City of Tampa
Jane Castor, Mayor

Contract Administration
Richard Mutterback, Director
306 East Jackson Street, 4N
Tampa, FL 33602

Office (813) 274-8116
Fax: (813) 274-7368

ADDENDUM 5
Via E-Mail
DATE: June 9, 2025

Contract: 24-C-00015; El Prado Sidewalk S Omar Ave to Lois Ave & Lois Ave to Bayshore Blvd

Bidders on the above referenced project are hereby notified that the following addendum is made to the Contract Documents. BIDS TO BE SUBMITTED SHALL CONFORM TO THIS NOTICE.

Item 1: The Bid Opening Date is hereby changed to June 17, 2025

Item 2: RFI - Can you confirm that the City will schedule & pay for CSX flaggers?

RFI response: All construction activities should follow CSX's Public Projects Manual. The Contractor will be required to obtain a Right of Entry agreement and insurance. These activities will be included in the contractor's bid pricing. RR protective liability. They can get Railroad Protective Liability ($5M/$10M). PUBLIC PROJECT INFORMATION - CSX

Item 3: RFI - What are the railroad insurance requirements?

RFI response: •Note the following:

- Include the CSX project description below within the "Description of Operations" field on the COI and on the Declarations page of the RPL Policy:
  - **FL3026; Tampa, Hillsborough County, FL; El Prado Blvd Roadway Improvements Within the CSX ROW; 626343N; Tampa Terminal Sub; A 886.36**
- Certificate of Liability Insurance (COI)
  - Include
    - Additional insured for General Liability and Auto Liability endorsement (separate sheets)
    - Waiver of Subrogation for Worker's comp endorsement (separate sheet)
  - **Be sure that the CSX project description (shown above) is stated in the Description of Operations field.**
  - **CSX must be stated as additional insured in the Description of Operations field.**
  - COI should look exactly like the attached example.
  - Full RPL Policy – unless General & Auto Liability includes endorsement covering work within 50 feet of a railroad (ISO CG 24 17 & CA 20 70)

- **Be sure that the CSX project description (shown above) is stated under Job Location on the Declarations page.**
- Please be sure all forms/certificates are signed.
- Entire CSX Insurance Requirement package to be submitted together. Less than complete submittals will result in review delays.

Item 4: RFI - Also, we need to know what type of trains (freight or passenger) and the frequency they pass through the jobsite in order to obtain an insurance quote.

RFI response: 10 mph; Freight – 2 movements per week / Passenger – 0

Item 5: RFI - • Regarding bituminous material the project should follow FDOT specifications unless otherwise noted by the City of Tampa's Technical Specifications.

RFI response: The El Prado plans follow FDOT specifications and bid item prices should use the FDOT Asphalt Price Index as a reference.

Item 6: RFI - • Is irrigation in place or is it to be installed after the installation of landscaping?

RFI response: Contractors should refer to the landscape plan notes for watering recommendations. They are responsible for maintaining the watering schedule and cost will be included in landscaping bid items. Contractors have flexibility as to the method of maintaining the watering schedule.

Item 7: RFI - • Can you provide the UWS?

RFI response: See attached

Item 8: RFI - • Can you provide the roadway core report?

RFI response: Please see the attached report.

Item 9: RFI - • Lane closures from 9a-4p is not enough time during the day to work. Minimum workday should be at least 9 hours.

RFI response: Additional time for construction can be coordinated with Right of Way Permitting upon award.

Item 10: RFI - • What are the El Prado road closure times?

RFI response: 9a - 4p

Item 11: RFI - • Please verify if the contractor is responsible for maintaining signalization & detection as per FDOT specs.

RFI response: Correct.

Item 12: RFI - • Regarding Addendum #1 sheet #17: What is the purpose of the temporary barrier wall? When is it to be installed and removed? Also, you cannot install temporary barrier wall perpendicular to traffic in the clear zone, that's an above ground hazard. Imagine a vehicle jumping the curb and hitting the wall head on; is

the City/FDOT going to indemnify the contractor against lawsuits when this gets hit? The temporary barrier wall needs to be removed from the plans; it's the wrong application.

RFI response: The temporary barrier is a requirement per coordination with CSX and FDOT to prevent pedestrians from traversing over the CSX tract without the presence of sidewalks. The barrier will remain until a future sidewalk construction path is built continuously along the north side of the El Prado corridor crossing the CSX tracks

Item 13: RFI - • Is irrigation in place or is it to be installed after the installation of landscaping?

RFI response: Please see specifications Section 7, G-7.01.

All other provisions of the Contract Documents and Specifications not in conflict with this Addendum shall remain in full force and effect. Questions are to be e-mailed to ContractAdministration@tampagov.net .

Jim Greiner

Jim Greiner, P.E., Contract Management Supervisor

INSURANCE REQUIREMENTS

I. Insurance Policies:

Agency and Contractor, if and to the extent that either is performing work on or about CSXT's property, shall procure and maintain the following insurance policies:

1. Commercial General Liability coverage at their sole cost and expense with limits of not less than $5,000,000 in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured. The policy shall include endorsement ISO CG 24 17 evidencing that coverage is provided for work within 50 feet of a railroad. If such endorsement is not included, railroad protective liability insurance must be provided as described in item 4 below.

2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than $1,000,000, which insurance must contain a waiver of subrogation against CSXT and its affiliates (if permitted by state law).

3. Commercial automobile liability insurance with limits of not less than $1,000,000 combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured. The policy shall include endorsement ISO CA 20 70 evidencing that coverage is provided for work within 50 feet of a railroad. If such endorsement is not included, railroad protective liability insurance must be provided as described in item 4 below.

4. Railroad protective liability insurance with limits of not less than $5,000,000 combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of $10,000,000, which insurance shall satisfy the following additional requirements:

    a. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance - Insurance Services Office (ISO) Form CG 00 35.

    b. CSX Transportation must be the named insured on the Railroad Protective Insurance Policy.

    c. Name and Address of Contractor and Agency must appear on the Declarations page.

    d. Description of operations must appear on the Declarations page and must match the Project description.

e. Authorized endorsements must include the Pollution Exclusion Amendment - CG 28 31, unless using form CG 00 35 version 96 and later.

f. Authorized endorsements may include:

(i). Broad Form Nuclear Exclusion - IL 00 21
(ii) 30-day Advance Notice of Non-renewal or cancellation
(iii) Required State Cancellation Endorsement
(iv) Quick Reference or Index - CL/IL 240

g. Authorized endorsements may not include:

(i) A Pollution Exclusion Endorsement except CG 28 31
(ii) A Punitive or Exemplary Damages Exclusion
(iii) A "Common Policy Conditions" Endorsement
(iv) Any endorsement that is not named in Section 4 (e) or (f) above.
(v) Policies that contain any type of deductible

5. All insurance companies must be A. M. Best rated A- and Class VII or better.

6. The CSX OP number or CSX contract number, as applicable, must appear on each Declarations page and/or certificates of insurance.

