

CHARLOTTE COUNTY

CONTRACT PLANS

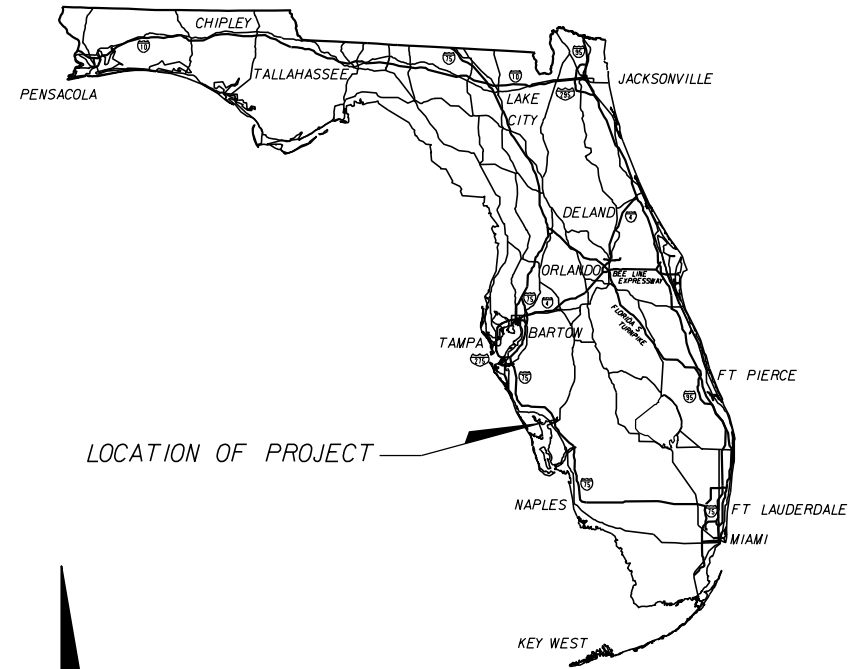
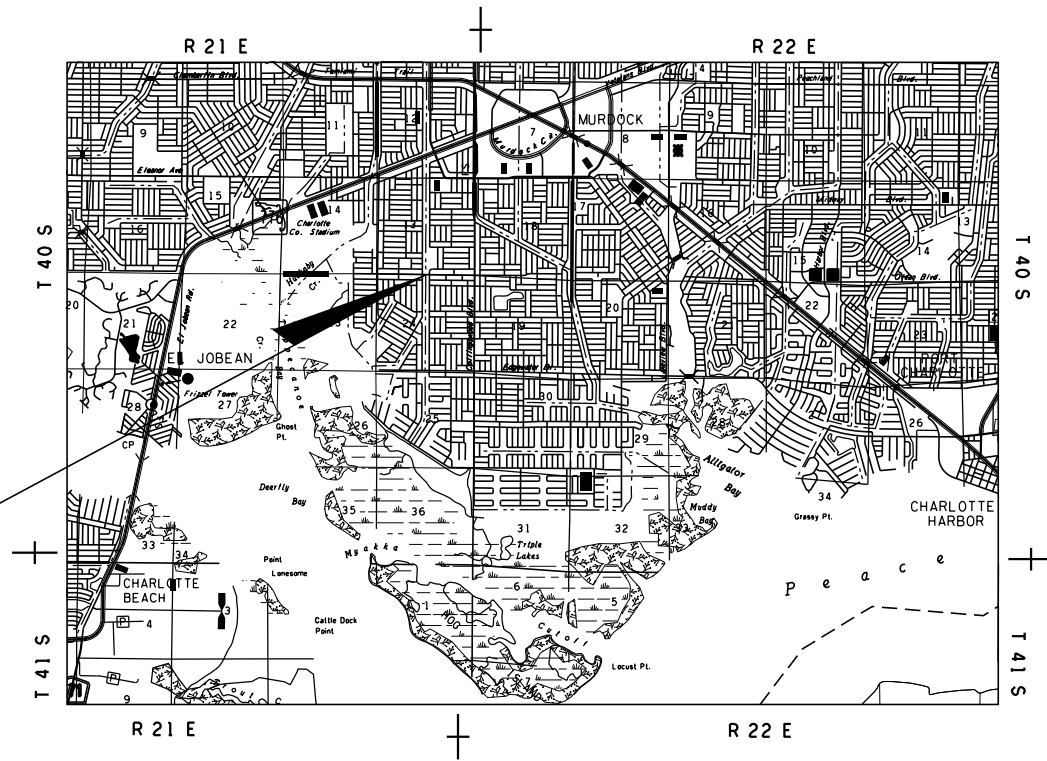
CHARLOTTE COUNTY PUBLIC WORKS
GREATER PORT CHARLOTTE BRIDGES
WINTERGARDEN AVENUE OVER
COMO WATERWAY (BR. NO. 014043)

FILE NO. 2024000117, WO NO. 289

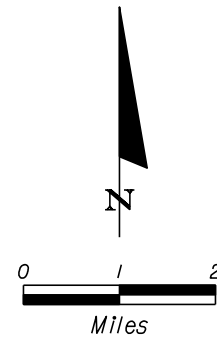
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PROJECT LOCATION



LOCATION OF PROJECT



PLANS PREPARED BY:

Kimley»Horn

1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
(561) 845 0665
PROJECT NUMBER: 140979107
REGISTRY NUMBER: 00035106

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
FY 2024-25 STANDARD PLANS,
AND STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION DATED FY 2024-25,
AS AMENDED BY CONTRACT DOCUMENTS.

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

PREPARED FOR

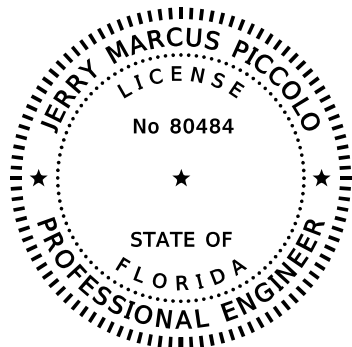


CHARLOTTE COUNTY, PROJECT MANAGER: KELLY SLAUGHTER

THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL

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ON THE ELECTRONIC COPIES.



100% PLANS
SUBMITTAL
JUNE 2025

STRUCTURES PLANS
ENGINEER OF RECORD: JERRY MARCUS PICCOLO

P.E. NO. 80484

SHEET
NO.

B2-01

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GENERAL NOTES

GOVERNING STANDARDS AND CONSTRUCTION SPECIFICATIONS

Florida Department of Transportation, FY 2024-25 Standard Plans and revised Index Drawings as appended herein, and FY 2024-25 Standard Specifications for Road and Bridge Construction, as amended by Contract Documents.

PLAN DIMENSIONS

All dimensions in these plans are measured in feet either horizontally or vertically unless otherwise noted.

EXISTING BRIDGE CONSTRUCTION CONSIDERATIONS

Dimension Verification: Unless otherwise noted, the dimensions, elevations and intersecting angles shown are based on the information as detailed in the Original Construction Plans of the existing bridges and may not represent as-built conditions. It is the Contractor's responsibility to verify this data before beginning construction and notify the Engineer of any discrepancies.

EXISTING ELEMENTS TO REPAIR

Exercise special care not to damage any elements of the structure that are to remain, including reinforcing. Repair or replace to the satisfaction of the Engineer, any elements that are to remain, which are damaged during construction at no additional cost to the County.

SODDING

- 1. The Contractor will restore all areas disturbed by the construction to a condition equal to, or better than that now existing.
- 2. All areas where clearing and grubbing occurs shall be sodded at the completion of construction.
- 3. Sod shall be Bahia.

UTILITIES

- 1. Prior to commencement of any excavation, the Contractor shall comply with Florida Statute 556, underground facility damage prevention and safety.
- 2. The Contractor shall call Sunshine (1-800-432-4770) for field locations two (2) business days prior to commencement of any excavation. The Contractor shall also be responsible to contact any utility owner(s) that may not be a "Sunshine" member.
- 3. The location of some existing utilities are shown in their approximate location and are for reference only; the exact location shall be determined by the Contractor during construction. Relocation of utilities shall be coordinated with the utility companies after identification of conflict by the Contractor. Contractor shall notify Engineer in advance before any relocation.
- 4. Existing utilities are to remain in place unless otherwise noted.
- 5. The Contractor is responsible for the protection of all utilities to remain in place.
- 6. The utility companies shall be notified by the Contractor two (2) business days in advance of any excavation involving their utilities so that company representative can be present.
- 7. The Contractor is to use caution when working in or around areas of overhead electric lines, underground utilities, or near canal banks.

EROSION CONTROL

- 1. Comply with FDOT Standard Specifications for Road and Bridge Construction Section 104 "Prevention, Control, and Abatement of Erosion and Water Pollution".
- 2. The Contractor shall provide a washout station to be inspected and approved by the County prior to the use of any paint, concrete, grout materials, or any other polluting materials the require a washout.
- 3. No debris or materials resulting from the work shall be permitted in the waterway. Contractor shall utilize containment systems or best management practices to contain all debris or materials and dispose of off site.
- 4. The Contractor shall repair or remove any equipment leaking fuel, oil, or other fluids immediately.
- 5. Protection of Water Resources:
 - A. The Contractor shall conduct his activities in a manner to avoid pollution of surface and groundwater and wetlands. The contractor's construction methods shall protect wetland and surface water areas from damage due to mechanical grading, erosion, sedimentation vehicular traffic, and turbid discharges. No storage or stockpiling of equipment shall be allowed within any wetland area unless specifically authorized under permit. Water wetland area unless specifically authorized under permit. Water retention areas to allow settling of suspended materials. All monitoring of any water areas that are affected by construction activities shall be the responsibility of the Contractor.
 - B. The Contractor shall prepare a spill contingency plan in accordance with 40CFR, Part 109. The contractor shall prevent oil, fuel, or other hazardous substances from entering the air, ground, drainage, and local bodies of water or wetlands. In the event that a spill occurs, despite design and procedural controls, the contractor shall take immediate action to contain and cleanup the spill and report the spill immediately to the county's representative. A written report providing certification of commitment of manpower, equipment, and materials necessary to prevent the spread and effect expeditious cleanup and disposal shall be submitted.

MATERIALS

Reinforcing Steel:

- A. ASTM A615 Grade 60 carbon steel per Specifications Section 931.
- B. All pile jacket reinforcing steel shall be galvanized in accordance with ASTM A767 Class 1.
- C. Contractor shall follow the "Guidelines for Construction Practices at the Job-Site" set forth in ASTM A767 Appendix X1.

Concrete:

Concrete Class	Min. 28-day Compressive Strength (psi)	Location of Concrete in Structure
UHPC	21000 psi	Closure Pour
II	3400 psi	Approach Slab Widening
IV	5500 psi	Pile Jacket

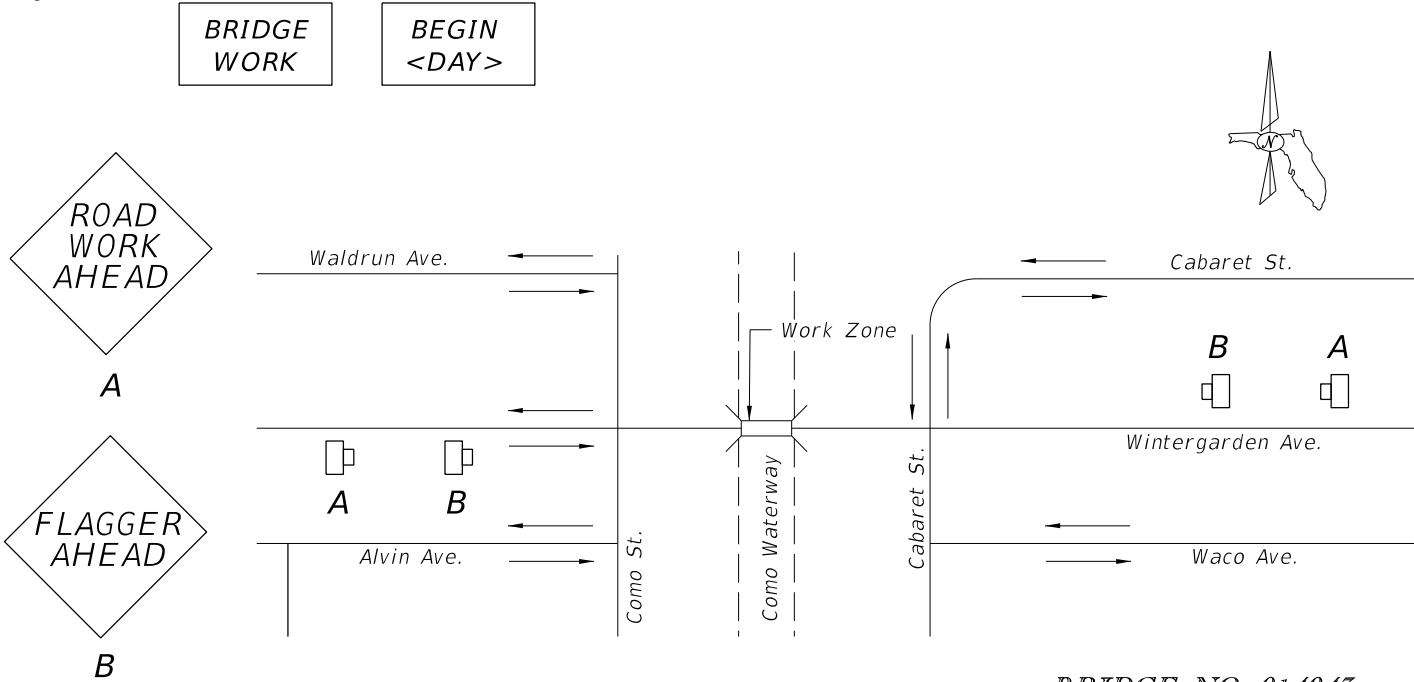
*See Developmental Specifications, Dev349 UPHC and Dev927 UHPC

MAINTENANCE OF TRAFFIC

- 1. Maintenance of traffic for this project shall be in compliance with the applicable FDOT Standard Plan Indices 102-600 Series and these documents; The Manual on Uniform Traffic Control Devices for Streets and Highways (U.S. Department of Transportation, FHWA), shall be followed in the design, application, installation, maintenance and removal of all traffic control devices, warning devices, and barriers necessary to protect the public and workmen from hazards within the project limits.
- 2. The existing bridge may closed to bidirectional vehicular, but shall remain open to marine traffic at all times during repairs.
- 3. The Contractor shall inform local emergency and rescue agencies located in the project vicinity including but not limited to those agencies listed below as well as the Engineer 14 Days in advance of and County approved lane closures or restrictions, and again 24 hours in advance of each series of lane closures. All lanes must be reopened to normal traffic within 12 hours during an evacuation notice for a hurricane or any other emergency event and shall remain open for the duration of the event as directed by the County.

