CONTRACT ADDENDUM

CITY OF KEY WEST
FLORIDA

GLYNN ARCHER DRIVE/ 14TH STREET ROADWAY RECONSTRUCTION

FROM NORTH ROOSEVELT BLVD. TO FLAGLER AVENUE

Project No. EN-1004
(Lap Agreement FM #420042-1)

To all Bidders,

The following is a list of addenda that shall govern all other contract documents to the extent specified.

Addendum No. 3

I. The following revision is hereby made a part of the Contract Documents as fully as completely as if the same were fully set forth therein:

Plan Revision Number 1

Sheet Nos.	Rev. Date	Description
1	02/29/12	Revised Governing Standards note
3	02/29/12	Revised Summary of Quantities tabulation and Pay Item descriptions. See Summary of Quantities Table below for additional information.
5-6	02/29/12	Revised Pay Item Notes and Environmental Notes.
8	02/29/12	Modified curb ramp and sidewalk limits at Northside Drive
10-11	02/29/12	Revised maximum sidewalk slope to 1:20.
16	02/29/12	Modified item descriptions
17	02/29/12	Modified curb ramp details and removed curb details
18	02/29/12	Removed Class II HDPE Pipe from the Optional Materials Tabulation.
30-34	02/29/12	Modified cross sections
38	02/29/12	Added note

Summary of Quantities

Pay Item	Add./Del./Rev.	Old Quantity	New Quantity
145-71	Del.	7267	0
145-2	Add.	0	7267
425-1-351	Rev.	8	6
425-1-361	Rev.	8	1
425-1-561	Rev.	5	2
425-1-565	Rev.	3	1
425-1-701	Del.	2	0
425-1-707	Del.	2	0
425-2-91	Rev.	7	2
430-175-101	Rev.	1840	430
425-1-351C	Add.	0	2
425-1-361C	Add.	0	7
425-1-561C	Add.	0	3
425-1-565C	Add.	0	2
425-1-701C	Add.	0	2
425-1-707C	Add.	0	2
425-2-91C	Add.	0	5
430-175-101C	Add.	0	1410
522-1	Rev.	2,858	2,878

II. The following revision is hereby made a part of Section 02162 Prepared Soil Layer, Part I, Section 1.1, Subsection A of the Contract Documents, as fully as completely as if the same were fully set forth therein:

- This Section covers the work necessary for the prepared soil layer as per the FDOT Standard Specifications.

III. The following revision is hereby made a part of Section 02570 Performance Turf, Part I, Section 1.3, Subsection A of the Contract Documents, as fully as completely as if the same were fully set forth therein:

- Sod shall be Tifway 419 Bermuda type. Contractor shall provide certification for Sod type prior to installation.

- Contractor shall warrant the Sod installation for 1 year after final acceptance of the project.

IV. The following is hereby made a part of the Contract Documents as fully as completely as if the same were fully set forth therein:

Sheet 17, under heading “Start of construction and contract completion time”, paragraph was changed as follows:

The Bidder further agrees to begin work within 14 calendar days of the Notice to Proceed (NTP) and to complete the construction in all respects within 150 calendar days from the date of the NTP.

Sheet 44, under table, first paragraph was changed as follows:

As agreed on page 17 of the "Proposal", the construction of the project, in all respects, shall be fully completed within one hundred and fifty (150) consecutive calendar days.

V. The following is hereby made a part of the Contract Documents as fully as completely as if the same were fully set forth therein:

Bid Schedule was modified. Please see attached revised bid schedule.

VI. The following is hereby made a part of the Contract Documents as fully as completely as if the same were fully set forth therein:

Sheet 5, Qualification of Contractors section has been modified as shown below:

The prospective Bidders must meet the statutorily prescribed requirements before award of Contract by the Owner.

Bidders must hold or obtain all Licenses as required by Florida State Statutes in order to bid and perform the work specified herein.

BIDDERS MUST BE FDOT PREQUALIFIED. AS PER FDOT STANDARD SPECIFICATIONS 2-1: PREQUALIFICATION OF BIDDERS.

ALL PREQUALIFIED CONTRACTORS BIDDING MUST INCLUDE WITH THEIR BID PROPOSAL A COPY OF THEIR CERTIFICATION OF PREQUALIFICATION

VII. The following is hereby made a part of the Contract Documents as fully as completely as if the same were fully set forth therein:

Sheet 190, Section 285-8 Method of Measurement, has been changed as follows:

The quantity to be paid for will be the plan quantity area in square yards, omitting any areas where under-thickness is in excess of the allowable tolerance as specified in 285-6. The pay area will be the surface area, determined as provided above, with no adjustments allowed on the basis of thickness for base courses.

VIII. The following is hereby made a part of the Contract Documents as fully as completely as if the same were fully set forth therein:

Please see attached Roadway Soil Survey

Mandatory Pre-Bidding Questions and Responses

1. Gravity Wall and Handrail: There is no detail for the gravity wall. I assume that the rail goes on the gravity wall, but there is more rail than gravity wall. What else is the rail attached to? There are a couple of cross sections that show the gravity wall, but do not show the rail on top. Can you clarify?

   Response: The gravity wall shall be used as detailed on FDOT Design Standards Index 520. Please refer to Index 870, Sheet 5 of 5 for handrail installation details.

2. There is no detail for the French drain or the standard trench. Will all of the trenches need to be lined with filter fabric?

   Response: Please refer to FDOT Design Standards Index 285 for French Drain details and installation requirements. As per Index 285, filter fabric is required for all French drains.

3. There is not a listed bid item for the drop curb. Will you be adding one. If not where do we price it?

   Response: There is no need for a separate pay item for drop curb. Drop curb is paid under pay item 520-1-10 Concrete curb and Gutter Type F. Please refer to FDOT Design Standards Index 300 for details.

4. Will they be adding an item for the disposal of the contaminated material?

   Response: Please refer to environmental notes on sheets 6. Per sections 02425 and 02430 of the contract documents, removal and disposal of surplus and unsuitable materials are included under Pay items 425-x-xx C and 430-x-xx C.

5. The purpose of this question is to bring attention to page 5 of the contract docs for Glynn Archer drive roadway construction. It is required by the contractor to submit fdot form 375 020 22 current capacity and form 375 020 21 for status of contracts on hand. In checking the fdot forms website it should be noted that these forms no longer exist.

   Response: Please refer to section VI above.

6. What is the flow rate for dewatering into the city sanitary sewer system?

   Response: Contractor shall coordinate with the City of Key to ensure the flow rate capacity of the sanitary sewer is not exceeded

7. What is the maximum contaminated loading levels for known contaminates discharged into the city sanitary system (during dewatering)?

   Response: Contractor shall acquire a dewatering permit from the Florida Department of Environmental Protection (FDEP) prior to commencing dewatering operations. Maximum

contaminated loading levels vary based on contaminants and needs to be coordinated with FDEP.

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 3 by acknowledging Addendum in their proposal or by submitting the addendum with the bid package. Bids submitted without acknowledgement or without this Addendum may be considered non-responsive.

_____ _____

Signature Name of Business

PLANS PREPARED FOR:

THE CITY OF KEY WEST

CONTRACT PLANS

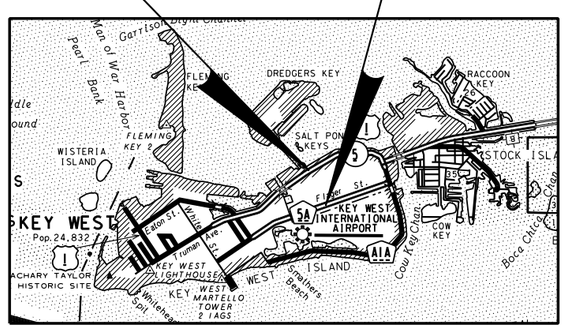
GLYNN ARCHER DRIVE/ 14TH STREET
ROADWAY RECONSTRUCTION
CITY PROJECT NO. EN-1004
FDOT FM No. 420042-1-52-01

INDEX OF ROADWAY PLANS

/1\ GOVERNING STANDARDS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN STANDARDS DATED 2010

BEGIN PROJECT
STA. 00+90.00

END PROJECT
STA. 28+54.67



LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY	2,764.67	0.523
BRIDGES		
NET LENGTH OF PROJECT	2,764.67	0.523
EXCEPTIONS		
GROSS LENGTH OF PROJECT	2,764.67	0.523

PROJECT MANAGER: JANET MUCCINO

REVISIONS
/1\ SHEETS 1, 3, 5, 6, 8, 10, 11, 16, 17, 18, 30, 31, 32, 33, 34, 38.

KEY SHEET REVISIONS	
DATE	DESCRIPTION
02/29/12	REVISED GOVERNING STANDARD NOTES

SEAL OF THE CITY OF KEY WEST, FLORIDA

ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:

FAVIO A. LAVERDE, P.E. No. 63546
THE CORRADINO GROUP
4055 N.W. 97TH AVE, DORAL, FL 33178
Ph: (305) 594-0735 Fax: (305) 594-0755

PLANS PREPARED BY:

CORRADINO
4055 N.W. 97th Avenue, Doral, Florida, 33178
Ph : (305) 594-0735 Fax : (305) 594-0755
Certificate Of Authorization No. 00007665
Vendor ID: 61-071-3040
CIVIL ENGINEERING • REGULATORY PERMITTING • CONSTRUCTION MANAGEMENT

PEREZ ENGINEERING & DEVELOPMENT, INC
CERTIFICATE OF AUTHORIZATION No. 8579

KEY WEST OFFICE
1010 EAST KENNEDY DRIVE, SUITE 400
KEY WEST, FLORIDA 33040
TEL: (305) 293-9440 FAX: (305) 296-0243

TAMPA OFFICE
CONCOURSE CENTER
3507 EAST FRONTAGE ROAD, SUITE 140
TAMPA, FLORIDA 33607
TEL: (813) 579-1616 FAX: (813) 288-0710

NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

ROADWAY PLANS
ENGINEER OF RECORD: FAVIO A. LAVERDE, P.E.

P.E. NO.: 63546

DRAINAGE PLANS
ENGINEER OF RECORD: ALLEN E. PEREZ, P.E.

P.E. NO.: 51468

SHEET NO. 1

SUMMARY OF QUANTITIES

SUMMARY OF ROADWAY PAY ITEMS

ITEM No.	ITEM	UNIT	TOTAL QUANTITIES
101-1	MOBILIZATION	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
102-3	COMMERCIAL MATERIAL FOR DRIVEWAY MAINTENANCE	CY	250
104-10-3	SEDIMENT BARRIER	LF	5,530
104-18	INLET PROTECTION SYSTEM	EA	22
110-1-1	CLEARING AND GRUBBING	LS	1
120-1	REGULAR EXCAVATION	CY	4,948.7
120-6	EMBANKMENT	CY	339.1
145-2	GEOSYNTHETIC REINFORCEMENT	SY	7,267
160-4	STABILIZATION TYPE B	SY	12,572
162-1-11	PREPARED SOIL LAYER, DEPTH 6"	SY	2,028
285-704	OPTIONAL BASE GROUP 04	SY	340
285-709	OPTIONAL BASE GROUP 09	SY	12,146
334-1-13	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC LEVEL C)	TN	1,451
337-7-32	ASPHALTIC CONCRETE FRICTION COURSE FC-9.5 (TRAFFIC LEVEL C)(RUBBER)	TN	550
400-011	CLASS NS CONCRETE (GRAVITY WALL)(AS PER FDOT INDEX 520)	CY	65.94
425-1-351	CURB INLET TYPE P-5, <10'	EA	6
425-1-351 C	CURB INLET TYPE P-5, <10' (CONTAMINATED AREA)	EA	2
425-1-361	CURB INLET TYPE P-6, <10'	EA	1
425-1-361 C	CURB INLET TYPE P-6, <10' (CONTAMINATED AREA)	EA	7
425-1-561	VALLEY GUTTER INLET, TYPE F, <10'	EA	2
425-1-561 C	VALLEY GUTTER INLET, TYPE F, <10' (CONTAMINATED AREA)	EA	3
425-1-565	VALLEY GUTTER INLET, TYPE F, <10', PARTIAL, MANHOLE TOP	EA	1
425-1-565 C	VALLEY GUTTER INLET, TYPE F, <10', PARTIAL, MANHOLE TOP (CONTAMINATED AREA)	EA	2
425-1-701 C	VALLEY GUTTER INLET, TYPE S, <10' (CONTAMINATED AREA)	EA	2
425-1-707 C	VALLEY GUTTER INLET, TYPE S, <10' (CONFLICT STRUCTURE)(CONTAMINATED AREA)	EA	2
425-2-91	MANHOLES, J-8, <10'	EA	2
425-2-91 C	MANHOLES, J-8, <10' (CONTAMINATED AREA)	EA	5
425-2-101	MANHOLES, P-7, <10' (CONFLICT STRUCTURE)	EA	1
425-5-1	ADJUSTMENT OF EXISTING UTILITY MANHOLES TO REMAIN	EA	10
425-6 (A)	ADJUSTMENT OF EXISTING UTILITY VALVES	EA	17
425-6 (B)	REPLACEMENT OF EXISTING UTILITY WATER METERS	EA	8

SUMMARY OF QUANTITIES

SUMMARY OF ROADWAY PAY ITEMS

ITEM No.	ITEM	UNIT	TOTAL QUANTITIES
430-175-101	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, (0-24" S/CD)	LF	430
430-175-101 C	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, (0-24" S/CD) (CONTAMINATED AREA)	LF	1,410
443-70-3	FRENCH DRAIN, (18") (AS PER FDOT INDEX 285)	LF	695
515-1-2	PIPE HANDRAIL - GUIDERAIL (ALUMINUM) (AS PER FDOT INDEX 870)	LF	722
520-1-10	CONCRETE CURB AND GUTTER TYPE "F" (AS PER FDOT INDEX 300)	LF	5,658
520-2-4	CONCRETE CURB TYPE "D" (AS PER FDOT INDEX 300)	LF	1,630
522-1	CONCRETE SIDEWALK (4" THICK) INCLUDING PEDESTRIAN RAMPS	SY	2,878
522-2	CONCRETE SIDEWALK (6" THICK)	SY	765
570-1-2	PERFORMANCE TURF (SOD)	SY	2,038
580-1-1	LANDSCAPE	LS	1
700-20-11	SINGLE POST SIGN, F&I <12 SF (AS PER FDOT INDEX 11860)	AS	27
700-20-60	SINGLE POST SIGN REMOVE	AS	20
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	EA	98
711-11-111	THERMOPLASTIC SOLID TRAFFIC STRIPE 6" WHITE	NM	1.082
711-11-122	THERMOPLASTIC SOLID TRAFFIC STRIPE 8" WHITE	LF	39
711-11-123	THERMOPLASTIC SOLID TRAFFIC STRIPE 12" WHITE	LF	624
711-11-124	THERMOPLASTIC SOLID TRAFFIC STRIPE 18" WHITE	LF	28
711-11-125	THERMOPLASTIC SOLID TRAFFIC STRIPE 24" WHITE	LF	720
711-11-151	THERMOPLASTIC (2-4 SKIP) 6" WHITE	LF	276
711-11-160	PAVEMENT MESSAGE	EA	17
711-11-170	PAVEMENT ARROW	EA	16
711-11-211	THERMOPLASTIC SOLID TRAFFIC STRIPE 6" YELLOW	NM	0.189
711-11-231	THERMOPLASTIC (10-30 SKIP) 6" YELLOW	GM	0.441
1050-11-224	UTILITY PIPE, F & I, PVC WATER, 8"-19.9"	LF	20
1055-11-214	UTILITY FITTING, F & I, PVC ELBOW, 8"-19.9"	EA	4
1080-11-409	UTILITY FITTING, F & I, MECH JOINT RESTRAIN, 8"-19.9"	EA	2
1644-800	FIRE HYDRANT, RELOCATE	EA	2

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV 1 MODIFIED PAY ITEMS DESCRIPTIONS AND QUANTITIES		

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E.O.R. Favio A. Laverde, P.E. No. 63546

THE CITY OF KEY WEST

COUNTY	CORRADINO PROJECT NO.
MONROE	4025

SUMMARY OF QUANTITIES

SHEET NO. 3

PAY ITEM NOTES:

101-1: INCLUDES COST FOR ALL MOBILIZATION AND DE-MOBILIZATION COSTS, FIELD ENGINEERING, CONSTRUCTION LAYOUT, FINAL CERTIFIED AS-BUILT, AND PRE-CONSTRUCTION VIDEO.

102-1: INCLUDES COST FOR ALL MAINTENANCE OF TRAFFIC AND INCLUDES ALL TEMPORARY TRAFFIC CONTROL DEVICES, WARNING DEVICES, BARRIERS, PEDESTRIAN ACCESS MAINTENANCE, AND DETOURS AS REQUIRED. ALL CROSSWALKS AND SIDEWALKS SHALL REMAIN OPEN AND FREE OF OBSTRUCTIONS. TEMPORARY PAINT FOR ROADWAYS AND CROSSWALKS SHALL BE MAINTAINED THROUGHOUT THE PROJECT DURATION AT NO ADDITIONAL COST.

110-1-1: INCLUDES THE REMOVAL AND DISPOSAL OF ALL EXISTING ASPHALT/CONCRETE PAVEMENT, CONCRETE SIDEWALK, CURBS, DRAINAGE STRUCTURES AND PIPES, AND OTHER FACILITIES NECESSARY TO PREPARE THE AREA FOR THE PROPOSED CONSTRUCTION. INCLUDES THE COST FOR CLEARING AND GRUBBING WITHIN HARMONIZATION AREAS. INCLUDES THE REMOVAL OF ALL CHAIN LINK AND WOOD FENCES ENCROACHING CITY'S R/W. CONTRACTOR SHALL REMOVE THESE APPURTENANCES AND DELIVER THEM TO THE RESPECTIVE PROPERTY OWNER. OWNER IS IN CHARGE OF RELOCATING/ RESETTING AND OR RE-INSTALLING THESE APPURTENANCES.

120-1: INCLUDES THE COST FOR REQUIRED EXCAVATION AT HARMONIZATION AREAS

285-704: INCLUDES 17.05 SY FOR HARMONIZATION AREAS.

334-1-13: INCLUDES 220 TN FOR ASPHALT HARMONIZATION. 1

425-X-XXX C, 430-175-101 C: INCLUDES THE COST OF A CAR CONTRACTOR AND ALL REQUIRED EQUIPMENT, LABOR, AND MATERIALS TO PERFORM ALL WORK SPECIFIED ON SHEET 6.

425-5, 425-6 (A), 425-6 (B): INCLUDES COST FOR VERTICALLY AND HORIZONTALLY ADJUSTING VALVE BOXES, MANHOLES RING AND COVERS, WATER METERS, SEWER CLEANOUTS, OR OTHER APPURTENANCES. COST WILL INCLUDE FULL COMPENSATION FOR ALL WORK AND MATERIALS REQUIRED. PAYMENT WILL BE BASED ON THE UNIT PRICE STATED IN THE CONTRACTOR'S PROPOSAL.

WHERE VALVE BOXES, MANHOLES, OR OTHER APPURTENANCES ARE WITHIN THE AREA TO RECEIVE ASPHALT CONCRETE PAVEMENT RESTORATION, THESE APPURTENANCES SHALL BE RAISED, LOWERED, AND LEVELED AS REQUIRED SO THEIR TOP IS LEVEL WITH THE FINISHED ELEVATION OR THE NEW ASPHALT LAYER. CONSIDER ANY DELAYS OR COSTS EXPERIENCED FROM SUCH OBSTRUCTIONS AS INCIDENTAL TO THE PAVING OPERATION. PROTECT ALL COVERS DURING ASPHALT APPLICATION. WHEN VALVE BOXES, MANHOLES, OR OTHER APPURTENANCES ARE RAISED, LOWERED, LEVELED THE ASPHALT CONCRETE PAVEMENT WILL BE SAW CUT AND REMOVED A MINIMUM OF ONE FOOT FROM THE EXCAVATED AREA. THE EXCAVATED AREA WILL BE BACKFILLED WITH CRUSHED LIME ROCK PER DIVISION LAP SPECIFICATIONS 120 EARTHWORK.

THESE ITEMS INCLUDE THE COST FOR THE INSTALLATION OF NEW SEWER/WATER METER BOXES W/LIDS AS PER FKAA SPECIFICATIONS; COST SHALL INCLUDE LABOR, EQUIPMENT AND MATERIALS; COST SHALL INCLUDE LATERAL AND VERTICAL ADJUSTMENTS NEEDED FOR THE SEWER CLEAN OUTS AND WATER METERS. 1

SEWER CLEANOUT BOXES SHALL BE MADE FROM 100% HOMOGENOUS POLYETHYLENE MATERIAL HAVING A MINIMUM WALL THICKNESS OF .550 INCH, A COMPARTMENT SIZE OF 12-INCHES BY 20-INCHES WITH A CLEAR OPENING OF 10-INCHES BY 17-INCHES. PROVIDE KNOCKOUTS OR NOTCHES IN EACH END SIZED TO ALLOW PLACEMENT OF A 6-INCH PVC PIPE INSIDE THE BOX. VERTICAL CRUSH TO EXCEED 20,000 POUNDS AND SIDEWALL LOADING TO EXCEED 180 POUNDS PER SQUARE INCH. A FLANGE SHALL ENCIRCLE THE TOP AREA FOR INSTALLATION IN CONCRETE. CLEANOUT COVERS SHALL BE CAST OF DUCTILE CONFORMING TO ASTM A-536-84, GRADE 60-40-18. THE METER BOX COVERS SHALL MEET OR EXCEED FEDERAL SPECIFICATIONS RR-F-621D FOR A MINIMUM PROOF LOAD OF 25,000 POUNDS ON 9" X 9" AREA. ALL BOXES AND COVERS SHALL BE MANUFACTURED BY MID- STATES PLASTICS, MOUNT STERLING, KY. FLORIDA MASTER DISTRIBUTOR: FERGUSON WATER WORKS. (561-844-3222) OR APPROVED EQUAL.

WATER METER BOXES SHALL BE MID- STATES MS # 15P METER BOX OR EQUAL, COVERS SHALL HAVE CAST IRON READING LID.

520-1-10, 520-2-4: INCLUDES COST OF REMOVAL AND DISPOSAL OF EXISTING RELATED CONCRETE ITEMS OUTSIDE CLEARING AND GRUBBING LIMITS, AND ALL LABOR AND MATERIALS TO COMPLETE THE WORK.

522-1, 522-2: INCLUDES COST OF REMOVAL AND DISPOSAL OF EXISTING RELATED CONCRETE ITEMS OUTSIDE CLEARING AND GRUBBING LIMITS, AND ALL LABOR AND MATERIALS TO COMPLETE THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR ALL SITE WORK AND CONSTRUCTION SUPERVISION REQUIRED TO MEET ADAAG /ADA SPECIFICATIONS WHEN PLACING CONCRETE. INCLUDES THE COST OF CONCRETE AND REINFORCEMENT FOR THICKENED EDGE. FURTHERMORE, INCLUDES THE COST OF THE MATERIAL AND LABOR REQUIRED FOR THE HARMONIZATION AT ALL DRIVEWAYS AS SPECIFIED IN THE PLANS.

580-1-1: INCLUDES COST OF TREE REMOVAL/ RELOCATION AS SPECIFIED IN THE PLANS. INCLUDES COST OF ROOT PRUNNING AND/OR CANOPY TRIMMING. ALSO INCLUDES THE COST OF OBTAINING ALL NECESSARY PERMITS TO PERFORM THIS WORK.

1644-800: INCLUDES COST OF ALL WORK, MATERIALS, EQUIPMENT AND ALL NECESSARY PERMITS REQUIRED TO RELOCATE/ ADJUST EXISTING FIRE HYDRANTS AS PER FKAA STANDARDS AND SPECIFICATIONS. UNLESS OTHERWISE INDICATED ON PLANS, FIRE HYDRANTS SHALL BE ADJUSTED TO THE FINAL SIDEWALK ELEVATIONS AND SHALL BE RELOCATED TO THE BACK OF SIDEWALKS.

