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90% SUBMITTAL  
6/16/08

**LEE COUNTY BOARD OF  
COUNTY COMMISSIONERS**

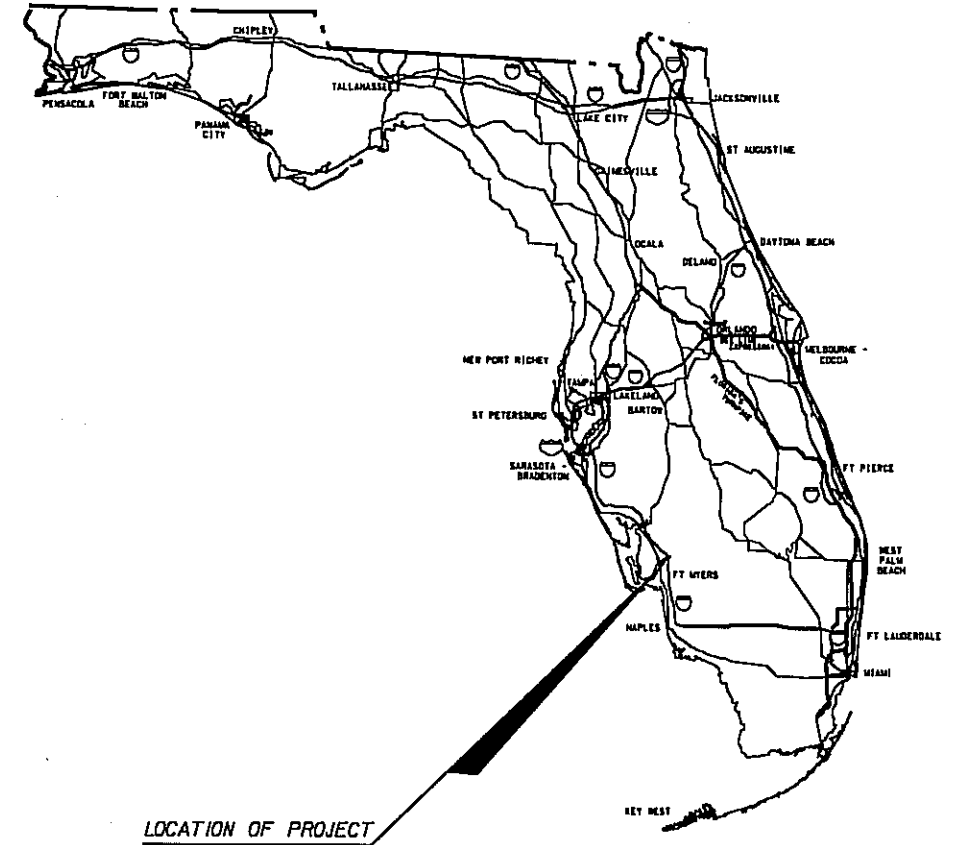
**PUBLIC WORKS ADMINISTRATION  
DEPARTMENT OF TRANSPORTATION**

**CONTRACT PLANS**

**PLANS OF PROPOSED  
ORTIZ AVENUE (CR 865)**

COUNTY PROJECT NO. 4072

**STRUCTURE PLANS**



STRUCTURE SHOP DRAWINGS  
TO BE SUBMITTED TO:

THOMAS J. SHAW, P.E.  
Kisinger Campo & Associates Corp.  
2203 N. Lois Avenue, Suite 1200  
Tampa, Florida 33607  
TELEPHONE (813) 871-5331  
FAX (813) 871-5135



PLANS PREPARED BY:

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Tampa, Florida 33607  
TELEPHONE (813) 871-5331  
FAX (813) 871-5135  
Florida Certificate of Authorization No. 02317



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

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

STRUCTURE PLANS  
ENGINEER OF RECORD: THOMAS J. SHAW, P.E.

DATE:  
P.E. NO.: 50787

LEE COUNTY PROJECT MANAGER : EYRA CASH, P.E.

SHEET NO.  
B-1

**GENERAL NOTES**

**GENERAL SPECIFICATIONS:**

FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2007 EDITION), AS AMENDED BY CONTRACT DOCUMENTS.

**DESIGN SPECIFICATIONS:**

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION 2007, AND APPROVED INTERIM REVISIONS THERETO.

FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT), STRUCTURES DESIGN OFFICE, STRUCTURES MANUAL. JANUARY 2007.

**DESIGN LOADS:**

LIVE LOAD: HL-93 VEHICLE LOAD  
 PEDESTRIAN BARRIER AND RAILING: 0.395 KLF  
 PEDESTRIAN LOAD: 0.075 KSF  
 EARTH SURCHARGE: 0.240 KSF  
 SIDEWALK: 0.100 KSF  
 MEDIAN: 0.240 KSF

**DESIGN METHOD:**

LOAD RESISTANCE FACTOR DESIGN METHODOLOGY (LRFD).

**LIVE LOAD DISTRIBUTION FACTORS:**

FOR MOMENT AND SHEAR: EQUIVALENT STRIP WIDTH =  
 149.0' / LANE (2 OR MORE LANES LOADED)  
 169.7' / LANE (ONE LANE LOADED)

**CONCRETE:**

ALL CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 346

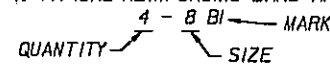
CLASS	MINIMUM 28-DAY COMPRESSIVE STRENGTH (Psi)	LOCATION OF CONCRETE IN STRUCTURE
II (BRIDGE DECK)	f'c = 4500	APPROACH SLABS
IV	f'c = 5500	TRAFFIC RAILING BARRIERS, CAST-IN-PLACE FOOTINGS, BRIDGE STRUCTURE & WINGWALLS

**POLLUTION CONTROL:**

THE CONTRACTOR MUST ADHERE TO ALL REQUIREMENTS FOR POLLUTION CONTROL STIPULATED IN THE PERMITS.

**REINFORCING STEEL:**

- ALL REINFORCING STEEL SHALL BE ASTM A-615, GRADE 60.
- ALL DIMENSIONS PERTAINING TO LOCATION OF REINFORCEMENT ARE TO CENTERLINE OF BARS EXCEPT WHERE THE CLEAR DIMENSION IS SHOWN TO FACE OF CONCRETE.
- REINFORCEMENT DETAIL DIMENSIONS ARE OUT-TO-OUT OF BARS.
- TYPICAL REINFORCING BARS ARE DESIGNATED THUS:



**ENVIRONMENT:**

LOCATION = COASTAL  
 SUPERSTRUCTURE: MODERATELY AGGRESSIVE  
 SUBSTRUCTURE: MODERATELY AGGRESSIVE

**PLAN DIMENSIONS:**

ALL DIMENSIONS IN THESE PLANS ARE GIVEN EITHER HORIZONTALLY OR VERTICALLY, UNLESS OTHERWISE NOTED, DECK JOINT OPENINGS ARE GIVEN FOR A MEAN TEMPERATURE OF 70° F.

**ELEVATIONS:**

ELEVATIONS ARE ACCORDING TO NATIONAL GEODETIC VERTICAL DATUM (NGVD) OF 1929.

**COVER:**

CONCRETE COVER SHOWN IN THE PLANS DOES NOT INCLUDE REINFORCEMENT PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER". SEE FDOT STANDARD SPECIFICATIONS FOR ALLOWABLE REINFORCEMENT PLACEMENT TOLERANCES. UNLESS OTHERWISE SHOWN ON THE PLANS, THE FOLLOWING CONCRETE COVERS SHALL BE USED:

CIP BRIDGE CULVERT = 2"  
 CIP SUBSTRUCTURE = 4" (BOTTOM OF FOOTING)  
 3" (TOP AND SIDES OF FOOTING)

**JOINTS IN CONCRETE:**

CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT LOCATIONS INDICATED ON THE PLANS. ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN SHALL REQUIRE APPROVAL OF THE ENGINEER.

**PHASING OF WORK:**

WORK PHASING AND PROGRESSION OF THE WORK SHALL CONFORM WITH THE TRAFFIC CONTROL PLANS LOCATED IN THE ROADWAY PLANS AND THE NOTES AND DETAILS ON THE CONSTRUCTION SEQUENCE DRAWINGS.

**UTILITIES:**

THE UTILITIES SHOWN IN THE BRIDGE PLANS ARE AT APPROXIMATE LOCATIONS. FOR LOCATION OF EXISTING UTILITIES, SEE THE UTILITY PLANS. IN ACCORDANCE WITH STATE STATUTE 556, THE CONTRACTOR WILL CALL SUNSHINE STATE ONE NUMBER AT 1-800-432-4770, 48 HOURS PRIOR TO DIGGING WORK.

**REMOVAL OF EXISTING STRUCTURE:**

REMOVAL OF EXISTING STRUCTURE IS LIMITED TO THE TRAFFIC RAILING BARRIERS AND ASPHALT OVERLAY ONLY. SEE PLAN SHEET FOR LIMITS.

**BID ITEM NOTES:**

- PAYMENT FOR REMOVAL AND DISPOSAL OF EXISTING BRIDGE TRAFFIC RAILING BARRIERS SHALL BE PAID FOR UNDER ITEM NO. 110-3. THE TOTAL PLAN AREA OF STRUCTURES TO BE REMOVED IS 198 SQ FT.
- FOR TRAFFIC CONTROL NOTES, SEE ROADWAY PLANS.
- PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL BID ITEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE BID ITEMS.
- THE APPROACH SLAB SHEETS ARE INCLUDED WITH THE BRIDGE PLANS. ALL QUANTITIES, THAT ARE ASSOCIATED WITH THE INDIVIDUAL APPROACH SLABS ARE INCLUDED WITH THE QUANTITIES FOR THEIR RESPECTIVE BRIDGES, EXCEPT FOR THE ASPHALT OVERLAY QUANTITIES. THEY ARE INCLUDED WITH THE ROADWAY QUANTITIES.

**LIST OF FREQUENTLY USED ABBREVIATIONS**

- ADT - AVERAGE DAILY TRAFFIC
- AOS - AVERAGE OPENING SIZE
- B - BOTTOM
- BRG - BEARING
- CIP - CAST-IN-PLACE
- CLR - CLEAR
- CJ - CONSTRUCTION JOINT
- DJS - DECK JOINT SEAL
- EB - END BENT
- EF - EACH FACE
- EL - ELEVATION
- EOP - EDGE OF PAVEMENT
- ES - EACH SIDE
- EW - EACH WAY
- EXP - EXPANSION
- FB - FIELD BEND
- FF - FAR FACE
- FFAS - FRONT FACE OF APPROACH SLAB
- FFRW - FRONT FACE OF RETAINING WALL
- FOC - FIBER OPTIC CABLE
- GM - GAS MAIN
- HW - HIGH WATER
- IF - INSIDE FACE
- JT - JOINT
- LME - LOW MEMBER ELEVATION
- LVC - LENGTH OF VERTICAL CURVE
- NF - NEAR FACE
- OF - OUTSIDE FACE
- OFM - OWNER FURNISHED MATERIAL
- PG - PROFILE GRADE
- PGL - PROFILE GRADE LINE
- PSC - PRESTRESSED CONCRETE
- RDWY - ROADWAY
- SHLD - SHOULDER
- SLO - SHORT LEG OUT
- T - TOP
- TYP - TYPICAL
- UNO - UNLESS NOTED OTHERWISE
- BK - BACK
- AH - AHEAD
- LT - LEFT
- RT - RIGHT
- REQ - REQUIRED

**VALUE ENGINEERING CHANGE PROPOSAL (VECP):**

THE CONTRACTOR MAY ELECT TO UTILIZE A PRECAST CULVERT SECTION TO WIDEN THE EXISTING BRIDGE AS PART OF A VECP. THIS SHALL BE PERMITTED PROVIDED THAT DETAILED SHOP DRAWINGS ARE SUBMITTED AND SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

**KCA**  
 Kisinger Campo & Associates Corp.  
 2203 N. Lois Avenue, Suite 1200  
 Tampa, Florida 33607  
 TELEPHONE (813) 871-5331  
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 Florida Certificate of Authorization No. 02317

APPROVED BY:  
**THOMAS J. SHAW, P.E.**  
 REGISTERED PROFESSIONAL ENGINEER  
 FLORIDA CERTIFICATE NO. 50787

PUBLIC WORKS DEPARTMENT  
 LEE COUNTY of  
 SOUTHWEST TRANSPORTATION  
 FLORIDA  
 1500 MONROE STREET FORT MYERS, FLORIDA 33904  
 (239) 473-8900 www.lee-county.com/publicworks/office.htm

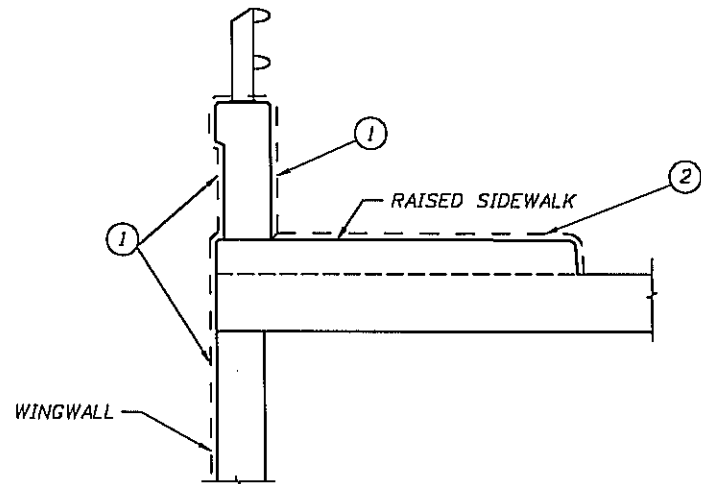
**GENERAL NOTES (1 OF 2)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-2

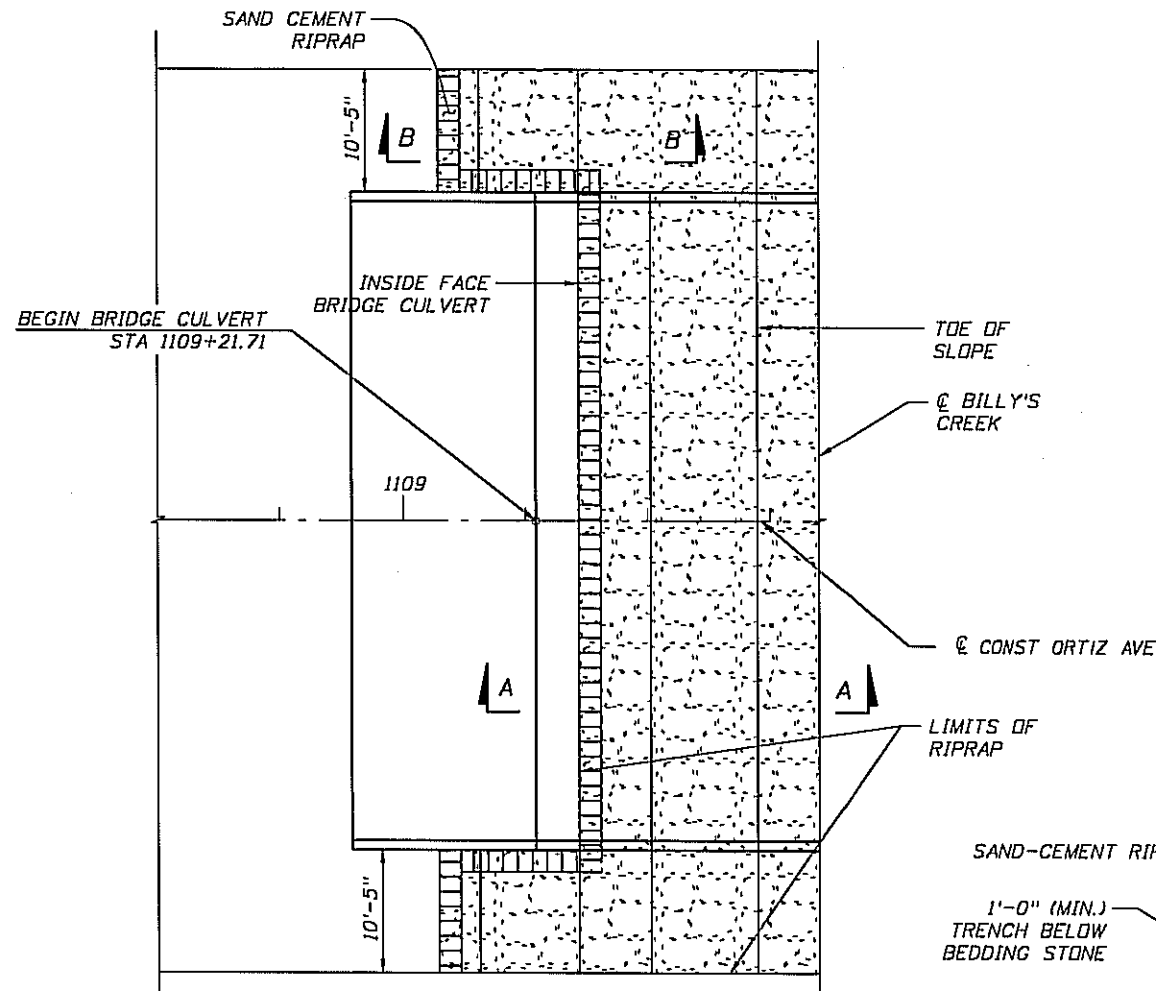
**CONCRETE SURFACE FINISH:**

FINISH ALL CONCRETE IN ACCORDANCE WITH THE SPECIFICATIONS UNLESS OTHERWISE SPECIFIED.

