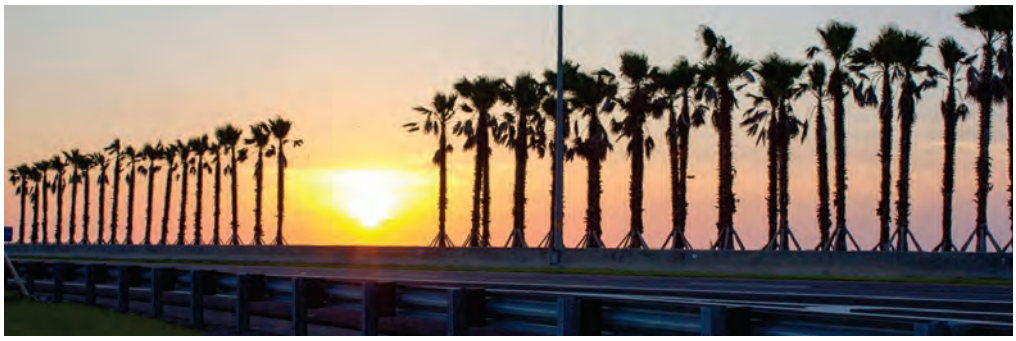
Client Information:
FDOT District 7
Megan Miller
11201 McKinley Dr.
Tampa, FL 33612
813.975.4854
Megan.Miller@dot.state.fl.us

Key Staff Involved:

- Marlin Register, PE
- Melanie Fowler, PE
- Tom Quinn, PE
- Huijing Qiang, PE
- Bijan Behzadi, PE, PTOE
- Greg Stevanus, PE
- Michael Oates, PE, PTOE
- N. Prabaharan, PE, PTOE
- Jamie Krzeminski, PE, PTOE
- Jim Johnston, PE
- Jose Gonzalez, PE
- Brian Zimmerman, PE
- Heather Hubbard, PE

Subs:

- Adams Traffic, Inc.
- Cumbey and Fair, Inc.
- Tierra, Inc.



For our multi-year GEC contract (36 years of continuous service), HDR functions as an extension of FDOT District 7 staff. Our highly-qualified personnel perform duties in the areas of PD&E, planning, design; project management, permitting, R/W, survey support, contract support, utility coordination and scheduling. Production support services include plans updates, minor designs, plans review, design studies, scopes staff hour development for design contracts and RFP development and support for Design Build projects, public awareness programs, mitigation plans, traffic control and utility coordination. Project management support includes management of design consultants/projects, plans packaging, LRE cost estimates and input into the work program. A sampling of work assignments to date has included:

Work Program Annual Update. Develop preliminary scopes, generate design, survey, right of way and construction costs estimates and upload these documents to SharePoint.

Plans Review. HDR staff have performed plans review over a thousand projects. Discipline reviews include roadway, drainage, structures, utility, architecture, landscaping and all traffic disciplines.

Gandy Blvd Concept Reevaluation. Data collection, traffic counts, developed traffic volumes, CORSIM model and traffic analysis of grade-separate and at-grade improvements at Grand Avenue.

I-275/22nd St and I-75/US 301 IOARs. Performed Synchro analysis, alternatives and operational analyses, conceptual design, evaluation matrix and traffic memo.

I-75/SR 56 DDI Alternative Study. Data collection, crash data analysis, CORSIM validation and modeling, VISSIM modeling, signal optimization, LOS analysis, developed traffic volumes, alternative analysis and IOAR report writing.

Courtney Campbell Causeway (SR 60) Multi Use Trail. Prepared conceptual plans of 12 foot wide shared use path along the south side of SR 60 from the Pinellas County line to Ben T. Davis Beach including a bridge across Old Tampa Bay; prepared Design-Build criteria package.

Bayway Structure E. Developed RFP, assisted with all aspects of procurement, and assisting with Post Award needs such as weekly coordination, plans and shop drawing reviews and design change concept development.

Embedded Support. HDR supplies embedded staff in many areas, including R/W appraisal, acquisition and property management, survey, Project Management, utility coordinators, procurement, drainage, traffic, roadway, Program Management and PD&E studies.

Transportation Engineering Consulting Services

Manatee County, FL

Contract Duration:
2012-Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Project Management
- ATMS Design
- Traffic Control
- Signalization Design
- Utility Coordination
- Cost Estimating

Client Information:
Manatee County
Albert Rosenstein, PE, CPM
1112 Manatee Ave. West
Bradenton, FL 34205
841.290.8342
albert.rosenstein@mymanatee.org

Key Staff Involved:

- Bijan Behzadi, PE, PTOE
- Melanie Fowler, PE
- Tom Quinn, PE
- Greg Stevanus, PE
- Michael Oates, PE, PTOE
- Jose Gonzalez, PE
- Jim Johnston, PE
- Brian Zimmerman, PE
- Heather Hubbard, PE

Subs:

- Tierra, Inc.

HDR provides transportation engineering services for various projects as requested by Manatee County. The work consists of transportation engineering services that include design and specifications; services during bidding and construction; record drawings; permitting; traffic plans, ATMS, lighting, signalization, fiber optic splicing details. Select task assignments have included:

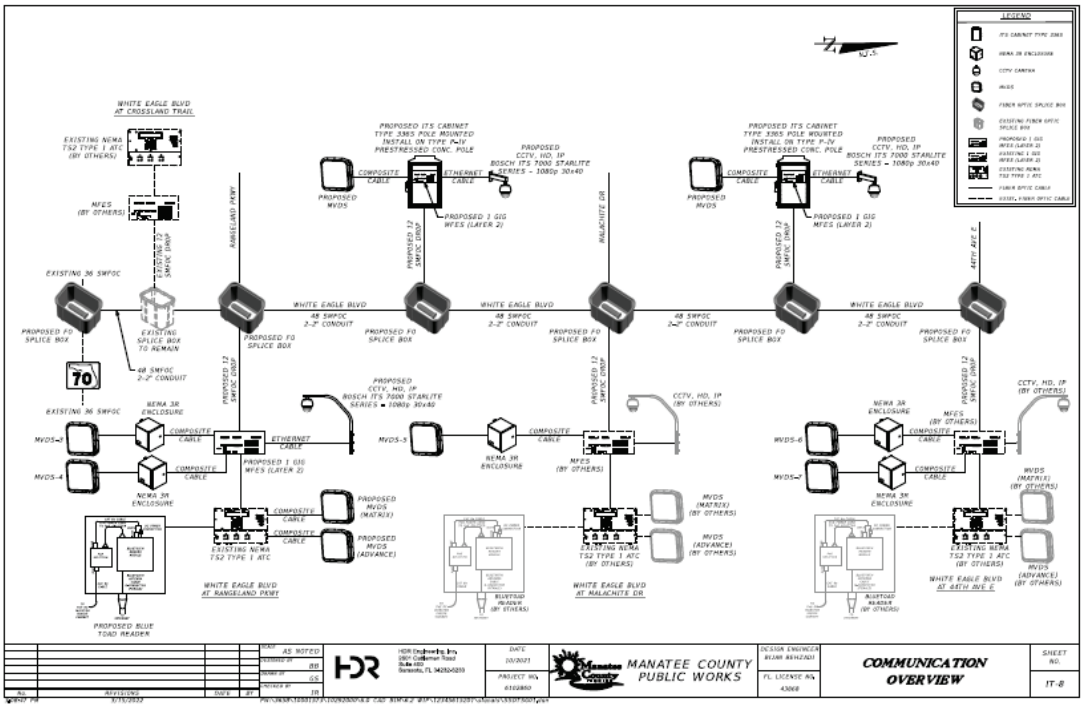
26th Street West at 30th Avenue Intersection Improvements. This project provided left and right turn lanes on 30th Avenue West at the T-intersection with 26th Street West with a new mast arm signal upgrade for the intersection. SWFWMD permit modification was required to treat the drainage impacts due to the widening. Project also included 4" watermain replacement at 25th Street West. Construction was completed in December 2022.

Port Harbour Parkway at Upper Manatee River Road Traffic Signal. This project consisted of the addition of a new traffic signal at the intersection of Upper Manatee River Road and the newly constructed Port Harbour Parkway. Included efforts were sidewalk design, signal and structural design, signing and pavement marking, lighting analysis, ATMS incorporation, bidding services, and construction phase services. Construction was completed March 2021.

White Eagle Blvd from SR 70 to 44th Avenue East - ATMS Improvements. The project consisted of the addition of a new ATMS line on White Eagle Boulevard from SR 70 to 44th Avenue East, an approximate distance of 1.9 miles. The scope of services for this project was to provide project management, coordination, design, and limited services during bidding and construction.

Designed a 48-count single mode fiber optic based communication distribution line and drop cables at the signalized intersections – Rangeland Pkwy., Malachite Dr., and 44th Avenue East. The signalized intersections of Malachite Dr. at White Eagle Blvd. and 44th Avenue East at White Eagle Blvd. were being constructed by others.

The design included 2-2" HDPE conduits, fiber optic pull boxes every 500 ft, and fiber optic splice boxes with a maximum spacing of 2,500 ft. A 30"x60"x48" splice vault were provided at the end of the fiber run at 44th Avenue East.

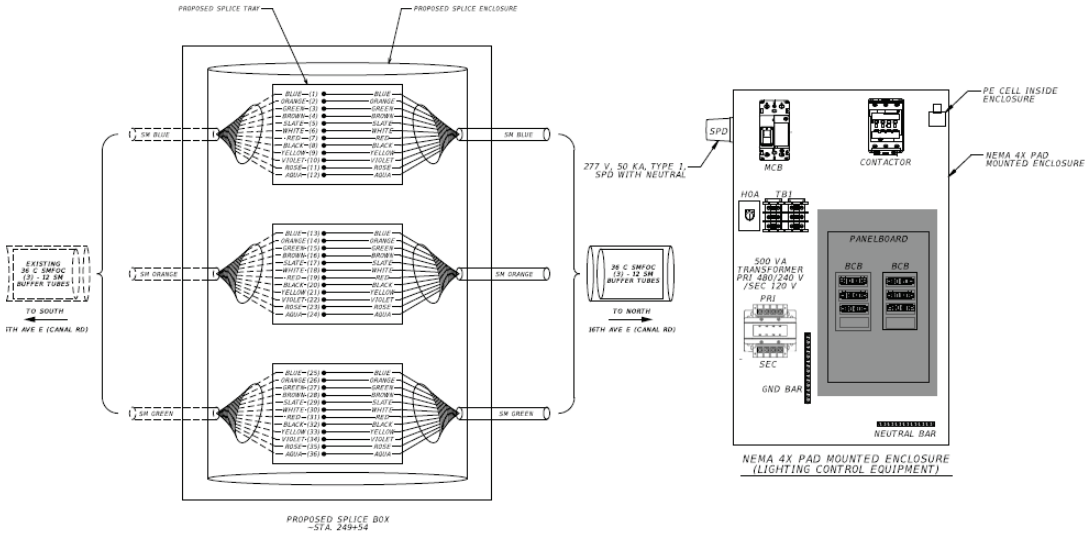


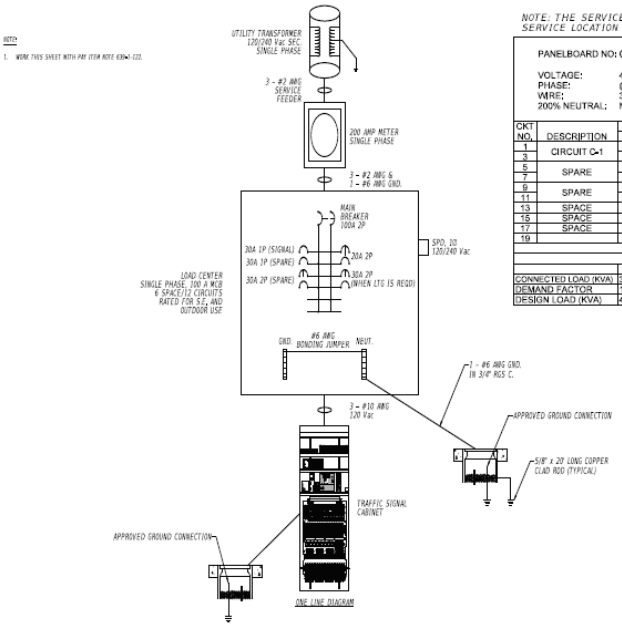
Transportation Engineering Consulting Services - Continued

Manatee County, FL

Canal Road (16th Avenue East). This project consists of converting an existing two-lane roadway to a new four-lane divided roadway for approximately 0.84 miles of Canal Road (16th Avenue East) from US 301 to 17th Street East. There is a large canal on the west side of the project corridor that will be enclosed as a box culvert for the entire length. The project contains upgrades to signals at the intersection with US 301 and the intersection with 17th Street East. CSXT has a railroad crossing at the middle of the project corridor that will be upgraded with new concrete tubs and a gate system for increased safety. The four-lane divided roadway contains 11-ft travel lanes, 5-ft bicycle lanes, 6-ft sidewalks, and median mounted corridor lighting. Manatee County utilities are also being upgraded due to roadway impacts.

Canal Road (Segment 3). The project consisted of signalization, signing, markings, lighting and ATMS improvements roadway widening and fiber optic based communication. Utilized AGi32 software for roadway lighting. Performed electrical load and voltage drop calculations.





NOTE: THE SERVICE CENTER DETAILS WILL BE COMPLETED IN THE NEXT SUBMITTAL AFTER POWER SERVICE LOCATION HAS BEEN FINALIZED AND ELECTRICAL LOAD CALCULATIONS HAVE BEEN COMPLETED.

PANELBOARD NO: C

VOLTAGE:	480/240	BUS RATING (A):	100	ENCLOSURE:	NEMA 4X
PHASE:	Ø	MAIN OC DEVICE:	MLO	MOUNTING:	SURFACE
WIRE:	3+GND	INTERRUPTING RATING (KA):	35	LOCATION:	LIGHTING CONTROLLER
200% NEUTRAL:	NO	SERVICE ENTRANCE LABEL:	NO		

CKT NO.	DESCRIPTION	CONNECTED LOAD (VA) LTS	REC	MECH	MISC	OCP AMPS	P		OCP AMPS	P	CONNECTED LOAD (VA) LTS	REC	MECH	MISC	DESCRIPTION	CKT NO.
1	CIRCUIT C-1	675,6				30	2	A	30	2	1.056,8				CIRCUIT C-2	2
3		675,6						B			1.056,8					4
5	SPARE					30	2	A	30	2					SPARE	6
7								B								8
9	SPARE					30	2	A	30	2					SPARE	10
11								B								12
13	SPACE							A							SPACE	14
15	SPACE							B							SPACE	16
17	SPACE							A							SPACE	18
19								B								20

LOAD SUMMARY

	LTS	REC	MECH	MISC	SPARE	TOTAL			PHASE BALANCE	
CONNECTED LOAD (KVA)	3,5	0,0	0,0	0,0	—	3,5		480	LINE-TO-LINE VOLTS	PHASE A (KVA) 1,7
DEMAND FACTOR	1,25	NEC	1,00	1,00	20%	—		7,2	CONNECTED AMPS	PHASE B (KVA) 1,7
DESIGN LOAD (KVA)	4,3	0,0	0,0	0,0	0,7	5,0		10,5	DESIGN AMPS	

PANELBOARD SCHEDULE FOR LOAD CENTER C

US 19 from Northside Drive to CR 95

FDOT District 7, FL

Contract Duration:
2012-Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Project Management
- Pedestrian Bridge Design
- Temporary Traffic Control Plan
- Roadway Design
- Drainage Systems
- Structures Design
- Traffic Analysis
- Traffic Control
- Signalization Design
- Lighting Design
- ITS Design
- Noise Study Report
- Utility Coordination
- Plans Review
- Cost Estimating

Client Information:
FDOT District 7
Elizabeth Winters
11201 McKinley Dr.
Tampa, FL 33612
813.975.6499
Elizabeth.Winters@dot.state.fl.us

Key Staff Involved:

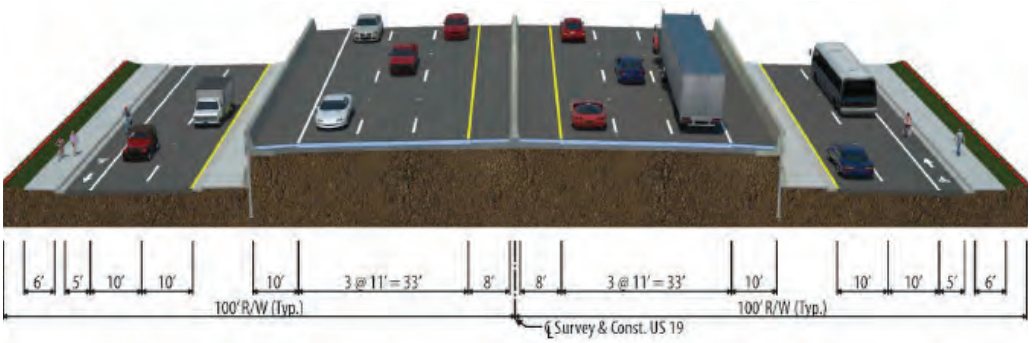
- Bijan Behzadi, PE, PTOE
- Melanie Fowler, PE
- Marlin Register, PE
- Greg Stevanus, PE
- N. Prabaharan, PE, PTOE
- Tom Quinn, PE
- Jim Johnston, PE
- Brian Zimmerman, PE

Subs:

- Tierra, Inc.

HDR was selected by the Florida Department of Transportation for the design of 1.21 miles of US 19 from Northside Drive to CR 95 in Pinellas County, Florida. The project included reconstructing the eight-lane divided roadway to a 6-lane controlled access facility with two-lane one-way frontage road on each side to provide for local access. The existing at-grade signalized intersection of US 19 and Curlew Rd. was replaced with a Single Point Urban Interchange (SPUI) with a complex long span steel bridge to provide the grade separation of the US 19 mainline from Curlew Rd.

HDR performed full design services including major highway design, stormwater management facility design, temporary traffic control plans, environmental permitting, complex structural design, miscellaneous structures design, signing and pavement marking plans, signalization design and intelligent transportation design. The project was let to construction in June 2022 and construction began in January 2023.



Professional Engineering Services for Roads & Drainage

Polk County, FL

Contract Duration:
2017 - 2022

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Roadway Design
- Drainage Systems
- Structural
- Utilities
- Environmental
- Engineer's Reports
- Emergency Bridge Inspection
- Post Design Services

Client Information:
Polk County
Jay Jarvis
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Winter Haven, FL 33880
863.534.6000
JayJarvis@polk-county.net

Key Staff Involved:

- Tom Quinn, PE
- Melanie Fowler, PE
- Jim Johnston, PE
- Bijan Behzadi, PE, PTOE
- Greg Stevanus, PE
- Michael Oates, PE, PTOE

Subs:

- Adams Traffic, Inc.
- Tierra, Inc.

Under this contract HDR assists Polk County with development of design and construction documents for roadway, drainage, structures, signing and pavement marking, signalization, lighting, utility design and environmental permitting. In addition, HDR has completed bridge development reports, bridge hydraulic reports, bridge design, bridge scour analysis, emergency bridge inspection, assessment and recommendations and post design services as needed. Select projects include:

CR 54 / Ronald Reagan Pkwy at CR 547/Lee Jackson Hwy Intersection Improvements. This project included roadway, drainage, permitting, traffic and utility design (for reclaimed water stub outs).

Banana Rd Sidewalk Improvements. The project consists of continuous sidewalks and crosswalks from west of Harrison Road to Churchwell Elementary School. Phase 1 included a feasibility study, and Phase 2 included roadway, drainage, permitting and traffic design.

Keith Ln and Berkley Rd Drainage Improvements. HDR performed a flooding study with detailed hydraulic modeling and improvement alternatives to address historic neighborhood flooding along Keith Land and west side of Berkley Road. Just north of Lake Myrtle Sports Complex, these drainage improvements along Keith Lane and the west side of Berkley Road include hydraulic modeling (SWMM5), permitting, and preparation of complete set of construction plans. Permitting included an Environmental Resource Permit and Florida Department of Transportation Drainage Connection Permit.

Country Club Road at Buckeye Loop Road Intersection Improvements. HDR developed the Intersection Alternative Analysis Report for this project. We performed traffic analysis, safety analysis, environmental impact analysis, right of way impact analysis, concept plans and cost-benefit analysis. HDR is also responsible for preparing the design and construction documents. The design scope includes roadway, drainage, S&PM and signalization.

Districtwide TSM&O Retiming

FDOT District 5, FL

Contract Duration:
2015-Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Traffic Analysis
- Traffic Control
- Signalization Design
- Department Support

Client Information:
FDOT District 5
Paul Wabi, PE
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Deland, FL 32720
407.670.2341
Paul.Wabi@dot.state.fl.us

Key Staff Involved:

- Bijan Behzadi, PE, PTOE
- Huijing Qiang, PE
- Richard Atta-Armah, PE
- N. Prabaharan, PE, PTOE
- Jamie Krzeminski, PE, PTOE

Subs:

- Adams Traffic, Inc.

HDR was selected to provide FDOT District 5 with signal retiming services throughout the entire District. Select tasks included

SR 421 (Taylor Rd./Dunlawton Ave.) from Summer Trees Rd. to SR 5A (Nova Rd.) & SR 5A (Nova Rd.) at Village Tr. This retiming project corridor consisted of 11 intersections with ECONOLITE ASC/3-2100 controllers. HDR was tasked to analyze and implement new coordination timings to improve corridor performance. Supplementary task for "before" and "after" travel time studies were undertaken.

A GPS receiver unit and TRU TRAFFIC was used to collect REAL TIME travel time studies and to verify field programmed offsets operating as intended.

Prior to implementation, the corridor was known to have significant queuing, main line delays and inefficient traffic flow.

Through the newly developed coordination plan, along with split, offset, and multi-pattern adjustments, specifically tuned to control minor movement behaviors, significant reductions in queuing and travel delay were observed. The before and after study verified significant savings in cost as well as fuel consumption as result of the retiming efforts.

Project Corridors: SR 200, US 27/US 301/US 441, SR 40, SR 492, & US 27. This area wide retiming project corridor consisted of roughly 60 intersections with Trafficware ATC controllers. HDR was tasked to analyze and implement a cross-coordination plan with the major city corridors while designing it to work in coordination with adjacent major corridors.

This project relied heavily upon field data collection, GPS travel run data, and additional controller programming locking offsets to maintain crossing artery coordination.

Through careful analysis of all the project corridors running as a single system, reviewing GPS travel run arrival times, and adding additional timing plans as needed to transition through peak demands, the project corridors operates better with reduced queues as well as reduced travel times. Adjacent corridors not included on the project also benefitted from improved system-wide performance while operating its existing system timings as desired by the City.

Districtwide Traffic Operational Studies for Innovative Intersections & Interchange Treatments

FDOT District 7, FL

Contract Duration:
2015-Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Roundabout Screening
- Traffic Analysis
- Traffic Control
- Signalization Design
- Department Support
- Safety Analysis
- Complete Streets
- Lane Elimination Evaluation

Client Information:
FDOT District 7
Jill Wehle
11201 McKinley Dr.
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Key Staff Involved:

- Bijan Behzadi, PE, PTOE
- Melanie Fowler, PE
- Heather Hubbard, PE
- N. Prabaharan, PE, PTOE

Subs:

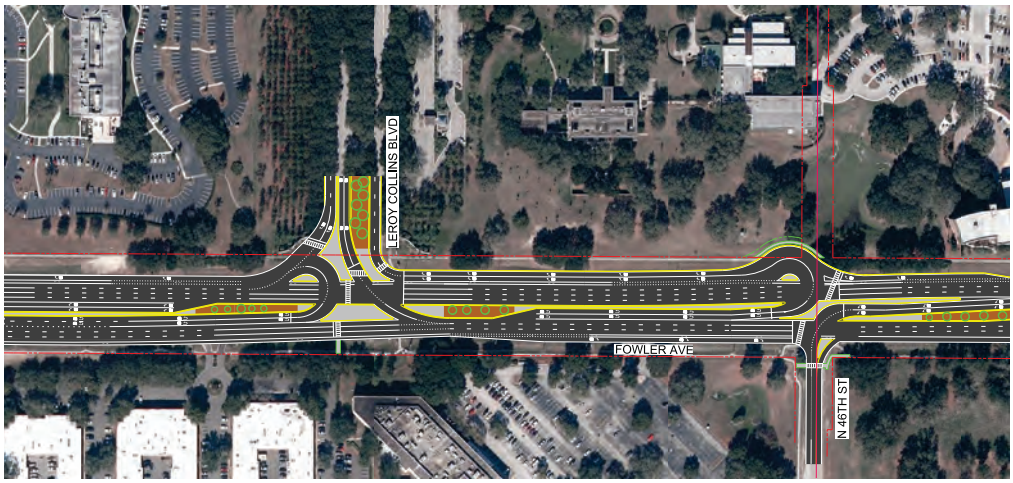
- Adams Traffic, Inc.
- Cumbey and Fair, Inc.

HDR was re-selected for this contract to provide FDOT with traffic operational analysis, concept development, and evaluation services for the definition and assessment of innovative intersection and interchange treatments for projects across the District. The contract is designed to support District traffic operations in the development and assessment of innovative solutions to address operational, safety, and capacity challenges. HDR has completed over 100 assignments under this contract including roundabout screenings using FDOT's Intersection Control Evaluations (ICE) Analysis, Hard Shoulder Running (HSR) analysis, Median U-Turn (MUT) and Displaced Left-Turn (DLT) intersection analyses and conceptual designs, interchange reconfiguration analyses and conceptual designs, and other miscellaneous tasks. Select notable assignments include the following:

ICE Analysis. Alt US 19/Virginia Ave, SR 60/Maydell Dr, US 301/Ayersworth Glen Blvd, Alt US 19/Anclote Road, and Selmon Expressway/21st St and 22nd St interchange.

Roundabout Analysis and Conceptual Design. Gandy Blvd/94th St, Alt US 19/Broadway, Meridian Ave/21st St, US 41/Snow Memorial Hwy, US 41/Lake Lindsey Road, SR 200/Lecanto Hwy, US 98/Citrus Way (currently in design) and US 98/Trilby Road (currently in design).

Innovative Intersection and Interchange Analysis and Conceptual Design. Fowler Ave from Bruce B Downs Blvd to Bull Run Dr, Dale Mabry Hwy/Waters Ave, Dale Mabry/Hillsborough Ave Interchange.



D.

Project Approach

D. Project Approach - Budget Methodology/Cost Control

Highway construction material prices are in flux now more than ever, so keeping an eye on the market is crucial to staying within the programmed budget. Successful project cost control can also contribute to the overall project's success, outside of avoiding cost overruns during design. Cost control relies on detailed and accurate engineered cost estimates and tracking throughout all project design phases.

The key to budget and cost control of any capital improvement project is to write a solid scope for the work order being issued by Hernando County and having both sides agree to the level of expected work to avoid scope creep, continuously update the engineer's estimate for the construction procurement, and then monitor the causes of cost escalation during design phases. In addition to this key approach, HDR will coordinate with Hernando County regarding updates to their planned capital improvement program on an annual basis and by applying the inflation rate if the project letting is postponed to the future fiscal years.

Work-Order based assignments usually start with a phone call or an email request from the Procurement Department or County Project Manager and/or Department of Public Works . HDR will meet your construction budget requirements for each project through a proven approach to project execution. HDR understands financial constraints and applying the appropriate level of design for each unique project. We will work with the County to verify budget constraints and expectations for every project. If the task is small and straightforward, our project manager, Bijan will review the project requirements and prepare a scope of work, an initial staff hour/ fee estimate and a project schedule for review and approval by the County staff. For more complex projects, or if the scope reflects new or unusual requirements, Bijan will pull in the appropriate HDR Task Managers and other discipline experts to meet face-to-face with the County to discuss the issues and essential scope elements.

• Establish & Maintain Estimates of Probable Cost Within Owner's Established Budget

There are several factors that boost contractors' costs. Some are general inflation, global market forces, skilled labor shortages, material and fabrication supply and natural disasters. Although, we as end users may not have any control on these factors, HDR's approach to establish and maintain estimates of probable costs within the Hernando County's programmed capital improvement projects are as follows:

Maintain within framework of authorized scope of work order: Bijan will engage the team members who are most knowledgeable in the various traffic engineering studies or design functions to develop the engineer estimate at 30 %, 60%, 90% and 100% design stages and review the causes for any abnormality that indicates cost increase between design phases.

Accurately Estimating Costs & Careful Tracking: There are multiple components to effective cost control. These include accurately estimating costs, carefully tracking them during design period, and proactively identifying and mitigating potential budget overruns. To meet these requirements, Bijan will create detailed costs using the Basis of Estimates Manual published by Florida DOT, build systems for tracking actual costs against programmed costs, and have a feedback loop for adjusting cost management processes as needed. HDR will manage construction costs by communicating with construction and manufacturing industries in obtaining pricing with material suppliers.

Collaboration Between Stakeholders: HDR will utilize a program approach that will enable HDR as the engineer of record to leverage a relationship between construction and manufacturing sectors as stakeholders with locally researched detailed construction cost data such as unit prices and maximizing the communication and transparency of cost information. The next important approach is to establish a working policy with contractors to encourage them to ask about suspected errors or omissions during the pre-bid and post-bid interviews. Contractors' knowledge of errors and omissions at this stage is limited because the estimator and contractor's project manager who attend these meetings have only studied the drawings for bidding purposes. However, even at this stage, the contractor usually comes to the pre-contract meetings with several questions. It is important to respond quickly and set a pace for a constructive dialogue in the future.

