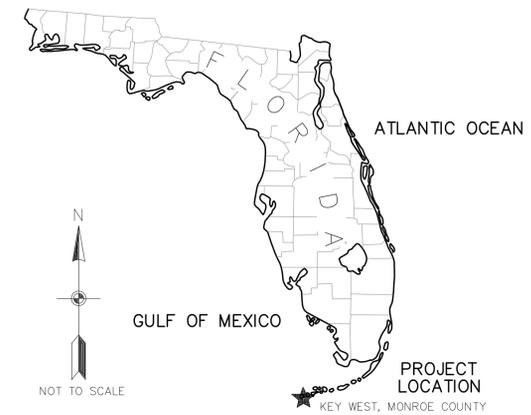
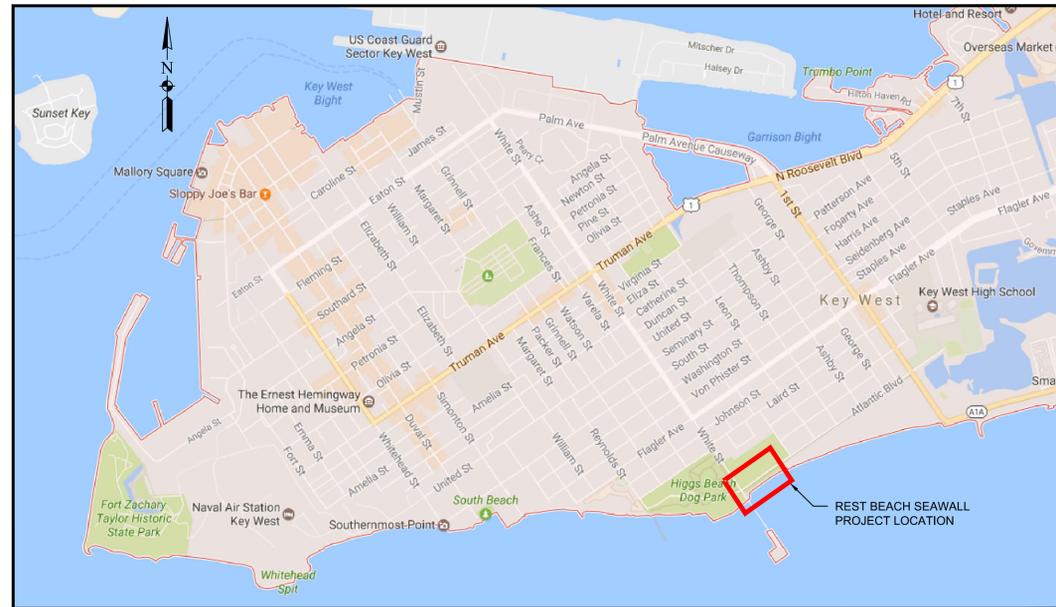


# CITY OF KEY WEST REST BEACH SEAWALL

## MONROE COUNTY, FLORIDA BID PLAN SET



MICHAEL R. BARNETT, PE  
FL LIC. # 44625



**VICINITY MAP**  
REST BEACH, KEY WEST, FLORIDA

### SHEET

SHEET #	TITLE	LATEST UPDATE	REV.
G-001	COVER SHEET AND VICINITY MAP	14-JUN-17	4
G-002	GENERAL NOTES, LEGEND AND ABBREVIATIONS	14-JUN-17	4
C-101	LIMITS OF CONSTRUCTION	14-JUN-17	4
C-102	SITE SURVEY (1 of 2)	14-JUN-17	4
C-103	SITE SURVEY (2 of 2)	14-JUN-17	4
C-104	EXISTING TREES (1 of 2)	14-JUN-17	4
C-105	EXISTING TREES (2 of 2)	14-JUN-17	4
C-106	EXISTING TREE PHOTOS (1 of 2)	14-JUN-17	4
C-107	EXISTING TREE PHOTOS (2 of 2)	14-JUN-17	4
C-108	DEMOLITION PLAN (1 of 3)	14-JUN-17	4
C-109	DEMOLITION PLAN (2 of 3)	14-JUN-17	4
C-110	DEMOLITION PLAN (3 of 3)	14-JUN-17	4
C-111	GRADING PLAN	14-JUN-17	4

C-112	SEAWALL INSTALLATION PLAN (1 of 3)	14-JUN-17	4
C-113	SEAWALL INSTALLATION PLAN (2 of 3)	14-JUN-17	4
C-114	SEAWALL INSTALLATION PLAN (3 of 3)	14-JUN-17	4
C-115	PLANTING PLAN	14-JUN-17	4
C-301	CROSS SECTIONS	14-JUN-17	4
C-302	CROSS SECTIONS	14-JUN-17	4
C-303	CROSS SECTIONS	14-JUN-17	4
C-501	DETAILS	14-JUN-17	4
C-502	DETAILS	14-JUN-17	4
C-503	DETAILS	14-JUN-17	4

**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**

Mark	Description	Date	Appr.
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
2	MOVE ALIGNMENT SEAWALL/ADD CAP	5/17/17	MB
0	ISSUED FOR CLIENT REVIEW	4/6/17	MB
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

Designed By:  
M. BARNETT  
Drawn By:  
M. BARNETT  
Checked By:  
R. CZAPINSKI  
Reviewed By:  
S. MCGAHEE  
Design file no:  
MWB-C-001-LOWER SHEET 1006.dwg  
Scale:  
AS SHOWN

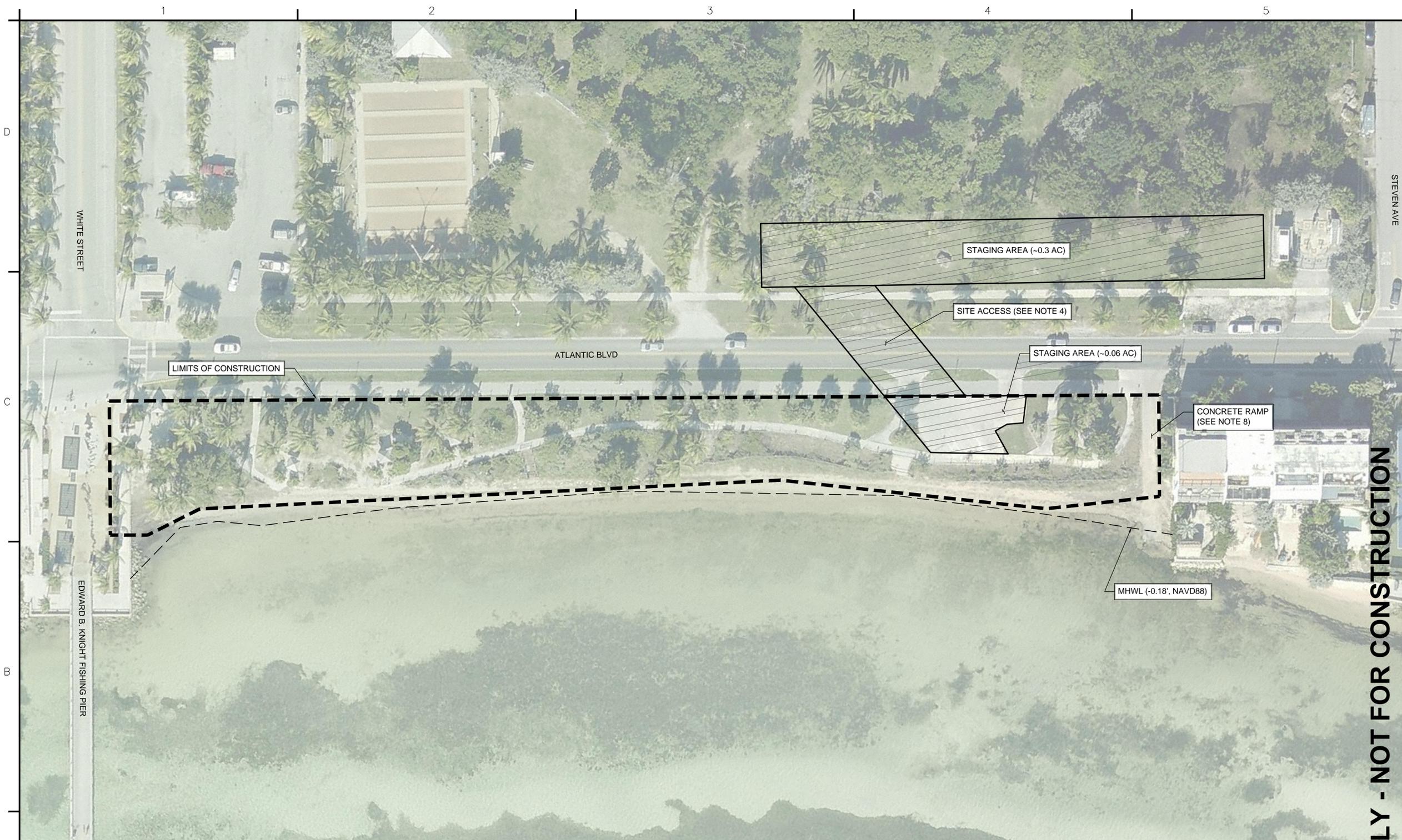
**TETRA TECH INC.**  
759 SOUTH FEDERAL HWY  
SUITE 314  
KEY WEST, FL 34094-2936  
TEL: (772) 781-3400  
FAX: (772) 781-3411  
CERTIFICATE OF AUTHORIZATION  
NO. 2429



**CITY OF KEY WEST**  
**REST BEACH SEAWALL**  
COVER SHEET AND VICINITY MAP  
**KEY WEST, MONROE COUNTY, FL**

Sheet Reference:  
**G-001**  
Sheet 1 of 23





MICHAEL R. BARNETT, PE  
FL LIC. # 44625

Mark	Description	Date	Appr.
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
1	REVISED BASED ON CLIENT REVIEW	4/6/17	MB
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

Designed By:  
M. BARNETT  
Drawn By:  
M. BARNETT  
Checked By:  
R. CZAPINSKI  
Reviewed By:  
S. MCGAHEE  
Design file no.:  
MWB-C-101-SEA-WALL-70810-00  
Scale:  
AS SHOWN



TETRA TECH INC.  
759 SOUTH FEDERAL HWY  
SUITE 314  
MIAMI, FL 33130  
TEL: (772) 781-3400  
FAX: (772) 781-3411

CITY OF KEY WEST  
REST BEACH SEAWALL  
LIMITS OF CONSTRUCTION  
KEY WEST, MONROE COUNTY, FL

CERTIFICATE OF AUTHORIZATION  
NO. 2429

Sheet Reference:  
**C-101**  
Sheet 3 of 23

**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**

**NOTES:**

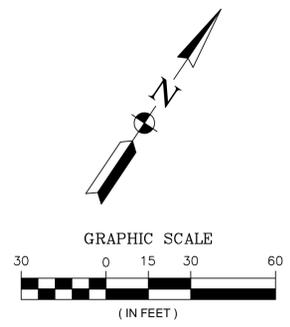
- SEE SHEET C-102 & C-103 FOR SITE SURVEY.
- THE CITY OF KEY WEST WILL MAKE THE STAGING AREAS SHOWN AVAILABLE FOR USE BY THE CONTRACTOR AT NO COST. THE EXACT LOCATION OF THE SITE ACCESS/CROSSING OF ATLANTIC BLVD. MAY BE SUBJECT TO FIELD ADJUSTMENT BY THE CITY/ENGINEER.
- UPON COMPLETION OF THE PROJECT, ALL AREAS UTILIZED BY THE CONTRACTOR SHALL BE RESTORED TO THE ORIGINAL OR BETTER CONDITION.
- THE CONTRACTOR SHALL MAINTAIN TRAFFIC ALONG ATLANTIC BLVD THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 102. THE CONTRACTOR SHALL NOT IMPEDE TRAFFIC. CONTRACTOR SHALL PROVIDE FLAGGERS AS NEEDED TO SAFELY CROSS ATLANTIC BLVD.
- THE CONTRACTOR SHALL MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 104. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS, INCLUDING A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND TO FILE THE NOTICE OF INTENT.

**NOTES CONT'D:**

- CONTRACTOR SHALL PROVIDE ANTI-TRACKING MEASURES AND KEEP ATLANTIC BLVD FREE OF DEBRIS AT ALL TIMES.
- UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR'S MATERIALS OR EQUIPMENT ENCROACH SEAWARD OF THE MEAN HIGH WATER LINE (MHWL).
- PUBLIC ACCESS TO THE CONCRETE RAMP SHALL BE MAINTAINED AT ALL TIMES. CONTRACTOR SHALL NOT STAGE MATERIAL ON THE RAMP.

**LEGEND:**

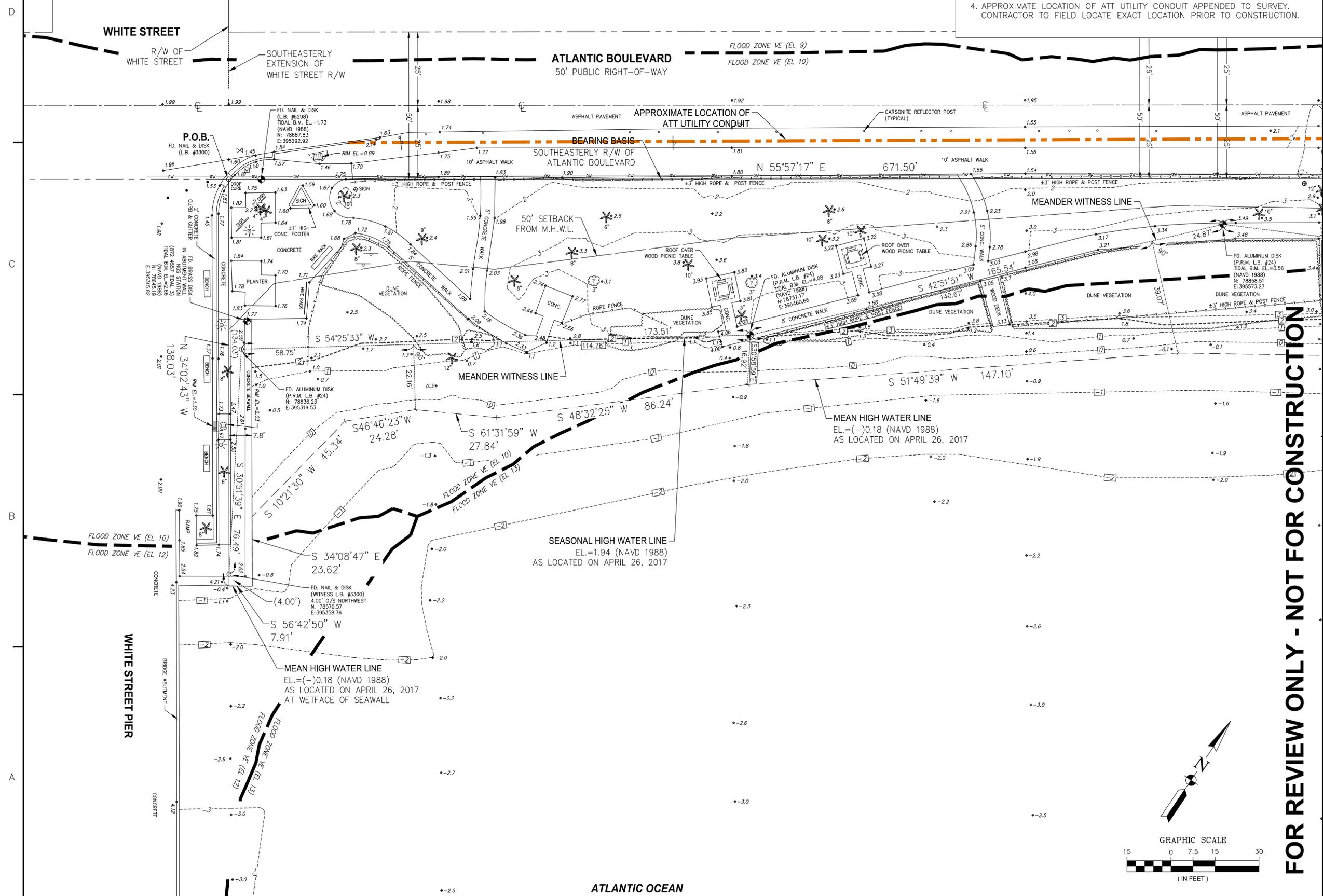
- LIMITS OF CONSTRUCTION
- STAGING AREA LOCATIONS
- MEAN HIGH WATER LINE (MHWL)



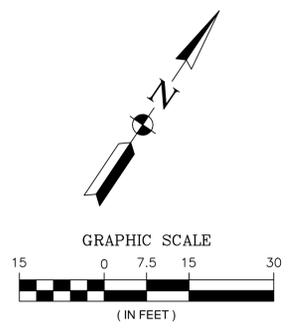
- NOTES:
1. SITE SURVEY PERFORMED BY AVIROM & ASSOCIATES INC. ON APRIL 26, 2017.
  2. ALL ELEVATIONS ARE REFERENCED TO NAVD88. NGVD29 = 1.35' + NAVD88.
  3. HORIZONTAL COORDINATES, WHERE DEPICTED, ARE REFERENCED TO NAD83, FLORIDA STATE PLANE, EAST ZONE.
  4. APPROXIMATE LOCATION OF ATT UTILITY CONDUIT APPENDED TO SURVEY. CONTRACTOR TO FIELD LOCATE EXACT LOCATION PRIOR TO CONSTRUCTION.



MICHAEL R. BARNETT, PE  
FL LIC. # 44625



**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**



Mark	Description	Date	Appr.
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB
1	REVISED BASED ON CLIENT REVIEW	4/6/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB

Designed By: M. BARNETT  
Drawn By: M. BARNETT  
Checked By: R. CZAPINSKI  
Reviewed By: S. MCGARRETT  
Design file no.: MREG-102-1000-1706-10-1  
Scale: AS SHOWN

**TETRA TECH INC.**  
759 SOUTH FEDERAL HWY  
SUITE 314  
KEY WEST, FL 34094-2936  
TEL: (772) 781-3400  
FAX: (772) 781-3411  
CERTIFICATE OF AUTHORIZATION  
NO. 2429



**CITY OF KEY WEST**  
**REST BEACH SEAWALL**  
SITE SURVEY (1 of 2)  
**KEY WEST, MONROE COUNTY, FL**

Sheet Reference:  
**C-102**  
Sheet 4 of 23

- NOTES:
1. SITE SURVEY PERFORMED BY AVIROM & ASSOCIATES INC. ON APRIL 26, 2017.
  2. ALL ELEVATIONS ARE REFERENCED TO NAVD88. NGVD29 = 1.35' + NAVD88.
  3. HORIZONTAL COORDINATES, WHERE DEPICTED, ARE REFERENCED TO NAD83, FLORIDA STATE PLANE, EAST ZONE.
  4. APPROXIMATE LOCATION OF ATT UTILITY CONDUIT APPENDED TO SURVEY. CONTRACTOR TO FIELD LOCATE EXACT LOCATION PRIOR TO CONSTRUCTION.