ENVIRONMENTAL NOTES:

1. EROSION, SEDIMENT, AND TURBIDITY CONTROL MEASURES SHALL BE PROVIDED THROUGHOUT CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND REPAIRING ALL SLOPES AND SURFACES THROUGHOUT CONSTRUCTION AND UNTIL A STABLE SURFACE CONDITION EXISTS. THE CONTRACTOR SHALL MINIMIZE THE EXPOSED AREA AT ANY POINT DURING CONSTRUCTION AS MUCH AS PRACTICAL.
2. CONTRACTOR SHALL INSTALL EROSION CONTROLS NOTED ON DRAWINGS AND APPLICABLE PERMITS, EROSION CONTROLS SHALL BE MAINTAINED UNTIL A PERMANENT STAND OF GRASS IS PLANTED ONSITE.
3. PROVIDE EROSION CONTROL MEASURES CONSISTING OF INLET PROTECTION SYSTEMS AND SEDIMENT BARRIERS ALONG THE PROPOSED LIMITS OF (WETLANDS OR WATER BODIES) AND OFF-SITE LANDS AND WATERBODIES. MAINTAIN THESE MEASURED DAILY UNTIL CONSTRUCTION ACCEPTANCE BY THE OWNER AND THEN REMOVE AND LEGALLY DISPOSE OF SAID MEASURES.
4. EROSION CONTROL SHALL BE MAINTAINED WITHIN CONSTRUCTION AREA BY QUICKLY STABILIZING DISTURBED AREA TO PREVENT THE RELEASE OF SEDIMENT. THIS SHALL BE ACCOMPLISHED USING GRASS COVER, INLET PROTECTION SYSTEMS, SEDIMENT BARRIERS AND OTHER MEANS ACCEPTABLE TO OWNER, ENGINEER AND REGULATORY AGENCIES.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ADEQUATE EROSION CONTROL AT ALL TIMES.
6. IN THE EVENT THAT THE EROSION PREVENTION AND CONTROL DEVICES SHOWN IN THESE PLANS PROVE NOT TO BE EFFECTIVE, ALTERNATE METHODS FOR MAINTAINING STATE WATER QUALITY STANDARDS FOR DISCHARGE FROM THE CONSTRUCTION SITE WILL BE REQUIRED. ANY ALTERNATE EROSION PREVENTION AND CONTROL DEVICES MUST BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
7. ANY MATERIAL TO BE STOCKPILED FOR PERIODS GREATER THAN 24 HOURS SHALL BE PROTECTED BY APPROPRIATE EROSION CONTROL DEVICES.
8. KEEP NEW AND EXISTING INLETS CLEAN OF LIMEROCK AND DEBRIS. INLETS LOCATED NEAR CONSTRUCTION ACTIVITIES SHOULD BE PROTECTED BY APPROPRIATE EROSION CONTROL DEVICES.
9. A CERTIFIED ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE SHALL BE PRESENT ON SITE TO DIRECT ALL TREE REMOVAL/ RELOCATION AS WELL AS ROOT PRUNING AND/OR CANOPY TRIMMING ACTIVITIES. COST TO BE INCLUDED IN 580-1-1, LANDSCAPE.
10. ALL EXISTING TREES ARE TO REMAIN UNLESS OTHERWISE NOTED IN THE PLANS; CONTRACTOR SHALL EXERCISE CARE NOT TO DAMAGE ANY TREE THAT IS TO REMAIN WITHIN CONSTRUCTION AREA.
11. THIS PROJECT IS LOCATED ADJACENT TO THE WATERS OF THE GULF OF MEXICO WHICH ARE DESIGNATED AS OUTSTANDING FLORIDA WATERS (OFW). ADHERE TO APPLICABLE WATER QUALITY STANDARDS DURING WORK INVOLVING DEWATERING ACTIVITIES OR DRAINAGE CONNECTION TO EXISTING OUTFALLS. NO DEGRADATION OF WATER QUALITY, INCREASED TURBIDITY OF THE WATER, AND/OR THE DISCHARGE OF ANY FOREIGN MATERIAL INTO THE WATER SHALL BE PERMITTED. TURBIDITY SHALL NOT EXCEED 0 NTU'S ABOVE BACKGROUND LEVELS OUTSIDE THE TURBIDITY CONTROLS. TURBIDITY BARRIERS SHOULD BE INSTALLED AT ALL DISCHARGE POINTS, INCLUDING EXISTING OUTFALLS.
12. NO STAGING OR OTHER ACTIVITIES FOR THIS PROJECT SHOULD OCCUR WITHIN THE DRIPLINE OF EXISTING TREES.
13. TREE PROTECTION BARRIERS SHOULD BE INSTALLED AROUND TREES ADJACENT TO CONSTRUCTION ACTIVITIES. COST TO BE INCLUDED UNDER PAY ITEM 580-1-1 THE PROJECT. PROVIDE ADDITIONAL MEASURES AS NECESSARY TO AVOID ADVERSE IMPACTS TO JURISDICTIONAL AREAS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV 1 MODIFIED PAY ITEMS NOTES		

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THE CITY OF KEY WEST

COUNTY	CORRADINO PROJECT NO.
MONROE	4025

PAY ITEM NOTES & ENVIRONMENTAL NOTES

SHEET NO. 5

cverson 2/29/2012 1:23:21 PM J:\4025 Key West Glynn Archer\CAD\Roadway\GNNTRD01.DGN

EXCAVATION - IDENTIFIED AREAS OF CONTAMINATION

THE FOLLOWING AREAS HAVE BEEN IDENTIFIED AS CONTAMINATED:

* APPROXIMATELY FROM STA. 0+80.00 TO STA. 2+60.00
* APPROXIMATELY FROM STA. 11+00.00 TO STA. 21+00.00
* APPROXIMATELY FROM STA. 23+50.00 TO STA. 26+25

THE PRIME CONTRACTOR SHALL HAVE A CONTAMINATION ASSESSMENT AND REMEDIATION (CAR) CONTRACTOR QUALIFIED TO PERFORM CONSTRUCTION ACTIVITIES WITHIN THE CONTAMINATED AREAS NOTED ABOVE. QUALIFICATIONS OF SUCH CAR CONTRACTOR SHALL INCLUDE, BUT NOT BE LIMITED TO: EXPERIENCE AND PERSONNEL TO PREPARE CONTAMINATION ASSESSMENT PLANS, CONDUCT CONTAMINATION ASSESSMENTS, PREPARE SITE ASSESSMENT REPORTS, REMEDIATION PLANS, IMPLEMENT REMEDIAL ACTION PLANS, RISK BASED CORRECTIVE ACTIONS, STORAGE TANKS SYSTEM REMOVAL, HIGHWAY SPILL RESPONSE AS WELL AS EXPERIENCE WITH INFRASTRUCTURE/CONSTRUCTION ACTIVITIES WITHIN (POTENTIALLY) CONTAMINATION AREAS SPECIFIC TO TRANSPORTATION SYSTEMS. 1

THE CAR CONTRACTOR WILL BE REQUIRED TO PROVIDE THE FOLLOWING DOCUMENTATION IN A PACKAGE AT THE PRE-CONSTRUCTION MEETING:

- A CERTIFICATE OF INSURANCE INCLUDING WORKMAN'S COMPENSATION INSURANCE AS REQUIRED BY THE STATE OF FLORIDA WORKMAN'S COMPENSATION ACT, GENERAL LIABILITY AND POLLUTION LIABILITY INSURANCE IN THE AMOUNT OF $3,000,000.00. SAID CERTIFICATES OF INSURANCE SHALL BE MAINTAINED THROUGHOUT THE PROJECT.

- A SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP) FOR THE PROJECT THAT SHALL INCLUDE TRAINING CERTIFICATES, IN COMPLIANCE WITH TITLE 29 CODE OF FEDERAL REGULATIONS (CFR) SECTION 1910.120 FOR ALL PERSONNEL WORKING WITHIN THE IDENTIFIED CONTAMINATED AREAS. ADDITIONALLY, THE HASP SHALL INCLUDE MEDICAL MONITORING CERTIFICATIONS AND RESPIRATOR FIT TEST RECORDS IN COMPLIANCE WITH TITLE 29 CFR SECTION 1910.134. THE HASP SHALL PROVIDE PROCEDURES FOR AIR MONITORING AND THE SAFE EXCAVATION, HANDLING, LOADING AND TRANSPORTATION OF THE SOLID WASTES, UNSUITABLE FILL MATERIALS, AND CONTAMINATED WATER. HAZARDOUS MATERIALS MAY POTENTIALLY BE PRESENT IN THE PROJECT CORRIDOR; THEREFORE THE HASP SHALL ALSO ADDRESS THE SAFE HANDLING, SAMPLING, CHARACTERIZATION AND STAGING OF HAZARDOUS MATERIALS THAT MAY BE ENCOUNTERED DURING THE SOLID WASTE REMOVAL. THE HASP SHALL BE MAINTAINED AND UPDATED AS NEEDED THROUGHOUT THE PROJECT.

- A WASTE DISPOSAL PLAN SHALL BE PROVIDED FOR THE PROPER DISPOSAL OF ALL CONTAMINATED MEDIA INCLUDING SOLID WASTE, CONTAMINATED SOILS AND CONTAMINATED WATER GENERATED BY THE CONSTRUCTION ACTIVITIES. SOLID WASTES AND CONTAMINATED NON-HAZARDOUS SOILS SHALL BE DISPOSED AT A CLASS I LANDFILL AND CONTAMINATED WATER SHALL BE DISPOSED AT A PERMITTED DISPOSAL FACILITY. ADDITIONALLY, THE WASTE DISPOSAL PLAN SHALL INCLUDE PROCEDURES FOR THE SAFE DISPOSAL OF HAZARDOUS MATERIALS THAT MAY BE ENCOUNTERED DURING THE PROJECT. THE NAMES AND PERMITS OF THE WASTE TRANSPORTERS AND DISPOSAL FACILITIES SHALL BE INCLUDED IN THE WASTE DISPOSAL PLAN. ALL DISPOSAL FACILITIES MUST BE IN COMPLIANCE OF LOCAL, STATE AND FEDERAL REGULATIONS AND PERMITTED TO ACCEPT WASTE MATERIALS GENERATED DURING THE CONSTRUCTION ACTIVITIES.

- THE NAME OF A SUPPORTING LABORATORY THAT MAY BE INVOLVED WITH SAMPLING AND ANALYSIS DURING THE PROJECT MUST BE CERTIFIED IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, CERTIFIED BY THE NATIONAL ENVIRONMENTAL LABORATORY ACCREDITATION CONFERENCE AND MUST BE CERTIFIED IN THE STATE OF FLORIDA.

- THE NAME OF A FLORIDA LICENSED TECHNICAL PROFESSIONAL (GEOLOGIST OR ENGINEER) WHO WILL BE INVOLVED WITH THE PROJECT AND KNOWLEDGEABLE OF THE WORK ACTIVITIES CONDUCTED WITHIN THE IDENTIFIED CONTAMINATED AREAS AND WHO WOULD SIGN AND SEAL PROJECT REPORTS AS REQUIRED FOR SUBMITTAL TO THE APPROPRIATE ENVIRONMENTAL REGULATORY AGENCIES. PREPARATION OF REPORTS AND ADDITIONAL ADDENDUMS TO SATISFY AGENCY REQUIREMENTS SHALL BE AT THE CONTRACTOR'S EXPENSE.

THE CAR CONTRACTOR WILL PERFORM THE FOLLOWING ACTIVITIES:

1. INSTALLATION OF THE FOLLOWING STRUCTURES:

* S-01 AT STA. 00+96.91
* S-02 AT STA. 1+05.85
* S-14 AT STA. 11+38.00
* S-15 AT STA. 11+60.00
* S-16 AT STA. 11+60.00
* S-17 AT STA. 11+60.00
* S-18 AT STA. 11+38.66
* S-19 AT STA. 13+66.14
* S-20 AT STA. 15+76.15
* S-21 AT STA. 15+72.18
* S-22 AT STA. 15+72.18
* S-23 AT STA. 18+18.96
* S-24 AT STA. 18+19.02
* S-25 AT STA. 18+20.00
* S-26 AT STA. 20+00.00
* S-27 AT STA. 20+00.00
* S-28 AT STA. 20+00.00
* S-29 AT STA. 23+85.00
* S-30 AT STA. 24+85.00
* S-31 AT STA. 24+85.00
* S-32 AT STA. 26+24.5
* S-33 AT STA. 26+24.5

THE CAR CONTRACTOR WILL TEMPORARILY COVER EACH DRAINAGE STRUCTURE FOLLOWING INSTALLATION. THE PRIME CONTRACTOR IS TO PROVIDE AND INSTALL THE INLET TOPS AND SET FINAL GRADE ON ALL STRUCTURE TOPS.

2. INSTALLATION OF CONNECTING PIPE BETWEEN THE FOLLOWING STRUCTURES

* S-01 (STA. 00+96.91) TO S-02 (STA. 1+05.85)
* S-02 (STA. 1+05.85) TO S-03 (STA. 2+60.00)
* S-14 (STA. 11+38.00) TO S-15 (STA. 11+60.00)
* S-15 (STA. 11+60.00) TO S-16 (STA. 11+60.00)
* S-16 (STA. 11+60.00) TO S-17 (STA. 11+60.00)
* S-17 (STA. 11+60.00) TO S-18 (STA. 11+38.66)
* S-16 (STA. 11+60.00) TO S-19 (STA. 13+66.14)
* S-19 (STA. 13+66.14) TO S-21 (STA. 15+72.18)
* S-20 (STA. 15+76.15) TO S-21 (STA. 15+72.18)
* S-21 (STA. 15+72.18) TO S-22 (STA. 15+72.18)
* S-21 (STA. 15+72.18) TO S-24 (STA. 18+19.02)
* S-23 (STA. 18+18.95) TO S-24 (STA. 18+19.02)
* S-24 (STA. 18+19.02) TO S-25 (STA. 18+20.00)
* S-24 (STA. 18+19.02) TO S-27 (STA. 20+00.00)
* S-26 (STA. 20+00.00) TO S-27 (STA. 20+00.00)
* S-27 (STA. 20+00.00) TO S-28 (STA. 20+00.00)
* S-29 (STA. 23+85.00) TO S-30 (STA. 24+85.00)
* S-30 (STA. 24+85.00) TO S-31 (STA. 24+85.00)
* S-31 (STA. 24+85.00) TO S-32 (STA. 26+24.50)
* S-32 (STA. 26+24.50) TO S-33 (STA. 26+24.50)

1

THE CAR CONTRACTOR WILL ONLY PROVIDE EQUIPMENT AND/OR LABOR TO PERFORM THE ABOVE REFERENCED WORK INCLUDING EXISTING SOIL REMOVAL, DISPOSAL, BACKFILL AND COMPACTION ACTIVITIES UP TO 2 FT BELOW THE EXISTING GRADE OR PROPOSED FINISHED GRADE WHICHEVER IS LOWER. THE PRIME CONTRACTOR IS RESPONSIBLE FOR ALL WORK FROM THE ABOVE REFERENCED ELEVATION TO THE FINISHED GRADE AT THE ABOVE REFERENCED LOCATIONS.

THE CAR CONTRACTOR MAY USE PRIME CONTRACTOR'S EQUIPMENT FOR ALL THE ABOVE REFERENCED WORK.

THE CAR CONTRACTOR MAY USE EXISTING CONTAMINATED SOIL MATERIAL AS BACKFILL MATERIAL WITHIN THE SAME TRENCH, IF IT MEETS THE BACKFILL MATERIAL REQUIREMENTS SPECIFIED IN SECTIONS 02425 AND 02430 OF THE CONTRACT SPECIFICATIONS.

A COORDINATION MEETING BETWEEN THE CITY OF KEY WEST, THE PRIME CONTRACTOR AND THE CAR CONTRACTOR WILL BE HELD FOLLOWING THE PRECONSTRUCTION MEETING AND PRIOR TO THE START OF CONSTRUCTION. THE PRIME CONTRACTOR IS REQUIRED TO ADHERE TO SPECIAL PROVISIONS OUTLINED ABOVE FOR IDENTIFIED AREAS OF CONTAMINATION.

DEWATERING

THE FOLLOWING PROVISIONS SHALL APPLY TO DEWATERING:
1. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN A DEWATERING PERMIT FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION PRIOR TO INITIALIZING ANY DEWATERING ACTIVITIES, IF NEEDED. DOCUMENTATION OF THE DEWATERING ACTIVITIES SHALL BE REQUIRED. WATER GENERATED FROM THE DEWATERING OPERATIONS AT THESE LOCATIONS SHALL BE PROPERLY DISPOSED AND/OR TREATED TO MEET LOCAL, STATE AND FEDERAL DISCHARGE STANDARDS.
2. IN THE EVENT GROUNDWATER CONTAMINATION EXACERBATION OCCURS AS RESULT OF THE DEWATERING ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE REMEDIATION ACTIVITIES AS REQUIRED BY ALL APPLICABLE ENVIRONMENTAL REGULATORY AGENCIES.

UNIDENTIFIED AREAS OF CONTAMINATION

WHEN ENCOUNTERING OR EXPOSING ANY ABNORMAL CONDITION INDICATING THE PRESENCE OF A HAZARDOUS OR TOXIC WASTE, OR CONTAMINANTS, CEASE OPERATIONS IMMEDIATELY IN THE VICINITY AND NOTIFY THE CITY OF KEY WEST ENGINEER. THE PRESENCE OF TANKS OR BARRELS; DISCOLORED EARTH, METAL, WOOD, GROUND WATER, ETC.; VISIBLE FUMES; ABNORMAL ODORS; EXCESSIVELY HOT EARTH; SMOKE; OR OTHER CONDITIONS THAT APPEAR ABNORMAL MAY INDICATE HAZARDOUS OR TOXIC WASTES OR CONTAMINANTS AND MUST BE TREATED WITH EXTREME CAUTION.

MAKE EVERY EFFORT TO MINIMIZE THE SPREAD OF CONTAMINATION INTO UNCONTAMINATED AREAS. IMMEDIATELY PROVIDE FOR THE HEALTH AND SAFETY OF ALL WORKERS AT THE JOB SITE AND MAKE PROVISIONS NECESSARY FOR THE HEALTH AND SAFETY OF THE PUBLIC THAT MAY BE EXPOSED TO ANY POTENTIALLY HAZARDOUS CONDITIONS. PROVISIONS SHALL MEET ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS OR CODES COVERING HAZARDOUS CONDITIONS AND WILL BE IN A MANNER COMMENSURATE WITH THE GRAVITY OF THE CONDITIONS.

1

THE PRIME CONTRACTOR WILL COORDINATE AND MOBILIZE A QUALIFIED CONTAMINATION ASSESSMENT/REMEDIATION (CAR) CONTRACTOR. QUALIFICATIONS OF SUCH CAR CONTRACTOR SHALL INCLUDE, BUT NOT BE LIMITED TO: EXPERIENCE AND PERSONNEL TO PREPARE CONTAMINATION ASSESSMENT PLANS, CONDUCT CONTAMINATION ASSESSMENTS, PREPARE SITE ASSESSMENT REPORTS, REMEDIATION PLANS, IMPLEMENT REMEDIAL ACTION PLANS, RISK BASED CORRECTIVE ACTIONS, STORAGE TANKS SYSTEM REMOVAL, HIGHWAY SPILL RESPONSE AS WELL AS EXPERIENCE WITH INFRASTRUCTURE/CONSTRUCTION ACTIVITIES WITHIN (POTENTIALLY) CONTAMINATION AREAS SPECIFIC TO TRANSPORTATION SYSTEMS.

ALL THE WORK PERFORMED BY THE CAR CONTRACTOR SHALL BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS GOVERNING WORKER SAFETY AND ENVIRONMENTAL REGULATIONS. THIS IS TO INCLUDE OCCUPATIONAL EXPOSURE TO CONTAMINATED SOILS, GROUNDWATER, WASTES AND ATMOSPHERE DURING THE CONSTRUCTION OF ALL FEATURES INCLUDED IN THE CONSTRUCTION PLANS. IN ADDITION, THE CAR CONTRACTOR MUST BE STAFFED WITH FLORIDA LICENSED TECHNICAL PROFESSIONALS (GEOLOGISTS AND ENGINEERS) WHO WILL BE INVOLVED WITH THE PROJECT AND KNOWLEDGEABLE OF THE WORK ACTIVITIES CONDUCTED WITHIN THE IDENTIFIED CONTAMINATED AREAS AND WHO WOULD SIGN AND SEAL PROJECT REPORTS AS REQUIRED FOR SUBMITTAL TO THE APPROPRIATE ENVIRONMENTAL REGULATORY AGENCIES.

THE CITY OF KEY WEST ENGINEER WILL IMMEDIATELY NOTIFY THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) DISTRICT VI CONTAMINATION IMPACT COORDINATOR (DCIC) AT (305) 470-5228 AFTER ENCOUNTERING THE UNIDENTIFIED AREAS OF CONTAMINATION. PRELIMINARY INVESTIGATION BY THE CAR CONTRACTOR WILL DETERMINE THE COURSE OF ACTION NECESSARY FOR SITE SECURITY AND THE STEPS NECESSARY UNDER APPLICABLE LAWS, RULES, AND REGULATIONS FOR ADDITIONAL ASSESSMENT AND/OR REMEDIATION WORK TO RESOLVE THE CONTAMINATION ISSUE.

FOLLOWING COMPLETION OF THE PROJECT, THE CAR CONTRACTOR SHALL BE REQUIRED TO PROVIDE COPIES OF ALL REPORTS SUBMITTED TO REGULATORY AGENCIES, WASTE MATERIAL PROFILES, MANIFESTS AND/OR DISPOSAL RECEIPTS FOR THE HANDLING OF ALL CONTAMINATED MEDIA INCLUDING BUT NOT LIMITED TO GROUND WATER, WASTE WATER, SOILS, SOLID WASTES, SLUDGE, HAZARDOUS WASTES, AIR MONITORING RECORDS AND SAMPLE RESULTS FOR ALL MATERIALS TESTED AND ANALYZED TO THE CITY OF KEY WEST ENGINEER AND THE FDOT DCIC.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV 1 MODIFIED NOTES		

CORRADINO
4055 N.W. 97th Avenue, Doral, Florida, 33178
Ph : (305) 594-0735 Fax : (305) 594-0755
Certificate Of Authorization No. 00007665
E.O.R. Favio A. Laverde, P.E. No. 63546

THE CITY OF KEY WEST	
COUNTY	CORRADINO PROJECT NO.
MONROE	4025

ENVIRONMENTAL NOTES

SHEET NO. 6

N

0 10 40
Feet

MATCH LINE STATION 4+00.00

MATCH LINE STATION 9+60.00

Sta. 50+60.00 ℄ SURVEY NORTHSIDE DRIVE
SAWCUT AND CONNECT TO EXISTING PAVEMENT

END 5' SIDEWALK
END C & G TYPE F
Sta. 50+60.00
18.17' (LT)

NORTHSIDE DRIVE

CR SPECIAL #1 *

+30.25
24.50' (LT)

+33.64
13.50' (LT)

PT +05.00
16.00' (LT)

+00.50
27.48' (LT)

+01.36
17.57' (LT)

+97.14
22.50' (LT)

PC +39.74
13.50' (LT)

R/W LINE

PT 50+35.49
18.14' (LT)

R/W LINE

5' SIDEWALK

CONCRETE APRON

PARALLEL PARKING

SOD

R 15'

+05.00
14.50' (LT)

S-4 S-5 S-6 S-7 S-8 S-9 S-10 S-11

5. GLYNN ARCHER DRIVE

8" SAN

18" SAN FM

BEGIN C & G TYPE F
BEGIN 5' SIDEWALK
Sta. 50+60.00
18.00' (RT)

CR SPECIAL #3 *

PC 50+23.58
18.09' (RT)

R/W LINE

PT 7+07.01
14.50' (LT)

R 15'

10" WM

R/W LINE

+94.69
27.50' (LT)

+62.69
27.50' (LT)

4.5'

PC+16.39
16.00' (LT)

+24.30
21.83' (LT)

CONCRETE APRON

5' SIDEWALK

PARALLEL PARKING

SOD

PGL

C & G TYPE F

12" WM

℄ SURVEY GLYNN ARCHER DRIVE

5' SIDEWALK

SOD

+13.15
16.50' (RT)

+56.27
15.50' (RT)

+71.86
27.50' (RT)

+99.86
27.50' (RT)

EXISTING UTILITY BOX TO REMAIN

R/W LINE

PC +47.23
15.50' (RT)

PT 49+71.22
18.00' (LT)

R/W LINE

CR SPECIAL #2 *

R 20'

10" WM

PT 7+11.25
16.50' (RT)

PC 49+68.62
17.75' (RT)

R/W LINE

CR SPECIAL #4 *

5' SIDEWALK

R/W LINE

+99.80
27.50' (RT)

CONCRETE BUS SHELTER PAD
6" THICK

+11.80
27.50' (RT)

+36.27
27.50' (RT)

+56.27
27.50' (RT)

0.5'

END 5' SIDEWALK
END C & G TYPE F
Sta. 49+40.00 (18.00' LT)

Sta. 49+40.00 ℄ SURVEY NORTHSIDE DRIVE
SAWCUT AND CONNECT TO EXISTING PAVEMENT

BEGIN 5' SIDEWALK
BEGIN C & G TYPE F
Sta. 49+40.00 (18.40' RT)

STA. 6+79.04 ℄ SURVEY GLYNN ARCHER DRIVE
STA. 50+00.00 ℄ SURVEY NORTHSIDE DRIVE

49

LEGEND

- (T#) EXISTING TREE TO BE REMOVED
- (1) SANITARY SEWER MANHOLE TO BE ADJUSTED
- (2) WATER VALVE TO BE ADJUSTED
- (3) WATER METER TO BE RELOCATED
- (4) FIRE HYDRANT TO BE RELOCATED
- (5) UTILITY POLE TO BE RELOCATED (BY OTHERS)
- ASPHALT DRIVEWAY HARMONIZATION

* REFER TO SHEET 17 FOR CURB RAMP DETAILS.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV ⚠ MODIFIED CURB RAMP AND SIDEWALK LIMITS		

CORRADINO
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E.O.R. Favio A. Laverde, P.E. No. 63546

THE CITY OF KEY WEST

COUNTY	CORRADINO PROJECT NO.
MONROE	4025

ROADWAY PLAN

SHEET NO. 8

USER: overson 2/29/2012 1:25:17 PM J:\4025 Key West Glynn Archer\CAD\Roadway\PLANRD02.DGN

N

0 10 40

Feet

PROP. DRIVEWAY WIDTH VARIES

2.0% 0.0% 1.18% 1.18% 0.0% 2.0%

10' 10' 10' 10' 10' 10'

SIDEWALK TRANSITION DETAIL

MATCH LINE STATION 15+20.00

MATCH LINE STATION 20+80.00

BEGIN HANDRAIL 15+56.00 27.50' LT

+56.16 27.50' (LT)

+04.98 27.50' (LT)

PT+65.53 16.00' (LT)

R/W LINE

END HANDRAIL 16+05.00 27.50' LT

BEGIN HANDRAIL 16+18.25 27.50' LT

+31.26 27.50' (LT)

CONCRETE BUS SHELTER PAD 6" THICK

+43.26 27.50' (LT)

END HANDRAIL 16+83.40 27.50' LT

+08.66 27.50' (LT)

+78.62 27.50' (LT)

PC+08.58 16.02' (LT)

+99.89 27.50' (LT)

+16.01 21.83' (LT)

CONCRETE APRON

+16.02 21.83' (LT)

PT+23.92 16.00' (LT)

PC+56.38 16.00' (LT)

+64.29 21.83' (LT)

OVERBUILD AND RE-GRADE EXISTING PARKING LOT TOWARDS PROPOSED SIDEWALK FLOW-THRU STRUCTURE. REFER TO DRAINAGE PLANS FOR PROPOSED GRADING.

CONCRETE APRON

+76.44 21.83' (LT)

+59.06 14.50' (LT)

+60.14 17.58' (LT)

+46.00 18.51' (RT)

+49.99 22.50' (RT)

+98.58 22.50' (RT)

5' SIDEWALK

SOD

PARALLEL PARKING

18"-SAN-FM

12"-WM

C & G TYPE F

℄ SURVEY GLYNN ARCHER DRIVE

PGL

GLYNN ARCHER DRIVE

(C.R. GLENN ARCHER DRIVE (A.K.A. FOURTEENTH STREET) 55' R/W)

S-20 S-21 S-22 S-23 S-24 S-25 S-26 S-27 S-28 S-37 S-38

16 17 18 19 20

BEGIN GRAVITY WALL +60+00 27.50' RT

BEGIN HANDRAIL 15+24.00 27.50' RT

+22.42 27.47' (RT)

END HANDRAIL END GRAVITY WALL 16+15.78 27.50' RT

BEGIN HANDRAIL 16+35.78 27.50' RT

+51.83 27.50' (RT)

CONCRETE BUS SHELTER PAD 6" THICK

+63.83 27.50' (RT)

END HANDRAIL 16+77.29 27.50' RT

BEGIN HANDRAIL BEGIN GRAVITY WALL +92.58 27.50' (RT)

END HANDRAIL END GRAVITY WALL +50.00 27.50' (RT)

5' SIDEWALK

SOD*

R/W LINE

* REMOVE EXISTING ASPHALT BETWEEN PROPOSED AND EXISTING SIDEWALK AND SCARIFY EXISTING BASE. COST TO BE INCLUDED IN PAY ITEM 110-1-1.