Charlotte County Fire Station 1	(941) 833-5600
Charlotte County Fire Station 2	(941) 627-8002
Charlotte County Fire Station 3	(941) 629-3334
Charlotte County Sheriff's Office - District 2	(941) 613-3245
Charlotte County Sheriff's Office - District 3	(941) 258-3900

- 4. The existing posted speed is 35 mph. The speed may be reduced to 25 mph during construction.
- 5. Personnel working on the maintenance of traffic must have the respective applicable FDOT MOT qualification of advanced, intermediate, and flagger based on their temporary traffic control duties.
- 6. The contractor shall restore all existing pavement damaged as a result of construction or MOT operations to original condition (prior to construction) as determined by the engineer. All costs shall be included in Pay Item 102-1 Maintenance of Traffic (LS).
- 7. For temporary construction signs located in paved areas, the contractor shall provide temporary sign support which does not penetrate the pavement.
- 8. Seven days prior to beginning work install PCMs in each direction, 500' in advance of the bridge with the following messages:

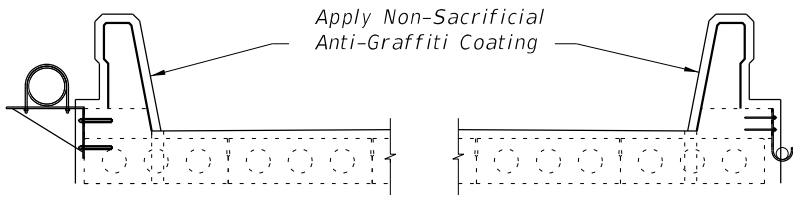


BRIDGE NO. 014043

REVISIONS						Kimley»Horn JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	Charlotte County PUBLIC WORKS GREATER PORT CHARLOTTE BRIDGES	GENERAL NOTES (1 OF 2) WINTERGARDEN AVENUE OVER COMO WATERWAY	SHEET NO. B2-02
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				

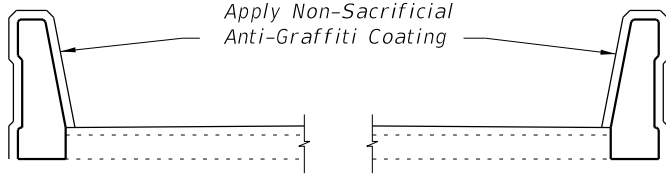
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GENERAL NOTES (CONTINUED)



SURFACE FINISH DETAIL

At Bridge



SURFACE FINISH DETAIL

At Approach Slab, Approach Roadway Similar

BRIDGE NO. 014043

R E V I S I O N S						Kimley»Horn JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEXIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	CHARLOTTE COUNTY PUBLIC WORKS	GENERAL NOTES (2 OF 2)	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			WINTERGARDEN AVENUE OVER COMO WATERWAY	B2-03
							GREATER PORT CHARLOTTE BRIDGES		

PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	QUANTITY	APPLICABLE TECHNICAL SPECIFICATIONS
101-1A	Mobilization/Demobilization	LS	1	TS-01
102-1	Maintenance of Traffic	LS	1	TS-02
104-2A	Prevention, Control, and Abatement of Erosion and Water Pollution	LS	1	TS-03
110-2-2A	Selective Clearing, Areas with Trees to Remain	LS	1	TS-04
110-3	Removal of Existing Structures/Bridges	SF	62	TS-05
110-3A	Removal of Existing Bridge Handrail	LF	210	TS-05
110-12-1	Hydrodemolition, Removal of Deck Surface	SY	39	TS-06
120-1A	Regular Excavation	LS	1	TS-07
120-5A	Channel Excavation	LS	1	TS-07
120-6A	Embankment	LS	1	TS-07
327-70-6	Milling Exist Asph Pavt, 1.5" Avg Depth	SY	59	TS-09
327-70-6A	Milling Exist Asph Pavt, Variable	SY	310	TS-10
331-2A	Asphaltic Concrete Type S-III	TN	56.1	TS-11
400-2-10	Concrete Class II, Approach Slabs	CY	2.0	TS-13
400-145A	Cleaning Concrete Surfaces	SF	4500	TS-14
400-153A	Non-Shrink Grout, F&I	CY	5	TS-15
401-70-1	Restore Spalled Areas, Epoxy	CF	0.3	TS-16
411-1	Epoxy Material for Crack Injection - Structures Rehab	GA	0.8	TS-18
411-2	Crack Inject & Seal - Structures Rehab	LF	5	TS-18
457-1-21A	Standard Integral Pile Jacket, Structural	EA	1	TS-21
458-1-21	Bridge Deck Expansion Joint, Rehabilitation, Poured Joint with Backer Rod	LF	112	TS-22
458-2	Polymer Nosing for Bridge Deck Expansion Joint	CF	24.1	TS-23
460-98-2A	Pipe Hanger, Stainless, Watermain	EA	12	TS-24
460-98-2B	Pipe Hanger, Stainless, Conduit	EA	10	TS-24
520-1-10	Concrete Curb & Gutter, Type F	LF	378	TS-26
521-5-13A	Concrete Traffic Railing- Bridge, 36" Single-Slope (Modified)	LF	250	TS-27
521-72-43A	Shoulder Concrete Barrier, Curb and Gutter Barrier	LF	150	TS-27
530-3-4	Riprap, Rubble F&I, Ditch Lining	TN	230.8	TS-29
563-4	Anti-Graffiti Coating, Non-Sacrificial	SF	4500	TS-32
570-1-2A	Performance Turf, Sod	LS	1	TS-33
700-1-111	Single Column Sign Assembly, F & I ground mount, Less than 12 SF	EA	4	TS-34
700-1-500	Single Column Ground Sign Assembly, Relocate	EA	4	TS-34
706-1-3A	Raised Pavement Markers, Type B	LS	1	TS-35
710-12-101A	Painted Pavement Markings, Durable Paint, White, Solid, 6" Wide	LF	690	TS-36
710-12-105A	Painted Pavement Markings, Durable Paint, White, Solid, 24" Wide	LF	23	TS-36
710-12-201A	Painted Pavement Markings, Durable Paint, Yellow, Solid, 6" Wide	LF	250	TS-36
918-349	Ultra High Performance Concrete (UHPC)	CY	6.5	TS-38
999-3	Gopher Tortoise Relocation and Permitting	EA	3	TS-39

PAY ITEM NOTES

- Pay Item 104-2A Prevention, Control, and Abatement of Erosion and Water Pollution
This pay item includes all costs for the labor, equipment, and materials required to provide erosion and water pollution control measures in accordance with Standard Specification Section 104.

Pay Item 331-2A Asphaltic Concrete Type S-III
This pay item shall also include the cost of furnishing and installing tack coat.

Pay Item 401-70-1 Restore Spalled Areas, Epoxy
This pay item also includes the cost of containing and off site disposal of all debris resulting from these repairs.

Pay Item 521-5-13A Concrete Traffic Railing – Bridge, 36" Single-Slope (Modified)
This pay item shall also include the cost of applying non-sacrificial anti-graffiti coating.

Pay Item 521-72-43A Shoulder Concrete Barrier, Curb and Gutter Barrier
This pay item shall also include the cost of applying non-sacrificial anti-graffiti coating.

- Pay Item 700-1-500 Single Column Ground Sign Assembly, Relocate
This pay item shall also include all costs associated with splicing/adjusting "U Channel" supports to adhere to the sign mounting height.

Pay Item 706-1-3A Raised Pavement Markers, Type B
This pay item includes all costs associated with finishing and installing raised pavement markers in accordance with Standard Plan Index 706-001 and FDOT Standard Specification Section 706.

Pay Item 710-12-101A, 710-12-201A, & 710-12-203A Painted Pavement Markings, Durable Paint, (White & Yellow), Solid, 6" & 24"
This pay item includes all costs associated to finish and install painted pavement markings matching the existing pavement markings in width, color, and location.

BRIDGE NO. 014043

REVISIONS						 JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	CHARLOTTE COUNTY PUBLIC WORKS	SUMMARY OF QUANTITIES	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		GREATER PORT CHARLOTTE BRIDGES	WINTERGARDEN AVENUE OVER COMO WATERWAY	B2-04

R E V I S I O N S							CHARLOTTE COUNTY PUBLIC WORKS		APPROACH ROADWAY PLAN WITH WORK IDENTIFICATION		SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		GREATER PORT CHARLOTTE BRIDGES		WINTERGARDEN AVENUE OVER COMO WATERWAY		B2-05
					JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106						

PLAN

Legend:

- Indicates Variable Milling and Resurfacing
- Indicates Limits of Hydro-Demolition & UHPC Repair
- Riprap

Notes:

- See "Approach Roadway - Plan with Work Identification" sheet for approach roadway modifications.

PLAN

- ① Epoxy inject the diagonal cracks on the waterward face of Abutment 4 cap as depicted above (Pay Items 411-1 & 411-2).
- ② Install expansion joint headers and expansion joint seals at the existing expansion joints within the roadway limits as shown on the "Expansion Joint Repair Details" sheet (Pay Items 458-1-21 & 458-2).
3. Mill and resurface within the limits depicted above (Pay Items 327-70-6A, 327-70-6, & 331-2A).
- ④ Repair minor spalls on underside of slab units as depicted above and on "Spall Repair Details" sheet (Pay Item 401-70-1).
5. Replace the existing steel handrail with modified 36" Single-Slope Traffic Railing within the bridge limits as depicted above and on "Railing Replacement Details" sheet (Pay Items 110-3A & 521-5-13A).
- ⑥ Install ultra-high performance concrete at the longitudinal joints between all slab units as depicted above and on "Prestressed Slab Unit Repair Details" sheets (Pay Items 110-12-1 & 918-349).
7. Within the approach slab limits as depicted above, remove and recast sections of the approach slab with a 36" Single-Slope Traffic Railing as shown on "Railing Replacement Details" sheet (Pay Items 110-3A, 400-2-10, & 521-5-13A).

- ⑧ Install structural pile jackets on pile 2-5 as depicted above and on "Pile Jacket Details" sheet (Pay Item 457-1-21A).
9. Remove and replace utility hangers with side-mounted utility hangers as depicted above and on "Utility Hanger Details" sheet (Pay Items 460-98-2A & 460-98-2B).
10. Install riprap 6' waterward from the toe of the existing slope protection concrete. Riprap shall be placed as depicted above and on "Slope Protection Repair Details" sheet (Pay Items 120-5A & 530-3-4).
11. Core 6" holes at 6'± on-center into the existing slope protection concrete, fill voids with non-shrink grout (Pay Item 400-153A).
12. Remove all non-protected plant species growing within or on the bridge, wingwalls, and slope protection. Selectively clear invasive northeast, southwest, and southeast corners of the bridge as depicted above. Existing oak tree to remain (Pay Item 110-2-2A).
13. Replace roadway striping within the limits of milling and resurfacing with painted pavement markings. Replace retroreflective pavement markers with the limits of milling and resurfacing (Pay Items 706-1-3A, 710-12-101A, & 710-12-201A).
14. Pressure clean and coat the slope pavement concrete, underside slab units (Spans 1 and 3), abutment caps, wingwalls, and sides of exterior slab units with non-sacrificial graffiti resistant coating. See Coating Notes (Pay Items 400-145A & 563-4).
15. Install "No Trespassing" Signs the locations depicted above and on "Crack Repair & Object Marker Details" Sheet (Pay Item 700-1-111)

1. See "Approach Roadway - Plan with Work Identification" sheet for approach roadway modifications.
2. See "Railing Replacement Details" sheet for Sections A-A and B-B.
3. See "Slope Protection Repair Details" sheet for Sections C-C, D-D, E-E, and F-F.