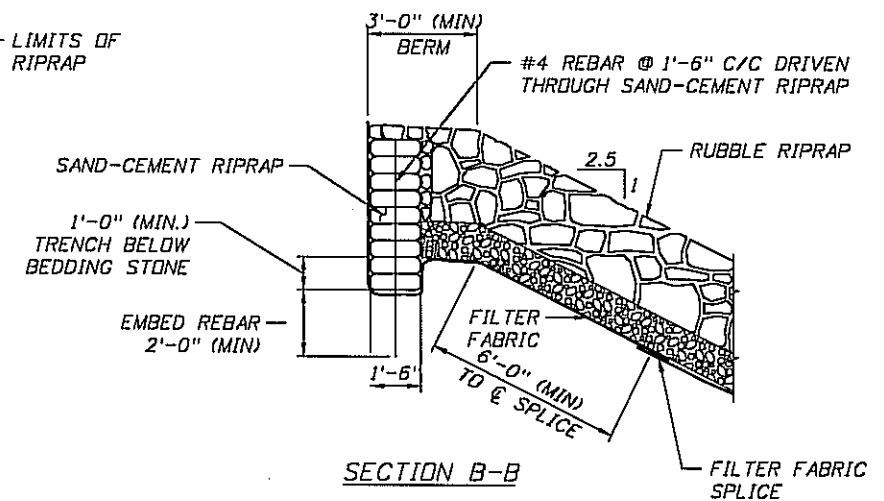
- ① ALL EXPOSED SURFACES OF THE TRAFFIC RAILING BARRIERS AND THE VERTICAL EXTERIOR EDGE OF THE RAISED SIDEWALKS, APPROACH SLABS AND BRIDGE CULVERT SHALL RECEIVE A CLASS 5 APPLIED FINISH COATING IN ACCORDANCE WITH THE SPECIFICATIONS.
- ② THE SIDEWALKS SHALL RECEIVE A CLASS 4 DECK FINISH IN ACCORDANCE WITH THE SPECIFICATIONS.



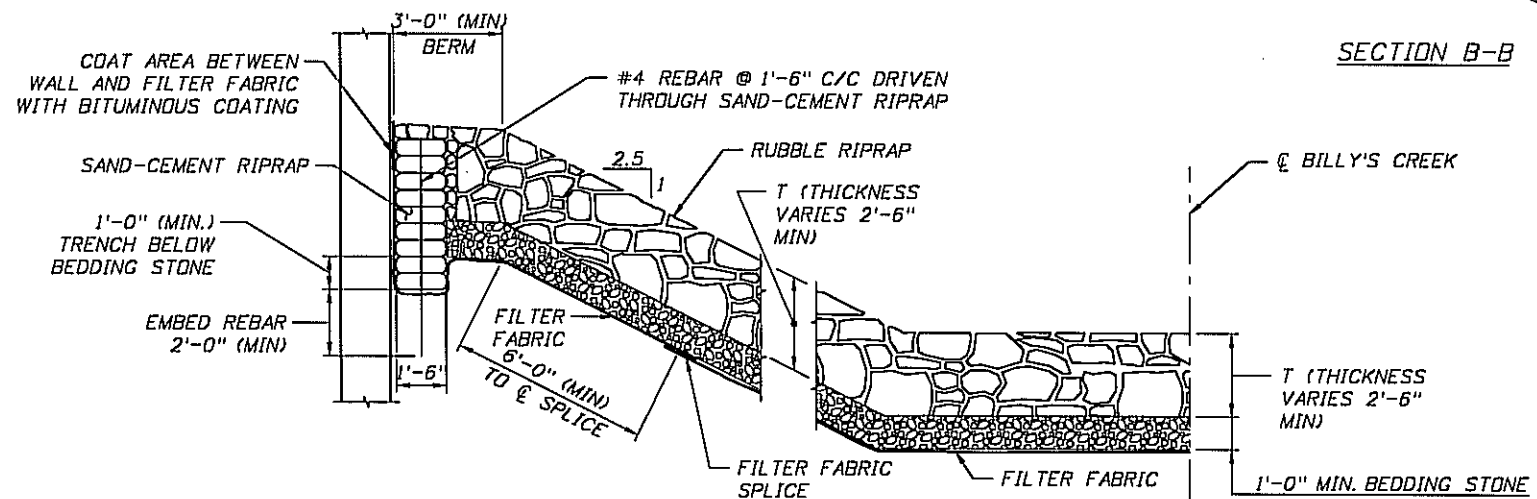
**SURFACE FINISH DETAIL**



**PARTIAL PLAN (SLOPE PROTECTION DETAILS)**



**SECTION B-B**



**SECTION A-A**

NOTE: THE FILTER FABRIC SHALL BE TYPE D-2, SEE DESIGN STANDARD INDEX 199. INSTALL IN ACCORDANCE WITH SECTION 514 OF THE SPECIFICATIONS.

POURED EXPANSION JOINT DATA TABLE			Table Date 1-01-06
INDEX NO. 21110			
LOCATION	DIM. "A" @ 70°	TOTAL DESIGN MOVEMENT	DIM. "A" ADJUSTMENT PER 10° F
BEGIN BRIDGE	1"	0.0"	N/A
END BRIDGE	1"	0.0"	N/A

NOTE:  
Dim. "A" adjustment per 10° F shown is measured perpendicular to C Expansion Joint. Work this table with Design Standards Index No. 21110.

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

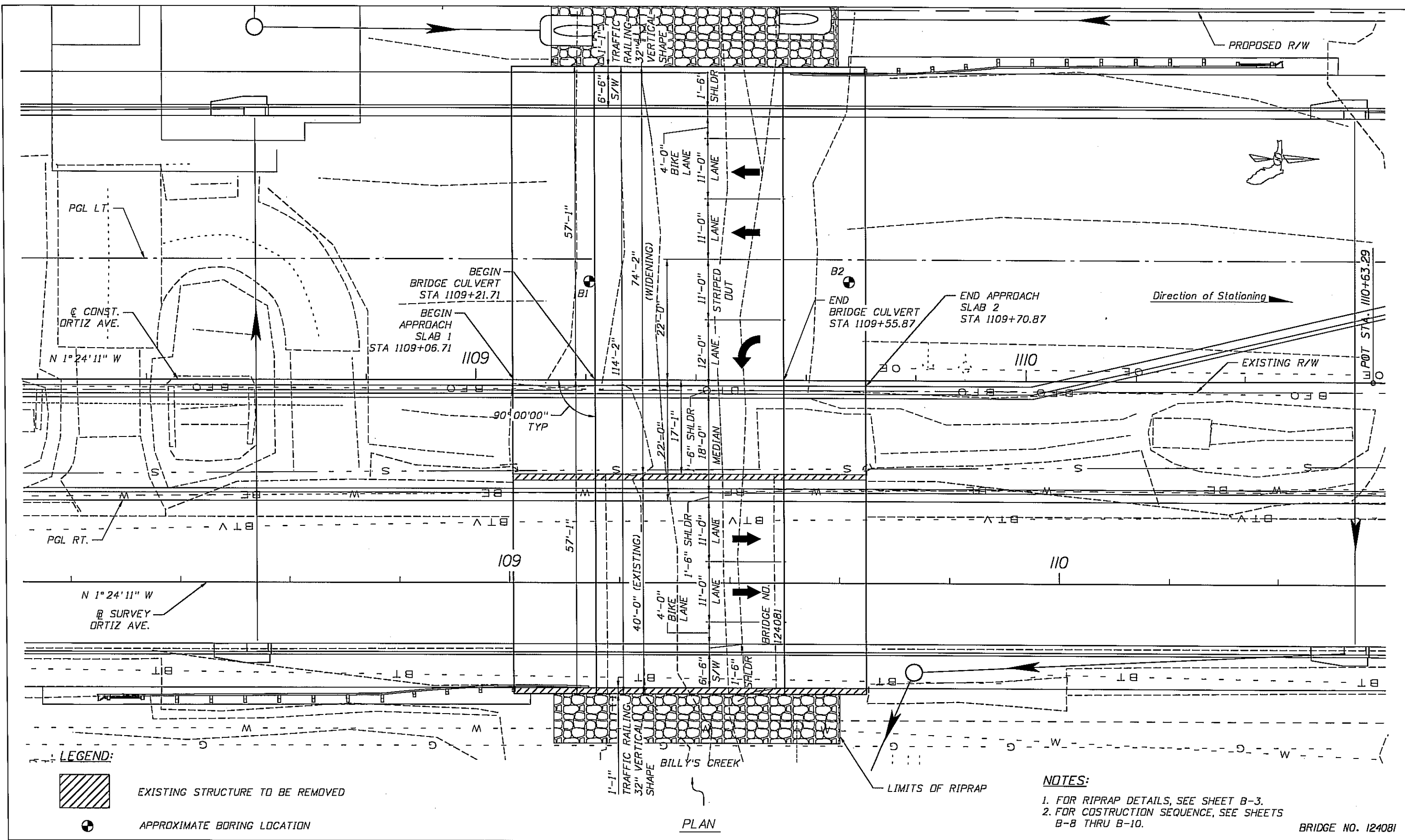
**KCS**  
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PUBLIC WORKS DEPARTMENT  
LEE COUNTY of SOUTHWEST FLORIDA TRANSPORTATION  
1500 WINDRE STREET FORT MYERS, FLORIDA 33904  
(239) 479-2500 www.lee-county.com/publicworks/department.htm

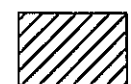
**GENERAL NOTES (2 OF 2)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
B-3



PLAN

LEGEND:



EXISTING STRUCTURE TO BE REMOVED



APPROXIMATE BORING LOCATION

NOTES:

1. FOR RIPRAP DETAILS, SEE SHEET B-3.
2. FOR COSTRUCTION SEQUENCE, SEE SHEETS B-8 THRU B-10.

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

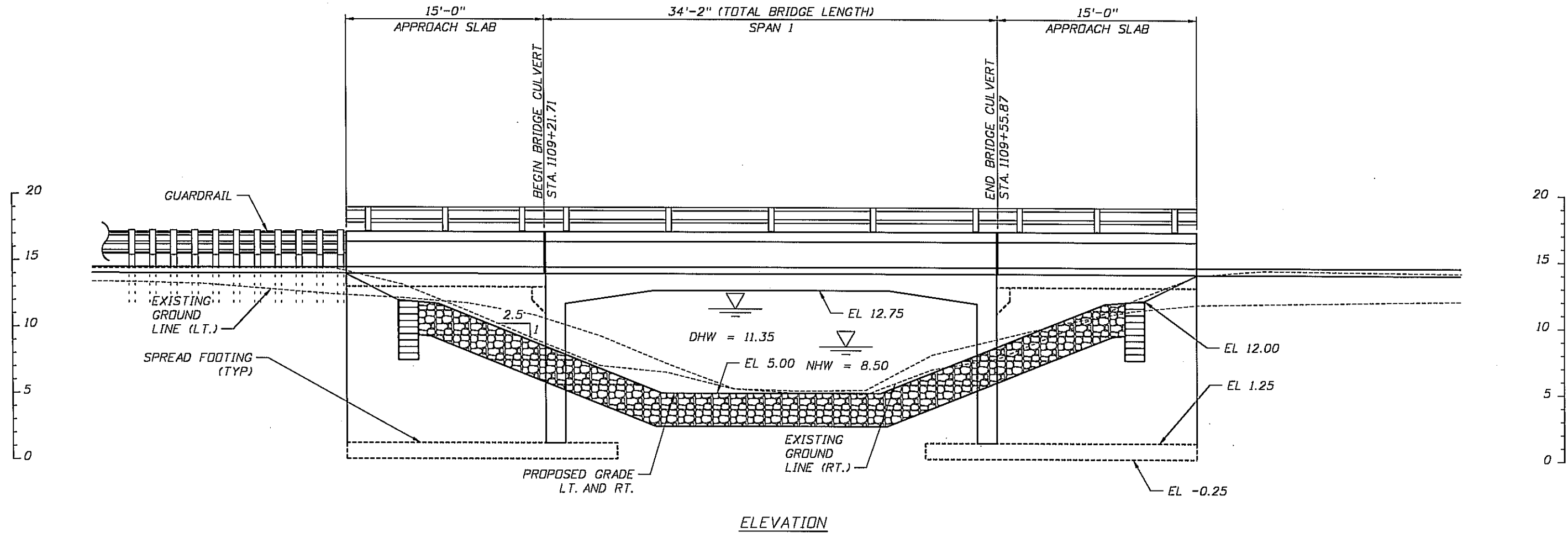
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 (239) 478-8900 www.lee-county.com/publicworks/dcl111a.htm

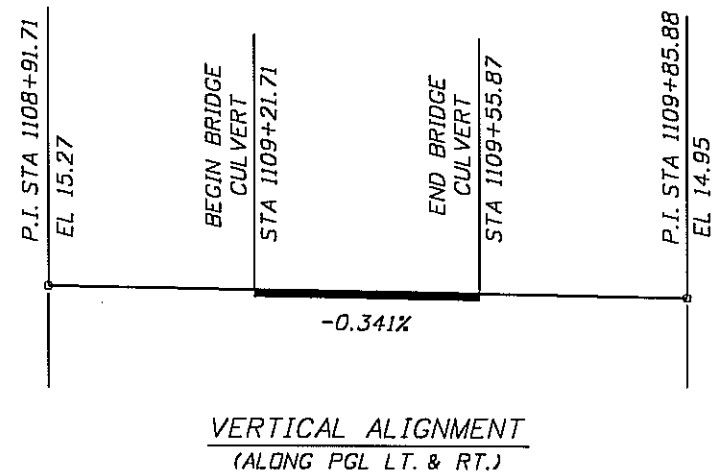
**PLAN**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-4