MICHAEL R. BARNETT, PE  
FL LIC. # 44625

Mark	Description	Date	Appr.
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB
1	REVISED BASED ON CLIENT REVIEW	4/6/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB

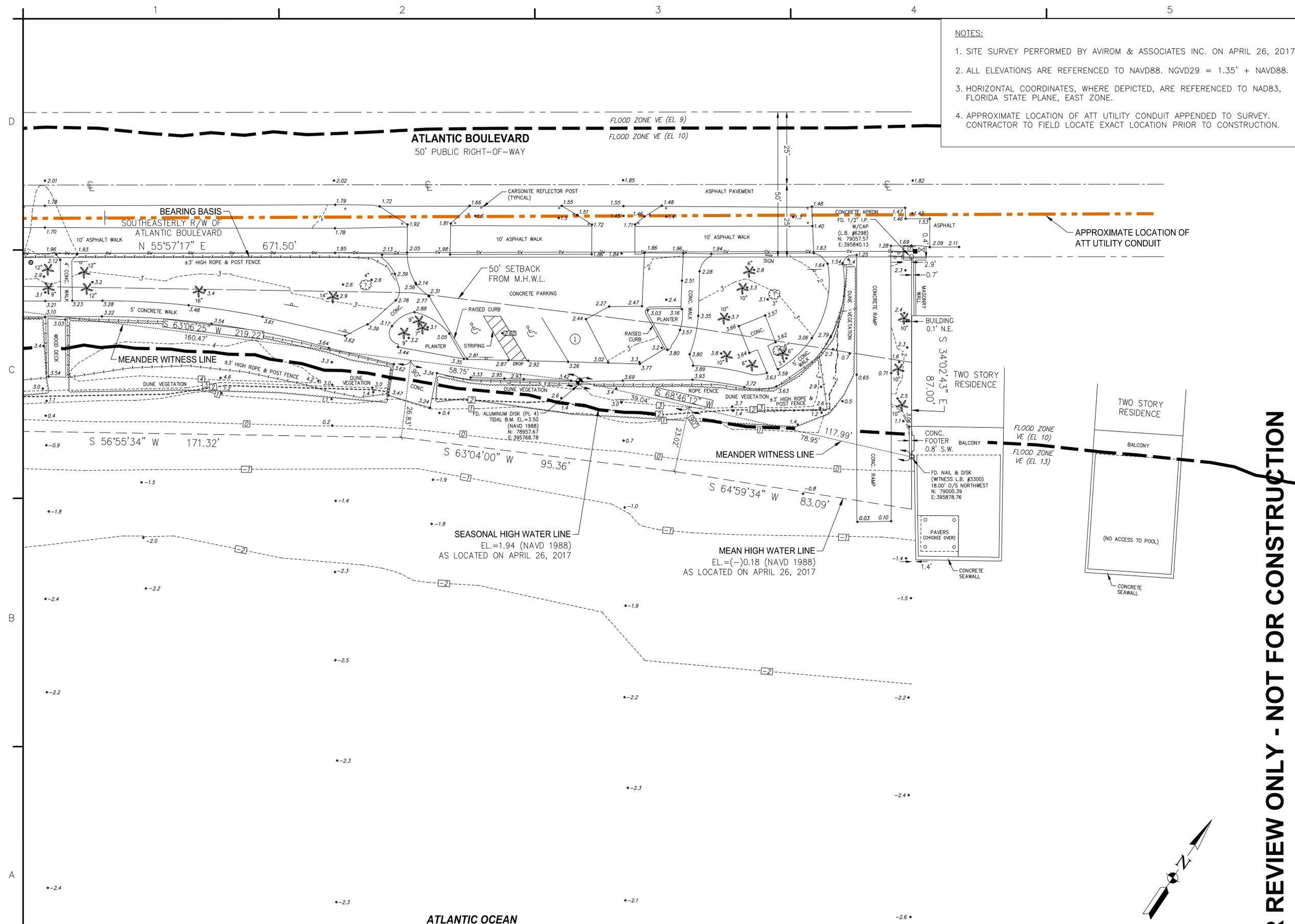
Designed By:  
M. BARNETT  
Drawn By:  
R. CZAPINSKI  
Checked By:  
R. CZAPINSKI  
Reviewed By:  
S. MCGARHEE  
Design file no.:  
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Scale:  
AS SHOWN

TETRA TECH INC.  
759 SOUTH FEDERAL HWY  
SUITE 314  
KEY WEST, FL 34094-2936  
TEL: (772) 781-3400  
FAX: (772) 781-3411  
CERTIFICATE OF AUTHORIZATION  
NO. 2429



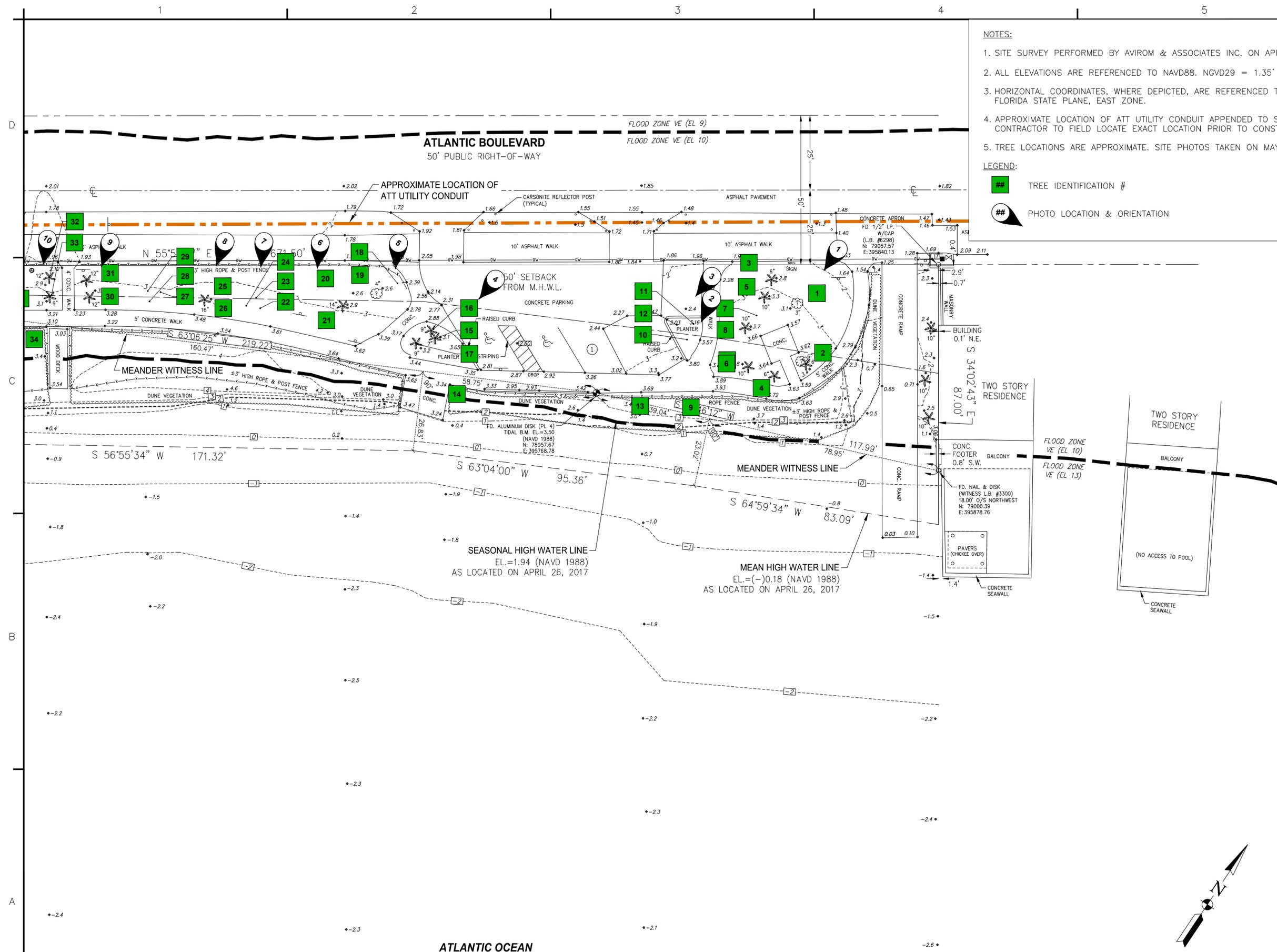
CITY OF KEY WEST  
REST BEACH SEAWALL  
SITE SURVEY (2 of 2)  
KEY WEST, MONROE COUNTY, FL

Sheet Reference:  
**C-103**  
Sheet 5 of 23



**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**





- NOTES:**
1. SITE SURVEY PERFORMED BY AVIROM & ASSOCIATES INC. ON APRIL 26, 2017.
  2. ALL ELEVATIONS ARE REFERENCED TO NAVD88. NGVD29 = 1.35' + NAVD88.
  3. HORIZONTAL COORDINATES, WHERE DEPICTED, ARE REFERENCED TO NAD83, FLORIDA STATE PLANE, EAST ZONE.
  4. APPROXIMATE LOCATION OF ATT UTILITY CONDUIT APPENDED TO SURVEY. CONTRACTOR TO FIELD LOCATE EXACT LOCATION PRIOR TO CONSTRUCTION.
  5. TREE LOCATIONS ARE APPROXIMATE. SITE PHOTOS TAKEN ON MAY 31, 2017.

- LEGEND:**
- ## TREE IDENTIFICATION #
  - ## PHOTO LOCATION & ORIENTATION



MICHAEL R. BARNETT, PE  
FL LIC. # 44625

Mark	Description	Date	Appr.
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
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0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

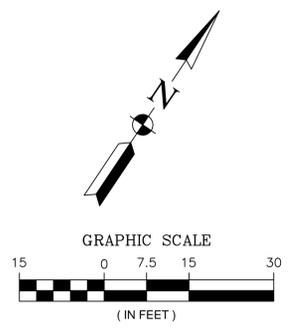
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M. BARNETT  
Drawn By:  
M. BARNETT  
Checked By:  
R. CZAPINSKI  
Reviewed By:  
S. MCGARRE  
Design file no.:  
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Scale:  
AS SHOWN

**TETRA TECH INC.**  
759 SOUTH FEDERAL HWY  
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KEY WEST, FL 34094-2936  
TEL: (772) 781-3400  
FAX: (772) 781-3411  
CERTIFICATE OF AUTHORIZATION  
NO. 2429

**CITY OF KEY WEST**  
REST BEACH SEAWALL  
EXISTING TREES (2 of 2)  
**KEY WEST, MONROE COUNTY, FL**

Sheet Reference:  
**C-105**  
Sheet 7 of 23

**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**



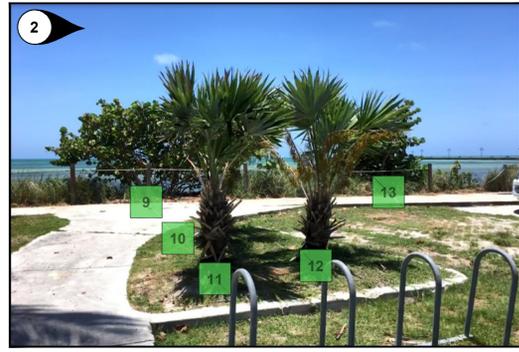
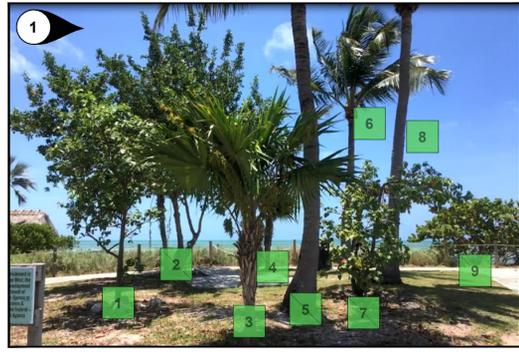
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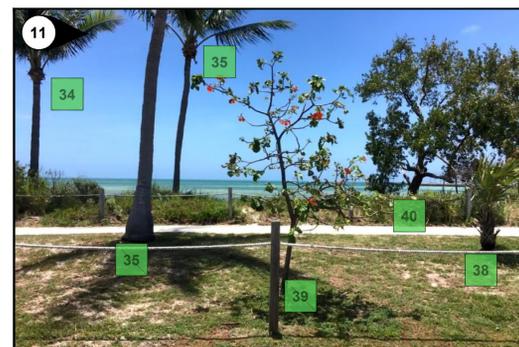
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5



NOTES:  
 1. SITE PHOTOS TAKEN ON MAY 31, 2017.  
 2. SEE SHEETS C-104 & C-105 FOR PHOTO LOCATIONS.

LEGEND:  
 ## TREE IDENTIFICATION #  
 ## PHOTO LOCATION & ORIENTATION



MICHAEL R. BARNETT, PE  
FL LIC. # 44625

Mark	Description	Date	Appr.
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
3	ADD TREE LOCATION DETAILS	6/16/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
0	RESUBMITTED BASED ON CLIENT REVIEW	4/16/17	MB
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

Designed By:  
M. BARNETT

Drawn By:  
M. BARNETT

Checked By:  
R. CZAPINSKI

Reviewed By:  
S. MCGAHEE

Design file no.:  
MWB\_C-104\_1000\_TREES.DWG

Scale:  
AS SHOWN



TETRA TECH INC.  
 759 SOUTH FEDERAL HWY  
 SUITE 314  
 MIAMI, FL 33134  
 TEL: (772) 781-3400  
 FAX: (772) 781-3411

CERTIFICATE OF AUTHORIZATION  
 NO. 2429

CITY OF KEY WEST  
 REST BEACH SEAWALL  
 EXISTING TREE PHOTOS (1 of 2)  
 KEY WEST, MONROE COUNTY, FL

Sheet Reference:  
**C-106**  
 Sheet 8 of 23

FOR REVIEW ONLY - NOT FOR CONSTRUCTION

NOTES:

1. SITE PHOTOS TAKEN ON MAY 31, 2017.

2. SEE SHEETS C-104 & C-105 FOR PHOTO LOCATIONS.

LEGEND:

## TREE IDENTIFICATION #

## PHOTO LOCATION & ORIENTATION



MICHAEL R. BARNETT, PE  
FL LIC. # 44625

D

C

B

A



**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**

Mark	Description	Date	Appr.
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
0	REISSUED BASED ON CLIENT REVIEW	4/6/17	MB
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

Designed By:  
M. BARNETT

Drawn By:  
M. BARNETT

Checked By:  
R. CZAPINSKI

Reviewed By:  
S. MCGAHEE

Design file no.:  
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Scale:  
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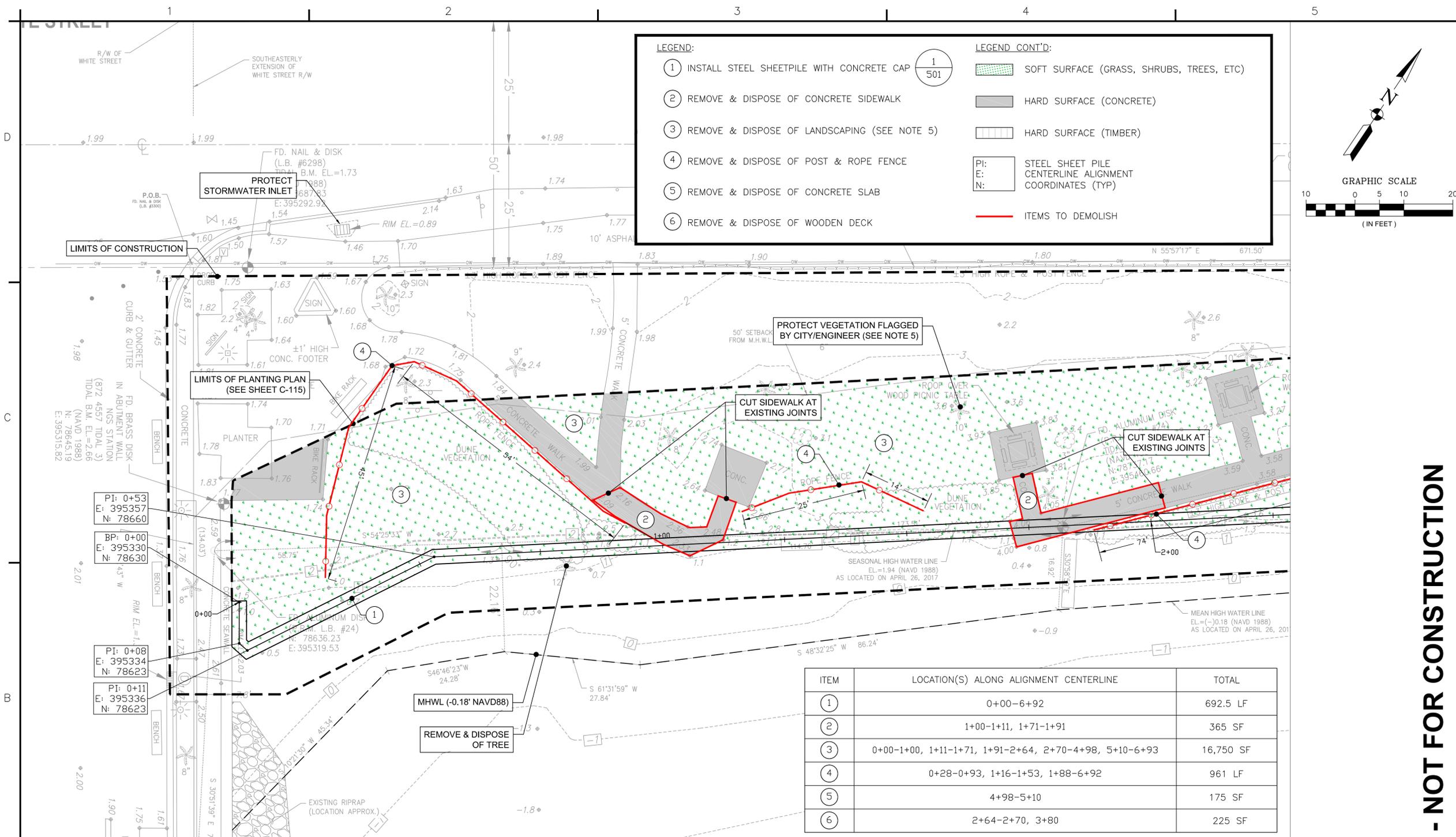


**TETRA TECH INC.**  
759 SOUTH FEDERAL HWY  
SUITE 314  
MIAMI, FL 33134  
TEL: (772) 781-3400  
FAX: (772) 781-3411

CERTIFICATE OF AUTHORIZATION  
NO. 2429

CITY OF KEY WEST  
REST BEACH SEAWALL  
EXISTING TREE PHOTOS (2 of 2)  
KEY WEST, MONROE COUNTY, FL

Sheet Reference:  
**C-107**  
Sheet 9 of 23

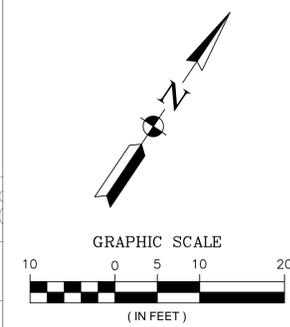


**LEGEND:**

- ① INSTALL STEEL SHEETPILE WITH CONCRETE CAP
- ② REMOVE & DISPOSE OF CONCRETE SIDEWALK
- ③ REMOVE & DISPOSE OF LANDSCAPING (SEE NOTE 5)
- ④ REMOVE & DISPOSE OF POST & ROPE FENCE
- ⑤ REMOVE & DISPOSE OF CONCRETE SLAB
- ⑥ REMOVE & DISPOSE OF WOODEN DECK