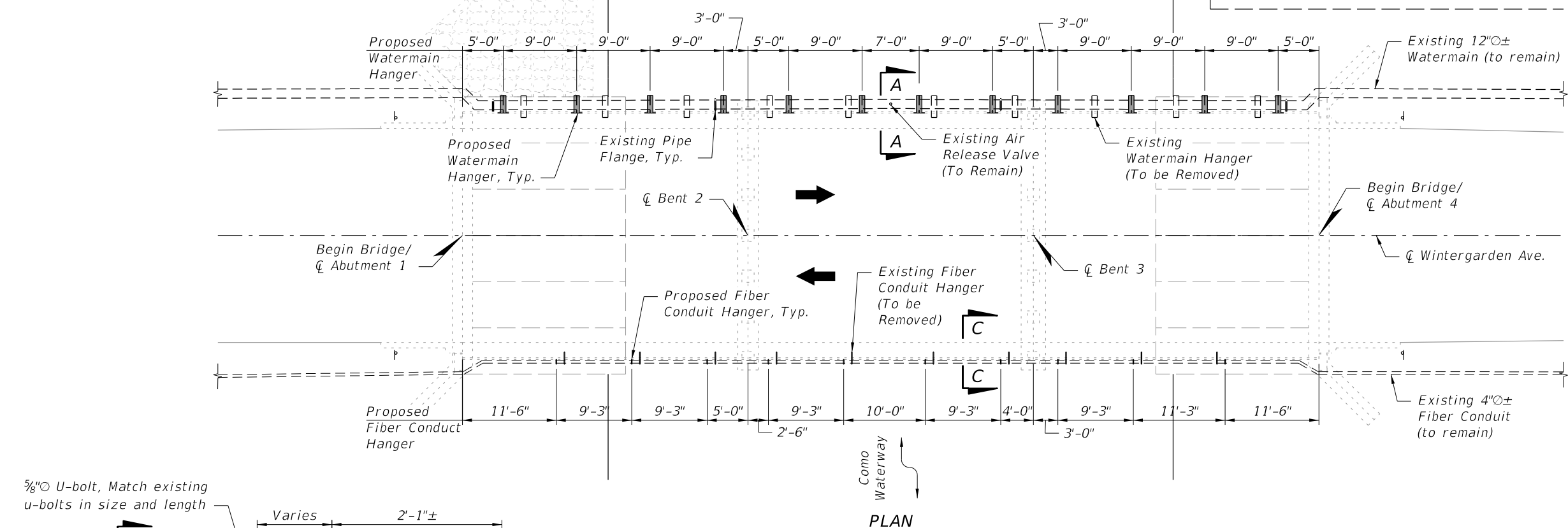
1. Non-sacrificial graffiti resistant coating shall be GRAFFITI GARD® IV or approved equal in the color Antique Ivory. Surface preparation and coating shall be in accordance with FDOT Specification Section 563.

1. Within bridge limits:
 - a. Mill existing asphalt pavement. Thickness varies from 2"± at gutterline to 3"± at crown.
 - b. Pavement resurfacing
 - Type S-III (Varies from 1½"± to 3"±)
2. Within approach slab limits:
 - a. Mill existing asphalt pavement 1½" average depth.
 - b. Pavement resurfacing
 - Type S-III (1½")
3. Profile of resurfaced roadway shall match existing profile.

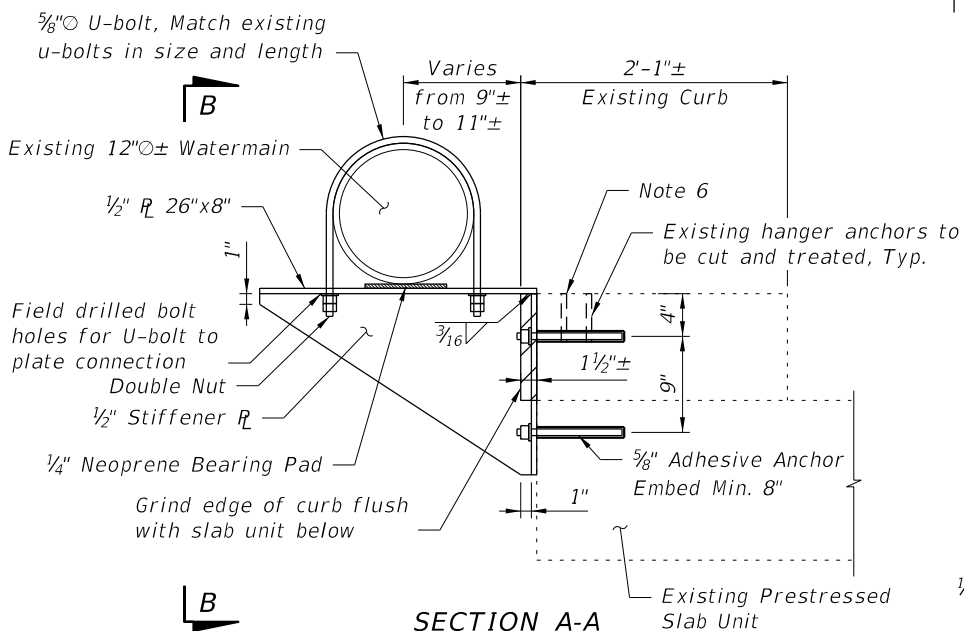
BRIDGE NO. 014043

REVISIONS							CHARLOTTE COUNTY PUBLIC WORKS	PLAN WITH WORK IDENTIFICATION	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				
						JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	GREATER PORT CHARLOTTE BRIDGES	WINTERGARDEN AVENUE OVER COMO WATERWAY	B2-06

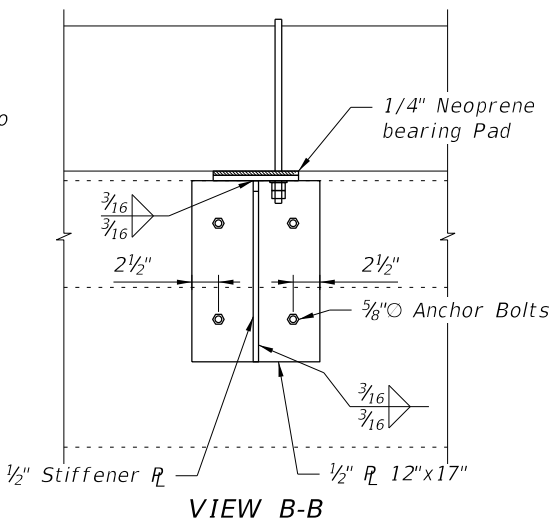
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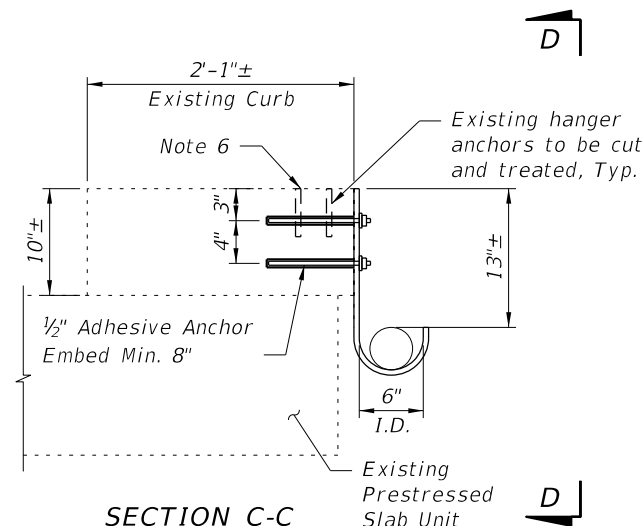
PLAN



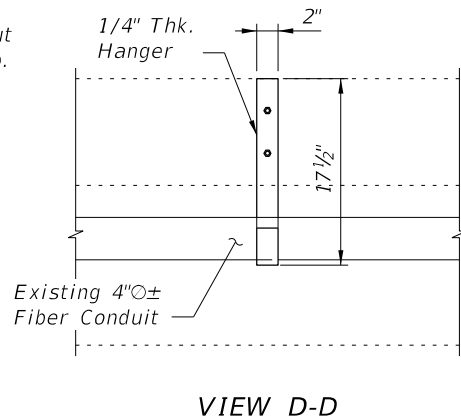
SECTION A-A



VIEW B-B



SECTION C-C



VIEW D-D

Watermain Hanger Replacement Notes:

1. One week prior to any work associated with the watermain hangers, notify Charlotte County Utilities, Mike Martindell - 941-764-4569 - Mike.martindell@charlottecountyfl.gov
2. Do not attempt to adjust the plan view location of the pipe.
3. While all existing hangers are in service, install new hangers to have positive contact between bearing pad and bottom of watermain.
4. Before removing any hangers, notify Charlotte County Utilities and obtain their permission to remove existing hangers. The County may elect to temporarily valve off the watermain prior to removing existing hangers.
5. All costs associated with replacing the watermain hangers shall be included in Pay Item 460-98-2A.

Fiber Utility Hanger Replacement Notes:

1. Prior to any work, contractor shall notify the utility owner of the hanger replacement.
2. Install new hangers to have positive contact between hanger and bottom of fiber conduit.
3. All costs associated with replacing the fiber hangers shall be included in Pay Item 460-98-2B.

Notes:

1. Adhesive Bonding Material shall be Type HV in accordance with Specification Section 937.
2. Pipe Hanger must be as follows:
 - Stainless Steel Threaded Anchors: ASTM F593 Type 316 CW1
 - Stainless Steel Nuts: ASTM F594
 - Stainless Steel Washers: Stainless Steel Type 316
 - Angles and Plates: Type 316
 - Weld Material: E316-XX
 - U-Bolts: Stainless Steel Type 316
3. All welding shall be shop welding in accordance with AWS D1.6.
4. Contractor shall exercise extreme caution not to damage the reinforcement and prestressing strands while installing the anchors.
5. Prior to fabrication, contractor shall submit shop drawings of the watermain hanger to the Engineer for approval.
6. All existing anchors that are being abandoned shall be cut flush with concrete surface and treated following anchor repair detail on "Spall Repair Details" sheet.

BRIDGE NO. 014043

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
JERRY MARCUS PICCOLO, P.E.
P.E. LICENSE NUMBER 80484
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
(561) 845-0665
REGISTRY NO. 35106