TRAFFIC DATA

CURRENT YEAR = 2006 AADT = 14,200  
 OPENING YEAR ESTIMATE = 2010 AADT = 17,500  
 DESIGN YEAR ESTIMATE = 2030 AADT = 28,500  
 K = 9.0% D = 58.0% T = N/A (24 HOUR)  
 DESIGN HOUR T = 5.0%  
 DESIGN SPEED = 45 MPH



BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

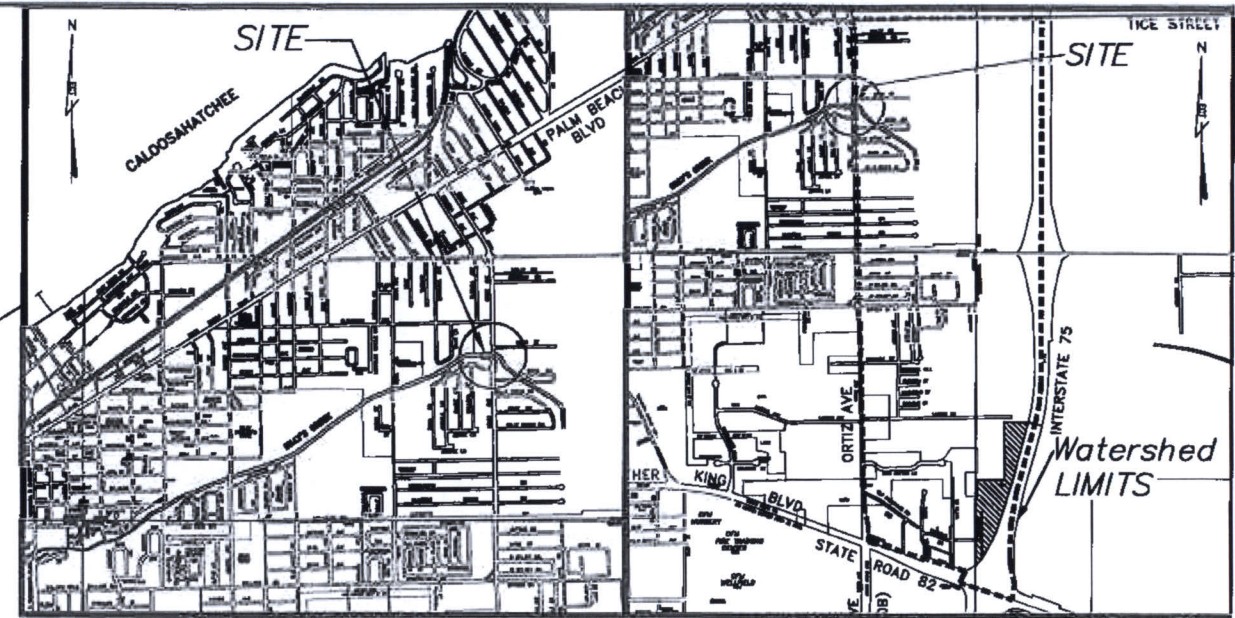
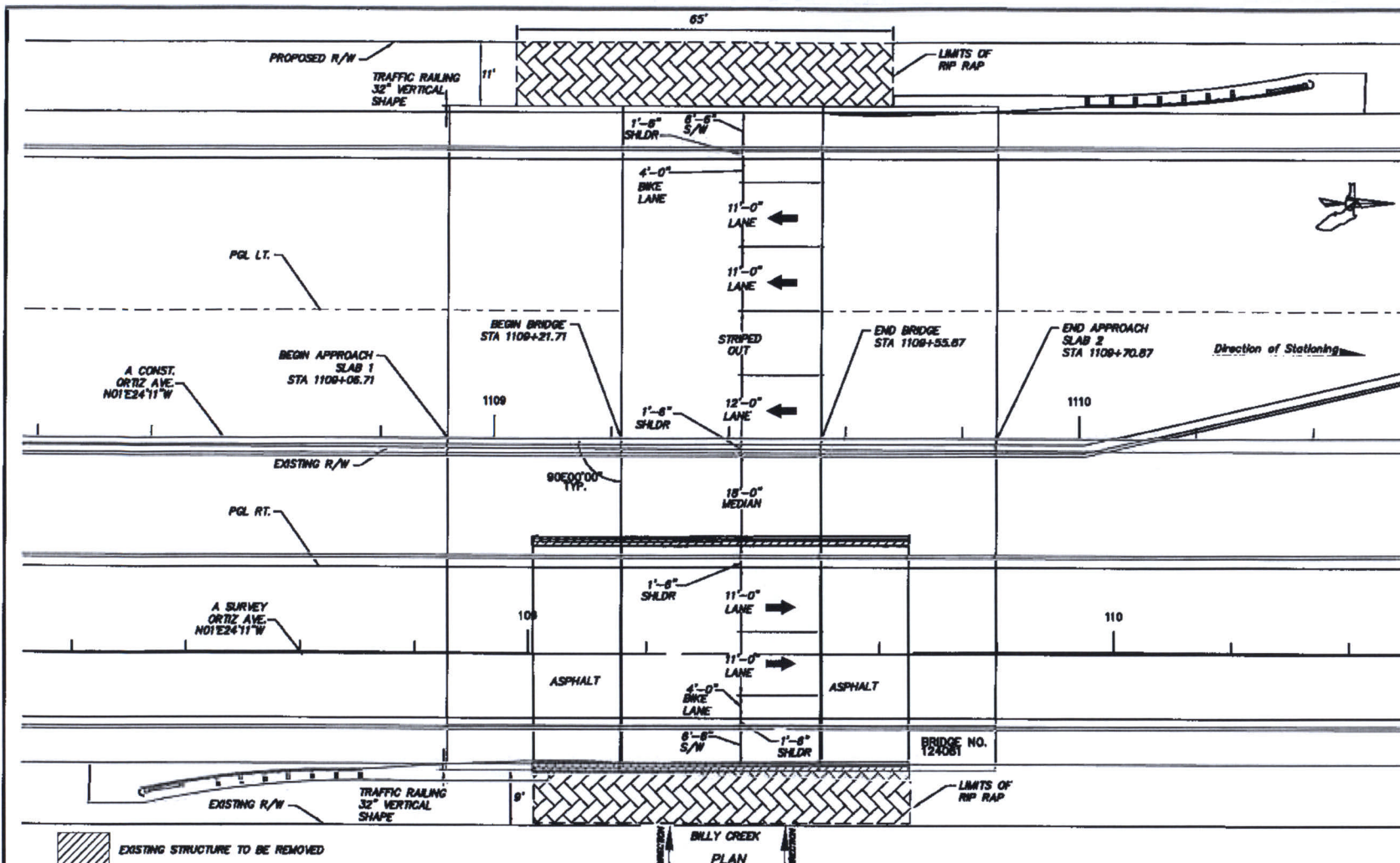

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**PUBLIC WORKS DEPARTMENT**  
**LEE COUNTY**  
 of  
**SOUTHWEST FLORIDA TRANSPORTATION**  
 1500 MONROE STREET FORT MYERS, FLORIDA 33904  
 (813) 479-8300 www.lee-county.com/publicworks/061116a.htm

**ELEVATION**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-5



SITE LOCATION MAP (NTS) WATERSHED AREA = 1149± ACRES (NTS)

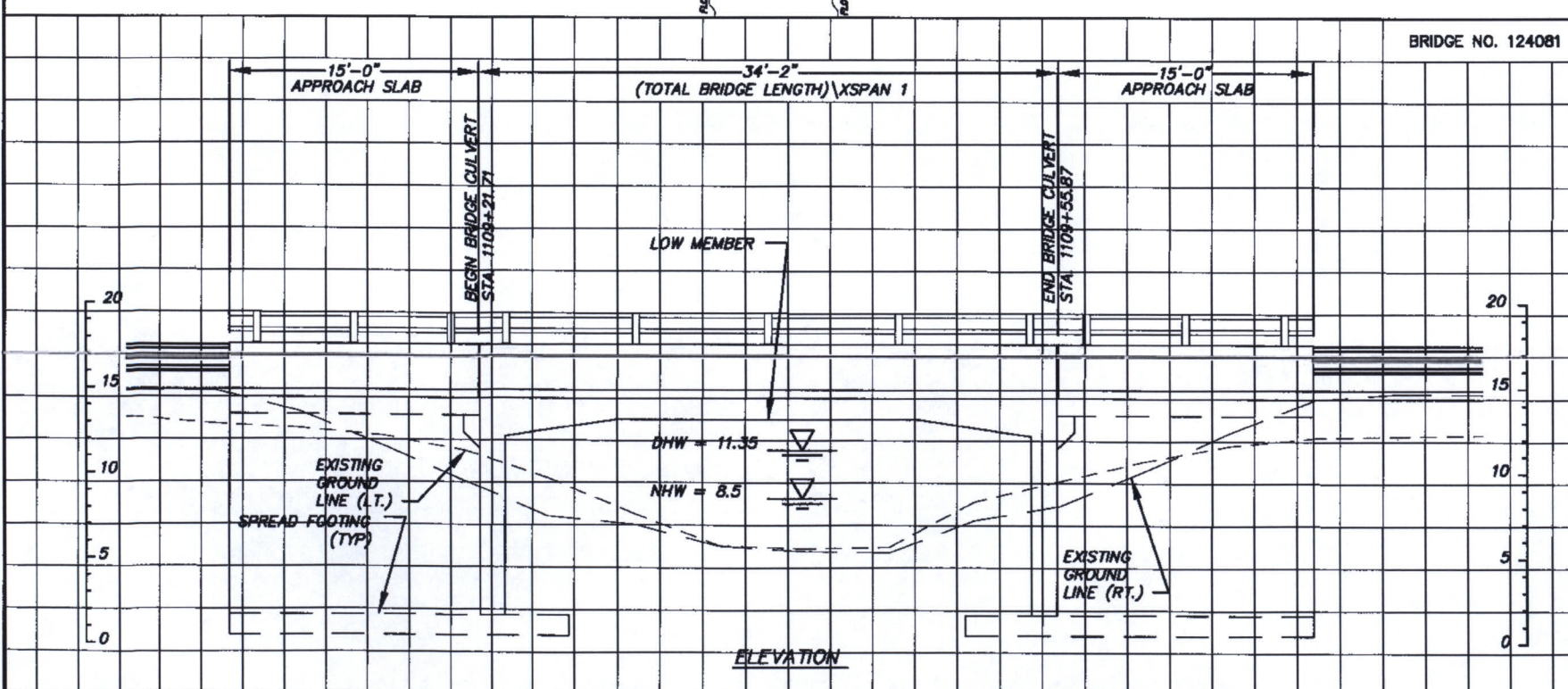
(REFERENCE) FOUNDATION	(1)	(2)	(3)	(4)	PROPOSED STRUCTURE
SPREAD FOOTER					SPREAD FOOTER
OVERALL LENGTH	34' 2"				34' 2"
SPAN LENGTH	34' 2"				34' 2"
TYPE CONSTRUCTION	PRECAST CONCRETE				PRECAST CONCRETE
AREA OF OPENING @ D.F.	156 SF				156 SF
BRIDGE WIDTH	40'				114' 2"
ELEV. LOW MEMBER	12.75				12.75

**HYDRAULIC DESIGN DATA**

**NOTE:** The hydraulic data is shown for informational purposes only to indicate the flood discharges and water surface elevations which may be anticipated in any given year. This data was generated using highly variable factors determined by a study of the watershed. Many judgements and assumptions are required to establish these factors. The resultant hydraulic data is sensitive to changes, particularly antecedent conditions, urbanization, channelization and land use. Users of this data are cautioned against the assumption of precision which cannot be obtained.

**TERMS:**  
 Design Flood: Utilized to assure a desired level of hydraulic performance.  
 Base Flood: Has a 1% chance of being exceeded in any given year (100 year frequency)  
 Overtopping Flood: Causes flow over the highway, over a watershed divide, or thru emergency relief structures.  
 Greatest Flood: The most severe that can be predicted where overtopping is not practicable.

WATER SURFACE ELEVATIONS:		N.H.W. (Non-Tidal)	8.5'	M.H.W. (Tidal)	N/A
CONTROL (Non-Tidal)		N/A		M.L.W. (Tidal)	N/A
<b>FLOOD DATA:</b>					
STAGE ELEV. NGVD (ft)	MAX. EVENT OF RECORD	DESIGN FLOOD	11.35	BASE FLOOD	11.89
DISCHARGE (cfs)	N/A		497		618
AVERAGE VELOCITY (f/s)			3.52		3.89
EXCEEDANCE PROB. (%)			2		1
FREQUENCY (yr.)			50		100
SCOUR PREDICTIONS FOR PROPOSED STRUCTURE DESCRIBED ABOVE:					
PIER INFORMATION		LONG TERM		TOTAL SCOUR ELEVATION	
NUMBERS	SIZE AND TYPE	SCOUR ELEV.	WORST CASE < 100 yr.	WORST CASE < 500 yr.	
1&2	ENDS	0	FREQ. (yr.) 100	FREQ. (yr.) 500	
			13.25	14.73	
			(-4.52 NGVD)	(-6.0 NGVD)	



**HYDRAULIC RECOMMENDATIONS**

- BEGIN BRIDGE STATION 1,108+21.71 END BRIDGE STATION 1,108+55.87 SKEW ANGLE 0.0
- CLEARANCE PROVIDED: NAV: HORIZ. N/A VERT. N/A ABOVE EL. N/A DRIFT: HORIZ. 31 VERT. 1.4 ABOVE EL. 11.35
- MINIMUM CLEARANCE: NAV: HORIZ. N/A VERT. N/A ABOVE EL. N/A DRIFT: HORIZ. N/A VERT. 2 ABOVE EL. 11.35
- ABUTMENTS:
 

BEGIN BRIDGE	END BRIDGE
RUBBLE GRADE: ALONG CONTOUR, ACROSS CHANNEL	ALONG CONTOUR, ACROSS CHANNEL
SLOPE: 2:1	2:1
BURIED OR NON-BURIED HORIZ. TOE: BURIED	BURIED
TOE HORIZ. DISTANCE: 9' MIN.	9' MIN.
LIMIT OF PROTECTION: TO LIMITS OF APPROACH SLAB	TO LIMITS OF APPROACH SLAB

REMARKS: 1.) ALL ELEVATIONS GIVEN IN FEET NGVD 29

NO.	DATE	REVISION	BY	APPROVED
	12/11/06	DESIGN	EMR	
	12/11/06	DRAWING	EMR	
	12/11/06	CHECK	RME	
	12/11/06	APPROVAL	RME	

  
**ECT**  
 Environmental Consulting & Technology, Inc.  
 4100 Center Pointe Drive Suite 112, Fort Myers, FL 33916  
 (239) 277-0063 fax (239) 277-1211 CA#5520