**LEGEND CONT'D:**

- SOFT SURFACE (GRASS, SHRUBS, TREES, ETC)
- HARD SURFACE (CONCRETE)
- HARD SURFACE (TIMBER)
- PI: STEEL SHEET PILE CENTERLINE ALIGNMENT COORDINATES (TYP)
- E: (Symbol)
- N: (Symbol)
- ITEMS TO DEMOLISH



MICHAEL R. BARNETT, PE  
FL LIC. # 44625

Mark	Description	Date	Appr.
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
4	ADD TREE LOCATION DETAILS	6/16/17	MB
3	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
2	ISSUED BASED ON CLIENT REVIEW	4/16/17	MB
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

Designed By: M. BARNETT  
Drawn By: M. BARNETT  
Checked By: R. CZAPINSKI  
Reviewed By: S. MCGAHEE  
Design file no.: MRE-C-108.DWG  
Scale: AS SHOWN

**TETRA TECH INC.**  
759 SOUTH FEDERAL HWY  
SUITE 314  
MIAMI, FL 33130  
TEL: (772) 781-3400  
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NO. 2429

**CITY OF KEY WEST**  
REST BEACH SEAWALL  
DEMOLITION PLAN (1 of 3)  
KEY WEST, MONROE COUNTY, FL

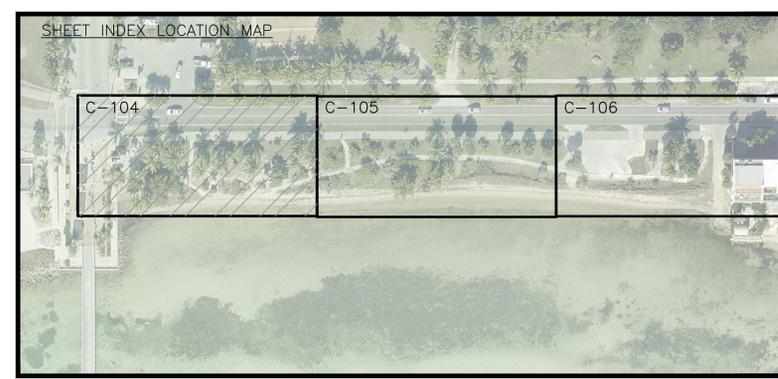
Sheet Reference:  
**C-108**  
Sheet 10 of 23

ITEM	LOCATION(S) ALONG ALIGNMENT CENTERLINE	TOTAL
①	0+00-6+92	692.5 LF
②	1+00-1+11, 1+71-1+91	365 SF
③	0+00-1+00, 1+11-1+71, 1+91-2+64, 2+70-4+98, 5+10-6+93	16,750 SF
④	0+28-0+93, 1+16-1+53, 1+88-6+92	961 LF
⑤	4+98-5+10	175 SF
⑥	2+64-2+70, 3+80	225 SF

- NOTES:**
- SEE SHEET C-102 & C-103 FOR SITE SURVEY.
  - ALL ELEVATIONS REFERENCED TO NAVD88. NGVD29 = 1.35' + NAVD88.
  - HORIZONTAL COORDINATES, WHERE DEPICTED, ARE REFERENCED TO NAD83, FLORIDA STATE PLANE, EAST ZONE.
  - CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
  - CONTRACTOR SHALL PRESERVE AND PROTECT ALL TREES/SHRUBS/VEGETATION FLAGGED BY CITY/ENGINEER.
  - DEMOLITION ACTIVITIES FOR THIS PROJECT INCLUDE THE FOLLOWING:
    - CONCRETE SIDEWALK CROSSINGS (2 LOCATIONS TOTALING 365sf).
    - CONCRETE SLABS (1 LOCATION TOTALING 175sf).
    - WOODEN DECKS (2 LOCATIONS TOTALING 225sf).
    - TREES, SHRUBS, VEGETATION & GRASS SOD TO ACCOMMODATE SEAWALL & NEW PLANTINGS (16,750sf).
    - POST & ROPE FENCE (961 LINEAR FEET).
  - SIGNS THAT REQUIRE REMOVAL FOR CONSTRUCTION ACTIVITIES SHALL BE TEMPORARILY RELOCATED AND MAINTAINED ON SITE FOR THE DURATION OF CONSTRUCTION ACTIVITIES. LOCATION SHALL BE APPROVED BY THE CITY.

- NOTES (CONT'D):**
- THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL OBSTRUCTIONS ALONG THE BULKHEAD'S ALIGNMENT PRIOR TO CONSTRUCTION. THE QUANTITY OF ITEMS REQUIRING DEMOLITION AND REPLACEMENT SHALL VARY DEPENDING UPON THE CONTRACTOR'S MEANS AND METHODS.
  - CONTRACTOR SHALL FIELD STAKE THE BULKHEAD ALIGNMENT AT THE INFLECTION POINTS SHOWN; CITY AND ENGINEER SHALL APPROVE THE STAKED ALIGNMENT PRIOR TO THE CONTRACTOR INITIATING SITE PREPARATION FOR SHEET PILE INSTALLATION.

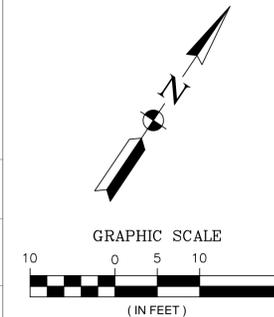
**Sunshine811**  
Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.  
*Check positive response codes before you dig!*



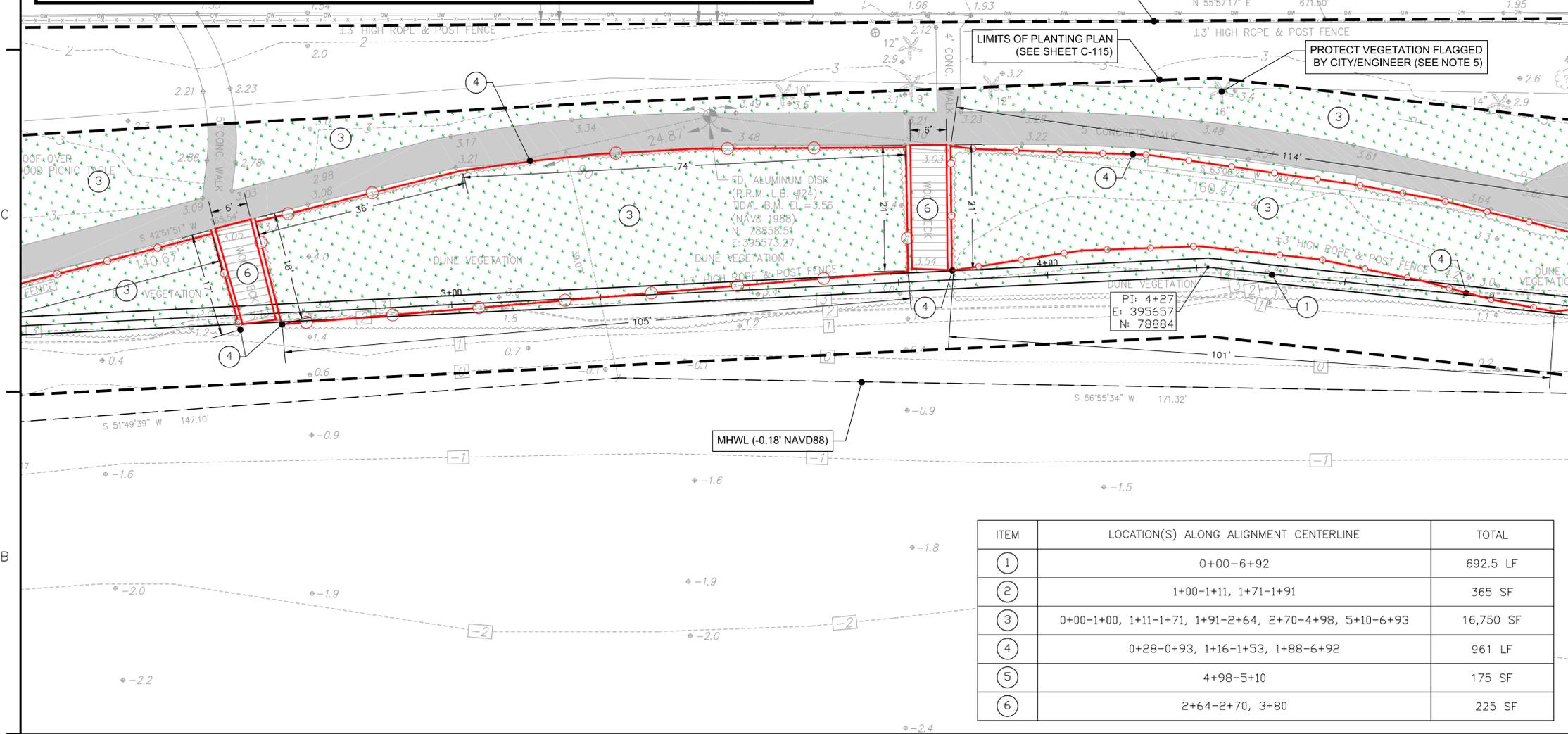
**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**



MICHAEL R. BARNETT, PE  
FL LIC. # 44625



LEGEND:		LEGEND CONT'D:	
①	INSTALL STEEL SHEETPILE WITH CONCRETE CAP		SOFT SURFACE (GRASS, SHRUBS, TREES, ETC)
②	REMOVE & DISPOSE OF CONCRETE SIDEWALK		HARD SURFACE (CONCRETE)
③	REMOVE & DISPOSE OF LANDSCAPING (SEE NOTE 5)		HARD SURFACE (TIMBER)
④	REMOVE & DISPOSE OF POST & ROPE FENCE	PI:	STEEL SHEET PILE
⑤	REMOVE & DISPOSE OF CONCRETE SLAB	E:	CENTERLINE ALIGNMENT
⑥	REMOVE & DISPOSE OF WOODEN DECK	N:	COORDINATES (TYP)
			ITEMS TO DEMOLISH



ITEM	LOCATION(S) ALONG ALIGNMENT CENTERLINE	TOTAL
①	0+00-6+92	692.5 LF
②	1+00-1+11, 1+71-1+91	365 SF
③	0+00-1+00, 1+11-1+71, 1+91-2+64, 2+70-4+98, 5+10-6+93	16,750 SF
④	0+28-0+93, 1+16-1+53, 1+88-6+92	961 LF
⑤	4+98-5+10	175 SF
⑥	2+64-2+70, 3+80	225 SF

- NOTES:**
- SEE SHEET C-102 & C-103 FOR SITE SURVEY.
  - ALL ELEVATIONS REFERENCED TO NAVD88. NGVD29 = 1.35' + NAVD88.
  - HORIZONTAL COORDINATES, WHERE DEPICTED, ARE REFERENCED TO NAD83, FLORIDA STATE PLANE, EAST ZONE.
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  - CONTRACTOR SHALL PRESERVE AND PROTECT ALL TREES/SHRUBS/VEGETATION FLAGGED BY CITY/ENGINEER.
  - DEMOLITION ACTIVITIES FOR THIS PROJECT INCLUDE THE FOLLOWING:
    - CONCRETE SIDEWALK CROSSINGS (2 LOCATIONS TOTALING 365sf).
    - CONCRETE SLABS (1 LOCATION TOTALING 175sf).
    - WOODEN DECKS (2 LOCATIONS TOTALING 225sf).
    - TREES, SHRUBS, VEGETATION & GRASS SOD TO ACCOMMODATE SEAWALL & NEW PLANTINGS (16,750sf).
    - POST & ROPE FENCE (961 LINEAR FEET).
  - SIGNS THAT REQUIRE REMOVAL FOR CONSTRUCTION ACTIVITIES SHALL BE TEMPORARILY RELOCATED AND MAINTAINED ON SITE FOR THE DURATION OF CONSTRUCTION ACTIVITIES. LOCATION SHALL BE APPROVED BY THE CITY.

- NOTES (CONT'D):**
- THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL OBSTRUCTIONS ALONG THE BULKHEAD'S ALIGNMENT PRIOR TO CONSTRUCTION. THE QUANTITY OF ITEMS REQUIRING DEMOLITION AND REPLACEMENT SHALL VARY DEPENDING UPON THE CONTRACTOR'S MEANS AND METHODS.
  - CONTRACTOR SHALL FIELD STAKE THE BULKHEAD ALIGNMENT AT THE INFLECTION POINTS SHOWN; CITY AND ENGINEER SHALL APPROVE THE STAKED ALIGNMENT PRIOR TO THE CONTRACTOR INITIATING SITE PREPARATION FOR SHEET PILE INSTALLATION.

**Sunshine811**  
Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.  
*Check positive response codes before you dig!*



**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**

Mark	Description	Date	Appr.
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB
1	REVISED BASED ON CLIENT REVIEW	4/6/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB

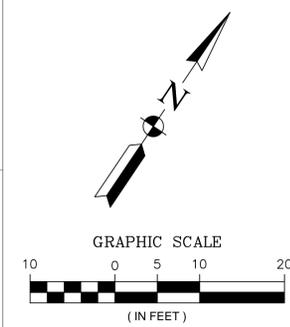
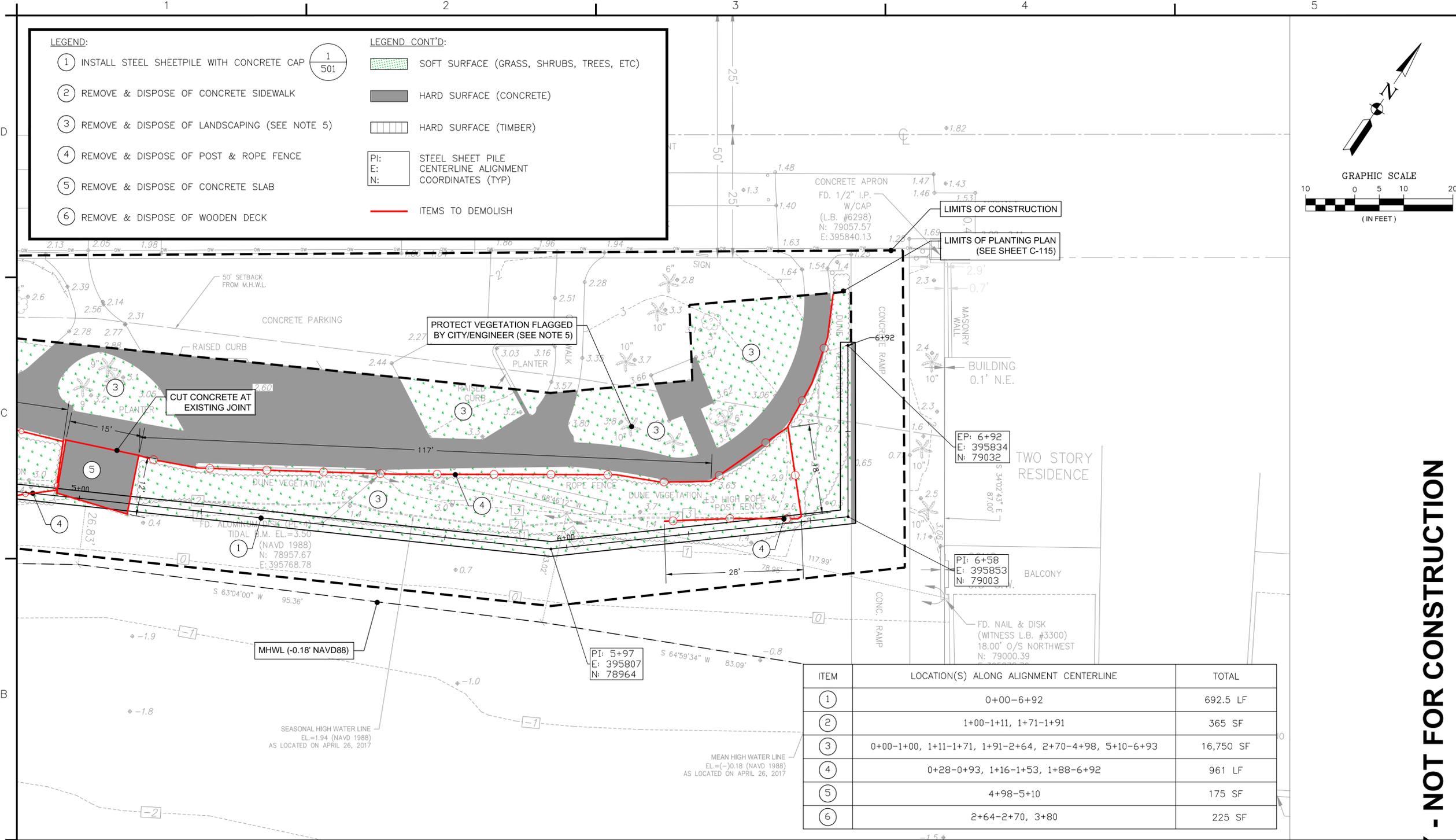
Designed By: M. BARNETT  
Drawn By: M. BARNETT  
Checked By: R. CZAPINSKI  
Reviewed By: S. MCGARHEE  
Design file no.: MWB-C-106.DMPRAN.170514.dwg  
Scale: AS SHOWN

**TETRA TECH INC.**  
759 SOUTH FEDERAL HWY  
SUITE 314  
MIAMI, FL 33130  
TEL: (772) 781-3400  
FAX: (772) 781-3411  
CERTIFICATE OF AUTHORIZATION  
NO. 2429

CITY OF KEY WEST  
REST BEACH SEAWALL  
DEMOLITION PLAN (2 of 3)  
KEY WEST, MONROE COUNTY, FL

Sheet Reference:  
**C-109**  
Sheet 11 of 23

- LEGEND:**
- ① INSTALL STEEL SHEETPILE WITH CONCRETE CAP
  - ② REMOVE & DISPOSE OF CONCRETE SIDEWALK
  - ③ REMOVE & DISPOSE OF LANDSCAPING (SEE NOTE 5)
  - ④ REMOVE & DISPOSE OF POST & ROPE FENCE
  - ⑤ REMOVE & DISPOSE OF CONCRETE SLAB
  - ⑥ REMOVE & DISPOSE OF WOODEN DECK
- LEGEND CONT'D:**
- [Green Dotted Pattern] SOFT SURFACE (GRASS, SHRUBS, TREES, ETC)
  - [Grey Solid] HARD SURFACE (CONCRETE)
  - [White with Vertical Lines] HARD SURFACE (TIMBER)
  - PI: STEEL SHEET PILE CENTERLINE ALIGNMENT COORDINATES (TYP)
  - E: [Red Line] ITEMS TO DEMOLISH



MICHAEL R. BARNETT, PE  
FL LIC. # 44625

Mark	Description	Date	Appr.
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
1	REISSUED BASED ON CLIENT REVIEW	4/6/17	MB
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