CHARLOTTE COUNTY
PUBLIC WORKS

GREATER PORT CHARLOTTE BRIDGES

UTILITY HANGER DETAILS

WINTERGARDEN AVENUE
OVER COMO WATERWAY

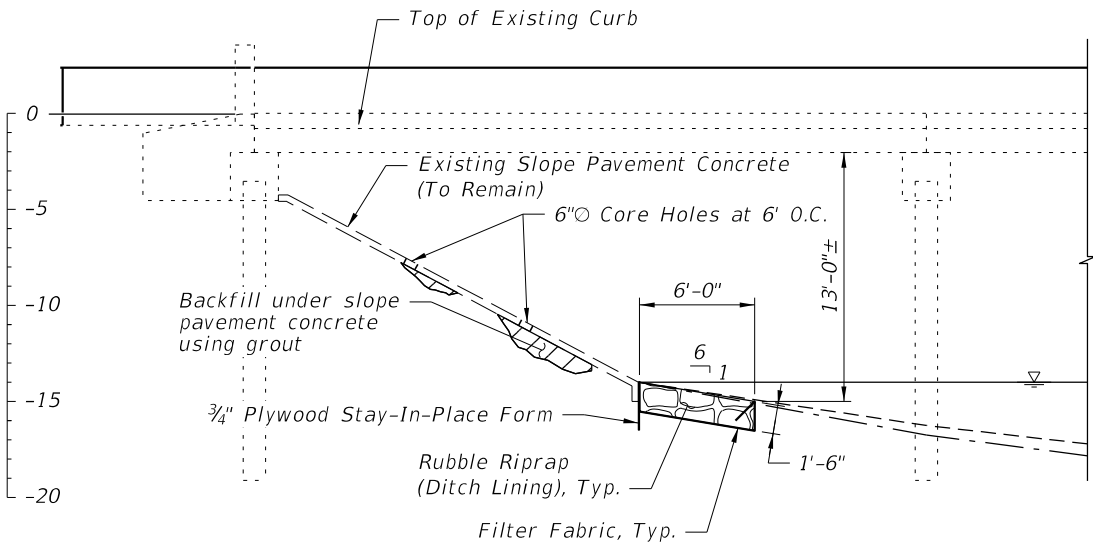
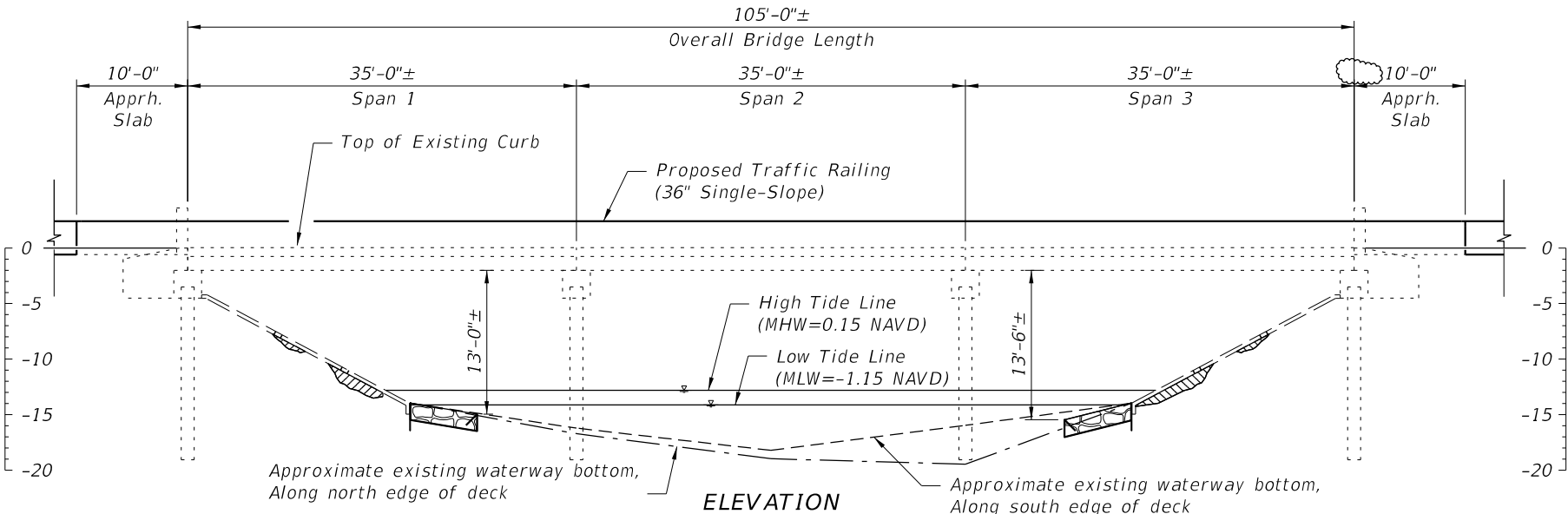
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NO.

B2-07

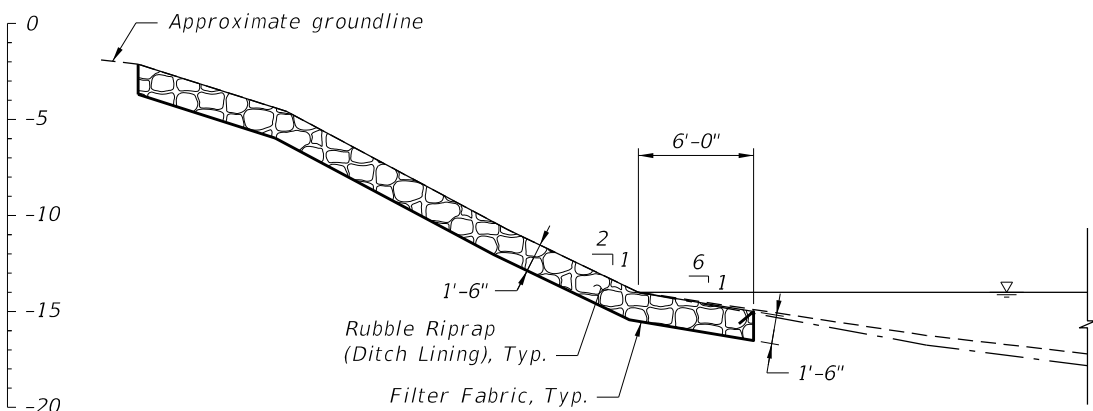
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- Slope Protection Backfilling Notes:**
- 1. Contractor shall core holes in slope pavement concrete or fabric-formed concrete revetment as shown. Additional cores may be needed to backfill voids.
 - 2. Prior to back filling with grout, the ¾" plywood stay-in-place form shall be installed and waterward riprap installed.
 - 3. Contractor may elect to use flowable fill instead of grout at no additional cost to the county.
 - 4. Grout shall be mixed to a flowing consistency in accordance to manufactures recommendations.
 - 5. No grout is permitted within the waterway.

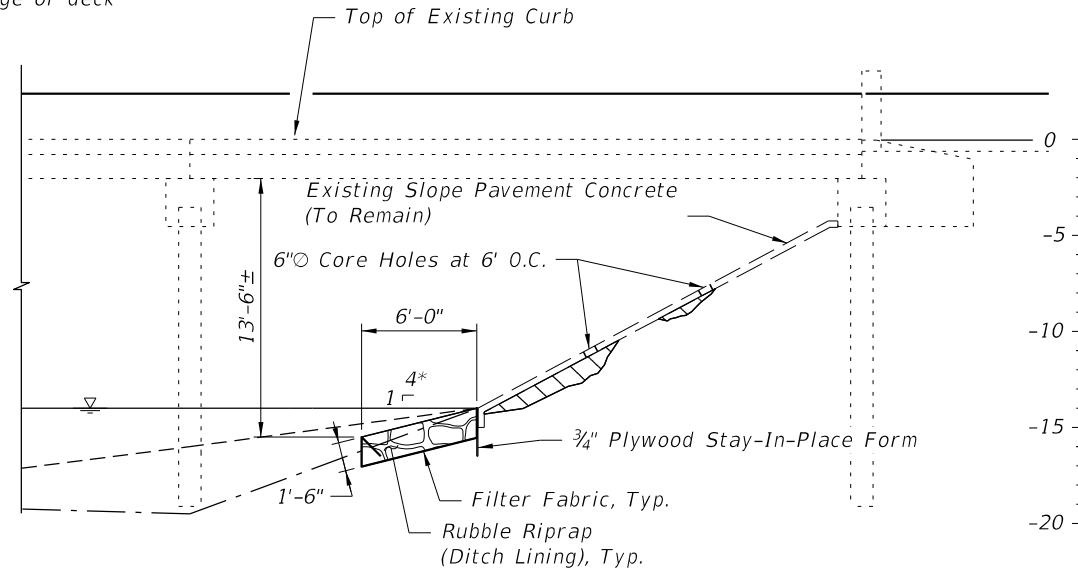
- Notes:**
- 1. At the outer limits of the Rubble Riprap (Ditch Lining), adjust the top of finished riprap slopes to feather into existing grades.



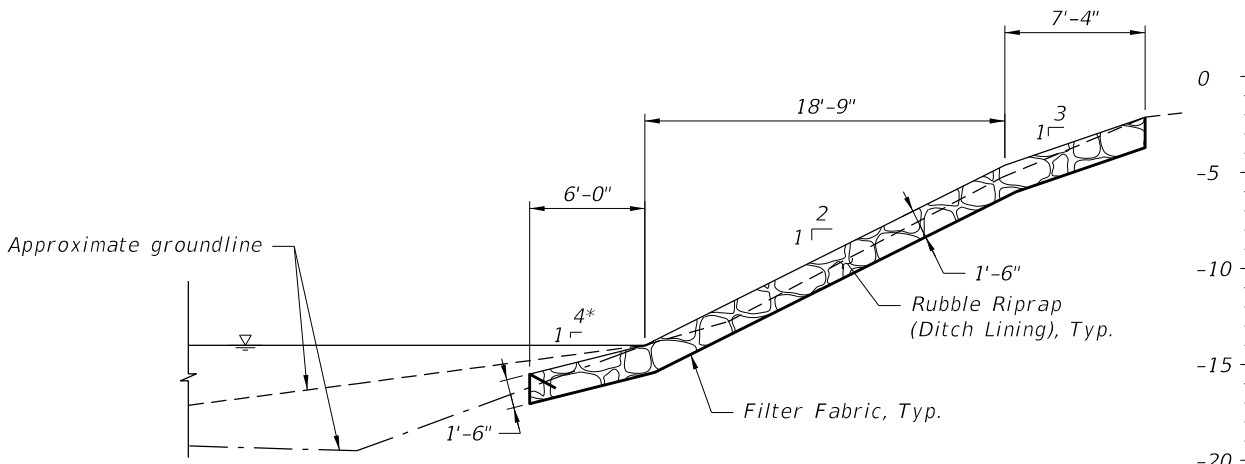
SECTION C-C



SECTION E-E



SECTION D-D



SECTION F-F

* Slope may vary as riprap extends north
BRIDGE NO. 014043

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

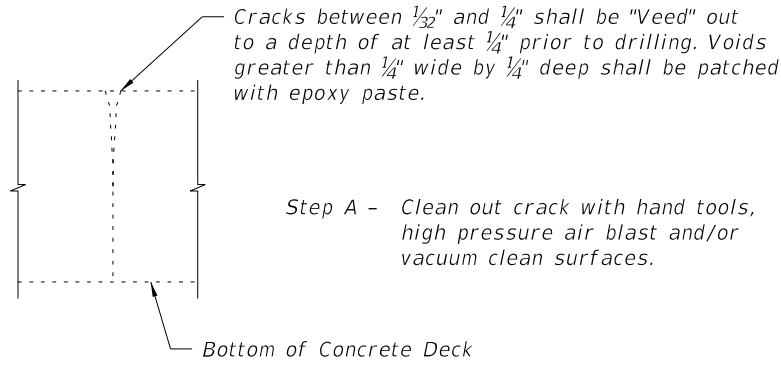
Kimley»Horn
JERRY MARCUS PICCOLO, P.E.
P.E. LICENSE NUMBER 80484
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
(561) 845-0665
REGISTRY NO. 35106

CHARLOTTE COUNTY
PUBLIC WORKS
GREATER PORT CHARLOTTE BRIDGES

SLOPE PROTECTION REPAIR DETAILS
WINTERGARDEN AVENUE
OVER COMO WATERWAY

SHEET
NO.
B2-08

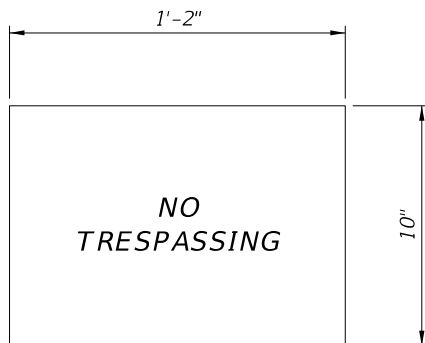
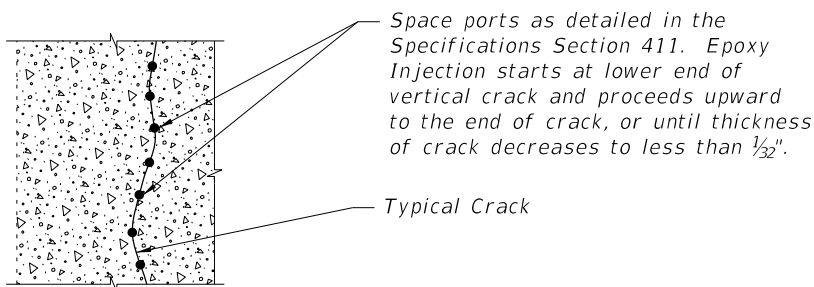
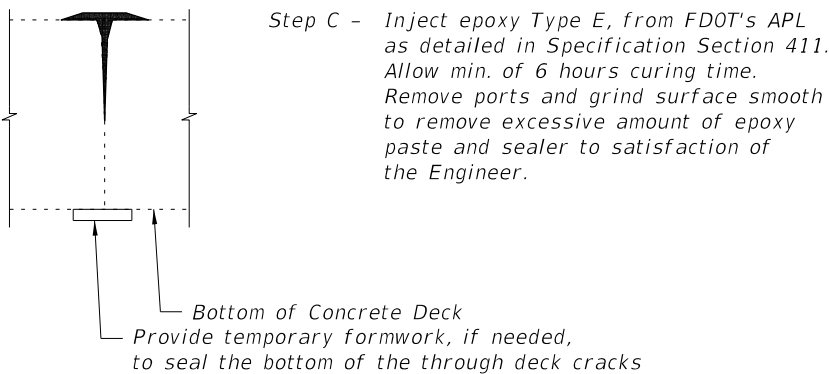
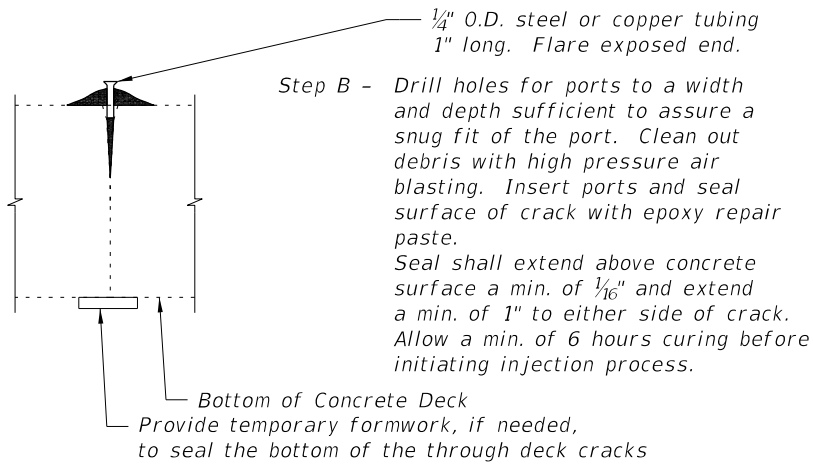
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TYPE 1 CRACK REPAIR DETAIL