Minimizing Errors & Omission: HDR will use Building Information Modeling (BIM) software that can significantly help minimize errors and omissions in construction drawings. BIM software allows for a 3D model-based approach to construction projects, which can enhance accuracy and coordination among various projects stakeholders. It provides features like clash detection and in-built error detection, which can identify conflicts or issues in the design, helping to prevent errors. However, errors or omissions due to incorrect data input or other human factors may still require multiple levels of reviews during production checks and quality control and quality assurance process to catch and rectify, emphasizing the importance of thorough quality control processes in construction projects.

• Control Consultant Contract Costs

The key to control consultant contract costs for each work order is budget and cost control of any capital improvement project by establishing a clear understanding of the scope for the work order and avoid unforeseen cases that cause scope creeps. HDR's approach to manage the consultant contract cost is described herein.

Develop Scope of Work: It is extremely important that the goals and objectives of the assigned work order are clearly defined and understood by each team member. The scope developed for each project forms the basis for staffing the assignment and for estimating the level of effort required to complete the task. Bijan will engage the team members who are most knowledgeable in the various study or design elements to develop the scope content for these specialized work elements, which will be integrated into the overall scope of work.

Develop Staffing Plan: A staffing plan will be developed to fit the requirements of the work order. The objective in this phase is to make assignments based on the level of experience required for the job. HDR will manage County resources judiciously, and we will assign cost-effective staff who possess the skills needed to efficiently complete each task.

Staff Hour/Negotiations: Once we have a clear understanding of scope and staffing requirements, staff hours will be finalized, and the fee estimate will be developed based on established rates and procedures. This effort normally takes place concurrently with the refinement of the scope. With an understanding of budget guidelines, we will not pursue supplements unless there are significant unforeseen scope changes.

Develop Schedule: A basic schedule defining the major subtasks and proposed milestone delivery dates will be prepared for all Work Order assignments. For studies or certain other assignments, the schedule may be comprised of draft and final delivery dates. For certain design projects, a Critical Path Method (CPM) schedule that includes the major tasks occurring under each major phase of design development will be provided. HDR will commit whatever resources are required to meet the schedule defined by the County's Project Manager to verify we are meeting the County's overall needs.

Coordination: HDR will administer and manage all tasks assigned under this contract. Bijan will serve as the primary contact for the County and will work directly with County staff to initiate the work order assignments. He will keep the County's Project Manager informed regarding all relevant issues with a focus on key items requiring County feedback. Our communication and coordination procedures have been developed and refined through our extensive experience delivering this type of work.

Controls to Maintain Project Cost: HDR's approach to controlling budgets begins with upfront planning by the Project Manager and task managers to develop a scope of work and schedule that meets the County's requirements. After receiving NTP, Bijan will develop a contract-specific Project Management Plan (PMP), provide the County PM with a contract specific Project Communication Plan (PCP) containing communication protocols for the contract along with contact information for team members so that County staff and task leaders can efficiently collaborate to proactively resolve issues.

We will work with the County to verify we stay within your budget for every project. At various stages throughout project scoping, preliminary design, and final design, HDR will prepare construction cost estimates based on the historical cost data and trends, so the County may plan for construction costs. There are design, maintenance and construction aspects to delivery of a cost effective design. We understand that it may be appropriate to provide a design solution that requires more design effort or specify a construction element that is more expensive to achieve a lower overall cost of implementation.

COST-EFFECTIVE SOLUTIONS

1) Confirming that the essential scope elements (from the County's perspective), are understood by the project team and that our proposed design does not include nonessential project elements. Many local government projects could include elements or enhancements that would be desirable to incorporate; but due to schedule, cost, right of way, or other constraints, cannot or should not be implemented.

2) Where standard County and/or FDOT design criteria cannot be implemented due to constraints or without significant cost, we will consider appropriate design variations or exceptions and provide a benefit-cost analysis of any proposed variation or exception to the County to justify any proposed deviation.

3) HDR's CEI staff will provide constructability reviews as part of our QC process to verify our proposed design solutions are constructible and avoid significant utility, maintenance of traffic or other impacts to schedule or cost.

HDR takes pride in improving the communities we live in. One important aspect we provide to our communities is taking time to incorporate practical design and project decisions that are appropriate for the context of each task.

Multi-discipline and constructability reviews combined with design reviews from Senior engineers during the QA/QC process ensures a vetted design for value focused design decisions and project features.

Project Innovative Approaches: With HDR' s approach to efficient, cost-effective solutions, streamlining work efforts where appropriate will allow us to be even more responsive to the County's needs. Key functions to fast track a project may include:

- Streamlined production and plans formats that simplify the construction documents yet provide the information necessary to bid, let and construct a project.
- Using as-built plans, aerial maps, and ground survey, as appropriate, to expedite plans development.

• Coordinate Value Engineering Activities

The Code of Federal Regulation 23 CFR Part 627 prohibits individuals directly involved in the design of a project from participation on the Value Engineering (VE) team analyzing the project.

HDR project manager, Bijan Behzadi, has served on several VE studies of multi-million dollar projects during his tenure at FDOT. Our understanding of VE is making the best use of available budget for the subject project, and that it is a team sport.

We believe the VE process taking place closer to the planning and design stages is the best time to identify and eliminate unwanted costs and improve functions and quality. When applied to the construction process, VE has enormous benefits for the highway agencies such as Hernando County.

CONSULTANT-RUN VE STUDIES

Although cost savings is a key benefit of the VE process, other issues which add to the complexity of the project should be considered in the VE selection process. Complexities may include critical constraints, difficult technical issues, external influences, or complicated functional requirements. The types of projects that provide the highest potential for value improvements are:

- High-cost projects
- Projects with alternate solutions which vary the scope and cost
- New alignment or by-pass sections
- Widening of existing highways for capacity improvements
- Major structures
- Projects with costly or extensive environmental or geotechnical requirements
- Major reconstruction of existing highways
- Projects with major traffic control

When a work order is issued for HDR to perform a VE study during design stages, VE process can begin when the project is at least at 60% design level and right of way process can logically begin. HDR personnel under supervision of Bijan, will be assembled with various skills to perform VE functions at the request of Hernando County. HDR will exercise the following steps to assist the County on any VE project assignment:

Team Structure: HDR's VE team is typically comprised of a team leader and four to six individuals with a diverse array of backgrounds relevant to the specific study. VE Teams of fewer than five tend to limit the amount and variety of creative input, while teams of more than seven can be difficult to manage. VE teams should be structured such that the appropriate areas of expertise are available to evaluate the potential value improvement areas associated within the project. Generally, expertise from the functional areas of design, structures, right of way, maintenance, and traffic operations make for a good team balance. All these disciplines may not be sufficient and depending on the project scope, other specialties such as utilities, environmental analysis or railroad operations may be included in the team.

Team Leader: Bijan will serve as the VE team leader responsible for guiding the team in its efforts during the study. The team leader should be proficient in the VE process.

Team Members: HDR VE team may consist of both technical and non-technical members. Technical team members are selected based on the various types of expertise needed to address the major functional areas and critical high-cost issues of the study. They play a vital role in the VE process by adding their individual perspectives and expertise to the VE process. Non-technical team members may consist of representatives from groups or agencies not affiliated with the County such as citizens advisory groups.

VE Team will be responsible for any combination of the three phases of work associated with any assigned Value Engineering study. These phases are: Pre-study Activities, Conduct Value Engineering Study, and Post Study Activities and include the following activities:

A. Pre-Study Activities – Bijan as the Team Leader will assist in the planning and organizing of the Value Engineering study. This includes but is not limited to:

1) Coordinating with the HCDPW as necessary to ensure adequate information is available to conduct a Value Engineering study.

2) Coordinating with the HCDPW to make provision for sufficient facilities for team meetings and other activities associated with conducting the Value Engineering study. Location of such facilities will be accessible to team and project personnel.

3) Organizing and planning the study by developing the study agenda for review by the HCDPW.

B. Conduct Value Engineering Study – HDR will conduct all Value Engineering studies in accordance with the practices and techniques as stated in FDOT Procedure No. 625-030-002. All materials and equipment needed to perform the study, including computers, projection equipment, stationary, easels, flip charts, markers, pens, etc. will be provided by the Team Leader.

C. Post Study Activities –

1) Reporting – The Value Engineering Team Leader will submit study results in a manner as stated in Procedure 625-030-002, A-4 with the study summary report prepared in a format consistent with approved FDOT procedures. Value Engineering recommendations will be supported with sufficient detail and calculations to allow a prudent decision of implementation by HCDPW. Each VE recommendation will be with Performance Indicators and the categorization will be reflected in the report. HDR will categorize the Performance Indicators as: Safety, Operations, Environmental, Construction and Other. In addition, the study summary report shall contain an Executive Summary which discusses in detail, the proposed Value Engineering alternative, as well as the potential savings and the description of costs.

2) Presentation – In addition to the presentation conducted during the Value Engineering study, the Value Engineering Team Leader and such team members will make a formal presentation to HCDPW Management. The presentation also shall be coordinated through the HCDPW Project Manager to ensure that persons authorized to evaluate and act upon the Value Engineering recommendations are present. HDR will tailor the Value Engineering (VE) deliverables to meet the needs of Hernando County.

VALUE ENGINEERING & DECISION ANALYSIS SUPPORT

One of the tenets of any successful Value Engineering (VE) program is to have an experienced multidisciplinary team that can work together to evaluate the many facets of a project to determine the most cost-effective means to accomplish the project's objectives. With HDR's breadth of in-house services and local project experience, we have the resources necessary to support the County's Value Engineering needs. HDR staff can help with any of the 6 phases of the VE Job Plan as follows:

1) Information Gathering. As a local design firm, HDR staff are familiar with the available information sources that are needed for project development. We have outstanding working relationships with local agencies that interact with the County such that we can assist the County with gathering any information needed for the VE analysis.

2) Function Analysis. The key to function analysis is understanding the driver's needs and intended benefits of the project. HDR staff's experience with projects similar to those included in the County's CIP will facilitate this analysis.

3) Creation. Idea generation is the cornerstone of this phase and HDR staff can lead effective brainstorming sessions to develop alternatives to accomplish the project objectives.

4) Evaluation. Once alternatives have been identified, HDR staff will vet each alternative to verify that realistic results are obtained.

5) Development. Once the alternatives have been vetted, HDR professionals can work independently or with County staff to develop accurate cost estimates for each solution.

6) Presentation. Once complete, the final stage is to present the findings clearly and concisely.

Our staff has participated in many value engineering studies as part of our Value Engineering Support Services contract with FDOT's Central Office. This experience provides Hernando County with value engineering support that is based on a solid approach that has been proven on a multitude of transportation projects.

HDR currently prepares half of the construction and engineering cost estimates for FDOT District 7's 5-year Work Program. HDR can provide sound cost estimating services to support any financial decisions the County needs to make regarding the Transportation Component of County's Capital Improvement Program.

D.

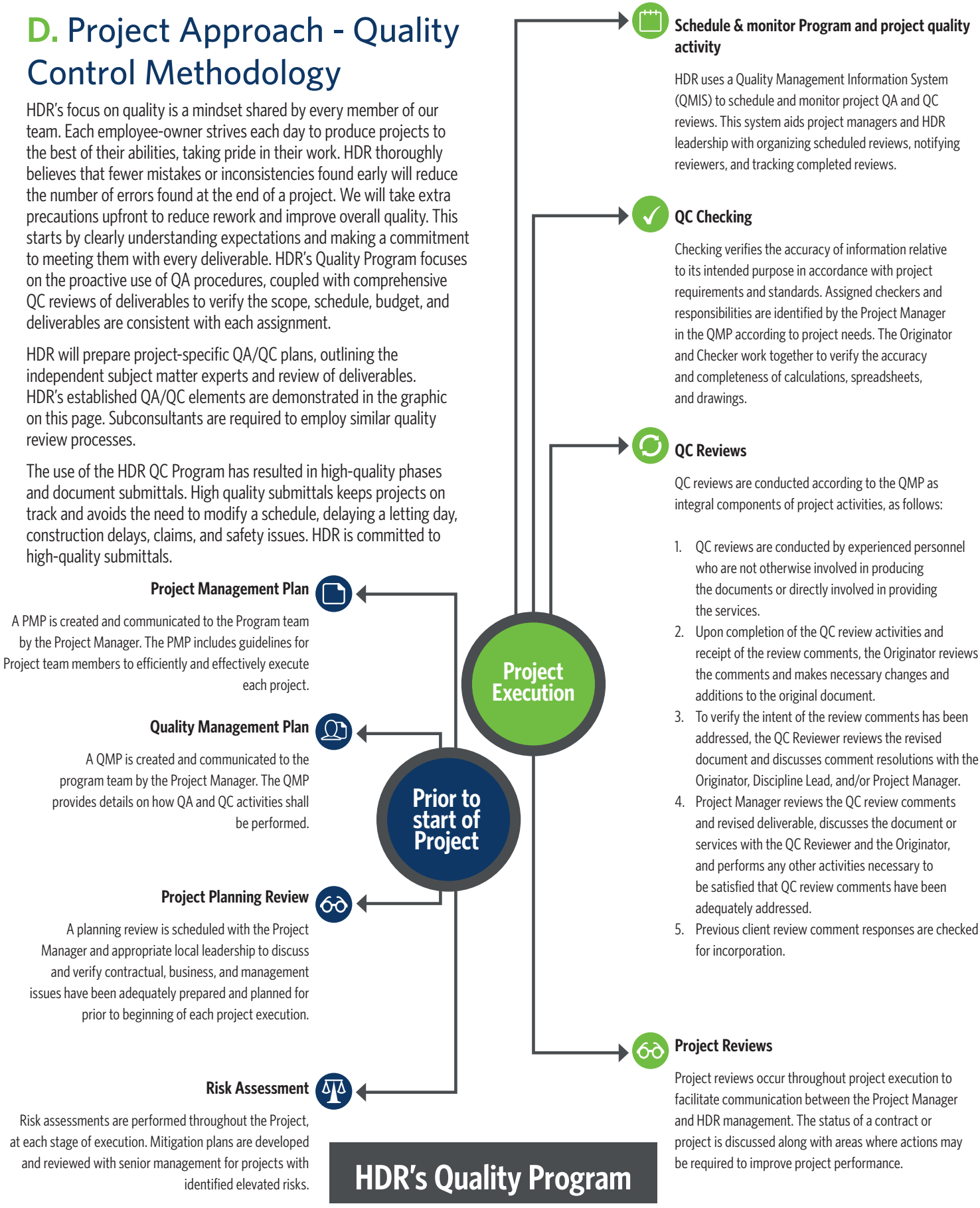
Project Approach

D. Project Approach - Quality Control Methodology

HDR's focus on quality is a mindset shared by every member of our team. Each employee-owner strives each day to produce projects to the best of their abilities, taking pride in their work. HDR thoroughly believes that fewer mistakes or inconsistencies found early will reduce the number of errors found at the end of a project. We will take extra precautions upfront to reduce rework and improve overall quality. This starts by clearly understanding expectations and making a commitment to meeting them with every deliverable. HDR's Quality Program focuses on the proactive use of QA procedures, coupled with comprehensive QC reviews of deliverables to verify the scope, schedule, budget, and deliverables are consistent with each assignment.

HDR will prepare project-specific QA/QC plans, outlining the independent subject matter experts and review of deliverables. HDR's established QA/QC elements are demonstrated in the graphic on this page. Subconsultants are required to employ similar quality review processes.

The use of the HDR QC Program has resulted in high-quality phases and document submittals. High quality submittals keeps projects on track and avoids the need to modify a schedule, delaying a letting day, construction delays, claims, and safety issues. HDR is committed to high-quality submittals.



• Insure County Procedures Are Followed

QUALITY CONTROL METHODOLOGY

Tom Quinn, PE, Marlin Register, PE and Huijing Qiang, PE will lead the quality component for Hernando County's Continuing Traffic Engineering Services. They will work closely with Bijan through all phases and elements of this contract to achieve the level of quality needed to make each assignment successful. We understand that quality is not a procedure completed at the end of the work assignment, but an ongoing process that begins with thorough research from the beginning and continuous communication with our client, agencies, and the entire team. HDR will prepare a project specific QA/QC plan for each task assignment under this traffic engineering service contract for review and approval by the County.

HDR formalized a Quality Control Program that begins at the project initiation and continues until the project is completed. At the heart of this program is the principle that all team members are held responsible for the quality of their own work, even though a series of independent reviews and checking procedures are in place to verify that all project work has been performed according to County and HDR requirements. Each discipline lead will be familiar with Hernando County standards from the Facility Design Guidelines, Land Development Codes, Building Codes, and other relevant standards applicable to the task given to make sure correct decisions are made from the first step to the last step of the assignment. Every plan markup goes through a mini-QC process, not just at the phase and document submittal stages. Bijan, Tom, Marlin and Huijingwill conduct routine audits to see that the team is following the project-specific QA/QC Plan and upholding their commitment to the quality of the product being produced.

Quality plans, documents and customer service are HDR's number one priority. Our QC program is a process that covers all project disciplines and constructability/biddability. Subconsultant QC plans are integrated into the overall project QC Plan. QA and QC are two separate but related groups of work that enable the designer to produce a quality product. QA is the process by which HDR builds in sufficient procedures, controls, and processes so each task, plan sheet, and design decision is correct. This process begins on the first day of consultant services and continues for the life of the contract. The QC process is used to check completed work at specific stages of the project. To accomplish the QA/QC of our work, we will follow a QA/QC plan specifically tailored for this contract. All project documents, including subconsultant work, will be closely reviewed prior to submittal to the County.

QUALITY ASSURANCE

HDR will develop a detailed project-wide Quality Management Plan (QMP) as part of the PMP, tailored to meet County requirements under the QA/QC Plan. The Quality Management Team will perform structured, independent quality reviews of the work at each milestone. The QA/QC plan includes the following key components:

- Assignment of QC reviewers based on work products and technical disciplines needed for each task order, with details of the deliverables to be reviewed and the expected standards or guidelines for use in the review.
- Recorded comments from all QC reviewers, and documentation of resolution of all QC comments by both the reviewer and the PM.
- Depending on the project type, the QMP will include standard checklists for reviews at milestones focused on both Intra-Design Review and Inter-Design Review.
- The QA review also includes electronic drawing files to check that our team's CADD drafting services and plans production are consistent.

• Improving Energy Efficiency Through the Use of an Integrated Design Process

HDR's vast experience in design and construction and maintenance of highway projects indicate the factors that influence the performance of highway projects are grouped under four categories:

1) Execution constraints

2) Operational factors

3) Stakeholder and political constraints

4) Design Constraints

The complexity of the contractor's performance, frequent modification in alignment, project design, loopholes in safety, and ambiguities in specifications are the main factors that impact the performance of highway projects.

A successful integrated design process brings key stakeholders together beginning with pre-design and continuing through all design phases to identify opportunities for synergy across disciplines and building systems.

For Public Works project types, integrated design is a holistic approach to high performance buildings, and highway projects. It relies upon every member of the project team sharing a vision of sustainability and working collaboratively to implement sustainability goals at appropriate phases during the project. Effective integrated design leverages synergies among project anatomy components, resulting in reduced life cycle costs of the project.

First and foremost, the approach is to utilize uniform standards and criteria for the design, construction, and maintenance published in Hernando County public roads and streets and facility design guidelines.

Two of the most important factors for achieving consistently high levels of efficiency in highway construction and rehabilitation projects are:

1) The uniform application of well-crafted guide specifications for all construction and rehabilitation

2) Keeping these energy efficiency requirements current with changing technology.

HDR uses Interactive Highway Safety Design Model (IHSDM) on selected projects (when required by the client) which is a suite of software analysis tools used to evaluate the safety and operational effects of geometric design decisions on highways. Most candidate projects include intersection models, roundabout model, driver-vehicle model, highway safety manual model, crash prediction model, and economic analysis model used by designer's input and selection of codes.

To confirm a highway project will expect a longer useful life and can sustain the natural and applied degrading factors, HDR will utilize high quality materials that are on FDOT Approved and Qualified Product Lists. During design, selection of high performing materials include:

- Pavement Materials
- Steel Materials
- Concrete Materials
- Intelligent Transportation Devices with Proven Track Records
- LED Highway Lighting Fixtures

• Insure the Project is Designed for Durability & Maintainability

DURABILITY & MAINTAINABILITY

There are design, maintenance, and construction aspects to the delivery of a cost-effective design. HDR understands that it may be appropriate to provide a design solution that requires more design effort, or specify a construction element that is more expensive, to realize a lower overall life-cycle costs.

HDR does not forget about projects once they are constructed. We routinely check on the history of a completed project from a safety and maintenance perspective. This look-back allows us to get a handle on how design decisions and assumptions affect outcomes in the real world. Implementing these cost-effective, practical designs begins with the assignment of qualified designers and an Engineer of Record with experience on similar projects. HDR's CEI staff complements our design staff's knowledge and expertise with their construction oversight experience on reconstruction and maintenance projects. A primary focus of our CEI team in early-stage constructability reviews is overall maintainability and considerations for potential future accommodations.

CONSTRUCTABILITY REVIEWS

This often-overlooked element of design is a prerequisite for any project designed by HDR. Our clients value this important element and recognize the significant cost savings created by making this a mandatory task item. The constructability review process provides early detection of potential design changes to minimize future construction claims and delays. For example, constructability reviews can provide value analysis of engineering for many critical issues in a project, such as increases in material costs, maintenance criteria, life-cycle costs, product availability, hazardous material mitigation, maintenance of operations or traffic, construction phasing, utility conflicts, right of way takes, avoidance and minimization of sensitive wetland impacts, etc. These issues can dictate the design as well as the project costs.

SUSTAINABILITY

HDR takes a holistic approach to sustainable design. Our balanced, sustainable solutions are resource-sensitive and provide private- and public-sector opportunities for economic growth and development. More than two decades ago, we established our sustainable solutions program to integrate sustainability into 100% of our business practices. Our specialists are leaders in climatology, natural resources, renewable energy, green rating systems, commissioning, measurement and verification, and community planning. We know that it is important to reduce energy and water use, but we also know that it is equally important to take steps to enhance the health and well-being of occupants, to regenerate the local ecology, to address the circular economy of resources, and to ensure project resiliency in the event of unforeseen impacts. We provide you with solutions that are good for your business, your communities, and our planet. Some examples of analysis and strategies include:

- Context-Sensitive Design
- Design for Health & Wellness
- Green Rating Systems
- Greenhouse Gas Management
- Net-Zero Evaluations
- Resilient, Hazard-Based Design & Hardening Practices
- Restorative & Regenerative Design
- Sustainable Value Analysis (SVA)

VULNERABILITY & RELIABILITY ASSESSMENTS LIFE-CYCLE COST ANALYSIS

HDR is committed to sustainable material selection. We seek out appropriate products and designs that not only protect the health of the building users and the community it serves, but also future generations. We are committed to using the best practices for safer material selection, sourcing, reducing, and sequestering embodied carbon. Sustainable materials take into account the larger environmental picture by considering the following, starting at the product's sourcing and manufacturing phase all the way through to the end of life/reuse phase:

- Circular economy
- Optimization
- Deconstruction/disassembly
- Recycled content/recyclability
- Durability/longevity
- Reuse
- Emissions
- Technological/ biological cycles
- Health
- Transparency
- Maintainability

This environmental viewpoint also explores life-cycle costs—reducing carbon emissions, or best-case scenario, producing a net-positive with potential for regenerative impacts. Sustainable and healthy materials selections and specifications and life-cycle analysis (LCA) can lead to healthier environments and potential reduction and/ or sequestration of carbon. HDR conducts life-cycle cost analyses (LCCAs) early in the design process to estimate the overall costs of project alternatives and to select the design that ensures the facility and other project components will provide the lowest overall cost of ownership. The LCCA process can be integrated into the design process and incorporate local energy standards. Our experts analyze the numerous costs associated with acquiring, operating, maintaining, and disposing of a building or building system, which usually fall into the following categories: initial costs; fuel costs; operation, maintenance, and repair costs; replacement costs; residual values; finance charges; and non-monetary benefits or costs. With all the information available today, it is vital to cut through the information overload to understand these issues, start discussions and work toward a healthier world, community, and home.

D.

Project Approach

D. Project Approach - Schedule

Successful completion of projects demands strong leadership, a complete understanding of County and FDOT requirements, and a focused/experienced staff who understand how to develop a design that appropriately integrates the various design and agency requirements that are applicable.

Once the manpower projection is developed with the necessary resources to execute the assignment, the Project Manager will develop a resource-loaded schedule. Schedules will be issued during weekly production summit meetings with the overall Team to demonstrate that all work tasks are sufficiently loaded with manpower resources to deliver projects on or ahead of schedule. Each schedule update will document each work task from the NTP through final completion.

• Manage the Required Work to Meet the Established Schedule

CONTROLS TO MAINTAIN SCHEDULE

HDR understands and realizes that time is money and project delays cost money. Prolonged activities and delayed progress are a drain on the valuable resources of both the County and HDR. As a firm, this is not acceptable, and as a practice this is not the way HDR does business to earn the trust and confidence of our clients. We will prepare a detailed schedule for each task, highlighting critical path items and major work areas, including a breakdown of the sub tasks and corresponding timelines and manpower required to complete the work. Included in our schedule is the allocation of adequate QA/QC time and constructability reviews during each milestone or phase submittals. Whenever possible, multiple tasks are scheduled to be performed simultaneously to promote efficiency and fast-track project performance. This project schedule will be presented to the County's Project Manager for approval at the kick-off meeting. The QA/QC tasks are completed prior to submittal of documents to the County.

Our team members have significant experience with a wide variety of transportation, facilities, park and architecture projects for Hernando County. This experience allows us to meet or beat proposed project schedules. HDR will use a two-phased management approach that includes:

Phase I – Baseline Planning

Phase II – Project Tracking

Developing and maintaining project schedules and keeping lines of communication open are crucial to the project success. These principles will foster the most efficient service:

- Providing an appropriate group of experienced professionals and production staff who understand the scope of work, the project constraints and the schedule and budget requirements.
- Utilizing seasoned specialists in the core disciplines with experience working on local government projects.

Being Proactive: Our Project Manager and Technical Leads will be proactive in coordinating with the HDR project team (daily) and Hernando County (on a weekly or bi-weekly basis as is appropriate).

We will remain focused on critical-path items, subcontractor tasks, utility coordination, environmental permits, gopher tortoise surveys, County review comments and other time-sensitive items that require 3rd party review and approval.

HDR will meet your budget requirements for each project through a proven approach to project execution, CPM project scheduling, resource planning/scheduling and utilizing HDR's web-based project management tools. We will use Microsoft Project and internal software to manage schedule performance and to plan resource utilization. Major work order tasks will be planned as a series of subtasks, thereby accommodating a bottom-up approach at the schedule development stage, a proper linkage of predecessor and successor activities, and an effective management tool to track and adjust schedules and to reallocate resources as the work proceeds. Close coordination between the County, our PM, Bijan and the Task Leader helps ensure timely project completion.

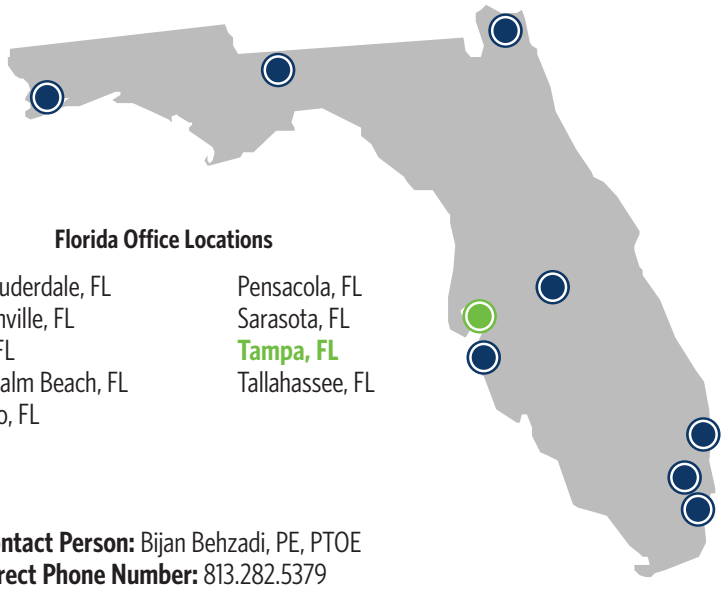
E.

Work Coordination

HDR's Florida
Practice Opened in
1974

9 LOCAL OFFICES

400+ LOCAL STAFF



Florida Office Locations

Fort Lauderdale, FL
Jacksonville, FL
Doral, FL
West Palm Beach, FL
Orlando, FL
Pensacola, FL
Sarasota, FL
Tampa, FL
Tallahassee, FL

Contact Person: Bijan Behzadi, PE, PTOE
Direct Phone Number: 813.282.5379
Main Phone Number: 813.466.9211
Address: 4830 W Kennedy Blvd, Suite 400,Tampa, FL 33609-2548
Fax Number: 813.282.2430
Email: Bijan.behzadi@hdrinc.com
Website: hdrinc.com

E. Work Coordination

• Proximity of Firms Office

HDR's managing local office for Hernando County is located at 4830 W Kennedy Blvd, Suite 400,Tampa, FL 33609-2548. Services will be performed and decisions regarding services will be made from our local Tampa office, located within 50 miles from the Hernando County Department of Public Works. We are less than 20 minutes away from the FDOT D-7 headquarters and less than 40 minutes from the FDOT D-7 Brooksville Maintenance office which is the primary contact point for FDOT access connection, drainage connection and utility permits. Our close proximity to FDOT D-7 and the Brooksville Maintenance Office will facilitate the coordination required for any Task Order assignments that include work that is within FDOT right of way or includes facilities that will connect to or impact the State system.