7. Such additional or different insurance as CSXT may require.

II. Additional Terms

1. Contractor must submit the original Railroad Protective Liability policy, Certificates of Insurance and all notices and correspondence regarding the insurance policies to:

Insurance Department
CSX Transportation, Inc.
500 Water Street, C-907
Jacksonville, FL 32202

OR

insurancedocuments@csx.com

2. Neither Agency nor Contractor may begin work on the Project until it has received CSXT's written approval of the required insurance.

(Public Projects) Insurance Submittal Checklist

*** All insurers must be A.M. Best rated A-, or higher ***

COMMERCIAL GENERAL LIABILITY

Occurrence based policy	☐
$5M policy limit (per occurrence)	☐
CSXT listed as Additional Insured	☐
Railroad Exclusion Endorsement included (ISO CG 24 17) *** If CGL policy does not have a railroad exclusion, please provide Coverage Form ***	☐

COMMERCIAL AUTO LIABILITY

$1M Policy Limit (combined single limit)	☐
CSXT listed as Additional Insured	☐
Railroad Exclusion Endorsement included (ISO CA 20 70) *** If AL policy does not have railroad exclusion, please provide Coverage Form ***	☐

WORKERS COMPENSATION/EMPLOYER'S LIABILITY

(WC) Statutory Limits	☐
(EL) $1M policy limit	☐
Waiver of subrogation (if permitted by law)	☐

RAILROAD PROTECTIVE LIABILITY

Policy limits of $5M/$10M	☐
CSX Transportation listed as Named Insured	☐
Entire RPL policy (policy is typically 30 – 40 pages)	☐
Name and Address of Contractor and Agency shown on the Declarations Page.	☐
Description of operations located on the Declarations Page	☐
Project description, location, and project/contract identification numbers match number(s) established by CSXT Public Projects	☐
**** Refer to insurance requirements document for list of approved (RPL) endorsements ****	

CERTIFICATE OF LIABILITY INSURANCE

Date: MM/DD/YY

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Phone: Fax: Name & Address of Producer	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS: PRODUCER CUSTOMER ID #:
	INSURER(S) AFFORDING COVERAGE — NAIC #
INSURED Name & Address of Insured	INSURER A: **AM Best Rating A-, Or Better** — **provide** INSURER B: **AM Best Rating A-, Or Better** — **provide** INSURER C: **AM Best Rating A-, Or Better** — **provide** INSURER D: **AM Best Rating A-, Or Better** — **provide**

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF DATE (MM/DD/YY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY ☐ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS MADE ☑ OCCUR ☐ _____ ☐ _____ GENERAL AGG. LIABILITY APPLIES PER: ☐ POLICY ☐ PROJECT ☑ LOC	✓					EACH OCCURRENCE $5,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS -COMP/OP AGG
	AUTOMOBILE LIABILITY ☑ ANY AUTO ☐ ALL OWNED AUTOS ☑ SCHEDULED AUTOS ☑ HIRED AUTOS ☑ NON-OWNED AUTOS ☐ CA 20 70	✓					COMBINED SINGLE LIMIT (Ea accident) $1,000,000 BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
	☐ UMBRELLA FORM ☑ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DEDUCTIBLE ☐ RETENTION						EACH OCCURRENCE AGGREGATE
D	WORKERS COMPENSATION AND EMPLOYER'S LIABILITY ANY PROPRIETOR/PARTNER/ EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N ☐ (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	Y				☑ WC STATUTORY LIMITS ☐ OTHER E.L.EACH ACCIDENT $1,000,000 DISEASE - EA EMPLOYEE $1,000,000 E.L.DISEASE - POLICY LIMIT $1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES

CSX Transportation is listed as an Additional Insured.

CERTIFICATE HOLDER

CSX Transportation
Insurance Compliance
500 Water Street, Speed Code J-907
Jacksonville, FL 32202
RenewalCOI@CSX.com

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Certificate Must be Signed

UTILITY WORK SCHEDULE

Financial Project ID: 443516-1	**Federal Project ID: N/A**
County: HILLSBOROUGH COUNTY	**State Road No.:** El Prado Boulevard
Document No: 1	
Utility Agency/Owner (UAO): Teleport Communications America (AT&T Metro)	

A. Summary of Utility Work And Execution

	Estimated Time (calendar days)
Total Time Prior To Project Construction	0
Total Time During Project Construction	2

This document has been developed as the method for a Utility Agency/Owner (UAO) to transmit to the Letting Agent, the Agent's Contractor, and other right-of-way users, the location, relocation, adjustment, installation, and/or protection of their facilities, on this State Road project. The following data is based on the preliminary construction plans dated **06/01/2023**. Any deviation by the Agent or its contractor from the plans, as provided, may render this work schedule null and void. Upon notification by the Agent of such change, this utility may require additional days for assessment and negotiation of a new work schedule. This UAO is not responsible for events beyond the control of the UAO that could not reasonably be anticipated by the UAO and which could not be avoided by the UAO with the exercise of due diligence at the time of the occurrence. The UAO agrees to notify the Agent in writing prior to starting, stopping, resuming, or completing work.

UAO Project Representative:	**Martin Shaw**	Telephone Number:	610-513-7050
UAO Field Representative:	**George Freas**	Telephone Number:	610-772-4043

This document is a printout of a form maintained in an electronic format and all revisions thereto by the UAO in the form of additions, deletions or substitutions are reflected only in an Appendix entitled "Changes to Form Document" and no change is made in the text of the document itself. Hand notations on affected portions of this document may refer to changes reflected in the above-named Appendix but are for reference purposes only and do not change the terms of the document. By signing this document, the UAO hereby represents that no change has been made to the text of this document except through the terms of the appendix entitled "Changes to Form Document".