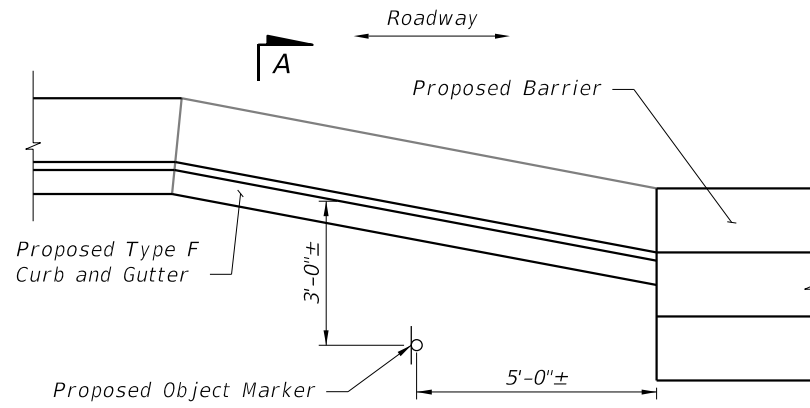
TYPE 1 CRACK REPAIR NOTES:

1. Seal cracks by epoxy injection.
2. Repair details are for illustrative purposes.
3. See *FDOT Standard Specifications Section 411*.
4. The Contractor shall contain all debris resulting from cleaning cracks before and after epoxy injection and dispose off site.
5. Where cracks are being injected in close proximity to tidal waters, time the installation to maximize dry curing time during low tide.

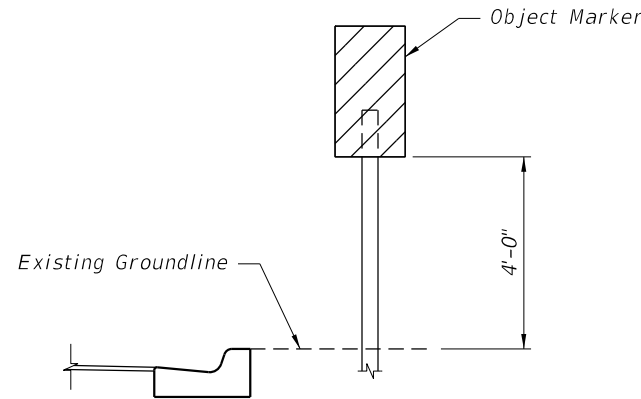


Sign Notes:

1. Minimum sign lettering size shall be 2" tall.
2. Lettering shall be bold font.
3. Sign shall be mounted on aluminum plating following *FDOT standard Plan Index 700-010*.
4. Sign panel shall be retro reflective
5. Sign shall be mounted following *FDOT standard Plan Index 700-010*.



PLAN



SECTION A-A

OBJECT MARKER RELOCATION DETAILS

Notes:

1. If sign support "U channel" does not provide adequate length for new mounting height, contractor may splice section of "U channel" to achieve proper mounting heights.

BRIDGE NO. 014043

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CHARLOTTE COUNTY
PUBLIC WORKS

GREATER PORT CHARLOTTE BRIDGES

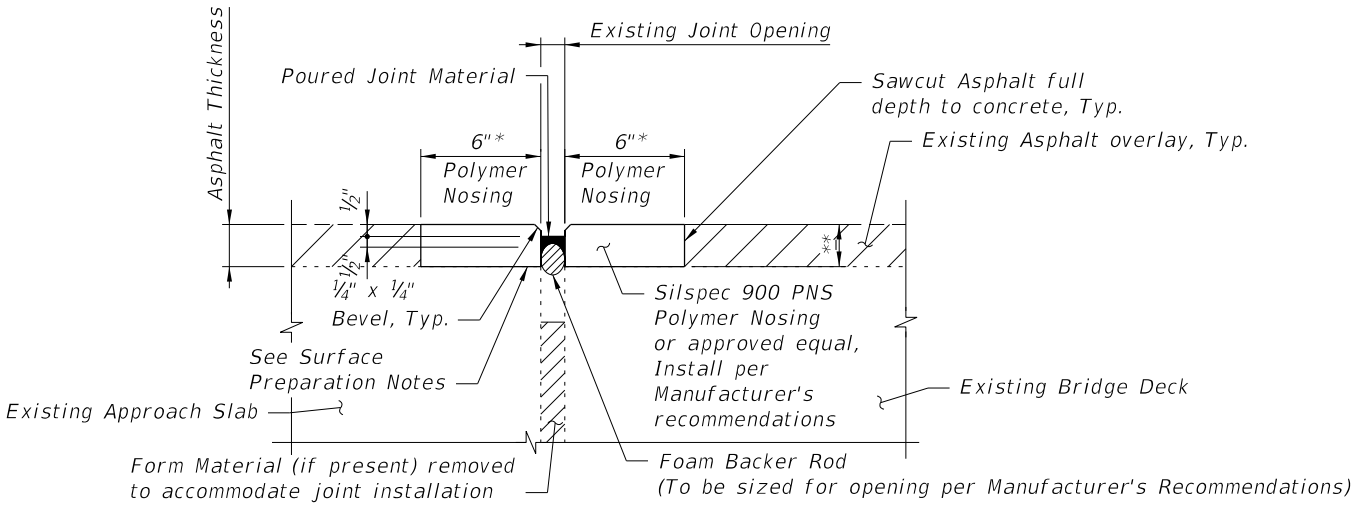
CRACK REPAIR & OBJECT
MARKER DETAILS

WINTERGARDEN AVENUE
OVER COMO WATERWAY

SHEET
NO.

B2-09

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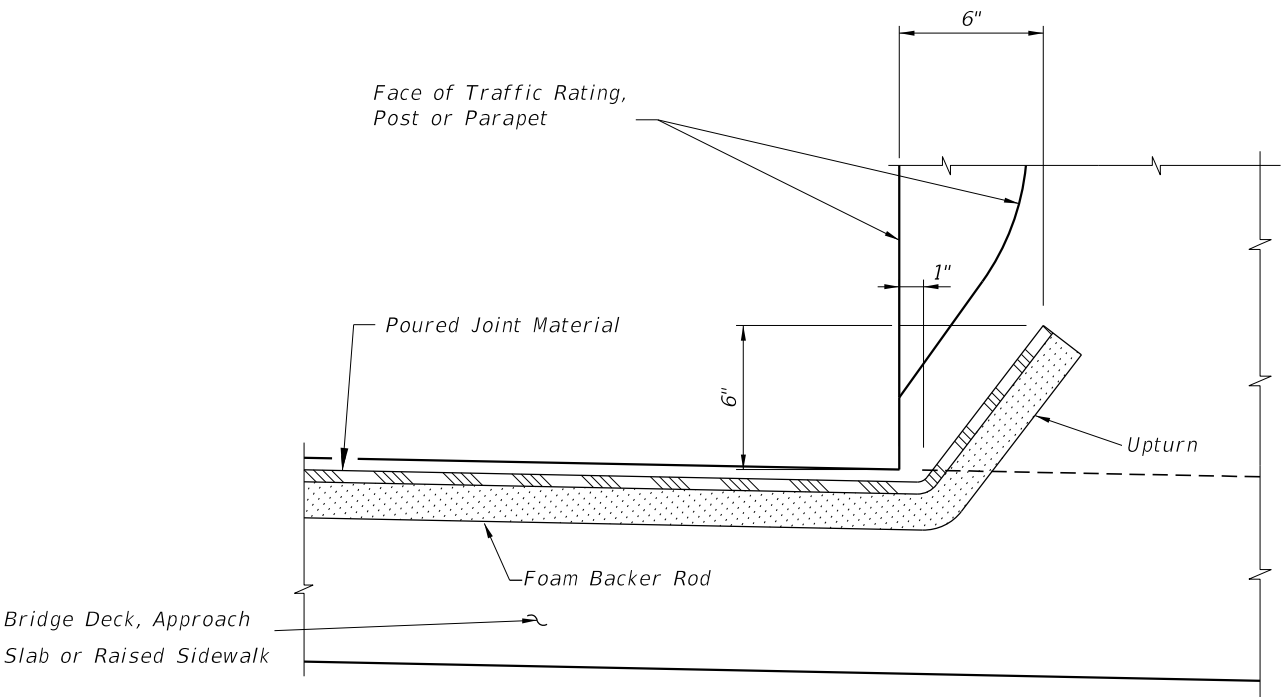
TYPE ② EXPANSION JOINT HEADER REPAIR AND JOINT SEAL REPAIR

(Construct new header on asphalt overlay bridges and replace existing joint seal)

- * The width of the polymer nosing is a minimum of 6" unless otherwise required by the Manufacturer's recommendations.
- ** The thickness of the polymer nosing is the thickness of the asphalt overlay. Adjust the width of the polymer nosing in accordance with the Manufacturer's recommendations for the asphalt thickness.

Surface Preparation Notes:

1. Remove asphalt within the limits of polymer nosing applications.
2. Prepare the concrete surface the polymer nosing will bond to by sand blasting and intentionally roughing the concrete surface to an aggregate fracture surface finish with minimum 1/4" amplitude.
3. Immediately prior to placement of polymer, air blast polymer nosing repair area free of all loose material.
4. Install the polymer nosing in accordance with Manufacturer's Recommendations.



General Expansion Joint Repair Notes:

1. Work this sheet with Standard Plan Index 458-110.

BRIDGE NO. 014043

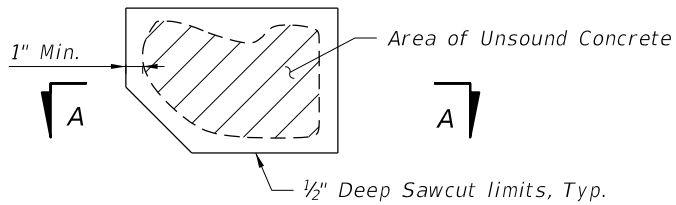
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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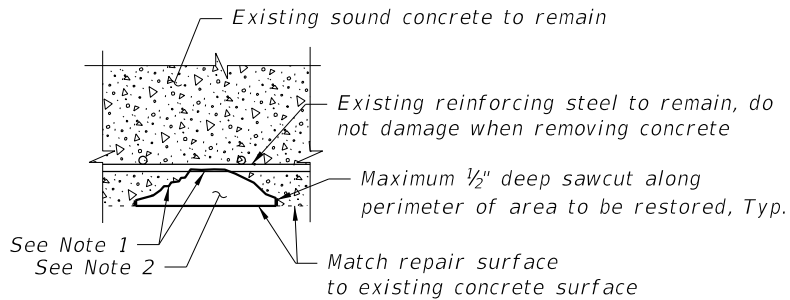
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REGISTRY NO. 35106

CHARLOTTE COUNTY PUBLIC WORKS	EXPANSION JOINT REPAIR DETAILS	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	WINTERGARDEN AVENUE OVER COMO WATERWAY	B2-10

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TYPE ④ - SPALL REPAIR

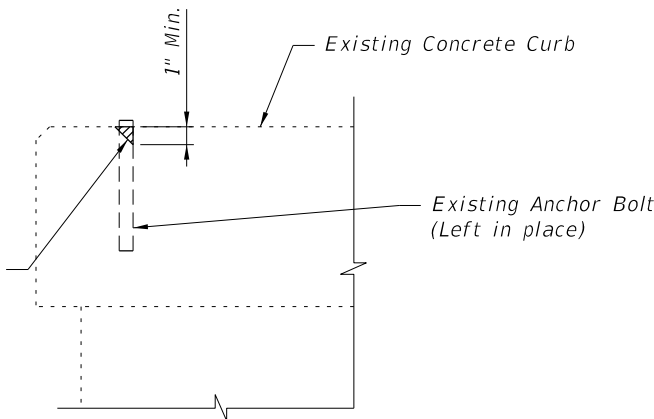


SECTION A-A

TYPE ④ SPALL REPAIR NOTES

1. *Surface Preparation*
Remove deteriorated concrete to sound material by scarification or by chipping with light duty pneumatic or electric concrete chippers (30 lbs or less in general, 15 lbs or less adjacent to prestressing strands, reinforcing steel, and structural limits of construction). Provide an aggregate-fractured surface with a minimum surface profile amplitude of ¼ inch by use of a scabblor or other appropriate means. Blast clean all reinforcing bars exposed after concrete removal in accordance with SSPC SP-10 "Near-White Blast Cleaning." Blast clean existing concrete surfaces that will be in contact with freshly placed repair material and clean to remove loose material and dust immediately before application of repair material.
2. *Repair material shall be Type F Epoxy in accordance with Specification Section 926 or SikaQuick V0H or approved equal in accordance with Specification Section 932, applied in accordance with Manufacturer's recommendations.*
3. *Type ④ Spall Repairs are paid for under Pay Item 401-70-1.*
4. *Exercise special care when removing unsound concrete to not damage existing reinforcing steel or other embedded anchorages or break the bond between the steel and sound concrete to remain.*
5. *Any existing reinforcing steel damaged by the Contractor's actions in the process of removing unsound concrete or cleaning reinforcing steel shall be repaired to the satisfaction of the Engineer at the Contractor's expense.*
6. *Detail applies to both horizontal and vertical repairs.*
7. *For locations of deficiencies, see bridge "Plan with Work Identification" sheets.*
8. *The Contractor shall contain all debris resulting from Type ④ repairs and disposed off site.*

Remove concrete and protruding anchor bolt to the limits shown and fill with Epoxy Compound Type F, Typ.