⚠ HARMONIZE SIDEWALK. CONNECT EXIST. WITH PROPOSED SIDEWALK WITH A RAMP. SLOPE SHALL NOT EXCEED 1:20. COST TO BE INCLUDED UNDER 522-1

LEGEND

② WATER VALVE TO BE ADJUSTED

③ WATER METER TO BE REPLACED

ASPHALT DRIVEWAY HARMONIZATION

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV ⚠ MODIFIED DESCRIPTION		

CORRADINO

4055 N.W. 97th Avenue, Doral, Florida, 33178
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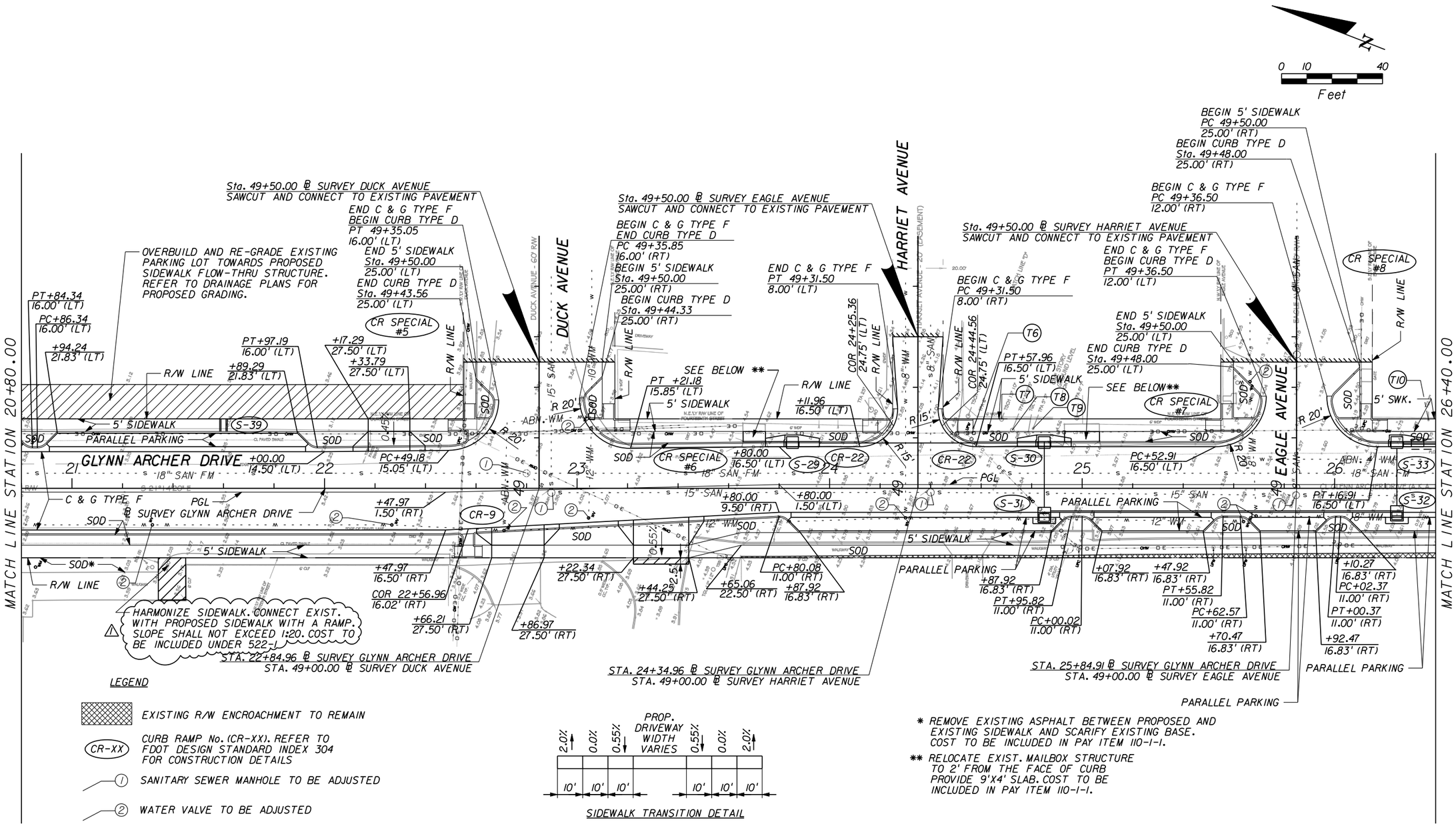
THE CITY OF KEY WEST

COUNTY	CORRADINO PROJECT NO.
MONROE	4025

ROADWAY PLAN

SHEET NO. 10

USER: cverson 2/29/2012 1:25:44 PM J:\4025 Key West Glynn Archer\CAD\Roadway\PLANRD04.DGN



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV ⚠MODIFIED DESCRIPTION		

CORRADINO
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THE CITY OF KEY WEST

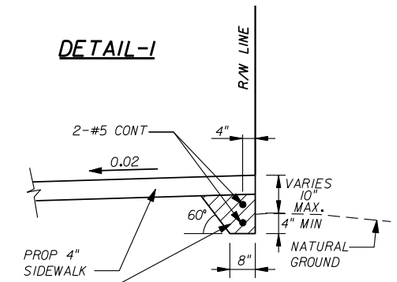
COUNTY	CORRADINO PROJECT NO.
MONROE	4025

ROADWAY PLAN

SHEET NO. 11

USER: cverson 2/29/2012 1:26:06 PM J:\4025 Key West Glynn Archer\CAD\Roadway\PLANRD05.DGN

DETAIL-1



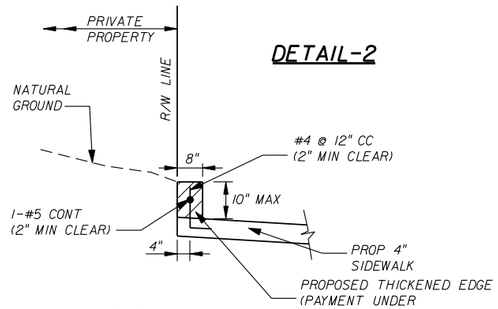
TYPICAL SIDEWALK DETAILS

1 - USE THICKENED EDGE SECTION ABOVE SIDEWALK WHEN BACK OF SIDEWALK IS 4" LOWER THAN NATURAL GROUND.

2 - COST OF THICKENED EDGE AND REINFORCED STEEL TO BE INCLUDED IN THE COST OF CONCRETE SIDEWALK 4" (PAY ITEM 522-1)

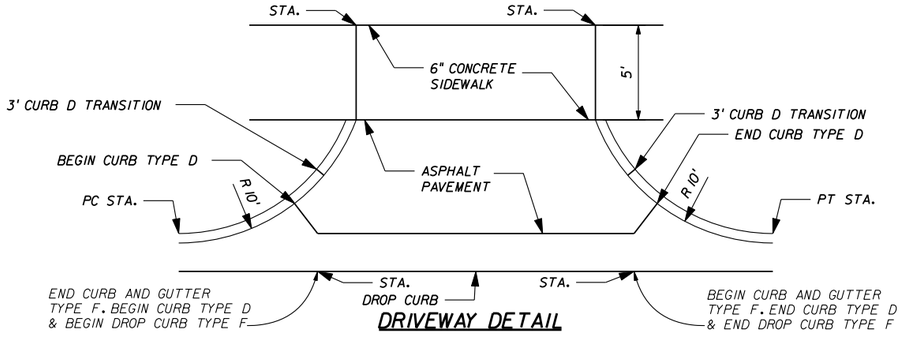
3 - SEE DESIGN STANDARD INDEX 870., HANDRAIL REQUIRED WHEN DROPOFF IS MORE THAN 10 INCHES.

DETAIL-2

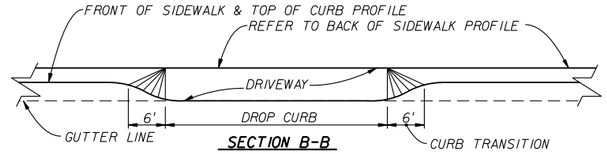


LOCATION STA. TO STA.	SIDE	THICKENED EDGE (522-1) LENGTH (FT) P	THICKENED EDGE (522-1) LENGTH (FT) F	GRAVITY WALL (AS PER FDOT INDEX 520) LENGTH (FT) P	GRAVITY WALL (AS PER FDOT INDEX 520) LENGTH (FT) F	ALUMINUM PIPE GUIDERAIL (515-1-2)(INDEX 870) LENGTH (FT) P	ALUMINUM PIPE GUIDERAIL (515-1-2)(INDEX 870) LENGTH (FT) F
3+00 TO 4+50	LT	150					
6+00 TO 6+40	LT	40'					
5+50 TO 6+40	RT	90'					
7+20 TO 7+80	RT	60'					
8+80 TO 9+20	RT	40'					
9+80 TO 10+20	RT	40'					
7+95 TO 11+05	LT	310					
11+30 TO 12+00	LT	70					
11+40 TO 15+15	LT					375	
12+00 TO 15+15	LT			315			
12+60 TO 14+60	RT	200					
14+60 TO 15+02	RT			42		42	
15+56 TO 16+05	LT	49				49	
15+24 TO 15+60	RT	36					
15+60 TO 16+16	RT			56			
15+24 TO 16+16	RT					92	
16+18 TO 16+83	LT	65				65	
16+35 TO 16+75	RT	40					
16+36 TO 16+77	RT					41	
17+08 TO 17+78	LT	70					
18+00 TO 22+17	LT	417					
16+93 TO 17+50	RT			58		58	
17+50 TO 22+40	RT	490					
23+15 TO 24+25	LT	110'					
24+50 TO 25+55	LT	105'					
26+20 TO 26+90	LT	70'					
TOTAL		2,452		471		722	

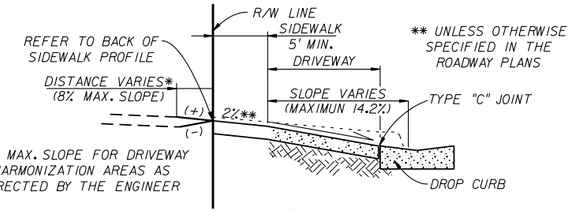
' THICKENED EDGE ABOVE THE SIDEWALK



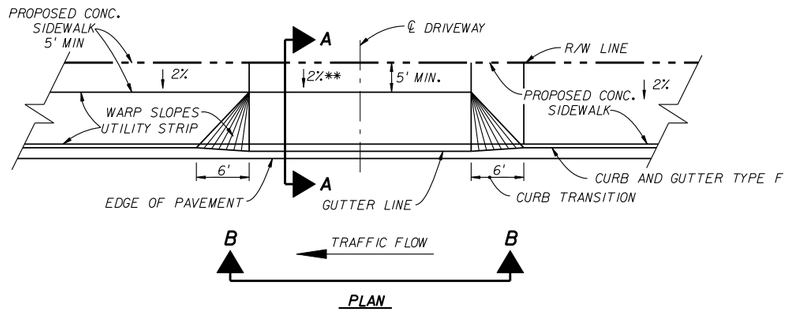
DRIVEWAY DETAIL



SECTION B-B



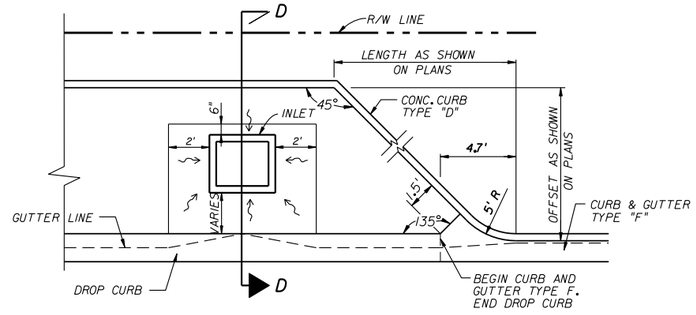
SECTION A-A



PLAN

CONCRETE DRIVEWAY DETAIL

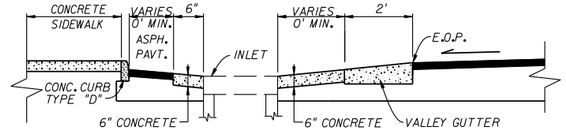
N.T.S.



TRANSITION DETAIL OF STANDARD CURB & GUTTER TO CURB TYPE "D" AT PARKING LANE AND DETAIL OF APRON AROUND STRUCTURES**

N.T.S.

**COST OF CONCRETE APRON SHALL BE INCLUDED IN THE COST OF THE DRAINAGE STRUCTURE.



SECTION D-D

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV △MODIFIED ITEM DESCRIPTIONS		

CORRADINO
4055 N.W. 97th Avenue, Doral, Florida, 33178
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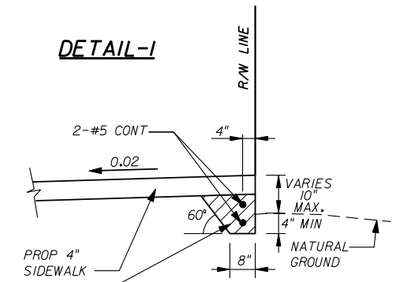
Certificate Of Authorization No. 00007665
E.O.R. Favio A. Laverde, P.E. No. 63546

THE CITY OF KEY WEST	
COUNTY	CORRADINO PROJECT NO.
MONROE	4025

MISCELLANEOUS CONSTRUCTION DETAILS

SHEET NO. 16

DETAIL-1



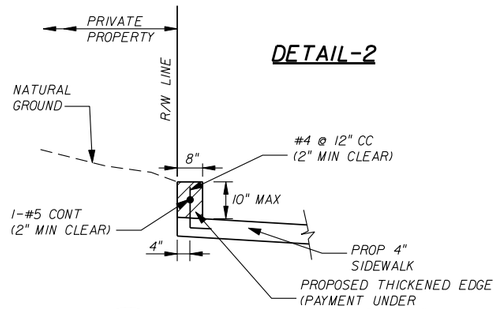
TYPICAL SIDEWALK DETAILS

1 - USE THICKENED EDGE SECTION ABOVE SIDEWALK WHEN BACK OF SIDEWALK IS 4" LOWER THAN NATURAL GROUND.

2 - COST OF THICKENED EDGE AND REINFORCED STEEL TO BE INCLUDED IN THE COST OF CONCRETE SIDEWALK 4" (PAY ITEM 522-1)

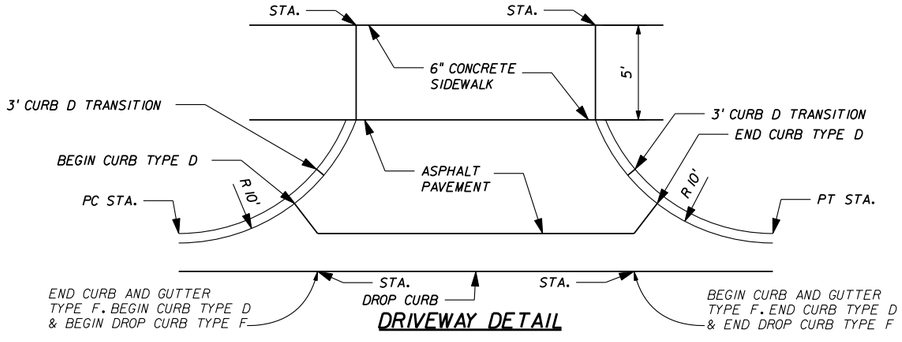
3 - SEE DESIGN STANDARD INDEX 870., HANDRAIL REQUIRED WHEN DROPOFF IS MORE THAN 10 INCHES.

DETAIL-2

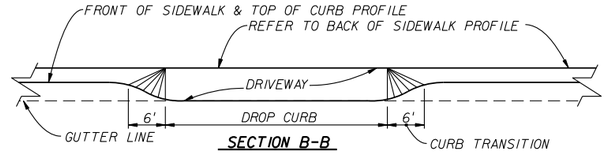


LOCATION STA. TO STA.	SIDE	THICKENED EDGE (522-1) LENGTH (FT) P	THICKENED EDGE (522-1) LENGTH (FT) F	GRAVITY WALL (AS PER FDOT INDEX 520) LENGTH (FT) P	GRAVITY WALL (AS PER FDOT INDEX 520) LENGTH (FT) F	ALUMINUM PIPE GUIDERAIL (515-1-2)(INDEX 870) LENGTH (FT) P	ALUMINUM PIPE GUIDERAIL (515-1-2)(INDEX 870) LENGTH (FT) F
3+00 TO 4+50	LT	150					
6+00 TO 6+40	LT	40'					
5+50 TO 6+40	RT	90'					
7+20 TO 7+80	RT	60'					
8+80 TO 9+20	RT	40'					
9+80 TO 10+20	RT	40'					
7+95 TO 11+05	LT	310					
11+30 TO 12+00	LT	70					
11+40 TO 15+15	LT					375	
12+00 TO 15+15	LT			315			
12+60 TO 14+60	RT	200					
14+60 TO 15+02	RT			42		42	
15+56 TO 16+05	LT	49				49	
15+24 TO 15+60	RT	36					
15+60 TO 16+16	RT			56			
15+24 TO 16+16	RT					92	
16+18 TO 16+83	LT	65				65	
16+35 TO 16+75	RT	40					
16+36 TO 16+77	RT					41	
17+08 TO 17+78	LT	70					
18+00 TO 22+17	LT	417					
16+93 TO 17+50	RT			58		58	
17+50 TO 22+40	RT	490					
23+15 TO 24+25	LT	110'					
24+50 TO 25+55	LT	105'					
26+20 TO 26+90	LT	70'					
TOTAL		2,452		471		722	

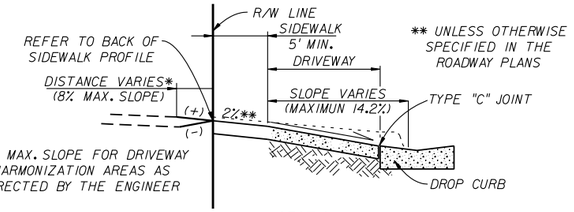
' THICKENED EDGE ABOVE THE SIDEWALK



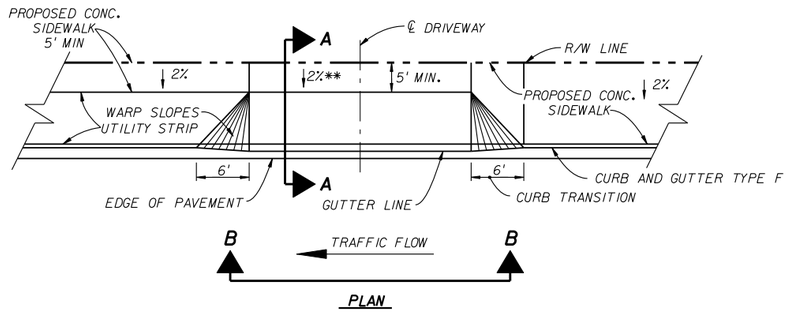
DRIVEWAY DETAIL



SECTION B-B



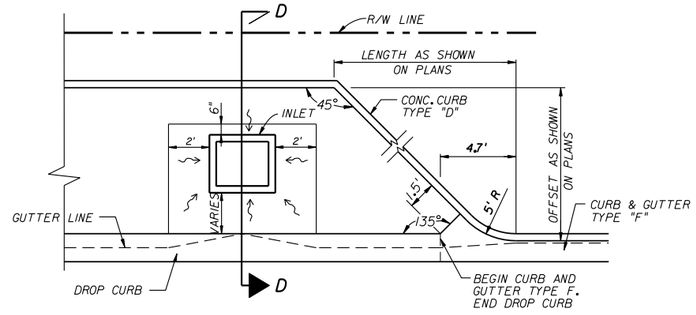
SECTION A-A



PLAN

CONCRETE DRIVEWAY DETAIL

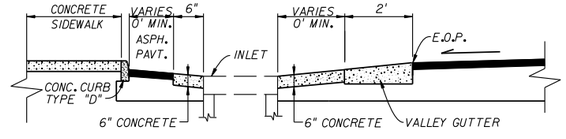
N.T.S.



TRANSITION DETAIL OF STANDARD CURB & GUTTER TO CURB TYPE "D" AT PARKING LANE AND DETAIL OF APRON AROUND STRUCTURES**

N.T.S.

**COST OF CONCRETE APRON SHALL BE INCLUDED IN THE COST OF THE DRAINAGE STRUCTURE.



SECTION D-D

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV △MODIFIED ITEM DESCRIPTIONS		

CORRADINO
4055 N.W. 97th Avenue, Doral, Florida, 33178
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Certificate Of Authorization No. 00007665
E.O.R. Favio A. Laverde, P.E. No. 63546

THE CITY OF KEY WEST	
COUNTY	CORRADINO PROJECT NO.
MONROE	4025

MISCELLANEOUS CONSTRUCTION DETAILS

SHEET NO. 16

DRAINAGE NOTES

1. EXISTING STORM SEWERS (PIPES, FRENCH DRAINS AND/OR SLAB COVERED TRENCHES) MAY REMAIN IN PLACE IF NOT IN CONFLICT WITH PROPOSED CONSTRUCTION. PLUG OPEN ENDS WHERE NEEDED WITH MISCELLANEOUS CONCRETE. COST TO BE INCLUDED IN PAY ITEM 110-1 CLEARING & GRUBBING, UNLESS OTHERWISE STATED ON PLANS.
2. EXISTING STORM SEWERS (PIPES, FRENCH DRAINS AND/OR SLAB COVERED TRENCHES) IN CONFLICT WITH PROPOSED CONSTRUCTION SHALL BE REMOVED. COST OF REMOVAL, DISPOSAL, BACKFILLING AND COMPACTING SHALL BE INCLUDED IN ITEM 110-1-1 CLEARING AND GRUBBING AS PER 110-6 OF STANDARD SPECIFICATIONS.
3. EXISTING INLETS, MANHOLES, RETAINING/GRAVITY WALLS THAT ARE PLACED OUT OF SERVICE AND ARE NOT SHOWN IN PLANS TO REMAIN SHALL BE REMOVED. COST OF REMOVAL, DISPOSAL, BACKFILLING AND COMPACTING SHALL BE INCLUDED IN PAY ITEM 110-1-1 CLEARING AND GRUBBING.
4. THERE SHALL BE NO MORE THAN THREE LATERAL DRAINAGE INSTALLATIONS WITHOUT BACKFILLING. BACKFILLING OF LATERAL DRAINAGE SHALL NOT LAG MORE THAN 72 HOURS BEHIND THE START OF EXCAVATION.
5. CURB INLET ELEVATIONS ARE GIVEN AT THE EDGE OF PAVEMENT. OFFSETS FOR INLETS ARE GIVEN AT THE CENTER OF THE STRUCTURE.
6. ALL APPLICABLE STORM STRUCTURES ARE TO RECEIVE ALTERNATIVE "G" GRATES AS SPECIFIED PER FDOT STANDARDS AND SPECIFICATIONS.
7. ALL POTABLE WATER MAIN RELOCATIONS ARE TO BE COMPLETED IN ACCORDANCE WITH F.A.C. RULE 62-555.314 & FKAA MINIMUM CONSTRUCTION STANDARDS AND SPECIFICATIONS. ALL RELOCATION WORK SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF A FKAA CONSTRUCTION REPRESENTATIVE.

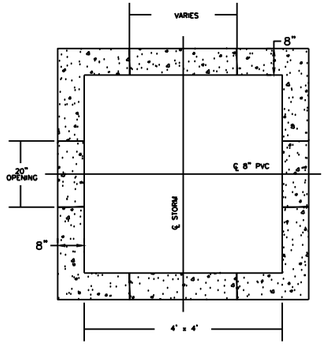
NEW CONSTRUCTION NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY DURING CONSTRUCTION OF NEW UTILITIES TO ANTICIPATE AND PLAN FOR CROSSINGS OF NEW AND EXISTING UTILITIES AND SUBSURFACE FEATURES.

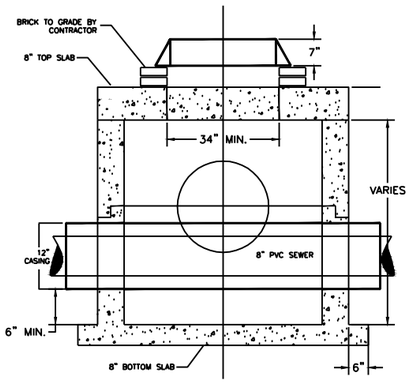
OPTIONAL MATERIALS TABULATION

STRUCTURE	SIZE (INCHES)	MATERIAL	PLOTTED	AS-BUILT	REMARKS
S-1 to S-2	15	PVC. ASTM F-949	X		
		NRCP			
S-2 to S-11	18	PVC. ASTM F-949	X		
		NRCP			
S-10 to S-11	15	PVC. ASTM F-949	X		
		NRCP			
S-11 to S-13	18	PVC. ASTM F-949	X		
		NRCP			
S-12 to S-13	15	PVC. ASTM F-949	X		
		NRCP			
S-14 to S-16	18	PVC. ASTM F-949	X		
		NRCP			
S-16 to S-18	24	PVC. ASTM F-949	X		
		NRCP			
S-16 to S-27	18	PVC. ASTM F-949	X		
		NRCP			
S-20 to S-21	15	PVC. ASTM F-949	X		
		NRCP			
S-21 to S-22	15	PVC. ASTM F-949	X		
		NRCP			
S-23 to S-24	15	PVC. ASTM F-949	X		
		NRCP			
S-24 to S-25	15	PVC. ASTM F-949	X		
		NRCP			
S-26 to S-27	15	PVC. ASTM F-949	X		
		NRCP			
S-27 to S-28	15	PVC. ASTM F-949	X		
		NRCP			
S-29 to S-31	15	PVC. ASTM F-949	X		
		NRCP			
S-31 to S-36	18	PVC. ASTM F-949	X		
		NRCP			

1



CONSTRUCTION NOTES:
RAMNECK JOINT OF STRUCTURE
FRAME AND COVER USF 230 LABELED "STORM SEWER"
GROUT ANNULAR SPACE BETWEEN CASING AND SEWER
REINFORCING STEEL TO A.S.T.M. C-478
CASING TO EXTEND 1' PAST WALL OF STRUCTURE
CONCRETE TO BE 4000 PSI

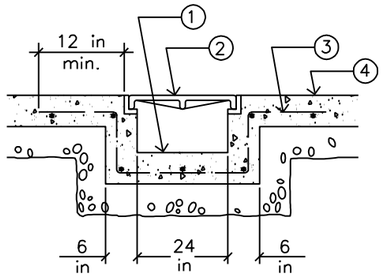


SEQUENCE OF INSTALLATION:
EXCAVATE, AS APPLICABLE, TO PERMIT PLACING STRUCTURE
PLACE MORTAR ON THE LOWER PORTION OF THE 20" OPENING.
CONNECT TO STRUCTURE AND PULL UP TIGHT TO STORM DRAIN.
SECURE STRUCTURE IN PLACE WITH STONE AND FLOWABLE FILL.
CUT OUT STORM PIPE AND PLUG OFF WATER.
INSTALL CASING AND MORTAR IN PLACE.
INSTALL PVC SEWER THROUGH CASING.
INSTALL TOP OF STRUCTURE & FINISH SEALING STORM PIPE WITH MORTAR.
REMOVE PLUG FROM STORM PIPE.
COMPLETE BACKFILL AND INSTALL FRAME AND COVER.