Designed By:  
M. BARNETT  
Drawn By:  
M. BARNETT  
Checked By:  
R. CZAPINSKI  
Reviewed By:  
S. MCGAHEE  
Design file no.:  
MWB-C-106-DMP-PLAN-170514.dwg  
Scale:  
AS SHOWN

**TETRA TECH INC.**  
759 SOUTH FEDERAL HWY  
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MIAMI, FL 33134  
TEL: (772) 781-3400  
FAX: (772) 781-3411  
CERTIFICATE OF AUTHORIZATION  
NO. 2429

**CITY OF KEY WEST**  
REST BEACH SEAWALL  
DEMOLITION PLAN (3 of 3)  
**KEY WEST, MONROE COUNTY, FL**

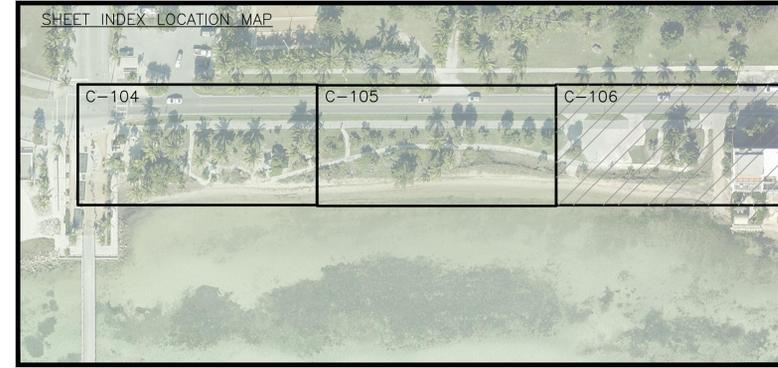
Sheet Reference:  
**C-110**  
Sheet 12 of 23

ITEM	LOCATION(S) ALONG ALIGNMENT CENTERLINE	TOTAL
①	0+00-6+92	692.5 LF
②	1+00-1+11, 1+71-1+91	365 SF
③	0+00-1+00, 1+11-1+71, 1+91-2+64, 2+70-4+98, 5+10-6+93	16,750 SF
④	0+28-0+93, 1+16-1+53, 1+88-6+92	961 LF
⑤	4+98-5+10	175 SF
⑥	2+64-2+70, 3+80	225 SF

- NOTES:**
- SEE SHEET C-102 & C-103 FOR SITE SURVEY.
  - ALL ELEVATIONS REFERENCED TO NAVD88. NGVD29 = 1.35' + NAVD88.
  - HORIZONTAL COORDINATES, WHERE DEPICTED, ARE REFERENCED TO NAD83, FLORIDA STATE PLANE, EAST ZONE.
  - CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
  - CONTRACTOR SHALL PRESERVE AND PROTECT ALL TREES/SHRUBS/VEGETATION FLAGGED BY CITY/ENGINEER.
  - DEMOLITION ACTIVITIES FOR THIS PROJECT INCLUDE THE FOLLOWING:
    - CONCRETE SIDEWALK CROSSINGS (2 LOCATIONS TOTALING 365sf).
    - CONCRETE SLABS (1 LOCATION TOTALING 175sf).
    - WOODEN DECKS (2 LOCATIONS TOTALING 225sf).
    - TREES, SHRUBS, VEGETATION & GRASS SOD TO ACCOMMODATE SEAWALL & NEW PLANTINGS (16,750sf).
    - POST & ROPE FENCE (961 LINEAR FEET).
  - SIGNS THAT REQUIRE REMOVAL FOR CONSTRUCTION ACTIVITIES SHALL BE TEMPORARILY RELOCATED AND MAINTAINED ON SITE FOR THE DURATION OF CONSTRUCTION ACTIVITIES. LOCATION SHALL BE APPROVED BY THE CITY.

- NOTES (CONT'D):**
- THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL OBSTRUCTIONS ALONG THE BULKHEAD'S ALIGNMENT PRIOR TO CONSTRUCTION. THE QUANTITY OF ITEMS REQUIRING DEMOLITION AND REPLACEMENT SHALL VARY DEPENDING UPON THE CONTRACTOR'S MEANS AND METHODS.
  - CONTRACTOR SHALL FIELD STAKE THE BULKHEAD ALIGNMENT AT THE INFLECTION POINTS SHOWN; CITY AND ENGINEER SHALL APPROVE THE STAKED ALIGNMENT PRIOR TO THE CONTRACTOR INITIATING SITE PREPARATION FOR SHEET PILE INSTALLATION.

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MICHAEL R. BARNETT, PE  
FL LIC. # 44625

Mark	Description	Date	Appr.
0	ISSUED FOR CLIENT REVIEW	3/23/17	
1	REVISION		
2	REVISION		
3	REVISION		
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
5	ADD TREE LOCATION DETAILS	6/16/17	MB
6	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
7	REVISION	4/16/17	MB
8	ISSUED FOR CLIENT REVIEW	3/23/17	MB

Designed By:  
M. BARNETT

Drawn By:  
M. BARNETT

Checked By:  
R. CZAPINSKI

Reviewed By:  
S. MCGARRE

Design file no.:  
MWB\_C-112\_BURBORGUAN\_170817.dwg

Scale:  
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TETRA TECH INC.  
759 SOUTH FEDERAL HWY  
SUITE 314  
MIAMI, FL 33130  
TEL: (772) 781-3400  
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CERTIFICATE OF AUTHORIZATION  
NO. 2429

CITY OF KEY WEST  
REST BEACH SEAWALL  
SEAWALL INSTALLATION PLAN

KEY WEST, MONROE COUNTY, FL

Sheet Reference:  
**C-112**  
Sheet 14 of 23

# ATLANTIC BOULEVARD

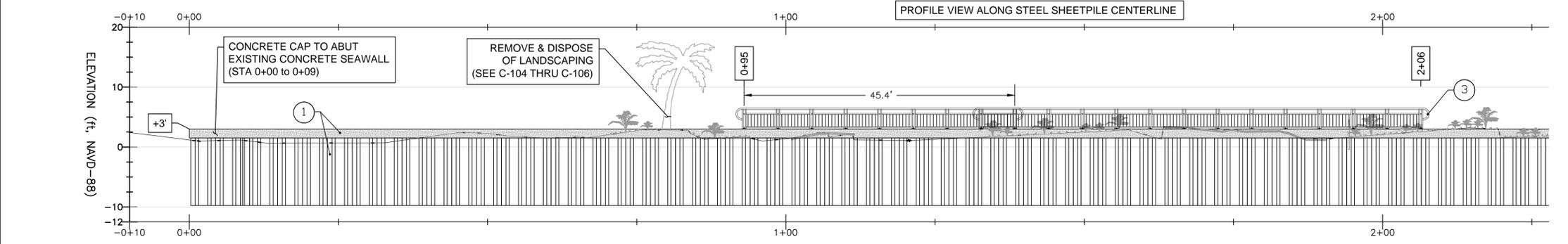
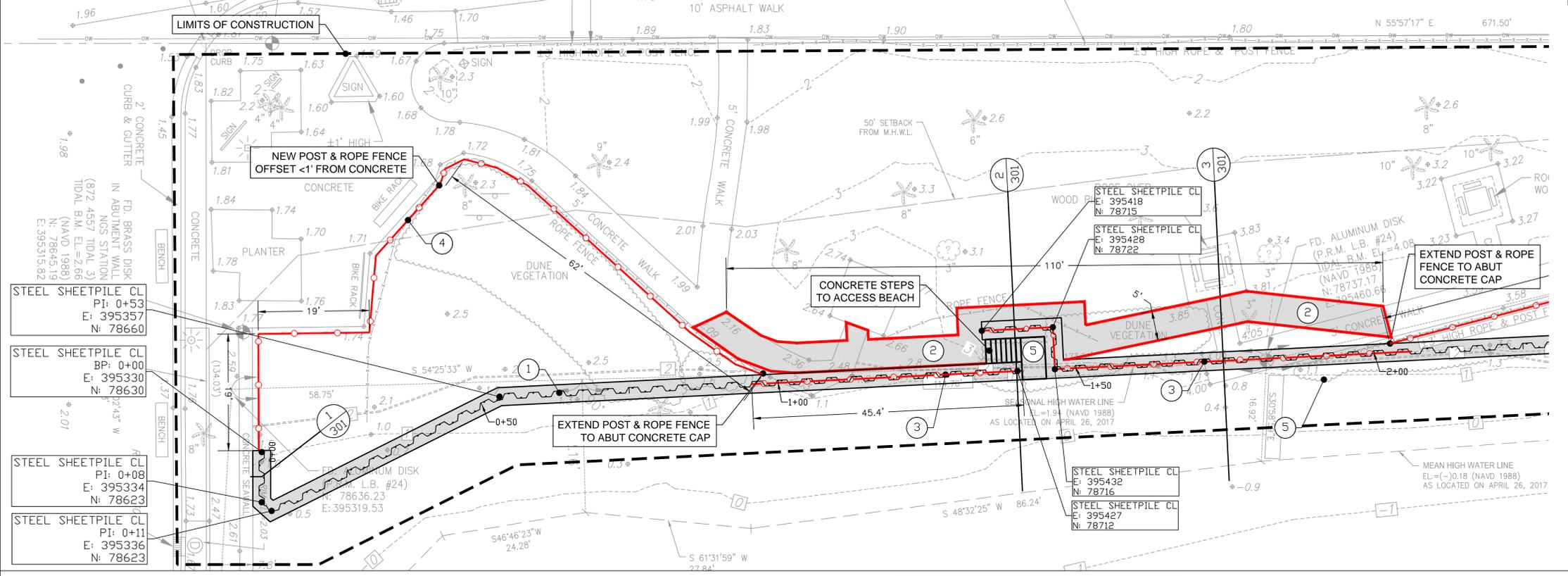
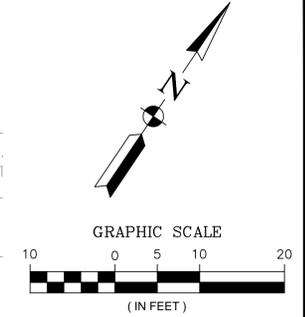
## 50' PUBLIC RIGHT-OF-WAY

**LEGEND:**

- ① INSTALL STEEL SHEETPILE WITH CONCRETE CAP
- ② INSTALL CONCRETE SIDEWALK
- ③ INSTALL HANDRAIL
- ④ INSTALL POST & ROPE FENCE
- ⑤ INSTALL CONCRETE STEPS WITH LANDING PAD

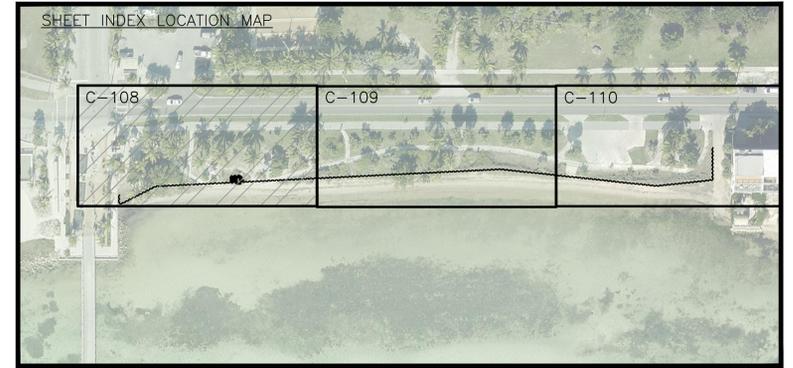
**LEGEND CONT'D:**

- [Grey Box] HARD SURFACE (CONCRETE)
- PI: STEEL SHEET PILE CENTERLINE ALIGNMENT
- E: COORDINATES (TYP)
- N: ITEMS TO INSTALL



- NOTES:**
- ALL ELEVATIONS REFERENCED TO NAVD88. NGVD29 = 1.35' + NAVD88.
  - HORIZONTAL COORDINATES, WHERE DEPICTED, ARE REFERENCED TO NAD83, FLORIDA STATE PLANE, EAST ZONE.
  - CONSTRUCTION ITEMS FOR THIS PROJECT INCLUDE THE FOLLOWING:
    - FURNISH AND INSTALL OF 702.1 LINEAR FEET OF STEEL SHEET PILE (337 TOTAL SHEETS)
    - FURNISH AND INSTALL OF REINFORCED CONCRETE CAP (707 LINEAR FEET, ~118CY)
    - FURNISH AND INSTALL OF NEW SIDEWALKS (594 SQUARE FEET)
    - FURNISH AND INSTALL OF HANDRAIL (127 LINEAR FEET)
    - FURNISH AND INSTALL OF POST & ROPE FENCE (627 LINEAR FEET)
    - FURNISH AND INSTALL OF CONCRETE STEPS WITH LANDING PAD.
    - REPAIR OF EXISTING CONCRETE SIDEWALK SECTION (REPAIR CONSISTS OF REMOVING 36 SQUARE FEET OF CONCRETE SIDEWALK, RE-GRADING & COMPACTING BASE FILL, AND REPLACING CONCRETE SIDEWALK)
  - PROFILE VIEW IS SCALED 1H:1V.
  - SEE SHEET C-301 FOR CROSS SECTIONS.

ITEM	LOCATION(S) ALONG ALIGNMENT CENTERLINE	TOTAL
①	0+00-6+92	702.1 LF
②	0+85-1+11	594 SF
③	0+95-2+06	127 LF
④	0+00-1+00, 2+00-6+92	627 LF
⑤	1+35-1+48	1 LS



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**LEGEND:**

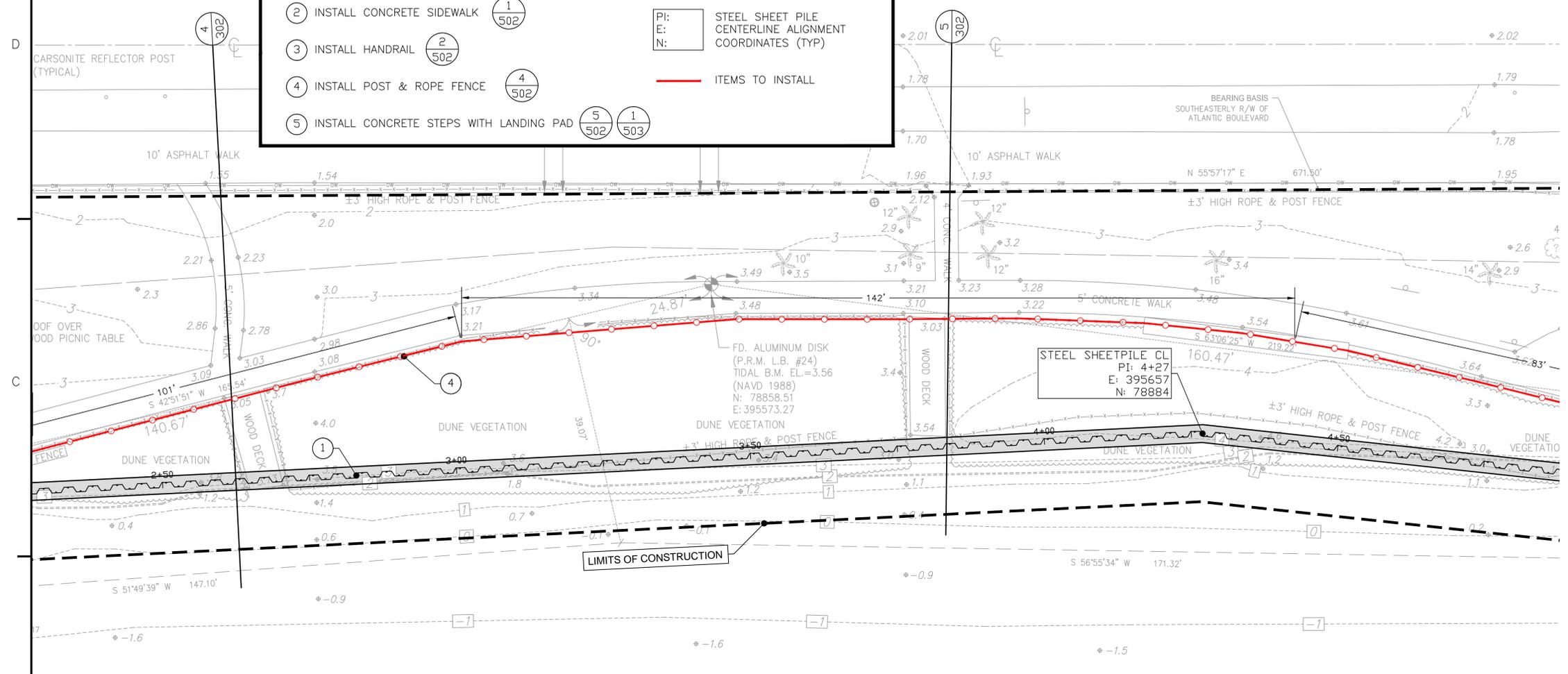
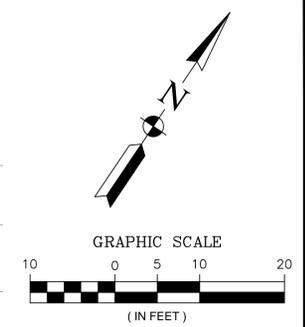
- ① INSTALL STEEL SHEETPILE WITH CONCRETE CAP (1/501)
- ② INSTALL CONCRETE SIDEWALK (1/502)
- ③ INSTALL HANDRAIL (2/502)
- ④ INSTALL POST & ROPE FENCE (4/502)
- ⑤ INSTALL CONCRETE STEPS WITH LANDING PAD (5/502, 1/503)

**LEGEND CONT'D:**

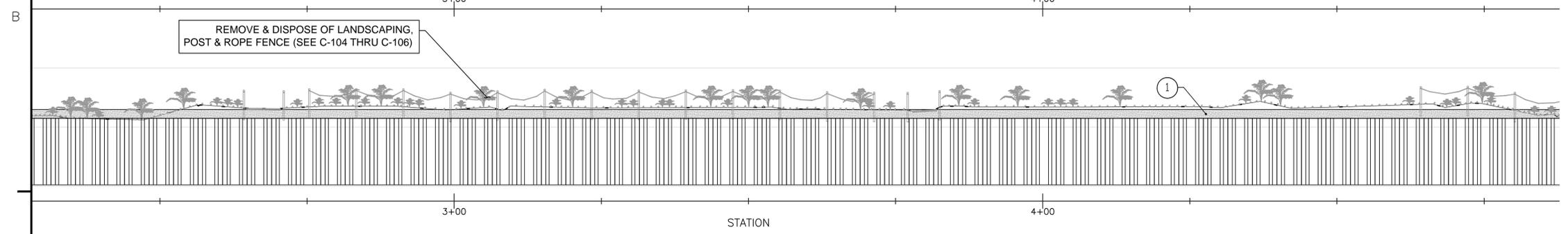
- [Grey Box] HARD SURFACE (CONCRETE)
- PI: STEEL SHEET PILE CENTERLINE ALIGNMENT COORDINATES (TYP)
- N: [Red Line] ITEMS TO INSTALL



MICHAEL R. BARNETT, PE  
FL LIC. # 44625



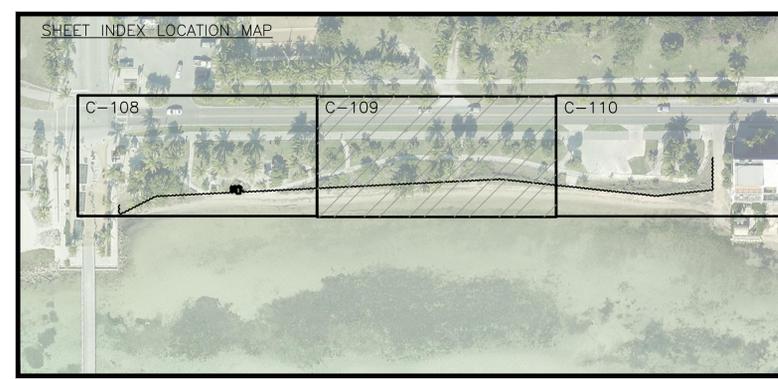
Profile View of Steel Sheetpile CL



**NOTES:**

1. ALL ELEVATIONS REFERENCED TO NAVD88. NGVD29 = 1.35' + NAVD88.
2. HORIZONTAL COORDINATES, WHERE DEPICTED, ARE REFERENCED TO NAD83, FLORIDA STATE PLANE, EAST ZONE.
3. CONSTRUCTION ITEMS FOR THIS PROJECT INCLUDE THE FOLLOWING:
  - 3.1. FURNISH AND INSTALL OF 702.1 LINEAR FEET OF STEEL SHEET PILE (337 TOTAL SHEETS)
  - 3.2. FURNISH AND INSTALL OF REINFORCED CONCRETE CAP (707 LINEAR FEET, ~118CY)
  - 3.3. FURNISH AND INSTALL OF NEW SIDEWALKS (594 SQUARE FEET)
  - 3.4. FURNISH AND INSTALL OF HANDRAIL (127 LINEAR FEET)
  - 3.5. FURNISH AND INSTALL OF POST & ROPE FENCE (627 LINEAR FEET)
  - 3.6. FURNISH AND INSTALL OF CONCRETE STEPS WITH LANDING PAD.
  - 3.7. REPAIR OF EXISTING CONCRETE SIDEWALK SECTION (REPAIR CONSISTS OF REMOVING 36 SQUARE FEET OF CONCRETE SIDEWALK, RE-GRADING & COMPACTING BASE FILL, AND REPLACING CONCRETE SIDEWALK)
4. PROFILE VIEW IS SCALED 1H:1V.
5. SEE SHEET C-302 FOR CROSS SECTIONS.