You MUST signify by selecting or checking which of the following applies:

☐ No changes to forms document.
☐ Appendix "Changes to Forms Document" is attached. ___ Number of Attachment Pages.

Authorized Utility Agent:	****Engineer of Record (EOR):**	**Acceptance by 3rd Party Agent:**
Martin Shaw		
(Signature)	(Signature)	(Signature)
Martin Shaw	Chris Meares, P.E.	Jorge Uy, P.E.
(Printed Name)	(Printed Name)	(Printed Name)
Engineer	EOR / PM	City of Tampa Project Manager
(Title)	(Title)	(Title)
08/28/2023	10/2/2023	
(Date)	(Date)	(Date)

(When requested by the A, the EOR will attest to compatibility of plans, specifications and Utility Work Schedule)**

UTILITY WORK SCHEDULE

Financial Project ID: 443516-1	**Federal Project ID: N/A**
County: HILLSBOROUGH COUNTY	**State Road No.:** El Prado Boulevard
Plans Date: 6/1/2023	
Utility Agency/Owner (UAO): Teleport Communications America (AT&T Metro)	

B. Special Conditions / Constraints

TCA requires access to all of its facilities at all times during construction.

TCA "Estimated Calendar Days" based on a five (5) day work week.

TCA requests FDOT contractor to coordinate with TCA project representative during construction of this project.

TCA estimated days contingent/subject to adverse weather conditions.

Please notify UAO rep Martin Shaw 2 weeks prior to when relocation is needed.

UTILITY WORK SCHEDULE

Financial Project ID: 443516-1	**Federal Project ID: N/A**
County: HILLSBOROUGH COUNTY	**State Road No.:** El Prado Boulevard
Plans Date: 6/1/2023	
Utility Agency/Owner (UAO): Teleport Communications America (AT&T Metro)	

C. Disposition of Facilities (List All Existing & Proposed) on Project:

UTILITY FACILITIES BY STATUS/ TYPE/SIZE/MATERIAL/OFFSET TO BASELINE FROM STA TO STA	DESCRIPTION OF UTILITY WORK	DEPENDENT ACTIVITIES	M.O.T. PHASE NUMBER	CONSECUTIVE CALENDAR DAYS
1. TCA Handhole at Sta 531+20	Adjust Handhole to new grade of sidewalk during construction	Sidewalk construction		2

Geotechnical Engineering Services Report

El Prado Boulevard Pavement Cores
City of Tampa, Florida

Prepared for: ***HNTB Corporation***
201 N. Franklin Street, Suite 1200
Tampa, Florida 33602

Prepared by: ***MC Squared, LLC***
5808-A Breckenridge Parkway
Tampa, Florida 33610

Project No. T042218.072
September 21, 2022

September 21, 2022

Mr. Jorge Vincent Uy, P.E., PTOE, RSP1
Senior Transportation Engineer
HNTB Corporation
201 N. Franklin Street, Suite 1200
Tampa, Florida 33602

Subject: Geotechnical and Pavement Engineering Services Report
El Prado Boulevard Pavement Cores
City of Tampa, Florida
MC² Project Number T042218.072

Dear Mr. Vincent Uy:

MC Squared, LLC (**MC²**) has completed the geotechnical engineering services for the referenced project. This study was performed in general accordance with **MC²** proposal No. T042217.072. The results of this exploration and laboratory testing, together with our observations and recommendations, are included in the accompanying report.

We trust that this report will assist you in the design and construction of the proposed project. We appreciate the opportunity to be of service to you on this project. Should you have any questions, please do not hesitate to contact us.

Respectfully submitted,
MC²

Sergio Gomez, E.I.
Staff Engineer

Jordan Fox, P.E.
Geotechnical Department Manager, Tampa
Florida P.E. No. 87472

5808-A Breckenridge Parkway, Tampa, Florida 33610
Phone (813) 623-3399, Fax (813) 623-6636
www.mc2engineers.com

PROJECT INFORMATION

Project information has been provided by Mr. Jorge Uy, P.E., PTOE, RSP1 of **HNTB** through e-mailed communications. We understand that **HNTB** has been requested by the City of Tampa (COT) to provide existing pavement and subsurface information to aide in development of a pavement design report for El Prado Boulevard.

FIELD EXPLORATION PROGRAM

The pavement and subsurface conditions for W El Prado Boulevard were evaluated through a series of pavement cores, hand auger (HA) borings, and Dynamic Cone Penetrometer (DCP) tests as summarized in the following table.

Table 1: Summary of Field Exploration

ID	Date Sampled	Total Depth Explored (feet)	UTM Coordinate (1)	
			Easting	Northing
C-1	8/30/2022	5	350183.53	3088341.98
C-2	8/30/2022	4	351285.27	3088318.10
C-3	8/30/2022	4	352249.58	3088296.00

Note: (1) Zone = 17R

At each core location, DCPs were advanced to a depth of approximately 4 feet below the existing ground surface (bgs) and HA borings were advanced to depths ranging between 4 and 5 feet bgs. Hand auger borings at C-2 and C-3 were terminated at 4 feet due to groundwater infiltration. Groundwater levels were recorded at the time of exploration. Borings were backfilled upon completion with soil cuttings and patched with asphalt cold patch.

Refer to **Sheet 2** in the **Attachments** for core locations. Refer to individual **Pavement Core Summary** sheets in the **Attachments** for specific details at each location. Details of the tests performed are summarized in the **Testing Procedures** included in the **Attachments**.

The field exploration services were performed by **MC²** personnel and overseen by one of its Florida State licensed professional engineers specializing in geotechnical engineering. All field samples will be retained for a maximum of 60 days from the date of this report and then discarded without further notice, unless requested otherwise in writing by the **HNTB.**

LABORATORY TESTING PROGRAM

Soil samples retrieved through the HA borings were visually classified by one of our geotechnical engineers and representative samples were selected for laboratory testing to assist in classification and determination of engineering characteristics of the soils. A summary of the laboratory testing program and the results are provided in the following table.