Subconsultant Work Location

SUBCONSULTANT FIRM | WORK ADDRESS	MILES FROM COUNTY
Adams Traffic, Inc. | 2404 Airport Rd, Suite 2, Plant City, FL 33563	51 mi.
Cumbey & Fair, Inc. | 2463 Enterprise Rd, Clearwater, FL 33763	61 mi.
Florida Bridge & Transportation, Inc. | 633 Dartmouth St, Orlando, FL 32804	65 mi.
Marr Traffic, Inc. | 7525 Currency Drive, Orlando, FL 32809	81 mi.
Precision Contracting Services, Inc. | 8812 Venture Cove, Tampa, FL 33637	45 mi.
Tierra, Inc. | 7351 Temple Terrace Hwy Tampa, FL 33637	46 mi.

• Firm's Familiarity with Project Area

Our Tampa office is the home of our Project Manager, Bijan and has the majority of the personnel in place to provide services directly to Hernando County. This allows our Team to respond in a timely manner and be readily accessible for meetings with County staff or for site visits quickly, regularly, and cost effectively.

HDR has carefully selected each team member based on his or her experience and familiarity to Hernando County and their ability to augment our deep bench of local design staff.

In his role, Bijan has the responsibility and authority to designate resources as needed for completion of tasks. Our team members have proven performance with Hernando County, and all team members will continue to provide the County with prompt, responsive, and quality services.

• Knowledge of the Local Labor & Material Markets

The HDR team has a proven, in-depth familiarity with Hernando County's labor and materials market, making us well-equipped to handle projects in the area. Through the vast quantity of local projects that HDR has prepared for Hernando County, as well as adjacent municipalities and FDOT District 7, we possess knowledge of the local markets for the purpose of product availability and cost of materials. This information is considered when designing a project to create a project that is cost efficient and supports the local community.

Statement of Qualifications

CONTINUING TRAFFIC ENGINEERING SERVICES

23-RFQ00414/CR

Hernando County

December 4, 2023

Cover Letter

December 4, 2023

Hernando County Board of County Commissioners
Alisa Pike, Procurement Coordinator
15470 Flight Path Drive
Brooksville, FL 34604

RE: RFQ No. 23-RFQ00414/CR - Continuing Traffic Engineering Services

Dear Ms. Pike and Selection Committee Members:

HDR is pleased to provide the County with our Statement of Qualifications (SOQ) for providing a myriad of professional traffic engineering, design, studies, Intelligent Transportation Systems (ITS) and production support services required to deliver needed infrastructure and transportation improvements for the public.

We are proposing our most capable staff for this contract including key personnel that have proven their ability to successfully work in partnership with Hernando County, FDOT District 7 and other agency staff to deliver a variety of traffic engineering study and design projects for the County. Our core team members are the same professionals who have served Hernando County under the previous Continuing Traffic Engineering Services contracts over the last 5 years. HDR understands the vital importance of maintaining a strong and collaborative partnership with all Hernando County Department of Public Works (HCDPW) staff and the need to be proactive and responsive in delivering services that meet your needs and expectations; and comply with the Federal, State, and County standards, manuals, and practices as applicable. HDR's ability to provide all the core services required under this Continuing Traffic Engineering Services contract from a single office located less than 50 minutes from Brooksville, assures the County of prompt, comprehensive and quality services on any Task Order assignment.

HDR's Experience and Familiarity with County and FDOT Staff

Based on our team's experience with delivering Hernando County projects, our in-depth knowledge of all the traffic engineering services required by the County and our established working relationships with County staff, HDR will provide services in an efficient and cost effective manner. We understand that County staff resources are burdened more than ever, and consequently, an important part of our job as the engineering consultant is to successfully deliver services and projects with minimal County involvement and oversight. HDR will always keep the County fully informed on progress and all key issues requiring County input as we complete Task Order assignments. HDR's experience and our ability to satisfy the requirements and interests of all internal and external stakeholders will allow the County to minimize its oversight efforts and maintain focus on other important County business.

Many existing and proposed Hernando County infrastructure components may be located within FDOT right of way, connect to, or impact FDOT owned systems; therefore, a thorough knowledge of both County and FDOT District 7 practices and processes is imperative. In order to effectively serve the County under this Continuing Traffic Services contract, cooperative working relationships with both County and FDOT District 7 staff are required. Our staff understands the interests of the County; we know how to serve as your partner, and we are well acquainted with FDOT staff that are responsible for project reviews, access connection, drainage connection and utility permitting and various other approvals that may be required for selected projects. We also have strong working relationships with FDEP, SWFWMD, USACOE, CSX and other agencies whose involvement may be required for selected Task Order assignments issued under this contract.

The HDR Team

HDR is proposing the same proven staff that have successfully completed studies, designs, plans, specifications and cost estimates on prior Hernando County projects as well as team members who have completed other projects similar in scope to the Task Order assignments anticipated under this contract. Several of our prior Hernando County projects and other representative projects are described in our proposal. Through our work under the existing Continuing Traffic Engineering Services contracts and under various stand-alone contracts with Hernando County, we have proven that HDR is a trusted partner by consistently providing flexible, collaborative service, so that the efforts of HDR and the County can remain focused on providing superior projects that meet and exceed your expectations. Bijan Behzadi, PE, PTOE will serve as Project Manager for the HDR team. Mr. Behzadi has over 38 years of dedicated professional service to enhancing travel safety and efficiency in Florida.

Project Specific Knowledge and Understanding

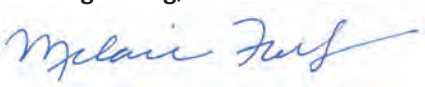
HDR has successfully completed traffic studies, traffic designs and construction plans for dozens of projects under similar task order based contracts for local governments throughout the Tampa Bay region. Under the FDOT District 7 General Engineering Consultant (GEC) contract that HDR has held for over 35 years, we have also provided plans review and work program support services including interstate program management for numerous FDOT District 7 projects located in Hernando County and throughout the District. Our experience stemmed from working with multiple highway agencies and has provided us with a unique understanding of traffic study and traffic design practices that are used by local governments, FDOT District 7 and other agencies that may be stakeholders for a particular Task Order assignment.

Details of our project understanding and approach to this Continuing Traffic Engineering Services contract are presented along with other relevant information in the technical proposal sections that follow.

Based on the experience, knowledge, resources and availability of the HDR team and our strong desire to continue serving Hernando County, we are ideally positioned to provide traffic study, design and support services that will keep the County's arterial and sub-arterial traffic signal systems, and traffic control devices operating effectively and safely and to HCDPW's complete satisfaction.

We look forward to the opportunity to serve as your Continuing Traffic Engineering Services consultant.

Sincerely,
HDR Engineering, Inc.



Melanie Fowler, PE
Tampa Office Principal
813.282.2352/melanie.fowler@hdrinc.com
4830 W Kennedy Blvd, Suite 400, Tampa, FL 33609-2548

A.

Project Team

A. Project Team

• Qualifications & Relevant Individual Experience

The HDR Team is comprised of local and regional experts with a proven record of successfully providing professional engineering solutions to local government clients and the Florida Department of Transportation. We have provided an organizational chart at the end of Section B as well as qualifications for key team members of our project team in the pages that follow.

TRUSTED LOCAL LEADERS SUPPORTED BY COMMITTED RESOURCES

Our Project Manager, Bijan Behzadi, PE, PTOE and key team members have proven performance in providing quality and efficient services in the past, and we have demonstrated in our proposal the level of staffing, service, relevant experience and abilities we will bring to the County on the Continuing Traffic Engineering Services contract (CTESC). HDR requests your favorable response to continue to serve as your trusted partner and successfully deliver all required management, traffic engineering design, traffic engineering studies, fiber optics, ITS, technical assistance and construction services. Our deep pool of experienced resources should provide the County with a comfort level that we will be able to meet the peak staffing demands and provide back-up for emergency, critical or unforeseen situations on any task assignment.

The HDR team offers an excellent cross section of the traffic engineering design, traffic engineering studies and support disciplines needed to successfully complete any assignment required under this task-based contract, and we will require no learning curve. Our project team's current and projected workload will allow us to continue providing Hernando County with quality services. We are available to begin working immediately on new assignments upon receiving Notice-to-Proceed. We will continue to commit the necessary resources to meet the requirements of each task assignment in a cost-effective manner. All HDR team members are committed to exceeding Hernando County's expectations on each task issued under this contract.

Tom Quinn, PE
Quality Assurance

Melanie Fowler, PE
Project Principal

Bijan Behzadi, PE, PTOE
Project Manager

Marlin Register, PE
Quality Control

Huijing Qiang, PE
Quality Control

Greg Stevanus, PE
Deputy Project Manager

Key Team Members

N. Prabaharan, PE, PTOE
Traffic Engineering Studies Task Lead

Michael Oates, PE, PTOE
Traffic Engineering Design Task Lead

Jamie Krzeminski, PE, PTOE
Review Development of Regional Impact (DRI) Applications & Reports

Richard Atta-Armah, PE
Corridor-Wide Signal Retiming

Heather Hubbard, PE
Intersection Control Evaluation (Roundabouts, RCUT)

Brian Zimmerman, PE
Roadway & Intersection Design

Jose Gonzalez, PE
Roadway & Intersection Lighting

Jim Johnston, PE
Drainage

Key Staff

MELANIE FOWLER, PE

PROJECT PRINCIPAL

Melanie has extensive civil engineering experience, specializing in permitting, compliance review, stormwater management, utility design, and land development projects. She has provided project management, planning, design, and construction phase services for various projects. She has completed numerous water resources, solid waste, and site development projects for a variety of private, local, and state clients in Florida. Melanie is a registered professional engineer in Florida. She has served as quality assurance manager for both traditional and alternative delivery projects.

Credentials: Professional Engineer, FL, No. 56133
Education: B.S. Civil Engineering
Office Location: Tampa, FL

- Hernando County, Continuing Traffic Engineering Services
- Hernando County, Continuing Professional Engineering Services
- Hillsborough County, Transportation Design & General Engineering Services
- Pasco County, Miscellaneous Professional Engineering Services
- FDOT District 7, General Engineering Consultant
- Manatee County, Transportation Engineering Consulting Services
- Polk County, Professional Engineering Services for Roads & Drainage
- FDOT District 7, US 19 from Northside to CR 95
- FDOT District 7, Districtwide Traffic Operational Studies for Innovative Intersections & Interchange Treatments (III)

BIJAN BEHZADI, PE, PTOE

PROJECT MANAGER

Bijan is a recognized leader in transportation engineering with 38 years of dedicated professional service to enhancing travel safety and efficiency in Florida. He has invested a significant portion of his professional career, 20 years, with the FDOT while contributing to safety, design, operations, and management of both conventional and advanced traffic control strategies, systems, technologies, and devices.

Credentials: Professional Engineer, FL, No. 43868; Professional Traffic Operations Engineer, FL, No. 544; Advanced Maintenance of Traffic Certification
Education: Post Graduate Study Civil Engineering-Transportation; M.S. Civil Engineering-Transportation; B.S. Civil Engineering
Office Location: Tampa, FL

- Hernando County, Continuing Traffic Engineering Services
- Hernando County, Continuing Professional Engineering Services
- Hillsborough County, Transportation Design & General Engineering Services
- Pasco County, Miscellaneous Professional Engineering Services
- FDOT District 7, General Engineering Consultant
- Manatee County, Transportation Engineering Consulting Services
- Polk County, Professional Engineering Services for Roads & Drainage
- FDOT District 7, US 19 from Northside to CR 95
- FDOT District 5, Districtwide TSM&O Retiming
- FDOT District 7, Districtwide Traffic Operational Studies for Innovative Intersections & Interchange Treatments (III)

Tom Quinn, PE
Quality Assurance

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 35
Office Location: Tampa, FL

Tom has experience in Project Development and Environmental (PD&E) Studies, corridor studies, conceptual design, final design and bidding/construction assistance for the State, various counties and municipalities.

- Hernando County, Cont. Traffic Engineering Services
- Hernando County, Cont. Professional Engineering Services
- Hernando County, Barclay Ave Phase 1 & 2, Final Design
- Hernando County, SR 50 from Windmere Rd to US 98 Final Design
- Hillsborough County, Transportation Design & GEC
- Pasco County, Misc. Professional Engineering Services
- FDOT District 7, GEC
- Manatee County, Transportation Engineering Consulting Services
- FDOT District 7, US 19 from Northside to CR 95

Marlin Register, PE
Quality Control

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 27
Office Location: Tampa, FL

Marlin has experience in Florida performing project management and design of transportation infrastructure projects. His professional career has been devoted primarily to roadway design and engineering studies in roadway and drainage design, hydraulic and hydrologic modeling.

- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- FDOT District 7, US 19 from Northside to CR 95
- FDOT District 7, US 19 from North of CR 95 to South of Pine Ridge Way
- Pinellas County, Professional Engineering Services for San Martin Blvd over Rivera Bay Bridge Replacement PD&E
- FDOT District 7, US 41 / Florida Ave RRR

Huijing Qiang, PE
Quality Control

Credentials: Professional Engineer, FL; Project Management Professional
Education: M.S. Civil Engineering; B.S. Electrical Engineering
Years' Experience: 17
Office Location: Doral, FL

Huijing is an experienced professional well versed in Connected and Autonomous Vehicle (CAV) and Smart Mobility including TSM&O planning and implementation, CAV planning, design, and deployment, and ITS in all project phases. Also experienced in TMC Operations, ITS maintenance, project and task management for technology-oriented projects such as ITS and TSM&O on-call projects, TMC Operations, GEC and TWO based projects, conventional and alternate delivery projects.

- FDOT District 7, GEC
- FDOT District 5, Districtwide TSM&O Retiming
- FDOT District 6, Traffic Signal Retiming & Fine Tuning on various Corridors
- FDOT District 6, Palmetto Express Lanes Phases 1 & 2

Greg Stevanus, PE
Deputy Project Manager

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 16
Office Location: Tampa, FL

Greg is a hands on traffic engineer with experience on multiple transportation projects ranging from complex interstate /interchange design to resurfacing and intersection improvement projects. He is proficient and skilled in design and preparation of traffic plans including signalization, lighting, signing and pavement markings and ITS.

- Hernando County, Cont. Traffic Engineering Services
- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- Manatee County, Transportation Engineering Consulting Services
- Polk County, Professional Engineering Services for Roads & Drainage
- FDOT District 7, US 19 from Northside to CR 95

N. Prabaharan, PE, PTOE
Traffic Engineering Studies Task Lead

Credentials: Professional Engineer, FL; Professional Traffic Operations Engineer, FL
Education: M.S. Civil Engineering; B.S. Civil Engineering
Years' Experience: 24
Office Location: Tampa, FL

Praba is a senior traffic engineer with experience working on projects related to transportation Project Development and Environmental (PD&E) studies, corridor traffic studies, Intersection Control Evaluations (ICE), interchange traffic studies, traffic impact studies, travel demand modeling, traffic operation and transit planning. His technical expertise includes conducting traffic operational analysis, developing corridor, intersection and interchange design alternatives, and preparing traffic technical reports.

- Hernando County, Cont. Traffic Engineering Services
- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- FDOT District 7, US 19 from Northside to CR 95
- FDOT District 7, Districtwide Traffic Operations Studies for III
- FDOT District 5, Districtwide TSM&O Retiming

Michael Oates, PE, PTOE
Traffic Engineering Design Task Lead

Credentials: Professional Engineer, FL; Professional Traffic Operations Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 34
Office Location: Tampa, FL

Michael has an extensive background in transportation engineering. He has managed and designed traffic plans and prepared studies for FDOT for signalization, signing and pavement marking, lighting, ITS and traffic control to enhance the safety and capacity of Florida roadways. He is proficient at reviewing traffic plans and has reviewed over 600 plan sets for FDOT.

- Hernando County, Cont. Traffic Engineering Services
- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- Pasco County, Misc. Professional Engineering Services
- Manatee County, Transportation Engineering Consulting Services
- Polk County, Professional Engineering Services for Roads & Drainage

Jamie Krzeminski, PE, PTOE
Review DRI Applications & Reports

Credentials: Professional Engineer, FL; Professional Traffic Operations Engineer, FL
Education: M.E. Civil Engineering; B.S. Civil Engineering
Years' Experience: 27
Office Location: Orlando, FL

Jamie is a senior transportation engineer with extensive experience in transportation planning and traffic engineering, much of which has been focused on the provision of Complete Streets. Jamie has worked with both public and private clients including cities, counties and MPOs in 20 states around the U.S. on projects ranging from intersection and corridor-level multimodal improvement projects to region-wide bicycle and pedestrian master plans.

- FDOT District 7, GEC
- FDOT District 5, Districtwide TSM&O Retiming
- Seminole County, Rolling Hills Area Corridor Study
- Orange County, Complete Streets Policy & Implementation Plan
- Orange County, Ped/Bike Safety Action Plan

Richard Atta-Armah, PE
Corridor-Wide Signal Retiming

Credentials: Professional Engineer, FL
Education: M.E. Civil Engineering; C.E. Technology; B.S. Civil Engineering
Years' Experience: 28
Office Location: Orlando, FL

Richard has served as a project manager in several traffic related projects including signalization, signing and pavement markings projects for FDOT and other public agencies. Recent projects include the E-W and Parramore Bus Rapid Design and implementation projects, I-4 Ultimate Signal systems design, active arterial management, traffic adaptive design, signing and marking, ITS, and ATMS projects.

- Hernando County, Cont. Traffic Engineering Services
- Hernando County, Cont. Professional Engineering Services
- FDOT District 5, Districtwide TSM&O Retiming
- FDOT District 5, I-4 Ultimate

Heather Hubbard, PE
Intersection Control Evaluation (Roundabouts, RCUT)

Credentials: Professional Engineer, FL
Education: M.S. Civil Engineering; B.S. Civil Engineering
Years' Experience: 13
Office Location: Tampa, FL

Heather is experienced providing traffic engineering, multi-modal transportation planning, and PD&E services throughout the State of Florida and throughout the country. Her core areas of focus are in innovative intersection concept development through microsimulation and macroscopic operational analysis, travel demand modeling, GIS mapping and complete streets development. She has served as a key member on numerous projects in both technical and lead capacities.

- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- Manatee County, Transportation Engineering Consulting Services
- FDOT District 7, Districtwide Traffic Operations Studies for III

Brian Zimmerman, PE
Roadway & Intersection Design

Credentials: Professional Engineer, FL
Education: M.E. Civil Engineering; B.S. Civil Engineering; Certified Public Manager
Years' Experience: 19
Office Location: Tampa, FL

Brian has civil engineering experience with 14 years of design experience in Florida. His diverse work experience includes working as roadway engineer for FDOT making his knowledge of FDOT and local agency policies invaluable. Brian is proficient with coordinating design efforts with multiple disciplines and stakeholders.

- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- Manatee County, Transportation Engineering Consulting Services
- FDOT District 7, US 19 from Northside to CR 95

Jose Gonzalez, PE
Roadway & Intersection Lighting

Credentials: Professional Engineer, FL
Education: B.S. Electrical Engineering
Years' Experience: 31
Office Location: Tampa, FL

Jose has provided electrical construction and design services for commercial, industrial, governmental and institutional clients. He is proficient in the design of roadway lighting systems, site and streetscape lighting systems, medium voltage primary and secondary electrical power distribution systems, lift, stormwater and leachate pump stations and emergency stand by systems.

- Hernando County, Cont. Professional Engineering Services
- Hillsborough County, Transportation Design & GEC
- Pasco County, Misc. Professional Engineering Services
- FDOT District 7, GEC
- Manatee County, Transportation Engineering Consulting Services

Jim Johnston, PE
Drainage

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 33
Office Location: Tampa, FL

Jim is a chief drainage engineer with experience in drainage and stormwater management analysis and design. His experience includes scope development, quality control / assurance reviews, peer reviews, and construction plan and drainage documentation reviews.

- Hernando County, Cont. Traffic Engineering Services
- Hernando County, Cont. Professional Engineering Services
- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC
- Pasco County, Misc. Professional Engineering Services
- Manatee County, Transportation Engineering Consulting Services
- Polk County, Professional Engineering Services for Roads & Drainage
- FDOT District 7, US 19 from Northside to CR 95

• Unique Knowledge of Key Team Members Relating to the Project

Our Project Manager, **Bijan Behzadi**, began working with the County as the Project Manager on the initial Continuing Traffic Engineering Services Contract in 2018. Bijan has had the privilege of working with the County on a wide variety of task order assignments including intersection improvements on Forest Oaks Blvd at Deltona Blvd., traffic impact analysis on the Citizens Center for Success Development, and signal retiming along Mariner Blvd from County Line Road to Northcliffe Blvd.

Our Deputy Project Manager, **Greg Stevanus**, has continuously been involved with Hernando County task order assignments providing traffic engineering services over the past 5 years.

HDR's Task Leads, **N. Prabaharan** and **Michael Oates**, bring significant experience leading diverse technical teams, drawing on the right expertise to deliver successful projects and value to Hernando County. Task Leads will be selected and assigned based on the project type to bring leadership based on the most relevant experience. They will be responsible for the day-to-day performance of the project(s) they manage and will work collaboratively with Bijan to provide consistency across all HDR projects for Hernando County.

HDR's Project Principal, **Melanie Fowler**, will work with Bijan, Greg and the Task Leads to provide the appropriate staffing resources to meet Hernando County's expectations for technical innovation and project efficiency. As HDR's Tampa Office Principal, Melanie has the authority and internal network to assign the right technical and managerial resources to Hernando County to deliver high-quality, efficient capital improvement projects.

• Experience on Projects as a Team

Our dynamic and integrated team lives here and works here, recognizing the importance of adding value to our local community by solving difficult challenges and inspiring positive change. Having provided services in Florida since 1974, we have built solid working relationships with the majority of state agencies. As the table below shows, HDR's key team members have worked together to deliver on a number of continuing services contracts across the state, and we will bring this wealth of experience to deliver tasks for Hernando County.

Project Experience of HDR Staff

Name	Role	CONTRACTS 1	2	3	4	5	6	7	8	9
Melanie Fowler, PE	Project Principal	●	●	●	●	●	●	●		●
Bijan Behzadi, PE, PTOE	Project Manager	●	●	●	●	●	●	●	●	●
Tom Quinn, PE	Quality Assurance	●	●	●	●	●	●	●		
Marlin Register, PE	Quality Control		●		●		●			
Huijing Qiang, PE	Quality Control				●				●	
Greg Stevanus, PE	Deputy Project Manager	●	●		●	●	●	●		
N. Prabaharan, PE, PTOE	Traffic Engineering Studies Task Lead	●	●		●		●		●	●
Michael Oates, PE, PTOE	Traffic Engineering Design Task Lead	●	●	●	●	●		●		
Jamie Krzeminski, PE, PTOE	Review DRI Applications & Reports				●				●	
Heather Hubbard, PE	Intersection Control Evaluation (Roundabouts, RCUT)		●		●	●				●
Richard Atta-Armah, PE	Corridor-Wide Signal Retiming	●							●	
Brian Zimmerman, PE	Roadway & Intersection Design		●		●	●	●			
Jose Gonzalez, PE	Roadway & Intersection Lighting		●	●	●	●				
Jim Johnston, PE	Drainage	●	●	●	●	●	●	●		

CONTRACT KEY

NO.	TITLE OF PROJECT	NO.	TITLE OF PROJECT
1	Hernando County, Continuing Traffic Engineering Services	6	FDOT District 7, US 19 from Northside Dr to CR 95
2	Hillsborough County, Transportation Design & General Engineering Services	7	Polk County, Professional Engineering Services for Roads & Drainage
3	Pasco County, Miscellaneous Professional Services	8	FDOT District 5, Districtwide TSM&O Retiming
4	FDOT District 7, General Engineering Consultant	9	FDOT District 7, Districtwide Traffic Operations Studies
5	Manatee County, Transportation Engineering Consulting Services		

• Key Staff Involvement in Project Management & On-site Presence

The proposed key staff has been carefully chosen based on their extensive track record of successful projects with Hernando County spanning several decades. Bijan will be the contract PM, and internally weekly meetings will keep Greg, Praba, Michael and other key staff involved with the project management decisions and specific details of the contract and tasks. At the start of a project, the key staff assigned to that particular task will go in the field for an on-site review. Subsequent on-site field reviews will also take place throughout the duration of the projects as needed to gather and verify information.

Our entire Team has demonstrated expertise including involvement in as-needed engineering service contracts and task-specific projects, many for Hernando County.

• Time Commitment of Key Staff

The HDR Team has ample capacity to support Hernando County's Continuing Traffic Engineering Services over the life of the contract, and will provide prompt, responsive, quality service throughout the contract term. HDR employee-owners are keenly aware of the importance for providing stellar client service; in fact, a cornerstone of our continued success has been the commitment to "Clients for Life", which is symbolic of the importance placed on earning repeat business from our clients – a direct measure of HDR's responsiveness, service, and value.

Time Commitment for Key HDR Staff

KEY STAFF | ROLE	12 M AVAIL.
Melanie Fowler, PE | Project Principal	30%
Bijan Behzadi, PE, PTOE | Project Manager	55%
Tom Quinn, PE | Quality Assurance	40%
Marlin Register, PE | Quality Control	40%
Huijing Qiang, PE | Quality Control	40%
Greg Stevanus, PE | Deputy Project Manager	50%
N. Prabaharan, PE, PTOE | Traffic Engineering Studies Task Lead	45%
Michael Oates, PE, PTOE | Traffic Engineering Design Task Lead	60%
Jamie Krzeminski, PE, PTOE | Review DRI Applications & Reports	55%
Heather Hubbard, PE | Roundabouts	30%
Richard Atta-Armah, PE | Corridor-Wide Signal Retiming	50%
Brian Zimmerman, PE | Roadway & Intersection Design	30%
Jose Gonzalez, PE | Roadway & Intersection Lighting	40%
Jim Johnston, PE | Drainage	40%

• Qualification & Relevant Subconsultant Experience

We hand-selected trusted subconsultants for this contract that have successfully worked with HDR in the past, and their specific work history is well-tailored to support this contract. We are confident that we will provide the County with a full-service, responsive, and experienced Team for this contract.

Adams Traffic, Inc. has provided traffic data collection services in Florida for over 22 years. Adams Traffic serves as the traffic data collection subconsultant on numerous FDOT districtwide contracts including traffic and safety studies, statistics annual counts, signal retiming, and PD&E studies.

Cumbey & Fair, Inc. (C&F) is a progressive firm based in Clearwater, Florida providing quality transportation engineering and land surveying services for over 48 years (since 1975). C&F is a full service Professional Engineering, Survey and Subsurface Utility firm with the in-house skilled professionals to perform subsurface utility engineering (SUE), survey & mapping, construction management, biddability. With a total staff of 35, C&F has four (4) licensed Professional Engineers and three (3) licensed Professional Surveyors & Mappers on staff, all of whom have extensive experience working on task driven assignment contracts.

Florida Bridge & Transportation, Inc. (FBT) specializes in the design of transportation-related structures and has been in business since 2005. FBT has designed over 170 bridges, including all types of bridges ranging from low-level water crossings and long-span bridges over interstate routes to an award-winning curved steel bridge along Wekiva Parkway. FBT's traditional design projects include bridge replacements, widening, new construction and repair projects. They have designed many miscellaneous structures including sheet pile walls, retaining walls, box culverts, bridge barrier retrofits, overhead sign structures and mast arm/span wire signal structures.

Tierra, Inc. is a full-service consulting geotechnical, environmental and construction materials testing engineering firm that was formed with the intent of building upon the many years of combined experience of their founding principals. Tierra is committed to providing quality, responsive service, establishing a reputation for sound approaches and professional competence in a wide range of technically demanding areas.

Marr Traffic, Inc. is a privately owned traffic data collection firm. Their leadership team has over 60 years of traffic data collection and project management experience combined and has completed tens of thousands of data collection projects throughout the Southeast. Over 150 clients across 15 states have trusted Marr Traffic as their traffic data collection partner. Marr Traffic currently provides traffic data for many counties, municipalities, and DOTs throughout the Southeast.

Precision Contracting Services, Inc. (PCS) is a multi-faceted professional services firm registered as a corporation in the State of Florida, providing design, installation, integration, maintenance and asset management services for fiber optic communication infrastructures supporting various network and low voltage applications. PCS has been providing continued quality service to Florida clients since 1990.

Subconsultants

Nancy Adams, PE
(Adams Traffic, Inc.)
Traffic Data Collection

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 33
Office Location: Plant City, FL

Nancy has extensive experience in traffic data collection. She has been responsible for hundreds of data collection assignments for the Florida DOT and many local government agencies. She provides hands-on service and is personally involved in the management, scheduling, collection, reporting and quality review of each Adams Traffic assignment.

- Hernando County, Cont. Professional Engineering Services
- Hernando County, Cont. Traffic Engineering Services
- Hillsborough County, Transportation Design & GEC
- Pasco County, Misc Professional Engineering Services
- FDOT District 7, GEC
- FDOT District 5, Districtwide TSM&O Retiming
- Polk County, Professional Engineering Services for Roads & Drainage

Pat McCormack, PSM
(Cumbey & Fair, Inc.)
Survey/SUE/Utility Locates

Credentials: Professional Land Surveyor & Mapper, FL
Education: B.S. Geomatics
Years' Experience: 28
Office Location: Clearwater, FL

Pat's experience in Surveying and Mapping includes Boundary Surveys, Topographic Surveys, Subsurface Utility Engineering, Right of Way Maps, Control Surveys, Wetland Jurisdictional Surveys, Construction Layout and Route Surveys. He presently serves as Vice President and Senior Survey/SUE Manager for Cumbey & Fair. In this capacity, he develops and negotiates scope of services, establishes, and maintains project budgets, generates schedules and quality assurance procedures.