**BRIDGE HYDRAULICS RECOMMENDATIONS**  
**ORTIZ BRIDGE EXPANSION**

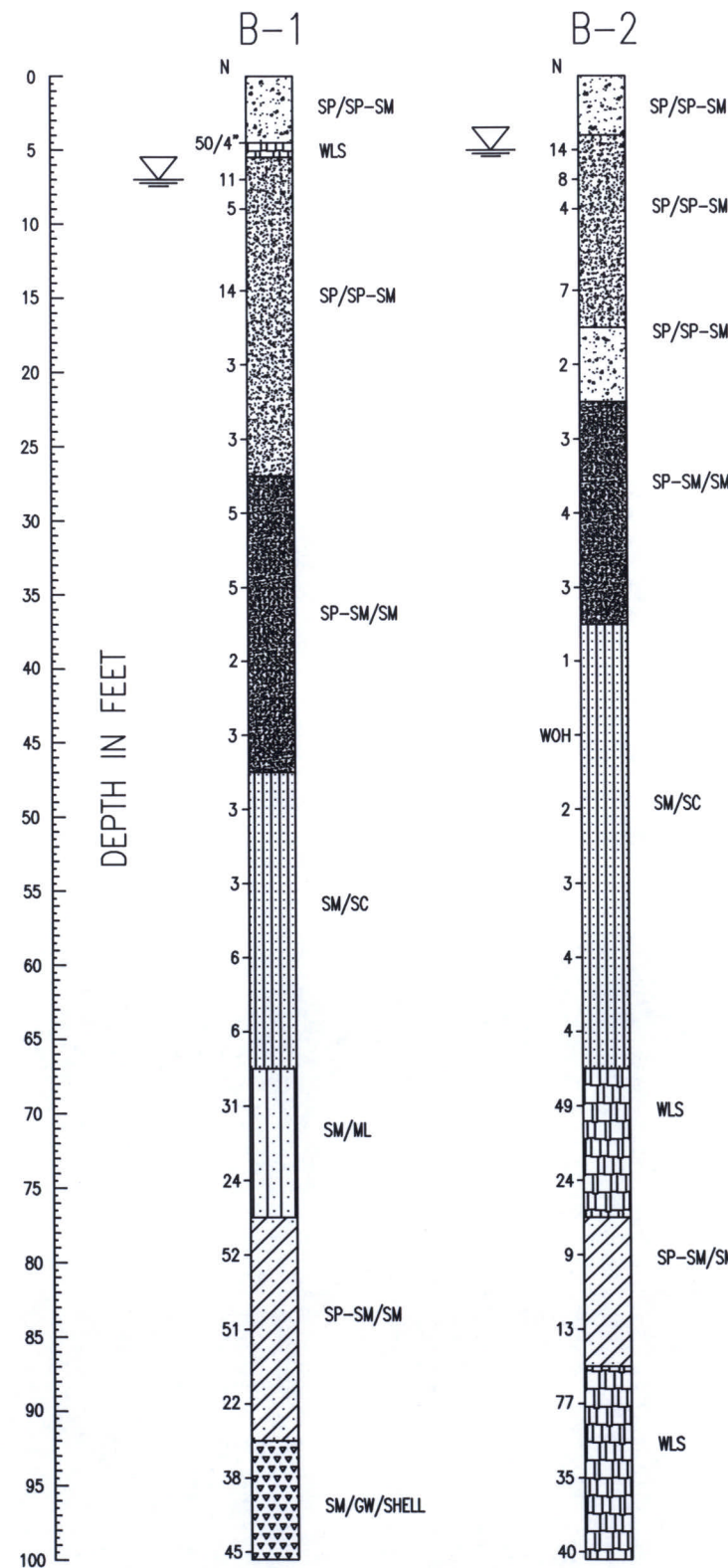
SCALE: NTS & AS NOTED  
 PROJECT: 06-0767  
 DATE: 04/11/07  
 SHEET: B-6

# BORING LOCATION PLAN



NOTES: SPT BORING LOCATION  
 MAP OBTAINED FROM LEE COUNTY PROPERTY APPRAISER

# SOIL PROFILES



## SOIL LEGEND

- SP/SP-SM  
Light brown to brown, grayish brown, clean to slightly silty SAND with some gravel, very loose to loose, moist (A-3)
- SP/SP-SM  
Light gray to gray, dark brown, clean to slightly silty SAND with a trace of shell, loose to medium dense, moist to wet (A-3)
- SP-SM/SM  
Light olive gray to olive gray, gray, slightly silty to silty SAND, very loose to loose, wet (A-3/A-2-4)
- SM/SC  
Light olive gray to olive gray, silty to very clayey SAND, very loose to loose, wet (A-2-4/A-4)
- SM/ML  
Olive gray, silty SAND to sandy SILT with a trace to some gravel, dense, wet (A-2-4/A-4)
- SP-SM/SM  
Olive gray to light gray, slightly silty to silty SAND with a trace of shell, loose to very dense, wet (A-3/A-2-4)
- SM/GW/SHELL  
Light gray, silty SAND with GRAVEL and SHELL, very dense, wet (A-2-4)
- WLS  
Light gray LIMESTONE, weathered to gravel, silt and shell fragments, soft to medium hard, wet (A-1-b)

### SOIL PROFILE LEGEND NOTES:

- SOIL SYMBOL**
- B-X = BORING NUMBER    N - STANDARD PENETRATION RESISTANCE TEST (SPT) VALUE  
 NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12-INCHES OF PENETRATION. (UNLESS OTHERWISE NOTED)
- GROUND WATER LEVEL
- TYPE RIG = MOBILE B-57  
 HAMMER USED = AUTOMATIC HAMMER  
 ALL ELEVATIONS BASED ON EXISTING GROUND LEVEL
- |  | SAFETY HAMMER<br>SPT N-VALUES<br>BLOW/FOOT | AUTOMATIC HAMMER<br>SPT N-VALUES<br>BLOW/FOOT |
|--|--|---|
| GRANULAR MATERIALS - <u>RELATIVE DENSITY</u> |  |   |
| VERY LOOSE                                   | LESS THAN 4                                | LESS THAN 3                                   |
| LOOSE  | 4 - 10                                     | 3 - 7   |
| MEDIUM DENSE                                 | 10 - 30                                    | 7 - 21  |
| DENSE  | 30 - 50                                    | 21 - 35                                       |
| VERY DENSE                                   | GREATER THAN 50                            | GREATER THAN 35                               |
| SILTS AND CLAYS - <u>CONSISTENCY</u>         |  |   |
| VERY SOFT                                    | LESS THAN 2                                | LESS THAN 1                                   |
| SOFT   | 2 - 4                                      | 1 - 3   |
| FIRM   | 4 - 8                                      | 3 - 6   |
| STIFF  | 8 - 15                                     | 6 - 11  |
| VERY STIFF                                   | 15 - 30                                    | 11 - 21                                       |
| HARD   | GREATER THAN 30                            | GREATER THAN 21                               |
| LIMEROCK - <u>HARDNESS</u>                   |  |   |
| VERY SOFT                                    | LESS THAN 19                               |   |
| SOFT   | 20 - 49                                    |   |
| MEDIUM HARD                                  | 50 - 100                                   |   |
| MODERATELY HARD                              | 50 FOR 2 TO 5"                             |   |
| HARD   | 50 FOR 0 TO 2"                             |   |

PAUL J. D'HUYETTER, P.E. # 59716

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION


ALLIED ENGINEERING & TESTING, INC.  
 5850 CORPORATION CIRCLE  
 FORT MYERS, FLORIDA 33905  
 STATE OF FLORIDA BOARD OF PROFESSIONAL  
 ENGINEERS LICENSE NO.: 00004698

LEE COUNTY DEPARTMENT OF TRANSPORTATION		
ROAD NAME	COUNTY	PROJECT ID
ORTIZ AVE	LEE	LEE COUNTY CONTRACT 3418 CN-05-17 ORTIZ AVE. FOUR LINING

**REPORT OF BORING**  
 ORTIZ WIDENING SR 82 TO SR 80  
 BILLY CREEK BRIDGE  
 Allied Project No. 45-6186

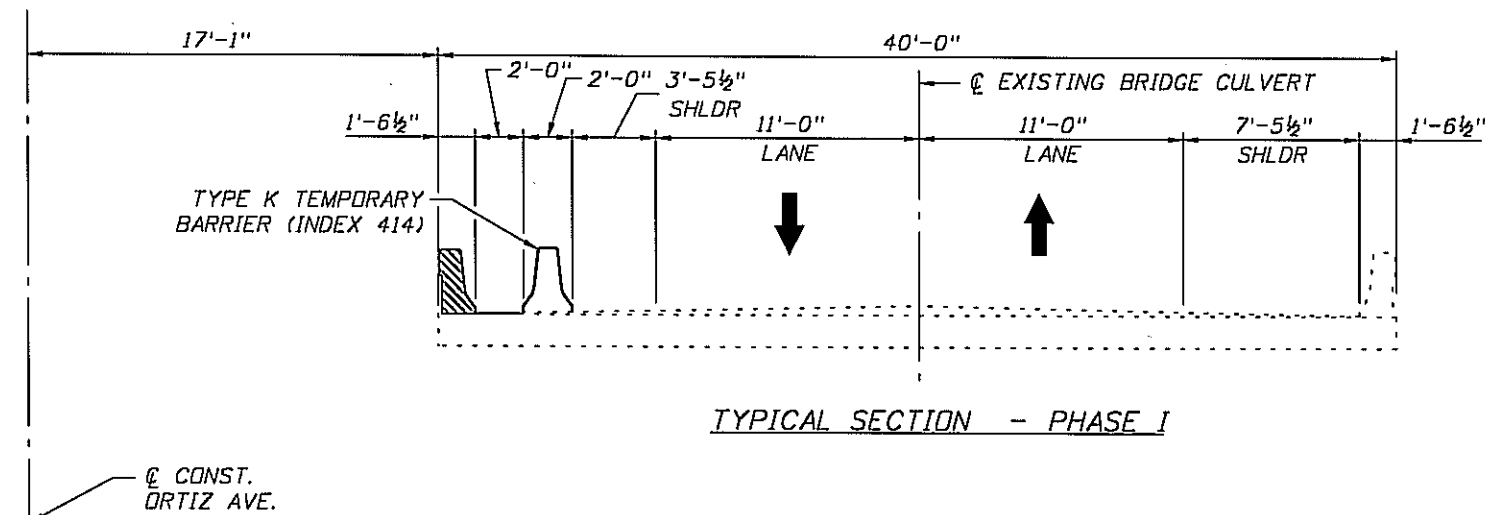
SHEET  
 B-10  
 DATE  
 04/11/07

**LEGEND**

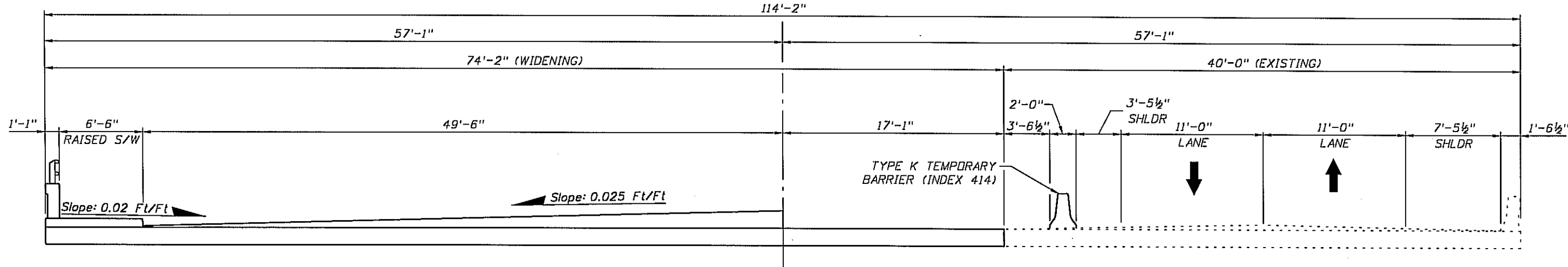
 EXISTING TO BE REMOVED

**PHASE I**

1. PLACE TYPE K TEMPORARY BARRIER AND DEMOLISH EXISTING BARRIER. AND ASPHALT OVERLAY BEHIND TEMPORARY BARRIER.
2. MAINTAIN TRAFFIC ON EXISTING BRIDGE CULVERT.
3. CONSTRUCT WIDENING INDICATED TO INCLUDE: BRIDGE STRUCTURE, RAISED SIDEWALK AND PEDESTRIAN BARRIER.



TYPICAL SECTION - PHASE I




TYPICAL SECTION - PHASE I

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

**KCA**  
 Kisinger Campo & Associates Corp.  
 2203 N. Lois Avenue, Suite 1200  
 Tampa, Florida 33607  
 TELEPHONE (813) 871-5331  
 FAX (813) 871-5135  
 Florida Certificate of Authorization No. 02317

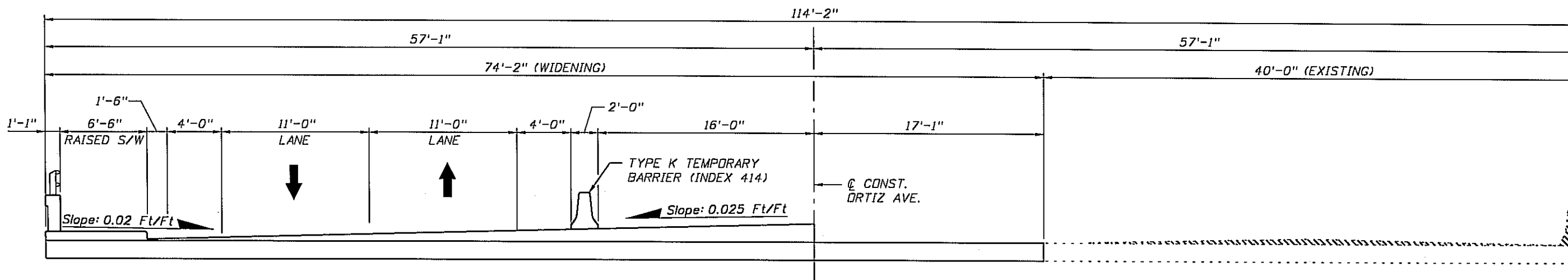
APPROVED BY:  
**THOMAS J. SHAW, P.E.**  
 REGISTERED PROFESSIONAL ENGINEER  
 FLORIDA CERTIFICATE NO. 50787

 PUBLIC WORKS  
 LEE COUNTY DEPARTMENT  
 of  
 SOUTHWEST TRANSPORTATION  
 FLORIDA  
 1500 HOWARD STREET FORT MYERS, FLORIDA 33904  
 (239) 473-2900 www.lee-county.com/publicworks/office.htm

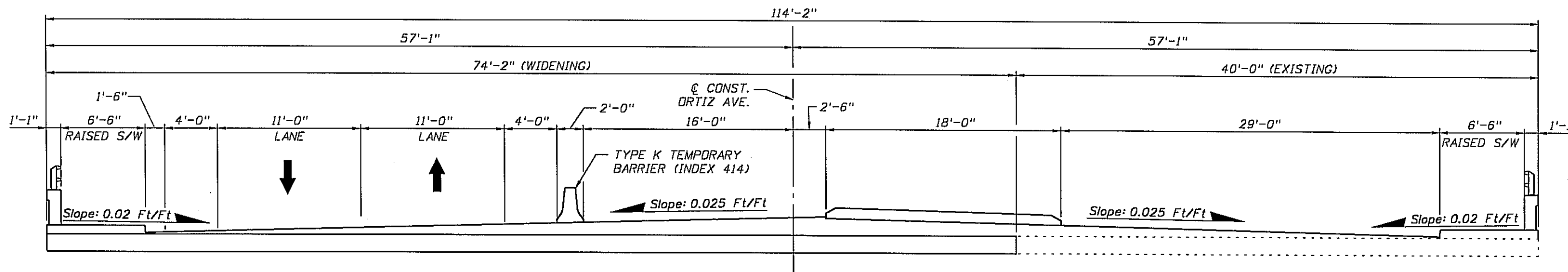
**CONSTRUCTION SEQUENCE (1 OF 3)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-8





TYPICAL SECTION - PHASE II



TYPICAL SECTION - PHASE II

**PHASE II**

1. SHIFT TYPE K TEMPORARY BARRIER TO NEW CONSTRUCTION AS INDICATED.
2. SHIFT NORTHBOUND AND SOUTHBOUND TRAFFIC TO WIDENED PORTION OF BRIDGE.
3. DEMOLISH PORTION OF EXISTING BRIDGE INDICATED. CONSTRUCT RIGHT SIDE RAISED SIDEWALK, PEDESTRIAN BARRIER, RAISED MEDIAN AND ASPHALT OVERLAY.