Table 2: Summary of Laboratory Testing

Core ID	Depth (inches)	Moisture Content (%) [AASHTO T 265]	Percent Passing No. 200 Sieve (%) [AASHTO T 11]	Organic Content (%) [AASHTO T 267]	AASHTO GROUP [AASHTO M 145]
C-1	32 – 40	18.0	1.6	-	A-3
C-2	7 – 14	22.8	-	2.85	A-3
C-2	20 – 32	22.4	2.06	-	A-3
C-3	32 – 44	23.2	8.6	-	A-3

PAVEMENT AND SUBSURFACE CONDITIONS

The subsurface conditions described herein are of a generalized nature to highlight the major stratification features and material characteristics encountered during the field exploration. Detailed information regarding these cores and their subsequent hand auger borings, including pavement core photographs and soil descriptions are included on each **Pavement Core Summary** sheet in the **Attachments**. They should be reviewed for specific information at individual coring locations. Variations may occur and should be expected between coring locations.

Table 3: Summary of Subsurface Conditions

Core ID	Pavement Thickness (inches)	Base Course Material/Thickness (inches)		Subgrade Material/ Depth Range (inches)		Groundwater Depth (inches)
C-1	2 ¼	OPCC [(1)]	6	8 ¼ – 60	Fine SAND (A-3)	52
C-2	2 ½		4 ¾	7 ¼ – 48	Fine SAND (A-3)	30
C-3	2 ¼		5 ¾	8 – 48	Fine SAND (A-3)	36

Note: 1. OPCC = Old Portland Cement Concrete

Based on a review of the *USDA Soil Survey of Hillsborough County, Florida* and the soil samples collected in the field, the seasonal high groundwater (SHGWT) table is estimated to be around 1 feet bgs. In general, groundwater levels tend to fluctuate during periods of prolonged drought and extended rainfall. Fluctuation of the groundwater levels is normal and should be anticipated. We recommend that the contractor determine the actual groundwater levels at the time of construction to determine groundwater impact on the construction activities.

EVALUATION AND RECOMMENDATIONS

The following evaluations and recommendations have been developed based on the previously described project characteristics, our review of published data, information provided by others, our site reconnaissance, and the results of our subsurface exploration and associated laboratory testing.

Roadway Design Considerations

MC² understands that the subject roadway is planned to be resurfaced. However, considerations to performing "full depth reclamation (FDR)", "milling and overlaying", or "complete reconstruction" should be considered to address the existing pavement/subgrade conditions. The following technical information

is provided to assist the Design Engineers in their decision process. Pavement/subgrade design was not a part of our scope of services.

FDOT Flexible Pavement Design Manual (January 2022 Manual) should be followed to determine if the current roadway design meets minimum FDOT and City of Tampa design requirements.

The Resilient Modulus (M_R) values are estimated from DCP test blow counts using empirical equations. Lab tests were not conducted to determine the LBR values. No information regarding the minimum Required Structural Number (SN_R) or traffic studies have been provided to **MC²**.

Based on the DCP values recorded, the subbase materials at all test locations and depths have a correlated LBR value below 40, which is the minimum FDOT requirement. Information pertaining to individual boreholes can be found in the **Attachments** of this report. As mentioned above, no laboratory testing was performed to determine the LBR values of the subbase materials.

Recommendations for Addressing Existing Pavement Conditions

General

Certain criteria should be considered when deciding between milling and resurfacing versus complete reconstruction of the road. Milling may be appropriate for removing cracked asphalt, avoiding excessive raising of the grade, removing rut susceptible pavement, elimination of an existing mix design problem, etc. However, if subsurface conditions require stabilization, complete reconstruction may be necessary.

These recommendations are based solely on the visual observations of the pavement sections and the field and laboratory test data obtained. The final pavement/subgrade design should be performed by Design Engineers using the information provided in this report, traffic data, types of vehicles, design life and latest FDOT Flexible Pavement Design Manual.

Milling and Resurfacing Considerations

If milling and resurfacing is selected, the January 2022 Manual recommends leaving at least ¾-inches of asphalt over the base throughout the project to protect the base material from traffic and rain. However, if this is not possible because of lack of adequate asphalt thickness, the entire asphalt structure can be milled out, as long as contract provisions allow for maintenance of traffic and protection of the base. In such a case, placement of the first lift of structural asphalt shall be no later than the day after the surface was milled.

Reconstruction Considerations

Our findings indicated that the soils found at the boring locations, wherever soil has been classified as A-3, would be suitable for supporting a reconstructed roadway and for reuse as structural fill and general backfill, if needed. The A-3 soils are considered as Select Fill in accordance with FDOT Standard Plans Index 120. A-2-4 soils are considered Select Fill as well. However, certain types of A-2-4 material are likely to retain excess moisture and may be difficult to dry and compact. While not encountered in our borings, such soils should be used in the embankment above the groundwater level existing at the time of construction. They may be used in the subgrade portion of the roadbed when approved by the Project Engineer. A-2-4 material placed below the existing groundwater level must be non-plastic and contain less than 15% passing the No. 200 U.S. Standard Sieve.

We note that A-3 soil with an organic content of 2.9 percent was encountered from approximately 0.5 to 1 foot below the pavement surface at core location C-02. Based on FDOT Standard Plans Index 120-001, Select soils having an average organic content of more than 2.5 percent, or having an individual test value which exceeds 4 percent, are not permitted in the subgrade portion. In addition, select soils having an average organic content of more than 5 percent, or an organic content individual test result which exceeds 7 percent, are not permitted in the portion of embankment inside the control line.

In accordance with the January 2022 Manual, Section 5.2.2 "Design Base High Water Clearance", a clearance of 3 feet between the design high water and the base is recommended. For clearance less than 3 feet a thicker pavement structure may be required along with a reduction of the Design Resilient modulus of 25% for a 2-ft. base clearance and 50% for a 1-ft. base clearance. Clearances less than 1 foot will require underdrains. Superpave Type B – 12.5 base, or equivalent, is an option and a thinner lift can be used to increase the base clearance.

The base material requires a well-compacted stabilized subgrade with a minimum LBR value of 40. Therefore, it will be necessary to keep a 2-foot clearance above groundwater to achieve compaction in the top foot of subgrade. In areas where this cannot be achieved, dewatering to lower the groundwater during construction may be necessary.

Full Depth Reclamation Considerations

An alternative to complete reconstruction is Full Depth Reclamation (FDR). With this option, existing base and asphalt material will be ground and pulverized in place while being mixed with cement and asphalt emulsion. This creates a new flexible, stabilized base material that can be incorporated as part of the new pavement. Resurfacing will then be performed to complete the improvement of the roadway(s). A benefit of FDR is the reduced risk of base course deterioration resulting from water table fluctuation. Depending on the project, this option can be cost effective over time while still providing a similar Structural Number, as compared to the pavement reconstruction option, and suggested for consideration by the design engineer.