ITEM	LOCATION(S) ALONG ALIGNMENT CENTERLINE	TOTAL
①	0+00-6+92	702.1 LF
②	0+85-1+11	594 SF
③	0+95-2+06	127 LF
④	0+00-1+00, 2+00-6+92	627 LF
⑤	1+35-1+48	1 LS



**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**

Mark	Description	Date	Appr.
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
0	ISSUED FOR CLIENT REVIEW	4/6/17	MB
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

Designed By: M. BARNETT  
 Drawn By: M. BARNETT  
 Checked By: R. CZAPINSKI  
 Reviewed By: S. MCGARHEE  
 Design file no.: MWB-C-112-BURBORGUAN-1708.rvt  
 Scale: AS SHOWN

**TETRA TECH INC.**  
 759 SOUTH FEDERAL HWY  
 SUITE 314  
 TEL: (772) 4494-2936  
 TEL: (772) 781-3400  
 FAX: (772) 781-3411

**CERTIFICATE OF AUTHORIZATION**  
 NO. 2429

CITY OF KEY WEST  
 REST BEACH SEAWALL  
 SEAWALL INSTALLATION PLAN  
 KEY WEST, MONROE COUNTY, FL

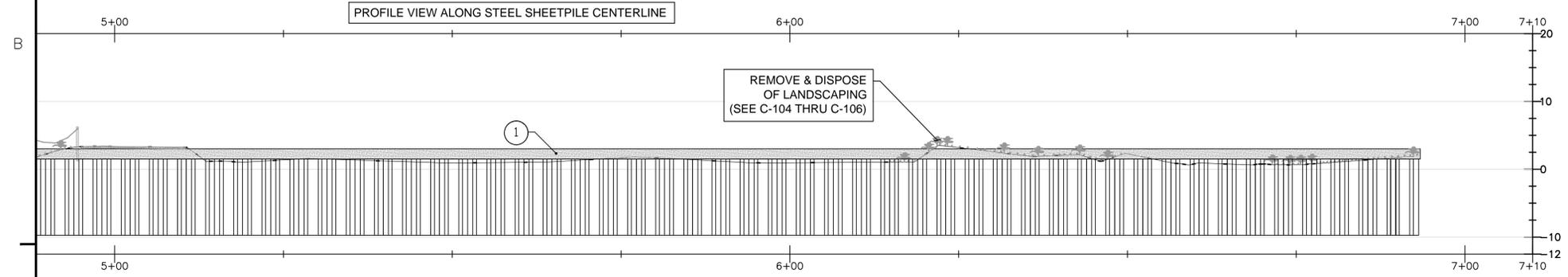
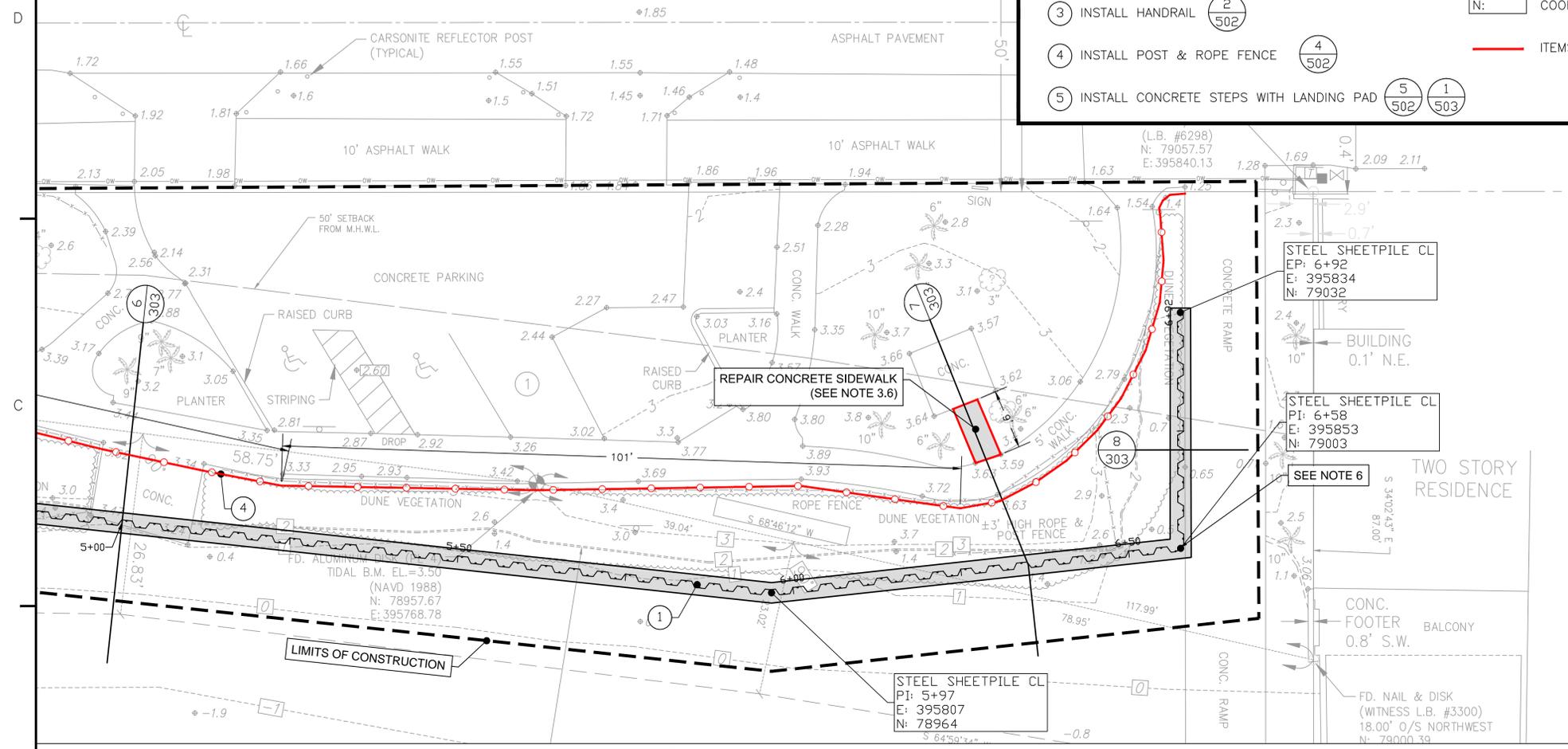
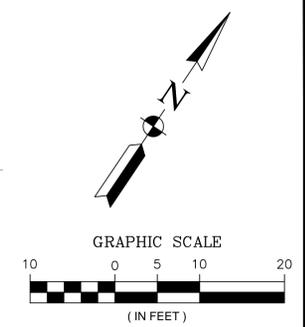
**ATLANTIC BOULEVARD**  
50' PUBLIC RIGHT-OF-WAY

**LEGEND:**

- ① INSTALL STEEL SHEETPILE WITH CONCRETE CAP (1/501)
- ② INSTALL CONCRETE SIDEWALK (1/502)
- ③ INSTALL HANDRAIL (2/502)
- ④ INSTALL POST & ROPE FENCE (4/502)
- ⑤ INSTALL CONCRETE STEPS WITH LANDING PAD (5/502) (1/503)

**LEGEND CONT'D:**

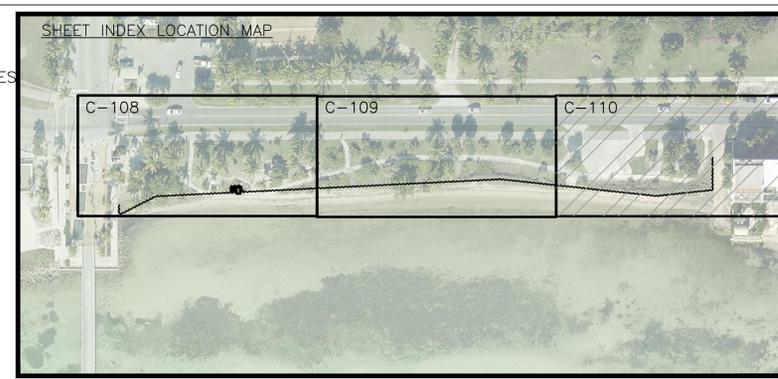
- HARD SURFACE (CONCRETE)
- PI: STEEL SHEET PILE CENTERLINE ALIGNMENT COORDINATES (TYP)
- ITEMS TO INSTALL



- NOTES:**
- ALL ELEVATIONS REFERENCED TO NAVD88. NGVD29 = 1.35' + NAVD88.
  - HORIZONTAL COORDINATES, WHERE DEPICTED, ARE REFERENCED TO NAD83, FLORIDA STATE PLANE, EAST ZONE.
  - CONSTRUCTION ITEMS FOR THIS PROJECT INCLUDE THE FOLLOWING:
    - FURNISH AND INSTALL OF 702.1 LINEAR FEET OF STEEL SHEET PILE (337 TOTAL SHEETS)
    - FURNISH AND INSTALL OF REINFORCED CONCRETE CAP (707 LINEAR FEET, ~118CY)
    - FURNISH AND INSTALL OF NEW SIDEWALKS (594 SQUARE FEET)
    - FURNISH AND INSTALL OF HANDRAIL (127 LINEAR FEET)
    - FURNISH AND INSTALL OF POST & ROPE FENCE (627 LINEAR FEET)
    - FURNISH AND INSTALL OF CONCRETE STEPS WITH LANDING PAD.
    - REPAIR OF EXISTING CONCRETE SIDEWALK SECTION (REPAIR CONSISTS OF REMOVING 36 SQUARE FEET OF CONCRETE SIDEWALK, RE-GRADING & COMPACTING BASE FILL, AND REPLACING CONCRETE SIDEWALK)
  - PROFILE VIEW IS SCALED 1H:1V.
  - SEE SHEET C-303 FOR CROSS SECTIONS.

- NOTES CONT'D:**
- SHEETPILE SHALL BE LOCATED AS CLOSE TO THE EXISTING CONCRETE RAMP AS PRACTICABLE (STA 6+58 TO 6+92). A CONCRETE PLUG SHALL BE INSTALLED TO 18 INCHES BELOW GRADE TO ENSURE NO GAP EXISTS BETWEEN THE TWO FEATURES.

ITEM	LOCATION(S) ALONG ALIGNMENT CENTERLINE	TOTAL
①	0+00-6+92	702.1 LF
②	0+85-1+11	594 SF
③	0+95-2+06	127 LF
④	0+00-1+00, 2+00-6+92	627 LF
⑤	1+35-1+48	1 LS



**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**

Mark	Description	Date	Appr.
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
2	MOVE ALIGNMENT SEAWALL/ADD CAP	5/17/17	MB
0	ISSUED BASED ON CLIENT REVIEW	4/6/17	MB
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

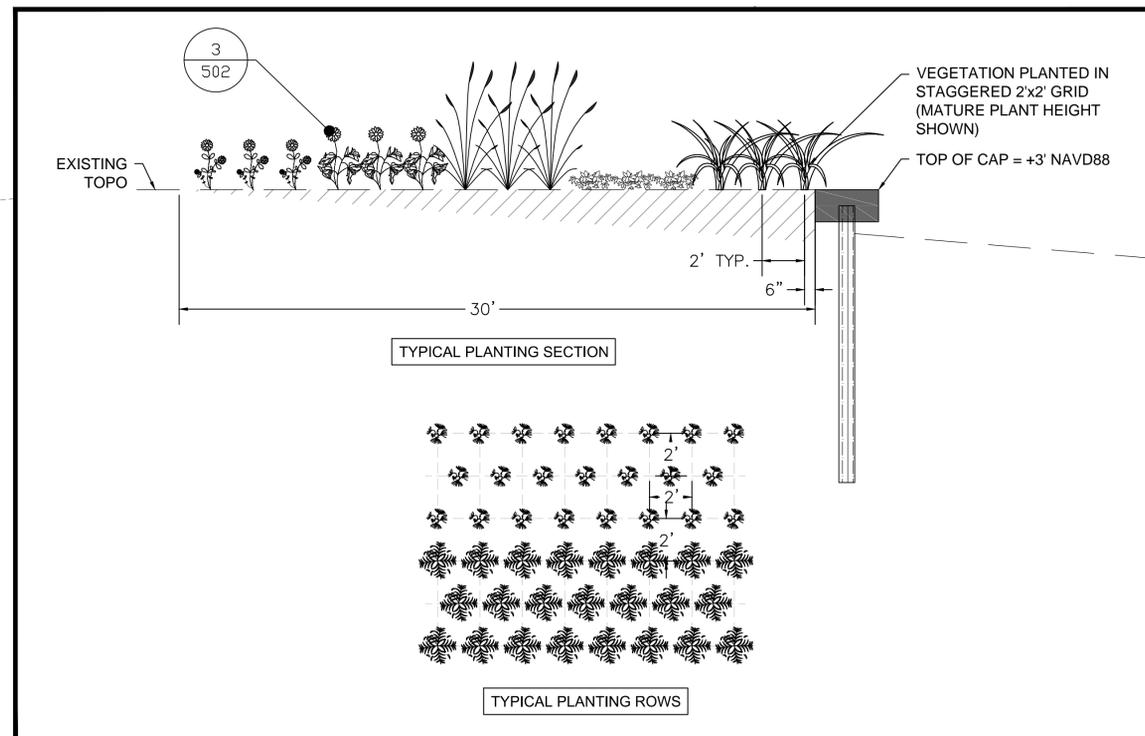
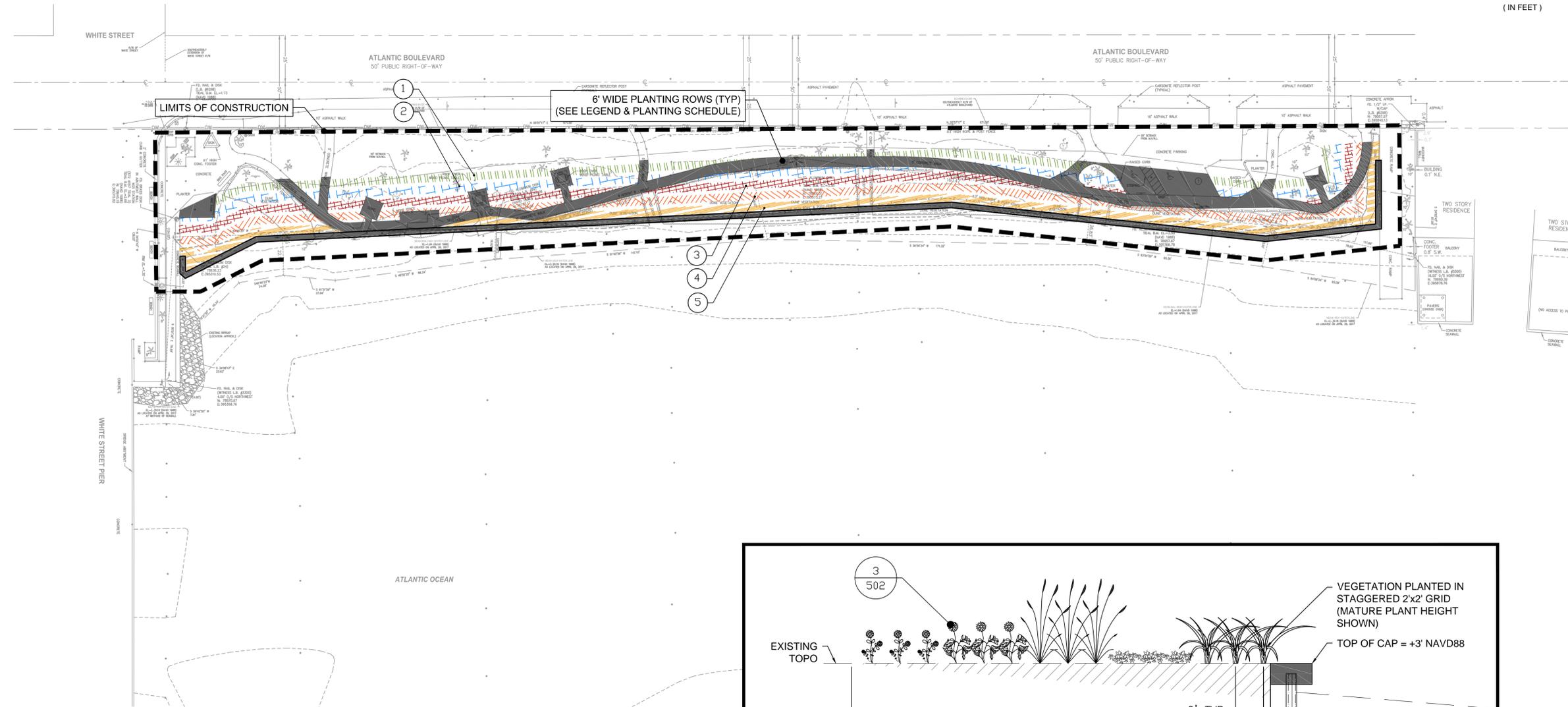
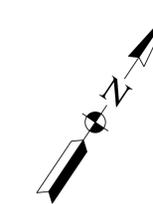
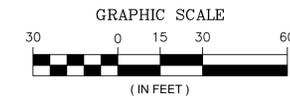
Designed By: M. BARNETT  
 Drawn By: M. BARNETT  
 Checked By: R. CZAPINSKI  
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**TETRA TECH INC.**  
 759 SOUTH FEDERAL HWY  
 SUITE 314  
 TEL: (772) 449-2936  
 TEL: (772) 781-3400  
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 CERTIFICATE OF AUTHORIZATION  
 NO. 2429

**CITY OF KEY WEST**  
**REST BEACH SEAWALL**  
 SEAWALL INSTALLATION PLAN  
**KEY WEST, MONROE COUNTY, FL**



MICHAEL R. BARNETT, PE  
FL LIC. # 44625



- NOTES:
- SEE SHEET C-102 & C-103 FOR SITE SURVEY.
  - ALL ELEVATIONS REFERENCED TO NAVD88. NGVD29 = 1.35' + NAVD88.
  - SEE SHEET C-502 FOR PLANTING DETAILS.