- Hernando County, Cont. Traffic Engineering Services
- Hillsborough County, Transportation Design & GEC
- Hernando County, LAP Contract
- Hernando County, Miscellaneous Services for Geomatics
- FDOT District 7, GEC
- FDOT District 7, Districtwide Traffic Operation Studies for III

Mark Niedermann, PE
(Florida Bridge & Transportation, Inc.)
Miscellaneous Structures

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 36
Office Location: Orlando, FL

Mark's 36 years of experience as a Bridge Engineer have included all phases of continuing service projects including QA-QC review, peer review, design, repair and construction design assignments. His bridge design experience includes continuous steel girder bridges, precast and cast-in-place flat slab bridges, prestressed girder bridges, bridge widenings, RRR projects with ADA retrofits, Value Engineering Studies, steel and concrete pedestrian bridges, post-tensioned substructure units and various bridge load ratings.

- FDOT District 1, SR 37 over Alafia River
- Florida's Turnpike Enterprise, Widening Neptune Rd to Osceola Parkway
- Lake County, Wekiva Parkway Section 3B (SR 46 to US 441)
- Lake County, Lois Drive Bridge Replacement

Juan Valenzuela, PE
(Florida Bridge & Transportation, Inc.)
Miscellaneous Structures

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 22
Office Location: Orlando, FL

Juan currently serves as the Director of Engineering for FBT and is responsible for the design, analysis and verification of a wide variety of transportation structures. Juan possesses a strong design knowledge of foundation, substructure and superstructure components for new bridges, bridge widenings and bridge replacements. He has participated in other structural design assignments including ITS structures, mast arm and strain pole signal structures, overhead sign structures, sound walls, box culverts, steel sheet pile walls and concrete retaining walls.

- FDOT District 1, SR 37 over Alafia River
- Hillsborough County, CR 582 (Knights Griffin Rd) over Itchepackesassa Creek
- Lake County, Wekiva Parkway Section 3B (SR 46 to US 441)
- Lake County, Lois Drive Bridge Replacement

Bassel Kassem, PE
(Florida Bridge & Transportation, Inc.)
Miscellaneous Structures

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 26
Office Location: Orlando, FL

Bassel has 26 years of extensive structural engineering experience and has worked on several types of bridges, miscellaneous structures, inspections, and underwater inspection projects throughout the nation. His experience is in the design and management of engineering projects. His duties include preparing and maintaining project schedules and budgets, serving as the point-of-contact for the client, supervising and directing the project team(s), and coordinating efforts and issues with agencies and facility owners.

- FDOT District 2, CR 361 over Spring Warrior Creek South
- FDOT District 2, SR 200 (US 301) over Alligator Creek
- Central Florida Expressway Authority, SR 429 over Lust Rd Bridge
- St. Lucie County, 25th St over Ten Mile Creek Bridge

Brian Gentry, PE, PTOE
(Marr Traffic, Inc.)
Traffic Data Collection

Credentials: Professional Engineer, FL; Professional Traffic Operations Engineer
Education: B.S. Chemical Engineering
Years' Experience: 18
Office Location: Orlando, FL

Brian is a Florida-licensed professional engineer with almost 20 years of traffic engineering, traffic analysis, transportation planning, and expert witness testimony. His track record includes traffic signal engineering studies, traffic data collection, traffic operational studies, Active Traffic Management, Active Arterial Management, special event Traffic Control Plans, performing CEI services, and conducting signal warrant studies.

- Hillsborough County Public Works, Traffic Management Program
- City of Tampa, Transportation & Stormwater Services
- FDOT District 7, Traffic Operations
- City of Tampa, Transportation Division - Traffic Engineer

Bruce Boyd, RCDD
(Precision Contracting Services, Inc.)
Fiber Optic Cable Discovery & Inventory

Credentials: Registered Communications Distribution Designer, #151603R
Education: B.S. Technology
Years' Experience: 40
Office Location: Tampa, FL

Bruce has experience working in communication construction management and more than 15 years of financial management in the construction, mergers and acquisition marketplace for government and private sectors.

Contract Engineering, Systems Design, Estimating, and Inspection for PCS fiber optic projects. Lead all PCS activities for project engineering, estimating, management and sales. Developed award winning FiberTrak Network Design/Asset Management model.

Kevin Scott, PE
(Tierra, Inc.)
Geotechnical Services

Credentials: Professional Engineer, FL
Education: B.S. Civil Engineering
Years' Experience: 22
Office Location: Tampa, FL

Kevin's experience includes shallow and deep foundation analyses, retaining wall design, settlement analyses, and pavement evaluation. Kevin also has extensive experience with Pile Integrity Testing (PIT) and Cross-Hole Sonic Logging (CSL).

- Hernando County, Cont. Professional Engineering Services
- Hernando County, Broad St. & Croom Rd Signalization Improvements
- Hernando County, Lake Lindsey Rd & Ponce de Leon Blvd Intersection Improvements

Michael Bair, ASP, LEP
(Tierra, Inc.)
Geotechnical Services

Credentials: Associate Safety Professional; Licensed Environmental Professional
Education: B.A. Biology
Years' Experience: 27
Office Location: Tampa, FL

Michael's progressive experience has included all phases of a typical project from the laboratory to the field work to all of the required office tasks. He also reviewed work products for compliance with quality assurance/quality control objectives. His Program Management experience includes the Florida Department of Environmental Protection (Preapproval, PRP, LSSI), Florida Department of Transportation, several large private clients, and multiple municipal contracts.

- Hillsborough County, Transportation Design & GEC
- FDOT District 7, GEC

Christopher Garth, LEP
(Tierra, Inc.)
Geotechnical Services

Credentials: Licensed Environmental Professional
Education: B.A. Geography
Years' Experience: 21
Office Location: Tampa, FL

Christopher's experience includes Due Diligence Services, FDOT Level 1 and Level 2 Contamination Screening Evaluations, Developments of Regional Impact (DRI) groundwater and surface water monitoring and reporting, soil and groundwater sampling and monitoring activities for various land acquisition, development, construction and design projects.

- Hillsborough County, Taylor Rd Drainage Improvements
- Polk County, US 27 Highlands County Line to N of SR 60
- Hillsborough County, US 92 PD&E Study from E of I-4 to County Line Rd

Team's Experience

Name	Role	Years of Experience	EXPERIENCE	Preparation of Plans	Specifications	Engineer's Reports	Cost Estimating and Scheduling	Cost-Benefit Analysis	Technical Studies	Master Plans	Permitting	Bidding and Award	Construction Administration	Resident Engineering Inspection	Project Record Keeping & Close-out	Environmental Assessments
Melanie Fowler, PE	Project Principal	28		●	●	●	●	●	●	●	●	●	●		●	
Bijan Behzadi, PE, PTOE	Project Manager	38		●	●	●	●	●	●	●	●	●	●		●	
Greg Stevanus, PE	Deputy Project Manager	16		●	●	●	●	●	●			●	●		●	
Tom Quinn, PE	Quality Assurance	35		●	●	●	●	●	●	●	●	●	●		●	
Marlin Register, PE	Quality Control	27		●	●	●	●	●	●	●	●	●	●		●	
Huijing Qiang, PE	Quality Control	17		●	●	●	●	●	●	●	●	●	●		●	
N. Prabaharan, PE, PTOE	Traffic Engineering Studies Task Lead	24		●	●	●	●	●	●	●		●	●		●	
Mike Oates, PE, PTOE	Traffic Engineering Design Task Lead	34		●	●	●	●	●	●	●	●	●	●		●	
Matthew Wiesenfeld, PE	Roadway Safety & Studies	18		●	●	●	●	●	●	●	●	●	●		●	
Steve Morency, PE	Roadway Safety & Studies/Roadway & Intersection Lighting	7		●	●	●	●	●	●			●	●		●	
Kevin Dunn	Speed Limit Studies/Plans Review	41		●	●	●	●	●	●			●	●	●	●	
Bryan St. George, PE	Intersection Modeling & Analysis/Intersection Control Evaluation (Roundabouts, RCUT)	10		●	●	●	●	●	●	●		●	●		●	
Jamie Krzeminski, PE, PTOE	Review Development of Regional Impact Applications & Reports	27		●	●	●	●	●	●	●	●	●	●		●	
Heather Hubbard, PE	Intersection Control Evaluation (Roundabouts, RCUT)	13		●	●	●	●	●	●	●		●	●		●	
Richard Atta-Armah, PE	Corridor-Wide Signal Retiming/Transportation Systems Management & Operations	28		●	●	●	●	●	●	●	●	●	●		●	
Shawn Pope, PE	Corridor-Wide Signal Retiming	8		●	●	●	●	●	●			●	●		●	
Alex Zhang, PE	Intelligent Transportation Systems Design & Integration	9		●	●	●	●	●	●			●	●		●	
Jim Gu, PhD, PE, PTOE	Fiber-Optic & Wireless Communication Design/Transportation Systems Management & Operations	18		●	●	●	●	●	●	●	●	●	●		●	
Jose Gonzalez, PE	Roadway & Intersection Lighting	31		●	●	●	●	●	●		●	●	●		●	
Brian Zimmerman, PE	Roadway & Intersection Design	19		●	●	●	●	●	●	●	●	●	●		●	
Jake Hemingway, PE	Roadways & Intersections Design	7		●	●	●	●	●	●	●	●	●	●		●	
Jim Johnston, PE	Drainage	33		●	●	●	●	●	●	●	●	●	●		●	
Adam Mitchum, PE	Drainage	11		●	●	●	●	●	●	●	●	●	●		●	
Jake Phillips	Utility Coordination	10		●	●		●								●	
Heather Manganiello, PE	Utility Relocations	21		●	●	●	●	●	●	●	●	●	●		●	
Tracy Keenan, PE (HDRC)	Constructability/Bidability & CEI Task Lead	34		●	●	●	●	●	●			●	●	●	●	
Stefanie McQueen, AICP	Agency Coordination/Public Involvement/Special Events	21					●	●	●	●		●			●	
Barry Lenz	Environmental Permitting	40		●	●	●		●	●	●	●				●	●
Noemi Castillo, PE, PMP	Wetlands/Species	24		●	●	●		●	●	●	●				●	●
Joe Thompson	Right of Way Services	48					●	●	●							
Ben Ellis, PE	Civil Engineering	18		●	●	●	●	●	●			●	●		●	

B.

Firm/Team Capabilities

B. Firm/Team Capabilities

• Are the Lines of Authority & Coordination Clearly Identified?

HDR, through the partnership with carefully selected firms, has assembled a team of experts who have a long history of working collaboratively, provide redundancy of staff and have extensive experience working with Hernando County. The project manager and the primary point of contact for tasks is Bijan Behzadi.

For over 15 years Hernando County has entrusted HDR with improving transportation infrastructure in various local roadway networks and adjacent state highway systems. We have been fortunate to hold continuing services contracts with Hernando County since 2008, and we pride ourselves on the services we have provided over these years. We have thoroughly enjoyed working on the current Continuing Traffic Engineering Services Contract, and we are very excited about the opportunity to continue our partnership with the County because it allows us to act on our passion - to help make a real difference in the communities where we work.

HDR's prior experience with Hernando County has afforded us a solid understanding of the unique challenges the County proactively prepares for – finding the right balance of mobility and livability for our communities, and the cost and schedule limitations that come with every project. This creates exciting opportunities for County staff to partner with the consulting community to help facilitate the advancement of projects from concept-to-concrete to benefit the County residents. The HDR team is a part of this community, and we will leverage our unique perspective and experience to continue to serve as your trusted consultant-of-choice.

AUTHORITY & COORDINATION

As Project Manager for this contract, Bijan will oversee all project management activities including coordination, scoping of work orders, scheduling, design development, plans production, traffic engineering reports, progress reporting, budgets, invoicing, quality control and quality assurance. Bijan will work directly with the

County's Project Manager and other County staff as approved to initiate, manage, and monitor all work activities. Working in collaboration with Hernando County staff, HDR is committed to completing individual or multiple projects efficiently to maximize the infrastructure investment value the County and the public receive. Effective communication and coordination will maintain that HDR and Hernando County staff share a common understanding of the goals and objectives for each work order. HDR understands the key to successful project delivery is a full understanding of the scope for each work order and a commitment to the associated budget and schedule. Continuous communication with the County will promote project success and enable us to accommodate minor changes that may occur during the design concept development without adversely impacting the overall budget or schedule.

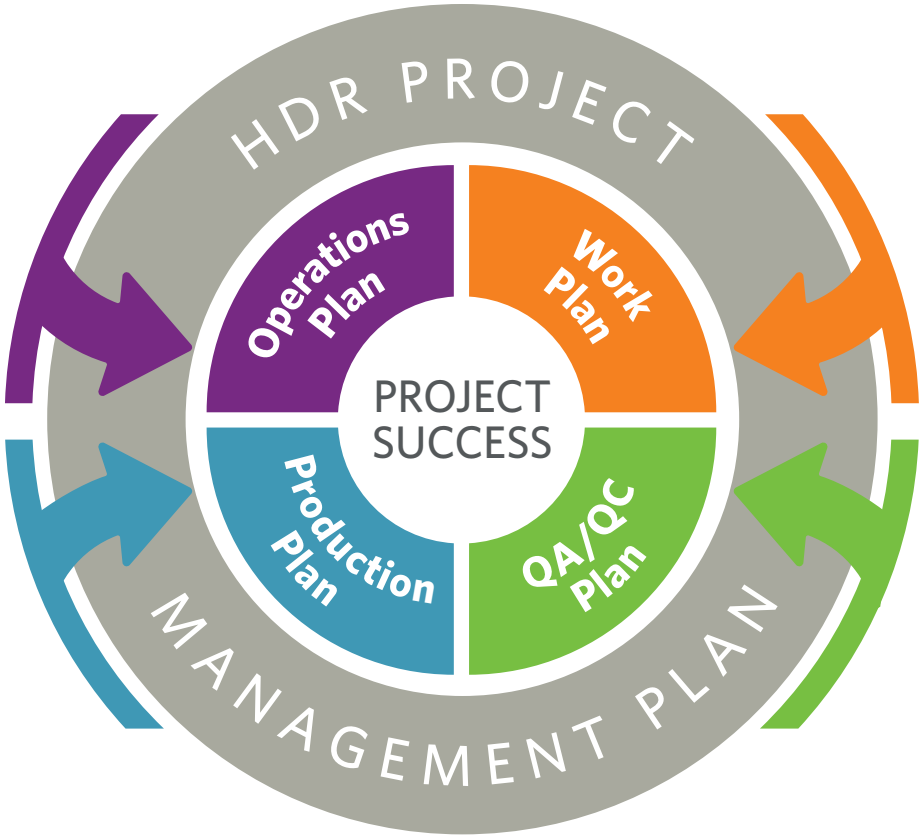
• Are Essential Management Functions Identified?

The core function of HDR's multidisciplinary team is to bring together a cooperative group of traffic and transportation engineering professionals from different fields of expertise with overarching goal of determining how best a specific work order should be treated.

HDR's effective approach to successfully controlling schedules and budgets begins with upfront planning by the project manager to develop a scope of work and schedule that meets the County's requirements. HDR's effective project management strategies are detailed below.

Upon notification by the County Project Manager regarding a new work order, Bijan will begin compiling relevant project information, pull in the appropriate HDR lead discipline staff and schedule a meeting or conference call with County staff to confirm a common understanding of the scope of work. Bijan will provide the key discipline leads with a draft scope of work which they will further develop in coordination with Bijan and Hernando County. The refined scope of work will be provided to the County for review and final approval.

Figure 1: HDR's Project Management Plan



A detailed Work Breakdown Structure (WBS) and staffing projection that shows the breakdown of tasks and identifies the estimated staff-hours and resources required will be jointly developed by Bijan and the discipline leads. The staff-hour and fee proposal will be submitted as part of the final work order for County approval. Any final scope or fee modifications can be made quickly to expedite County approval and issuance of a Notice to Proceed.

Once the staffing projection is developed with the necessary resources to execute the assignment, Bijan will develop a final Critical Path Method type schedule for the work orders. Schedules will be reviewed during periodic management meetings with the County and HDR staff to demonstrate that all work tasks are sufficiently staffed to deliver projects on or ahead of schedule. Monthly progress reports will document the progress for each major work order subtask. HDR assigns a dedicated in-house project accountant that is responsible for working with the project manager to develop monthly invoicing and progress reports.

HDR's proprietary software, E-Business Suite (EBS), is utilized by the project manager and task managers to assess workload and schedule requirements, staff availability and the associated costs to complete work assignments. EBS, and associated HDR systems, also support analysis of cost to date by task, remaining budgets vs. outstanding workload, accounts receivable, QC scheduling, project management reviews, etc.

For all work order projects, we will develop and utilize a Project Management Plan (PMP) as illustrated in Figure 1 above, the foundation for HDR's Project Approach that defines key scope items and milestone dates, identifies key contacts and lines of communication, teaming assignments, includes the work breakdown structure with staff-hours and budgets for each task, along with a project-specific QA/QC Plan and QC Schedules.

A key element of our approach to a typical transportation work order, will be to conduct a 60% level Design Concept Meeting with Hernando County, following development of the initial design. The purpose of these meetings is to verify that the County concurs with the preliminary design approach and concept early in the design process.

For complex projects, the Design Concept Meeting may be followed by a meeting with key stakeholders and/or by an advanced submittal of documentation to the County to verify that there is full consensus on design concepts and preliminary alignments. HDR has utilized this protocol during development of the projects with potential right of way and major utility impacts. The Design Concept Meeting also provides a venue for confirming that all key stakeholder requirements and interests are appropriately addressed. Conducting these Design Concept meetings will confirm direction for development for the 90% design and final plans submittal and streamline plans reviews by the County and other involved agencies.

• Are the Functions Effectively Integrated?

DELINEATION OF SUBCONSULTANT ROLES

As listed in the County's Scope of Services for this contract, the areas of discipline are wide-ranging and will require specific individual expertise to deliver the comprehensive services the County will require. HDR's approach to meeting the County's objectives includes the identification of the right staff with the appropriate level of expertise in the early stage of the project's scoping under the Operations Plan phase of the PMP.

HDR will be teaming with highly a recognized and experienced team of subconsultants with including several with DBE and SBE certification. Over the past 35 years since the opening of our office in Tampa, HDR has developed successful working relationships with a wide network of qualified DBE and SBE firms and has a proven track record of utilizing these firms whenever possible.

Traffic Data Collection

Survey/ROW, Utility Exploration & Utility Locates

Miscellaneous Structures

Geotechnical Services

Fiber Optic Cable Discovery & Inventory

Traffic Data Collection: **Adams Traffic, Inc.** (DBE) and **Marr Traffic, Inc.** (SBE) located in Plant City and Orlando, respectively, to perform a variety of traffic data collection with focus on data accuracy and having capabilities to undertake all types and sizes of video surveillance traffic data collection, intersection turning movement counts, queue length and delay studies, ADT clarification, and speed counts. Marr Traffic will be assigned to use their Drone Artificial Intelligence technology software as needed allowing us to overlay the drone footage with heat maps identifying with detail the counts, track vehicle movements, origin and destination studies. Nancy Adams, PE, and Brian Gentry, PE, PTOE will be the task leads.

Survey/Right of Way, Subsurface Utility Exploration and Utility Locates: **Cumbey & Fair, Inc.** (SBE) certified and a progressive firm based in Clearwater, Florida will provide a variety of land surveying services such as topographic survey, GPS survey, legal descriptions and sketches, route location survey, subsurface utility locations, aerial photogrammetry control, boundary survey, right of way mapping, horizontal and vertical control survey, digital terrain model survey, and as-built survey under supervision of Pat McCormack, PSM, the survey manager.

Miscellaneous Structural Engineering and Design: **Florida Bridge & Transportation, Inc.** (SBE), an award-winning civil engineering firm with extensive experience and specialization in structural engineering. HDR worked with FBT on I-4 Ultimate to design miscellaneous structures such as overhead sign structures, signal mast arm and span wire signal strain poles. Juan Valenzuela, PE, will serve as the task lead for design and production of the structural components of traffic plans.

Geotechnical Services: **Tierra, Inc.**, provides experienced personnel to perform geotechnical support services during the planning and design stages of a project work order requiring soil analysis. Tierra laboratory facilities provide specialized testing services associated with geotechnical engineering and construction materials projects including the physical testing of soil, rock, concrete, aggregate, and asphalt. Kevin Scott, PE has extensive experience in geotechnical engineering, shallow and deep foundation analysis and retaining wall design will be the task lead to provide all geotechnical services for the projects requiring soil strata investigation, and foundation design recommendations.

Fiber Optic Cable Discovery and Inventory: **Precision Contracting Services, Inc.** (SBE), provides services related to locating and providing fiber optic cable routes, budget loss of the existing optical fibers for attenuation and determining the additional bandwidth allocation and transmission capacity. PCS has developed tools to track and assess the current fiber optic infrastructure. In cases where Hernando County staff needs additional support for discovery of the existing communication legacy, HDR with the aid of PCS can accurately provide the fiber optic discovery services. Bruce Boyd will serve as the task lead.

▪ Current & Projected Workload

The HDR team has ample capacity to support Hernando County's Continuing Traffic Engineering Services Contract and historically have demonstrated our reliability and quality service on previous Hernando County work. HDR's company leadership, project management staff, and key technical resources all receive state of the art resource management and leadership training and are provided with the necessary project and resource management tools for implementation and successful delivery of any assigned work order.

CURRENT & PROJECTED COMMITMENT

The contract's team has immediate availability and capacity to handle this assignment from Hernando County. Our availability to commit resources to serve the County has never been greater.

Projected backlog and availability for key staff and support staff that will be providing core services are shown in figure 2 to the right.

These professionals are leading the elements of work that HDR is proposing to self-perform. Our Project Manager and key staff identified on our organizational chart have substantial availability. The reported numbers represent approximate, projected total availability for January 2024 through January 2025, based on existing backlog as of November 2023. Projected backlog varies with time, as with all consultant firms, as work is completed, and clients' needs change over time. HDR will remain engaged and committed to each task, near, mid, and long term, for the duration of this contract.

DEPTH OF RESOURCES

HDR's Organizational Chart (provided at the end of this section) identifies our core team for this Contract. These local professionals and specialists, including our subconsultant partners, will be devoted to Hernando County throughout the entirety of the Contract. Furthermore, the County has immediate access to more than 160 total HDR staff based in our local Tampa office and more than 600 employee-owners throughout Florida.

Throughout the State of Florida, HDR has more than 40 traffic engineers with expertise in traffic modeling, forecasting, design, and corridor signal retiming experience and has performed these types of functions for every FDOT district, central office and over a dozen local and county highway agencies.

HDR's multi-disciplined team (see our Organizational Chart) of competent, experienced professionals and specialists will provide the required expertise for this Contract. We formulated our team based on previous Hernando County project experience, individual expertise, capabilities, and availability. HDR's experienced team will require no learning curve and we bring a deep understanding of the Contract's history and needs. Our project team's current and projected workload will allow us to continue providing Hernando County with efficient and quality services for the project's duration. We are available to begin working immediately upon receiving Notice to Proceed (NTP). The HDR team will provide both depth and breadth of resources and are committed to meeting Hernando County's expectations on this Contract.

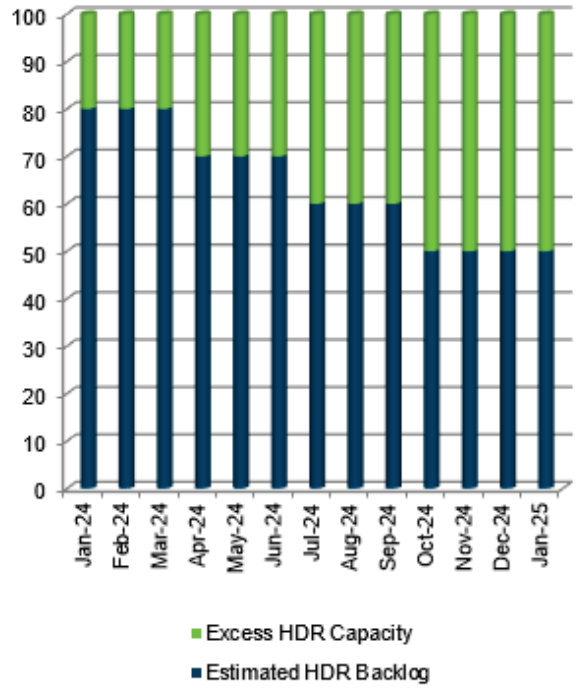


Figure 2: HDR's Projected Backlog

UNDERSTANDING OF SCOPE ITEMS

The Scope of Services highlights the various task assignments that are expected to be completed by the consultant under the Continuing Traffic Engineering Services Contract. The HDR Team currently provides similar services under various task based contracts with municipalities throughout the Tampa Bay region and also with FDOT Districts throughout the State.

Engineering Design

The core traffic design support services include, but are not limited to: design of traffic signals, design of fiber optic interconnections between existing and/or proposed traffic signals and Intelligent Transportation Systems (ITS) facilities, design of ancillary intersection improvements including turn lanes associated with signal design, design of traffic calming devices including roundabouts, design of signage and pavement marking plans to include compliance with the most current edition of the Manual of Uniform Traffic Control Devices (MUTCD), design of Temporary Traffic Control (TTC) plans for planned events and emergency situations, design projects including utility locations/relocations, drainage, determination of right of way requirements and maintenance of traffic/detour plan, design of project deliverables including sign and sealed plans and specifications, any applicable regulatory approvals and permits and tabulation of quantities and cost estimates to enable the County to competitively bid out the project. We will base traffic designs on current standards including MUTCD, Florida Design Manual & Standard Plans, FHWA Highway Safety Manual and Safety Performance Functions, Hernando County Facility Design Guidelines, Manual on Uniform Traffic Studies, 23 Code of Federal Regulations Related to Systems Engineering Management, and Florida Green Book. A brief description of HDR's understanding of each of these support services is provided on the following pages.

A. Traffic Signal Design

Development of traffic signal design plans compatible with the proposed geometric design is critical to ensuring the safety and efficiency of the traveling public is addressed. Our approach to individual intersection and signal systems design begins with advance engineering data collection including condition and collision diagrams, and collision severity rates. While these critical items are being gathered, other key factors as described below will be established as the basis for design:

- Intersection users and human factors
- Establishing Design vehicle, design and operating speeds
- Topographical survey of the existing geometry
- Determination of signal operating plan & turn lane treatment
- Determination of preemption, and method of detection
- Location & configuration of the controller and cabinet
- Selection of type and location of traffic signal support structures
- Determination of signing and locating the stop line and crosswalks
- Identification of the communication design and interconnectivity
- Future intersection expansion and signal loads
- Location of power service source and feeder design
- Offset turn lanes and alignment
- Pedestrian accessibility, detection, and display
- Signal head display and visibility
- Determination of Ethernet based communication equipment
- Addressing detection for different approach speeds
- Close coordination with the County staff in various design stages
- Utility coordination and subsurface utility and soil exploration
- Determination of OSHA circle of safety near overhead power lines
- Elimination of pedestrian-vehicular conflicts
- Computation for intersection clearance intervals
- Queuing calculations and turn lane design
- Scheduling field reconnaissance during various design stages

Partial listing of intersection and signal systems design projects prepared in Hernando County are provided herein:

- SR 50 corridor east of I-75
- Forest Oaks Blvd and Deltona Blvd
- Barclay Ave. Phases I & II (Powell Rd and SR 50)
- US 19 at Forest Oaks Blvd

HDR traffic engineers have designed and successfully implemented signal systems throughout the State for all of FDOT districts and many neighboring and local government agencies. We have the critical mass to handle multiple assignments with difficult deadlines. Goals of the design approach are:

1. Field review of the project with the involved design team.
2. Early identification of design issues by all parties.
3. The ability to break out critical path components for fast-tracked final design.
4. Throughout design, assure the project remains consistent with the scope and construction budget.

Signals

HDR has designed signalized intersections, including pedestrian signals and school beacons, locally and throughout Florida on both major reconstruction and minor design projects. These signal systems range from span-wire supported flashing beacons at rural intersections to multi-signal advance arterial management traffic systems for major urban reconstruction projects. Team members have completed approximately 100 signal projects for FDOT alone.

Using SYNCHRO, SIMTRAFFIC, and TSPP Draft application programs, HDR has optimized, implemented and fine-tuned signals along arterial and network systems with diamond interchanges. The work efforts have included system and field programming LMD, PEEK, ECONOLITE, EAGLE, and NAZTEC traffic signal controllers. With these tools, our traffic engineers make decisions based on field traffic observation and engineering judgment, while taking into consideration the strengths and limitations of the traffic signal controllers and the timing models. Our signal timing engineers understand the importance of accurate controller programming and testing of complex phasing sequences before they are implemented. Implemented timings have yielded positive feedback from the FDOT, the maintaining agencies and the public.

Transportation & Transit Network Modeling & Traffic Signal Retiming

Traffic and transportation network analysis is a core service offered by our Tampa-based team of modelers and data analysts. Our projects involve extensive use of modeling and simulation to test multimodal project alternatives, identify corridor and network impacts, refine ideas and strategies, and drive design innovation. Our team is well-versed in utilizing state-of-the-art simulation software, and we've built in-house tools to streamline workflows for data collection, integration, analysis, and presentation. HDR also implemented numerous corridor-wide signal retiming projects in several FDOT districts successfully. We have implemented twice per cycle left turn (TPCLT) strategies at the interstate ramp-street signals, resulting in a more efficient utilization of the left turn storage lanes. We have deep experience simulating intersection, corridor, and system performance using VISSIM, VISUM, CUBE, AIMSUN, SIDRA, HCS, SYNCHRO, TrU Traffic, TACTICS, ATMS.NOW, and CENTRACs. Through our Innovative Interchange and Intersection contract with FDOT District 7, we're the "go to" firm for developing and testing solutions to address especially complex corridor and intersection challenges. SYNCHRO model development and calibration, timing

optimization, draft and final reports, implementation, and fine tuning and "before" and "after" travel time studies are part of the efforts we perform in signal retiming projects. HDR analyzed and implemented system timings where the control sections operated as one system for all timing plans with intersections equipped with NAZTEC, PEEK 3000, PEEK LMD 8000, and ECONOLITE traffic signal controllers.