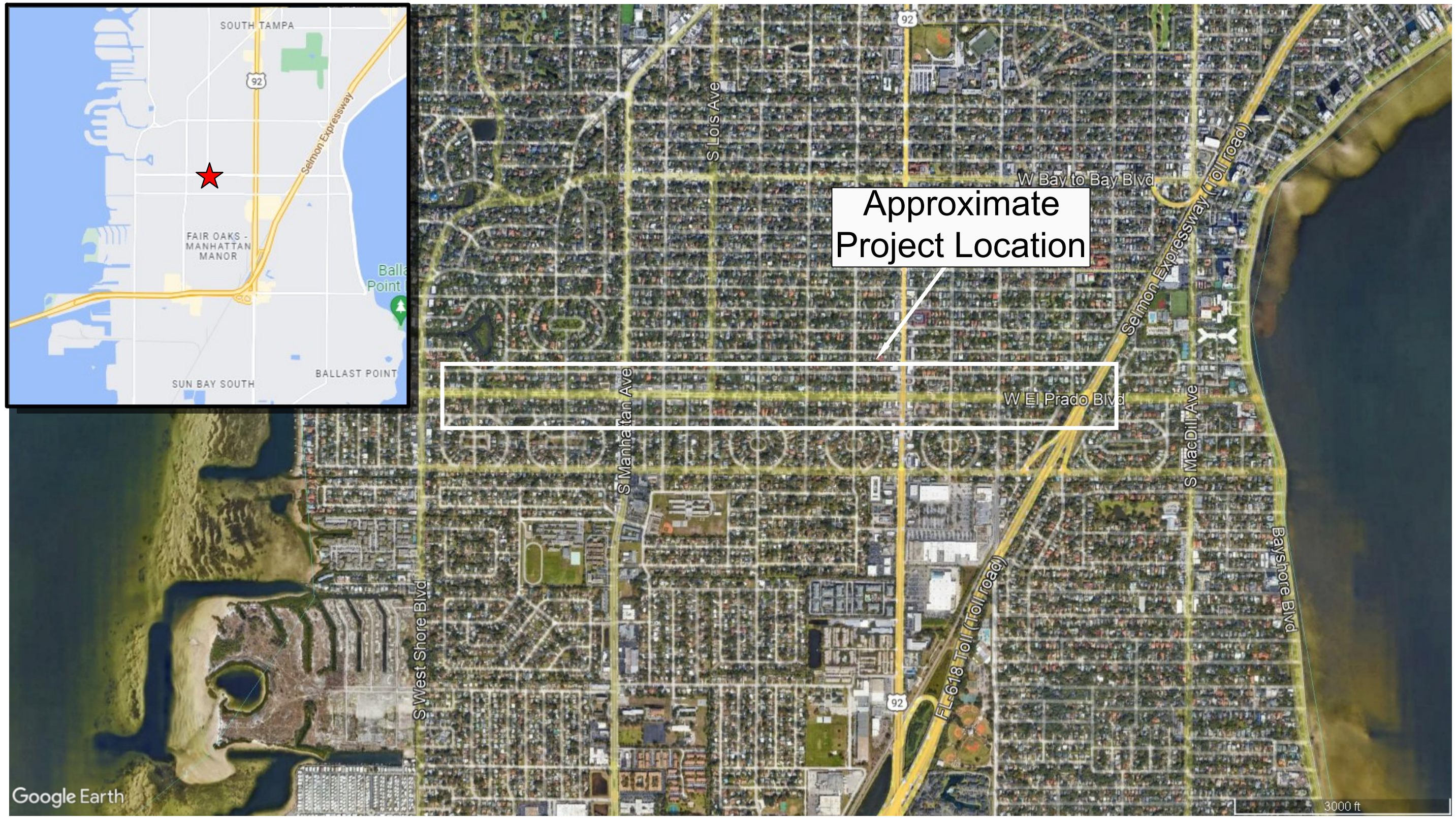
REPORT LIMITATIONS

The evaluations and observations detailed herein are based on the available limited soil information obtained by **MC²** and information provided by **HNTB** for the proposed project. If there are any revisions to the plans for this project or if deviations from the subsurface conditions noted in this report are encountered during construction, **MC²** should be notified immediately to determine if changes to our recommendations or additional testing are required for this project. If **MC²** is not retained to address such revisions and/or changes, **MC²** cannot be held responsible for their potential impact on the performance of the project.

MC² warrants that the findings or professional advice contained herein has been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

After the plans and specifications are more complete, **MC²** should be provided the opportunity to review the final design plans and specifications to assess that our findings have been properly incorporated into the design documents. At that time, it may be necessary to submit recommendations for supplementary information. This report has been prepared for the exclusive use of **HNTB** and **City of Tampa**.

ATTACHMENTS



LEGEND:

★ Approximate Project Location

Source: Google Earth
Image Date: 5/23/2021

0' 1500' 3000'

Graphic Scale (feet)

DATE	NAME	REVISION	APPROVED BY:

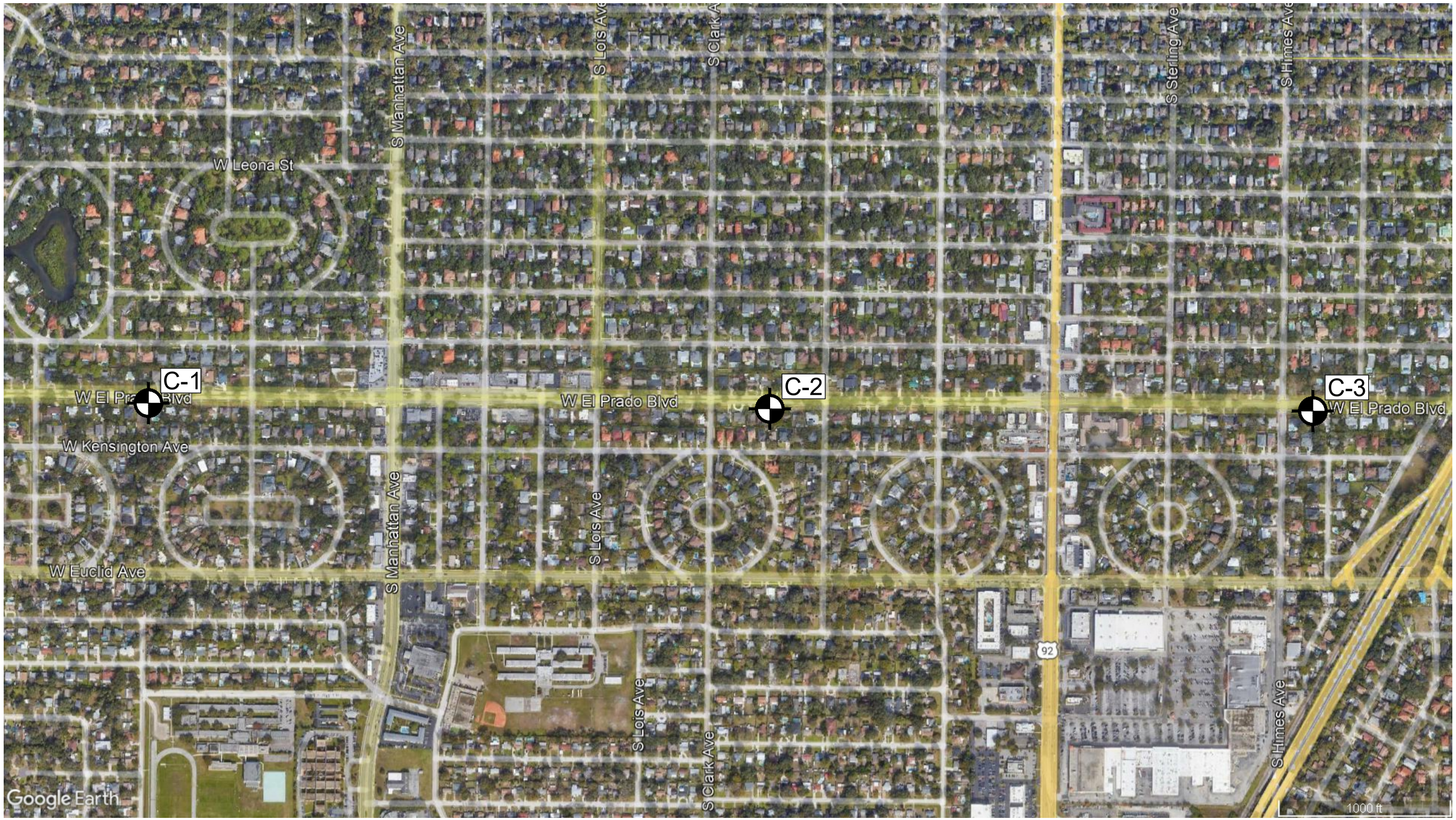
MC SQUARED, LLC
Geotechnical Consultants
5808-A Breckenridge Parkway
Tampa, FL 33610
Ph:813-623-3399 Fax:813-623-6636

GEOTECHNICAL • ENVIRONMENTAL MATERIALS TESTING

FLORIDA ENGINEERING CERTIFICATE OF AUTHORIZATION No. 9191
Jordan Fox, P.E.
FLORIDA LICENSE No. 87472

	NAME	DATE
DESIGNED BY:	SG	9/12/2022
DRAWN BY:	SG	9/12/2022
CHECKED BY:	JF	9/13/2022
SUPERVISED BY:	JF	

Project Location Map - W El Prado Blvd	MC² PROJ. NO.	SHEET NO.
El Prado Boulevard Pavement Cores City of Tampa, Florida	T042218.072	1



LEGEND:

Approximate Pavement Core Location

Source: Google Earth
Image Date: 2/01/2020

0' 500' 1000'

Graphic Scale (feet)

DATE	NAME	REVISION	APPROVED BY:

MC SQUARED, LLC
Geotechnical Consultants
5808-A Breckenridge Parkway
Tampa, FL 33610
Ph:813-623-3399 Fax:813-623-6636

FLORIDA ENGINEERING CERTIFICATE OF AUTHORIZATION No. 9191
Jordan Fox, P.E.
FLORIDA LICENSE No. 87472

	NAME	DATE
DESIGNED BY:	SG	9/12/2022
DRAWN BY:	SG	9/12/2022
CHECKED BY:	JF	9/13/2022
SUPERVISED BY:	JF	

Coring Location Map - W El Prado Blvd

El Prado Boulevard Pavement Cores
City of Tampa, Florida

MC² PROJ. NO.: T042218.072

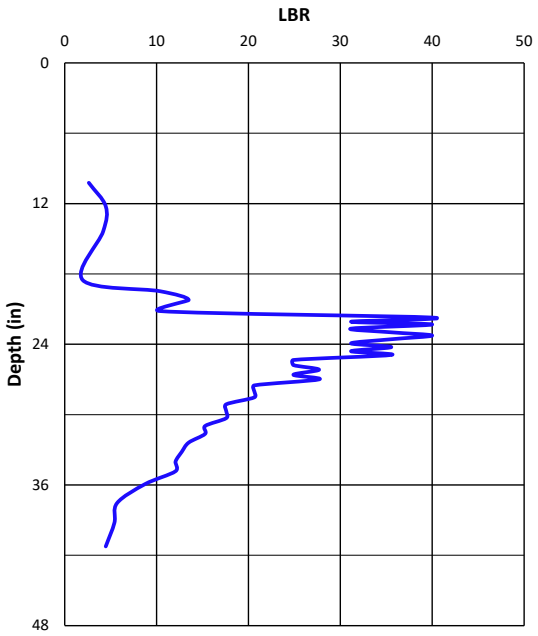
SHEET NO.: 2

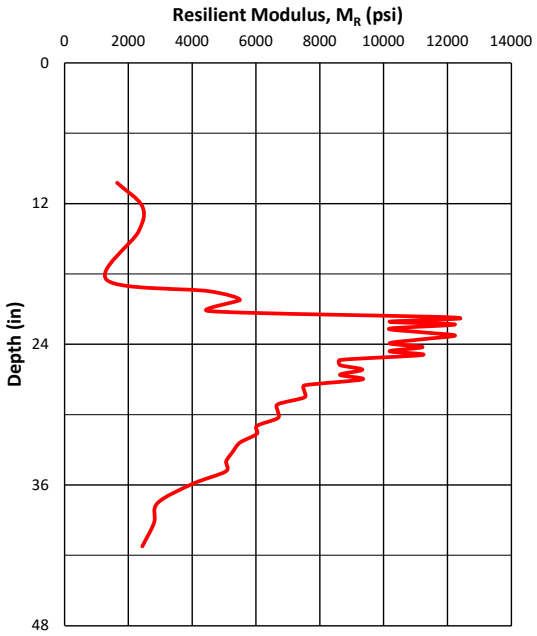
PAVEMENT CORE SUMMARY

PROJECT NAME:	**El Prado Blvd Pavement Cores**	CORE ID:	**C-1**
PROJECT NO.:	**T042218.072**	ROAD:	**W El Prado Blvd**
CLIENT:	**HNTB**	LANE:	**Eastbound**
DATE PERFORMED:	**8/30/22**	LOCATION:	**E 350183.53, N 3088341.98**