PLANTING SCHEDULE					
ITEM	LEGEND	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
①		741	<i>Borrhicia arborescens</i>	GREEN SEA-OXEYE DAISY	1 GALLON
②		719	<i>Helianthus debilis</i>	DUNE SUNFLOWER	1 GALLON
③		740	<i>Uniola paniculata</i>	SEA OATS	1 GALLON
④		863	<i>Sesuvium portulacastrum</i>	SEA PURSLANE	1 GALLON
⑤		1,001	<i>Panicum amarum</i>	BEACHGRASS	1 GALLON

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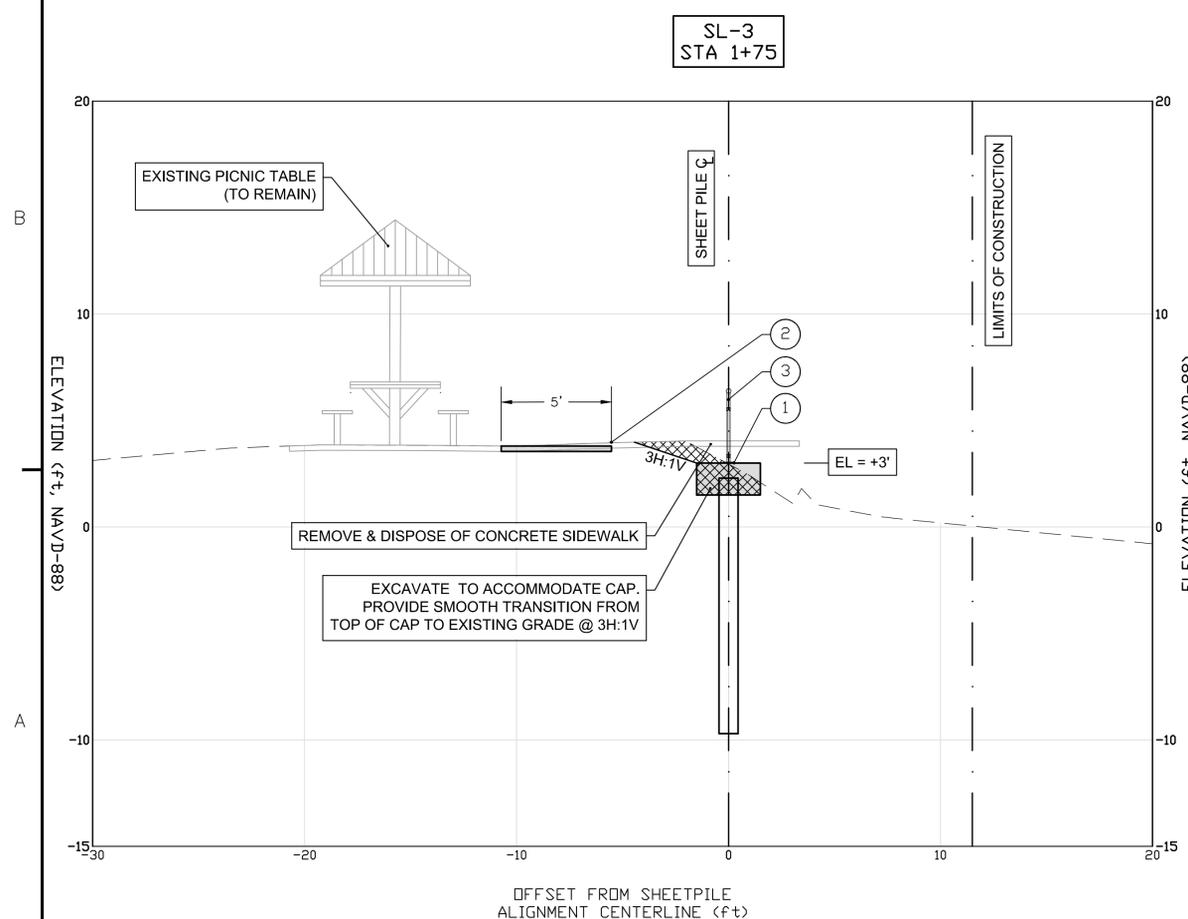
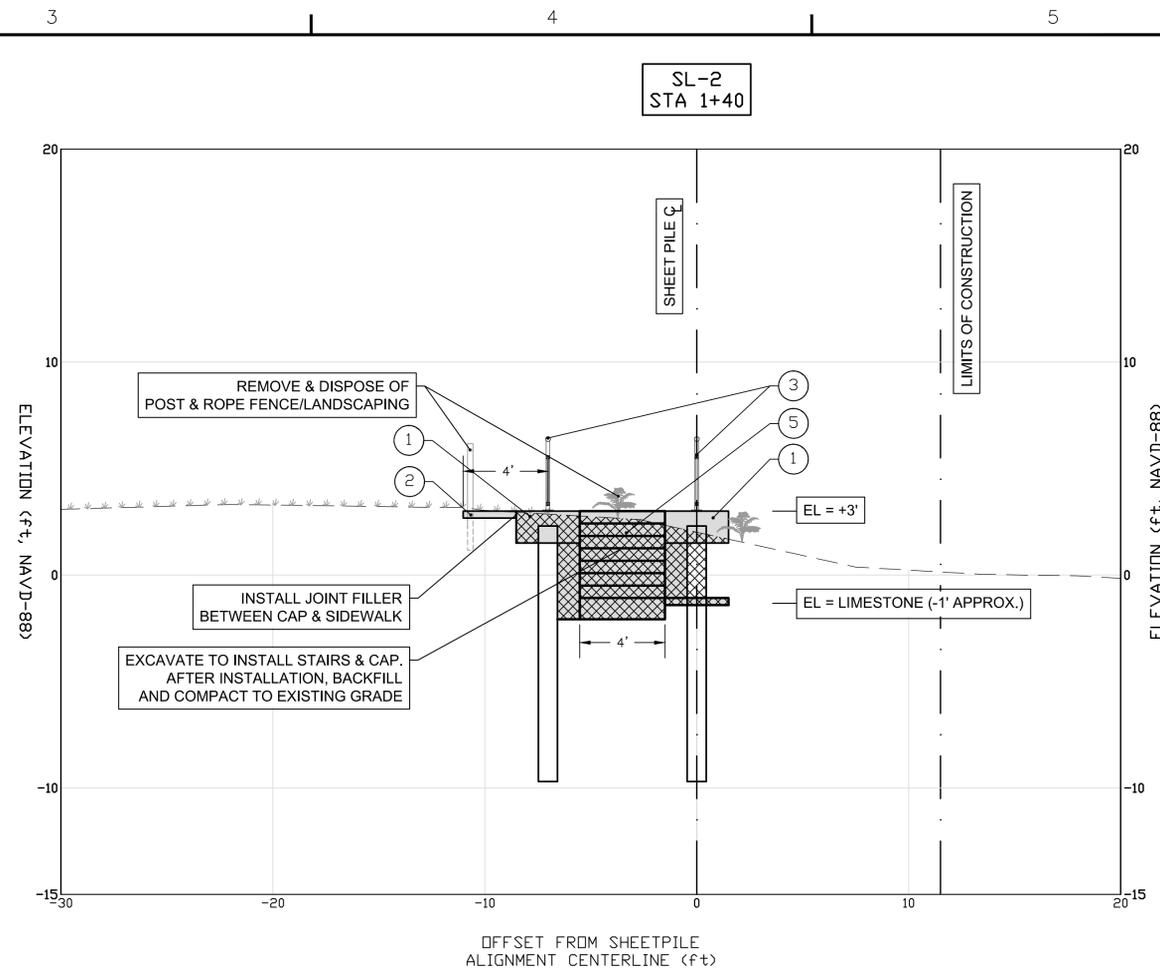
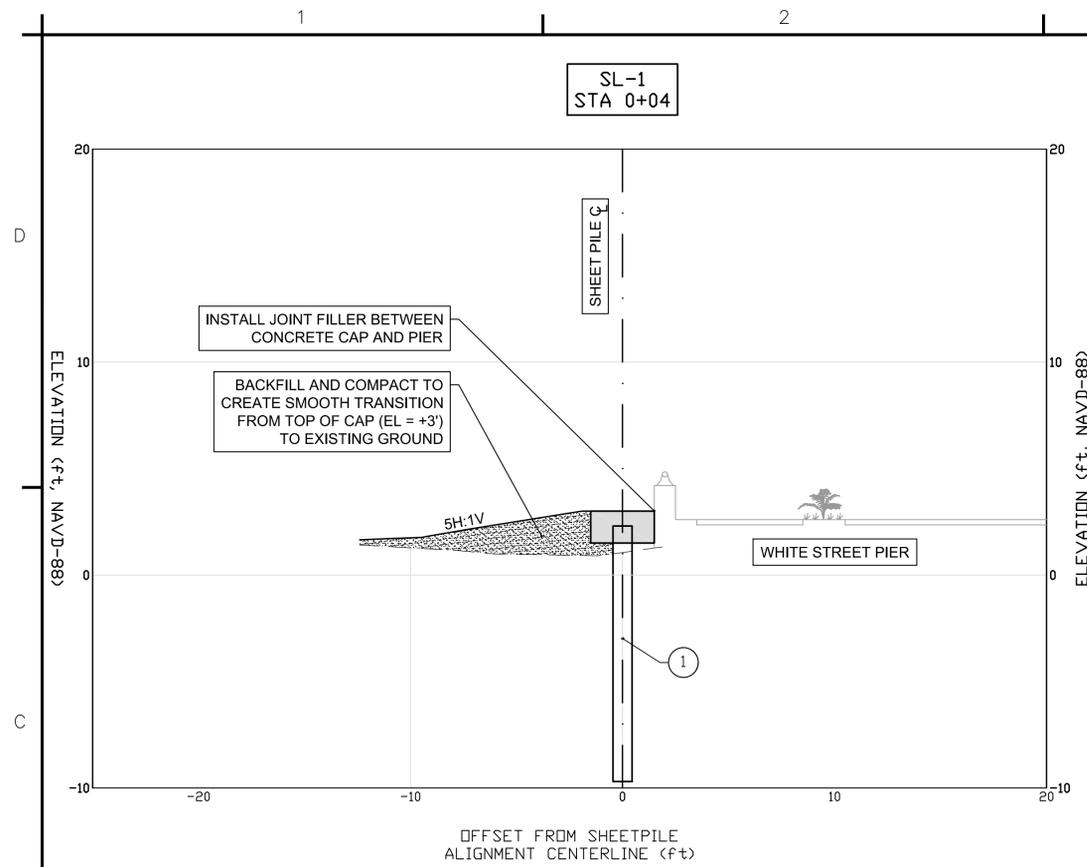
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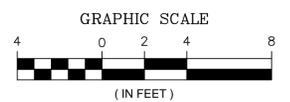
TETRA TECH INC.  
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KEY WEST, FL 34094-2936  
TEL: (772) 781-3400  
FAX: (772) 781-3411  
CERTIFICATE OF AUTHORIZATION  
NO. 2429



CITY OF KEY WEST  
REST BEACH SEAWALL  
PLANTING PLAN  
KEY WEST, MONROE COUNTY, FL



LEGEND:		LEGEND CONT'D:	
①	INSTALL STEEL SHEETPILE WITH CONCRETE CAP (1/501)	[Hatched Box]	HARD SURFACE (CONCRETE)
②	INSTALL CONCRETE SIDEWALK (1/502)	[Cross-hatched Box]	EXCAVATION
③	INSTALL HANDRAIL (2/502)	[Dotted Box]	FILL
④	INSTALL POST & ROPE FENCE (4/502)	[Dashed Line]	EXISTING TOPOGRAPHY
⑤	INSTALL CONCRETE STEPS WITH LANDING PAD (5/502, 1/503)	[Solid Line]	PROPOSED GRADE



MICHAEL R. BARNETT, PE  
FL LIC. # 44625

Mark	Description	Date	Appr.
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
0	ISSUED FOR CLIENT REVIEW	4/6/17	MB
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

Designed By: M. BARNETT  
Drawn By: M. BARNETT  
Checked By: R. CZAPINSKI  
Reviewed By: S. MCGAHEE  
Design file no: MWEL-112-BURBORGUAN-170817  
Scale: AS SHOWN

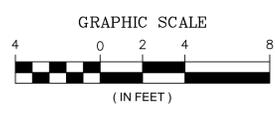
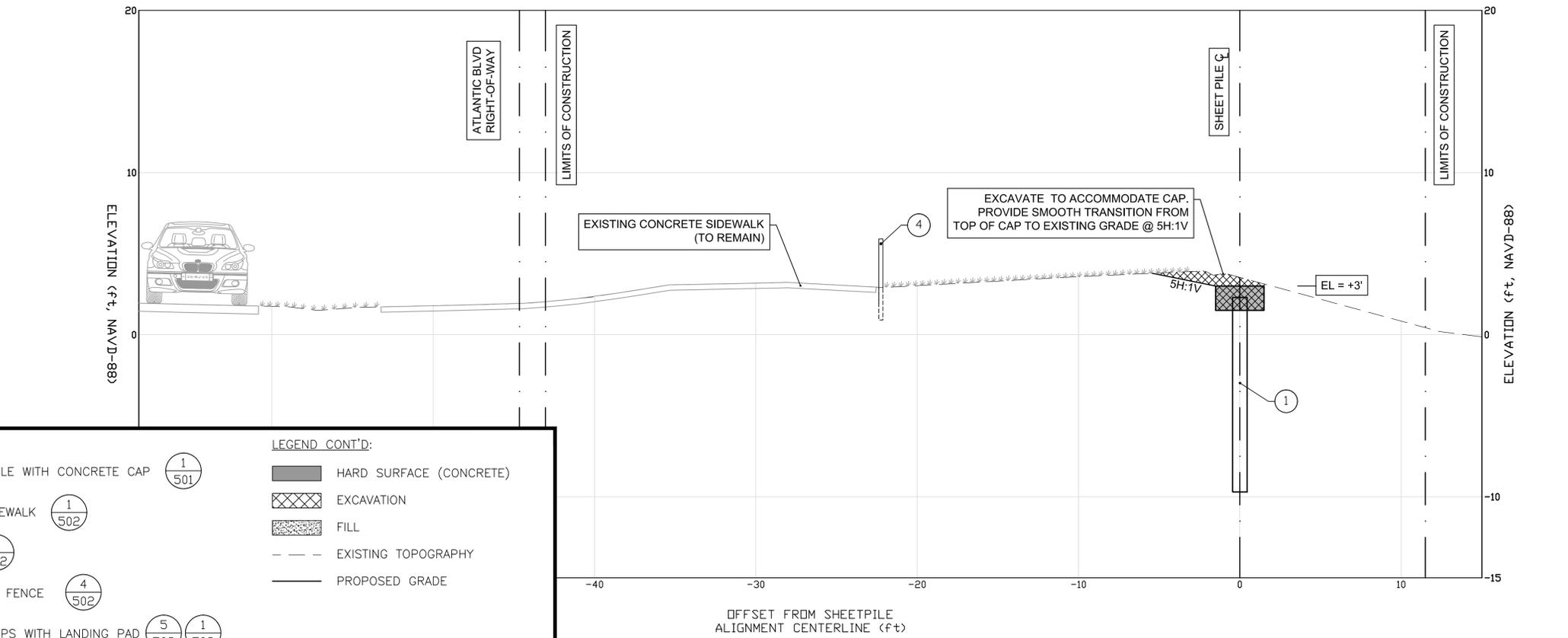
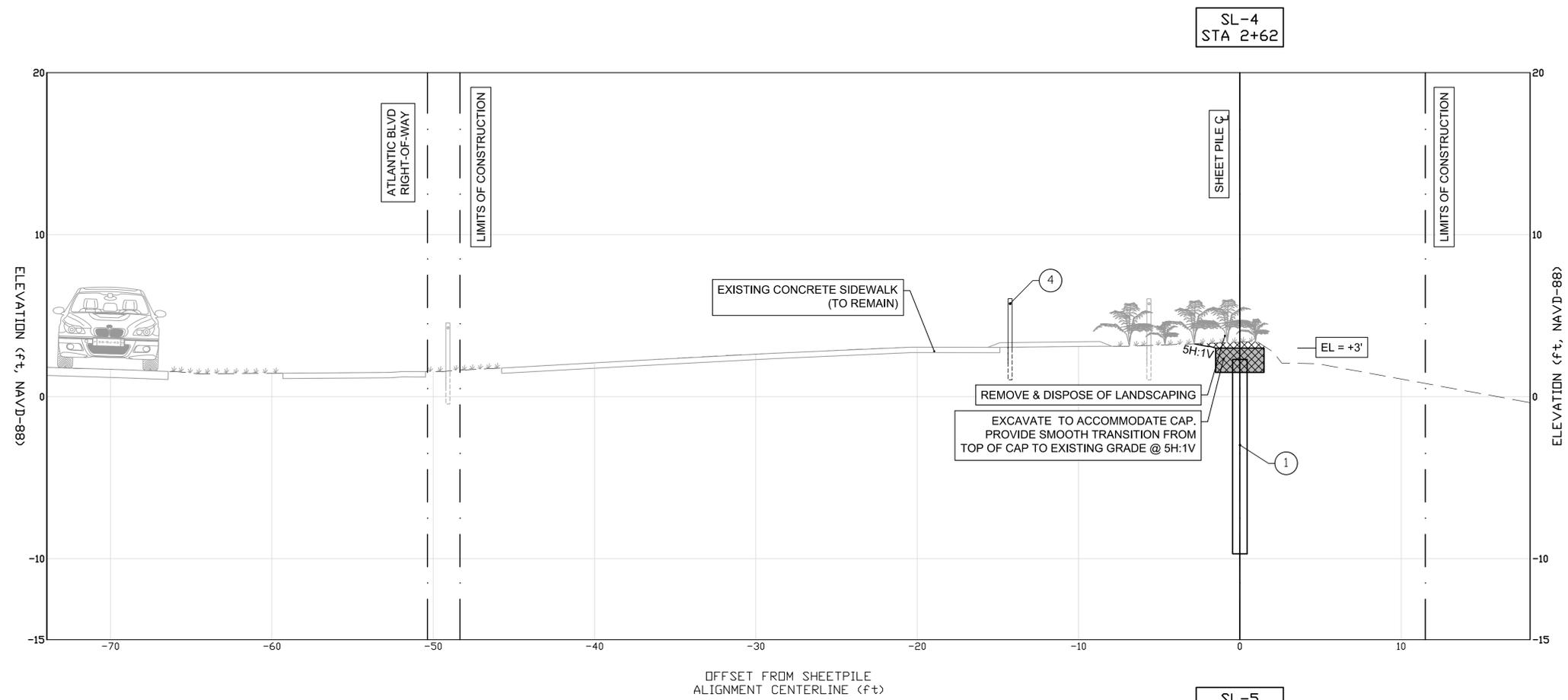
TETRA TECH INC.  
759 SOUTH FEDERAL HWY  
SUITE 314  
MIAMI, FL 33134  
TEL: (772) 781-3400  
FAX: (772) 781-3411  
CERTIFICATE OF AUTHORIZATION  
NO. 2429