**LEGEND**

EXISTING TO BE REMOVED

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

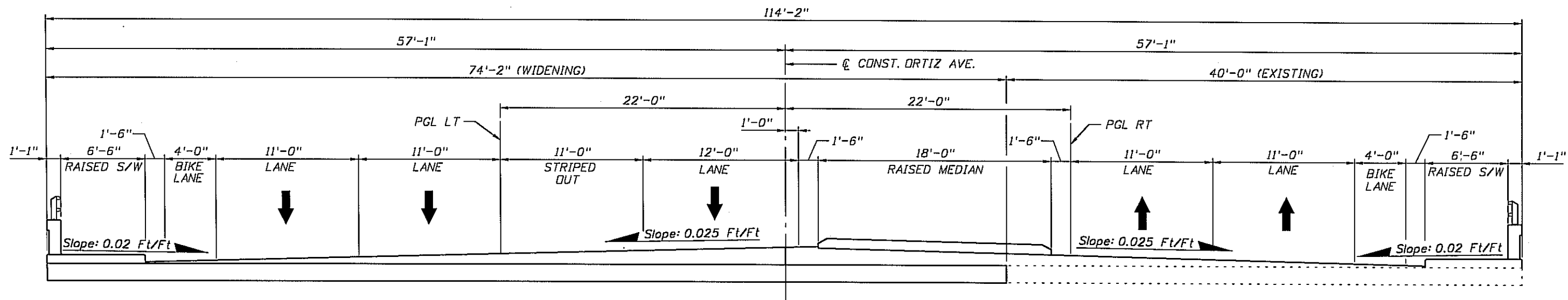
**KCA**  
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 (239) 478-8900 www.lee-county.com/publicworks/department.htm

**CONSTRUCTION SEQUENCE (2 OF 3)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-9



TYPICAL SECTION - FINAL CONFIGURATION

PHASE III

1. REMOVE TYPE K TEMPORARY BARRIER AND SHIFT NORTHBOUND AND SOUTHBOUND TRAFFIC TO THE FINAL CONFIGURATION SHOWN ABOVE.

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

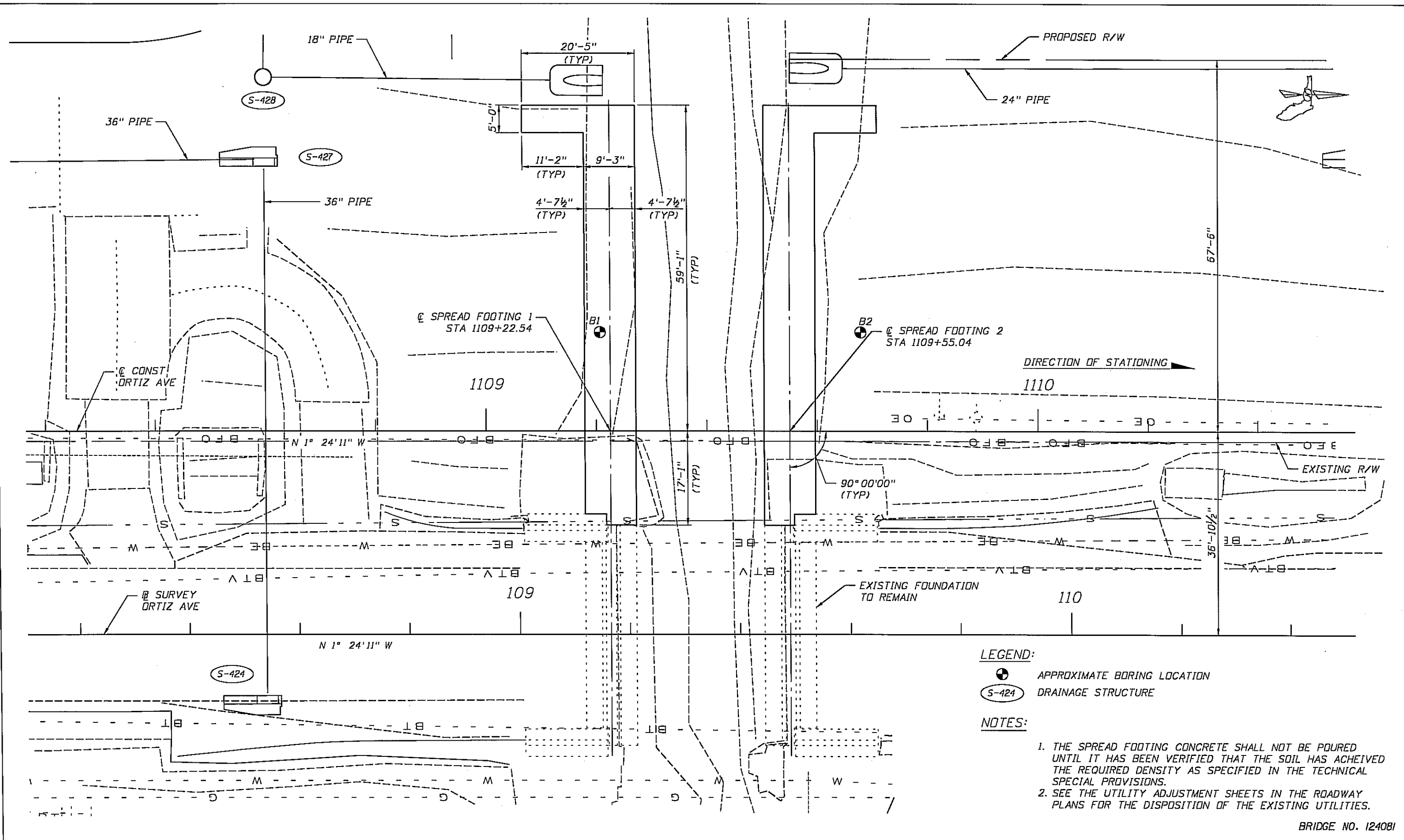
**KCA**  
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**CONSTRUCTION SEQUENCE (3 OF 3)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-10



BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

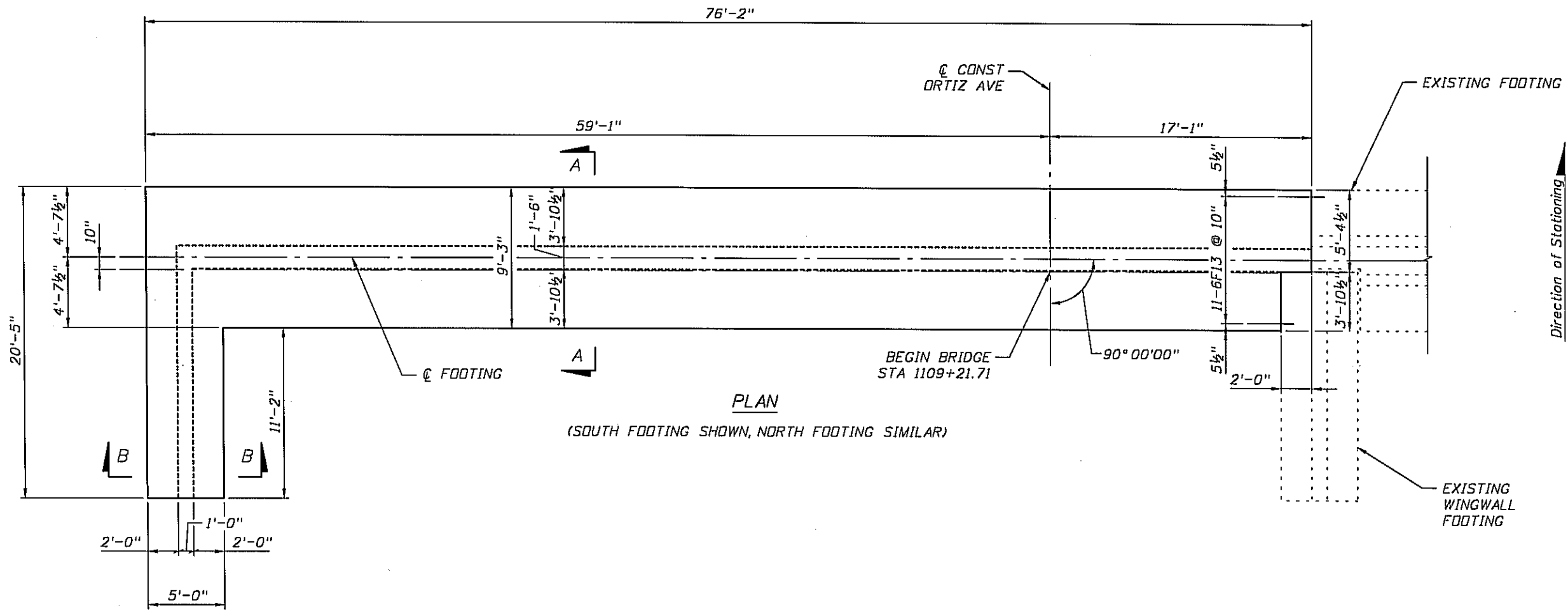
**KCA**  
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 1500 MONROE STREET FORT MYERS, FLORIDA 33901  
 (239) 419-8300 www.lee-county.com/pw/transportation.html

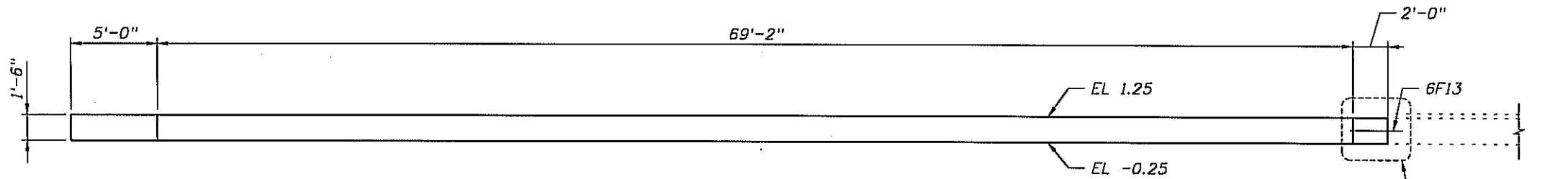
**FOUNDATION LAYOUT**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-II



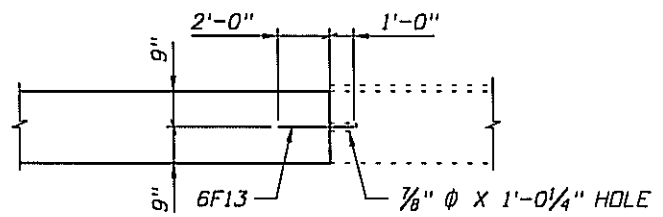
**PLAN**

(SOUTH FOOTING SHOWN, NORTH FOOTING SIMILAR)



**ELEVATION**

(SOUTH FOOTING SHOWN, NORTH FOOTING SIMILAR)



**DETAIL "A"**

ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
*Class IV Concrete (Culverts)	CY	83.6
*Reinforcing Steel (Miscellaneous)	LB	13132

\*Quantities include both footings

- NOTES:**
1. WORK THIS SHEET WITH SHEETS B-13 AND B-14.

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

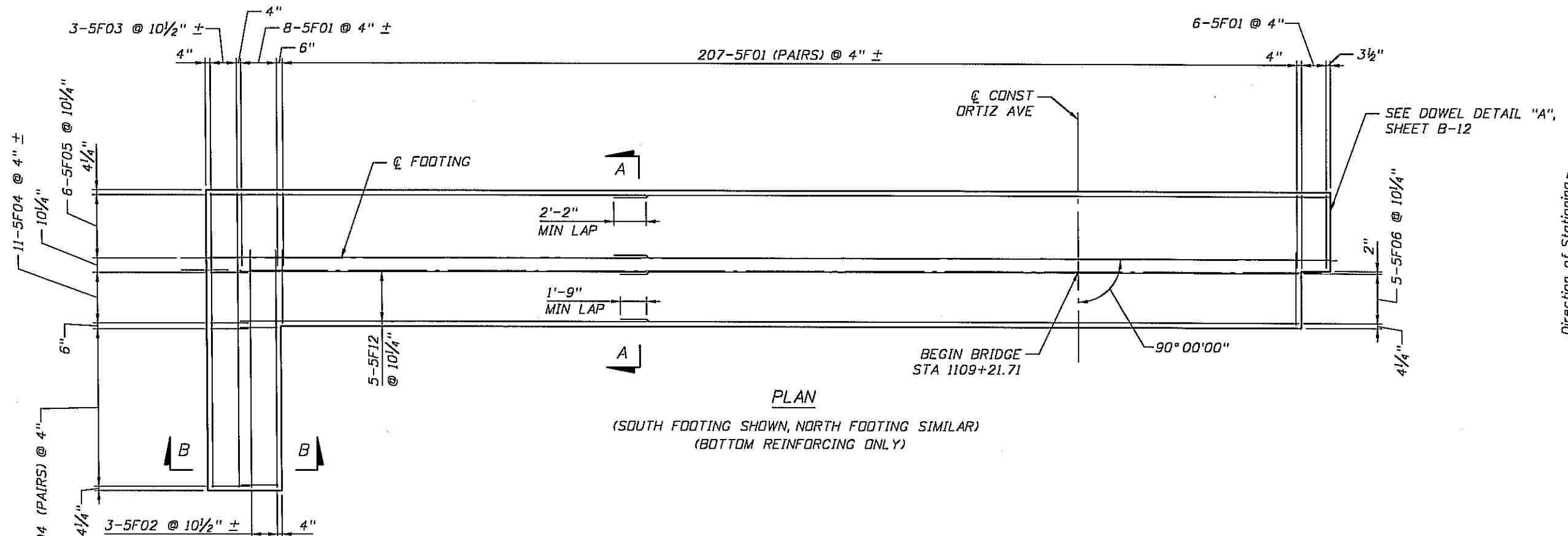
**KCS**  
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 Tampa, Florida 33607  
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**THOMAS J. SHAW, P.E.**  
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 FLORIDA CERTIFICATE NO. 50767

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 1500 MONROE STREET FORT MYERS, FLORIDA 33904  
 (239) 473-8900 www.lee-county.com/publicworks/2011116.htm