EXISTING ANCHOR DETAIL

EXISTING ANCHOR TREATMENT

Notes:

1. *Sawcut existing anchor bolt and clean off any apparent surface rust prior to epoxy filling.*
2. *See FDOT Standard Specification Section 926 for epoxy material. Epoxy repair material shall be applied flush with adjacent concrete surface.*
3. *Contractor shall contain all debris resulting from sawcutting and epoxy filling operations.*
4. *All cost associated with anchor treatment shall be included in Pay Items 110-3A, 460-98-2A, or 460-98-2B.*

BRIDGE NO. 014043

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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WEST PALM BEACH, FL 33411
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REGISTRY NO. 35106

CHARLOTTE COUNTY
PUBLIC WORKS

GREATER PORT CHARLOTTE BRIDGES

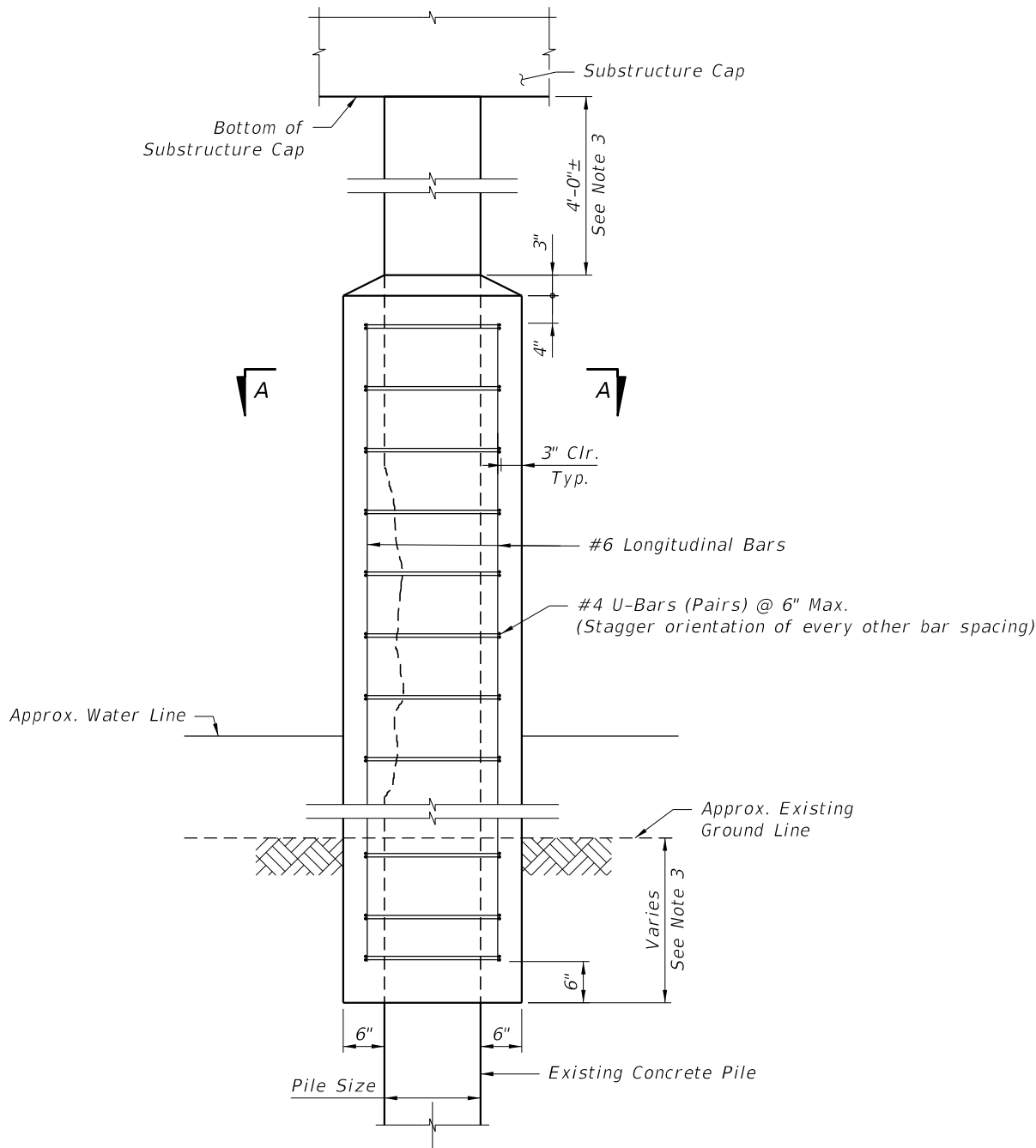
SPALL REPAIR DETAILS

WINTERGARDEN AVENUE
OVER COMO WATERWAY

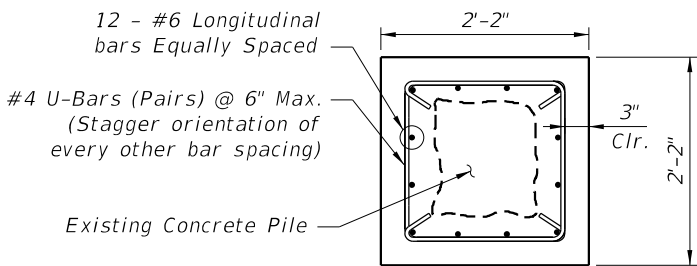
SHEET
NO.

B2-11

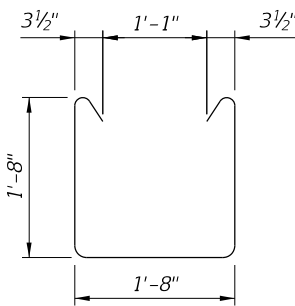
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TYPE ⑧ REPAIR - STRUCTURAL CONCRETE PILE JACKET



SECTION A-A



Bar Bending Detail
#4 U-Bars

PILE JACKETS NOTES

1. All loose or soft concrete shall be removed, using a 15 lb. or less chipping hammer or hand tools. All incipient spalls shall be broken out. All debris, residue, or marine growth on the surface of the piles at the elevations where the Concrete jacket will be installed shall be removed. This may be achieved by sandblasting, hydro-blasting, or other method as approved by the Engineer. After the surface preparation of the pile, the Contractor shall notify the Engineer of Record, 48 hours in advance, who will review the surface preparation of the pile. If any areas of delamination are encountered, all delaminated concrete shall be removed. All cracks discovered within the core of the pile shall be injected with FDOT APL approved epoxy. All costs associated with crack injection shall be included in the unit cost of the pile jacket.
2. Existing pile surfaces shall be cleaned, above and below water, of any oil, grease, dirt or other foreign materials which could prevent proper bonding. All existing concrete surfaces that will be in contact with the pile jacket shall be roughened to a minimum 1/4" amplitude. All exposed reinforcing steel shall be sandblasted to near white metal in accordance with SSPC SP-10. All encountered reinforcement shall be treated with a corrosion inhibitor.
3. The location and length of the jacket are subject to the following guidelines, unless otherwise specified in the Contract Documents. Pile jackets will overlap into sound existing pile at least two pile dimensions, at both upper and lower ends. If the cap limits this overlap at the upper end, jacket will extend as close as possible to the cap. When, at the lower end, the overlap requirements would place the jacket within two pile dimensions of the existing ground line, then the jacket will extend 2 feet below the existing ground line.
4. The maximum time interval between surface preparation of the piles and concrete placement is 36 hours.
5. Contractor shall place pile jacket cementitious material to maximize the amount of initial cure time unsubmerged during low tide.
6. Concrete placement that occurs below water shall be placed via the tremie method or other means to ensure good consolidation.
7. Stay-in-place pile jacket forms will not be permitted on this project including, but not limited to, fiberglass, wood, or polymer form systems.
8. Reinforcement shall be hot dip galvanized.
9. At no time shall live traffic be permitted on the bridge during pile jacket preparation or installation nor until pile jacket concrete has reached 5,500 psi (28-day) compressive strength.

BRIDGE NO. 014043

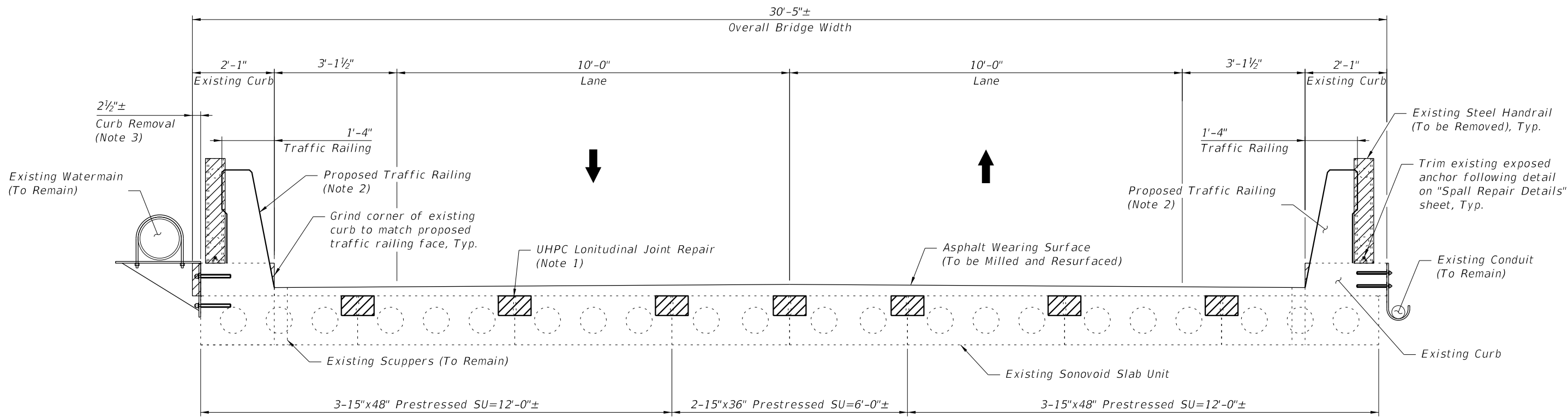
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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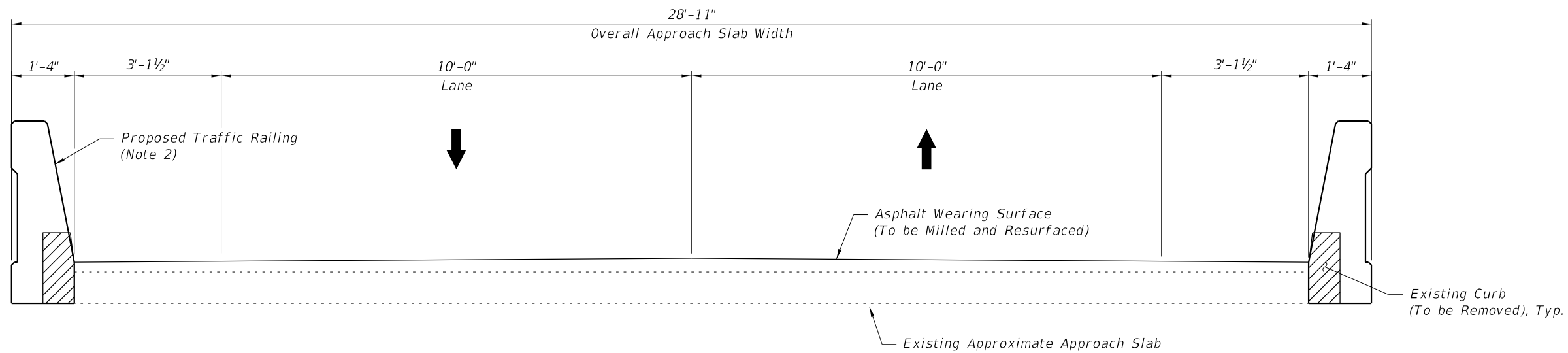
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P.E. LICENSE NUMBER 80484
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
(561) 845-0665
REGISTRY NO. 35106

CHARLOTTE COUNTY PUBLIC WORKS	PILE JACKET DETAILS	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	WINTERGARDEN AVENUE OVER COMO WATERWAY	B2-12

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PROPOSED TYPICAL SECTION
Through Bridge Deck



PROPOSED TYPICAL SECTION
Through Approach Slab

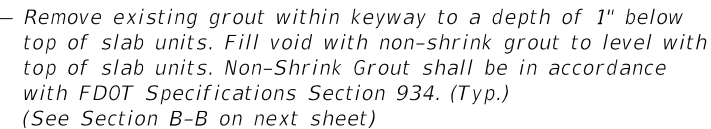
Abbreviations:
SU - Slab Units

Legend:
 - Limits of Removal

- Notes:
- 1. See "Prestressed Slab Unit Details" sheets for joint repair details.
 - 2. See "Railing Replacement Details" sheet for removal and reinforcement details.
 - 3. See "Utility Hanger Details" sheet for curb removal and utility hanger details.