S-07
Conflict Structure Detail
NTS

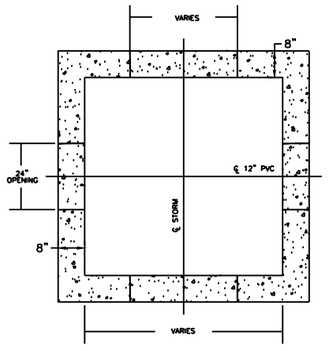
OPTIONAL MATERIAL NOTES

1. THE CONTRACTOR MAY USE ANY OF THE OPTIONAL PIPE MATERIALS TABULATED FOR A GIVEN STRUCTURE. ONLY THE MATERIAL OPTIONS TABULATED FOR A GIVEN STRUCTURE CAN BE USED.
2. ADJUSTMENT TO THE BID QUANTITIES, PRICES, AND PAYMENT WILL NOT BE ALLOWED DUE TO INCREASE OR DECREASE IN STRUCTURE SIZE, SHAPE, LENGTH, WIDTH, DEPTH OR ACCESSORY CONSTRUCTION NECESSARY TO ACCOMMODATE THE USE OF AN OPTIONAL PIPE MATERIAL OTHER THAN THE "PLOTTED" OPTION; LIKEWISE THERE WILL BE NO ADDED OR REDUCED COMPENSATION FOR STRUCTURE ALTERATIONS REQUIRED TO RELIEVE UTILITY CONFLICTS WHICH ARISE FROM THE USE OF AN OPTIONAL PIPE MATERIAL OTHER THAN THE "PLOTTED" OPTION.
3. ADJUSTMENT TO THE BID QUANTITIES, PRICES AND PAYMENT WILL NOT BE ALLOWED DUE TO INCREASED OR DECREASED EXCAVATION, BEDDING, BORROW, BACKFILLING, COMPACTION, SPECIAL INSTALLATION REQUIREMENTS OR DISPOSAL OF EXCESS MATERIALS DUE TO THE USE OF ANY OF THE PIPE OPTIONAL MATERIALS. LIKEWISE, ADJUSTMENT IN THE QUANTITIES, PRICES AND PAYMENTS WILL NOT BE ALLOWED DUE TO DIFFERENCES IN END TREATMENT SIZE OR TYPES, PIPE LENGTH, ALTERNATE JOINTING AND CONNECTING MATERIALS, SADDLES, CRADLES, FILTER FABRICS, SHORING OR SIMILAR FEATURES DUE TO THE USE OF AN OPTIONAL MATERIAL OTHER THAN THE "PLOTTED" OPTION.
4. IF ADJUSTMENTS ARE REQUIRED DUE TO PLAN ERRORS OR OMISSIONS OR AUTHORIZED FIELD CHANGES, THE "PLOTTED" MATERIAL AND NOT THE MATERIAL SELECTED BY THE CONTRACTOR WOULD BE USED TO ESTABLISH NEW PAY QUANTITES.
5. THE CONTRACTOR SHALL NOTIFY THE CITY OF KEY WEST IN WRITING AS TO WHICH OPTIONAL PIPE MATERIAL HE CHOOSES TO USE AT THE PRECONSTRUCTION CONFERENCE. ONCE IDENTIFIED THE CONTRACTOR MAY NOT CHANGE PIPE MATERIAL SELECTED WITHOUT THE APPROVAL OF THE ENGINEER.
6. PIPE SIZES OTHER THAN ROUND (ELLIPTICAL / ARCH) ARE SUMMARIZED AND PAID FOR USING EQUIVALENT ROUND PIPE DIAMETER.



1. CONCRETE FLOW PATH TO BE SLOPED TO POSITIVELY DRAIN TOWARD STORM SYSTEM.
2. COVER: DUCTILE IRON, NO MORE 1/8" GAP BETWEEN FRAME AND COVER. COVER TO BE PAINTED TO MATCH SIDEWALK COLOR
3. #4 REBAR @12" O.C. BOTH WAYS
4. TOP OF COVER ELEVATION TO BE FLUSH WITH CORRESPONDING SIDEWALK ELEVATION.
5. COST TO BE INCLUDED UNDER PAY ITEM 522-1.

S-37 S-38 S-39
Sidewalk Flow-Thru Detail
NTS



CONSTRUCTION NOTES:
RAMNECK JOINT OF STRUCTURE
FRAME AND COVER USF 230 LABELED "STORM SEWER"
GROUT ANNULAR SPACE BETWEEN CASING AND SEWER
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CASING TO EXTEND 1' PAST WALL OF STRUCTURE
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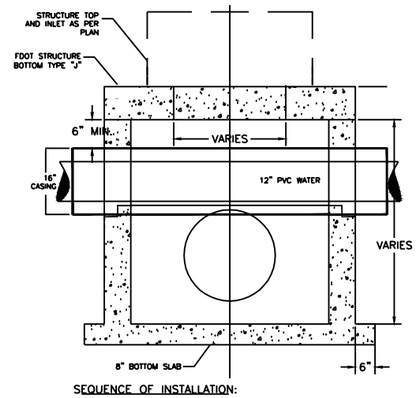


SEQUENCE OF INSTALLATION:
EXCAVATE TO PERMIT PLACING STRUCTURE UNDER STORM PIPE.
PLACE MORTAR ON THE LOWER PORTION OF THE 24" OPENING.
CONNECT TO STRUCTURE AND PULL UP TIGHT TO STORM DRAIN.
SECURE STRUCTURE IN PLACE WITH STONE AND FLOWABLE FILL.
CUT OUT STORM PIPE AND PLUG OFF WATER.
INSTALL CASING AND MORTAR IN PLACE.
INSTALL PVC WATER THROUGH CASING.
FINISH SEALING STORM PIPE WITH MORTAR.
REMOVE PLUG FROM STORM PIPE.
COMPLETE BACKFILL AND INSTALL FRAME AND COVER.

S-31 S-32
Conflict Structure Detail
NTS

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
2-21-12	1. OPTIONAL MATERIALS TABULATION REVISED		

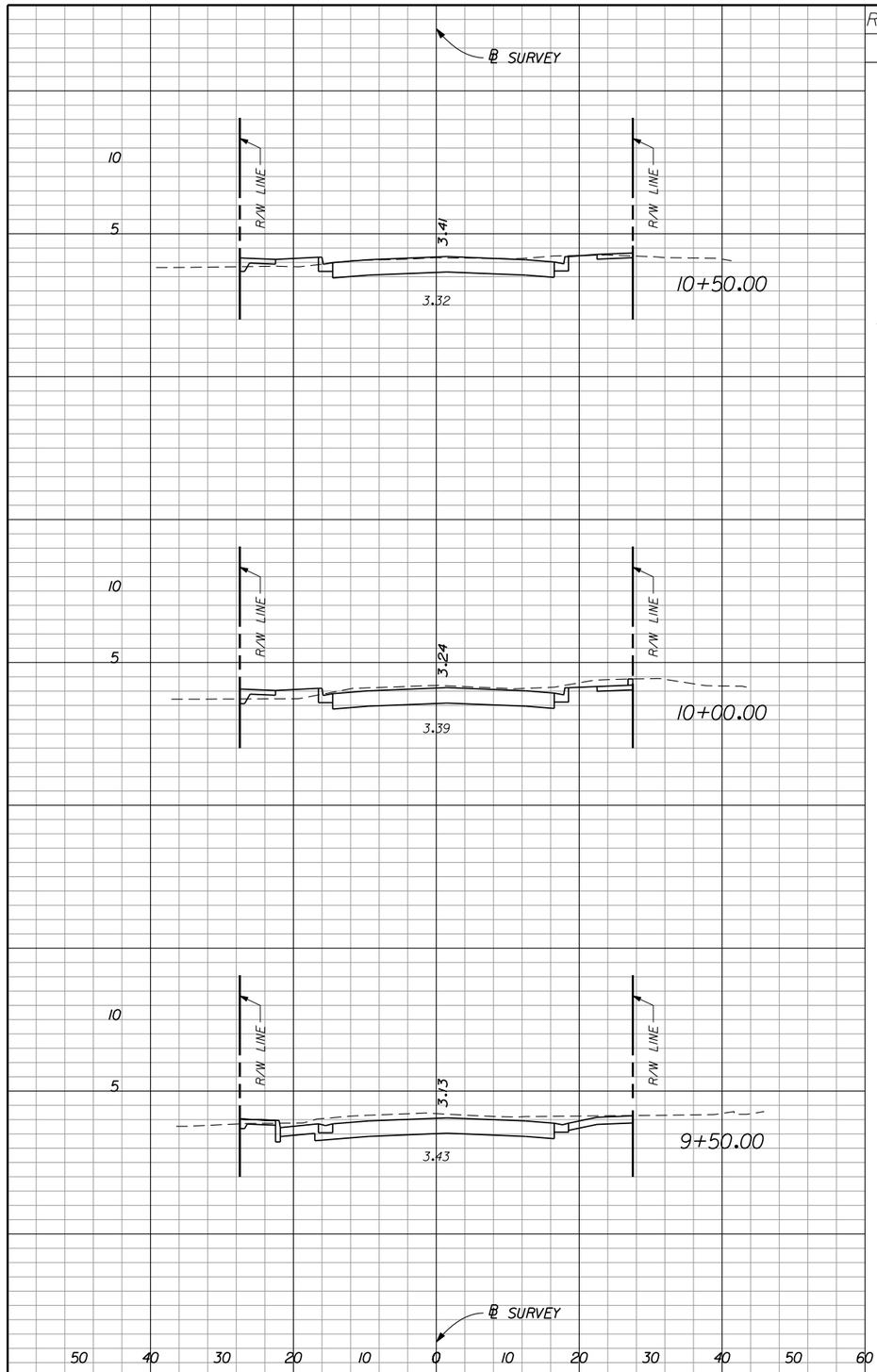
CIVIL ENGINEERING • REGULATORY PERMITTING • CONSTRUCTION MANAGEMENT
PEREZ ENGINEERING & DEVELOPMENT, INC
CERTIFICATE OF AUTHORIZATION NO. 8579
KEY WEST OFFICE
1010 EAST KENNEDY DRIVE, SUITE 400
KEY WEST, FLORIDA 33040
TEL.: (305) 293-9440 FAX: (305) 296-0243
TAMPA OFFICE
CONCOURSE CENTER
3507 EAST FROWN AGE ROAD, SUITE 140
TAMPA, FLORIDA 33637
TEL: (813) 570-1616 FAX: (813) 288-0710
E.O.R. Allen E. Perez, P.E. No. 51468

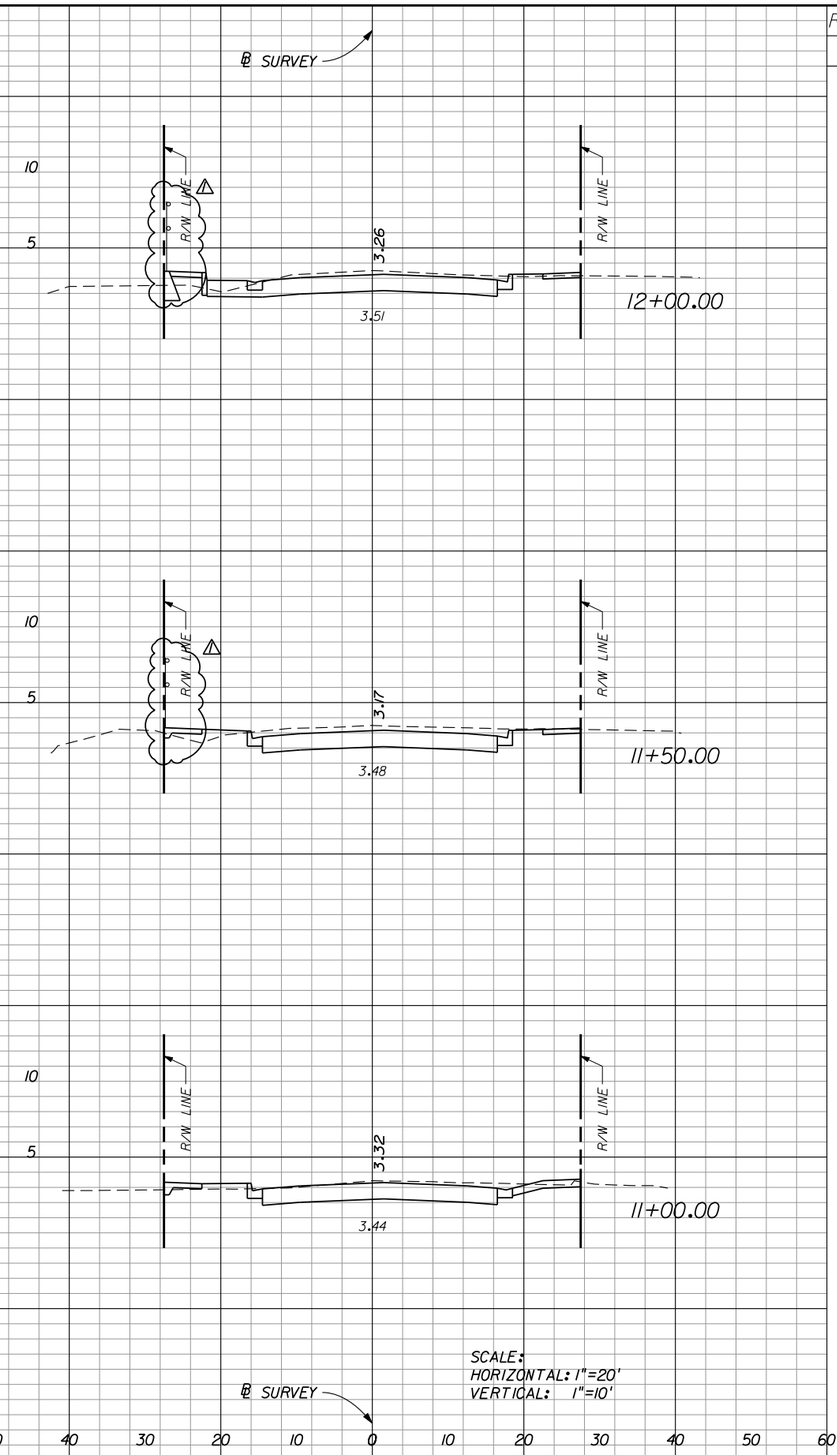
THE CITY OF KEY WEST

COUNTY	CORRADINO PROJECT NO.
MONROE	4025

DRAINAGE NOTES & DRAINAGE DETAILS

SHEET NO. 18





Regular Exc.		Embankment	
A	V	A	V
38.43		4.11	
	80.3		8.1
48.28		4.66	
	87.7		4.3
46.40		0.00	
	96.0		0.7

Regular Exc.		Embankment	
A	V	A	V
48.62		2.82	
	92.0		6.2
50.71		3.92	
	87.3		5.9
43.57		2.47	
	75.9		6.1

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV ⚠MODIFIED CROSS SECTIONS		

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THE CITY OF KEY WEST

COUNTY	CORRADINO PROJECT NO.
MONROE	4025

CROSS SECTIONS

SHEET NO. 30

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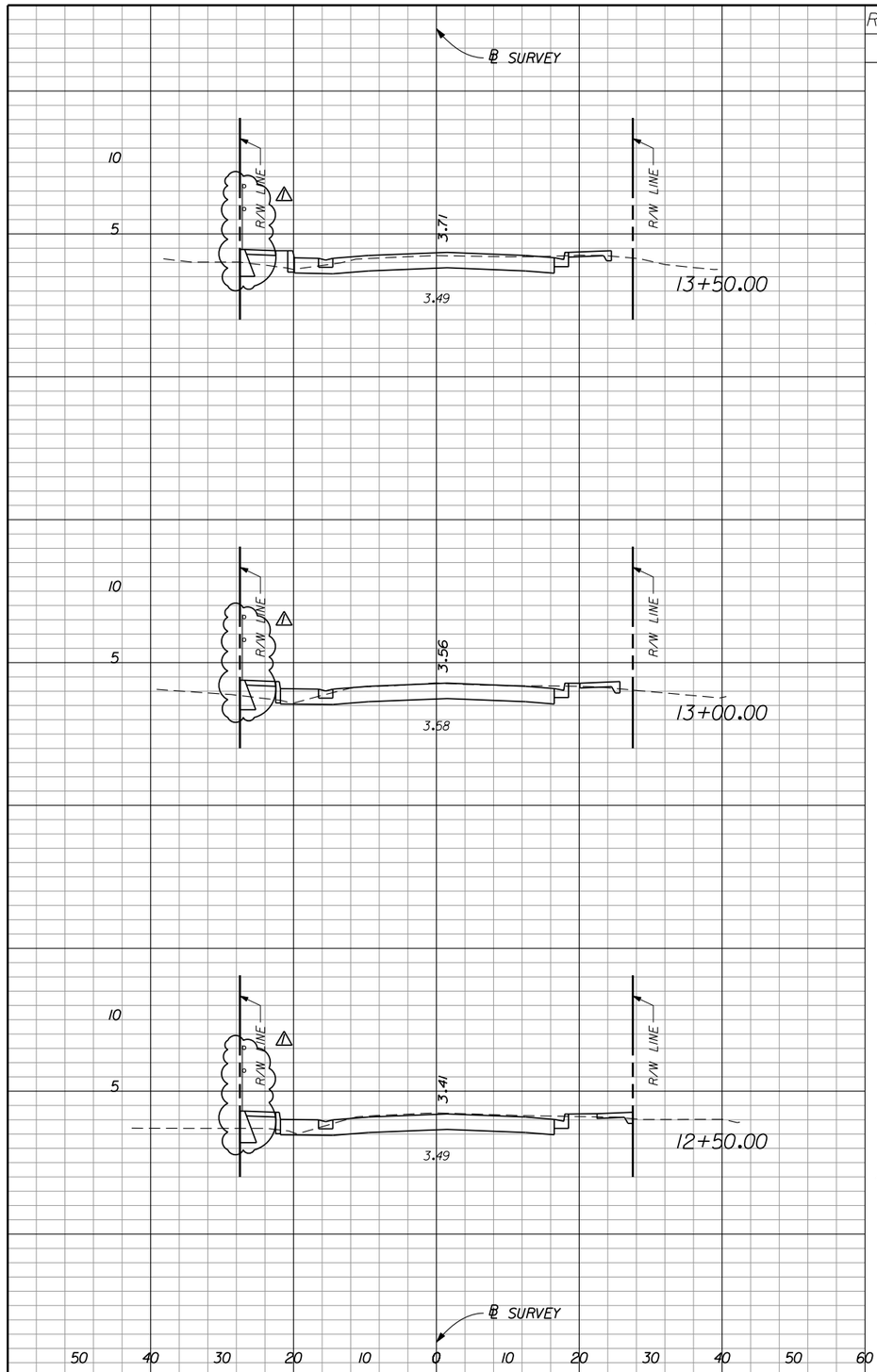
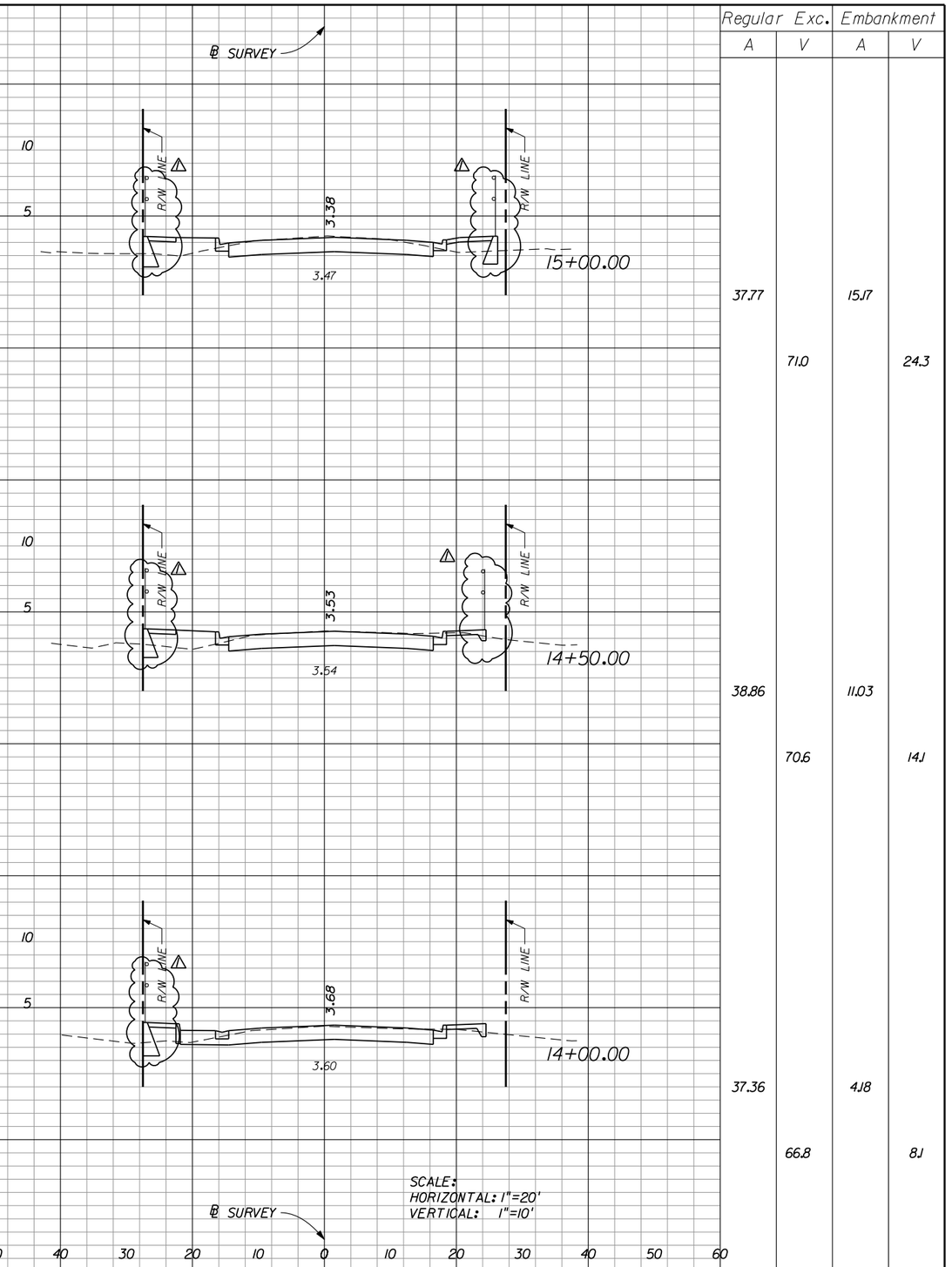


Regular Exc.		Embankment	
A	V	A	V
34.75		4.59	
	69.3		7.7
40.11		3.71	
	77.0		7.1
43.05		3.91	
	84.9		6.2



Regular Exc.		Embankment	
A	V	A	V
37.77		15.17	
	71.0		24.3
38.86		11.03	
	70.6		14.1
37.36		4.18	
	66.8		8.1

REVISIONS			
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02-29-12	CEV ⚠MODIFIED CROSS SECTIONS		

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THE CITY OF KEY WEST

COUNTY	CORRADINO PROJECT NO.
MONROE	4025

CROSS SECTIONS

SHEET NO. 31

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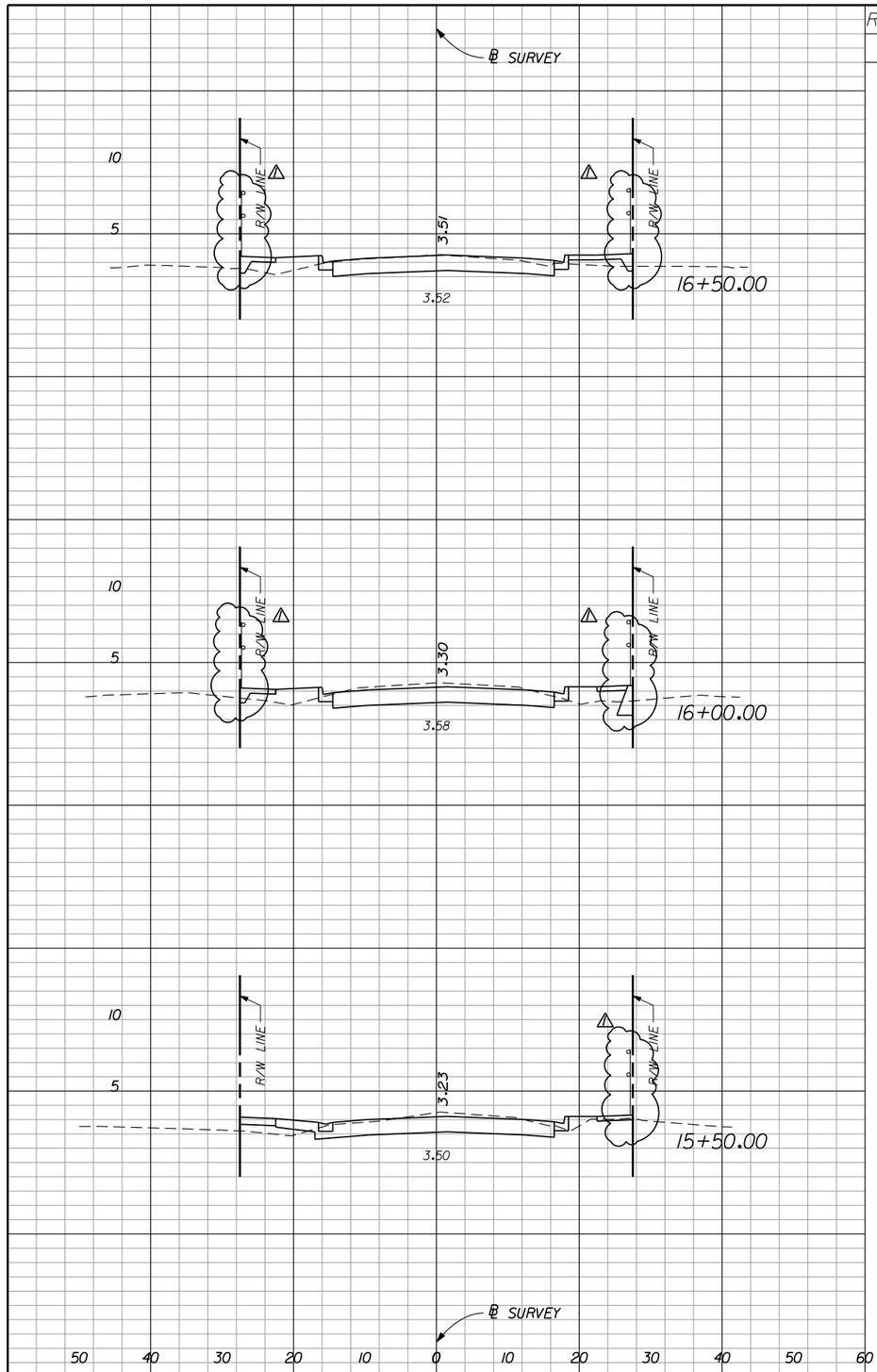