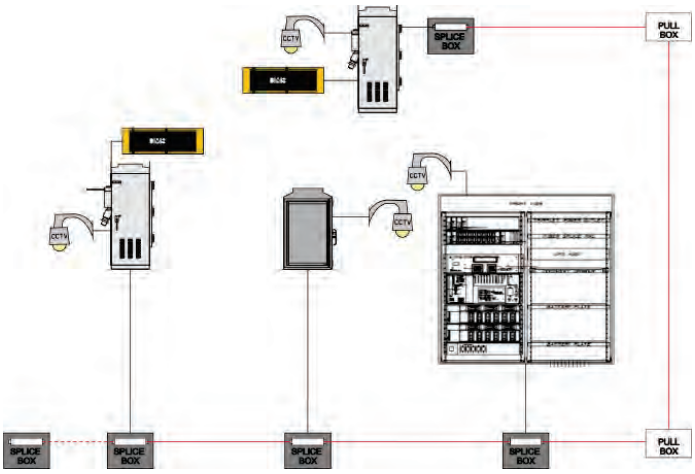
B. Fiber Optic-Based Communication Design

Our approach to wire-based communication design is to draw the communication overview depicting the field devices, intersections, local hubs, 1 Gbps Layer II Ethernet switches, and to ensure field-to-center (F2C) connectivity is achieved. Fiber is the least expensive, most reliable method for high speed and/or long distance communications.

The key objectives of our design approach is to improve reliability of the communication topology comprised of dedicated Layer I (Physical) and Layer II (Network Interface), and updating the aging communication infrastructures for the assigned intersections or corridors. The key factors as described below will establish the basis for design approach:

- Field review of the project with the involved design team
- Defining the ITS subsystems that will be constructed
- Identifying existing communication legacy for end-to-end tie backs.
- Identifying the buffer tube(s) to be used to perform midspan fusion splicing
- Drawing the communication overview
- Determining the ITS subsystems being on FDOT Approved Product Lists (APL)
- Preparing the base plans depicting conduit sizes, number and fiber optic cable counts
- Depicting the ITS subsystems with stations and offsets
- Showing the pay item numbers using the FDOT Basis Estimates Manual
- Drawing the cross sections for ITS poles and in most cases for the local hubs to ensure they are in dry areas
- Drawing the block diagrams showing the connections and equipment
- Drawing the fiber optic cable splicing diagrams
- Soil and underground utility exploration for location of ITS poles
- Multiple coordination efforts with the County's traffic operations staff, and FDOT

HDR traffic & ITS engineers have designed and successfully implemented interstate management and arterial management corridors for FDOT and multiple local government agencies statewide and nation-wide.



C. Design of Ancillary Intersection Improvements Including Turn Lanes Associated with Signal Design

The Florida Strategic Highway Safety Plan (SHSP) identifies intersection safety as one of the top emphasis areas for the state. In response to this call to action, FDOT has developed an Intersection Control Evaluation (ICE) manual to aid in this effort.

When the County decides to study an intersection for signal control to regulate the movements, HDR traffic engineers will consider the ICE process to quantitatively evaluate several intersection control scenarios (alternatives) and rank these alternatives based on their operational and safety performance. Implementing a "performance-based" procedure such as ICE creates a transparent and consistent approach to consider intersection alternatives based on metrics such as safety, operations, cost, and social, environmental, and economic impacts.

Turning movement counts with projected traffic to an acceptable time horizon will be performed to compute the number and queue lengths at both signalized and unsignalized intersections. Computer programs such as HCS and Synchro will be used to document the recommendations. We will use the FDOT standard plans in designing the anatomy of the turn (auxiliary) lanes.

A list of the intersection safety and innovative techniques that may be considered depending on the specific location and conditions are listed below:

- Roundabouts
- U-turn-based intersections and the Median U-Turn (MUT)
- Restricted Crossing U-Turn (RCUT)

Intersection Improvements

HDR's project team has designed numerous urban and rural intersection improvements for Florida cities, counties and State agencies, as part of major reconstruction projects and under stand-alone task order assignments. Typical assignments may incorporate these operational and safety improvements:

- Modification of intersection geometry, increasing radii
- Addition and/or extension of auxiliary lanes

- Incorporation of raised medians/traffic separator
- Incorporation/upgrade of pedestrian/ADA features and amenities - sidewalks, curb ramps bike lanes, etc.
- Access Connection Permitting per FAC 14-96 (if project impacts FDOT system)
- Minor drainage improvements – replacement of damaged or non-functioning drainage structures, addition or relocation of inlets (out of the returns), regrading or relocation or piping of existing ditches or swales
- Drainage Connection Permitting per FAC 14-86 (if project impacts FDOT system)
- Maintenance of traffic
- Utility coordination/relocation and SUE locates
- Signalization, signing & pavement marking and lighting per MUTCD, FDOT and HCDPW standards

HDR has assisted Hernando County with the design of the Lake Lindsey Rd. Widening, Forest Lakes Blvd/Deltona Blvd Intersection, US 19 at Forest Oaks Blvd and Barclay Avenue Final Design, all of which included various intersection design considerations. The HDR team is familiar with the County's practices and preferences for development of designs, plans and project specifications. This knowledge helps facilitate cost effective delivery.

D. Traffic Calming Devices Including Roundabouts

Hernando County's Residential Traffic Control Program allows residents and business owners within the County to express their concern regarding various traffic engineering issues, including: vehicle speeding, insufficient roadway capacity, excess traffic volumes, deficient signing and marking and general traffic calming concerns. HDR's traffic calming experience includes stand-alone traffic calming projects, and numerous projects that include traffic calming elements.

Innovative Intersections

Our team has the expertise to evaluate innovative treatments of intersections to determine modifications that realize capacity and safety improvements of existing intersections to meet the challenges of rapid developments around the existing intersections within Hernando County. HDR has been serving FDOT District 7 under the Innovative Intersections contract where HDR staff have evaluated intersections throughout the Tampa Bay Area for application of new intersection configurations including roundabouts, continuous flow intersections, diverging diamond interchanges, restricted crossing u-turns, and median u-turn intersections. We have completed over 35 assignments which include roundabout screenings using the FDOT three-step screening process and Intersection Control Evaluation (ICE), Hard Shoulder Running (HSR) analysis, Median U-Turn (MUT) and Displaced Left-Turn (DLT) intersection analyses and designs, interchange reconfiguration analyses and designs, and other miscellaneous tasks. Through our evaluations, our team uniquely understands when applications of these alternative intersection treatments can realize a benefit to Hernando County.

E. Design of Signing & Pavement Markings

Signing and pavement marking plays an imperative role in traffic operations by establishing the rules of the roads for all road users.

All proposed signing and pavement marking associated with a specific project will comply with the FDOT standard plans, Traffic Engineering Manual, FDM and the MUTCD.

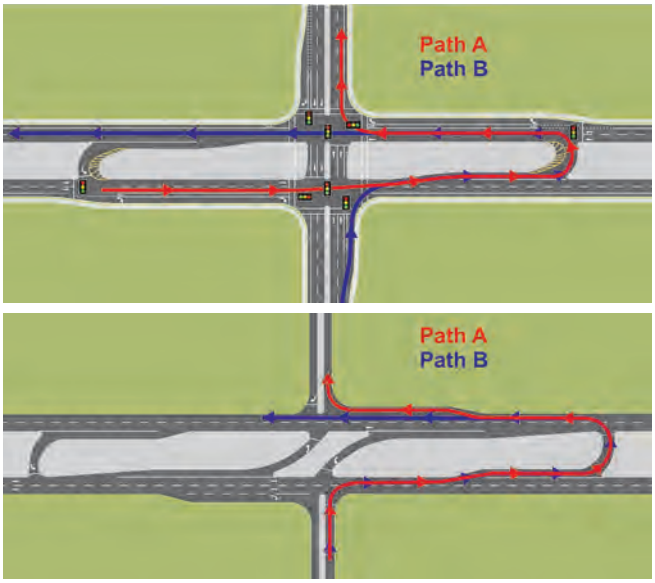
HDR traffic engineers will consider the concept of positive guidance as a guiding principle for providing information to drivers. Positive guidance philosophy leveraged by HDR consists of creating and maintaining a driving environment that has the following characteristics:

- Motorists are provided with the maximum amount of useful visual information
- Information is presented in such a way that it is prioritized in importance
- Information is presented uniformly, allowing drivers to develop expectations about the location of information
- Information is visible under most, if not all, environmental conditions

Photo: US 19 - Broadway, Roundabout Options 1, 2 & 3, FDOT District 7

Signing & Pavement Marking Plans

HDR has designed signing and pavement marking for numerous roadway projects from complex interstate mega projects to intersection improvement projects. No-passing zone studies of substandard 2-lane highways have been performed on resurfacing projects with upgrades to current standards. We have designed electrically powered enhanced signing for curved alignments, and at pedestrian crossings on numerous local and state highway systems for safety improvements. HDR was the first design consultant to prepare signing and pavement markings plans for non-conventional intersections such as DDI and CFI in the State of Florida. The I-75 interchange with Colonial Blvd., in Lee County is a prime example of HDR setting best practices.



F. Design of Maintenance of Traffic (MOT) Plans for Planned Events and Emergency Situations

We will utilize the standard plans published by FDOT to show the **Temporary Traffic Control Plans** (TTCP) for simple construction projects with minimum alterations to the roadway. We will provide more details of TTCP for any work over the travel lanes and lane closure or detour of traffic. We will perform lane closure computations to restrict the duration when travel lane(s) can be closed. For the special events, and catastrophic weather conditions when evacuation of mass people becomes mandatory, we will provide template detour plans and Transportation Management Plan (TMP) for these cases so the various pre-established and pre-approved TMP templates can be utilized by the County or Contractors. The TMP for the emergency situations addresses traffic safety and control in the project specific work zone, and leverages strategies to manage the work zone impacts of a project. We will use field observations, available work zone crash data and operational information to design and manage work zone impacts for specific projects during the implementation.

In addition, HDR traffic and ITS engineers have significant experience in the **Maintenance Of Communication** (MOC) plans for the projects where the existing field-to-center connectivity is impacted by major widening, but it is essential to remain intact and devices remain operational with minimum down time.

G. Accompanying Utility, Drainage, Right of Way Requirements, MOT/ Detour Plans

As part of the Capital Improvement Projects (CIP) where utility locate functions or relocation of underground infrastructures are necessary, HDR has assigned an experienced team leader to perform all necessary utility coordination with the affected utility owners during the early stages of the design activities. Site visits and assessments by the HDR utility coordinator accompanied by a representative from each of the utility owner agencies will be conducted and the findings will be assessed in the next phase of design submittals. We will work to identify existing utility facilities early during design development and to consider design alternates that avoid impacts to facilities. By minimizing the "footprint" of potential impacts early in the design process, the turnaround time required for existing facility mark-ups by UAO's, field designating and verification/vertical/horizontal (VVH) work and the need for relocation plans can all be reduced. We are familiar with the major UAO's located in Hernando County. HDR has prepared design plans for dozens of roundabouts for municipalities in west central Florida.

Utility Coordination

Facilitating proper communication with utility owners impacted by transportation infrastructure projects is vital to the successful completion of construction on schedule and within budget. HDR's approach to effective utility coordination includes the following steps:

1. Identifying Utility Owners – To accomplish this during scoping the HDR team research Sunshine One Call tickets, existing design plans and conducts 0% field reviews to determine what facilities are located within the project limits.
2. Initial Contacts – Once preliminary plan information is obtained from field survey, initial base plans are forwarded to the utility owner for verification of their facilities.
3. Phase II (60%) Design Coordination – During development of the 60% design plans HDR design team will identify potential utility impacts and document the impacts in a Utility Conflict Matrix (UCM). In coordination with Hernando County's Utility Coordinator the UCM will be submitted with the design plans to the utility owners for review prior to a design conference. During the Phase II Design Conference impact to the facilities will be discussed with each utility owner and their proposed means of resolution identified for incorporation into their proposed relocation RGB's. Any needed subsurface utility engineering (SUE) locates will be identified for collection to assist in resolution of conflicts.
4. Phase III (90%) and Phase IV (100%) Coordination – During these phases an updated UCM, SUE data and design plans denoting the utility owners proposed resolutions will be distributed to each utility owner for confirmation of conflict resolutions. Utility work schedules will be developed as needed by the utility owners and reviewed by HDR's design staff.

Using this approach HDR has been able to significantly minimize utility conflicts encountered during construction. This approach encourages open communication between the County, HDR and the utility owners throughout the development of the design.

Utility Relocation

HDR has water and wastewater design engineers and technical professionals in our Tampa office to support the designs of any Hernando County wastewater or reclaimed water relocations. We designed 12,000 feet of 8-in/12-in potable water and 10-in sanitary sewer on the SR 50 widening project under the County's Continuing Professional Engineering contract.

Drainage/Stormwater

Our experienced drainage staff performs designs for smaller transportation projects (minor widening and resurfacing) as well as larger projects (major reconstruction and interstate) along with assisting the Planning/PD&E groups with the development of the drainage study documents. This experience with performing multiple task order assignments on various local government projects, FDOT projects and FDOT drainage investigation tasks makes HDR well suited to support the County's drainage and stormwater management needs by providing sound drainage design solutions. On similar contracts, we have performed drainage studies to find solutions to existing drainage problems, reviewed other consultant's designs, assisted in drainage connection permit reviews, and provided technical advice on drainage problems encountered during construction. HDR's construction knowledge is a cornerstone of our drainage designs to confirm construction is the most cost effective and efficient. Our knowledge and experience with the Southwest Florida Water Management District, the Florida Department of Environmental Protection and the FDOT drainage connection permit requirements will expedite the project permitting process.

Hydraulic/Hydrologic Modeling

HDR's drainage staff has experience with hydraulic and hydrologic surface water modeling. HDR has worked with regional SWMM and ICPR watershed models maintained by SWFWMD and/or Counties to analyze existing versus proposed conditions. Each given task order associated with an outfall system, stream, watershed, or other surface water will be assessed to determine the need and suitability of the applicable stormwater model software for the project. We will provide the County with an evaluation and comparison of the various models to make the appropriate selection. Each model selected for review will be evaluated for its merits and drawbacks and for its capability to manage critical conditions. These models will include those used for both water quantity and quality including those in the EPA "toolbox" for TMDL (nutrient loading) assessment as well as those models recognized by FDEP for use in TMDL evaluations. We have worked extensively with the Watershed Assessment Model, a model currently accepted by the FDEP for TMDL development.

Bridge hydraulics is another one of our specialized drainage expertise. We have performed numerous bridge hydraulic evaluations for bridge repair and replacement projects, along with providing scour evaluations of riverine and tidal systems. Our staff is highly proficient with HY-8, HEC-RAS and ICPR software and knowledgeable in FHWA Hydraulic Engineering Circular publications for stream stability and bridge design.

Geotechnical/Contamination

Geotechnical and Contamination services to support the HDR team on assignments under this contract will be performed by Tierra. Tierra is a full-service consulting geotechnical, contamination assessments and construction materials testing engineering firm with more than 28 years of experience serving governmental agencies. Tierra has provided geotechnical and contamination support services on numerous Hernando County continuing services contracts.

Our approach to providing geotechnical engineering services begins with having a thorough understanding of the overall project objectives including a desired schedule for completing the work. This is best accomplished by having initial discussions as part of the design team with the County to understand the issues associated with the project and then developing a scope of services which detail the work to be performed including a schedule and associated fees.

Right of Way Services

Projects under this contract may include right of way issues, such as appraisal, cost estimates, establishment of right of way requirements, easements or license agreements necessary to accommodate roadway, drainage and traffic components. HDR offers the full range of appraisal services, including a team of land planners, engineers and other experts with extensive eminent domain experience. HDR's right of way staff handle acquisitions for FDOT District 7, so they are very familiar with eminent domain issues within Hernando County. All proposed staff maintain the appropriate licensure and certifications required to perform the right of way services. HDR is currently providing Hernando County with right of way services on the Barclay Ave at SR 50 Project.

Maintenance of Traffic/Detour Plans

Our Project Manager, Bijan Behzadi is Advanced MOT Certified and will verify that safe MOT practices are followed. Given the very high traffic volumes on many of the County roads and numerous active construction projects along county roads, we understand the importance of Temporary Traffic Control (TTC) for each work assignment. Our design professionals understand that project-specific Maintenance of Traffic (MOT) plans are essential to construct the project safely, on schedule and without claims. We recognize that TTC is a critical design component that must be considered during design development. Our approach is to evaluate potential TTC needs as part of the alternatives evaluation during scoping then developing the necessary design details to provide a comprehensive safe MOT plan as part of the construction documents. We have worked closely with the Hernando County and FDOT Traffic Operations and Construction personnel on prior projects and are fully familiar with specific MOT and constructability requirements. Our roadway design staff assigned to the development of MOT plans for this Contract are all MOT certified in accordance with FDOT requirements. Additionally, our design group maintains a regular dialogue with construction and consultant CEI personnel regarding current issues relating to MOT and safe construction practices.

The detour plans will be prepared using the MUTCD and the specific project condition and roadway network system to ensure clear guidance is provided to the motorists. The detail of the detour plan can be designed for utility work that requires closure of a roadway segment.

H. Design Project Delivery, Plans Specifications & Estimate (PS&E), Cost Estimating, Permitting & Bid Support Services

The production of construction plans for the highway agencies has been the core strength of HDR The policies and procedures contained in the FDOT publications for the Plans, Specifications and Estimate (PS&E) phase of local projects off the State Highway System (SHS) will be followed. The procedures for any project PS&E as a minimum will cover the following items:

- Project management, personnel and procedures
- Highway design standards (and any other technical standards as appropriate)
- Review and approval procedures
- Oversight procedures if a State highway is involved
- Maintenance of records and access

The preliminary design defines the general project location and design concepts known as 60% plans. It includes, but is not limited to, preliminary engineering and other activities and analyses, such as environmental assessments, topographic surveys, metes and bounds surveys, geotechnical investigations, hydraulic analysis, utility engineering, traffic studies, contamination assessments, general estimates of the types and quantities of materials, and other work needed to establish parameters for the final design. The final design plans and specifications will encompass the signed and sealed drawings, cost estimate, technical special provisions, and permits.

Environmental & Permitting

HDR's experience with numerous infrastructure projects has made us keenly aware that state and federal regulatory requirements, such as permitting, wildlife concerns, potential archaeological involvement, and wetland mitigation are directly tied to a project's critical path. Our highly experienced team of environmental professionals is dedicated to working with state and federal regulatory agencies to minimize any project delays and cost overruns that may result from environmental issues. Our experience has shown that the client's best interest and a project's critical path are best maintained through effective coordination with these agencies.

Our team has fostered excellent working relationships with regulatory supervisors and staff of the key agencies exerting jurisdiction over the ecological aspects of projects. Agencies that will review and issue permits for County projects include the Southwest Florida Water Management District (SWFWMD), the U.S. Army Corps of Engineers (USACE), the Florida Fish and Wildlife Conservation Commission (FWC), the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS) and, in some cases, the U.S. Coast Guard (USCG).

In addition, our team is exceptionally qualified to coordinate, negotiate, and resolve permitting issues, consult on wildlife matters, prepare and analyze complex maps, provide mitigation strategies, and address monitoring and management aspects of any infrastructure improvement project.

Construction Cost Estimates, Project Specifications & Bidding

HDR is familiar with Hernando County's Contract Specifications Package, and we have assisted with preparation of many of these packages for both FDOT LAP projects as well as Hernando County CIP projects. We are also familiar with the review process required by the Hernando County Purchasing and Contracts Division and the Hernando County Legal Offices.

HDR will prepare bid pay items and quantities that include all items comprising the project design. We will assist the County with development of bid proposal sheets to be included in the Contract Specifications Package.

Preliminary bid quantities will be submitted with the 60% design review submittal. The quantities and associated cost will be submitted in the Engineer's Construction Cost Estimate, which will be submitted with the 90% and 100%/final submittals. Construction costs will be based on the most current cost data available from FDOT or Hernando County.

Traffic Control Investigations

The proper investigation and documentation of the performance of existing traffic controls and their compliance with current MUTCD/ FDOT standards is increasingly important with respect to safe operations and owner liability. Similarly, when modifications or upgrades to existing traffic controls or new devices are incorporated, documentation of the project's needs and the development of reasonable alternatives must be based on proper engineering assessments and sound judgment.

HDR has researched and documented the existing conditions for numerous roadway and intersection locations and have developed appropriate design recommendations for signal, signing & pavement marking and lighting upgrades to improve operations and safety.

3rd-Party Traffic Design & Plan Reviews

It is very important that traffic design plans address safety and operational challenges while meeting all the design standards and HCDPW preferences. Our first step in the plan review process will be to review the original project scope as well as all issues and citizen complains documented by HCDPW and other agencies (e.g. FHP, City Public Works, local law enforcement, etc.) and then conduct a thorough field review with the plans in hand. Any special challenges or design constraints will be noted and marked-up on the plans. Our plan reviews will be based on FHWA MUTCD, ITE, FDOT and Hernando County Standards and requirements, with a focus on practical design concepts, constructability and operations and maintenance. We will provide written comments, plan markups, photos and video to facilitate feedback to the 3rd Party designer/ EOR and to document our findings. Once the 3rd Party designer/

EOR provides responses to our review comments, we will review the responses to close out the comment or if the response is deemed inappropriate, coordinate with designer/EOR and HCDPW to reach resolution. In subsequent plan submittals, we will verify that responses to prior comments have been properly implemented. HDR has reviewed numerous standalone intersection improvement plans, RRR plans and complete roadway reconstruction plans under our FDOT District 7 GEC Contract.

Plans & Documents Review Services

Our team of experienced design leads has over 100 years of combined Florida design experience that includes development of technical manuals, codes and specifications for FDOT and various City, County and Municipal clients. HDR is a local firm with national expertise available to the County to assist with review and development of any transportation or development related design and construction standards.

HDR has provided plans review services for FDOT Districts 1, 2, 6, 7, Central Office and various Counties within west-central Florida. Our plans review focus areas include roadway, drainage, traffic, utilities, structures, survey/mapping, signing/pavement marking, signalization, ITS, lighting, right of way, cost estimates and appraisals.

From our experience on all of these contracts, HDR understands the importance of clear and concise review comments that result in elimination of errors, decreased costs, and improved safety. We understand we need to provide reviewers who have a clear understanding of County and State policies and procedures. HDR will assign one key reviewer from each Discipline to develop and document County-focused checklists for 60%, 100% and Final Plans; constructability/biddability; route study reports and traffic reports; and County preferences/standards. Once the checklists have been established and documented, they will be circulated to all HDR reviewers.

We understand the importance of "timely comments" at Preliminary (60%) Plans or First Draft Reports – meeting the design intent, uncovering utility conflicts, identifying right of way issues and accurate cost estimates.

Our plan reviews will focus on construction issues, claims avoidance, improving safety (Vision Zero), pedestrians, bicycles and bus infrastructure; and curb ramp ADA. Our report reviews will focus on traffic analysis, alternatives analysis (engineering); drainage, hydraulics and pond siting; environmental issues, R/W & construction costs; and documenting decisions. The selected alternative must be based on the Five-Factors for eminent domain – safety, cost, alternative alignments, long-range planning and environmental factors.

Development Reviews and Traffic Impact Analysis Reviews

The HDR Team has thorough knowledge and extensive experience in assisting numerous municipal governments within the Tampa Bay region and FDOT with the review of traffic impact studies for newly planned unit developments and Developments of Regional Impact (DRIs).

Our approach to development review related tasks are as follow: First, when requested by the County, HDR staff will be present at the methodology meeting between the applicant, the applicant's transportation consultant and the County to clearly define and reinforce the County's expectations for the technical analysis to be prepared in support of the proposed development. This is the first opportunity for HDR, while working on behalf of the County, to guide the traffic impact assessment. Secondly, very early in the review process (generally the first review of the applicant's Traffic Impact Study report), we will identify the information that the County needs to define it's position on the issues with an acceptable degree of certainty, and then, if needed, formulate a request for additional information that is sufficiently specific to ensure that the needed information will be provided. If this is not successful, or sometimes in lieu of requesting additional information from the applicant, HDR will conduct the analysis needed to provide the information to the degree of accuracy required by the County. In most cases, this will result in much lower costs than proceeding through numerous iterations of comment and response in the quest for the required information.

Construction Engineering & Inspection (CEI) Services

HDR's construction group (HDRCCC) has worked on many projects throughout Florida during the past 32 years, including providing construction management and inspection staff for County and municipal clients. HDR has construction staff who are FDOT CTQP certified with extensive construction management experience in Florida on both large highway/interstate projects and local roadways. Our staff is thoroughly familiar with Hernando County processes and procedures.

The consultant selected for the CTESC must possess the depth and quality of construction support resources to effectively respond to the various task assignments initiated under the contract, as well as provide the necessary construction administration, inspection and record keeping for CEI projects.

We understand construction schedules are critically important to the County, it's citizens and the general public – not only the duration of the schedule but the time of year various construction activities will take place. Tracy Keenan, PE, our construction management lead, will review and approve the contractor's baseline schedule following discussions with the County and will verify the accuracy of the construction schedule on a regular basis.

HDR's construction personnel assigned to each project will coordinate with County staff and the contractor for scheduling, permits and other documents. A pre-construction conference and a utility conference will be held so everyone will fully understand the requirements of the task. As applicable to each project, HDR's construction activities will include:

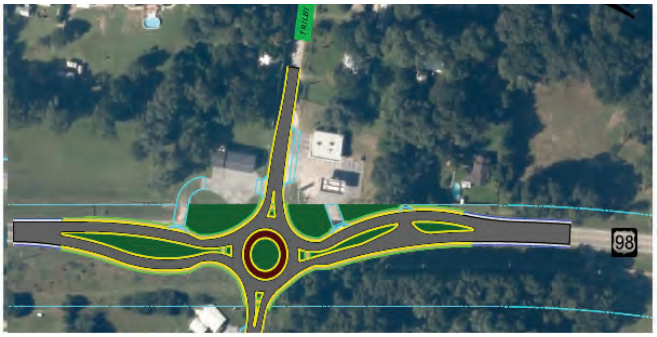
- Preparation of record keeping documents prior to the actual execution of the project.
- Weekly meetings and other project coordination meetings, as required.
- Recording construction progress by daily reports. All documents will be prepared for the monthly estimate.
- Documenting any change in the work plan and coordination with the County.
- Preparing documentation to verify activities for EEO/DBE/OJT, as the County requires.
- Fully documenting permit related activities and utility conflicts. HDR will be proactive in resolving any construction related issues.
- Verifying that shop drawings and sample submittals are checked and approved per FDOT CPAM, Job Guide Schedules and applicable County requirements.
- Monitoring and implementing the MOT Plan for the safety of workers and the public. Any changes or concerns with the plan will be coordinated with HDR and the County.

In addition to CEI services, HDR has extensive experience providing post design services which typically include construction assistance, responding to Requests for Additional Information (RAI's), etc., on many local government projects.

Technical Assistance - Residential Traffic Control Program & Road Safety Audits

HDR traffic engineers are prepared to provide support and technical services associated with the Residential Traffic Control Program (RTCP) based on a two-phase approach. Phase I includes community education, enforcement, less restrictive traffic management measures, such as improved pavement markings and enhanced signage. These relatively simple, and often effective, approaches to solving neighborhood traffic problems are attempted first. If necessary, and only with neighborhood concurrence, Phase II solutions may be tried. These involve more complex physical construction measures -- speed humps and traffic circles, for example. If Phase I actions fail to reduce excessive speeds or traffic volumes, HDR will pursue more restrictive measures pending approval from the County staff, based on certain threshold criteria.

Average daily traffic volumes of at least 200 but less than 7,000 vehicles per day; where speed is an issue, 15% of the vehicles must be exceeding the posted speed limit by at least 5 miles per hour as determined by speed studies. Roadway characteristics such as hills, curves and sight distance will also be considered as safety remains paramount in the decision-making process, including access for public safety vehicles.



HDR has certified Road Safety Audit (RSA) engineers that have significant experience in Florida. A keystone to the RSA process is that prevention of a safety problem is more effective than a cure. Traffic accidents can be reduced by proactively addressing road safety issues at the time the road is conceptualized, designed, constructed, or in service. HDR recently completed an RSA for Pasco County along Old Pasco Rd.

Lighting

HDR has designed numerous lighting systems for City, County and State Highway System projects. We have designed architectural lighting systems as part of streetscape projects, bridge aesthetic lighting over waterways, parking lot lighting, tunnel lighting, intersection and continuous lighting for several municipalities and FDOT. Team members have performed lighting justification reports that determine if a system should be funded and constructed and also to prioritize the installation of lighting systems. Our licensed electrical professional engineers perform power design analysis and prepare the design report containing electrical load, voltage drop, and control panel board sizing and details. We have extensive experience with the industry standard software called AGi32 in modeling the intersections, corridors, and special applications for accurate photometric predictions that can compute illuminance in any situation involving luminaire placement, aiming, and luminiare height to validate adherence to any number of lighting criterion. Results will be presented in 3D rendering format to show the effects of the lighting design in real world, light and surface interaction.

Miscellaneous Structures

We anticipate most of the miscellaneous structures work for this Contract will include concrete and steel strain poles and mast arm systems for numerous signals, signing and lighting projects. Our structures professionals have designed ground-mount, overhead and bridge-mount sign structural supports for traffic plans for dozens of the area's roadways and bridges. It is important to determine a conceptual layout early in the design to estimate mast arm lengths. If mast arm lengths exceed maximum allowable distance, a variance may be required to allow a span-wire system. For this contract, HDR will be supported by Florida Bridge and Transportation, Inc. for design of miscellaneous structures.