CITY OF KEY WEST  
REST BEACH SEAWALL  
SECTIONS  
KEY WEST, MONROE COUNTY, FL

Sheet Reference:  
**C-301**  
Sheet 18 of 23

**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**



LEGEND:		LEGEND CONT'D:	
①	INSTALL STEEL SHEETPILE WITH CONCRETE CAP	■	HARD SURFACE (CONCRETE)
②	INSTALL CONCRETE SIDEWALK	▨	EXCAVATION
③	INSTALL HANDRAIL	■	FILL
④	INSTALL POST & ROPE FENCE	- - -	EXISTING TOPOGRAPHY
⑤	INSTALL CONCRETE STEPS WITH LANDING PAD	—	PROPOSED GRADE
①	501		
①	502		
②	502		
④	502		
⑤	502		
①	503		



MICHAEL R. BARNETT, PE  
FL LIC. # 44625

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4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
0	RESUBMITTED BASED ON CLIENT REVIEW	4/6/17	MB
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

Designed By:  
M. BARNETT  
Drawn By:  
M. BARNETT  
Checked By:  
R. CZAPINSKI  
Reviewed By:  
S. MCGARHEE  
Design file no.:  
MWB-C-12-BURBORGUAN-170417.dwg  
Scale:  
AS SHOWN

TETRA TECH INC.  
759 SOUTH FEDERAL HWY  
SUITE 314  
KEY WEST, FL 34094-2936  
TEL: (772) 781-3400  
FAX: (772) 781-3411  
CERTIFICATE OF AUTHORIZATION  
NO. 2429



CITY OF KEY WEST  
REST BEACH SEAWALL  
SECTIONS  
KEY WEST, MONROE COUNTY, FL

Sheet Reference:  
**C-302**  
Sheet 19 of 23

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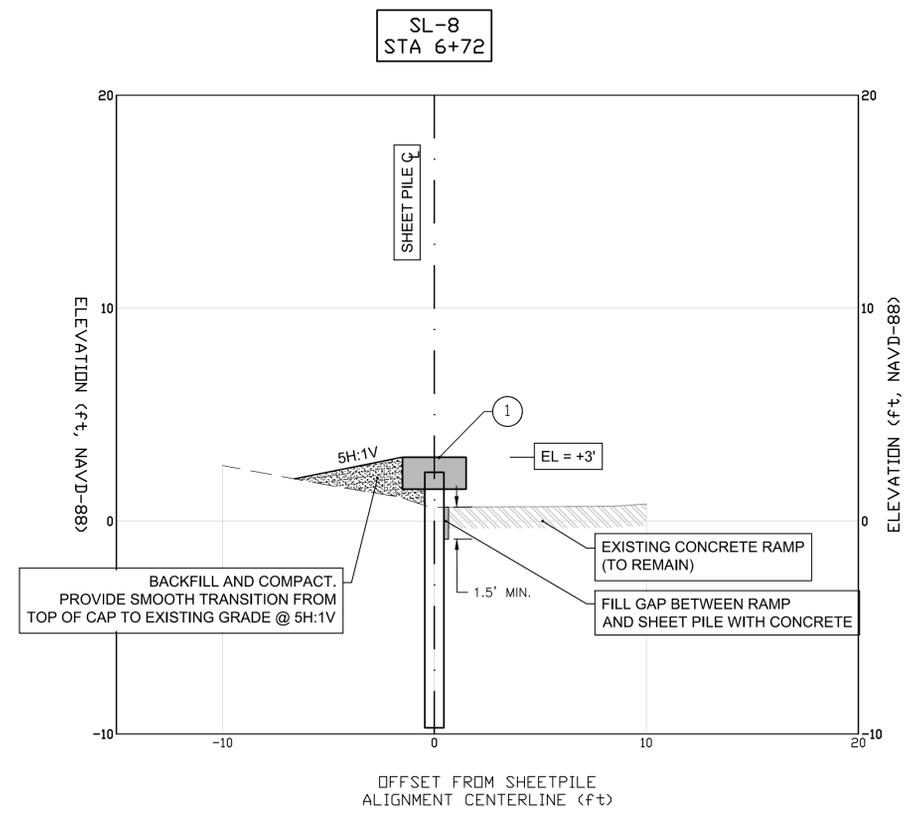
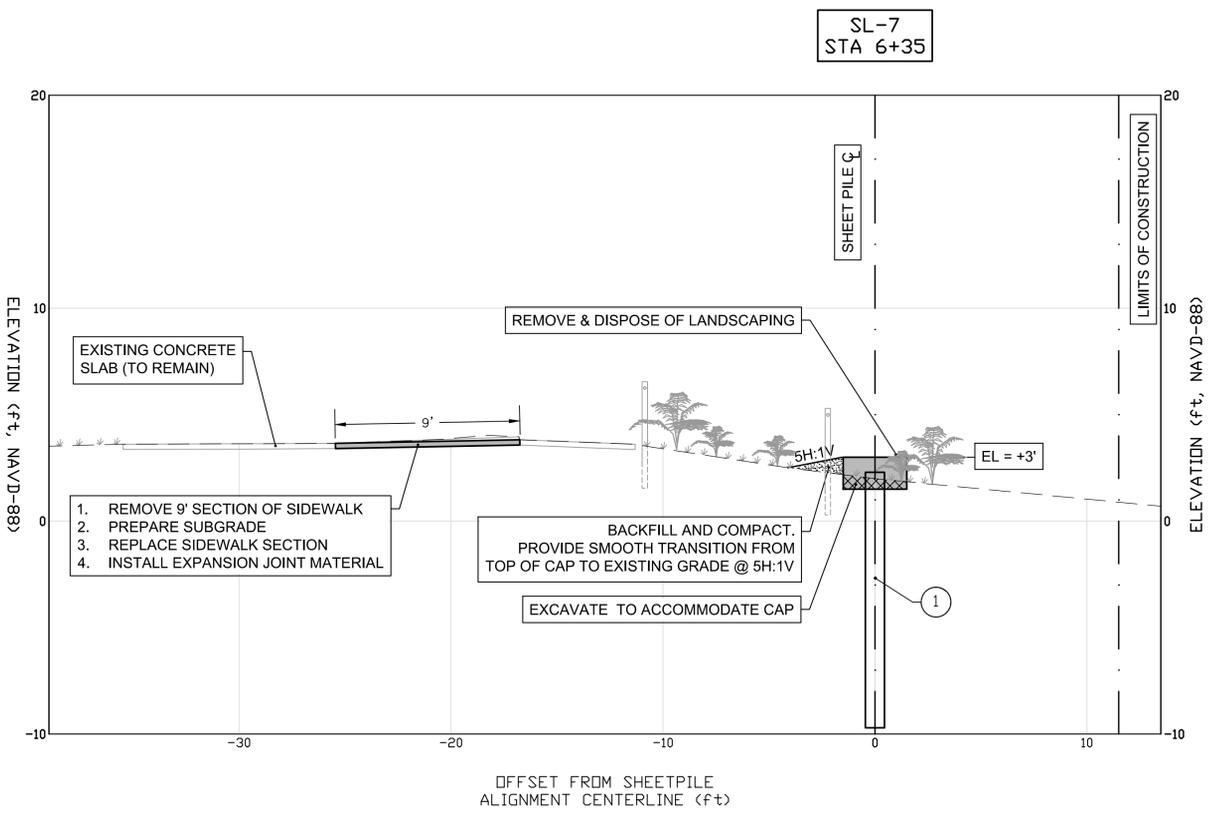
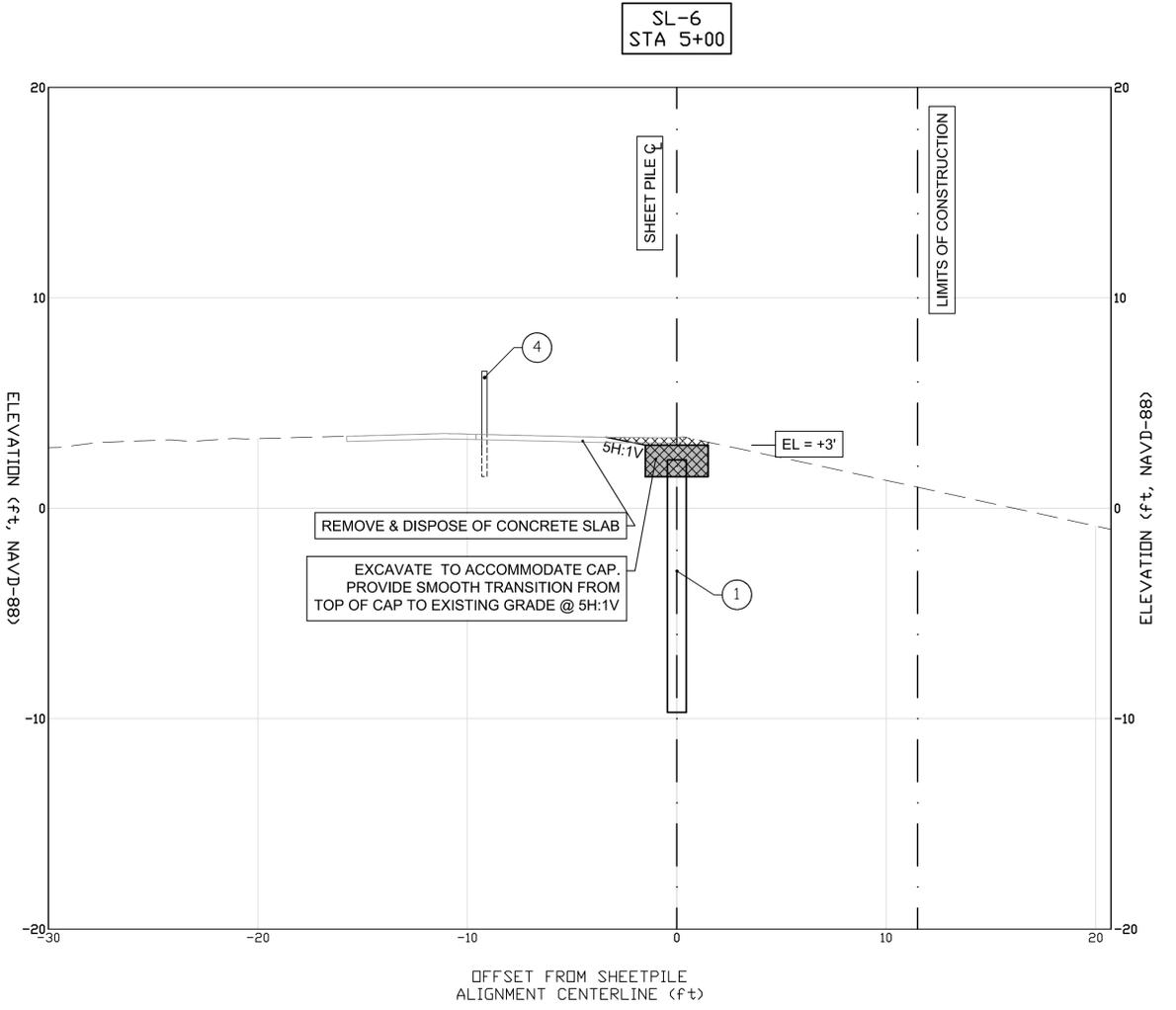
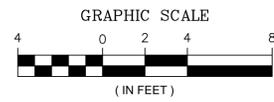
MICHAEL R. BARNETT, PE  
FL LIC. # 44625

**LEGEND:**

- ① INSTALL STEEL SHEETPILE WITH CONCRETE CAP (1/501)
- ② INSTALL CONCRETE SIDEWALK (1/502)
- ③ INSTALL HANDRAIL (2/502)
- ④ INSTALL POST & ROPE FENCE (4/502)
- ⑤ INSTALL CONCRETE STEPS WITH LANDING PAD (5/502, 1/503)

**LEGEND CONT'D:**

- [Hatched Box] HARD SURFACE (CONCRETE)
- [Cross-hatched Box] EXCAVATION
- [Dotted Box] FILL
- [Dashed Line] EXISTING TOPOGRAPHY
- [Solid Line] PROPOSED GRADE



**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**

Mark	Description	Date	Appr.
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB
3	ADD TREE LOCATION DETAILS	6/16/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
0	ISSUED FOR CLIENT REVIEW	4/16/17	MB
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB

Designed By: M. BARNETT  
 Drawn By: M. BARNETT  
 Checked By: R. CZAPINSKI  
 Reviewed By: S. MCGARREY  
 Design file no.: MWELC-112-BURBORGUAN-170101010  
 Scale: AS SHOWN

**TETRA TECH INC.**  
 759 SOUTH FEDERAL HWY  
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 TEL: (772) 781-3400  
 FAX: (772) 781-3411  
 CERTIFICATE OF AUTHORIZATION  
 NO. 2429



CITY OF KEY WEST  
 REST BEACH SEAWALL  
 SECTIONS  
 KEY WEST, MONROE COUNTY, FL



MICHAEL R. BARNETT, PE  
FL LIC. # 44625

Rev.	Description	Date	Appr.
0	ISSUED FOR CLIENT REVIEW	3/23/17	MB
1	RESUBMITTED BASED ON CLIENT REVIEW	4/6/17	MB
2	MOVE ALIGNMENT SEAWARD/ADD CAP	5/17/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB

Designed By: M. BARNETT  
 Drawn By: M. BARNETT  
 Checked By: R. CZAPINSKI  
 Reviewed By: S. MCGAHEE  
 Design file no: MWEL-112-BURBORGUAN-1701010  
 Scale: AS SHOWN

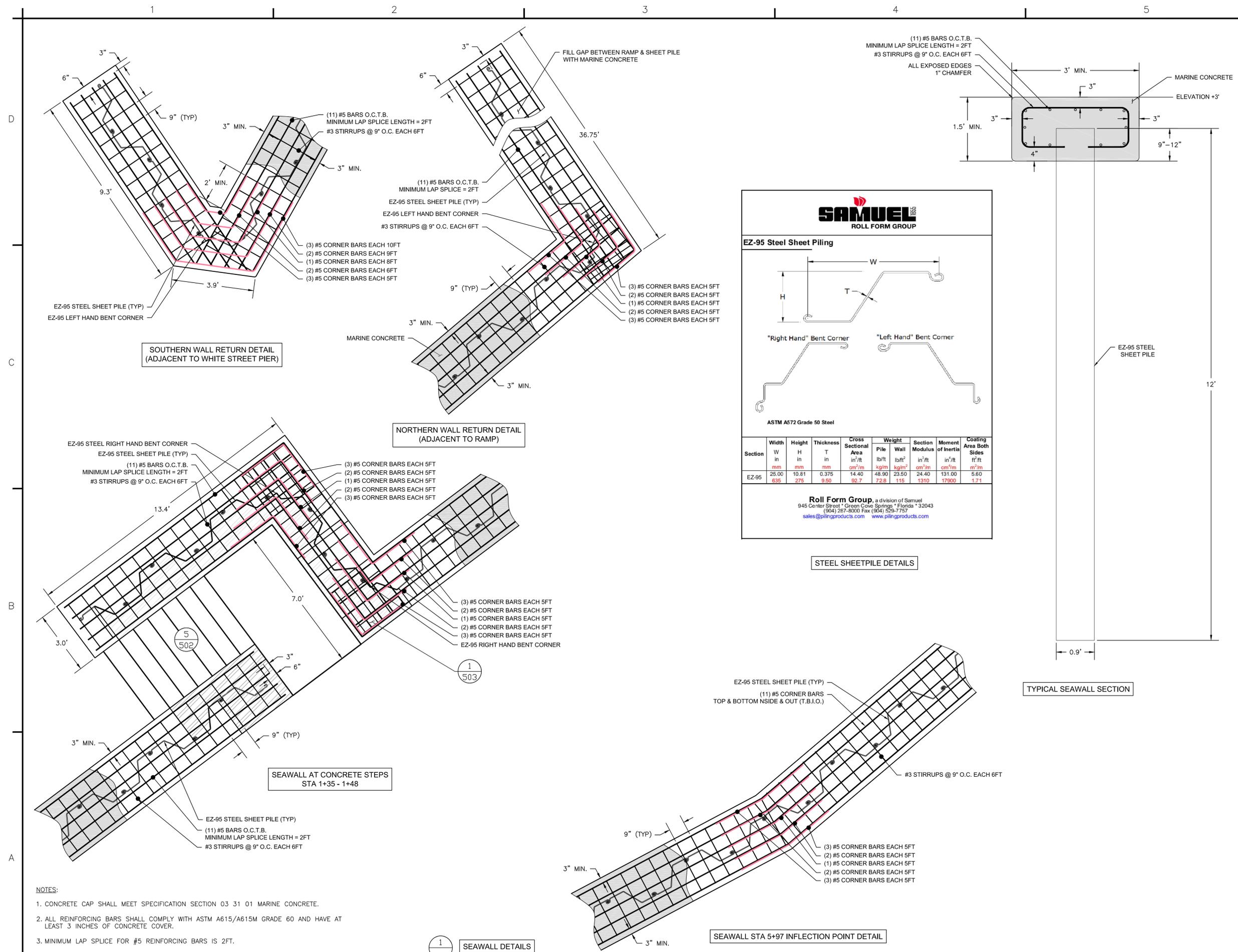
**TETRA TECH INC.**  
 759 SOUTH FEDERAL HWY  
 SUITE 314  
 GREEN COVE SPRINGS, FL 32043  
 TEL: (772) 781-3400  
 FAX: (772) 781-3411  
 CERTIFICATE OF AUTHORIZATION  
 NO. 2429



**CITY OF KEY WEST**  
**REST BEACH SEAWALL**  
 DETAILS  
**KEY WEST, MONROE COUNTY, FL**

Sheet Reference:  
**C-501**  
 Sheet 21 of 23

**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**



**SAMUEL**  
ROLL FORM GROUP

**EZ-95 Steel Sheet Piling**

ASTM A572 Grade 50 Steel

Section	Width	Height	Thickness	Cross Sectional Area	Weight	Section Modulus	Moment of Inertia	Coating Area Both Sides
	W in	H in	T in	in <sup>2</sup> /ft	lb/ft	in <sup>3</sup> /ft	in <sup>4</sup> /ft	ft <sup>2</sup> /ft
EZ-95	25.00	10.81	0.375	14.40	48.90	23.50	24.40	131.00
	635	275	9.50	92.7	72.8	115	1310	17900