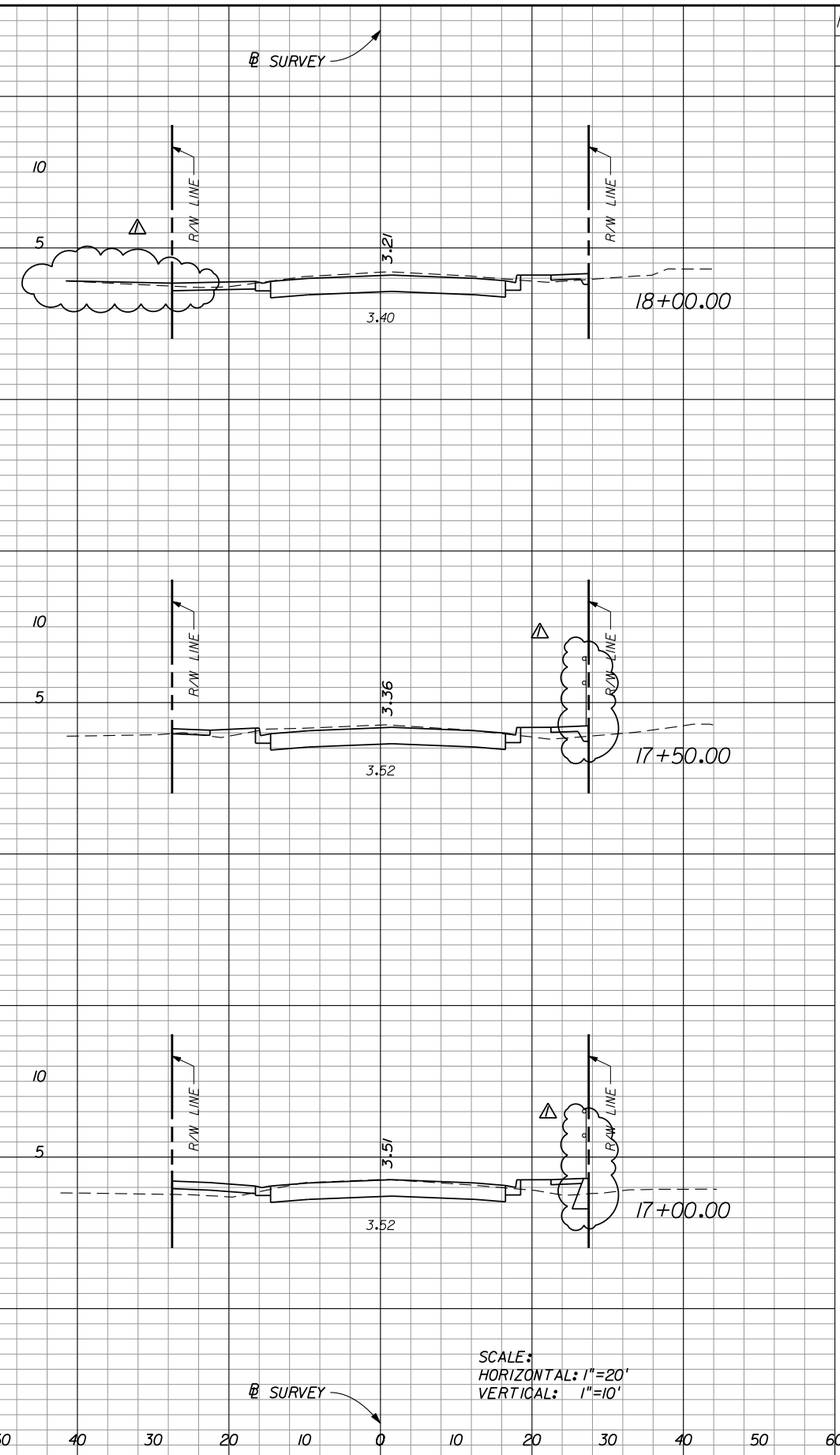

Regular Exc.		Embankment	
A	V	A	V
33.13		10.98	
	69.5		23.9
41.88		14.78	
	73.9		19.6
37.88		6.41	
	70.0		20.0

Regular Exc.		Embankment	
A	V	A	V
43.85		2.06	
	78.4		8.0
40.79		6.55	
	70.5		14.1
35.34		8.66	
	63.4		18.2

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV ⚠MODIFIED CROSS SECTIONS		

CORRADINO
4055 N.W. 97th Avenue, Doral, Florida, 33178
Ph : (305) 594-0735 Fax : (305) 594-0755
Certificate Of Authorization No. 00007665
E.O.R. Favio A. Laverde, P.E. No. 63546

THE CITY OF KEY WEST

COUNTY	CORRADINO PROJECT NO.
MONROE	4025

CROSS SECTIONS

SHEET NO. 32

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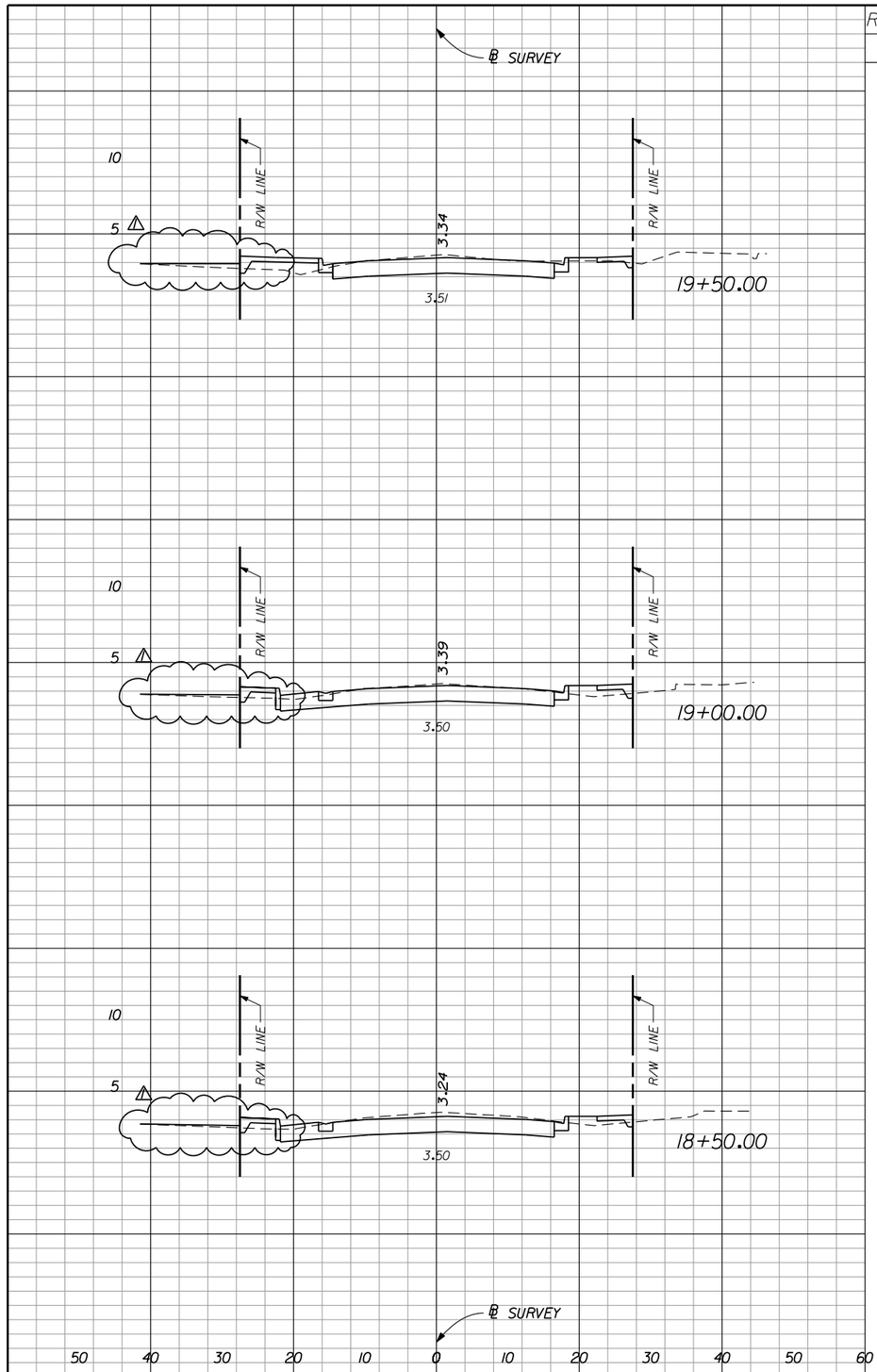
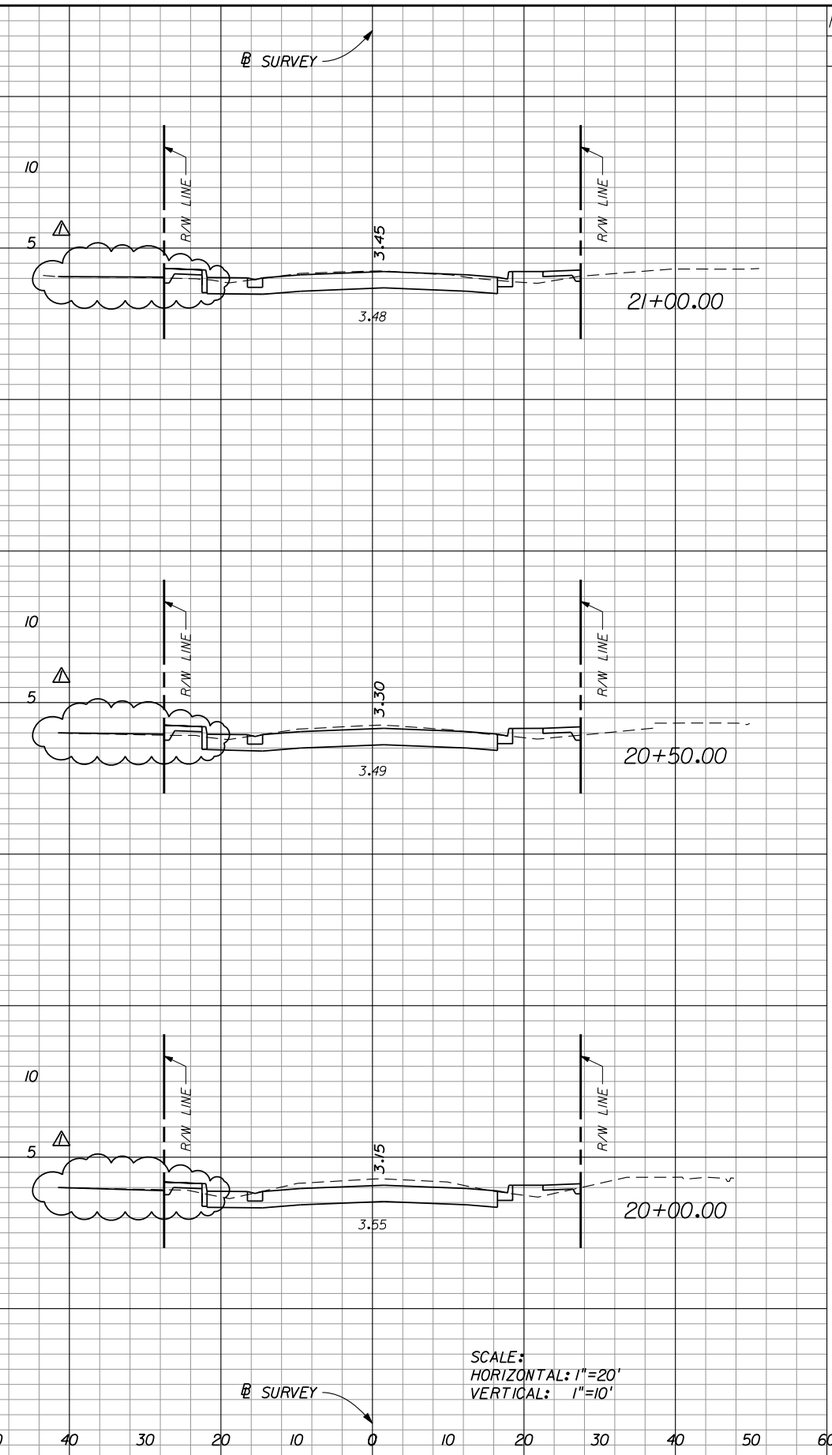


Regular Exc.		Embankment	
A	V	A	V
38.14		6.83	
	74.8		11.6
42.59		5.69	
	83.9		9.6
48.06		4.65	
	85.1		6.2



Regular Exc.		Embankment	
A	V	A	V
41.69		5.01	
	81.1		9.0
45.86		4.71	
	89.9		7.7
51.23		3.64	
	82.8		9.7

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV ⚠MODIFIED CROSS SECTIONS		

CORRADINO
4055 N.W. 97th Avenue, Doral, Florida, 33178
Ph : (305) 594-0735 Fax : (305) 594-0755
Certificate Of Authorization No. 00007665
E.O.R. Favio A. Laverde, P.E. No. 63546

THE CITY OF KEY WEST

COUNTY	CORRADINO PROJECT NO.
MONROE	4025

CROSS SECTIONS

SHEET NO. 33

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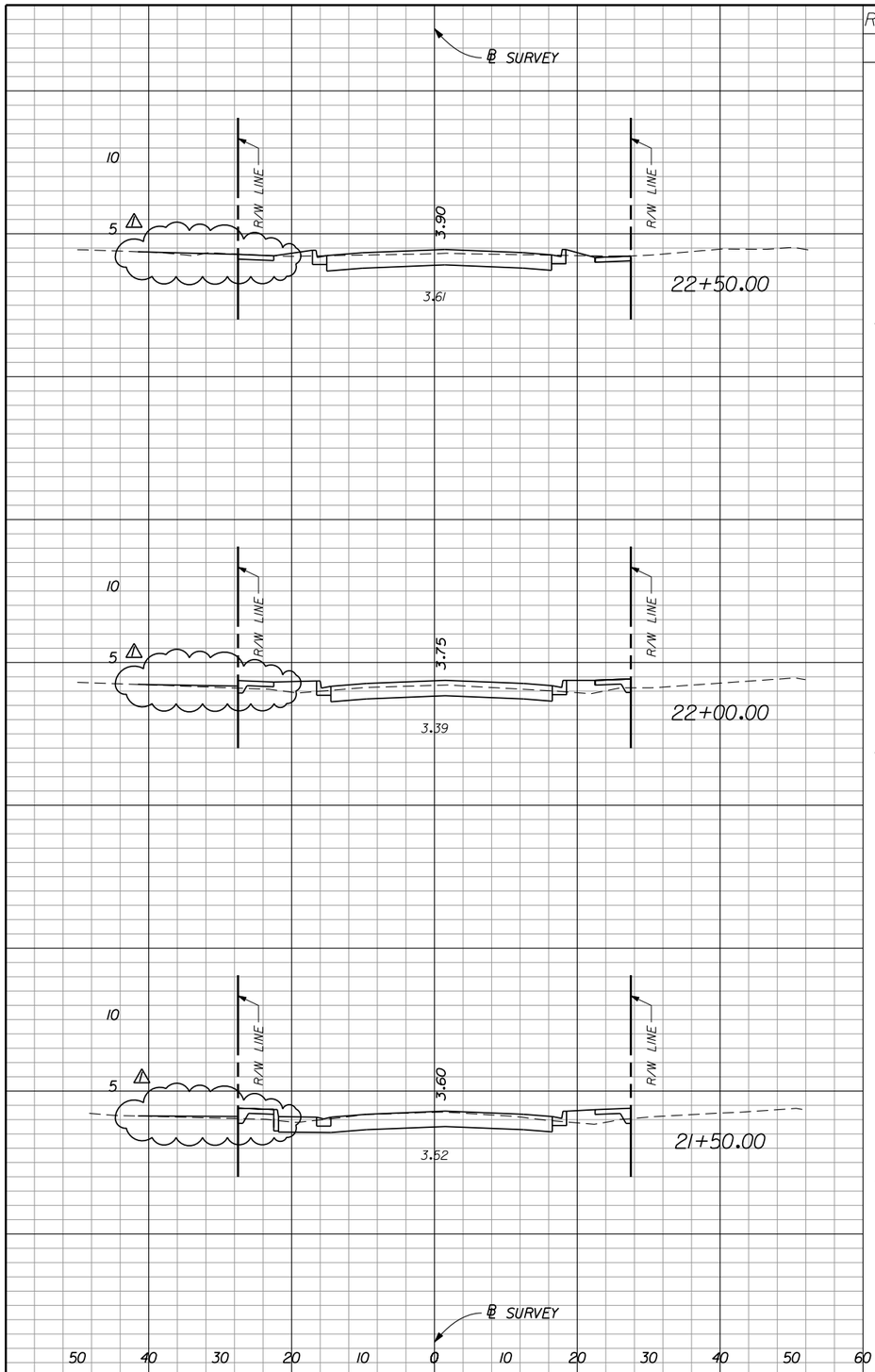
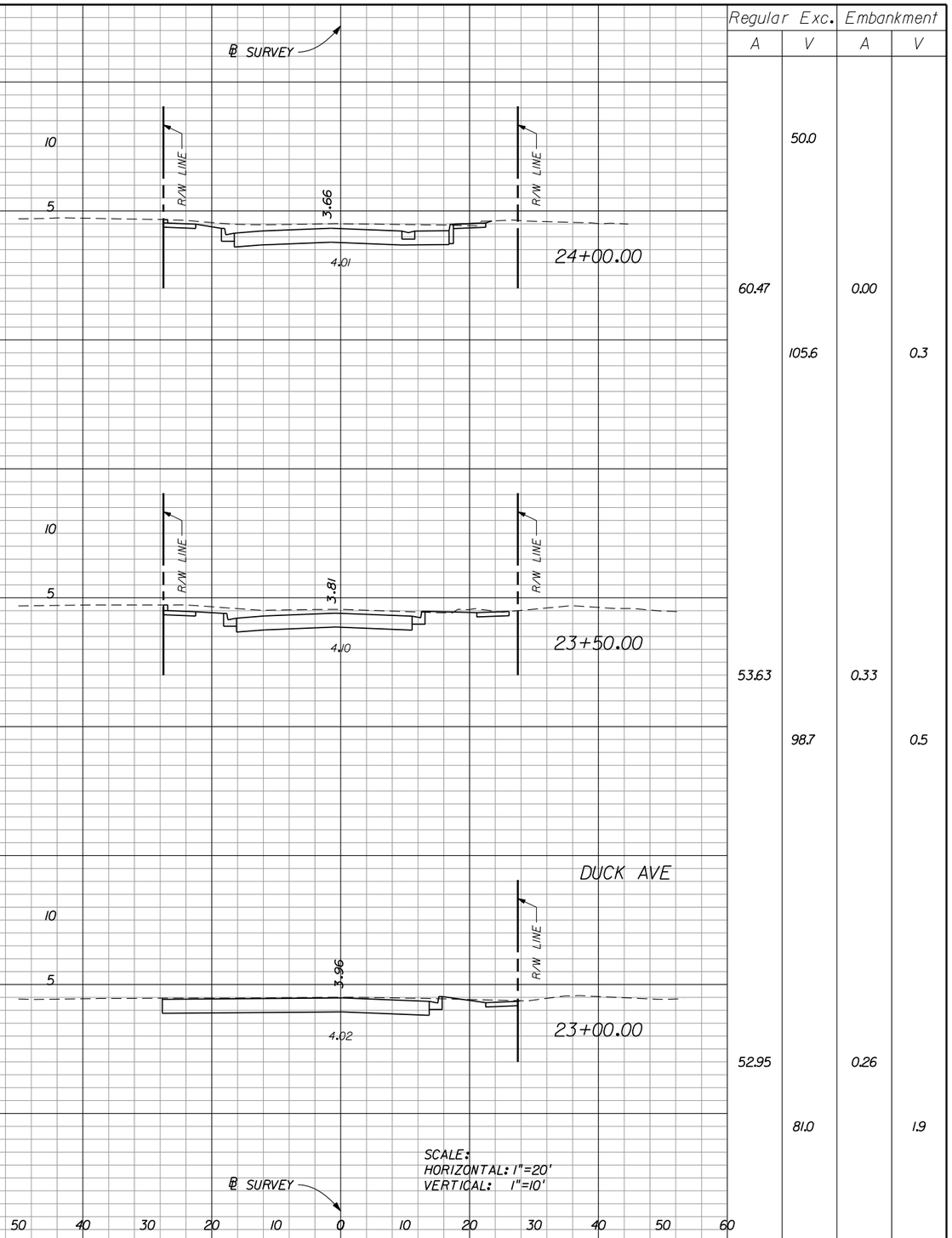


	Regular Exc.		Embankment	
	A	V	A	V
		50.0		
	34.53		1.82	
		55.0		11.0
	24.82		10.10	
		57.9		15.9
	37.76		7.02	
		73.6		11.1



	Regular Exc.		Embankment	
	A	V	A	V
		50.0		
	60.47		0.00	
		105.6		0.3
	53.63		0.33	
		98.7		0.5
	52.95		0.26	
		81.0		1.9

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV ⚠1 MODIFIED CROSS SECTIONS		

CORRADINO
4055 N.W. 97th Avenue, Doral, Florida, 33178
Ph : (305) 594-0735 Fax : (305) 594-0755
Certificate Of Authorization No. 00007665
E.O.R. Favio A. Laverde, P.E. No. 63546

THE CITY OF KEY WEST

COUNTY	CORRADINO PROJECT NO.
MONROE	4025

CROSS SECTIONS

SHEET NO. 34

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GENERAL:

1. TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS, THE CURRENT EDITION OF THE FLORIDA DOT DESIGN STANDARDS (600 SERIES), THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2009 EDITION) AS MINIMUM CRITERIA.

2. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ALL POTHOLES THAT DEVELOP WITHIN THE PROJECT LIMITS AND WILL MAINTAIN A SUPPLY OF COLD MIX ON THE PROJECT SITE TO EXPEDITE THOSE REPAIRS. COST OF REPAIR TO BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.

3. NOTIFICATION OF LANE CLOSURES OR TEMPORARY DETOURS SHALL BE ACCOMPLISHED 14 WORKING DAYS PRIOR TO CLOSURE.

4. THE TRAFFIC AND TRAVEL WAYS SHALL NOT BE ALTERED BY THE CONTRACTOR TO CREATE A WORK ZONE UNTIL ALL LABOR AND MATERIAL ARE AVAILABLE FOR THE CONSTRUCTION IN THAT AREA.

5. ALL WORK SHALL BE PERFORMED DURING DAYTIME ONLY (8AM - 6PM)

6. REGULATORY SPEED ESTABLISHED WITHIN WORK ZONE TRAVEL WAYS SHALL BE THE POSTED SPEED (30 MPH).

7. AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL COVER WORK ZONE SIGNS WHEN CONDITIONS NO LONGER WARRANT THEIR USE. COST OF COVERING AND UNCOVERING THE SIGNS SHALL BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.

8. CONTRACTOR SHALL REMOVE, RELOCATE OR COVER ANY EXISTING OR PROPOSED SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLANS. WHEN THE CONFLICT NO LONGER EXISTS, THE CONTRACTOR SHALL RESTORE THE SIGNS TO THEIR ORIGINAL POSITION. COST OF TEMPORARILY REMOVING, RELOCATING, COVERING AND RESTORING THE SIGNS SHALL BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.

9. EACH EXISTING STREET NAME AND STOP SIGN AFFECTED BY CONSTRUCTION SHALL BE RELOCATED AND MAINTAINED IN AN APPROPRIATE LOCATION FOR THE DURATION OF THE PROJECT. WHEN NO LONGER AFFECTED BY CONSTRUCTION, THESE SIGNS SHALL BE RESTORED TO THEIR ORIGINAL POSITION. COST OF TEMPORARILY RELOCATING AND RESTORING THE SIGNS SHALL BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REMOVAL OF STORM WATER FROM ROADWAYS UTILIZED FOR MAINTAINING TRAFFIC IN A MANNER APPROVED BY THE ENGINEER. COST FOR REMOVING THE WATER SHALL BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL SIGNAGE AND MAINTENANCE OF TRAFFIC ACTIVITIES WITH THE ADJACENT NORTH ROOSEVELT BLVD. CONSTRUCTION PROJECT. ⚠

DROP OFFS:

12. FOR DROP OFFS, THE CONTRACTOR'S ATTENTION IS DIRECTED TO STANDARD INDEX NO. 600, SHEET 10 OF 13. THE CONTRACTOR SHALL USE SHOULDER TREATMENT DETAIL WHEN NO BARRIERS ARE REQUIRED IN THE PLANS. ANY COSTS ASSOCIATED W/ PROTECTING DROP OFF CONDITIONS SHALL BE INCLUDED UNDER PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.

PAVEMENT MARKINGS:

13. COST OF REMOVAL OF WORK ZONE PAVEMENT MARKINGS (INCLUDING PAINT, REMOVABLE TAPE AND MARKERS), REGARDLESS OF METHOD, TO BE INCLUDED IN 102-1, MAINTENANCE OF TRAFFIC. ALSO INCLUDES THE COST OF REMOVAL OF PAVEMENT MARKINGS AND MARKERS, EXISTED PRIOR TO CONSTRUCTION. USE OF BLACK PAINT TO COVER EXISTING AND/OR TEMPORARY PAVEMENT MARKINGS IS PROHIBITED. GRINDING OR MILLING SHALL ONLY BE PERMITTED IN NON-TRAFFIC AREAS.