Project Principal
Melanie Fowler, PE ☆

Project Manager
Bijan Behzadi, PE, PTOE ☆

Quality Assurance
Tom Quinn, PE ☆

Quality Control
Marlin Register, PE ☆
Huijing Qiang, PE ☆

Deputy Project Manager
Greg Stevanus, PE ☆

Traffic Engineering Studies

Task Lead: N. Prabaharan, PE, PTOE ☆

Access Management
N. Prabaharan, PE, PTOE

Roadway Safety & Studies
Matthew Wiesenfeld, PE
Steve Morency, PE

Signal Warrant Analysis
N. Prabaharan, PE, PTOE

Speed Limit Studies
Kevin Dunn
Steve Morency, PE

Intersection Modeling & Analysis
Bryan St. George, PE
Heather Hubbard, PE

Traffic Impact Studies
N. Prabaharan, PE, PTOE

Review Development of Regional Impact Applications & Reports
Jamie Krzeminski, PE, PTOE ☆

Traffic Data Collection: Volume, Speed, Bicycles, Pedestrians, Trucks, Origin & Destination
Brian Gentry, PE, PTOE (MT)
Nancy Adams, PE (AT)

Intersection Control Evaluation (Roundabouts, RCUT)
Heather Hubbard, PE ☆
Bryan St. George, PE

Traffic Engineering Design

Task Lead: Michael Oates, PE, PTOE ☆

Signal Systems Design
Michael Oates, PE, PTOE
Greg Stevanus, PE

Corridor-Wide Signal Retiming
Richard Atta-Armah, PE ☆
Shawn Pope, PE

Intelligent Transportation Systems Design & Integration
Greg Stevanus, PE
Alex Zhang, PE

Fiber-Optic & Wireless Communication Design
Jim Gu, PhD, PE, PTOE
Greg Stevanus, PE

Roadway & Intersection Lighting & Signing/Pavement Markings
Jose Gonzalez, PE ☆
Greg Stevanus, PE
Steve Morency, PE

Transportation Systems Management & Operations
Richard Atta-Armah, PE
Jim Gu, PhD, PE, PTOE

Roadway & Intersection Design
Brian Zimmerman, PE ☆
Jake Hemingway, PE

Drainage
Jim Johnston, PE ☆
Adam Mitchum, PE

Specifications & Estimates
Tom Quinn, PE

Plans Review
Bijan Behzadi, PE, PTOE
Tom Quinn, PE
Marlin Register, PE
Kevin Dunn
Michael Oates, PE, PTOE

☆ *Resumes included for key personnel*

Support Services

Miscellaneous Structures
Juan Valenzuela, PE (FBT)
Mark Niedermann, PE (FBT)
Bassel Kassem, PE (FBT)

Survey/ROW Mapping, SUE/Utility Locates
Patrick McCormack, PSM (C&F)

Utility Coordination/Relocation
Jake Phillips
Heather Manganiello, PE

CEI/Constructability/Bidability
Tracy Keenan, PE

Geotechnical Services
Kevin Scott, PE (TI)
Michael Bair, ASP, LEP (TI)
Christopher Garth, LEP (TI)

Construction Cost Estimates
Tom Quinn, PE
Tracy Keenan, PE

Agency Coordination/Public Involvement/ Special Events
Stefanie McQueen, AICP

Environmental Permitting
Barry Lenz

Wetlands/Species
Noemi Castillo, PE, PMP

Right of Way Services
Joe Thompson

Civil Engineering
Ben Ellis, PE

Fiber Optic Cable Discovery & Inventory
Bruce Boyd, RCDD (PCS)

Subconsultants

AT - Adams Traffic, Inc. (DBE, SBE)
C&F - Cumbey and Fair, Inc. (SBE)
FBT - Florida Bridge and Transportation, Inc. (SBE)
TI - Tierra, Inc.
MT - Marr Traffic, Inc. (SBE)
PCS - Precision Contracting Services, Inc. (SBE)

C.

Prior Experience

C. Prior Experience

Continuing Traffic Engineering Services

Hernando County, FL

Contract Duration:
2018-Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Intersection Improvements
- Traffic Control
- Traffic Design
- Signalization
- ITS/ATMS

Client Information:
Hernando County
Scott Herring, PE
1525 E. Jefferson St.
Brooksville, FL 34601
352.754.4060
ScottH@co.hernando.fl.us

Key Staff Involved:

- Richard Atta-Armah, PE
- Bijan Behzadi, PE, PTOE
- Melanie Fowler, PE
- Tom Quinn, PE
- Greg Stevanus, PE
- Michael Oates, PE, PTOE
- Jim Johnston, PE
- N. Prabaharan, PE, PTOE

Subs:

- Adams Traffic, Inc.
- Cumbey and Fair, Inc.
- Tierra, Inc.

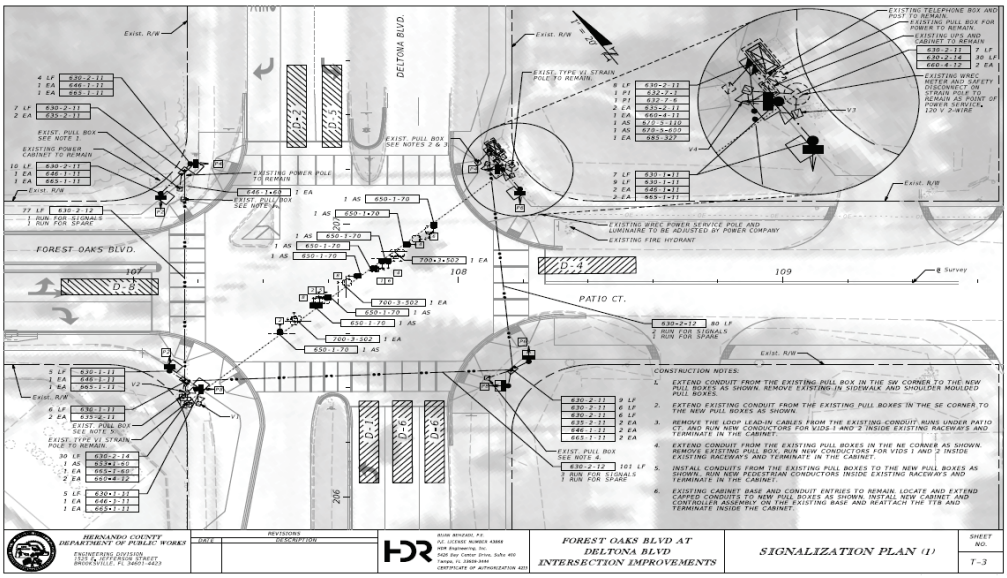
HDR has served Hernando County on multiple Continuing Services contracts including the 2018 Continuing Traffic Engineering Services contract. We have accomplished a wide variety of task order assignments including intersection improvement, traffic control and design, signal retiming, ATMS plans and traffic impact analysis projects for the County. Select projects from our most recent contract are shown below.

Forest Oaks Blvd at Deltona Blvd. HDR provided roadway and intersection improvement plans with successful construction completed in 2017. Under this contract, we provided post design services. This project included reconstructing the signalized intersection.

County Line Road and Linden Drive Signal Warrant Study. HDR performed the signal warrant study which was approved by the County in 2022.

Citizens Center for Success Development Traffic Impact Analysis. Citizens Center for Success development located on the south side of Spring Hill Drive between US 41 and Air Commerce Boulevard. The purpose of the Traffic Impact Analysis (TIA) is to identify the intersection and roadway improvements needed to accommodate the future traffic that would be generated by the development on the roadway network system and adjacent signalized intersections. The TIA report was prepared, signed, and sealed and submitted for review and approved by the county.

Spring Hill Drive from Aerial Way to US 41. HDR prepared the ATMS plans to equip the corridor with fiber optic communication subsystem and Ethernet-based Edge Switches for point-to-point connection.



Continuing Traffic Engineering Services - Continued

Hernando County, FL

Mariner Blvd Signal Retiming Project from County Line Road to Northcliffe Blvd. Hernando County requested HDR to provide services for retiming a total of eight (8) intersections, along Mariner Boulevard from County Line Road to Northcliffe Boulevard in the City of Spring Hill, Florida. Study methods and analyses were performed consistent with the Manual on Uniform Traffic Studies (MUTS), Manual on Uniform Traffic Control Devices (MUTCD), the Highway Capacity Manual (HCM), and FDOT guidelines and preferences. Signal retiming processes included:

- Data Collection (seven-day and turning movement counts, intersection inventories, and existing timing data).
- Field reviewed to observe and understand intersection and system-wide traffic flow, and intersection operational deficiencies.
- Modeled and calibrated existing conditions as the baseline for analyses.
- Updated local controller timings, develop coordination timing plans for weekday and weekend periods, implement, fine-tune, and post-implementation monitoring.
- Made immediate short-term recommendations where needed, to provide additional benefits.
- Documented work performed on this project.

Designed By:	J.M.	Section:		Mile Post:		Node:	1
Date:	2/26/2021	Sig ID:		Controller:	Econolite Cobalt	System ID:	
Checked By:	R.A.A.	Maj. Street:	Mariner Blvd	Orientation:	N-S	SOP:	10
Date:	2/26/2021	Min. Street:	County Line Rd	Orientation:	E-W		

Data Inputs

Movement # (Controller Phase Ø)	1	2	3	4	5	6	7	8	Notes
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB	
Speed Limit (mph)	45	45	45	50	45	45	50	45	
Vehicle Traversed Width	154	152	156	169	164	134	163	161	
Approach Grades	-0.3%	-0.3%	-2.1%	-2.1%	-0.3%	-0.3%	-2.1%	-2.1%	
Ped-X (curb to curb)		139		156		115		144	
Crossing Time		40		39		33		42	
Ped-X (button to curb)		11		11		8		10	
Ped-X (button to far curb)		150		147		123		154	
Crossing Time (to far curb)		50		49		41		52	

Controller Timings (seconds)

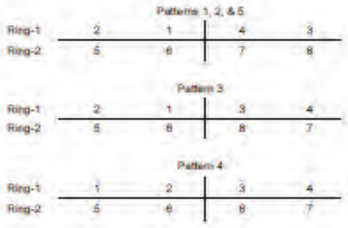
Movement # (Controller Phase Ø)	1	2	3	4	5	6	7	8	Notes
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB	
Turn Type	Prot.		Prot.		Prot.		Prot.		
Min Green	5	10	5	5	5	10	5	5	
Ext	3.0	6.0	5.0	5.0	3.0	6.0	5.0	5.0	
Yellow Change Interval	4.8	4.8	5.0	5.0	4.8	4.8	5.0	5.0	
Red Clearance Interval	3.8	3.8	4.0	4.0	4.1	3.8	4.0	4.0	
Max I	15	50	15	30	20	50	15	30	
Max II	10	30	10	20	10	30	10	20	
Walk		7		7		7		7	
Flashing Don't Walk		40		39		33		42	
Min Splits	14.0	56.0	14.0	55.0	14.0	49.0	14.0	56.0	
Detector Memory									
Det. Cross Switch									
Recall		Min		Min		Min		Min	
CNA									
Coord Phase				ON				ON	

Coordination Timings (seconds)

Plan	Pattern	C-O-S	Splits								Cycle Length	Offset	Seq
AM	1		20	44	22	34	20	44	20	36	120	109	2
MIDDAY	2		22	41	22	35	20	43	22	35	120	92	2
PM	3		30	37	26	37	21	46	24	39	130	50	1
NT	4		20	30	20	30	20	30	20	30	100	33	3
WKN	5		25	35	24	36	22	36	22	36	120	58	2

Notes:

1. Offset referenced to end of main street green
2. Use Fixed Force-offs
3. Use Max Inhibit during coordination
4. Min Recall phases 2, 4, 6, & 8 during coordination



Time of Day Plan

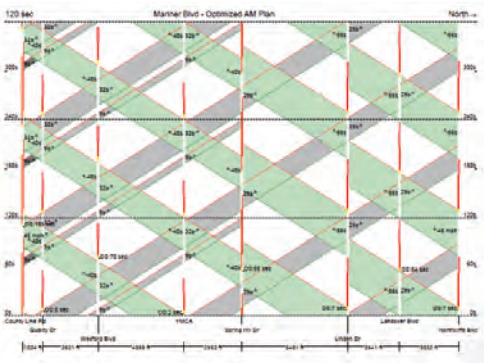
Designed By:	JM
Date:	2/22/2021
Checked By:	RAA
Date:	2/22/2021

Section:	
Corridor:	Mariner Blvd
From:	County Line Rd
To:	Northcliffe Blvd

TIME OF DAY

Day	Plan	Time		Pattern	Cycle Length
Monday Thru Friday	FREE	0:00	6:30	-	FREE
	AM/AM School*	6:30	7:45	7	120/FREE
	AM	7:45	9:30	1	120
	MIDDAY	9:30	14:30	2	120
	MD School*	13:50	15:00	8	FREE
	PM	14:30	19:00	3	130
	NT	19:00	20:15	4	100
	FREE	20:15	0:00	-	FREE
Saturday	FREE	0:00	9:00	-	FREE
	WEEKEND	9:00	18:00	5	120
	FREE	18:00	0:00	-	FREE
Sunday	FREE	0:00	9:30	-	FREE
	WEEKEND	9:30	18:00	5	120
	FREE	18:00	0:00	-	FREE

* Applies to Mariner Blvd at Landover Blvd only



Transportation Design & General Engineering Services

Hillsborough County, FL

Contract Duration:
2003 - Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Preparation of Plans & Specifications
- Scope Support
- Master Plan Preparation
- Fiber Optic Cable Allocation
- Utility Coordination
- PERs
- Strategic Communications
- Intersection Improvements
- Signal & SPM
- Traffic Signal Interconnect
- Drainage
- Environmental
- Sidewalks/Trails
- Technical Studies

Client Information:
Hillsborough County
Bryan Zayas
601 E Kennedy Blvd
Tampa, FL 33602
813.778.4535
zayasb@hillsboroughcounty.org

Key Staff Involved:

- Melanie Fowler, PE
- Tom Quinn, PE
- Bijan Behzadi, PE, PTOE
- Greg Stevanus, PE
- Michael Oates, PE, PTOE
- Jose Gonzalez, PE
- Marlin Register, PE
- Jim Johnston, PE
- N. Prabaharan, PE, PTOE
- Brian Zimmerman, PE
- Heather Hubbard, PE

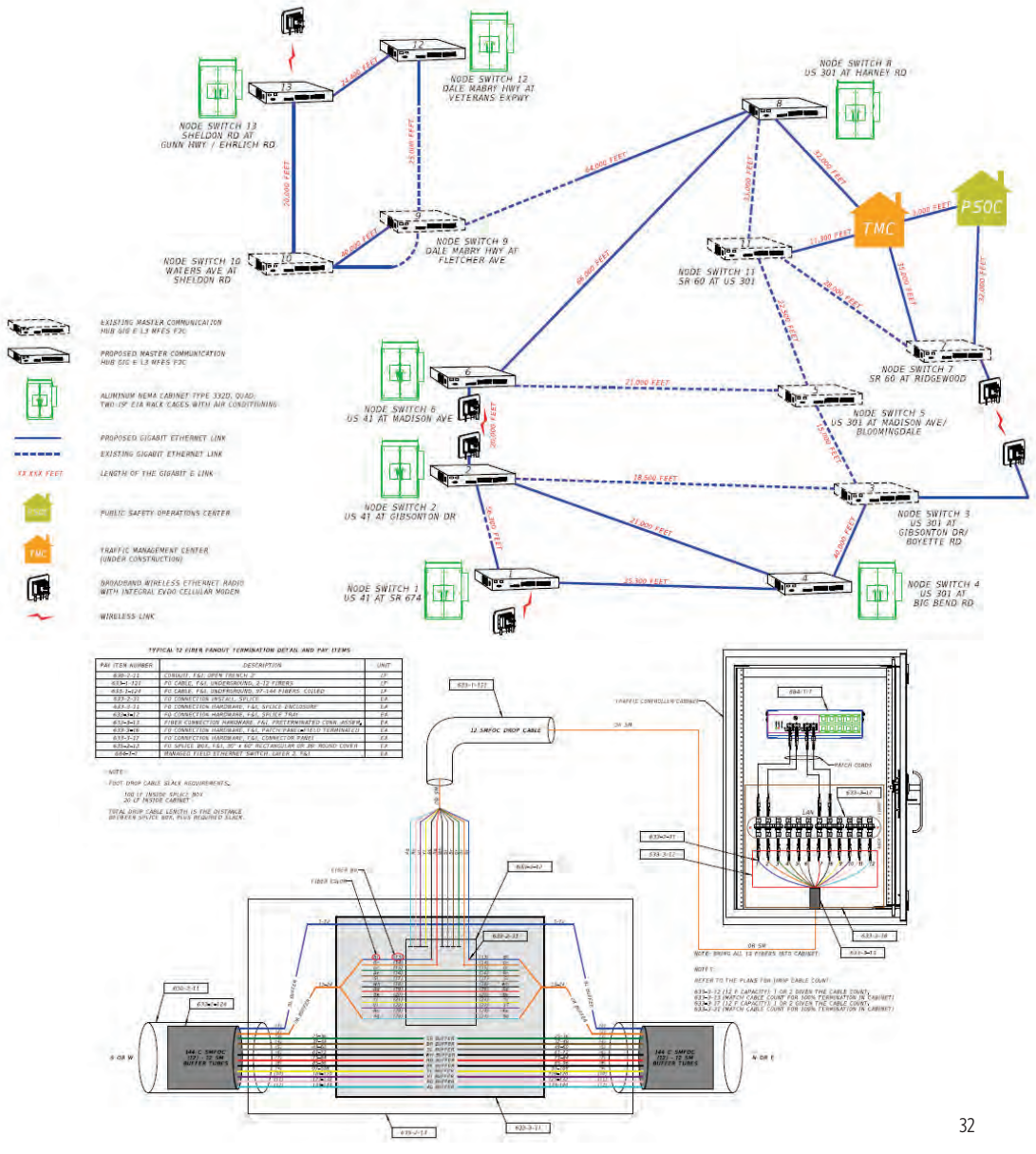
Subs:

- Adams Traffic, Inc.
- Cumbey and Fair, Inc.
- Tierra, Inc.

Since 2003, HDR has provided general/civil engineering services to Hillsborough County to support transportation capital improvements. Our team supports the County with transportation engineering services from concept, through design and specifications, bidding and construction. Projects include but are not limited to intersection improvements, new signals, traffic signal interconnection, fiber optic network design on county-wide basis, road diets, complete streets, road widening, road resurfacing and reconstruction, record drawings, permitting, modeling and plan evaluation, GIS, biological and ecological evaluations, and landscape architecture. Select projects from our most recent contract are shown below.

ATMS Expansion & Improvement Projects Program. Since 2017, we have completed fiber optic network upgrade planning and design on county-wide basis for 40 corridors for the County.

- CIP 69602659 (Fiber Optic Network Planning and Design)- County-Wide - Served as the technical advisory role and communication designer to perform the preliminary fiber-optic-based communication network design, forming a robust and reliable dedicated self-healing ring communication topology for the County to manage, operate and maintain their traffic signal systems, and participate in the broader Transportation Systems Management and Operations (TSM&O) functions.



Transportation Design & General Engineering Services - Continued

Hillsborough County, FL

Intersection Improvements Program. Select tasks include:

- CIP 69679009 (Traffic Study & Design) - George Road at Memorial Highway Intersection Improvements
- CIP 69600314 (PD&E & Design) - Symmes Rd. at East Bay Road Intersection Improvements – Project to analyze the existing and design year traffic, existing features, right of way impacts, etc. to recommend the optimum intersection improvement / configuration (roundabout). Prepared Preliminary Engineering Report and design phase for the preferred alternative (spiral roundabout) is underway.
- CIP 69679028 (PD&E); 69645134 (Design) - Boyette Road at Dorman Road Intersection Improvements - Safety improvement project that will reconstruct the existing 4-way stop controlled intersection with a roundabout.
- CIP 69639002 Cypress Village Blvd Mobility Improvements from N of CR 674 to 19th Ave. - Mobility improvements to re-purpose the outside lane of Cypress Village Blvd to accommodate golf carts.
- CIP 69679041 - Big Bend Road Interim Improvements Phase I from E of Bullfrog Creek to Simmons Loop - Evaluated corridor to provide recommendations for interim operational improvements from US 41 to US 301.

ATMS - Master Communication Hubs Upgrade. Bijan served as the EOR to perform the civil, electrical and mechanical design of the proposed master communications hubs at suitable locations inside the County right of way. The design included the following key components:

- Civil site design with Type B fencing and leveling pad for the locations requiring new field equipment enclosure.
- Electrical design including power service feeder, transformer, service disconnect, riser diagram and the electrical panel board with calculations.
- Air conditioner design for the master hub cabinet based on the heat loading requirements, the cooling and ambient temperature with calculations.

Managed Field Ethernet Switch / 10 Gbps Core Router. Designed the plan details depicting communication rack, rack units, existing equipment, conduit entry, fiber optic cables and sizes, Corning Distribution Housing Patch Panels, remote power management unit, UPS, port assignments, patch cords for each Master Communication Hub depicting the Pre-Connectorized Patch Panels, and Connections to the Layer 3 Ethernet Core Switch ports and the optical fiber allocations / assignments approved by the County. During this time, the COUNTY built their Traffic Management Center (TMC) and this project connected all of the signal system, and supporting intelligent devices to the TMC .

Miscellaneous Professional Engineering Services

Pasco County, FL

Contract Duration:
2015 - Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Roadway Design
- Drainage Systems
- Traffic Design
- Structures Design
- Traffic Control
- Environmental
- Utility Coordination
- Route Studies
- Traffic Analysis
- Post Design Services
- Grant Application Support

Client Information:
Pasco County
Panos Kontses, PE
5418 Sunset Rd
New Port Richey, FL 34652
727.834.3604, ext 1623
pkontses@pascocountyfl.net

Key Staff Involved:

- Melanie Fowler, PE
- Tom Quinn, PE
- Jim Johnston, PE
- Bijan Behzadi, PE, PTOE
- Jose Gonzalez, PE
- Michael Oates, PE, PTOE

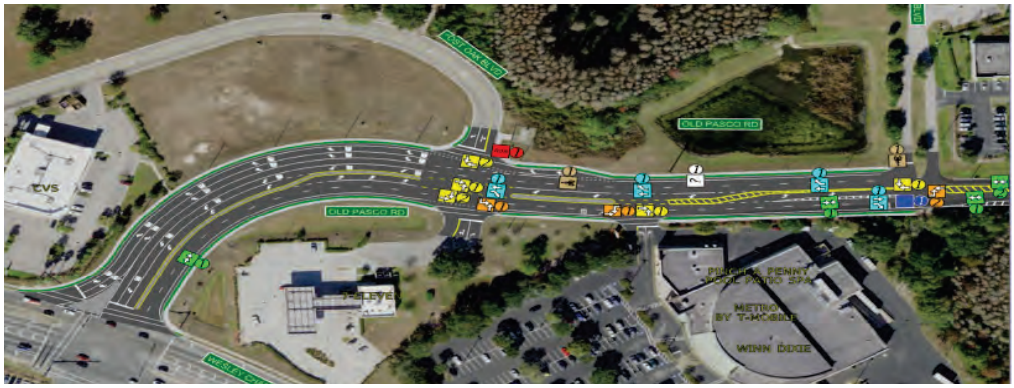
Subs:

- Adams Traffic, Inc.
- Tierra, Inc.

HDR has provided professional engineering services to Pasco County for 20 years. Select projects from our most recently completed continuing services contract include:

Road Safety Audit - Old Pasco Road from CR 54 to Overpass Road. HDR conducted a Road Safety Audit (RSA) on Old Pasco Road from CR 54 to north of Overpass Road (3.6 miles).The Road Safety Audit project was initiated by the Pasco County Traffic Operations, to perform a full RSA study in conformance with the FHWA and FDOT guidelines. The RSA Team comprised of multiple County agencies was formed and remained active during the investigation period. The final RSA report provided recommendations with phased implementation encompassing short-term, mid-term, and long-term improvements. The cost to construct including design, construction and time frame for completion of each improvement terms were provided in the RSA Report.

The findings of the concentrated efforts of the Old Pasco Road RSA were based on the following analytical procedures: selected RSA team, conducted pre-audit meeting to review project information, performed field observations under various conditions, conducted audit analysis and prepared report of findings, performed review of the as-built plans, presented audit findings to Project Manager and Design Team and incorporated findings into project.



Old Pasco Road at SR 52 Final Design. This project included widening Old Pasco Road from 2 lanes to a 4-lane divided urban section south of SR 52 (0.34 mi), constructing a stormwater pond, medians and left turn lanes, SWFWMD and FDOT permitting and preparing plan revisions for FDOT's SR 52 widening project to accommodate proposed roadway, drainage, signing/marking and signal modifications during construction. HDR's services included roadway/intersection design, drainage design, environmental, traffic control, signing & pavement marking plans, signal plans, utility coordination, computation books, contract documents, bidding & post design services. During the bidding and 12-month construction phases, HDR provided post design construction assistance services.

CR 579 (Prospect Road/Happy Hill Road) Route Study. HDR conducted a Route Study and Pond Siting Analysis Report (RSPSAR) in order to investigate potential roadway and drainage improvements along 4,200 feet of CR 579 (Prospect Road/Happy Hill Road) from south of Clinton Avenue to north of the existing SR 52 intersection to accommodate future traffic volume increases anticipated to occur by the Design Year 2041. The study area also includes approximately 2,200 feet along the existing SR 52 (approximately 1,600 feet east and 600 feet west of CR 579). In addition to the No-Build Alternative, three (3) Build Alternatives were developed and considered for this project.

Ossie Murphy Road Route Study. HDR was tasked with performing a route study for Ossie Murphy Road. This project included analysis of new roadway alignments and pond sites for Old Pasco Road Extension and Ossie Murphy Road located northwest of the I-75/SR 52 interchange. HDR's services included preliminary design, pond siting, environmental analysis, cost estimates, draft and final reports, alternative concept plans and typical sections, public meeting displays (typical sections, alignment alternatives on aerial background, evaluation matrix), public involvement and BCC presentation of recommendations. The study evaluated alternatives based on six factors: long-range planning, safety, environmental impacts, property impacts, costs and public opinion. Concept plans were developed for the recommended west-shifted alignment.

General Engineering Consultant (GEC)

District 7 Counties, FL

Contract Duration:
1987 - Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Project Management
- Environmental
- Roadway Design
- Drainage Systems
- Structures Design
- Traffic Analysis
- Traffic Control
- Landscape Design
- Architecture
- Permitting
- Utilities
- Right of Way Cost Estimating, Appraisal, Acquisition & Relocation
- Plans Review
- Cost Estimating
- Work Program

Client Information:
FDOT District 7
Megan Miller
11201 McKinley Dr.
Tampa, FL 33612
813.975.4854
Megan.Miller@dot.state.fl.us

Key Staff Involved:

- Marlin Register, PE
- Melanie Fowler, PE
- Tom Quinn, PE
- Huijing Qiang, PE
- Bijan Behzadi, PE, PTOE
- Greg Stevanus, PE
- Michael Oates, PE, PTOE
- N. Prabaharan, PE, PTOE
- Jamie Krzeminski, PE, PTOE
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Subs:

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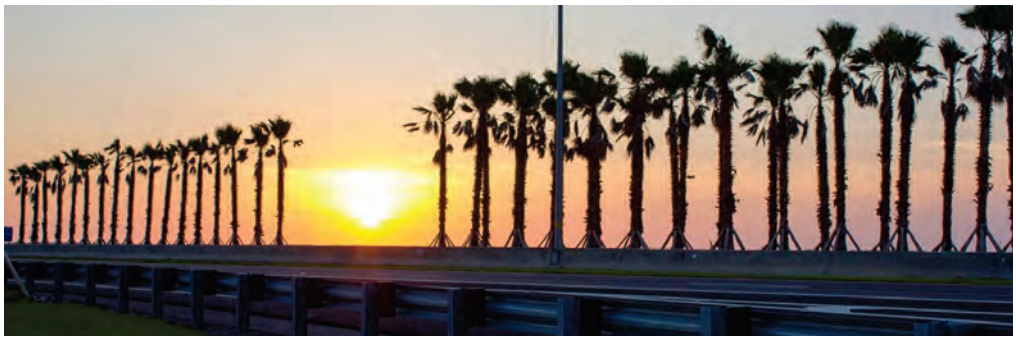

For our multi-year GEC contract (36 years of continuous service), HDR functions as an extension of FDOT District 7 staff. Our highly-qualified personnel perform duties in the areas of PD&E, planning, design; project management, permitting, R/W, survey support, contract support, utility coordination and scheduling. Production support services include plans updates, minor designs, plans review, design studies, scopes staff hour development for design contracts and RFP development and support for Design Build projects, public awareness programs, mitigation plans, traffic control and utility coordination. Project management support includes management of design consultants/projects, plans packaging, LRE cost estimates and input into the work program. A sampling of work assignments to date has included:

Work Program Annual Update. Develop preliminary scopes, generate design, survey, right of way and construction costs estimates and upload these documents to SharePoint.

Plans Review. HDR staff have performed plans review over a thousand projects. Discipline reviews include roadway, drainage, structures, utility, architecture, landscaping and all traffic disciplines.

Gandy Blvd Concept Reevaluation. Data collection, traffic counts, developed traffic volumes, CORSIM model and traffic analysis of grade-separate and at-grade improvements at Grand Avenue.