BRIDGE NO. 014043 B2-12

REVISIONS						 JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	CHARLOTTE COUNTY PUBLIC WORKS GREATER PORT CHARLOTTE BRIDGES	TYPICAL SECTION WINTERGARDEN AVENUE OVER COMO WATERWAY	SHEET NO. B2-13
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				



4 1/2"±
End

Exist. Scupper, Typ.
(To Remain, Protect
during Milling &
Resurfacing)

10", Typ. UON
Limits of UHPC Repair

C Wintergarden Ave.

Exist. Asphalt, Typ.
(To Be Milled prior
to UHPC Repairs)

2 1/2"±

4'-0"± Unit 1

4'-0"± Unit 2

4'-0"± Unit 3

3'-0"± Unit 4

3'-0"± Unit 5

4'-0"± Unit 6

4'-0"± Unit 7

4'-0"± Unit 8

2 1/2"±

30'-5"

Note: For Notes & Sections, see "Prestressed Slab Unit Details (2 of 2)"

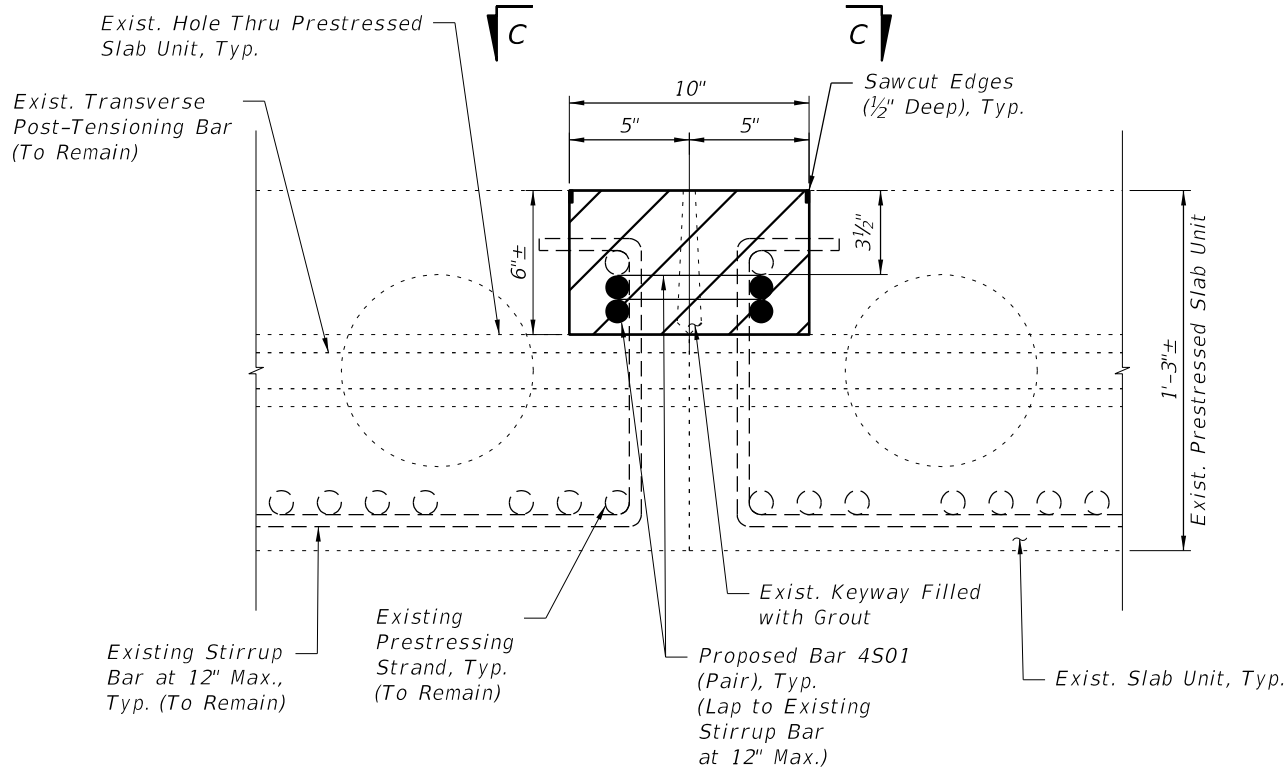
Legend:

-  - Limits of Hydro-Demolition & UHPC Repair
- - - - - - - Limits of Removal & Replacement of Non-Shrink Grout

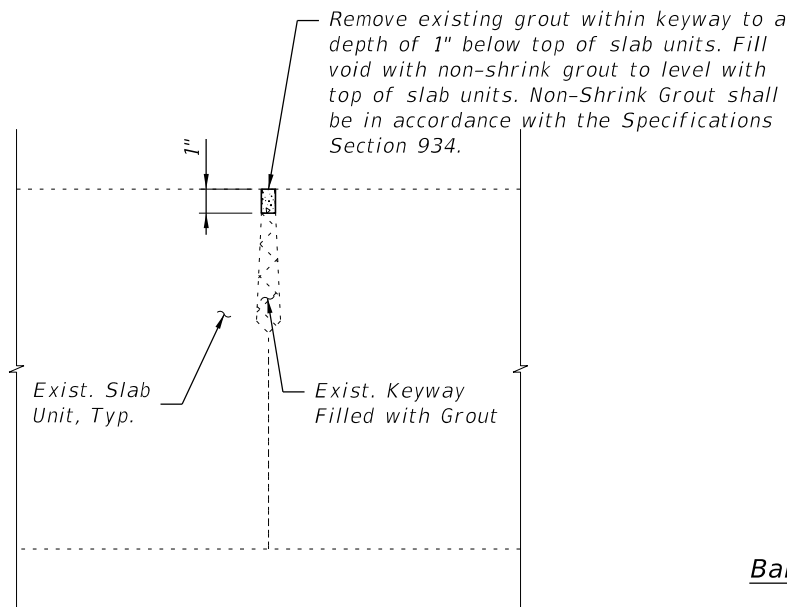
BRIDGE NO. 014043

R E V I S I O N S							CHARLOTTE COUNTY PUBLIC WORKS	PRESTRESSED SLAB UNIT DETAILS (1 OF 2)	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				
						JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	GREATER PORT CHARLOTTE BRIDGES	WINTERGARDEN AVENUE OVER COMO WATERWAY	B2-14

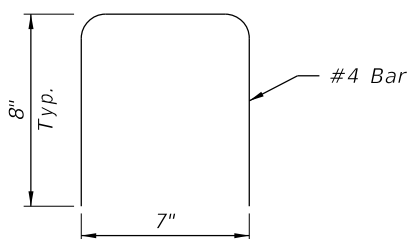
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SECTION A-A

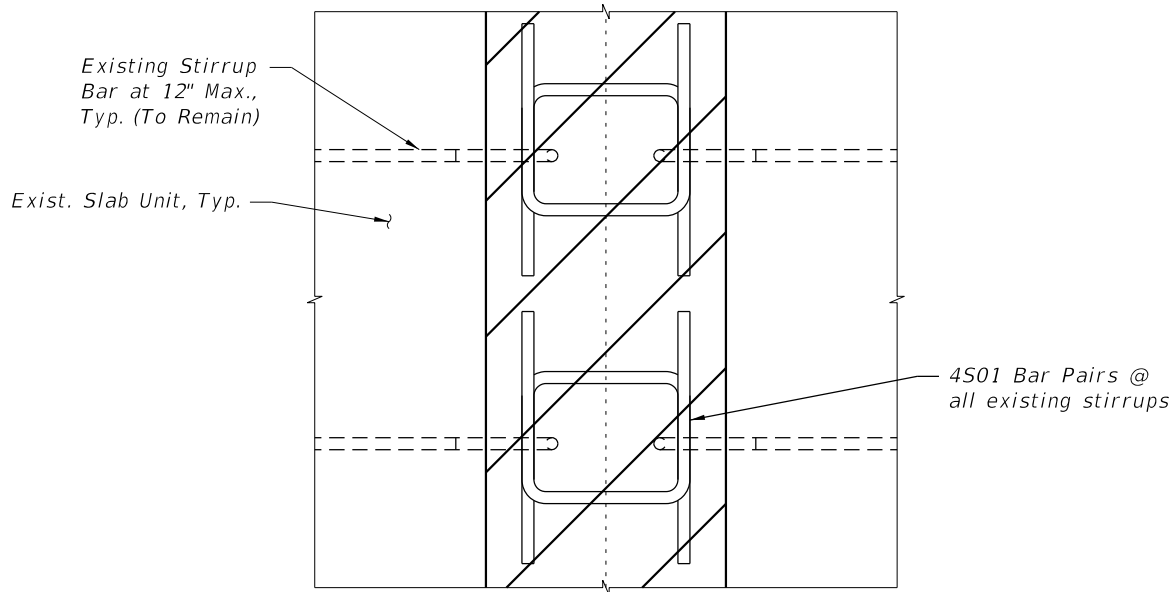


SECTION B-B



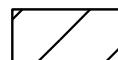
Bar 4S01 Bar Bending Diagram

- Reinforcing Notes:
1. Dimensions in Bar Bending Diagram are out to out.
 2. Each joint repair requires 40-4S01 bars.



VIEW C-C

Legend:

 - Limits of Hydro-Demolition & UHPC Repair

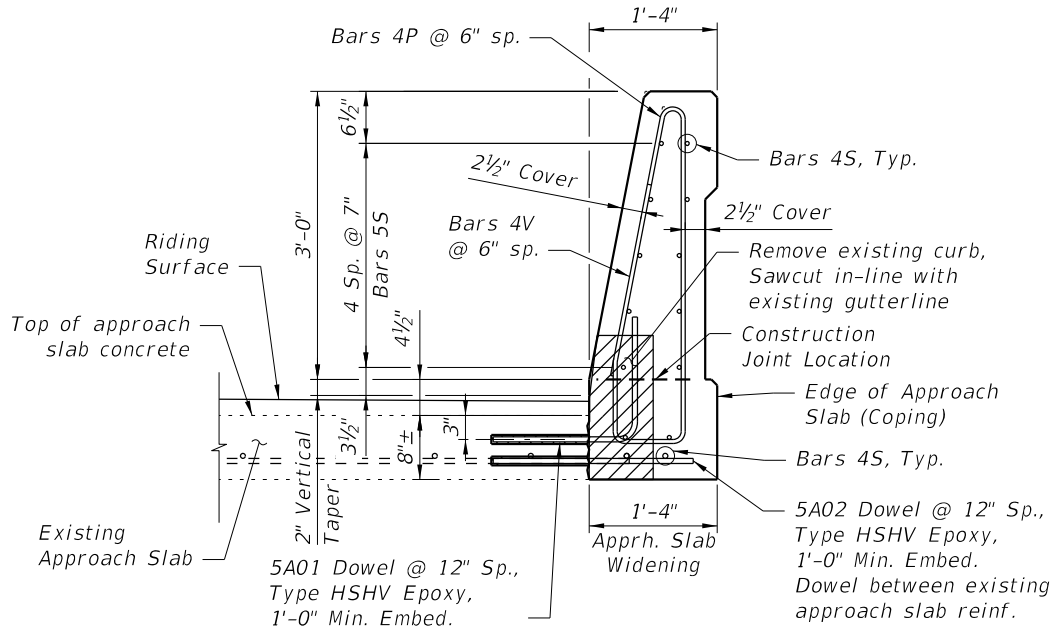
Notes:

1. Contractor shall submit a demolition plan in accordance with Specification 110 to the Engineer for approval prior to commencing demolition operations.
2. Demolition of concrete shall be performed using hydro-demolition. Demolition using pneumatic or hydraulic hammers is not permitted.
3. All cost associated with removal and installation of non-shrink grout in keyways shall be include in Pay Item 918-349.