14. TEMPORARY LANE TRANSITIONS, SHIFTS, AND CROSSOVERS SHALL HAVE SOLID LANE AND EDGE LINES FOR THE LENGTH OF THE TRANSITION, SHIFT OR CROSSOVER. IN ADDITION, SOLID LANE AND EDGE LINES SHALL EXTEND 100 FT ON TANGENT BEYOND EACH END OF THE TRANSITION, SHIFT, OR CROSSOVER. EXCEPTION SHALL BE THROUGH INTERSECTIONS WHERE 2 - 4 SKIP LINES WILL BE PLACED. ANY COSTS ASSOCIATED WITH TEMPORARY LANE TRANSITIONS, SHIFTS, AND CROSSOVERS SHALL BE INCLUDED UNDER PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.

15. ALL TEMPORARY STRIPES AND MARKINGS SHALL BE PAINT ONLY, UNLESS OTHERWISE SPECIFIED ON THE PLANS OR APPROVED BY THE ENGINEER. ANY COSTS ASSOCIATED WITH TEMPORARY STRIPING SHALL BE INCLUDED UNDER PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.

16. TEMPORARY RAISED PAVEMENT MARKERS (RPMs) SHALL BE INSTALLED ON THE EDGE, CENTER, AND LANE LINES OF ALL CROSSOVERS, TRANSITIONS, AND TANGENT SECTIONS WITHIN THE WORK ZONE WHERE THE VEHICLE PATHS ARE ALTERED. THE SPACING FOR THESE RPMs SHALL BE 40 FT ON CENTERS FOR TANGENT SECTIONS AND 5 FT FOR TRANSITIONS, CURVES, AND CROSSOVERS. THE RPMs SHALL EXTEND 100 FT ON THE TANGENT SECTION BEYOND EACH END OF THESE CROSSOVERS OR TRANSITION AREAS.

PEDESTRIANS, BICYCLES, AND WHEELCHAIRS:

17. AT THE END OF EACH WORK DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE, ANY DROP OFF GREATER THAN 6 IN ADJACENT TO THE PEDESTRIAN, BICYCLE, AND WHEELCHAIR TRAVEL PATHS SHALL BE BACKFILLED FLUSH WITH THE SAID PATHS OR PROTECTED WITH TEMPORARY FENCE, CONCRETE BARRIER WALL OR APPROVED HANDRAIL. COST SHALL BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.

18. CONSTRUCTION ACTIVITIES THAT INVOLVE SIDEWALKS ON BOTH SIDES OF THE STREET ARE NOT ALLOWED UNLESS APPROVED BY THE ENGINEER.

WORK ZONE LIMITS:

19. THE LENGTH OF AN OPEN TRENCH SHALL NOT EXCEED 500 FT. PROPERTY ACCESS SHALL BE MAINTAINED IN ACCORDANCE TO THE CONDITIONS OF THE CONTRACT AND THE GENERAL REQUIREMENTS.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02-29-12	CEV ⚠ADDED GENERAL NOTE		

CORRADINO
4055 N.W. 97th Avenue, Doral, Florida, 33178
Ph : (305) 594-0735 Fax : (305) 594-0755
Certificate Of Authorization No. 00007665
E.O.R. Favio A. Laverde, P.E. No. 63546

THE CITY OF KEY WEST

COUNTY	CORRADINO PROJECT NO.
MONROE	4025

TRAFFIC CONTROL PLANS GENERAL NOTES

SHEET NO. 38

BID SCHEDULE

GLYNN ARCHER DRIVE/ 14TH STREET ROADWAY RECONSTRUCTION (ROOSEVELT BLVD. TO FLAGLER AVE.)

The following Bid Schedule is presented to assist the City in evaluating the Bid. The Bidder further Proposes to accept as full payment for the work Proposed herein the amounts computed under the Provisions of the Contract Documents and based on the following unit Price amounts, it being expressly understood that the unit Prices are independent of the exact quantities involved. The Bidder agrees that the unit Prices represent a true measure of the labor and materials required to perform the work, including all allowances for overhead and Profit for each type and unit of work called for in these Contract Documents. Unit price line items may be deleted, reduced or increased as needed by the City.

Bid Item No.	DESCRIPTION	Estimated Quantity	Unit	Unit Price	Value
10	Performance and Payment Bonds	1	LS		
Value in Words					
20	FDOT Grant Requirements, General and Supplementary Conditions, Quality Control Requirements, Fl trench Act	1	LS		
Value in Words					
101-1	Mobilization	1	LS		
Value in Words					
102-1	Maintenance of Traffic	1	LS		
Value in Words					
102-3	Commercial Material for Driveway Maintenance	250	CY		
Value in Words					
104-10-3	Sediment Barrier	5,530	LF		
Value in Words					
104-18	Inlet Protection System	22	EA		
Value in Words					
110-1	Clearing and Grubbing	1	LS		
Value in Words					
120-1	Regular Excavation	4,948.7	CY		

Value in Words					
120-6	Embankment	339.1	CY		
Value in Words					
145-72	Geosynthetic Reinforcement	7,267	SY		
Value in Words					
160-4	Stabilization Type B	12,572	SY		
Value in Words					
162-1-11	Prepared Soil Layer, Depth 6”	2,028	SY		
Value in Words					
285-704	Optional Base Group 04	340	SY		
Value in Words					
285-709	Optional Base Group 09	12,146	SY		
Value in Words					
334-1-13	Type SP Asphaltic Concrete (Traffic Level C)	1,451	TN		
Value in Words					
337-7-32	Asphaltic Concrete Friction Course FC-9.5 (Traffic Level C) (Rubber)	550	TN		
Value in Words					
400-0-11	Class NS Concrete (Gravity Wall)	65.94	CY		
Value in Words					
425-1-351	Curb Inlet Type P-5, <10’	6	EA		
Value in Words					
425-1-351 C	Curb Inlet Type P-5, <10’ (Contaminated Area)	2	EA		
Value in Words					
425-1-361	Curb Inlet Type P-6, <10’	1	EA		
Value in Words					
425-1-361 C	Curb Inlet Type P-6, <10’ (Contaminated Area)	7	EA		

Value in Words					
425-1-561	Valley Gutter Inlet, Type F, <10’	2	EA		
Value in Words					
425-1-561 C	Valley Gutter Inlet, Type F, <10’ (Contaminated Area)	3	EA		
Value in Words					
425-1-565	Valley Gutter Inlet, Type F, <10’, Partial	1	EA		
Value in Words					
425-1-565 C	Valley Gutter Inlet, Type F, <10’, Partial (Contaminated Area)	2	EA		
Value in Words					
425-1-701 C	Valley Gutter Inlet, Type S, <10’ (Contaminated Area)	2	EA		
Value in Words					
425-1-707 C	Valley Gutter Inlet, Type S, <10’ (Conflict Structure) (Contaminated Area)	2	EA		
Value in Words					
425-2-91	Manholes, J-8, <10’	2	EA		
Value in Words					
425-2-91 C	Manholes, J-8, <10’ (Contaminated Area)	5	EA		
Value in Words					
425-2-101	Manholes, P-7, <10’ (Conflict Structure)	1	EA		
Value in Words					
425-5-1	Adjustment of existing Utility Manholes to Remain	10	EA		
Value in Words					
425-6 (A)	Adjustment of existing Utility Valves	17	EA		
Value in Words					
425-6 (B)	Replacement of existing Utility Water Meters	8	EA		
Value in Words					
430-175-101	Pipe Culvert, Optional Material, Round, (0”-24” S/CD)	430	LF		

Value in Words					
430-175-101	Pipe Culvert, Optional Material, Round, (0”-24” S/CD) (Contaminated Area)	1,410	LF		
Value in Words					
443-70-3	French Drain, (18”)	695	LF		
Value in Words					
515-1-2	Pipe Handrail – Guiderail (Aluminum)	722	LF		
Value in Words					
520-1-10	Concrete Curb and Gutter Type F	5,658	LF		
Value in Words					
520-2-4	Concrete Curb Type D	1,630	LF		
Value in Words					
522-1	Concrete Sidewalk (4”) (including Pedestrian Ramps)	2,878	SY		
Value in Words					
522-2	Concrete Sidewalk (6”)	765	SY		
Value in Words					
570-1-2	Performance Turf (SOD)	2,038	SY		
Value in Words					
580-1-1	Landscape	1	LS		
Value in Words					
700-20-11	Single Post Sign (Less Than 12 SF)	27	AS		
Value in Words					
700-20-60	Single Post Sign Remove	20	AS		
Value in Words					
706-3	Reflective Pavement Markers	98	EA		
Value in Words					
711-11-111	Thermoplastic Solid Traffic Stripe (6” White)	1.082	NM		

Value in Words					
711-11-122	Thermoplastic Solid Traffic Stripe (8” White)	39	LF		
Value in Words					
711-11-123	Thermoplastic Solid Traffic Stripe (12” White)	624	LF		
Value in Words					
711-11-124	Thermoplastic Solid Traffic Stripe (18” White)	28	LF		
Value in Words					
711-11-125	Thermoplastic Solid Traffic Stripe (24” White)	720	LF		
Value in Words					
711-11-151	Thermoplastic (2-4 Skip) 6” White	276	LF		
Value in Words					
711-11-160	Pavement Message	17	EA		
Value in Words					
711-11-170	Pavement Arrow	16	EA		
Value in Words					
711-11-211	Thermoplastic Solid Traffic Stripe (6” Yellow)	0.189	NM		
Value in Words					
711-11-231	Thermoplastic Skip (10-30) Traffic Stripe (6” Yellow)	0.441	GM		
Value in Words					
1050-11-224	Utility Pipe, F & I, PVC Water, 8”-19.9”	20	LF		
Value in Words					
1055-11-214	Utility Fitting, F & I, OVC Elbow, 8”-19.9”	4	EA		
Value in Words					
1080-11-409	Utility Fitting, F & I, Mech Joint Restrain, 8”-19.9”	2	EA		
Value in Words					
1644-800	Fire Hydrant, Relocate	2	EA		

Value in Words					
A-1	Allowances	1	LS	$50,000	$50,000
Value in Words					

Additive/ Alternative Item*

A-2	Bus Shelter	4	EA		
Value in Words					
A-3	Yellow Reflective Paint (To be installed at the proposed Curbs where parking is not permitted)	3000	LF		
Value in Words					

**please refer to bid item note #2*

BASE BID AMOUNT $_____

BASE BID AMOUNT (IN WORDS) _____

_____

Bid Item Notes:

1. Bid Item A-1 any portion of this allowance that remains after all authorized payments has been made will be withheld from contract payments and will remain with the OWNER.
2. Bid Item A-2 Bus shelter, this item is to be used at the discretion of the engineer. Quantities may be increased, decreased or omitted as directed by the Engineer. Refer to Section 02800 for applicable specifications and details.

NOTE: The CONTRACTOR'S unit prices shall include full compensation for all Proposal Items listed above.

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List items to be performed by Contractor's own forces and the estimated total cost of these items. (Use additional sheets if necessary.)

SUBCONTRACTORS

The Bidder further proposes that the following subcontracting firms or businesses will be awarded subcontracts for the following portions of the work in the event that the Bidder is awarded the Contract:

_____
Portion of Work

_____
Name

_____, _____, _____, _____
Street City State Zip

_____
Portion of Work

_____
Name

_____, _____, _____ ,_____
Street City State Zip

_____
Portion of Work

_____
Name

_____, _____, _____,_____
Street City State Zip

_____
Portion of Work

_____
Name

_____, _____, _____,_____
Street City State Zip

SURETY

_____ whose address is

_____, _____, _____, _____
Street City State Zip

BIDDER

The name of the Bidder submitting this Proposal is

_____ doing business at

_____, _____, _____, _____
Street City State Zip

which is the address to which all communications concerned with this Proposal and with the Contract shall be sent.

The names of the principal officers of the corporation submitting this Proposal, or of the partnership, or of all persons interested in this Proposal as principals are as follows:

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

If Sole Proprietor or Partnership

IN WITNESS hereto the undersigned has set his (its) hand this _____ day of _____ 2012.

_____
Signature of Bidder

_____
Title

If Corporation

IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this _____ day of 2012.

(SEAL)

_____
Name of Corporation

By _____

Title_____

Attest_____
Secretary

EXPERIENCE OF BIDDER

The Bidder states that he is an experienced Contractor and has completed similar projects within the last 5 years.

(List similar projects, with types, names of owners, construction costs, Engineers, and references with phone numbers. Use additional sheets if necessary.)

Information To Build On
Engineering • Consulting • Testing

REPORT OF

GEOTECHNICAL ENGINEERING SERVICES

FOR

ROADWAY SOIL SURVEY

14TH STREET – NORTH ROOSEVELT BOULEVARD

TO FLAGLER AVENUE

KEY WEST, MONROE COUNTY, FLORIDA

PREPARED FOR

THE CORRADINO GROUP

PREPARED BY

PROFESSIONAL SERVICE INDUSTRIES, INC.

PSI PROJECT No. 0397-216

JULY 7, 2010

Information To Build On
Engineering • Consulting • Testing

July 7, 2010

THE CORRADINO GROUP
4055 N.W. 97th Avenue
Miami, Florida 33178

Attention: Mr. Favio A. Laverde, P.E.
Project Manager

Re: Report of Geotechnical Engineering Services
Roadway Soil Survey
14th Street - North Roosevelt Boulevard to Flagler Avenue
Key West, Monroe County, Florida
PSI Project No.: 0397-216

Dear Mr. Laverde:

Professional Service Industries, Inc. (PSI) has completed a geotechnical engineering study in connection with the noted project. Our services were provided in general accordance with PSI Proposal No. 0397-23528, dated June 15, 2010. The work was authorized by means of a subconsultant agreement between The Corradino Group and PSI, dated June 15, 2010.

We trust this report is adequate for your current needs; however, should you have any questions or should additional information be required, please do not hesitate to contact our office at (305) 471-7725.

DHURUVA B. BADRI LICENSE No 68718 STATE OF FLORIDA PROFESSIONAL ENGINEER

Respectfully submitted,

Professional Service Industries, Inc.
Certificate of Authorization No: 3684

Paul D. Passe, P.E.
Chief Engineer
FL. License No. 34750

Valerie Raymond, E.I.
Staff Engineer

Dhuruva (Drew) Badri, P.E.
Project Manager
FL License No. 68718

VR/PDP/DB/db/cd

cc: Addressee (3 and PDF)
File (1 and PDF)

G:\397 - GEO\Projects\2010 PROJECTS\0397-216-City of Key West-14th Street\0397-216-14th Street Key West.doc

TABLE OF CONTENTS

APPENDIX A

APPENDIX B

1.0 PROJECT INFORMATION

The project is located on 14th Street (Glynn R. Archer Jr. Drive) between North Roosevelt Boulevard and Flagler Avenue in Key West, Monroe County, Florida. A site vicinity map identifying the limits of the study is presented on **Sheet 1** of **Appendix B**.

As we understand, the project will involve the reconstruction of approximately 2,900 linear feet of roadway. Currently, 14th Street exists with two lanes of traffic flow (one in each direction) in the north-south direction. The roadway pavement was observed to be moderately to severely distressed along the alignment of the existing roadway. The existing right-of-way along the roadway is covered by asphaltic pavement, concrete sidewalk, exposed granular fill, grass and trees. Photographs from our site visit are presented on **Sheets 2** and **3** of **Appendix B**.

If any of the noted information is incorrect or has changed, please notify PSI so that we may amend the recommendations presented in this report, if appropriate.

2.0 SCOPE OF WORK

Our services included performing field reconnaissance, utility clearance, subsurface exploration, percolation tests, laboratory testing, measuring groundwater depths, providing engineering evaluations and recommendations for pavement reconstruction.

The purpose of this study was to obtain information concerning the general subsurface conditions along the roadway alignment in order to make engineering estimates and recommendations in each of the following areas:

1. Soil stratigraphy at the boring locations. Development of the soil profiles along the roadway and the anticipated soil conditions within the depth of influence.

2. Assessment of the existing soil subgrade and groundwater conditions along the roadway alignment for subgrade suitability and pavement support.

3. General location and description of existing fills, soils and potentially deleterious materials encountered in the borings that may affect reconstruction activities and pavement performance.

4. Discuss site preparation requirements and engineering criteria for placement and compaction of in-situ soils and approved fill materials.

5. Identification of critical design and/or construction considerations based on the soil and groundwater conditions encountered in the borings.

6. Measure the groundwater levels in the borings.

3.2 SPT Borings

PSI performed a total of 15 SPT borings to depths of 6 and 15 feet below existing grade.

The SPT borings were performed using the techniques of ASTM D-1586. After seating the sampler six inches, the number of successive blows required to drive the sampler twelve inches into the soil constitutes the test result commonly referred to as the "N" value. The "N" value has been empirically correlated with various soil properties and is considered to be indicative of the relative density of cohesionless soils and the consistency of cohesive soils. The SPT borings were performed using a CME-55 truck mounted drill rig equipped with a calibrated automatic hammer. The recovered split spoon samples were visually classified in the field and transported to the laboratory for further review.

After completion of the borings, the boreholes were grouted sealed and the site was generally cleaned, as required. The grout mixture consisted of 1 bag of cement (94 lbs), 6 gallons of water and 5 lbs of bentonite.

3.3 Percolation Tests

PSI performed two percolation tests at depths of 10 and 15 feet below grade within SPT borings B-6 and B-13. The percolation tests were performed in general accordance with the South Florida Water Management District (SFWMD) procedures for the "Usual Condition Constant Head" Percolation Test. SPT sampling was performed simultaneously as the boreholes were advanced using a 6-inch diameter casing. A 4-inch diameter perforated PVC pipe was placed in the borehole prior to retrieving the casing. Water was then pumped into the borehole in order to raise the water level as close to the ground surface as possible. Once the inflow equalized with the outflow rate, the average pumping rate and level of the water for this stabilized flow rate was recorded.

The hydraulic conductivity values determined from the tests are presented in **Table 2** of **Appendix A**. The values are in units of cubic feet of flow per second, per square foot of seepage area, per foot of head (cfs/ft^2-ft). The tabulated values are ultimate values. The designer should apply an appropriate factor of safety.

4.0 LABORATORY TESTING

4.1 Soil Classification Testing

Soil samples collected from the borings were visually reviewed in the laboratory by a geotechnical engineer to confirm the field classification. The samples were classified in general accordance with the AASHTO soil classification. Classification was based on visual observations with the aid of the laboratory test results performed on select samples. Testing was as noted in the next sections.

4.2 Grain Size Analysis

Grain-size analysis tests were conducted in general accordance with the FDOT test designation FM 1-T088 (American Society for Testing and Materials [ASTM] test designation D-422). The grain-size analysis test measures the percentage by weight of a dry soil sample passing a series of U.S. standard sieves, including the percentage passing the No. 200 Sieve. In this manner, the grain-size distribution of a soil is measured. The percentage by weight passing the No. 200 Sieve is the amount of silt and clay sized particles. The gradation of a soil, including the amount of silt and clay, affects its engineering properties, including permeability, consolidation rate, suitability as roadway subgrade and suitability as general fill material. The results of the laboratory tests are presented in **Table 3** of **Appendix A**.

4.3 Moisture Content Determinations

The laboratory moisture content test consists of determining the percentage of moisture in selected samples in general accordance with FDOT test designation FM 1-T265 (ASTM test designation D-2216). Briefly, natural moisture content is determined by weighing a sample of the selected material and then drying it in a warm oven. Care is taken to use a gentle heat so as not to burn off any organics. The sample is removed from the oven and reweighed. The difference of the two weights is the amount of moisture removed from the sample. The weight of the moisture divided by the weight of the dry soil sample is the percentage by dry weight of the moisture in the sample. The results of the laboratory tests are presented in **Table 3** of **Appendix A**.

4.4 Organic Content Determinations

The organic content test consists of the determination of the percentage of organic material present in a soil sample in general accordance with FDOT Test Designation FM1-T267 (ASTM Test Designation D-2974, titled "Moisture, Ash, and Organic Matter of Peat and Other Organic Soils"). Briefly, the organic content is determined by weighing a sample of the selected material and then burning off the organic material in a hot oven. The sample is removed from the oven and reweighed. The difference of the two weights is the amount of organic material removed from the sample. The weight of the organic material divided by the weight of the dry soil sample is the percentage by dry weight of organic material in the sample. The results of the organic content determinations tests are summarized in **Table 3** of **Appendix A.**

5.0 GENERALIZED SUBSURFACE CONDITIONS

5.1 General

Soil stratification is based on an examination of the recovered soil samples, the laboratory testing, and interpretation of field boring logs by a geotechnical engineer. The depths represent the approximate boundaries between soil types of significantly different engineering properties. The actual transition may be gradual. In some cases, small variations in properties not considered pertinent to our engineering evaluation may have been abbreviated or omitted for clarity. The profiles represent the conditions at the boring locations only and variations may occur between the borings.

The various strata are presented in **Table A** below:

Table A: Soil Legend

STRATUM	SOIL DESCRIPTION	AASHTO SOIL CLASSIFICATION
1	Asphalt	-
2	Light Brown/Gray LIMEROCK with Fine Sand to Silty Fine SAND	A-1-a/A-1-b
3	Light Brown Silty Fine SAND with Traces of Limerock	A-2-4
4	Light Brown/Gray Sandy SILT with Traces of Limerock and/or shell fragments	A-4
5	Organic Silty Fine SAND with Traces of Limerock and/or glass fragments	A-8
6	Decomposed WOOD with Fine Sand and Traces of Limerock	A-8
7	Light Brown LIMESTONE with Fine Sand	-

Based upon the exploratory borings and results of the laboratory testing, the near surface soils along the project alignment have been grouped into seven different strata. Each stratum group exhibits a range of engineering properties related to suitability for roadway construction as outlined by FDOT Standard Index 505.

The soil types encountered at the boring locations are presented in the form of Generalized Soil Profiles presented on **Sheets 10** and **11** of **Appendix B**. Detailed individual logs are also presented in **Appendix B**. The stratification presented is based on visual observation of the recovered soil samples and the interpretation of field logs by a geotechnical engineer. Included with the profiles are the N-values and groundwater levels measured at the time the borings were drilled.

5.2 GROUNDWATER CONDITIONS

At the time of our field exploration, the groundwater table was encountered at depths ranging from 3.3 to 3.5 feet below grade. The depths to groundwater table are noted on **Table 1** of **Appendix A**.

It should be noted that groundwater levels fluctuate seasonally as a function of rainfall, tidal changes, and the infiltration rate of the soil. Therefore, at a time of year different from the time of drilling, there is a possibility of a change in the recorded levels. It should also be noted that our field explorations were performed towards the end of the dry season and beginning of the wet season. Therefore, the estimated seasonal high groundwater (ESHGWT) at the site should be expected to be 18 inches higher than the levels measured during our study.

We recommend that the contractor determine the actual groundwater levels at the time of construction to determine groundwater impact on the construction procedure.

6.0 ENGINEERING EVALUATION AND RECOMMENDATIONS

6.1 SOIL USAGE SUMMARY

The subsurface materials are generally considered suitable and are not expected to impose geotechnical constraints or limitations on the planned roadway reconstruction, provided the subgrade is prepared prior to placement of the new pavement. However, unsuitable organic soils, consisting predominantly of decomposed wood, were encountered in boring B-1 in the 3.5 and 4.0 foot depth interval. In addition, sandy silt (A-4) and organic materials (A-8) were encountered in borings B-7, B-8, B-10, B-11 and B-12 in the 2 to 5 foot depth interval. Due to the depths of these unsuitable materials, it is our opinion that its removal and replacement may be cost prohibitive and/or impractical. Therefore, we recommend leaving these unsuitable soils in place while utilizing a geosynthetic reinforcement material to help minimize any adverse settlement impact to the finished roadway surface.

6.2 SUBGRADE PREPARATION

The exposed roadway subgrade should be proofrolled until compaction is achieved to a depth of 12 inches below the working surface. Pumping, cracking and other unusual distortion of the surface under the weight of the roller is indicative of underlying pockets of soft soils which should be removed over the width of the proposed pavement and shoulders plus a foot on each side and replaced with structural fill in accordance with Florida Department of Transportation (FDOT) Index 505 and the latest FDOT Standard Specifications for Roads and Bridge Construction.

6.3 GEOSYNTHETIC REINFORCEMENT

We recommend that geosynthetic reinforcement be placed immediately beneath the proposed pavement base, along the areas where the unsuitable soils were encountered. These areas exist along 14th Street in two segments (identified on **Sheets 4** through **9** of **Appendix B**):

- Segment 1: Starting from North Roosevelt Boulevard and extending to approximately 250 feet south.
- Segment 2: Starting 300 feet south of the intersection with Northside Drive and extending 1,500 feet south (100 feet south of the intersection with Duck Avenue).

Previous experience with the use of geosynthetic reinforcement beneath pavement sections has shown a noticeable reduction in maintenance costs caused by long-term settlements. However, even with the use of geosynthetic reinforcement, primary and secondary settlements of the proposed roadway are expected due to the physical characteristics of the organic soils. The resulting settlements will require periodic maintenance. The use of the geosynthetic reinforcement should be in general accordance with FDOT Standard Index 501 (Titled "Geosynthetic Reinforcement") and standard specification section 145. We recommend that the geosynthetic reinforcement be of biaxial structure. The minimum strength required is 1,270 lb/ft at ultimate strength and 370 lb/ft at 2% ultimate strength in both the machine direction and the cross direction. We recommend that the Standard Index 501 and standard specification section 145 be included as part of the design/contract documents.

6.4 Structural Fill Requirements

Structural fill, if used (to achieve the final pavement grades) should consist of materials conforming to FDOT Standard Index 505. In general, the structural fill to be placed in pavement backfill areas should consist of inorganic, non-plastic, clean sand or crushed limerock free of any manmade debris. The fill materials should contain less than 10% percent material passing the No. 200 mesh sieve. The maximum particle size of the crushed limerock should not exceed three inches. The structural fill to be compacted with a heavy vibratory roller should be placed in lifts not exceeding twelve inches in loose thickness. The structural fill to be compacted with a vibratory plate, or a small walk-behind vibratory roller should be placed in lifts not exceeding six inches in loose thickness. Compaction requirements should be in general accordance with Section 120-9 of the FDOT Standard Specifications for Road and Bridge Construction.

It is imperative that the fill supporting new pavements be placed, compacted and tested until the maximum density is achieved. The tests should be performed by a qualified Soils Technician under the supervision of a Geotechnical Engineer, in accordance with appropriate ASTM procedures. Any fill area indicating less than the recommended compaction should be recompacted until the required density is obtained prior to the placement of subsequent lifts.