PAVEMENT AND SUBSURFACE CONDITIONS

Layer Depth (in)		Thickness (in)	Description
From	To		
0.0	2.25	2.25	Asphalt
2.25	8.25	6.0	Old Portland Cement Concrete
8.25	60.0	51.75	Fine SAND (A-3)
Water Table Depth (in):		52.0	Borehole terminated at 60 inches





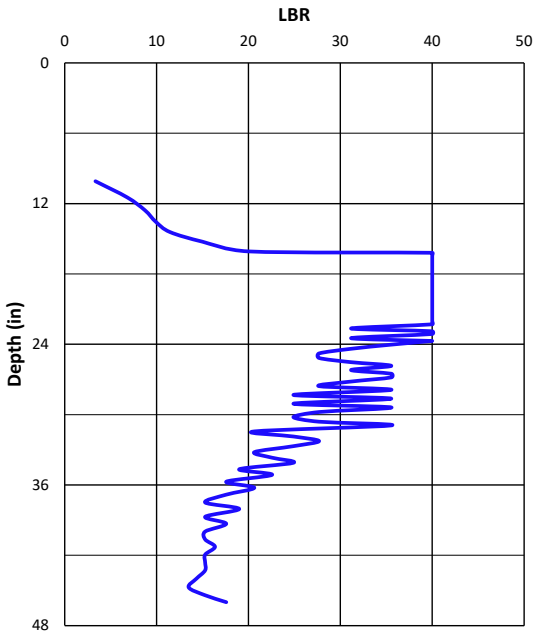
Notes:
1. Coordinates obtained from Garmin eTrex 10 handheld GPS device.
2. Pavement core photograph may not be representative of the entire pavement core section observed.
3. DCP data obtained from SAPPER ADCP manufactured by Kessler Soil Engineering Products, Inc.
4. CBR estimated from DCP per ASTM D6951. LBR estimated from CBR per "Development of an Automated Dynamic Cone Penetrometer for Evaluating Soils and Pavement Materials," 1998, Parker, Hammons, and Hall, prepared for the FDOT.
5. M_R estimated from LBR per correlation published in the FDOT Flexible Pavement Design Manual, Section 5.2.4.

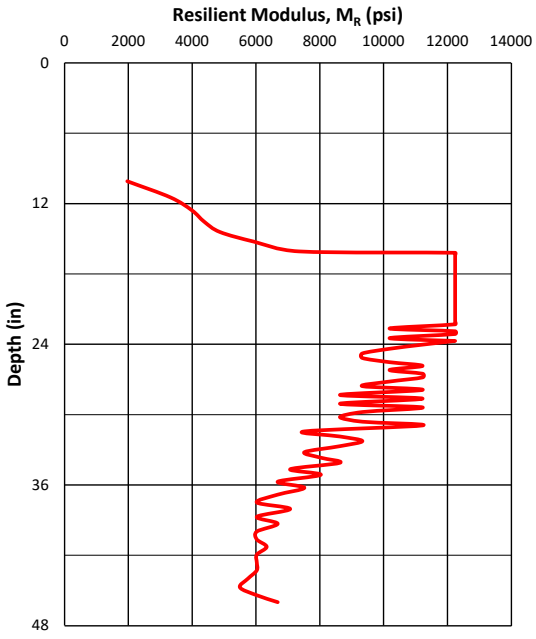
PAVEMENT CORE SUMMARY

PROJECT NAME:	**El Prado Blvd Pavement Cores**	CORE ID:	**C-2**
PROJECT NO.:	**T042218.072**	ROAD:	**W El Prado Blvd**
CLIENT:	**HNTB**	LANE:	**Eastbound**
DATE PERFORMED:	**8/30/22**	LOCATION:	**E 351285.27, N 3088318.10**

PAVEMENT AND SUBSURFACE CONDITIONS

Layer Depth (in)		Thickness (in)	Description
From	To		
0.0	2.5	2.5	Asphalt
2.5	7.25	4.75	Old Portland Cement Concrete
7.25	48.0	40.75	Fine SAND (A-3)
Water Table Depth (in):		30.0	Borehole collapsed, terminated at 48 inches





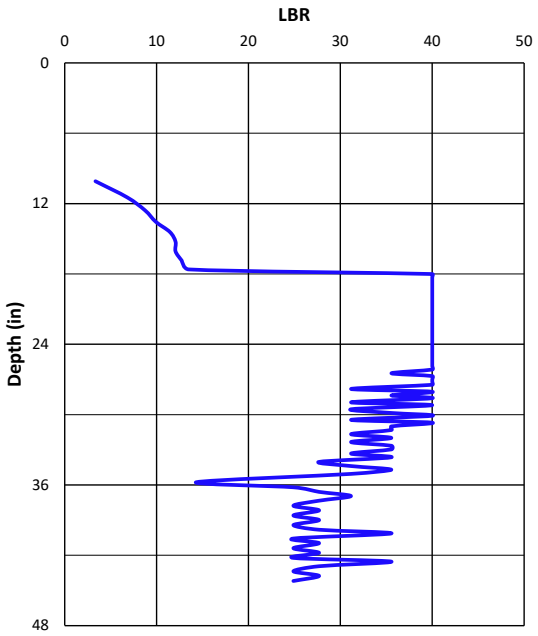
Notes:
1. Coordinates obtained from Garmin eTrex 10 handheld GPS device.
2. Pavement core photograph may not be representative of the entire pavement core section observed.
3. DCP data obtained from SAPPER ADCP manufactured by Kessler Soil Engineering Products, Inc.
4. CBR estimated from DCP per ASTM D6951. LBR estimated from CBR per "Development of an Automated Dynamic Cone Penetrometer for Evaluating Soils and Pavement Materials," 1998, Parker, Hammons, and Hall, prepared for the FDOT.
5. M_R estimated from LBR per correlation published in the FDOT Flexible Pavement Design Manual, Section 5.2.4.