**Roll Form Group**, a division of Samuel  
 945 Center Street • Green Cove Springs, Florida • 32043  
 (904) 297-3000 Fax (904) 509-7757  
 sales@pilingproducts.com www.pilingproducts.com

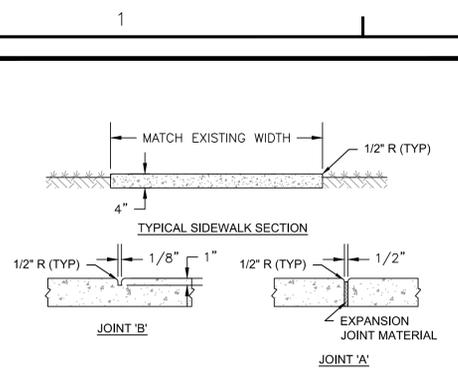
STEEL SHEETPILE DETAILS

TYPICAL SEAWALL SECTION

SEAWALL DETAILS

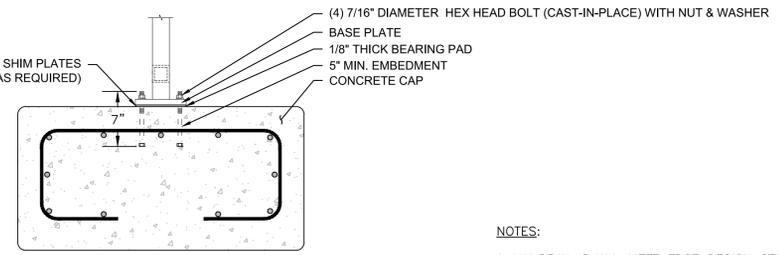
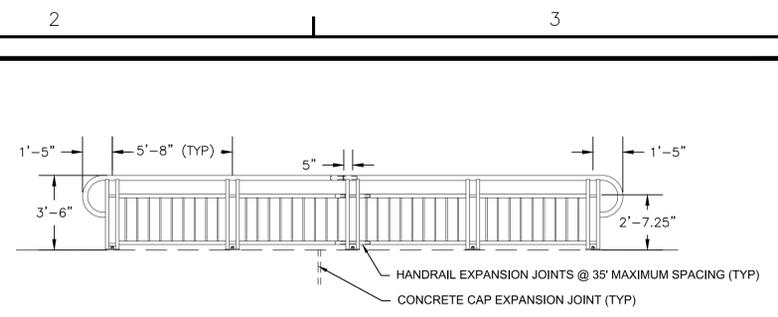
SEAWALL STA 5+97 INFLECTION POINT DETAIL

- NOTES:**
1. CONCRETE CAP SHALL MEET SPECIFICATION SECTION 03 31 01 MARINE CONCRETE.
  2. ALL REINFORCING BARS SHALL COMPLY WITH ASTM A615/A615M GRADE 60 AND HAVE AT LEAST 3 INCHES OF CONCRETE COVER.
  3. MINIMUM LAP SPLICE FOR #5 REINFORCING BARS IS 2FT.
  4. #5 CORNER BARS ARE REQUIRED FOR INFLECTION POINTS LOCATED AT STA 0+53 & 4+27. SEE STA 5+97 INFLECTION POINT DETAIL FOR TYPICAL LAYOUT.



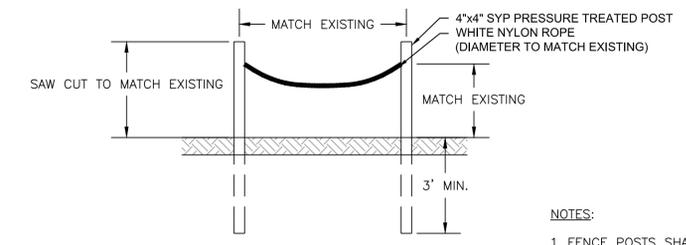
- NOTES:**
1. SIDEWALKS SHALL BE A MINIMUM OF 4" IN THICKNESS AND CONSTRUCTED IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 522.
  2. CONCRETE SHALL MEET FDOT SPECIFICATION SECTION 347.
  3. SIDEWALK SLOPES SHALL NOT EXCEED 5% RUNNING SLOPE OR 2% CROSS SLOPE.
  4. PROVIDE JOINT 'A' WHERE SIDEWALKS ABUT STRUCTURES AND JOINT 'B' AT AN INTERVAL EQUAL TO THE SIDEWALK'S WIDTH.
  5. NO PATCHING OF SIDEWALKS BETWEEN EXISTING JOINTS. CONTRACTOR SHALL FULLY REPLACE SIDEWALK FROM JOINT TO JOINT.

1 CONCRETE SIDEWALK



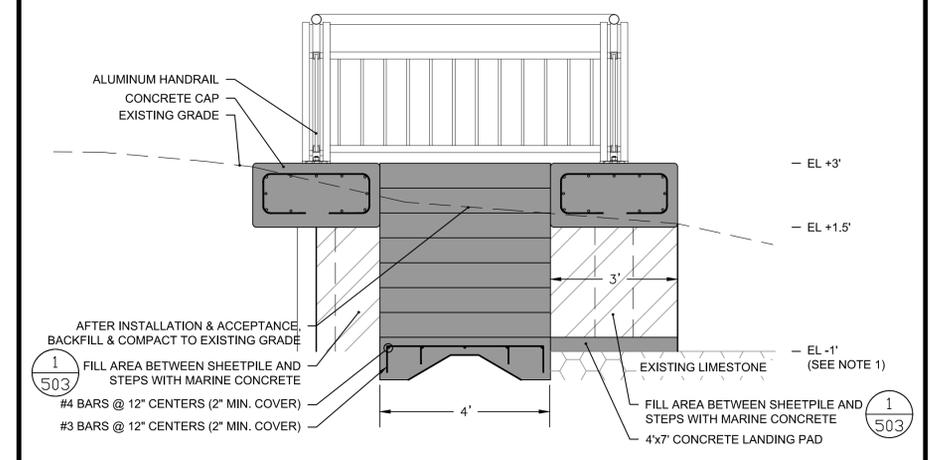
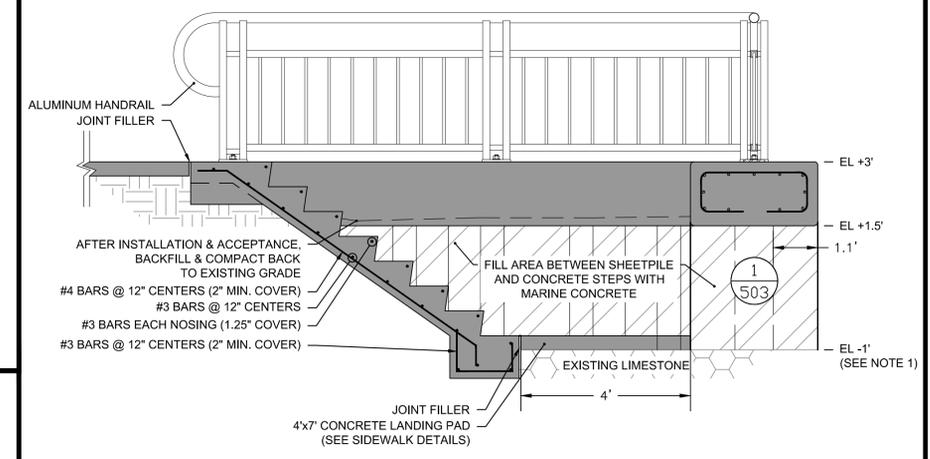
- NOTES:**
1. HANDRAIL SHALL MEET FDOT DESIGN STANDARD 862.
  2. RAILING SHALL HAVE TYPE 1 - PICKET INFILL PANELS.
  3. PROVIDE HANDRAIL EXPANSION JOINTS AT A MAXIMUM SPACING OF 35'.
  4. ALL FASTENERS SHALL BE GALVANIZED STEEL AND COATED IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 962.

2 ALUMINUM HANDRAIL

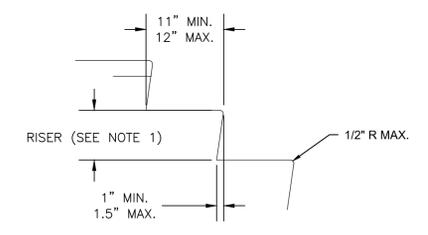


- NOTES:**
1. FENCE POSTS SHALL BE 4x4 SQUARE AND MEET FDOT SPECIFICATION SECTION 954.

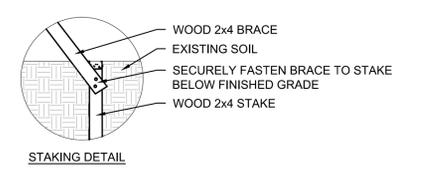
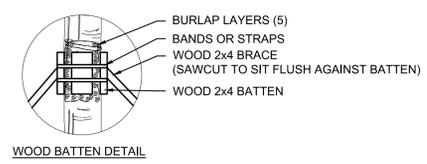
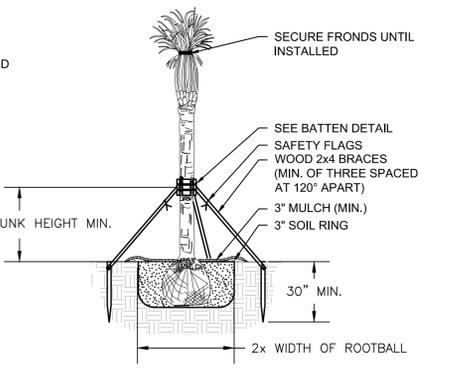
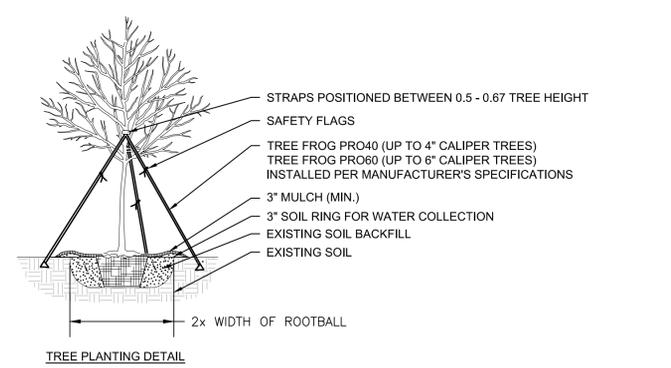
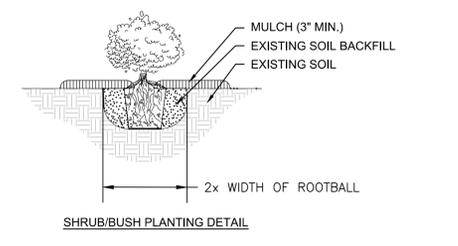
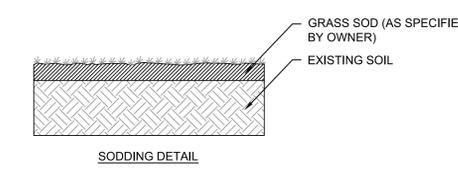
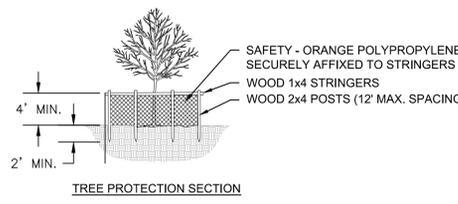
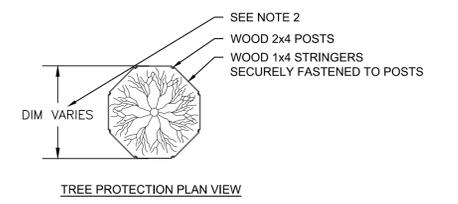
4 POST & ROPE FENCE DETAIL



- NOTES:**
1. CONTRACTOR SHALL FIELD LOCATE ELEVATION OF LIMESTONE AND SELECT A UNIFORM RISER DIMENSION BETWEEN 4" (MINIMUM) AND 7" (MAXIMUM) SO THAT CONCRETE LANDING PAD IS Poured ATOP A LIMESTONE FOUNDATION. DRAWING DEPICTS 7" RISER DIMENSION.
  2. CONCRETE SHALL MEET SPECIFICATION 03 31 01 MARINE CONCRETE.
  3. CONCRETE STEPS SHALL MEET THE SPECIFICATIONS OF FDOT INDEX NO. 521 AND MODIFIED TO MEET THE DIMENSIONS SHOWN ON THE PLANS.



5 CONCRETE STEP DETAILS



- NOTES:**
1. LANDSCAPING SHALL BE INSTALLED TO MEET FDOT DESIGN INDEX NO. 533.
  2. TREE PROTECTION BARRICADES SHALL BE LOCATED TO PROTECT A MINIMUM OF 75% OF THE CRITICAL PROTECTION ZONE. CRITICAL PROTECTION ZONE IS DEFINED AS THE AREA SURROUNDING A TREE WITHIN A CIRCLE DESCRIBED BY A RADIUS OF ONE FOOT FOR EACH INCH OF THE TREE TRUNK DIAMETER AT 54" ABOVE FINISHED GRADE. FOR GROUPS OF TREES, PLACE BARRICADES BETWEEN TREES AND CONSTRUCTION ACTIVITY.

3 LANDSCAPING DETAILS



MICHAEL R. BARNETT, PE  
FL LIC. # 44625

Mark	Description	Date	Appr.
0	ISSUED FOR CLIENT REVIEW	3/21/17	MB
1	REISSUED BASED ON CLIENT REVIEW	4/6/17	MB
2	MOVE ALUMINUM SEAWARD/ADD CAP	5/17/17	MB
3	ADD TREE LOCATION DETAILS	6/6/17	MB
4	ADD BEACH ACCESS VIA CONCRETE STEPS	6/14/17	MB

DESIGNED BY: M. BARNETT  
DRAWN BY: M. BARNETT  
CHECKED BY: R. CZAPINSKI  
REVIEWED BY: S. MCGAHEE  
DESIGN FILE NO: MWB-C-112-BURBORDIAN-170817  
SCALE: AS SHOWN

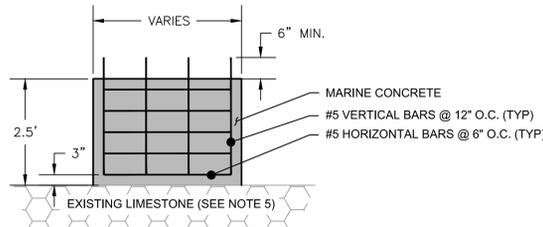
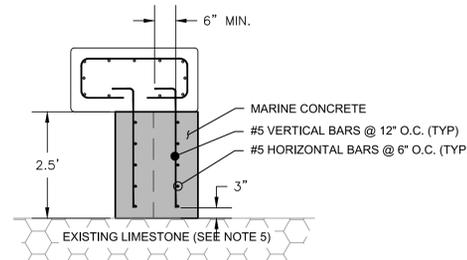
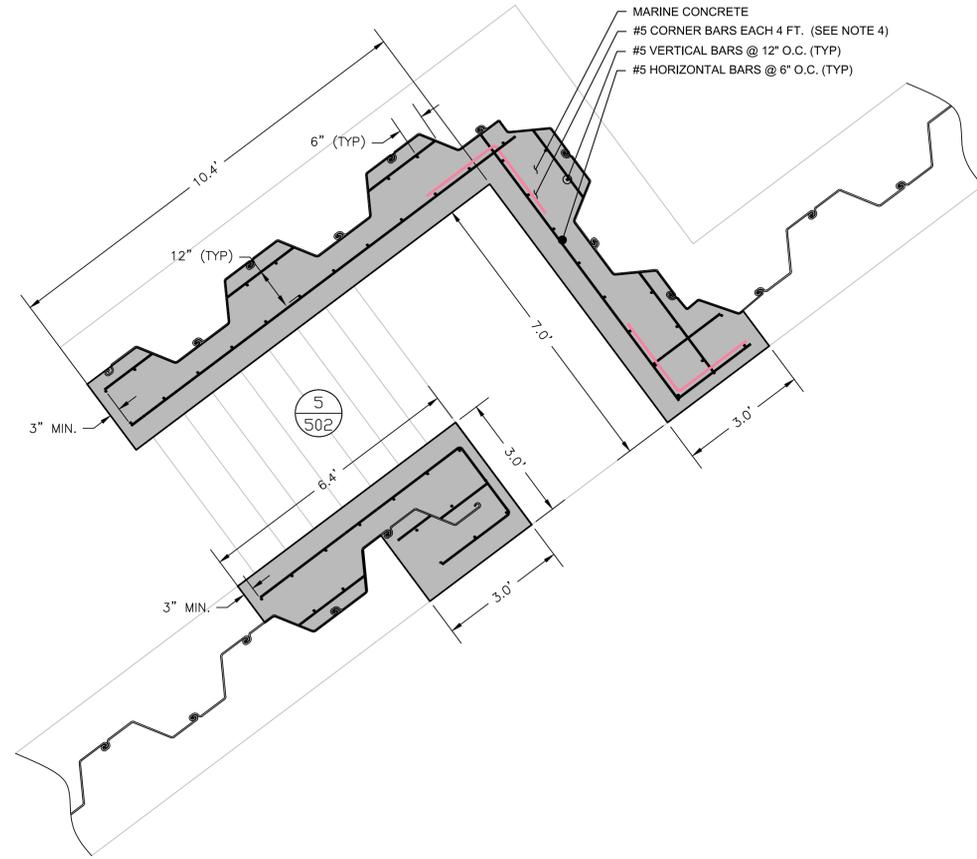


TETRA TECH INC.  
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CITY OF KEY WEST  
REST BEACH SEAWALL  
DETAILS  
KEY WEST, MONROE COUNTY, FL

Sheet Reference:  
**C-502**  
Sheet 22 of 23

**FOR REVIEW ONLY - NOT FOR CONSTRUCTION**



1 CONCRETE FILL DETAILS FOR BEACH ACCESS

NOTES:

1. CONCRETE CAP SHALL MEET SPECIFICATION SECTION 03 31 01 MARINE CONCRETE.
2. ALL REINFORCING BARS SHALL COMPLY WITH ASTM A615/A615M GRADE 60 AND HAVE AT LEAST 3 INCHES OF CONCRETE COVER.
3. MINIMUM LAP SPLICE FOR #5 REINFORCING BARS IS 2FT.
4. IF CONTINUOUS HORIZONTAL BARS ARE UTILIZED, NO CORNER BARS ARE NECESSARY.
5. ELEVATION OF LIMESTONE IS APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE.



MICHAEL R. BARNETT, PE  
FL LIC. # 44625

Mark	Description	Date	Appr.
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DESIGN FILE NO.:  
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SCALE:  
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CERTIFICATE OF AUTHORIZATION  
NO. 2429

CITY OF KEY WEST  
REST BEACH SEAWALL  
DETAILS  
KEY WEST, MONROE COUNTY, FL

Sheet Reference:  
**C-503**  
Sheet 23 of 23

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