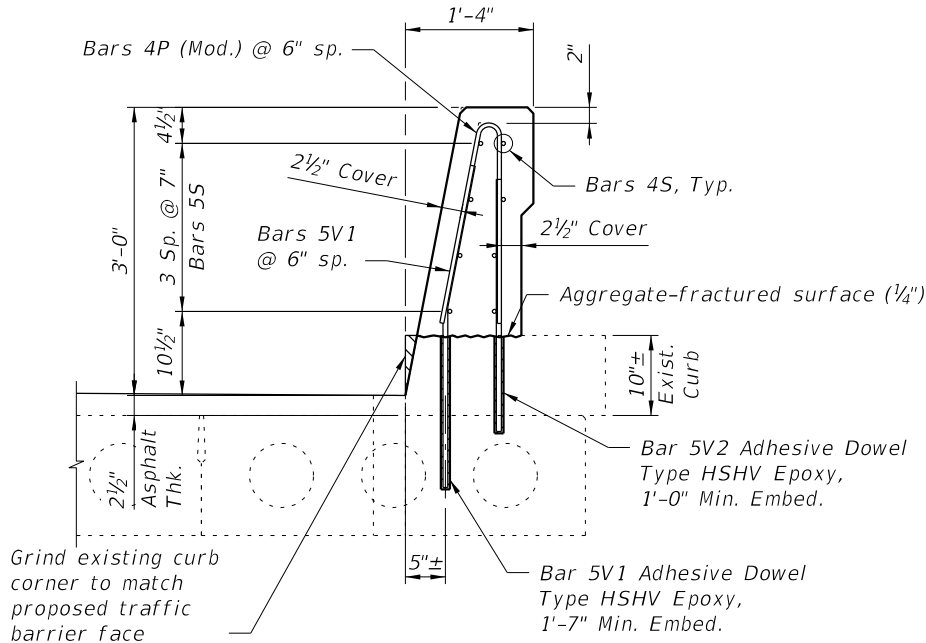
BRIDGE NO. 014043

REVISIONS						 JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	CHARLOTTE COUNTY PUBLIC WORKS	GREATER PORT CHARLOTTE BRIDGES	PRESTRESSED SLAB UNIT DETAILS (2 OF 2)	WINTERGARDEN AVENUE OVER COMO WATERWAY	SHEET NO. B2-15
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION						

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SECTION A-A



SECTION B-B

RAILING REPLACEMENT DETAIL

Removal Notes:

1. Remove existing curb as depicted in Section A-A by way of scarification or by chipping with light duty pneumatic or electric concrete chippers (15 lbs or less adjacent to reinforcing steel and structural limits of construction). Clean exposed existing curb reinforcement to remove loose material prior to railing retrofit.
2. Approach slab thickness varies, remove curb to full depth of approach slab.

Surface Preparation:

1. Existing concrete surfaces to be in contact with proposed concrete shall be cleared of any oil, grease, dirt, or other foreign materials, which could inhibit proper bonding.
2. Provide an aggregate-fractured surface (1/4") at interfaces between existing and proposed concrete.

Adhesive Dowels:

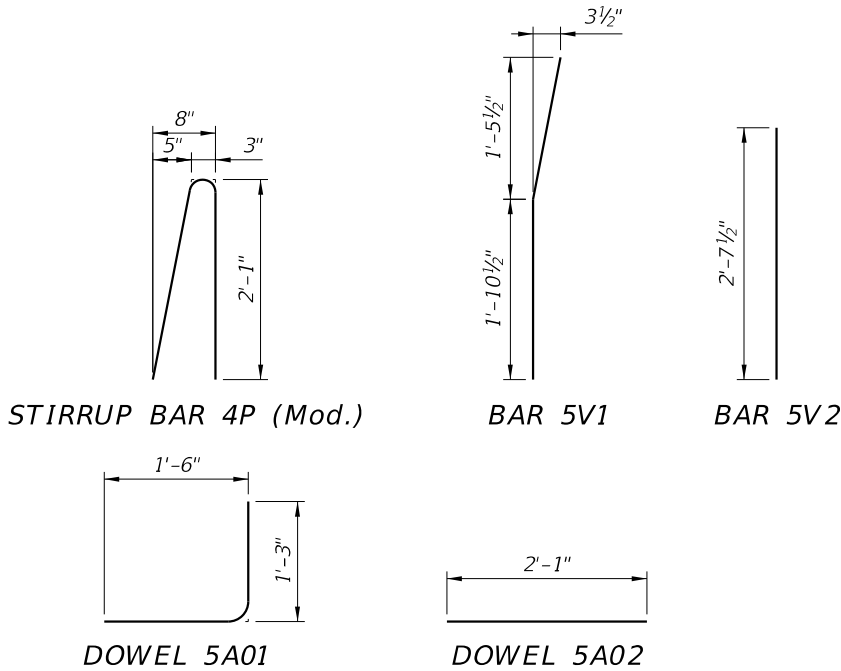
1. Adhesive dowels shall be installed in accordance with Specification Sections 416 and 937.
2. Contractor shall exercise caution to avoid existing curb and prestressed slab unit reinforcement. If existing reinforcement/strand is encountered, shift dowel location to miss existing reinforcement/strand.
3. Contractor shall avoid doweling 5V1 bar into sonovoid tubes within the existing slab unit. Shift 5V1 bar to avoid doweling into sonovoid where necessary.
4. Contractor is not permitted to install dowel holes utilizing a coring drill.
5. Prior to drilling 5V1 adhesive anchors, contractor shall locate all transverse post tensioning locations. Contractor shall adjust 5V1 bars to miss transverse post tensioning.

Placing:

1. Maintain 2 1/2" minimum cover between reinforcement and external surfaces unless noted otherwise.
2. Install traffic railing per FDOT Standard Plan Index 521-427, except where modifications are depicted within the details above.
3. Approach slab thickness varies, proposed approach slab widening shall match bottom of existing approach slab.

Method of Measurement:

1. All costs associated with approach slab concrete removal shall be included in Pay Item 110-3.
2. All costs associated with adhesive dowel installation within traffic railing installation shall be included in Pay Item 521-5-13A.
3. All costs associated with the approach slab widening concrete, reinforcement, and adhesive dowels within the widening shall be included in Pay Item 400-2-10.



REINFORCING BAR BENDING DIAGRAMS

BRIDGE NO. 014043

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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(561) 845-0665
REGISTRY NO. 35106

CHARLOTTE COUNTY
PUBLIC WORKS

GREATER PORT CHARLOTTE BRIDGES

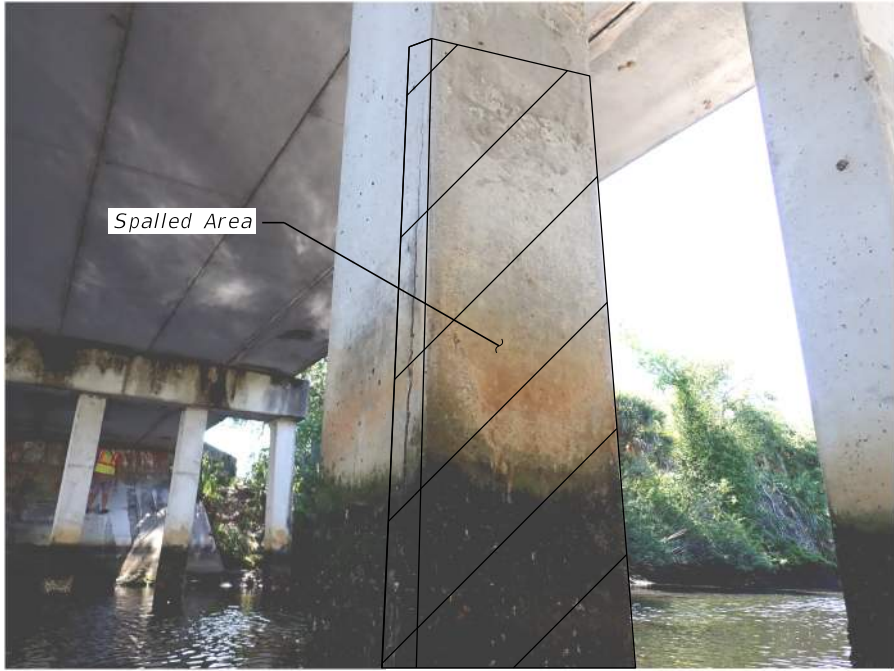
RAILING REPLACEMENT DETAILS

WINTERGARDEN AVENUE
OVER COMO WATERWAY

SHEET
NO.

B2-16

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Spall at Pile 2-5
(To be jacketed)



Erosion Along Slope Protection
(North Edge of East Slope Protection shown)



Existing Railing
(To be Replaced)



Existing Utility Hangers
(To be Replaced)



Bridge Expansion Joint

BRIDGE NO. 014043

REVISIONS						Kimley»Horn JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	Charlotte County Public Works	Representative Repair Field Pictures	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			Wintergarden Avenue Over Como Waterway	B2-17
							Greater Port Charlotte Bridges		

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Load Rating Summary Details for Prestressed Concrete Bridges (Flat Slab and Deck/Girder)																	Table Date 07-01-15
Table 2 - LRFR																	
Level	Limit State	Vehicle	Weight (tons)	Load Factors			Moment (Strength) or Stress (Service)					Shear (Strength)					Comments:
				LL	DC	DW	Distribution Factor (DF)	Rating Factor	Tons	Location	Dimension	Distribution Factor (DF)	Rating Factor	Tons	Location	Dimension	
Design Load Rating	Strength I (Inv)	HL-93	N/A	1.75	1.25	1.50	0.28	1.01	N/A	A	17.50	0.28	3.23	N/A	C	1.85	Beam 4 / 5 - All Spans, Interior
	Strength I (Op)	HL-93	N/A	1.35	1.25	1.50	0.28	1.30	N/A	A	17.50	0.28	6.45	N/A	C	1.85	Beam 4 / 5 - All Spans, Interior
	Service III (Inv)	HL-93	N/A	0.80	1.00	1.00	0.28	1.07	N/A	A	17.50	N/A	N/A	N/A	N/A	N/A	Beam 4 / 5 - All Spans, Interior
Permit Load Rating	Strength II	FL120	60.0	1.35	1.25	1.50	0.28	0.95	57.2	B	21.00	0.28	2.55	152.7	C	1.85	Beam 4 / 5 - All Spans, Interior

General Notes:

1. This table is based on the requirements established in the January 2024 "Structures Manual".

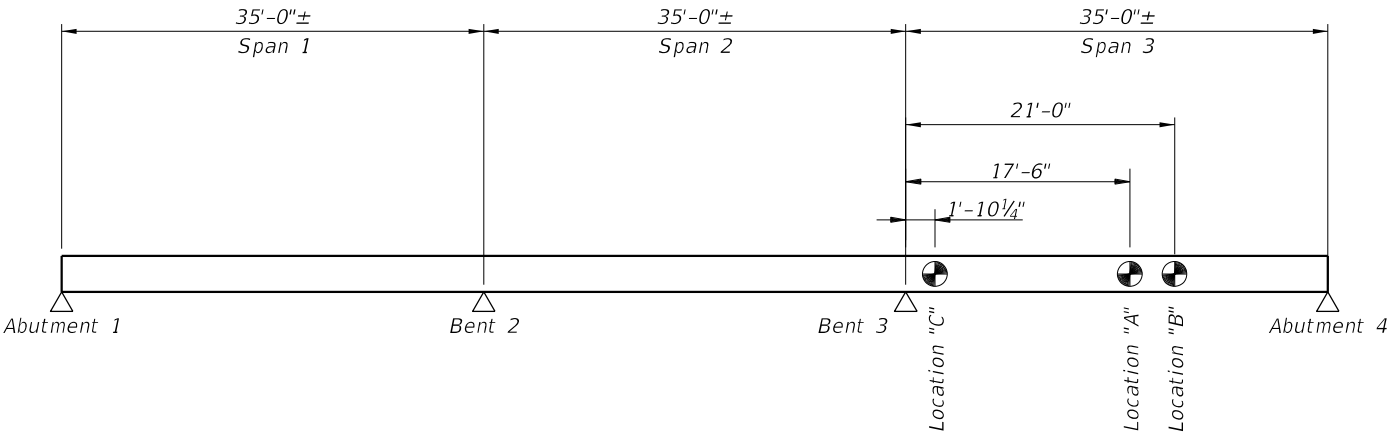
Table 2 Notes [Notes Date 07-01-15]:

1. Permit capacity is determined by using the permit vehicle in all lanes.

2. Service III Design Inventory tensile stress limits = $3\sqrt{f'c}$ or $6\sqrt{f'c}$.

3. Has the AASHTO LRFD Specifications Article 5.8.3.5 longitudinal reinforcement been satisfied? ☐ Yes ☐ No

4. LEAP Bridge Concrete CE V21 Version 21.02.00.38 Software used on August 9, 2024 for load rating.



Abbreviations:

Inv - Inventory

Op - Operating

RATING LOCATIONS

BRIDGE NO. 014043

REVISIONS						 JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	CHARLOTTE COUNTY PUBLIC WORKS	LOAD RATING SUMMARY TABLE	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			WINTERGARDEN AVENUE OVER COMO WATERWAY	B2-18
							GREATER PORT CHARLOTTE BRIDGES		