I-275/22nd St and I-75/US 301 IOARs. Performed Synchro analysis, alternatives and operational analyses, conceptual design, evaluation matrix and traffic memo.

I-75/SR 56 DDI Alternative Study. Data collection, crash data analysis, CORSIM validation and modeling, VISSIM modeling, signal optimization, LOS analysis, developed traffic volumes, alternative analysis and IOAR report writing.

Courtney Campbell Causeway (SR 60) Multi Use Trail. Prepared conceptual plans of 12 foot wide shared use path along the south side of SR 60 from the Pinellas County line to Ben T. Davis Beach including a bridge across Old Tampa Bay; prepared Design-Build criteria package.

Bayway Structure E. Developed RFP, assisted with all aspects of procurement, and assisting with Post Award needs such as weekly coordination, plans and shop drawing reviews and design change concept development.

Embedded Support. HDR supplies embedded staff in many areas, including R/W appraisal, acquisition and property management, survey, Project Management, utility coordinators, procurement, drainage, traffic, roadway, Program Management and PD&E studies.

Transportation Engineering Consulting Services

Manatee County, FL

Contract Duration:
2012-Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Project Management
- ATMS Design
- Traffic Control
- Signalization Design
- Utility Coordination
- Cost Estimating

Client Information:
Manatee County
Albert Rosenstein, PE, CPM
1112 Manatee Ave. West
Bradenton, FL 34205
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albert.rosenstein@mymanatee.org

Key Staff Involved:

- Bijan Behzadi, PE, PTOE
- Melanie Fowler, PE
- Tom Quinn, PE
- Greg Stevanus, PE
- Michael Oates, PE, PTOE
- Jose Gonzalez, PE
- Jim Johnston, PE
- Brian Zimmerman, PE
- Heather Hubbard, PE

Subs:

- Tierra, Inc.

HDR provides transportation engineering services for various projects as requested by Manatee County. The work consists of transportation engineering services that include design and specifications; services during bidding and construction; record drawings; permitting; traffic plans, ATMS, lighting, signalization, fiber optic splicing details. Select task assignments have included:

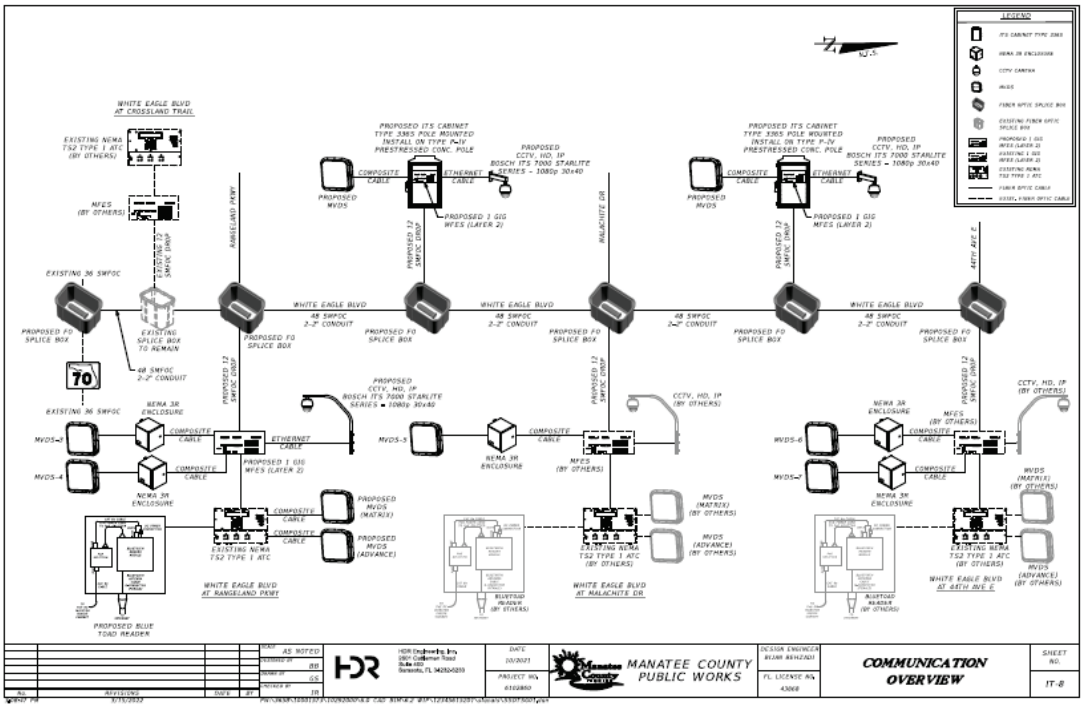
26th Street West at 30th Avenue Intersection Improvements. This project provided left and right turn lanes on 30th Avenue West at the T-intersection with 26th Street West with a new mast arm signal upgrade for the intersection. SWFWMD permit modification was required to treat the drainage impacts due to the widening. Project also included 4" watermain replacement at 25th Street West. Construction was completed in December 2022.

Port Harbour Parkway at Upper Manatee River Road Traffic Signal. This project consisted of the addition of a new traffic signal at the intersection of Upper Manatee River Road and the newly constructed Port Harbour Parkway. Included efforts were sidewalk design, signal and structural design, signing and pavement marking, lighting analysis, ATMS incorporation, bidding services, and construction phase services. Construction was completed March 2021.

White Eagle Blvd from SR 70 to 44th Avenue East - ATMS Improvements. The project consisted of the addition of a new ATMS line on White Eagle Boulevard from SR 70 to 44th Avenue East, an approximate distance of 1.9 miles. The scope of services for this project was to provide project management, coordination, design, and limited services during bidding and construction.

Designed a 48-count single mode fiber optic based communication distribution line and drop cables at the signalized intersections – Rangeland Pkwy., Malachite Dr., and 44th Avenue East. The signalized intersections of Malachite Dr. at White Eagle Blvd. and 44th Avenue East at White Eagle Blvd. were being constructed by others.

The design included 2-2" HDPE conduits, fiber optic pull boxes every 500 ft, and fiber optic splice boxes with a maximum spacing of 2,500 ft. A 30"x60"x48" splice vault were provided at the end of the fiber run at 44th Avenue East.

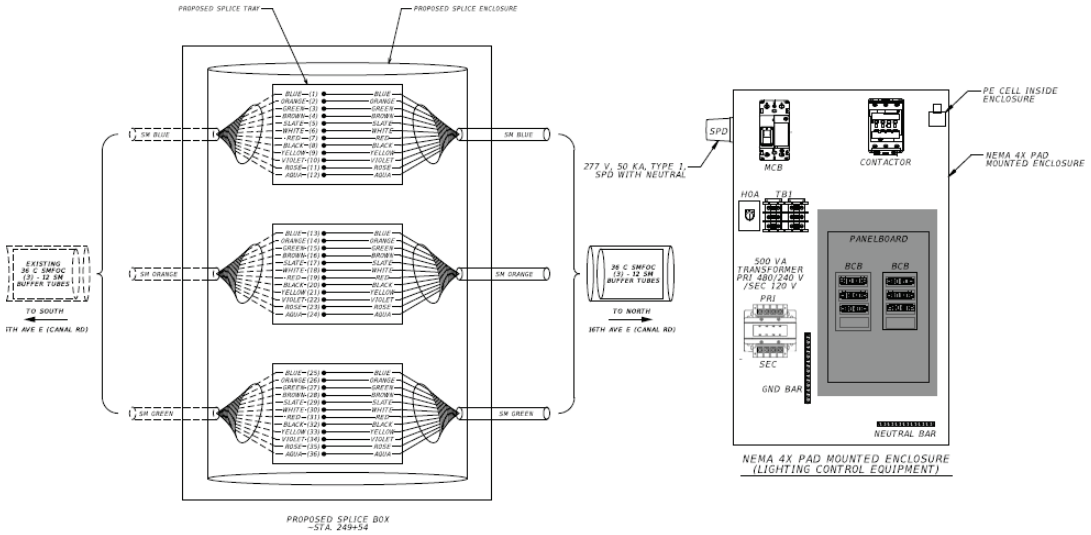


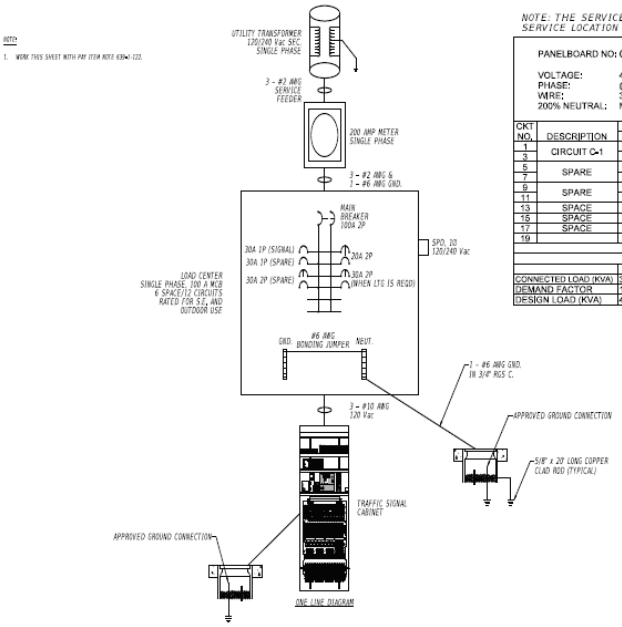
Transportation Engineering Consulting Services - Continued

Manatee County, FL

Canal Road (16th Avenue East). This project consists of converting an existing two-lane roadway to a new four-lane divided roadway for approximately 0.84 miles of Canal Road (16th Avenue East) from US 301 to 17th Street East. There is a large canal on the west side of the project corridor that will be enclosed as a box culvert for the entire length. The project contains upgrades to signals at the intersection with US 301 and the intersection with 17th Street East. CSXT has a railroad crossing at the middle of the project corridor that will be upgraded with new concrete tubs and a gate system for increased safety. The four-lane divided roadway contains 11-ft travel lanes, 5-ft bicycle lanes, 6-ft sidewalks, and median mounted corridor lighting. Manatee County utilities are also being upgraded due to roadway impacts.

Canal Road (Segment 3). The project consisted of signalization, signing, markings, lighting and ATMS improvements roadway widening and fiber optic based communication. Utilized AGi32 software for roadway lighting. Performed electrical load and voltage drop calculations.





NOTE: THE SERVICE CENTER DETAILS WILL BE COMPLETED IN THE NEXT SUBMITTAL AFTER POWER SERVICE LOCATION HAS BEEN FINALIZED AND ELECTRICAL LOAD CALCULATIONS HAVE BEEN COMPLETED.

PANELBOARD NO: C

VOLTAGE:	480/240	BUS RATING (A):	100	ENCLOSURE:	NEMA 4X
PHASE:	Ø	MAIN OC DEVICE:	MLO	MOUNTING:	SURFACE
WIRE:	3+GND	INTERRUPTING RATING (KA):	35	LOCATION:	LIGHTING CONTROLLER
200% NEUTRAL:	NO	SERVICE ENTRANCE LABEL:	NO		

CKT NO.	DESCRIPTION	CONNECTED LOAD (VA) LTS	REC	MECH	MISC	OCP AMPS	P		OCP AMPS	P	CONNECTED LOAD (VA) LTS	REC	MECH	MISC	DESCRIPTION	CKT NO.
1	CIRCUIT C-1	675,6				30	2	A	30	2	1.056,8				CIRCUIT C-2	2
3		675,6						B			1.056,8					4
5	SPARE					30	2	A	30	2					SPARE	6
7								B								8
9	SPARE					30	2	A	30	2					SPARE	10
11								B								12
13	SPACE							A							SPACE	14
15	SPACE							B							SPACE	16
17	SPACE							A							SPACE	18
19								B								20

LOAD SUMMARY

	LTS	REC	MECH	MISC	SPARE	TOTAL			PHASE BALANCE	
CONNECTED LOAD (KVA)	3,5	0,0	0,0	0,0	—	3,5		480	LINE-TO-LINE VOLTS	PHASE A (KVA) 1,7
DEMAND FACTOR	1,25	NEC	1,00	1,00	20%	—		7,2	CONNECTED AMPS	PHASE B (KVA) 1,7
DESIGN LOAD (KVA)	4,3	0,0	0,0	0,0	0,7	5,0		10,5	DESIGN AMPS	

PANELBOARD SCHEDULE FOR LOAD CENTER C

US 19 from Northside Drive to CR 95

FDOT District 7, FL

Contract Duration:
2012-Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Project Management
- Pedestrian Bridge Design
- Temporary Traffic Control Plan
- Roadway Design
- Drainage Systems
- Structures Design
- Traffic Analysis
- Traffic Control
- Signalization Design
- Lighting Design
- ITS Design
- Noise Study Report
- Utility Coordination
- Plans Review
- Cost Estimating

Client Information:
FDOT District 7
Elizabeth Winters
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Tampa, FL 33612
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Key Staff Involved:

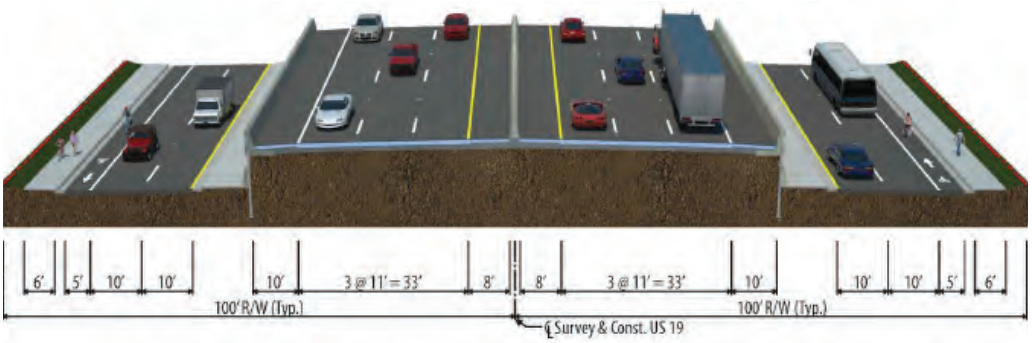
- Bijan Behzadi, PE, PTOE
- Melanie Fowler, PE
- Marlin Register, PE
- Greg Stevanus, PE
- N. Prabaharan, PE, PTOE
- Tom Quinn, PE
- Jim Johnston, PE
- Brian Zimmerman, PE

Subs:

- Tierra, Inc.

HDR was selected by the Florida Department of Transportation for the design of 1.21 miles of US 19 from Northside Drive to CR 95 in Pinellas County, Florida. The project included reconstructing the eight-lane divided roadway to a 6-lane controlled access facility with two-lane one-way frontage road on each side to provide for local access. The existing at-grade signalized intersection of US 19 and Curlew Rd. was replaced with a Single Point Urban Interchange (SPUI) with a complex long span steel bridge to provide the grade separation of the US 19 mainline from Curlew Rd.

HDR performed full design services including major highway design, stormwater management facility design, temporary traffic control plans, environmental permitting, complex structural design, miscellaneous structures design, signing and pavement marking plans, signalization design and intelligent transportation design. The project was let to construction in June 2022 and construction began in January 2023.



Professional Engineering Services for Roads & Drainage

Polk County, FL

Contract Duration:
2017 - 2022

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Roadway Design
- Drainage Systems
- Structural
- Utilities
- Environmental
- Engineer's Reports
- Emergency Bridge Inspection
- Post Design Services

Client Information:
Polk County
Jay Jarvis
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Key Staff Involved:

- Tom Quinn, PE
- Melanie Fowler, PE
- Jim Johnston, PE
- Bijan Behzadi, PE, PTOE
- Greg Stevanus, PE
- Michael Oates, PE, PTOE

Subs:

- Adams Traffic, Inc.
- Tierra, Inc.

Under this contract HDR assists Polk County with development of design and construction documents for roadway, drainage, structures, signing and pavement marking, signalization, lighting, utility design and environmental permitting. In addition, HDR has completed bridge development reports, bridge hydraulic reports, bridge design, bridge scour analysis, emergency bridge inspection, assessment and recommendations and post design services as needed. Select projects include:

CR 54 / Ronald Reagan Pkwy at CR 547/Lee Jackson Hwy Intersection Improvements. This project included roadway, drainage, permitting, traffic and utility design (for reclaimed water stub outs).

Banana Rd Sidewalk Improvements. The project consists of continuous sidewalks and crosswalks from west of Harrison Road to Churchwell Elementary School. Phase 1 included a feasibility study, and Phase 2 included roadway, drainage, permitting and traffic design.

Keith Ln and Berkley Rd Drainage Improvements. HDR performed a flooding study with detailed hydraulic modeling and improvement alternatives to address historic neighborhood flooding along Keith Land and west side of Berkley Road. Just north of Lake Myrtle Sports Complex, these drainage improvements along Keith Lane and the west side of Berkley Road include hydraulic modeling (SWMM5), permitting, and preparation of complete set of construction plans. Permitting included an Environmental Resource Permit and Florida Department of Transportation Drainage Connection Permit.

Country Club Road at Buckeye Loop Road Intersection Improvements. HDR developed the Intersection Alternative Analysis Report for this project. We performed traffic analysis, safety analysis, environmental impact analysis, right of way impact analysis, concept plans and cost-benefit analysis. HDR is also responsible for preparing the design and construction documents. The design scope includes roadway, drainage, S&PM and signalization.

Districtwide TSM&O Retiming

FDOT District 5, FL

Contract Duration:
2015-Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Traffic Analysis
- Traffic Control
- Signalization Design
- Department Support

Client Information:
FDOT District 5
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Deland, FL 32720
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Key Staff Involved:

- Bijan Behzadi, PE, PTOE
- Huijing Qiang, PE
- Richard Atta-Armah, PE
- N. Prabaharan, PE, PTOE
- Jamie Krzeminski, PE, PTOE

Subs:

- Adams Traffic, Inc.

HDR was selected to provide FDOT District 5 with signal retiming services throughout the entire District. Select tasks included

SR 421 (Taylor Rd./Dunlawton Ave.) from Summer Trees Rd. to SR 5A (Nova Rd.) & SR 5A (Nova Rd.) at Village Tr. This retiming project corridor consisted of 11 intersections with ECONOLITE ASC/3-2100 controllers. HDR was tasked to analyze and implement new coordination timings to improve corridor performance. Supplementary task for "before" and "after" travel time studies were undertaken.

A GPS receiver unit and TRU TRAFFIC was used to collect REAL TIME travel time studies and to verify field programmed offsets operating as intended.

Prior to implementation, the corridor was known to have significant queuing, main line delays and inefficient traffic flow.

Through the newly developed coordination plan, along with split, offset, and multi-pattern adjustments, specifically tuned to control minor movement behaviors, significant reductions in queuing and travel delay were observed. The before and after study verified significant savings in cost as well as fuel consumption as result of the retiming efforts.

Project Corridors: SR 200, US 27/US 301/US 441, SR 40, SR 492, & US 27. This area wide retiming project corridor consisted of roughly 60 intersections with Trafficware ATC controllers. HDR was tasked to analyze and implement a cross-coordination plan with the major city corridors while designing it to work in coordination with adjacent major corridors.

This project relied heavily upon field data collection, GPS travel run data, and additional controller programming locking offsets to maintain crossing artery coordination.

Through careful analysis of all the project corridors running as a single system, reviewing GPS travel run arrival times, and adding additional timing plans as needed to transition through peak demands, the project corridors operates better with reduced queues as well as reduced travel times. Adjacent corridors not included on the project also benefitted from improved system-wide performance while operating its existing system timings as desired by the City.

Districtwide Traffic Operational Studies for Innovative Intersections & Interchange Treatments

FDOT District 7, FL

Contract Duration:
2015-Ongoing

HDR Role:
Prime Consultant

On Time:
Yes

Within Budget:
Yes

Project Type:

- Roundabout Screening
- Traffic Analysis
- Traffic Control
- Signalization Design
- Department Support
- Safety Analysis
- Complete Streets
- Lane Elimination Evaluation

Client Information:
FDOT District 7
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Jill.Wehle@dot.state.fl.us

Key Staff Involved:

- Bijan Behzadi, PE, PTOE
- Melanie Fowler, PE
- Heather Hubbard, PE
- N. Prabaharan, PE, PTOE

Subs:

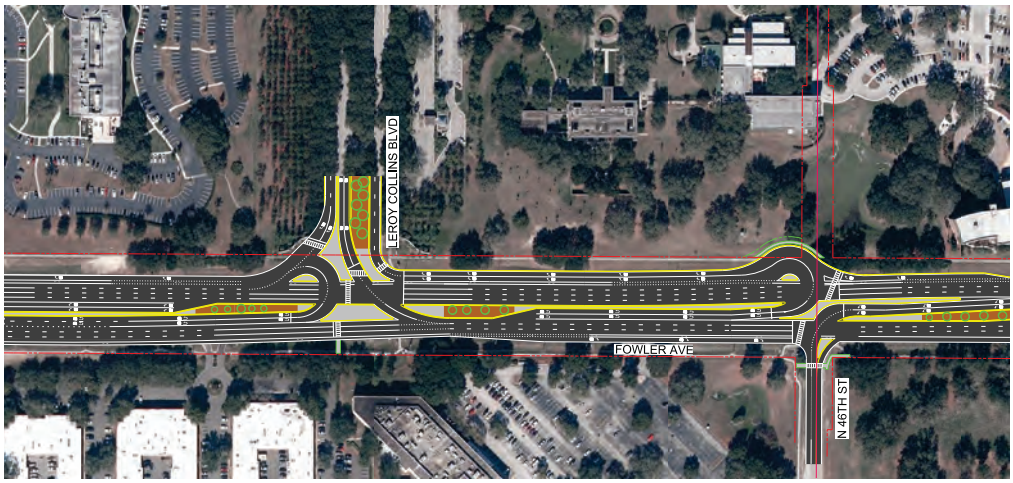
- Adams Traffic, Inc.
- Cumbey and Fair, Inc.

HDR was re-selected for this contract to provide FDOT with traffic operational analysis, concept development, and evaluation services for the definition and assessment of innovative intersection and interchange treatments for projects across the District. The contract is designed to support District traffic operations in the development and assessment of innovative solutions to address operational, safety, and capacity challenges. HDR has completed over 100 assignments under this contract including roundabout screenings using FDOT's Intersection Control Evaluations (ICE) Analysis, Hard Shoulder Running (HSR) analysis, Median U-Turn (MUT) and Displaced Left-Turn (DLT) intersection analyses and conceptual designs, interchange reconfiguration analyses and conceptual designs, and other miscellaneous tasks. Select notable assignments include the following:

ICE Analysis. Alt US 19/Virginia Ave, SR 60/Maydell Dr, US 301/Ayersworth Glen Blvd, Alt US 19/Anclote Road, and Selmon Expressway/21st St and 22nd St interchange.

Roundabout Analysis and Conceptual Design. Gandy Blvd/94th St, Alt US 19/Broadway, Meridian Ave/21st St, US 41/Snow Memorial Hwy, US 41/Lake Lindsey Road, SR 200/Lecanto Hwy, US 98/Citrus Way (currently in design) and US 98/Trilby Road (currently in design).

Innovative Intersection and Interchange Analysis and Conceptual Design. Fowler Ave from Bruce B Downs Blvd to Bull Run Dr, Dale Mabry Hwy/Waters Ave, Dale Mabry/Hillsborough Ave Interchange.



D.

Project Approach

D. Project Approach - Budget Methodology/Cost Control

Highway construction material prices are in flux now more than ever, so keeping an eye on the market is crucial to staying within the programmed budget. Successful project cost control can also contribute to the overall project's success, outside of avoiding cost overruns during design. Cost control relies on detailed and accurate engineered cost estimates and tracking throughout all project design phases.

The key to budget and cost control of any capital improvement project is to write a solid scope for the work order being issued by Hernando County and having both sides agree to the level of expected work to avoid scope creep, continuously update the engineer's estimate for the construction procurement, and then monitor the causes of cost escalation during design phases. In addition to this key approach, HDR will coordinate with Hernando County regarding updates to their planned capital improvement program on an annual basis and by applying the inflation rate if the project letting is postponed to the future fiscal years.

Work-Order based assignments usually start with a phone call or an email request from the Procurement Department or County Project Manager and/or Department of Public Works . HDR will meet your construction budget requirements for each project through a proven approach to project execution. HDR understands financial constraints and applying the appropriate level of design for each unique project. We will work with the County to verify budget constraints and expectations for every project. If the task is small and straightforward, our project manager, Bijan will review the project requirements and prepare a scope of work, an initial staff hour/ fee estimate and a project schedule for review and approval by the County staff. For more complex projects, or if the scope reflects new or unusual requirements, Bijan will pull in the appropriate HDR Task Managers and other discipline experts to meet face-to-face with the County to discuss the issues and essential scope elements.

• Establish & Maintain Estimates of Probable Cost Within Owner's Established Budget

There are several factors that boost contractors' costs. Some are general inflation, global market forces, skilled labor shortages, material and fabrication supply and natural disasters. Although, we as end users may not have any control on these factors, HDR's approach to establish and maintain estimates of probable costs within the Hernando County's programmed capital improvement projects are as follows:

Maintain within framework of authorized scope of work order: Bijan will engage the team members who are most knowledgeable in the various traffic engineering studies or design functions to develop the engineer estimate at 30 %, 60%, 90% and 100% design stages and review the causes for any abnormality that indicates cost increase between design phases.

Accurately Estimating Costs & Careful Tracking: There are multiple components to effective cost control. These include accurately estimating costs, carefully tracking them during design period, and proactively identifying and mitigating potential budget overruns. To meet these requirements, Bijan will create detailed costs using the Basis of Estimates Manual published by Florida DOT, build systems for tracking actual costs against programmed costs, and have a feedback loop for adjusting cost management processes as needed. HDR will manage construction costs by communicating with construction and manufacturing industries in obtaining pricing with material suppliers.

Collaboration Between Stakeholders: HDR will utilize a program approach that will enable HDR as the engineer of record to leverage a relationship between construction and manufacturing sectors as stakeholders with locally researched detailed construction cost data such as unit prices and maximizing the communication and transparency of cost information. The next important approach is to establish a working policy with contractors to encourage them to ask about suspected errors or omissions during the pre-bid and post-bid interviews. Contractors' knowledge of errors and omissions at this stage is limited because the estimator and contractor's project manager who attend these meetings have only studied the drawings for bidding purposes. However, even at this stage, the contractor usually comes to the pre-contract meetings with several questions. It is important to respond quickly and set a pace for a constructive dialogue in the future.

Minimizing Errors & Omission: HDR will use Building Information Modeling (BIM) software that can significantly help minimize errors and omissions in construction drawings. BIM software allows for a 3D model-based approach to construction projects, which can enhance accuracy and coordination among various projects stakeholders. It provides features like clash detection and in-built error detection, which can identify conflicts or issues in the design, helping to prevent errors. However, errors or omissions due to incorrect data input or other human factors may still require multiple levels of reviews during production checks and quality control and quality assurance process to catch and rectify, emphasizing the importance of thorough quality control processes in construction projects.

• Control Consultant Contract Costs

The key to control consultant contract costs for each work order is budget and cost control of any capital improvement project by establishing a clear understanding of the scope for the work order and avoid unforeseen cases that cause scope creeps. HDR's approach to manage the consultant contract cost is described herein.

Develop Scope of Work: It is extremely important that the goals and objectives of the assigned work order are clearly defined and understood by each team member. The scope developed for each project forms the basis for staffing the assignment and for estimating the level of effort required to complete the task. Bijan will engage the team members who are most knowledgeable in the various study or design elements to develop the scope content for these specialized work elements, which will be integrated into the overall scope of work.

Develop Staffing Plan: A staffing plan will be developed to fit the requirements of the work order. The objective in this phase is to make assignments based on the level of experience required for the job. HDR will manage County resources judiciously, and we will assign cost-effective staff who possess the skills needed to efficiently complete each task.

Staff Hour/Negotiations: Once we have a clear understanding of scope and staffing requirements, staff hours will be finalized, and the fee estimate will be developed based on established rates and procedures. This effort normally takes place concurrently with the refinement of the scope. With an understanding of budget guidelines, we will not pursue supplements unless there are significant unforeseen scope changes.

Develop Schedule: A basic schedule defining the major subtasks and proposed milestone delivery dates will be prepared for all Work Order assignments. For studies or certain other assignments, the schedule may be comprised of draft and final delivery dates. For certain design projects, a Critical Path Method (CPM) schedule that includes the major tasks occurring under each major phase of design development will be provided. HDR will commit whatever resources are required to meet the schedule defined by the County's Project Manager to verify we are meeting the County's overall needs.

Coordination: HDR will administer and manage all tasks assigned under this contract. Bijan will serve as the primary contact for the County and will work directly with County staff to initiate the work order assignments. He will keep the County's Project Manager informed regarding all relevant issues with a focus on key items requiring County feedback. Our communication and coordination procedures have been developed and refined through our extensive experience delivering this type of work.

Controls to Maintain Project Cost: HDR's approach to controlling budgets begins with upfront planning by the Project Manager and task managers to develop a scope of work and schedule that meets the County's requirements. After receiving NTP, Bijan will develop a contract-specific Project Management Plan (PMP), provide the County PM with a contract specific Project Communication Plan (PCP) containing communication protocols for the contract along with contact information for team members so that County staff and task leaders can efficiently collaborate to proactively resolve issues.

We will work with the County to verify we stay within your budget for every project. At various stages throughout project scoping, preliminary design, and final design, HDR will prepare construction cost estimates based on the historical cost data and trends, so the County may plan for construction costs. There are design, maintenance and construction aspects to delivery of a cost effective design. We understand that it may be appropriate to provide a design solution that requires more design effort or specify a construction element that is more expensive to achieve a lower overall cost of implementation.