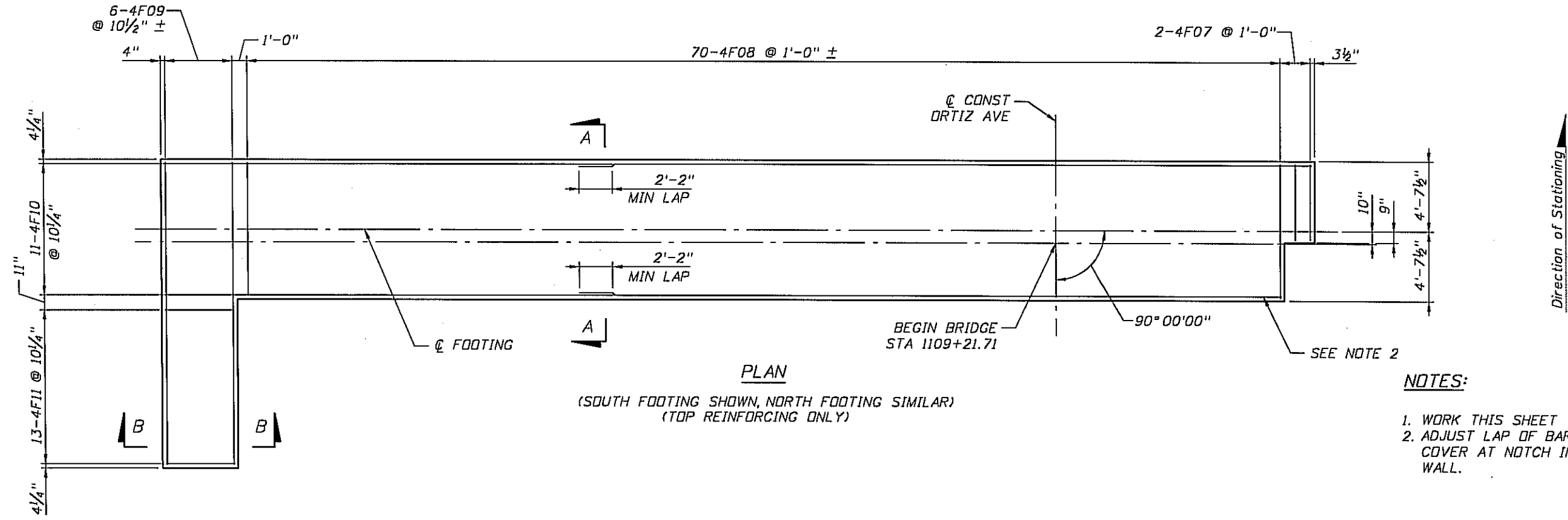
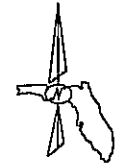
**SPREAD FOOTING (1 OF 2)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-12



**PLAN**  
 (SOUTH FOOTING SHOWN, NORTH FOOTING SIMILAR)  
 (BOTTOM REINFORCING ONLY)

Direction of Stationing



**PLAN**  
 (SOUTH FOOTING SHOWN, NORTH FOOTING SIMILAR)  
 (TOP REINFORCING ONLY)

Direction of Stationing

- NOTES:**
1. WORK THIS SHEET WITH SHEETS B-12 AND B-14.
  2. ADJUST LAP OF BARS 4F10 TO MAINTAIN MINIMUM COVER AT NOTCH IN FOOTING FOR EXISTING WING WALL.

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

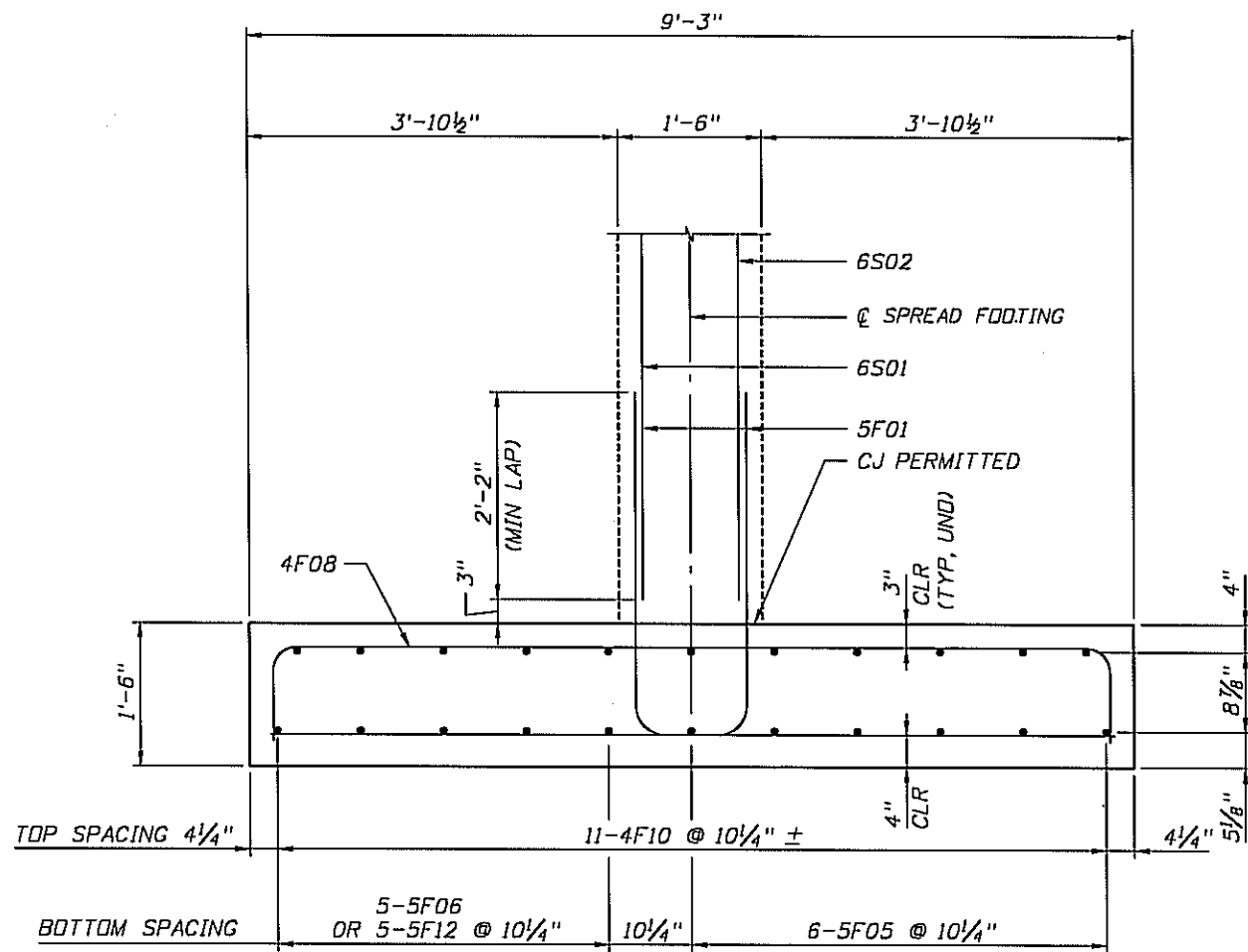
**KCA**  
 Kisinger Campo & Associates Corp.  
 2203 N. Lois Avenue, Suite 1200  
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 FAX (813) 871-5135  
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APPROVED BY:  
**THOMAS J. SHAW, P.E.**  
 REGISTERED PROFESSIONAL ENGINEER  
 FLORIDA CERTIFICATE NO. 50787

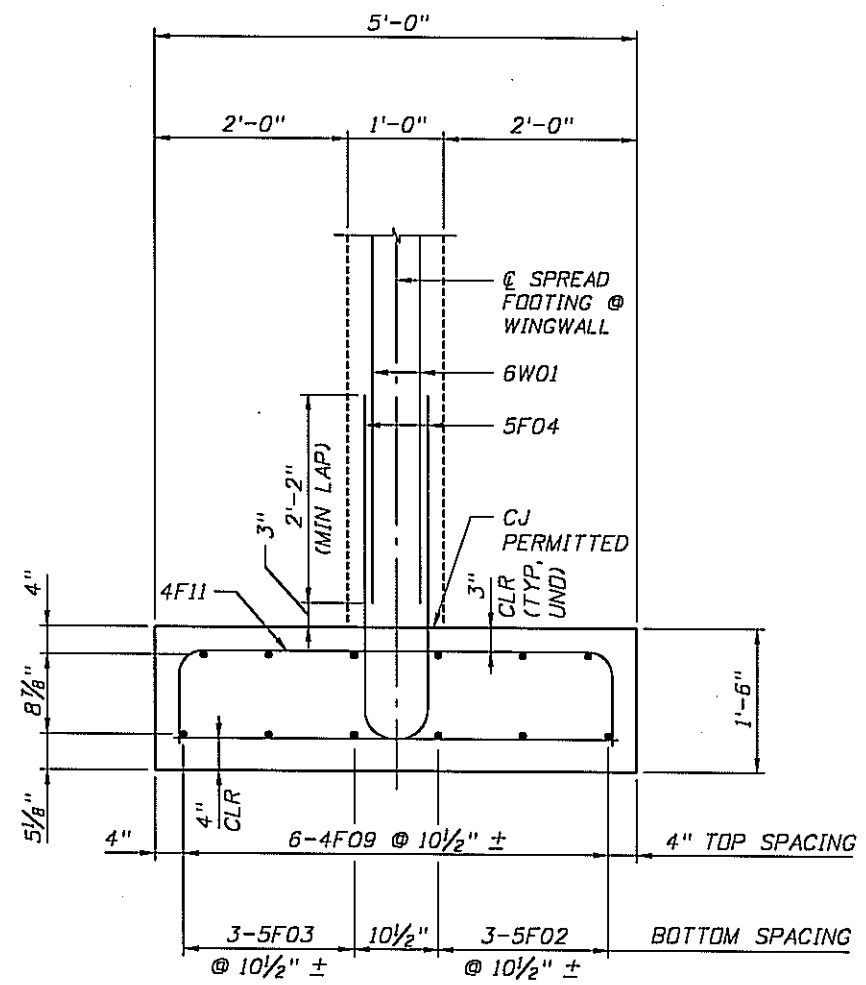
PUBLIC WORKS DEPARTMENT  
 LEE COUNTY of  
 SOUTHWEST FLORIDA TRANSPORTATION  
 1500 MONROE STREET FORT MYERS, FLORIDA 33904  
 12391 479-8900 www.lee-county.com/publicworks/transportation.htm

**SPREAD FOOTING (2 OF 2)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-13



SECTION A-A



SECTION B-B

NOTES:

1. WORK THIS SHEET WITH SHEETS B-12 AND B-13.

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

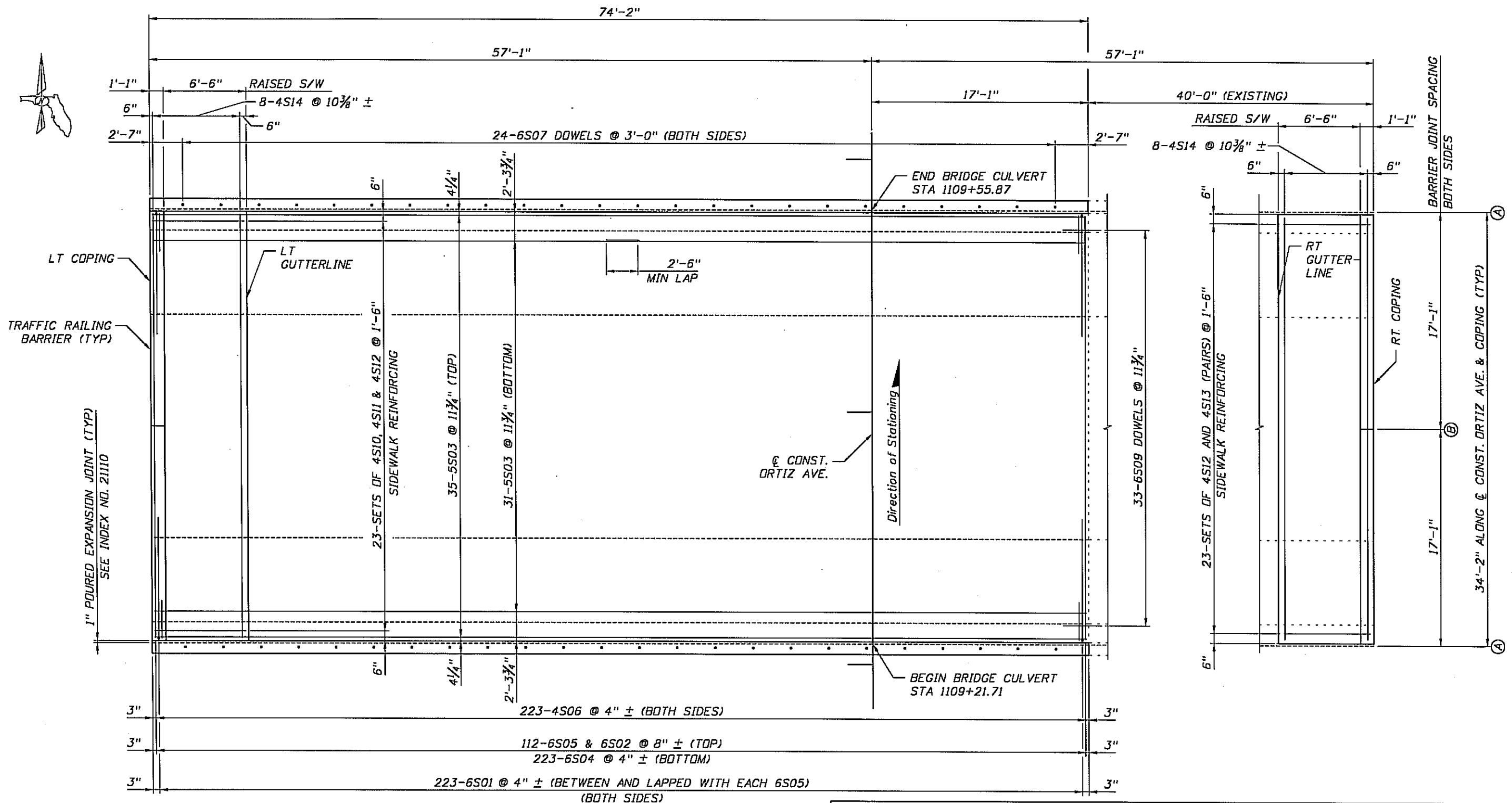
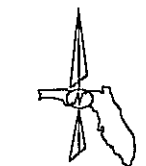
**KCS**  
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**SPREAD FOOTING DETAILS**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-14



**NOTES:**

- SEE SHEET B-16 FOR CULVERT TYPICAL SECTION.
- SEE SHEET B-18 FOR RAISED SIDEWALK REINFORCING DETAILS.