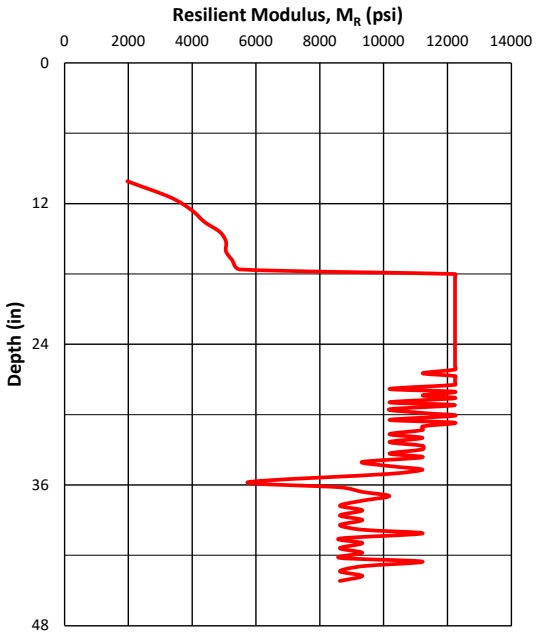
PAVEMENT CORE SUMMARY

PROJECT NAME:	**El Prado Blvd Pavement Cores**	CORE ID:	**C-3**
PROJECT NO.:	**T042218.072**	ROAD:	**W El Prado Blvd**
CLIENT:	**HNTB**	LANE:	**Eastbound**
DATE PERFORMED:	**8/30/22**	LOCATION:	**E 352249.00, N 3088296.00**

PAVEMENT AND SUBSURFACE CONDITIONS

Layer Depth (in)		Thickness (in)	Description
From	To		
0.0	2.25	2.25	Asphalt
2.25	8.0	5.75	Old Portland Cement Concrete
8.0	48.0	40.0	Fine SAND (A-3)
Water Table Depth (in):		36	Borehole collapsed, terminated at 48 inches





Notes:
1. Coordinates obtained from Garmin eTrex 10 handheld GPS device.
2. Pavement core photograph may not be representative of the entire pavement core section observed.
3. DCP data obtained from SAPPER ADCP manufactured by Kessler Soil Engineering Products, Inc.
4. CBR estimated from DCP per ASTM D6951. LBR estimated from CBR per "Development of an Automated Dynamic Cone Penetrometer for Evaluating Soils and Pavement Materials," 1998, Parker, Hammons, and Hall, prepared for the FDOT.
5. M_R estimated from LBR per correlation published in the FDOT Flexible Pavement Design Manual, Section 5.2.4.

TEST PROCEDURES

The general field procedures employed by MC Squared, LLC. (**MC^2**) are summarized in the American Society for Testing and Materials (ASTM) Standard D420 which is entitled "Site Characterization for Engineering Design and Construction Purposes". This recommended practice lists recognized methods for determining soil and rock distribution and groundwater conditions. These methods include geophysical and in-situ methods as well as borings.

Standard Drilling Techniques

Hand Auger (HA): A 3-inch (75 mm) diameter hand bucket auger with a cutting head is simultaneously turned and pressed into the ground. The bucket auger is retrieved at approximately 6 inch (0.15 m) intervals and its contents emptied for inspection. The soil sample obtained is described and representative samples put in bags or jars and transported to the laboratory for classification and testing, if necessary.

Pavement Cores: The pavement cores are performed using a 6-in. diameter core barrel that is advanced through the asphalt layers utilizing an electric drill. A gravity fed water system is connected into the barrel to prevent burnout of the asphalt material, heating of the core barrel, and removal of fines produce from the coring process.

Sampling and Testing in Boreholes

Dynamic Cone Penetrometer (DCP) Testing: The device consists of a portable cone penetrometer that is driven into the soil by dropping a single-mass hammer weighing 10.1 lbs from a height of 22.6 inches. The cone point is enlarged to minimize shaft resistance during testing. The penetration test is made through an augered hole. After augering to the test depth, the cone point is seated into the undisturbed bottom of the hole and the number of blows required to advance the penetrometer 4 inches is counted and recorded. Empirical correlations are then used to estimate soil strength parameters from the test results. DCP tests are conducted in general accordance with ASTM D6951.

Water Level Readings: Water level readings are normally taken in the borings and are recorded on the boring logs. In sandy soils, these readings indicate the approximate location of the hydrostatic water level at the time of our field exploration. In clayey soils, the rate of water seepage into the borings is low and it is generally not possible to establish the location of the hydrostatic water level through short-term water level readings. Also, fluctuation in the water level should be expected with variations in precipitation, surface run-off, evaporation, and other factors. For long-term monitoring of water levels, it is necessary to install piezometers.

The water levels reported on the boring logs are determined by field crews during drilling but prior to the introduction of slurry to the boreholes.

Occasionally the borings will cave-in, preventing water level readings from being obtained or trapping drilling water above the cave-in zone.

Boring Logs

The subsurface conditions encountered during drilling are reported on a field boring log prepared by a field engineer. The log contains information concerning the boring method, samples attempted and recovered, indications of the presence of coarse gravel, cobbles, etc., and observations of groundwater. It also contains the field engineer's interpretation of the soil conditions between samples. Therefore, these boring records contain both factual and interpretive information. The field boring records are kept on file in our office.

After the drilling is completed, a Florida licensed professional engineer specializing in geotechnical engineering classifies the soil samples and prepares the final boring logs, which are the basis for our evaluations and recommendations.

Soil Classification

Soil classifications provide a general guide to the engineering properties of various soil types and enable the engineer to apply his past experience to current problems. The soils are classified according to consistency (based on number of blows from standard penetration tests), color and texture. These classification descriptions are included on our boring logs.

The classification system discussed above is primarily qualitative and for detailed soil classification two laboratory tests are necessary: grain size tests and plasticity tests. Using these test results the soil can be classified according to the AASHTO or Unified Classification Systems (ASTM D 2487). Each of these classification systems and the in-place physical soil properties provides an index for estimating the soil's behavior. The soil classification and physical properties are presented in this report.