COST-EFFECTIVE SOLUTIONS

1) Confirming that the essential scope elements (from the County's perspective), are understood by the project team and that our proposed design does not include nonessential project elements. Many local government projects could include elements or enhancements that would be desirable to incorporate; but due to schedule, cost, right of way, or other constraints, cannot or should not be implemented.

2) Where standard County and/or FDOT design criteria cannot be implemented due to constraints or without significant cost, we will consider appropriate design variations or exceptions and provide a benefit-cost analysis of any proposed variation or exception to the County to justify any proposed deviation.

3) HDR's CEI staff will provide constructability reviews as part of our QC process to verify our proposed design solutions are constructible and avoid significant utility, maintenance of traffic or other impacts to schedule or cost.

HDR takes pride in improving the communities we live in. One important aspect we provide to our communities is taking time to incorporate practical design and project decisions that are appropriate for the context of each task.

Multi-discipline and constructability reviews combined with design reviews from Senior engineers during the QA/QC process ensures a vetted design for value focused design decisions and project features.

Project Innovative Approaches: With HDR' s approach to efficient, cost-effective solutions, streamlining work efforts where appropriate will allow us to be even more responsive to the County's needs. Key functions to fast track a project may include:

- Streamlined production and plans formats that simplify the construction documents yet provide the information necessary to bid, let and construct a project.
- Using as-built plans, aerial maps, and ground survey, as appropriate, to expedite plans development.

• Coordinate Value Engineering Activities

The Code of Federal Regulation 23 CFR Part 627 prohibits individuals directly involved in the design of a project from participation on the Value Engineering (VE) team analyzing the project.

HDR project manager, Bijan Behzadi, has served on several VE studies of multi-million dollar projects during his tenure at FDOT. Our understanding of VE is making the best use of available budget for the subject project, and that it is a team sport.

We believe the VE process taking place closer to the planning and design stages is the best time to identify and eliminate unwanted costs and improve functions and quality. When applied to the construction process, VE has enormous benefits for the highway agencies such as Hernando County.

CONSULTANT-RUN VE STUDIES

Although cost savings is a key benefit of the VE process, other issues which add to the complexity of the project should be considered in the VE selection process. Complexities may include critical constraints, difficult technical issues, external influences, or complicated functional requirements. The types of projects that provide the highest potential for value improvements are:

- High-cost projects
- Projects with alternate solutions which vary the scope and cost
- New alignment or by-pass sections
- Widening of existing highways for capacity improvements
- Major structures
- Projects with costly or extensive environmental or geotechnical requirements
- Major reconstruction of existing highways
- Projects with major traffic control

When a work order is issued for HDR to perform a VE study during design stages, VE process can begin when the project is at least at 60% design level and right of way process can logically begin. HDR personnel under supervision of Bijan, will be assembled with various skills to perform VE functions at the request of Hernando County. HDR will exercise the following steps to assist the County on any VE project assignment:

Team Structure: HDR's VE team is typically comprised of a team leader and four to six individuals with a diverse array of backgrounds relevant to the specific study. VE Teams of fewer than five tend to limit the amount and variety of creative input, while teams of more than seven can be difficult to manage. VE teams should be structured such that the appropriate areas of expertise are available to evaluate the potential value improvement areas associated within the project. Generally, expertise from the functional areas of design, structures, right of way, maintenance, and traffic operations make for a good team balance. All these disciplines may not be sufficient and depending on the project scope, other specialties such as utilities, environmental analysis or railroad operations may be included in the team.

Team Leader: Bijan will serve as the VE team leader responsible for guiding the team in its efforts during the study. The team leader should be proficient in the VE process.

Team Members: HDR VE team may consist of both technical and non-technical members. Technical team members are selected based on the various types of expertise needed to address the major functional areas and critical high-cost issues of the study. They play a vital role in the VE process by adding their individual perspectives and expertise to the VE process. Non-technical team members may consist of representatives from groups or agencies not affiliated with the County such as citizens advisory groups.

VE Team will be responsible for any combination of the three phases of work associated with any assigned Value Engineering study. These phases are: Pre-study Activities, Conduct Value Engineering Study, and Post Study Activities and include the following activities:

A. Pre-Study Activities – Bijan as the Team Leader will assist in the planning and organizing of the Value Engineering study. This includes but is not limited to:

1) Coordinating with the HCDPW as necessary to ensure adequate information is available to conduct a Value Engineering study.

2) Coordinating with the HCDPW to make provision for sufficient facilities for team meetings and other activities associated with conducting the Value Engineering study. Location of such facilities will be accessible to team and project personnel.

3) Organizing and planning the study by developing the study agenda for review by the HCDPW.

B. Conduct Value Engineering Study – HDR will conduct all Value Engineering studies in accordance with the practices and techniques as stated in FDOT Procedure No. 625-030-002. All materials and equipment needed to perform the study, including computers, projection equipment, stationary, easels, flip charts, markers, pens, etc. will be provided by the Team Leader.

C. Post Study Activities –

1) Reporting – The Value Engineering Team Leader will submit study results in a manner as stated in Procedure 625-030-002, A-4 with the study summary report prepared in a format consistent with approved FDOT procedures. Value Engineering recommendations will be supported with sufficient detail and calculations to allow a prudent decision of implementation by HCDPW. Each VE recommendation will be with Performance Indicators and the categorization will be reflected in the report. HDR will categorize the Performance Indicators as: Safety, Operations, Environmental, Construction and Other. In addition, the study summary report shall contain an Executive Summary which discusses in detail, the proposed Value Engineering alternative, as well as the potential savings and the description of costs.

2) Presentation – In addition to the presentation conducted during the Value Engineering study, the Value Engineering Team Leader and such team members will make a formal presentation to HCDPW Management. The presentation also shall be coordinated through the HCDPW Project Manager to ensure that persons authorized to evaluate and act upon the Value Engineering recommendations are present. HDR will tailor the Value Engineering (VE) deliverables to meet the needs of Hernando County.

VALUE ENGINEERING & DECISION ANALYSIS SUPPORT

One of the tenets of any successful Value Engineering (VE) program is to have an experienced multidisciplinary team that can work together to evaluate the many facets of a project to determine the most cost-effective means to accomplish the project's objectives. With HDR's breadth of in-house services and local project experience, we have the resources necessary to support the County's Value Engineering needs. HDR staff can help with any of the 6 phases of the VE Job Plan as follows:

1) Information Gathering. As a local design firm, HDR staff are familiar with the available information sources that are needed for project development. We have outstanding working relationships with local agencies that interact with the County such that we can assist the County with gathering any information needed for the VE analysis.

2) Function Analysis. The key to function analysis is understanding the driver's needs and intended benefits of the project. HDR staff's experience with projects similar to those included in the County's CIP will facilitate this analysis.

3) Creation. Idea generation is the cornerstone of this phase and HDR staff can lead effective brainstorming sessions to develop alternatives to accomplish the project objectives.

4) Evaluation. Once alternatives have been identified, HDR staff will vet each alternative to verify that realistic results are obtained.

5) Development. Once the alternatives have been vetted, HDR professionals can work independently or with County staff to develop accurate cost estimates for each solution.

6) Presentation. Once complete, the final stage is to present the findings clearly and concisely.

Our staff has participated in many value engineering studies as part of our Value Engineering Support Services contract with FDOT's Central Office. This experience provides Hernando County with value engineering support that is based on a solid approach that has been proven on a multitude of transportation projects.

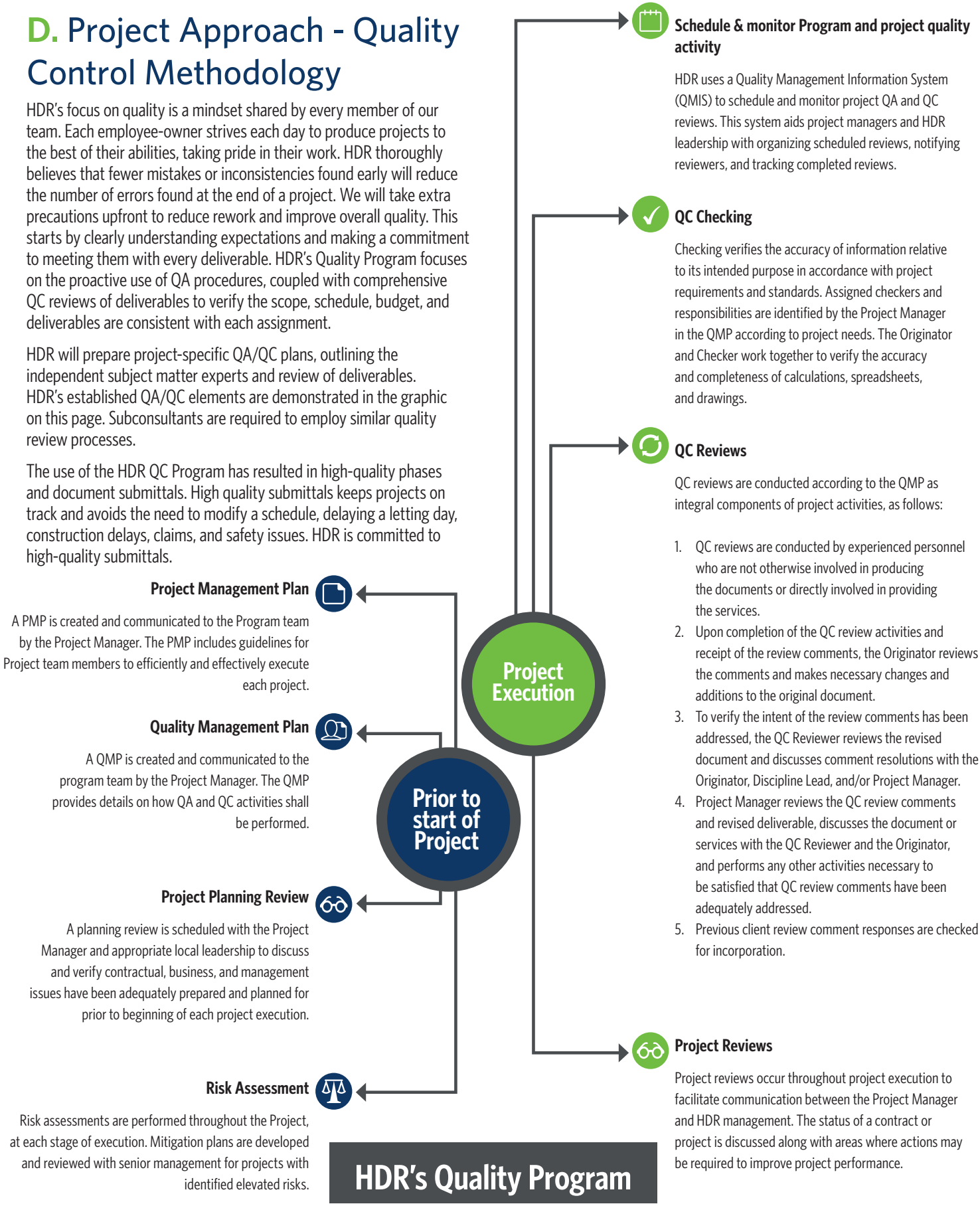
HDR currently prepares half of the construction and engineering cost estimates for FDOT District 7's 5-year Work Program. HDR can provide sound cost estimating services to support any financial decisions the County needs to make regarding the Transportation Component of County's Capital Improvement Program.

D. Project Approach - Quality Control Methodology

HDR's focus on quality is a mindset shared by every member of our team. Each employee-owner strives each day to produce projects to the best of their abilities, taking pride in their work. HDR thoroughly believes that fewer mistakes or inconsistencies found early will reduce the number of errors found at the end of a project. We will take extra precautions upfront to reduce rework and improve overall quality. This starts by clearly understanding expectations and making a commitment to meeting them with every deliverable. HDR's Quality Program focuses on the proactive use of QA procedures, coupled with comprehensive QC reviews of deliverables to verify the scope, schedule, budget, and deliverables are consistent with each assignment.

HDR will prepare project-specific QA/QC plans, outlining the independent subject matter experts and review of deliverables. HDR's established QA/QC elements are demonstrated in the graphic on this page. Subconsultants are required to employ similar quality review processes.

The use of the HDR QC Program has resulted in high-quality phases and document submittals. High quality submittals keeps projects on track and avoids the need to modify a schedule, delaying a letting day, construction delays, claims, and safety issues. HDR is committed to high-quality submittals.



• Insure County Procedures Are Followed

QUALITY CONTROL METHODOLOGY

Tom Quinn, PE, Marlin Register, PE and Huijing Qiang, PE will lead the quality component for Hernando County's Continuing Traffic Engineering Services. They will work closely with Bijan through all phases and elements of this contract to achieve the level of quality needed to make each assignment successful. We understand that quality is not a procedure completed at the end of the work assignment, but an ongoing process that begins with thorough research from the beginning and continuous communication with our client, agencies, and the entire team. HDR will prepare a project specific QA/QC plan for each task assignment under this traffic engineering service contract for review and approval by the County.

HDR formalized a Quality Control Program that begins at the project initiation and continues until the project is completed. At the heart of this program is the principle that all team members are held responsible for the quality of their own work, even though a series of independent reviews and checking procedures are in place to verify that all project work has been performed according to County and HDR requirements. Each discipline lead will be familiar with Hernando County standards from the Facility Design Guidelines, Land Development Codes, Building Codes, and other relevant standards applicable to the task given to make sure correct decisions are made from the first step to the last step of the assignment. Every plan markup goes through a mini-QC process, not just at the phase and document submittal stages. Bijan, Tom, Marlin and Huijingwill conduct routine audits to see that the team is following the project-specific QA/QC Plan and upholding their commitment to the quality of the product being produced.

Quality plans, documents and customer service are HDR's number one priority. Our QC program is a process that covers all project disciplines and constructability/biddability. Subconsultant QC plans are integrated into the overall project QC Plan. QA and QC are two separate but related groups of work that enable the designer to produce a quality product. QA is the process by which HDR builds in sufficient procedures, controls, and processes so each task, plan sheet, and design decision is correct. This process begins on the first day of consultant services and continues for the life of the contract. The QC process is used to check completed work at specific stages of the project. To accomplish the QA/QC of our work, we will follow a QA/QC plan specifically tailored for this contract. All project documents, including subconsultant work, will be closely reviewed prior to submittal to the County.

QUALITY ASSURANCE

HDR will develop a detailed project-wide Quality Management Plan (QMP) as part of the PMP, tailored to meet County requirements under the QA/QC Plan. The Quality Management Team will perform structured, independent quality reviews of the work at each milestone. The QA/QC plan includes the following key components:

- Assignment of QC reviewers based on work products and technical disciplines needed for each task order, with details of the deliverables to be reviewed and the expected standards or guidelines for use in the review.
- Recorded comments from all QC reviewers, and documentation of resolution of all QC comments by both the reviewer and the PM.
- Depending on the project type, the QMP will include standard checklists for reviews at milestones focused on both Intra-Design Review and Inter-Design Review.
- The QA review also includes electronic drawing files to check that our team's CADD drafting services and plans production are consistent.

• Improving Energy Efficiency Through the Use of an Integrated Design Process

HDR's vast experience in design and construction and maintenance of highway projects indicate the factors that influence the performance of highway projects are grouped under four categories:

1) Execution constraints

2) Operational factors

3) Stakeholder and political constraints

4) Design Constraints

The complexity of the contractor's performance, frequent modification in alignment, project design, loopholes in safety, and ambiguities in specifications are the main factors that impact the performance of highway projects.

A successful integrated design process brings key stakeholders together beginning with pre-design and continuing through all design phases to identify opportunities for synergy across disciplines and building systems.

For Public Works project types, integrated design is a holistic approach to high performance buildings, and highway projects. It relies upon every member of the project team sharing a vision of sustainability and working collaboratively to implement sustainability goals at appropriate phases during the project. Effective integrated design leverages synergies among project anatomy components, resulting in reduced life cycle costs of the project.

First and foremost, the approach is to utilize uniform standards and criteria for the design, construction, and maintenance published in Hernando County public roads and streets and facility design guidelines.

Two of the most important factors for achieving consistently high levels of efficiency in highway construction and rehabilitation projects are:

1) The uniform application of well-crafted guide specifications for all construction and rehabilitation

2) Keeping these energy efficiency requirements current with changing technology.

HDR uses Interactive Highway Safety Design Model (IHSDM) on selected projects (when required by the client) which is a suite of software analysis tools used to evaluate the safety and operational effects of geometric design decisions on highways. Most candidate projects include intersection models, roundabout model, driver-vehicle model, highway safety manual model, crash prediction model, and economic analysis model used by designer's input and selection of codes.

To confirm a highway project will expect a longer useful life and can sustain the natural and applied degrading factors, HDR will utilize high quality materials that are on FDOT Approved and Qualified Product Lists. During design, selection of high performing materials include:

- Pavement Materials
- Steel Materials
- Concrete Materials
- Intelligent Transportation Devices with Proven Track Records
- LED Highway Lighting Fixtures

• Insure the Project is Designed for Durability & Maintainability

DURABILITY & MAINTAINABILITY

There are design, maintenance, and construction aspects to the delivery of a cost-effective design. HDR understands that it may be appropriate to provide a design solution that requires more design effort, or specify a construction element that is more expensive, to realize a lower overall life-cycle costs.

HDR does not forget about projects once they are constructed. We routinely check on the history of a completed project from a safety and maintenance perspective. This look-back allows us to get a handle on how design decisions and assumptions affect outcomes in the real world. Implementing these cost-effective, practical designs begins with the assignment of qualified designers and an Engineer of Record with experience on similar projects. HDR's CEI staff complements our design staff's knowledge and expertise with their construction oversight experience on reconstruction and maintenance projects. A primary focus of our CEI team in early-stage constructability reviews is overall maintainability and considerations for potential future accommodations.

CONSTRUCTABILITY REVIEWS

This often-overlooked element of design is a prerequisite for any project designed by HDR. Our clients value this important element and recognize the significant cost savings created by making this a mandatory task item. The constructability review process provides early detection of potential design changes to minimize future construction claims and delays. For example, constructability reviews can provide value analysis of engineering for many critical issues in a project, such as increases in material costs, maintenance criteria, life-cycle costs, product availability, hazardous material mitigation, maintenance of operations or traffic, construction phasing, utility conflicts, right of way takes, avoidance and minimization of sensitive wetland impacts, etc. These issues can dictate the design as well as the project costs.

SUSTAINABILITY

HDR takes a holistic approach to sustainable design. Our balanced, sustainable solutions are resource-sensitive and provide private- and public-sector opportunities for economic growth and development. More than two decades ago, we established our sustainable solutions program to integrate sustainability into 100% of our business practices. Our specialists are leaders in climatology, natural resources, renewable energy, green rating systems, commissioning, measurement and verification, and community planning. We know that it is important to reduce energy and water use, but we also know that it is equally important to take steps to enhance the health and well-being of occupants, to regenerate the local ecology, to address the circular economy of resources, and to ensure project resiliency in the event of unforeseen impacts. We provide you with solutions that are good for your business, your communities, and our planet. Some examples of analysis and strategies include:

- Context-Sensitive Design
- Design for Health & Wellness
- Green Rating Systems
- Greenhouse Gas Management
- Net-Zero Evaluations
- Resilient, Hazard-Based Design & Hardening Practices
- Restorative & Regenerative Design
- Sustainable Value Analysis (SVA)

VULNERABILITY & RELIABILITY ASSESSMENTS LIFE-CYCLE COST ANALYSIS

HDR is committed to sustainable material selection. We seek out appropriate products and designs that not only protect the health of the building users and the community it serves, but also future generations. We are committed to using the best practices for safer material selection, sourcing, reducing, and sequestering embodied carbon. Sustainable materials take into account the larger environmental picture by considering the following, starting at the product's sourcing and manufacturing phase all the way through to the end of life/reuse phase:

- Circular economy
- Optimization
- Deconstruction/disassembly
- Recycled content/recyclability
- Durability/longevity
- Reuse
- Emissions
- Technological/ biological cycles
- Health
- Transparency
- Maintainability

This environmental viewpoint also explores life-cycle costs—reducing carbon emissions, or best-case scenario, producing a net-positive with potential for regenerative impacts. Sustainable and healthy materials selections and specifications and life-cycle analysis (LCA) can lead to healthier environments and potential reduction and/ or sequestration of carbon. HDR conducts life-cycle cost analyses (LCCAs) early in the design process to estimate the overall costs of project alternatives and to select the design that ensures the facility and other project components will provide the lowest overall cost of ownership. The LCCA process can be integrated into the design process and incorporate local energy standards. Our experts analyze the numerous costs associated with acquiring, operating, maintaining, and disposing of a building or building system, which usually fall into the following categories: initial costs; fuel costs; operation, maintenance, and repair costs; replacement costs; residual values; finance charges; and non-monetary benefits or costs. With all the information available today, it is vital to cut through the information overload to understand these issues, start discussions and work toward a healthier world, community, and home.

D. Project Approach - Schedule

Successful completion of projects demands strong leadership, a complete understanding of County and FDOT requirements, and a focused/experienced staff who understand how to develop a design that appropriately integrates the various design and agency requirements that are applicable.

Once the manpower projection is developed with the necessary resources to execute the assignment, the Project Manager will develop a resource-loaded schedule. Schedules will be issued during weekly production summit meetings with the overall Team to demonstrate that all work tasks are sufficiently loaded with manpower resources to deliver projects on or ahead of schedule. Each schedule update will document each work task from the NTP through final completion.

• Manage the Required Work to Meet the Established Schedule

CONTROLS TO MAINTAIN SCHEDULE

HDR understands and realizes that time is money and project delays cost money. Prolonged activities and delayed progress are a drain on the valuable resources of both the County and HDR. As a firm, this is not acceptable, and as a practice this is not the way HDR does business to earn the trust and confidence of our clients. We will prepare a detailed schedule for each task, highlighting critical path items and major work areas, including a breakdown of the sub tasks and corresponding timelines and manpower required to complete the work. Included in our schedule is the allocation of adequate QA/QC time and constructability reviews during each milestone or phase submittals. Whenever possible, multiple tasks are scheduled to be performed simultaneously to promote efficiency and fast-track project performance. This project schedule will be presented to the County's Project Manager for approval at the kick-off meeting. The QA/QC tasks are completed prior to submittal of documents to the County.

Our team members have significant experience with a wide variety of transportation, facilities, park and architecture projects for Hernando County. This experience allows us to meet or beat proposed project schedules. HDR will use a two-phased management approach that includes:

Phase I – Baseline Planning

Phase II – Project Tracking

Developing and maintaining project schedules and keeping lines of communication open are crucial to the project success. These principles will foster the most efficient service:

- Providing an appropriate group of experienced professionals and production staff who understand the scope of work, the project constraints and the schedule and budget requirements.
- Utilizing seasoned specialists in the core disciplines with experience working on local government projects.

Being Proactive: Our Project Manager and Technical Leads will be proactive in coordinating with the HDR project team (daily) and Hernando County (on a weekly or bi-weekly basis as is appropriate).

We will remain focused on critical-path items, subcontractor tasks, utility coordination, environmental permits, gopher tortoise surveys, County review comments and other time-sensitive items that require 3rd party review and approval.

HDR will meet your budget requirements for each project through a proven approach to project execution, CPM project scheduling, resource planning/scheduling and utilizing HDR's web-based project management tools. We will use Microsoft Project and internal software to manage schedule performance and to plan resource utilization. Major work order tasks will be planned as a series of subtasks, thereby accommodating a bottom-up approach at the schedule development stage, a proper linkage of predecessor and successor activities, and an effective management tool to track and adjust schedules and to reallocate resources as the work proceeds. Close coordination between the County, our PM, Bijan and the Task Leader helps ensure timely project completion.

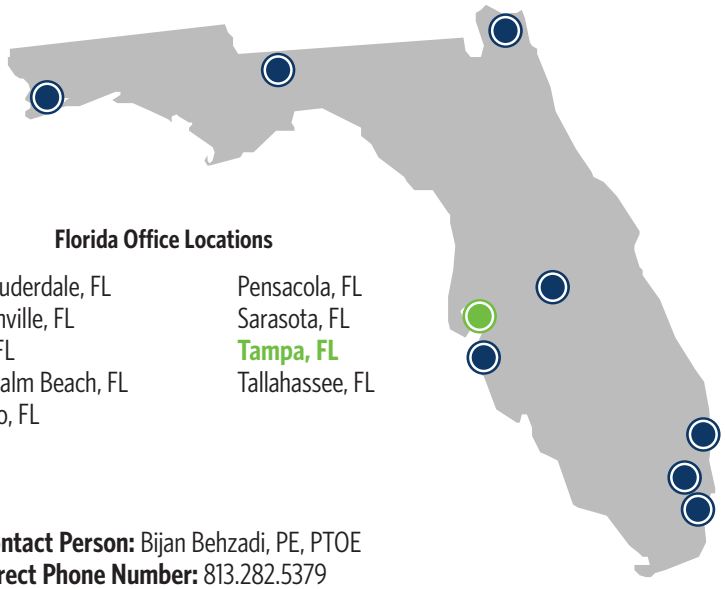
E.

Work Coordination

HDR's Florida
Practice Opened in
1974

9 LOCAL OFFICES

400+ LOCAL STAFF



Florida Office Locations

Fort Lauderdale, FL
Jacksonville, FL
Doral, FL
West Palm Beach, FL
Orlando, FL
Pensacola, FL
Sarasota, FL
Tampa, FL
Tallahassee, FL

Contact Person: Bijan Behzadi, PE, PTOE
Direct Phone Number: 813.282.5379
Main Phone Number: 813.466.9211
Address: 4830 W Kennedy Blvd, Suite 400,Tampa, FL 33609-2548
Fax Number: 813.282.2430
Email: Bijan.behzadi@hdrinc.com
Website: hdrinc.com

E. Work Coordination

• Proximity of Firms Office

HDR's managing local office for Hernando County is located at 4830 W Kennedy Blvd, Suite 400,Tampa, FL 33609-2548. Services will be performed and decisions regarding services will be made from our local Tampa office, located within 50 miles from the Hernando County Department of Public Works. We are less than 20 minutes away from the FDOT D-7 headquarters and less than 40 minutes from the FDOT D-7 Brooksville Maintenance office which is the primary contact point for FDOT access connection, drainage connection and utility permits. Our close proximity to FDOT D-7 and the Brooksville Maintenance Office will facilitate the coordination required for any Task Order assignments that include work that is within FDOT right of way or includes facilities that will connect to or impact the State system.

Subconsultant Work Location

SUBCONSULTANT FIRM | WORK ADDRESS	MILES FROM COUNTY
Adams Traffic, Inc. | 2404 Airport Rd, Suite 2, Plant City, FL 33563	51 mi.
Cumbey & Fair, Inc. | 2463 Enterprise Rd, Clearwater, FL 33763	61 mi.
Florida Bridge & Transportation, Inc. | 633 Dartmouth St, Orlando, FL 32804	65 mi.
Marr Traffic, Inc. | 7525 Currency Drive, Orlando, FL 32809	81 mi.
Precision Contracting Services, Inc. | 8812 Venture Cove, Tampa, FL 33637	45 mi.
Tierra, Inc. | 7351 Temple Terrace Hwy Tampa, FL 33637	46 mi.

• Firm's Familiarity with Project Area

Our Tampa office is the home of our Project Manager, Bijan and has the majority of the personnel in place to provide services directly to Hernando County. This allows our Team to respond in a timely manner and be readily accessible for meetings with County staff or for site visits quickly, regularly, and cost effectively.

HDR has carefully selected each team member based on his or her experience and familiarity to Hernando County and their ability to augment our deep bench of local design staff.

In his role, Bijan has the responsibility and authority to designate resources as needed for completion of tasks. Our team members have proven performance with Hernando County, and all team members will continue to provide the County with prompt, responsive, and quality services.

• Knowledge of the Local Labor & Material Markets

The HDR team has a proven, in-depth familiarity with Hernando County's labor and materials market, making us well-equipped to handle projects in the area. Through the vast quantity of local projects that HDR has prepared for Hernando County, as well as adjacent municipalities and FDOT District 7, we possess knowledge of the local markets for the purpose of product availability and cost of materials. This information is considered when designing a project to create a project that is cost efficient and supports the local community.

Anti-Human Trafficking Affidavit

In compliance with Fla. Stat. § 787.06(13), this affidavit must be completed by an officer or representative of a nongovernmental entity that is executing, renewing, or extending a contract with Hernando County or any of its subordinate units (the "Governmental Entity").

1. My name is Katie E. Duty and I am over eighteen years of age. The following information is given from my own personal knowledge.

2. I am an officer or representative with HDR Engineering, Inc., a non-governmental entity (the "Nongovernmental Entity"). I am authorized to provide this affidavit on behalf of Nongovernmental Entity.

3. Neither Nongovernmental Entity, nor any of its subsidiaries or affiliates, uses *coercion* for *labor* or *services*, as such italicized terms are defined in Fla. Stat. § 787.06, as it may be amended from time to time.

4. If, at any time in the future, Nongovernmental Entity does use coercion for labor or services, Nongovernmental Entity will immediately notify Governmental Entity and no contracts may be executed, renewed, or extended between the parties.

5. This declaration is made pursuant to Fla, Stat. § 92.525. I understand that making a false statement in this declaration may subject me to criminal penalties.

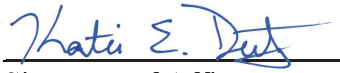
Under penalties of perjury, I Katie E. Duty, declare that I have read the foregoing Anti-Human Trafficking Affidavit and that the facts stated in it are true.

FURTHER AFFIANT SAYETH NAUGHT.

HDR Engineering, Inc.
Name of Nongovernmental Entity

Katie E. Duty
Printed Name of Affiant

Vice President
Title of Affiant


Signature of Affiant

October 29, 2024
Date