**LEGEND:**

- (A) = EXPANSION JOINT
- (B) = 3/4" OPEN JOINT IN TRAFFIC RAILING BARRIER

**PLAN**

ITEM	UNIT	ESTIMATED QUANTITIES	
		PHASE I QUANTITY	PHASE II QUANTITY
*Class II Concrete (Miscellaneous) (Sidewalks)	CY	12.0	12.0
*Reinforcing Steel (Miscellaneous) (Sidewalks)	LB	690	1574
Class IV Concrete (Culverts)	CY	251.1	-
Reinforcing Steel (Miscellaneous) (Culvert)	LB	52507	-
*Concrete Traffic Railing, Bridge (32" Vertical-Shape)	LF	64	64

\* Quantity Includes Component Applied to Approach Slabs

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

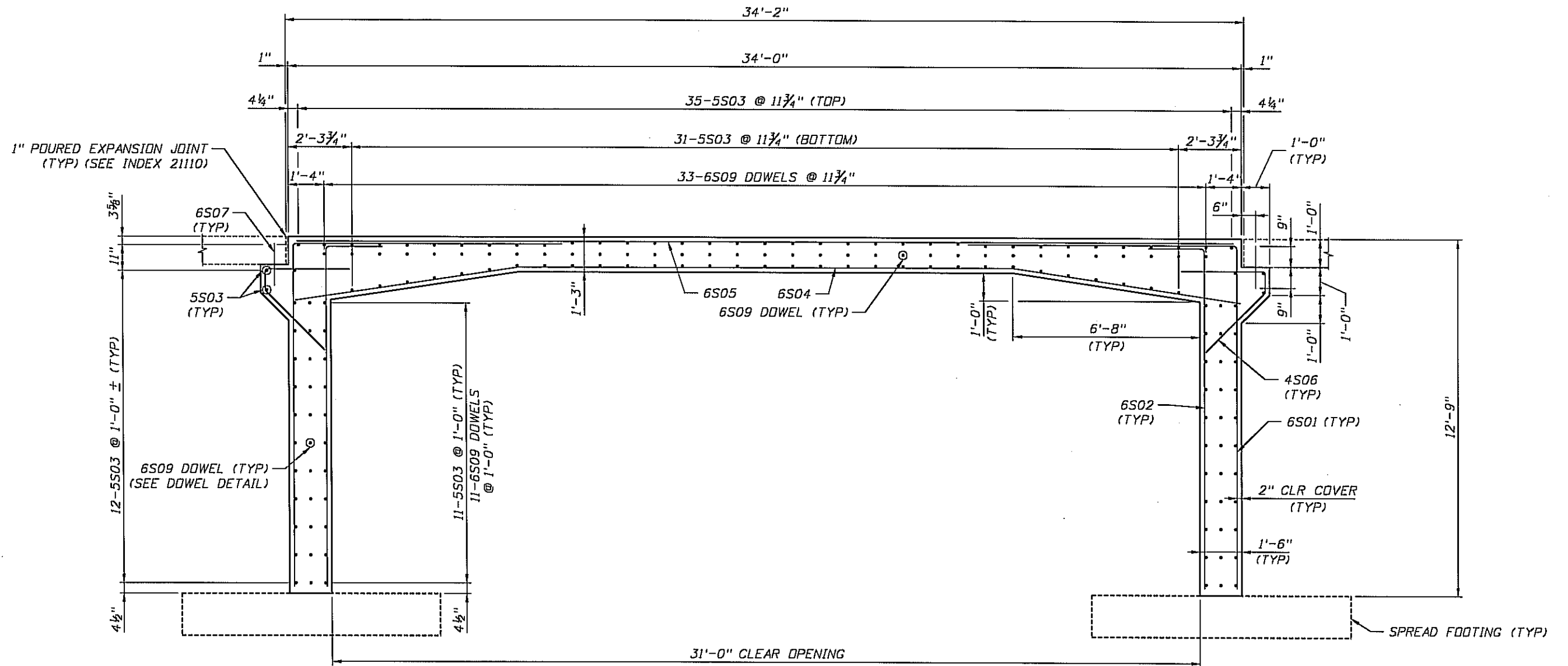
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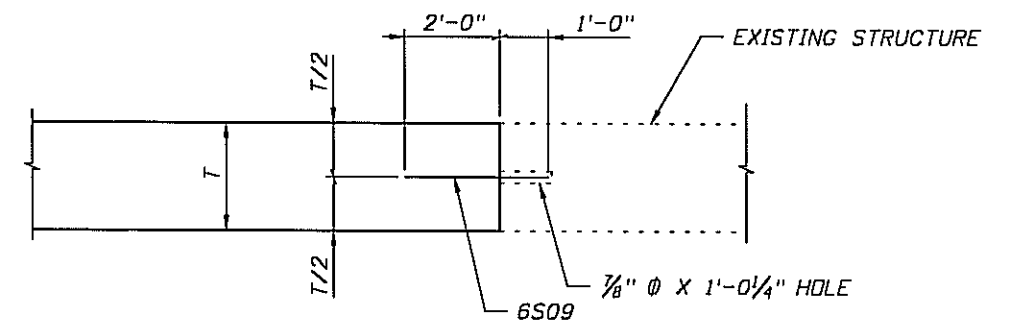
**PUBLIC WORKS DEPARTMENT**  
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 1500 MONROE STREET FORT MYERS, FLORIDA 33904  
 (239) 479-8300 www.lee-county.com/publicworks/001116.htm

**SUPERSTRUCTURE PLAN**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-15



CULVERT TYPICAL SECTION



DOWEL DETAIL

NOTES:

1. WORK THIS SHEET WITH SHEETS B-15 AND B-17.
2. SEE SHEETS B-13 AND B-14 FOR SPREAD FOOTING REINFORCING DETAILS.

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

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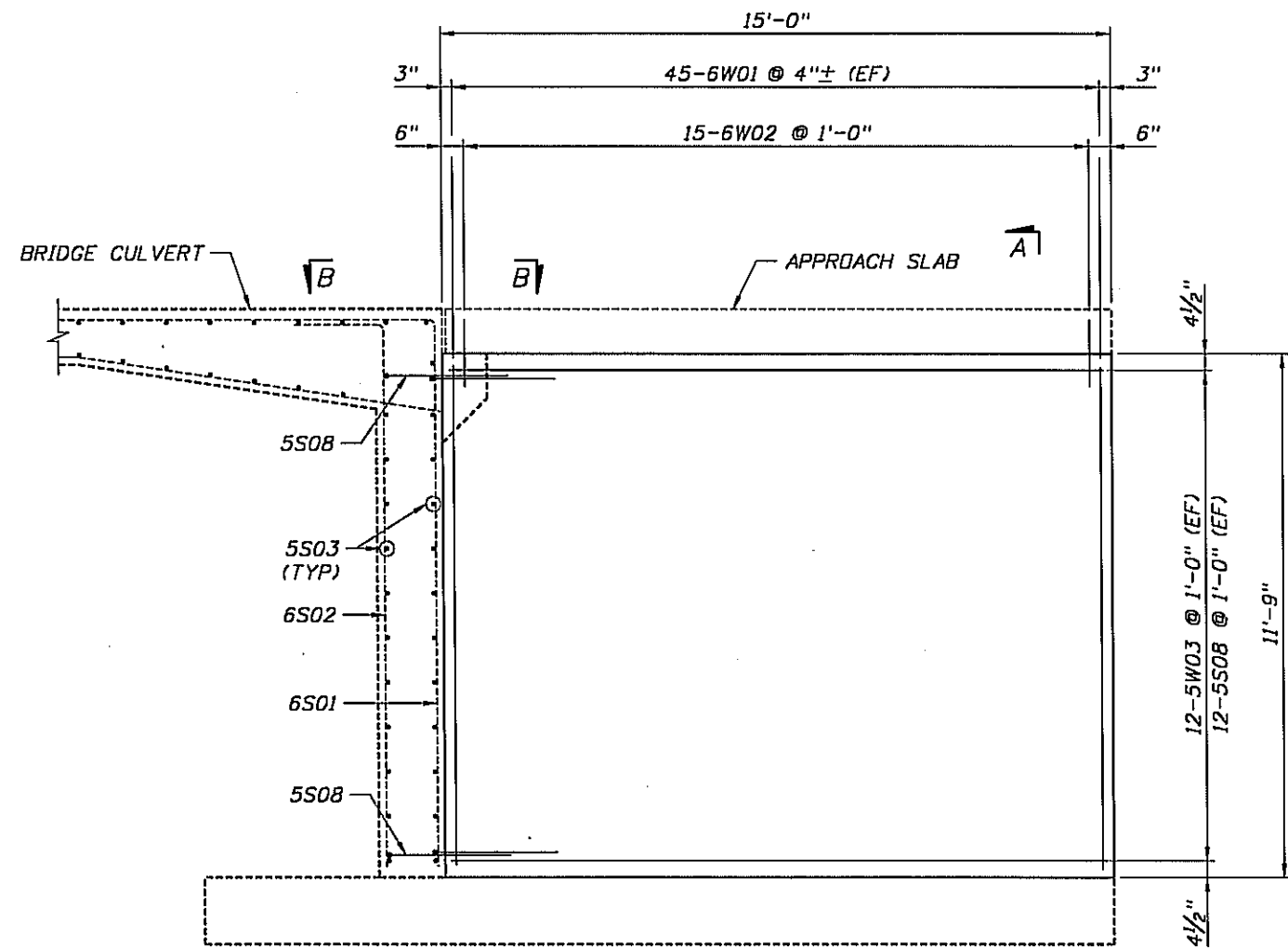
APPROVED BY:  
**THOMAS J. SHAW, P.E.**  
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**PUBLIC WORKS DEPARTMENT**  
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**CULVERT TYPICAL SECTION**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

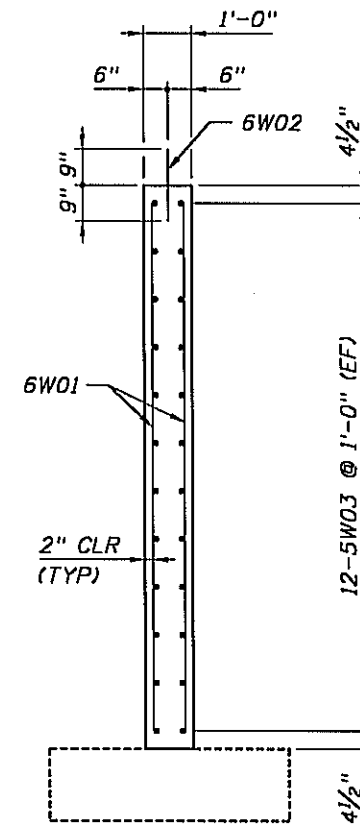
SHEET  
 B-16



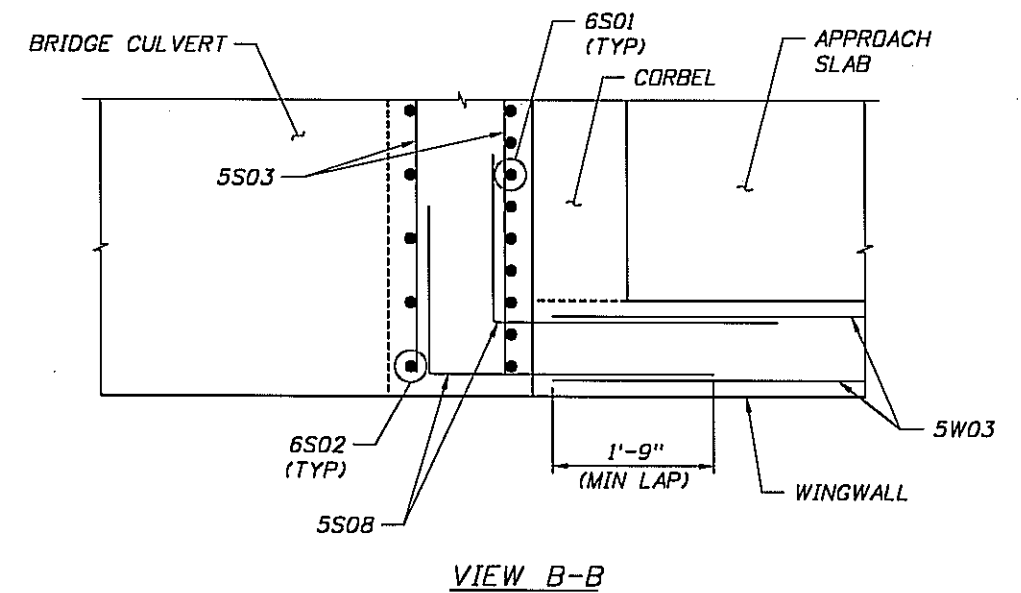


**WINGWALL ELEVATION**

(SOUTHWEST WINGWALL SHOWN, NORTHWEST WINGWALL OPPOSITE HAND)



**SECTION A-A**



**VIEW B-B**

**NOTES:**

1. WORK THIS SHEET WITH SHEETS B-15 AND B-16.
2. BARS 5S08 LAP WITH 5S03 IN BRIDGE CULVERT SIDEWALLS AND 5W03 IN WINGWALLS.
3. SEE SHEETS B-13 AND B-14 FOR SPREAD FOOTING REINFORCING DETAILS.

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

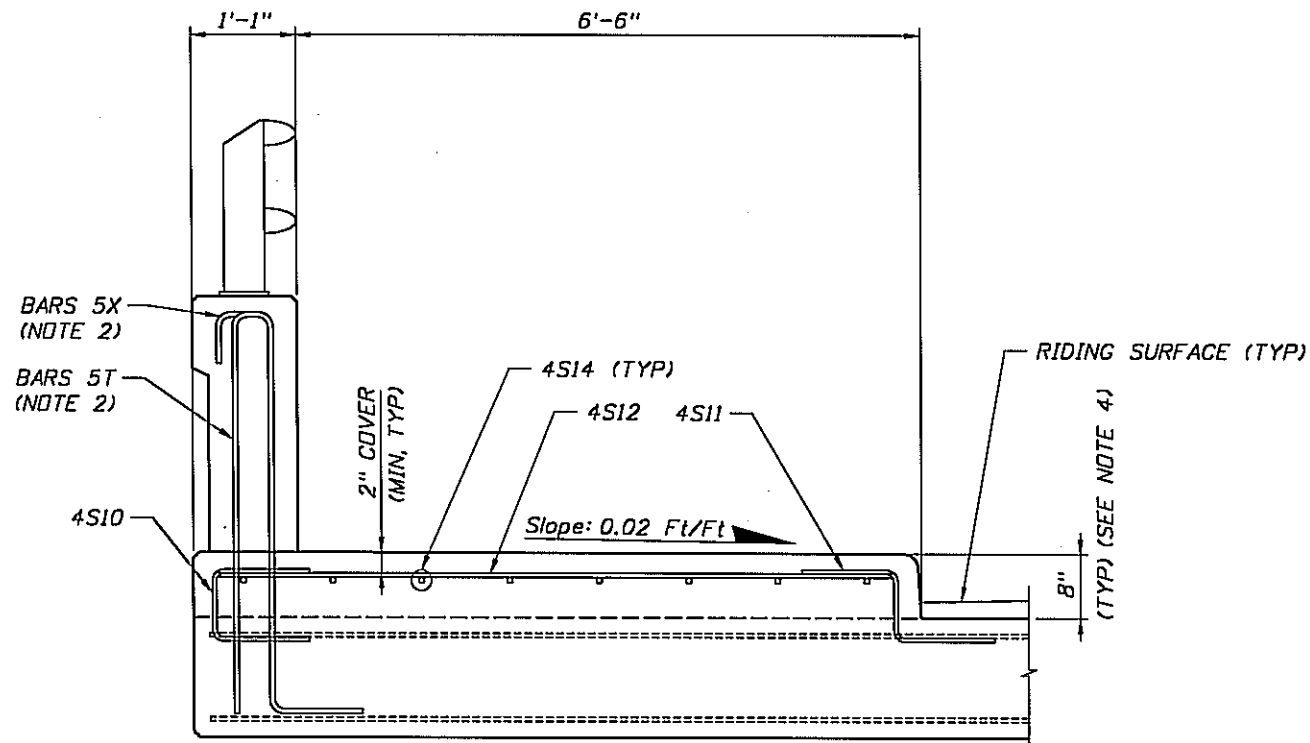
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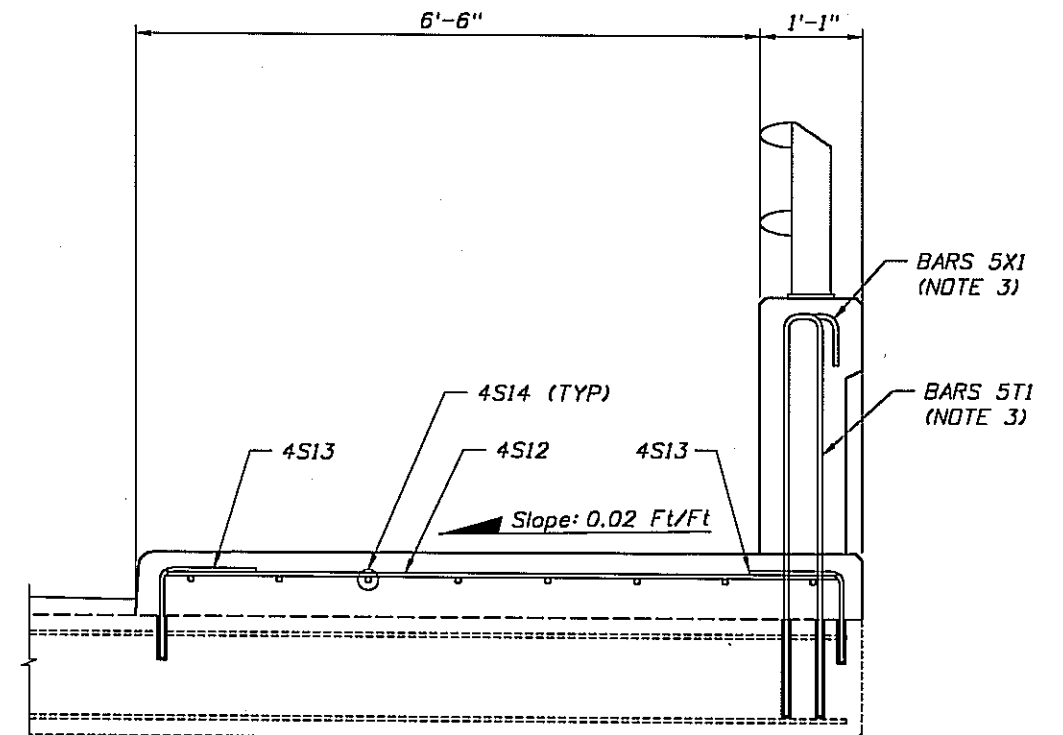
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**CULVERT DETAILS (1 OF 2)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-17