6.5 Pavement Design Considerations

The proposed new pavement structure is understood to be a flexible asphalt concrete section. The pavement cross-section should include a base course consisting of limerock, with a minimum LBR value of 100 percent, meeting the requirements of the FDOT "Standard Specifications for Road and Bridge Construction", Section 911. The base material should overlie stabilized subgrade with a minimum LBR value of 40. In areas of LBR values less than 40, the subgrade should be stabilized to a depth of 12 inches. This can be achieved by blending base materials with the existing subgrade soils. Both the base course and stabilized subgrade should be compacted to at least 100 percent of maximum dry density (AASHTO T-99). Their thicknesses should be based on design requirements. Asphalt should be of Type S, with a thickness that is determined in the pavement design that considers the anticipated traffic loading.

Observing FDOT criteria, a minimum separation of three feet is recommended between the bottom of the pavement base and the estimated normal wet season groundwater table. The point of reference for this measurement would normally be the lowest point of the base. If the above minimum separation cannot be met, than the appropriate resilient modulus reduction factor should be used.

From section 5.2.2 of the Flexible Pavement Design Manual:

When the base clearance is less than three feet, the pavement designer must reduce the Design Resilient modulus as follows:

- For two feet Base Clearance a 25% modulus reduction
- For one foot Base Clearance a 50% modulus reduction

If one foot base clearance can not be met the normal practice is the use of under-drains.

7.0 CONSTRUCTION CONSIDERATIONS

7.1 GENERAL ROADWAY CONSTRUCTION RECOMMENDATIONS

The following are our recommendations for overall site preparation and mechanical densification, based on our exploration results and the anticipated construction. These recommendations along with those for "Subgrade Preparation" and "Structural Fill requirements" stated earlier should be used as guidelines for the Design Engineer preparing specifications. Site preparation and filling should be in accordance with sections 110 and 120 of the FDOT Standard Specifications for Road and Bridge Construction and FDOT Standard Indices 500 and 505.

1. The roadway width plus five feet beyond on each side should be stripped and cleared of existing pavement, topsoil and any unsuitable materials (if encountered). A geosynthetic reinforcement material should be placed under the roadway in areas mentioned in **Section 6.3** of this report. The placement should be as per the "geosynthetic reinforcement" section of this report. A Geotechnical Engineer or representative should observe the stripped grade to document adequate depth of stripping, prior to backfilling and filling.

2. The stripped and compacted backfilled areas should be leveled sufficiently to permit equipment traffic, cut to grade if necessary, and then compacted using a large diameter, self-propelled or tractor drawn vibratory roller. The vibratory drum roller should have a static drum weight of about four tons and should be capable of exerting a minimum impact force of 15 tons. Careful observations should be made during proofrolling to help identify any areas of soft yielding soils that may require overexcavation and replacement. Care should be used when operating the compactor near existing structures (including underground structures such as pipelines and residential buildings) to avoid transmission of vibrations that could cause settlement damage or disturb occupants. Use of a smaller vibratory or static compactor may be necessary in some instances. Construction operations that may be affected by vibration, such as concrete placement, if any, should be scheduled at times when nearby compaction operations are not taking place.

3. Prior to any field construction operations, we recommend that a survey be performed (including pictures and/or video) of existing structures located adjacent to the existing right-of-way. Documentation should be made of any foundation problems or structural distress noted by owners. If any problems are evident or substantial objections voiced by property owners, consideration should be given to monitoring vibrations during compaction. It is also recommended that a follow-up photographic and visual survey be performed after the compaction operations.

4. Prior to beginning compaction, soil moisture contents may need to be controlled in order to facilitate proper compaction. If additional moisture is necessary to achieve compaction objectives, then water should be applied in such a way that it will not cause erosion or removal of the subgrade soils. A moisture content within two percentage points of the optimum indicated by the AASHTO test method T-99, Method C, is recommended

5. Earthwork and related operations should be conducted in accordance with Section 120 of the FDOT Standard Specifications for Road and Bridge Construction.

6. An experienced, qualified Geotechnical Engineer should be retained to provide on-site observation of earthwork activities. Monitoring should include the visual observation of stripping asphalt and topsoil, placement of approved fills, proofrolling and compaction testing. Density tests should be performed in surficial fill material after proofrolling and in each fill lift thereafter. It is important that careful observation be made to confirm that the subsurface conditions are as we have discussed herein, and that fill placement is in accordance with our recommendations, project specifications and the latest FDOT Standard Specifications for Road and Bridge Construction.

7.2 GROUNDWATER CONTROL

During subgrade preparation, the soils below design grade could become disturbed by construction activities due to heavy rainfall conditions or temporarily perched water. If this becomes the case, the contractor may be directed by the owners' representative to remove the disturbed or pumping soils to a depth of 12 to 18 inches below design grade and backfill the area with structural fill in accordance with FDOT Index 505 and the latest FDOT Standard Specifications for Roads and Bridge Construction.

Surface water and groundwater control may be necessary during construction to permit establishment of a stable bottom. A section of the construction area could be dammed off, and water diverted through a temporary ditch or pumped around construction activities. If a pump is used, a standby pump is recommended.

Depending upon shallow groundwater levels at the time of construction, seepage may enter from the bottom and sides of the excavation. Such seepage will act to loosen soils, and create difficult working conditions. Therefore, it may be necessary to wellpoint or sump pump and rim ditch the construction area. Groundwater levels should be determined immediately prior to construction. Shallow groundwater should be kept at least 24 to 36 inches below the lowest working area to facilitate proper material placement and compaction.

8.0 REPORT LIMITATIONS

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This company is not responsible for the conclusions, opinions or recommendations made by others based on these data. No other warranties are expressed or implied. The scope of the investigation was intended to evaluate soil conditions within the influence of the expected roadway pavement section.

The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated. If any subsoil variations become evident during the course of this project, a re-evaluation of the recommendations contained in this report will be necessary after we have had an opportunity to observe the characteristics of the conditions encountered. The applicability of the report should also be reviewed in the event significant changes occur in the design, nature or location of the proposed roadway and mast arm construction.

TABLE 1
SUMMARY OF TEST LOCATIONS
14TH STREET - NORTH ROOSEVELT BOULEVARD TO FLAGLER AVENUE
MONROE COUNTY, FLORIDA
PSI PROJECT NO. 0397-216

BORING NUMBER	NORTHING [1]	EASTING [1]	BORING DEPTH (FEET)	GROUNDWATER TABLE DEPTH (FEET)
B - 1	86393.0	401273.8	6.0	3.5
B - 2	86207.3	401352.6	6.0	3.4
B - 3	86014.4	401394.7	6.0	3.4
B - 4	85875.9	401463.7	6.0	3.4
B - 5	85686.8	401499.2	6.0	3.3
B - 6	85504.6	401574.7	15.0	3.3
B - 7	85308.1	401630.1	6.0	3.3
B - 8	85107.7	401722.0	6.0	3.3
B - 9	84918.4	401770.8	6.0	3.3
B - 10	84729.0	401852.9	6.0	3.3
B - 11	84532.5	401898.3	6.0	3.3
B - 12	84346.7	401983.7	6.0	3.3
B - 13	84168.4	402022.6	15.0	3.3
B - 14	83997.1	402111.4	6.0	3.3
B - 15	83800.6	402160.2	6.0	3.3

Note:
(1) Plane coordinates were obtained by using a hand held GPS instrument (Garmin 60 CSX) with the reported data being accurate to within 10 feet

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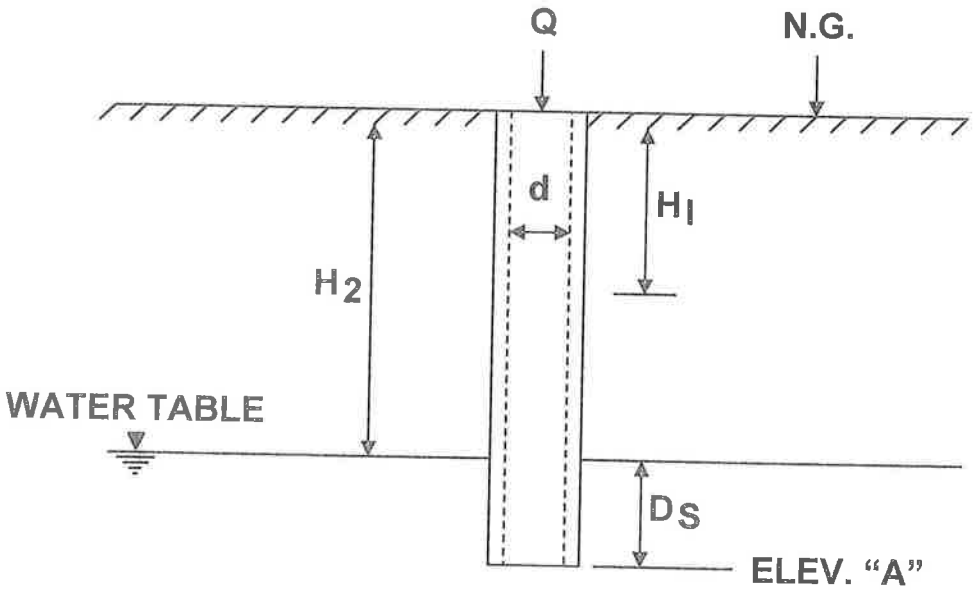
TABLE 2
SUMMARY OF PERCOLATION TEST RESULTS
14TH STREET - NORTH ROOSEVELT BOULEVARD TO FLAGLER AVENUE
MONROE COUNTY, FLORIDA
PSI PROJECT NO. 0397-216

Test No.	Date Performed	Diameter		Depth of Hole	Depth to Groundwater Level Below Ground Surface (Feet)		Hydraulic Head, H2	Saturated Hole Depth, Ds	Average Flow Rate, Q	K, Hydraulic Conductivity
		Hole (Inches)	Casing (Inches)	(Feet)	Prior to Test	During Test	(Feet)	(Feet)	(gpm)	cfs/ft^2-ft
B-6	24-Jun-10	6	4	10.0	3.3	0.0	3.3	6.7	11.0	5.6E-04
		6	4	15.0	3.3	0.0	3.3	11.7	12.0	3.8E-04
B-13	24-Jun-10	6	4	10.0	3.3	0.0	3.3	6.7	9.0	4.6E-04
		6	4	15.0	3.3	0.0	3.3	11.7	10.0	3.2E-04

Note:
(1) The above hydraulic conductivity values are for a french drain installed to the same depth as the borehole tests. The values represent an ultimate value. The designer should decide on the required factor of safety.
(2) The hydraulic conductivity values were calculated based on the South Florida Water Management District's USUAL OPEN HOLE CONSTANT HEAD percolation test procedure as shown on **the following page.**
(3) A hole diameter of six inches was used in the computation of the Hydraulic Conductivity value presented in the above table.

USUAL OPEN – HOLE TEST



$$K = \frac{4Q}{\pi d (2H_2^2 + 4H_2D_S + H_2d)}$$

K= HYDRAULIC CONDUCTIVITY (CFS/FT.^{2} - FT.HEAD)

Q= "STABILIZED" FLOW RATE (CFS)

d= DIAMETER OF TEST HOLE (FEET)

H_2 = DEPTH TO WATER TABLE (FEET)

D_S = SATURATED HOLE DEPTH (FEET)

ELEV. "A"= PROPOSED TRENCH BOTTOM ELEV.

H_I = AVERAGE HEAD ON UNSATURATED HOLE SURFACE (FT.HEAD)

TABLE 3
SUMMARY OF LABORATORY TEST RESULTS
14TH STREET - NORTH ROOSEVELT BOULEVARD TO FLAGLER AVENUE
MONROE COUNTY, FLORIDA
PSI PROJECT NO. 0397-216

BORING NUMBER	SAMPLE NUMBER	SAMPLE DEPTH (FEET)	STRATUM NUMBER	ORGANIC CONTENT (%)	MOISTURE CONTENT (%)								ATTERBERG LIMIT			AASHTO GROUP
						3/8"	#4	#10	#20	#40	#60	#100	#200	LL	PL	PI	
B - 1	3	3.5 - 4.0	6	9	50	-	-	-	-	-	-	-	-	-	-	-	A-8
B - 6	3	4.0 - 5.0	3	4	41	-	-	-	-	-	-	-	-	-	-	-	A-2-4
B - 7	3	3.0 - 4.0	4	-	59	-	-	-	-	-	-	-	73	-	-	-	A-4
B - 8	4	4.0 - 5.0	4	-	62	-	-	-	-	-	-	-	66	-	-	-	A-4
B - 9	2	2.0 - 3.0	3	-	37	-	-	-	-	-	-	-	25	-	-	-	A-2-4
B - 10	2	2.0 - 3.0	5	9	21	-	-	-	-	-	-	-	-	-	-	-	A-8
B - 11	2	2.0 - 3.0	5	9	10	-	-	-	-	-	-	-	-	-	-	-	A-8
B - 12	2	2.0 - 3.0	5	-	43	-	-	-	-	-	-	-	25	-	-	-	A-8

APPENDIX B

SITE VICINITY MAP

GEOTECHNICAL ENGINEERING SERVICES 14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE. KEY WEST, FLORIDA		DATE: 07/02/2010
		DRAWN CD
SHEET NO.: 1	PSI PROJ. NO.: 0397-216	CHKD: DB

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SITE PHOTOGRAPHS






GEOTECHNICAL ENGINEERING SERVICES 14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE. KEY WEST, FLORIDA		DATE: 07/02/2010 DRAWN CD	psi Information To Build On Engineering • Consulting • Testing
SHEET NO.: 2	PSI PROJ. NO.: 0397-216	CHKD: DB	

SITE PHOTOGRAPHS

GEOTECHNICAL ENGINEERING SERVICES
14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

DATE: 07/02/2010

DRAWN: CD

CHKD: DB

SHEET NO.: 3

PSI PROJ. NO.: 0397-216

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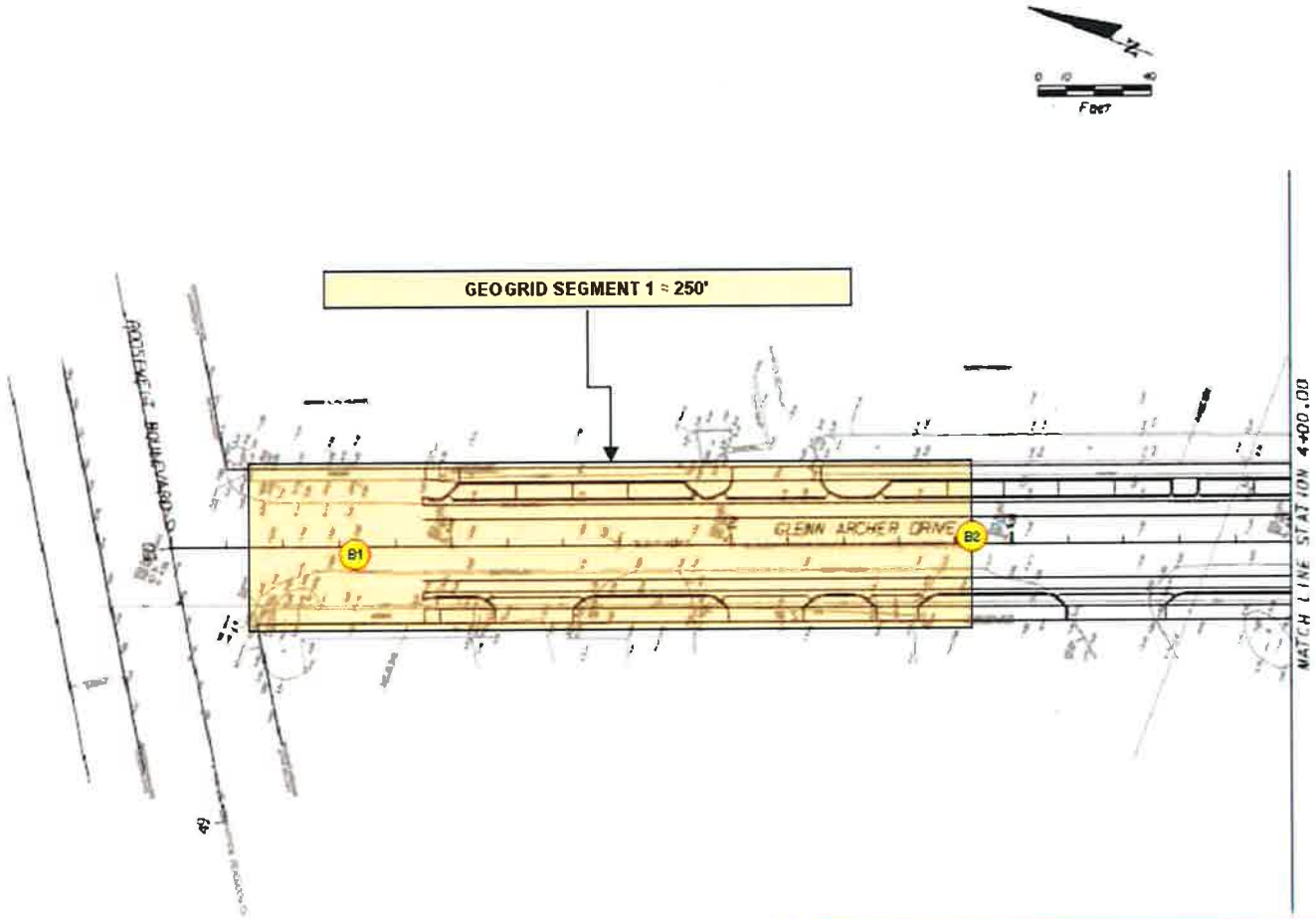
BORING LOCATION PLAN



APPROXIMATE SPT BORING LOCATION

GEOTECHNICAL ENGINEERING SERVICES 14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE. KEY WEST, FLORIDA		DATE: 07/02/2010 DRAWN CD
SHEET NO.: 4	PSI PROJ. NO.: 0397-216	CHKD: DB

psi Information To Build On
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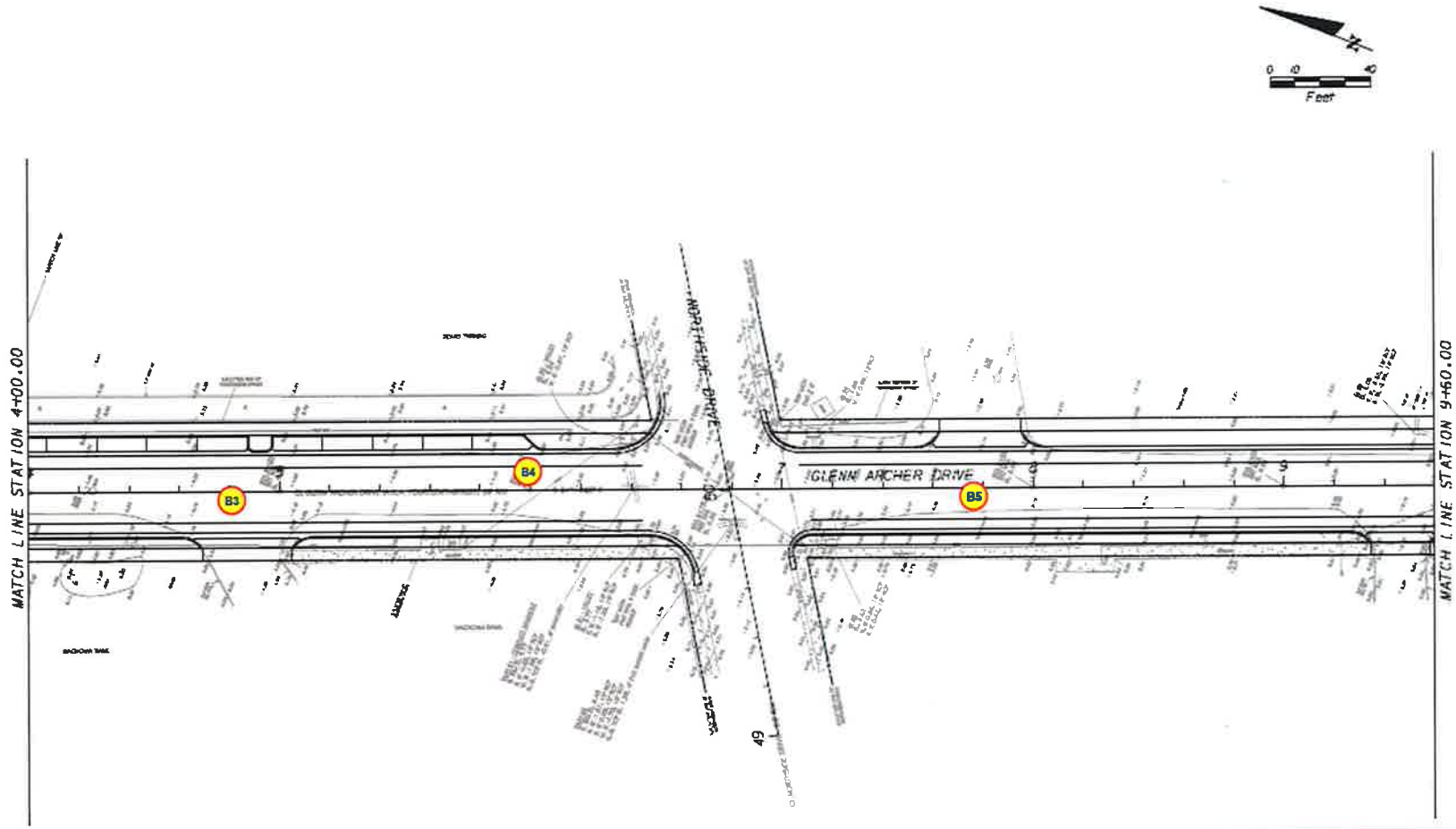
BORING LOCATION PLAN



APPROXIMATE SPT BORING LOCATION

GEOTECHNICAL ENGINEERING SERVICES 14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE. KEY WEST, FLORIDA		DATE: 07/02/2010 DRAWN CD
SHEET NO.: 5	PSI PROJ. NO.: 0397-216	CHKD: DB

psi Information To Build On
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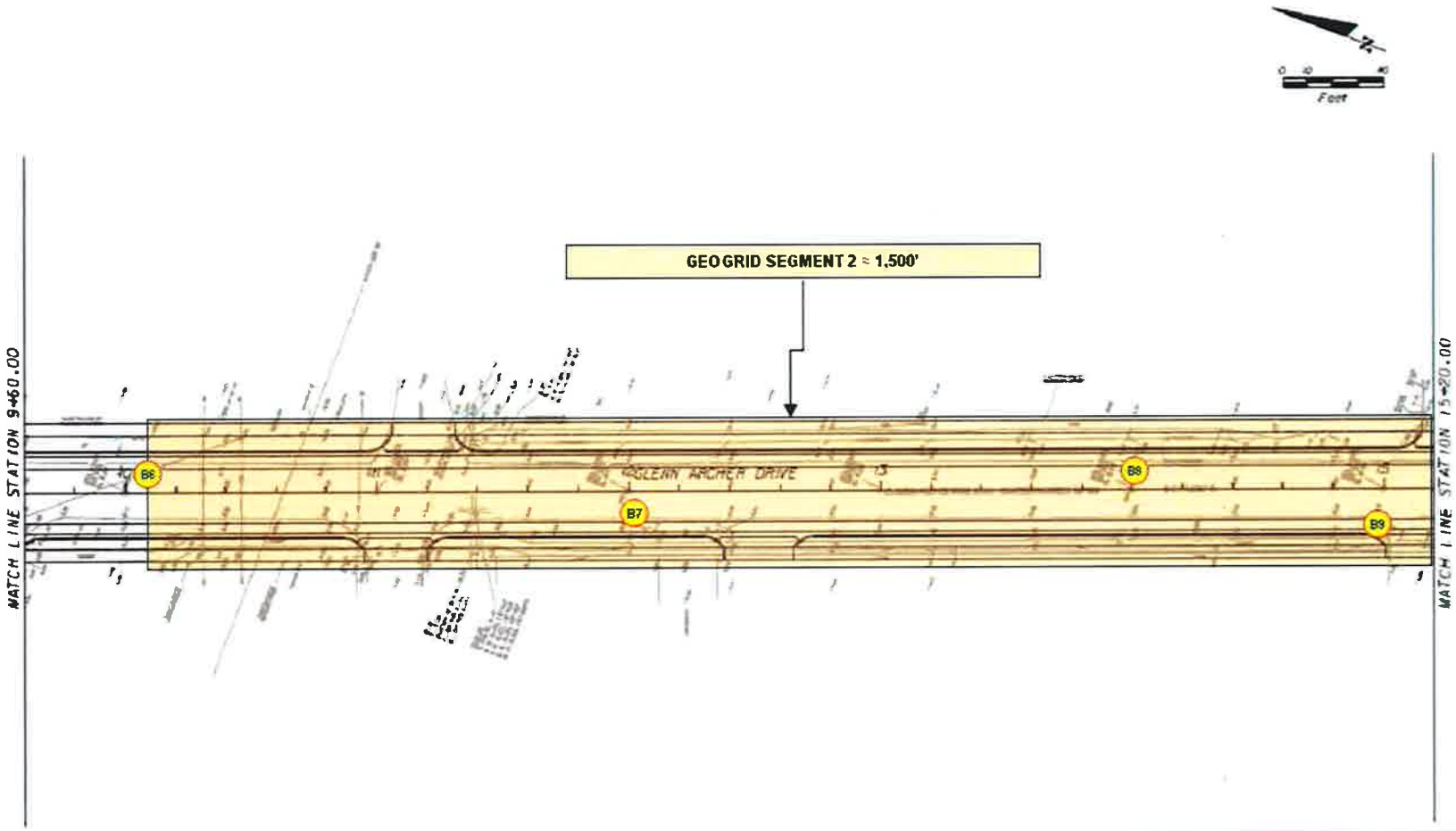
BORING LOCATION PLAN



APPROXIMATE SPT BORING LOCATION

GEOTECHNICAL ENGINEERING SERVICES 14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE. KEY WEST, FLORIDA		DATE: 07/02/2010 DRAWN CD
SHEET NO.: 6	PSI PROJ. NO.: 0397-216	CHKD: DB

psi Information To Build On
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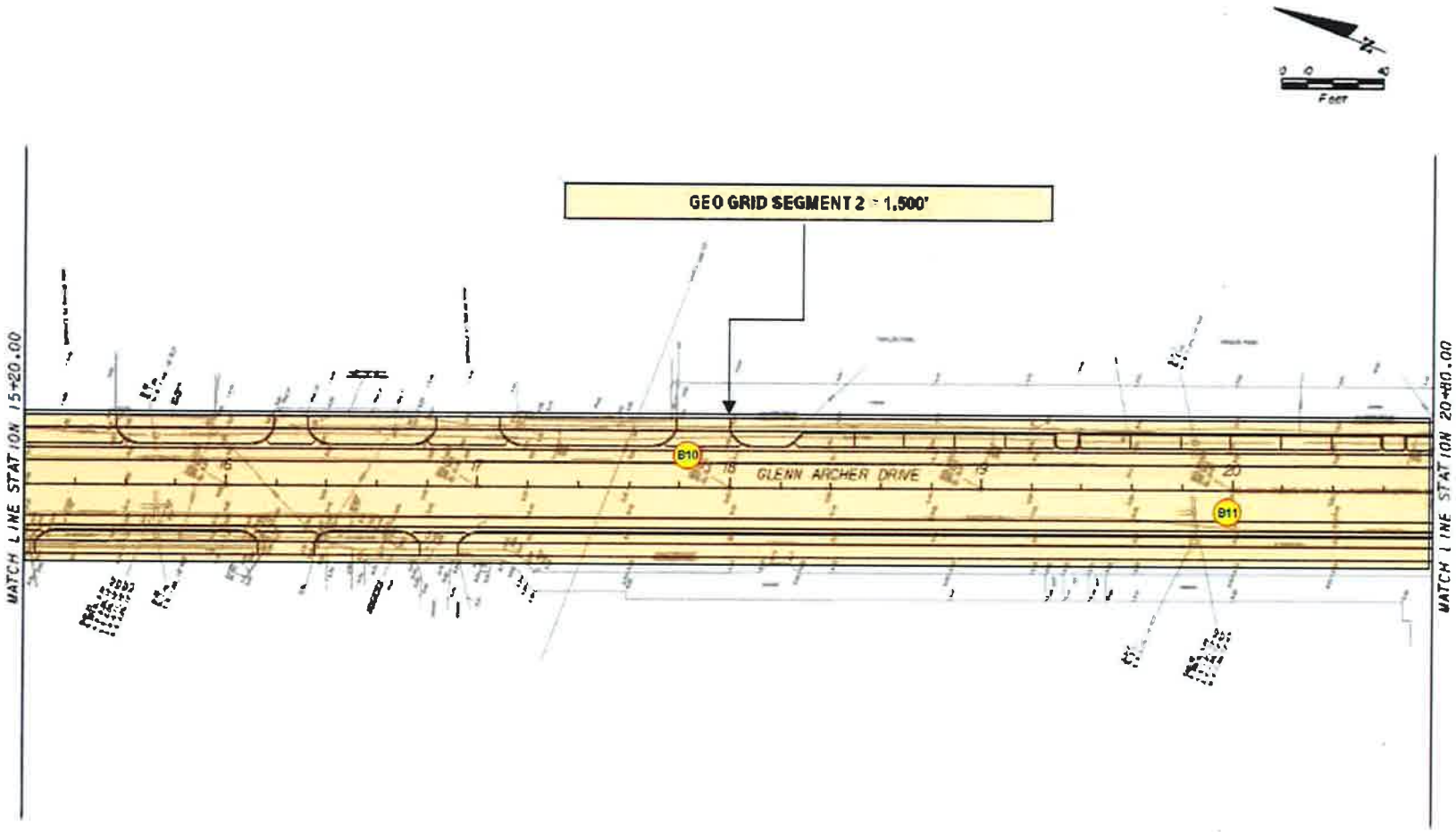
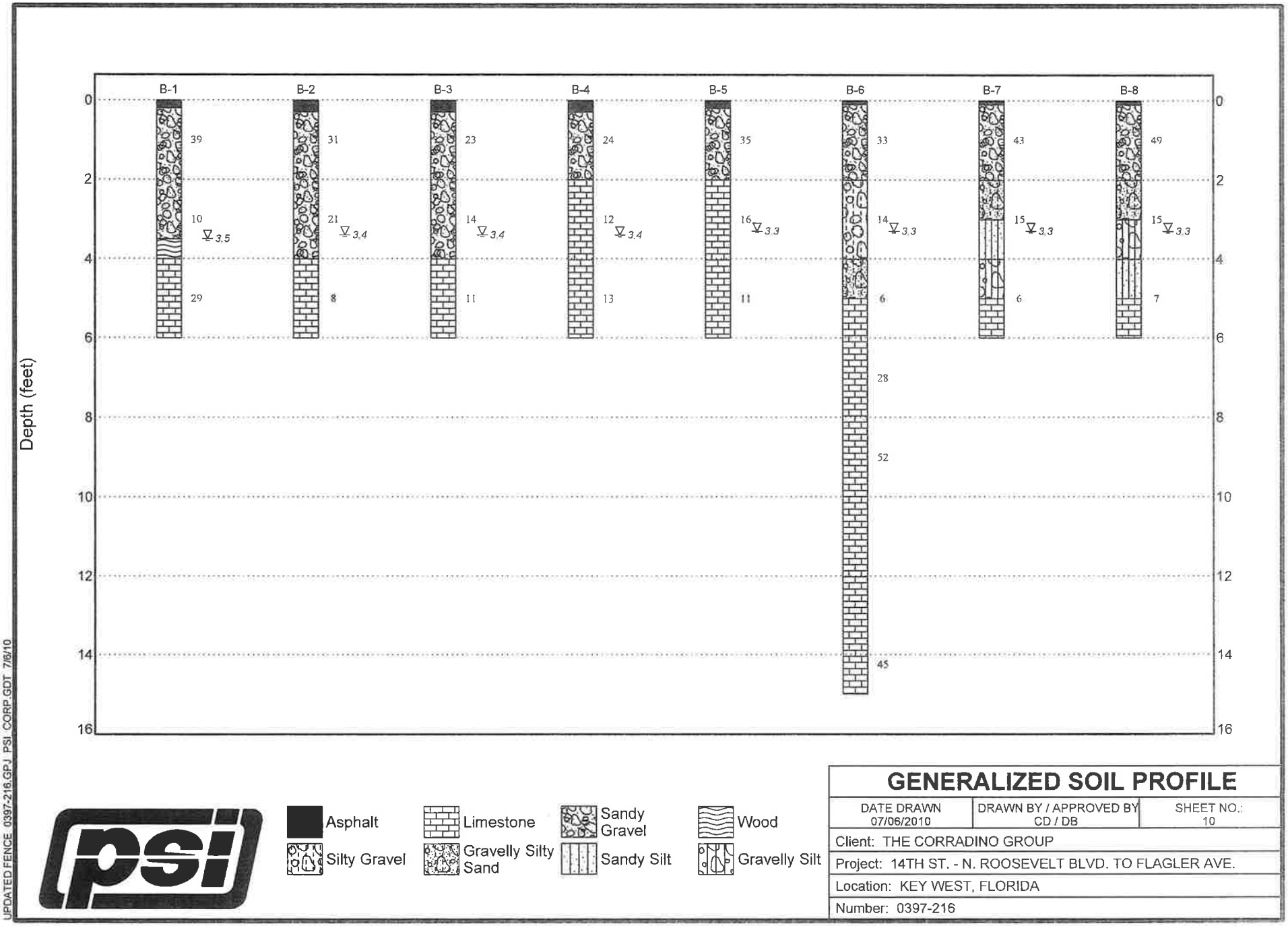
BORING LOCATION PLAN



APPROXIMATE SPT BORING LOCATION

GEOTECHNICAL ENGINEERING SERVICES 14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE. KEY WEST, FLORIDA	DATE: 07/02/2010	psi Information To Build On Engineering • Consulting • Testing
	DRAWN CD	
SHEET NO.: 7 / PSI PROJ. NO.: 0397-216	CHKD: DB	



GENERALIZED SOIL PROFILE

DATE DRAWN	DRAWN BY / APPROVED BY	SHEET NO.:
07/06/2010	CD / DB	10

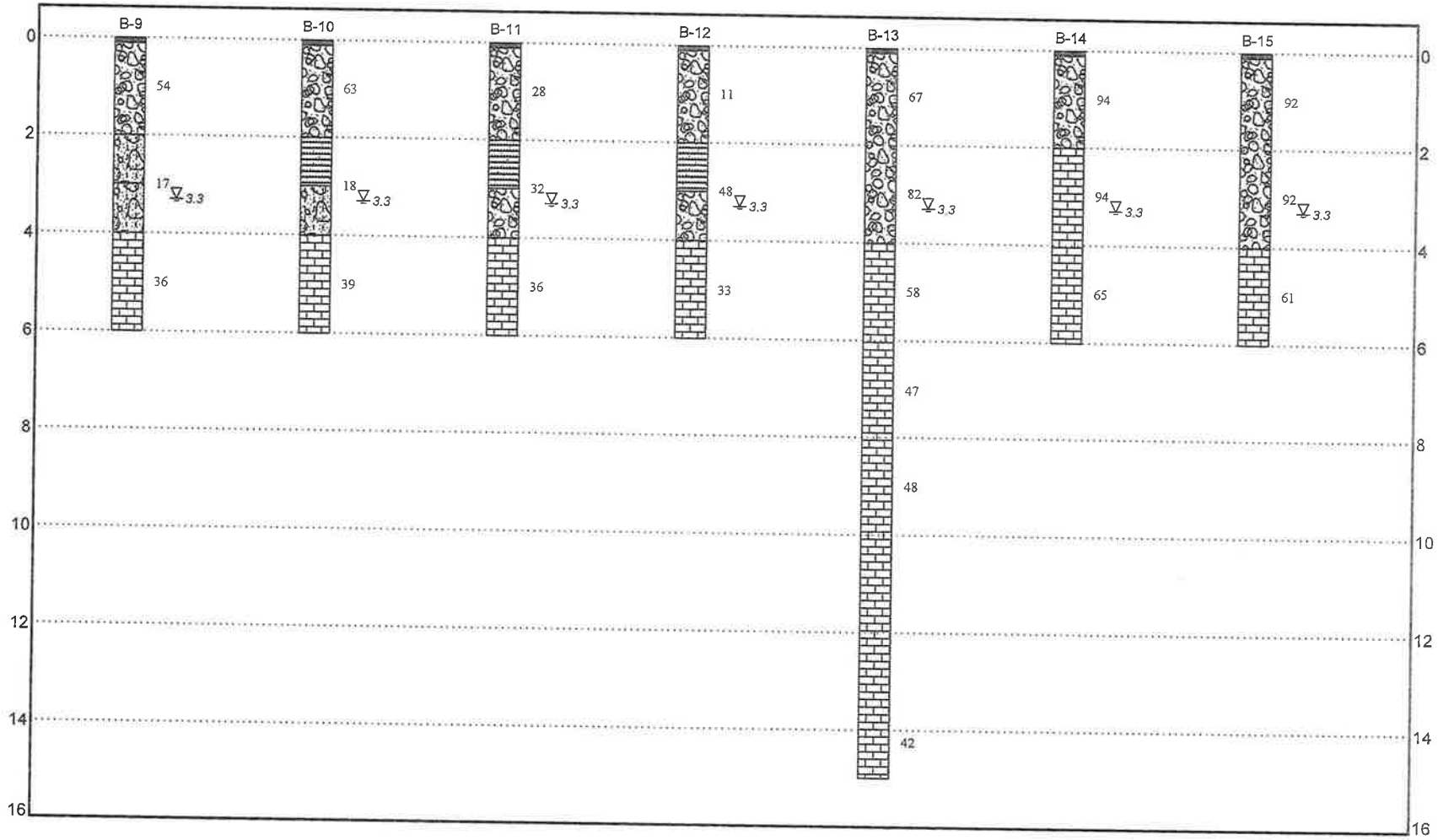
Client: THE CORRADINO GROUP

Project: 14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.

Location: KEY WEST, FLORIDA

Number: 0397-216

UPDATED FENCE 0397-216.GPJ PSI_CORP.GDT 7/6/10



Asphalt

Organic Sand

Sandy Gravel

Gravelly Silty Sand

Limestone

GENERALIZED SOIL PROFILE

DATE DRAWN	DRAWN BY / APPROVED BY	SHEET NO.:
07/01/2010	CD / DB	11

Client: THE CORRADINO GROUP

Project: 14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.

Location: KEY WEST, FLORIDA

Number: 0397-216

UPDATED FENCE 0397-216A.GPJ PSI_CORP.GDT 7/6/10

LOG OF BORING NO. B-1

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST ●N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				25-17-22-18	39	
							7-8-2-5	10	
			Decomposed Wood with Fine Sand and Traces of Limerock (A-8)		9	50			
5			Light Brown/Gray LIMESTONE with Fine Sand				14-14-15-11	29	
10									
15									

COMPLETION DEPTH (FT): 6.0 | **DEPTH TO WATER (FT): 3.5** | **SURF. ELEV.: NP**
DATE DRILLED: 6/23/10 | **CHECKED BY: DB/CD** | **DRILLER: L.R.**

Geotechnical Consulting Services
7950 N.W 64th Street
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305/471-7725
Fax 305/593-1915

BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

FINAL EXPLORER 0397-216.GPJ PSI_CORP.GDT 7/6/10

LOG OF BORING NO. B-2

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST ●N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				24-14-17-9	31	
							18-14-7-6	21	
5			Light Brown/Gray LIMESTONE with Fine Sand				2-2-6-6	8	
10									
15									

COMPLETION DEPTH (FT): 6.0 | **DEPTH TO WATER (FT): 3.4** | **SURF. ELEV.: NP**
DATE DRILLED: 6/23/10 | **CHECKED BY: DB/CD** | **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

FINAL EXPLORER 0397-216.GPJ PSI_CORP.GDT 7/6/10

LOG OF BORING NO. B-3

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST ●N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				20-13-10-10	23	
							5-8-6-6	14	
5			Light Brown/Gray LIMESTONE with Fine Sand				7-6-5-12	11	
10									
15									

COMPLETION DEPTH (FT): 6.0 | **DEPTH TO WATER (FT): 3.4** | **SURF. ELEV.: NP**
DATE DRILLED: 6/23/10 | **CHECKED BY: DB/CD** | **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

FINAL EXPLORER 0397-216.GPJ PSI_CORP.GDT 7/6/10

LOG OF BORING NO. B-4

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST ●N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				21-15-9-11	24	
			Light Brown/Gray LIMESTONE with Fine Sand				6-7-5-6	12	
5							7-7-6-10	13	
10									
15									

COMPLETION DEPTH (FT): 6.0 | **DEPTH TO WATER (FT): 3.4** | **SURF. ELEV.: NP**
DATE DRILLED: 6/23/10 | **CHECKED BY: DB/CD** | **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

FINAL EXPLORER 0397-216.GPJ PSI_CORP.GDT 7/6/10

LOG OF BORING NO. B-5

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST •N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				22-17-18-16	35	
			Light Brown/Gray LIMESTONE with Fine Sand				10-9-7-7	16	
5							5-5-6-5	11	
10									
15									

COMPLETION DEPTH (FT): 6.0 | **DEPTH TO WATER (FT): 3.3** | **SURF. ELEV.: NP**
DATE DRILLED: 6/23/10 | **CHECKED BY: DB/CD** | **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

FINAL EXPLORER 0397-216.GPJ PSI_CORP.GDT 7/6/10

LOG OF BORING NO. B-6

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP **PROJECT NO: 0397-216**

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT
			Asphalt					
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				20-14-19-15	33
			Light Brown/Gray LIMEROCK with Silty Fine Sand (A-1-a/A-1-b)				9-7-7-5	14
			Brown/Gray Slightly Organic Silty Fine SAND with Traces of Limerock (A-2-4)		4	41		
5			Light Brown/Gray LIMESTONE with Fine Sand				2-1-5-6	6
							7-12-16-30	28
							25-28-24-22	52
10								
							14-22-23	45
15								

STANDARD PENETRATION TEST
● N-VALUE (ASTM D-1586)
10 20 30 40 50 60 70 80 90

COMPLETION DEPTH (FT): 15.0 **DEPTH TO WATER (FT): 3.3** **SURF. ELEV.: NP**
DATE DRILLED: 6/24/10 **CHECKED BY: DB/CD** **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

FINAL EXPLORER 0397-216.GPJ PSI_CORP.GDT 7/6/10

LOG OF BORING NO. B-7

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST ●N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				29-23-20-19	43	
			Light Brown/Gray Silty Fine SAND with Traces of Limerock (A-2-4)						
			Light Brown/Gray Sandy SILT with Shell Fragments (A-4)	73		59	14-11-4-2	15	
			Light Brown/Gray Sandy SILT with Traces of Limerock and Shell Fragments (A-4)						
5			Light Brown/Gray LIMESTONE with Fine Sand				2-2-4-6	6	
10									
15									

COMPLETION DEPTH (FT): 6.0 | **DEPTH TO WATER (FT): 3.3** | **SURF. ELEV.: NP**
DATE DRILLED: 6/23/10 | **CHECKED BY: DB/CD** | **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

FINAL EXPLORER 0397-216.GPJ PSI_CORP.GDT 7/6/10

LOG OF BORING NO. B-8

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST ●N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				34-25-24-20	49	
			Light Brown/Gray Silty Fine SAND with Shell Fragments (A-2-4)						
			Light Brown/Gray Sandy SILT with Traces of Limerock (A-4)				12-10-5-3	15	
			Light Brown/Gray Sandy SILT with Shell Fragments (A-4)	66		62			
5			Light Brown/Gray LIMESTONE with Fine Sand				1-2-5-6	7	
10									
15									

COMPLETION DEPTH (FT): 6.0 | **DEPTH TO WATER (FT): 3.3** | **SURF. ELEV.: NP**
DATE DRILLED: 6/23/10 | **CHECKED BY: DB/CD** | **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

LOG OF BORING NO. B-9

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST ●N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				38-35-19-10	54	
			Light Brown/Gray Silty Fine SAND with Traces of Limerock and Glass Fragments (A-2-4)	25		37			
			Light Brown/Gray Silty Fine SAND with Traces of Limerock (A-2-4)				6-5-12-13	17	
5			Light Brown/Gray LIMESTONE with Fine Sand				16-17-19-18	36	
10									
15									

COMPLETION DEPTH (FT): 6.0 **DEPTH TO WATER (FT): 3.3** **SURF. ELEV.: NP**
DATE DRILLED: 6/23/10 **CHECKED BY: DB/CD** **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

FINAL EXPLORER 0397-216A.GPJ PSI_CORP.GDT 7/6/10

LOG OF BORING NO. B-11

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST ●N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				23-21-7-6	28	
			Brown Organic Silty Fine SAND with Traces of Limerock (A-8)		9	10			
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				2-2-30-35	32	
5			Light Brown/Gray LIMESTONE with Fine Sand				21-19-17-16	36	
10									
15									

COMPLETION DEPTH (FT): 6.0 | **DEPTH TO WATER (FT): 3.3** | **SURF. ELEV.: NP**
DATE DRILLED: 6/23/10 | **CHECKED BY: DB/CD** | **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

FINAL EXPLORER 0397-216A.GPJ PSI_CORP.GDT 7/6/10

LOG OF BORING NO. B-12

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST ●N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				20-7-4-3	11	
			Brown Organic Silty Fine SAND with Traces of Limerock and Glass Fragments (A-8)	25		43			
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				1-2-46-43	48	
5			Light Brown/Gray LIMESTONE with Fine Sand				22-17-16-14	33	
10									
15									

COMPLETION DEPTH (FT): 6.0 **DEPTH TO WATER (FT): 3.3** **SURF. ELEV.: NP**
DATE DRILLED: 6/23/10 **CHECKED BY: DB/CD** **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

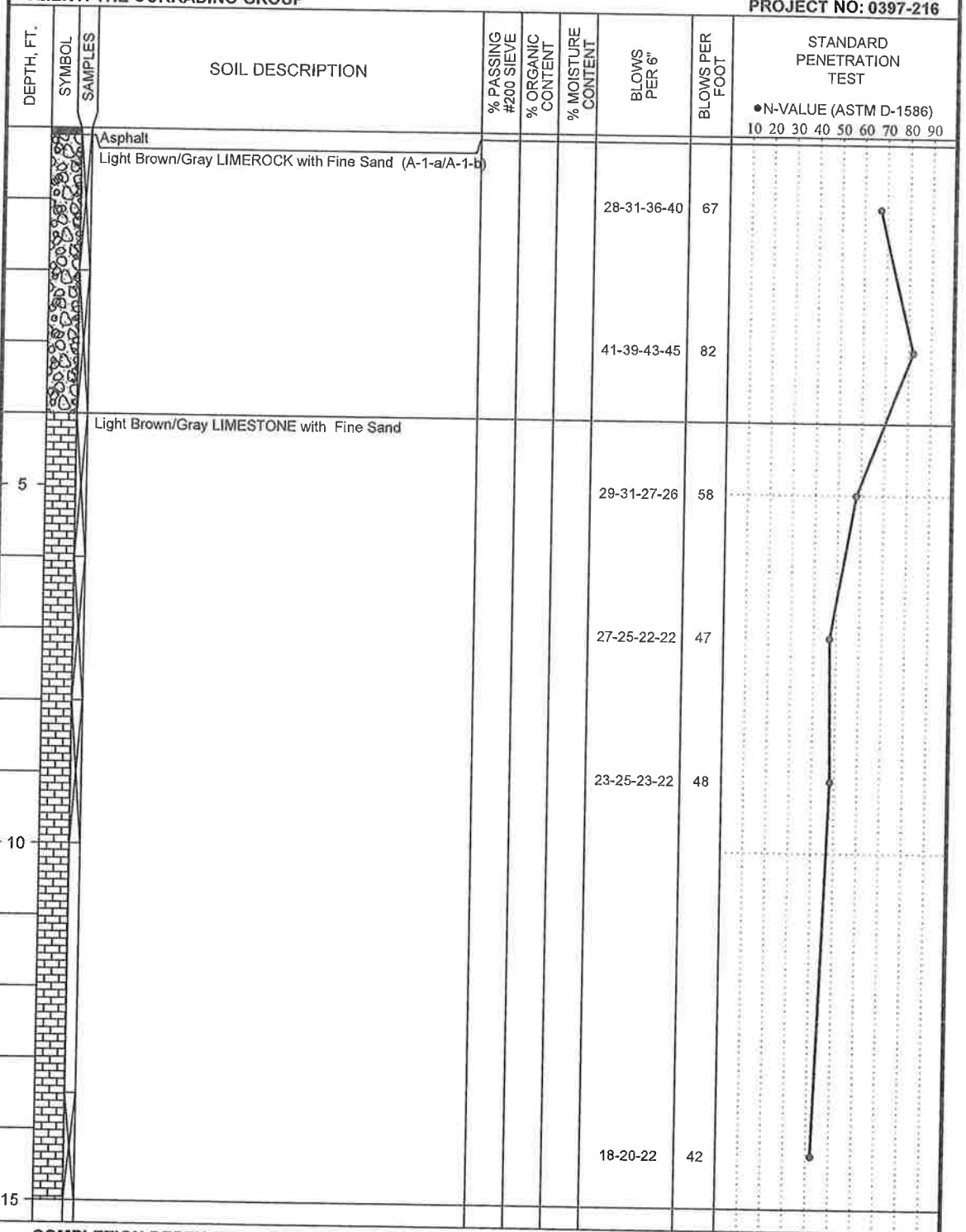
BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

FINAL EXPLORER 0397-216A.GPJ PSI_CORP.GDT 7/6/10

LOG OF BORING NO. B-13

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216



FINAL EXPLORER 0397-216A.GPJ PSI_CORP.GDT 7/6/10

COMPLETION DEPTH (FT): 15.0 | **DEPTH TO WATER (FT): 3.3** | **SURF. ELEV.: NP**
DATE DRILLED: 6/24/10 | **CHECKED BY: DB/CD** | **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

LOG OF BORING NO. B-14

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST ●N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				30-46-48-43	94	
			Light Brown/Gray LIMESTONE with Fine Sand				46-47-47-48	94	
5							32-35-30-27	65	
10									
15									

COMPLETION DEPTH (FT): 6.0 | **DEPTH TO WATER (FT): 3.3** | **SURF. ELEV.: NP**
DATE DRILLED: 6/23/10 | **CHECKED BY: DB/CD** | **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

LOG OF BORING NO. B-15

14TH ST. - N. ROOSEVELT BLVD. TO FLAGLER AVE.
KEY WEST, FLORIDA

BORING TYPE: 2" SPLIT BARREL (SPT)
CLIENT: THE CORRADINO GROUP
PROJECT NO: 0397-216

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING #200 SIEVE	% ORGANIC CONTENT	% MOISTURE CONTENT	BLOWS PER 6"	BLOWS PER FOOT	STANDARD PENETRATION TEST ●N-VALUE (ASTM D-1586) 10 20 30 40 50 60 70 80 90
			Asphalt						
			Light Brown/Gray LIMEROCK with Fine Sand (A-1-a/A-1-b)				31-45-47-40	92	
							42-45-47-48	92	
5			Light Brown/Gray LIMESTONE with Fine Sand				30-32-29-26	61	
10									
15									

COMPLETION DEPTH (FT): 6.0 **DEPTH TO WATER (FT): 3.3** **SURF. ELEV.: NP**
DATE DRILLED: 6/24/10 **CHECKED BY: DB/CD** **DRILLER: L.R.**

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BLOWS / FT.	DENSITY
<3	Very Loose
3-8	Loose
8-24	Medium Dense
24-40	Dense
>40	Very Dense

BLOWS / FT.	CONSISTENCY
<1	Very Soft
1-3	Soft
3-6	Firm
6-12	Stiff
12-24	Very Stiff
>24	Hard

DRILLING AND SAMPLING PROCEDURES

The borings were performed with a drill rig equipped with a rotary head. The drill holes were advanced by the use of a high speed rollercone bit, with bentonite drilling fluid being pumped through the drill rods to remove the cuttings and to stabilize the side walls and bottom of the hole. Representative samples were obtained by the use of split-barrel sampling procedures in general accordance with the procedures for "Penetration Test and Split-Barrel Sampling of Soils" (ASTM D-1586).

FIELD TESTS AND MEASUREMENTS

Penetration Tests - During the sampling procedure, Standard Penetration Tests (SPT) were performed at pre-determined intervals to obtain the standard penetration value (N) of the soil. The standard penetration value (N) is defined as the number of blows of a 140 pound hammer, falling thirty (30) inches, required to advance the split-barrel sampler one (1) foot into the soil. The sampler is lowered to the bottom of the previously cleaned drill hole and advanced by blows from the hammer. The number of blows is recorded for each of three (3) successive increments of six (6) inches penetration. The "N" value is obtained by adding the second and third incremental numbers.

Water Level Measurements - Water level depths were obtained during the boring operations. In relatively pervious soils, such as sandy soils, the indicated depths are usually reliable groundwater levels. Seasonal variations, tidal conditions, temperature, land-use, and recent rainfall conditions may influence the depths to the groundwater.

Ground Surface Elevations - Ground surface elevations at the boring locations were not provided. Therefore, all references to depth of the various strata and materials encountered are from existing grade at the time of drilling.