TYPICAL SECTION THRU RAISED SIDEWALK ON WIDENING  
(Bridge Deck Shown, Approach Slab Similar)



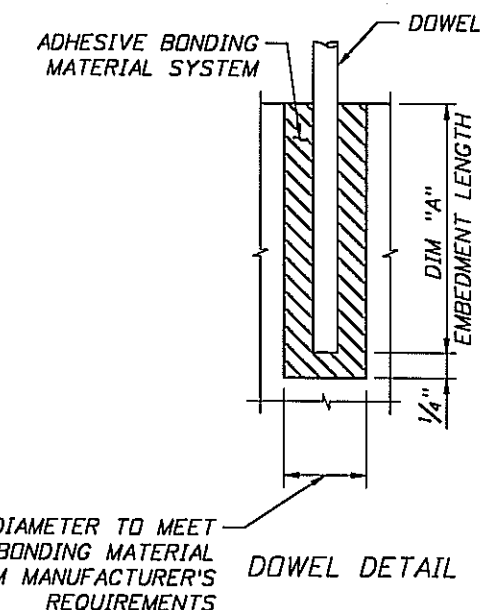
TYPICAL SECTION THRU RAISED SIDEWALK ON EXISTING STRUCTURE  
(Bridge Deck Shown, Approach Slab Similar)

**NOTES:**

1. WORK THIS SHEET WITH SHEET B-15.
2. SEE STANDARD INDEX NO. 423 FOR BARRIER REINFORCING AND DETAILS.
3. BARS 5X1 AND 5T1 SUBSTITUTED FOR BARS 5X AND 5T, RESPECTIVELY, FOR BARRIER PLACED ON EXISTING STRUCTURE. SEE INDEX 423 FOR REINFORCING SPACING AND DETAILS. SEE REINFORCING BAR LIST FOR BAR DIMENSIONS.
4. SIDEWALK THICKNESS OF 8" ACCOMMODATES ASPHALT OVERLAY ON BRIDGE CULVERT AND APPROACH SLABS.

**DOWEL NOTES:**

1. SHIFT DOWEL HOLES TO CLEAR IF EXISTING REINFORCEMENT IS ENCOUNTERED.
2. PROVIDE AND INSTALL AN ADHESIVE BONDING MATERIAL SYSTEM IN ACCORDANCE WITH SECTIONS 416 AND 937 OF THE SPECIFICATIONS



DOWEL	DIM "A"
4S13	5"
5T1 & 5X1	12"
5T2 & 5X2	8"

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

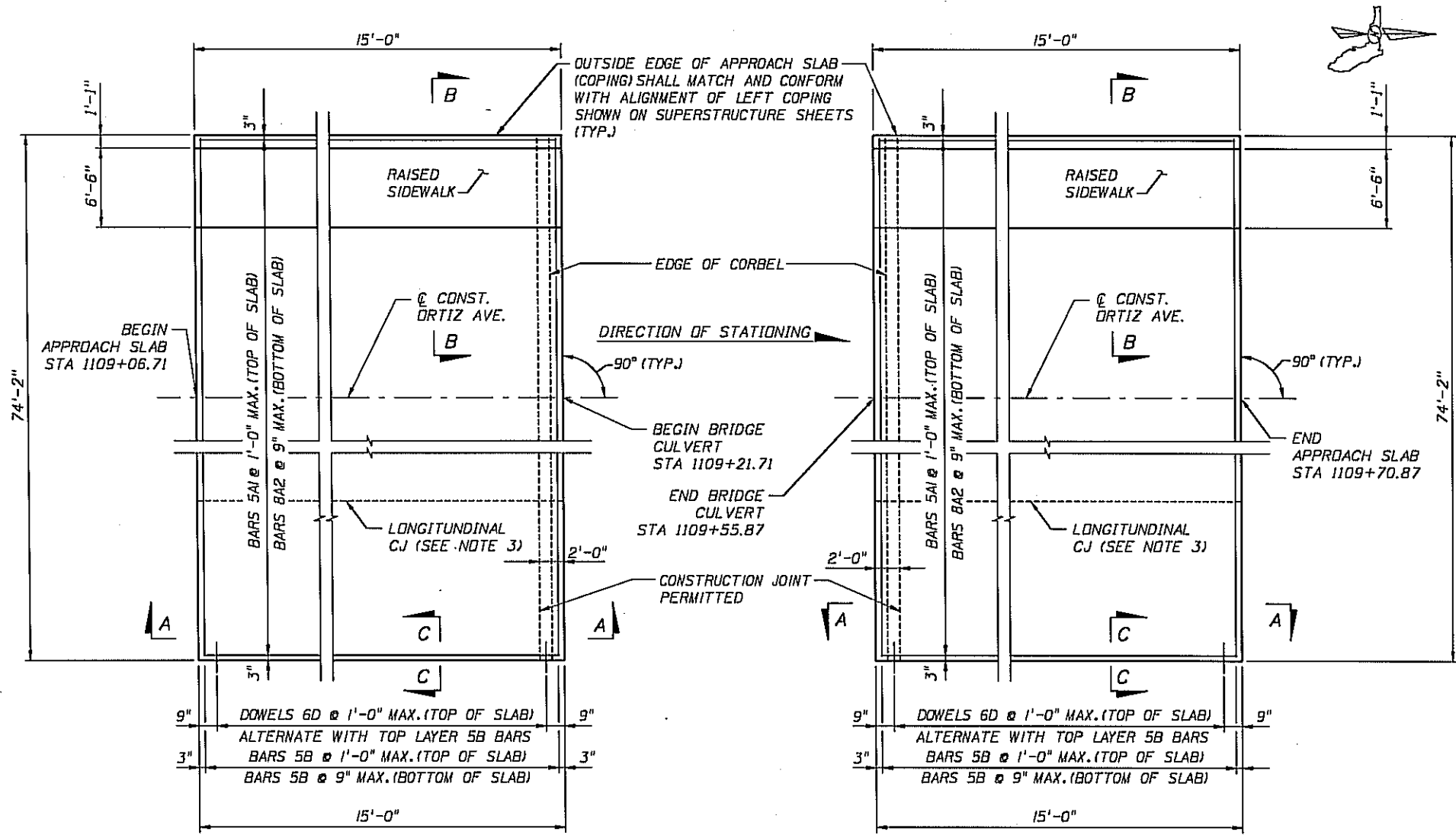
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**CULVERT DETAILS (2 OF 2)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-18



**NOTES:**

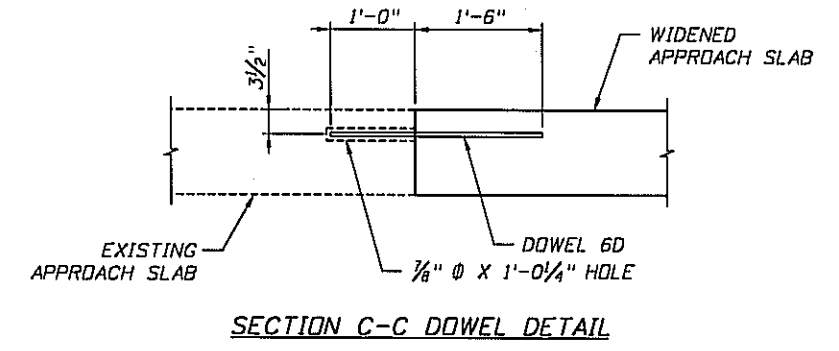
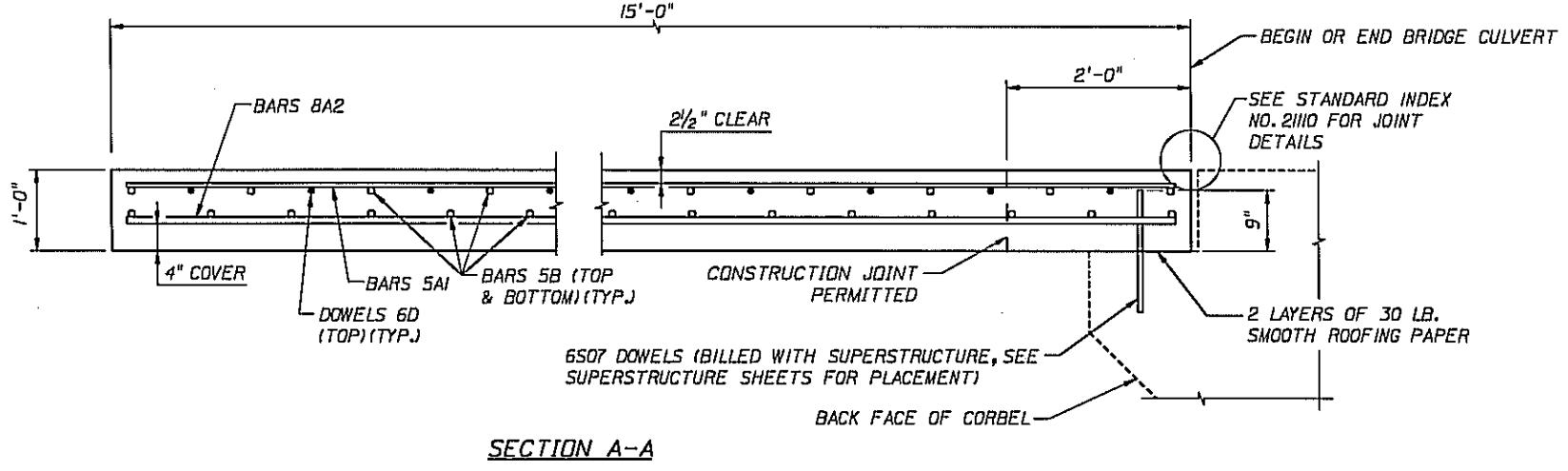
1. SURFACE TREATMENT: APPLY CLASS IV FINISH TO SIDEWALK AREAS. THE TOP SURFACE OF THE APPROACH SLAB CONCRETE SHALL BE RAKED IN PREPARATION FOR AN ASPHALT BUILD-UP.
2. IF A LONGITUDINAL CONSTRUCTION JOINT IS UTILIZED, THE TRANSVERSE STEEL SHALL BE EXTENDED AS SHOWN IN THE LONGITUDINAL CONSTRUCTION JOINT DETAIL. THE PREFERRED LOCATION OF THE LONGITUDINAL JOINT IS AT A LANE LINE.
3. PARAPETS SHALL BE PROVIDED AS SHOWN IN THE PLANS. PAYMENT FOR THE PARAPETS SHALL BE INCLUDED IN THE PAY ITEM FOR THE PARAPETS. RAISED SIDEWALKS SHALL BE PROVIDED AS SHOWN IN THE PLANS. PAYMENT SHALL BE INCLUDED IN THE PAY ITEMS FOR APPROACH SLAB CONCRETE AND REINFORCEMENT.
4. SEE ADDITIONAL APPROACH SLAB SHEETS FOR SIDEWALK AND OTHER PERTINENT DETAILS.

**CROSS REFERENCES:**

FOR SECTION B-B, LONGITUDINAL CONSTRUCTION JOINT DETAIL, ESTIMATED QUANTITIES AND APPROACH SLAB DETAILS SEE APPROACH SLAB (2 OF 2).

**BEGIN BRIDGE CULVERT PLAN VIEW**

**END BRIDGE CULVERT PLAN VIEW**



BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

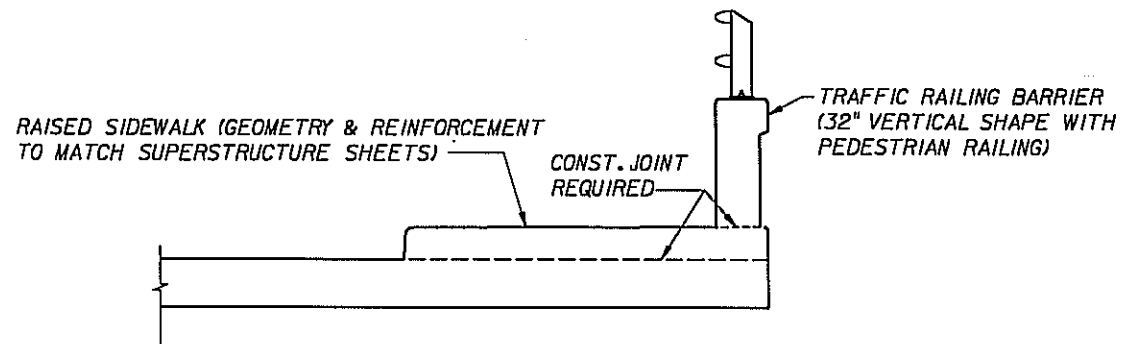
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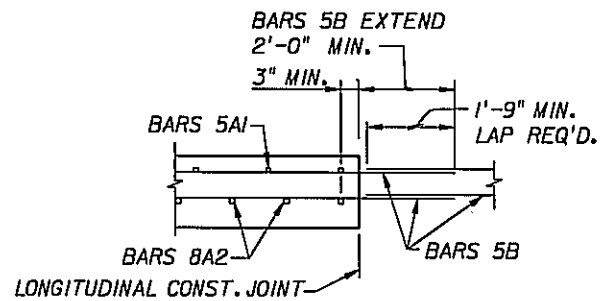
PUBLIC WORKS DEPARTMENT  
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 FLORIDA  
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 12391 479-8300 www.lee-county.com/pw/transportation

**APPROACH SLABS (1 OF 2)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-19



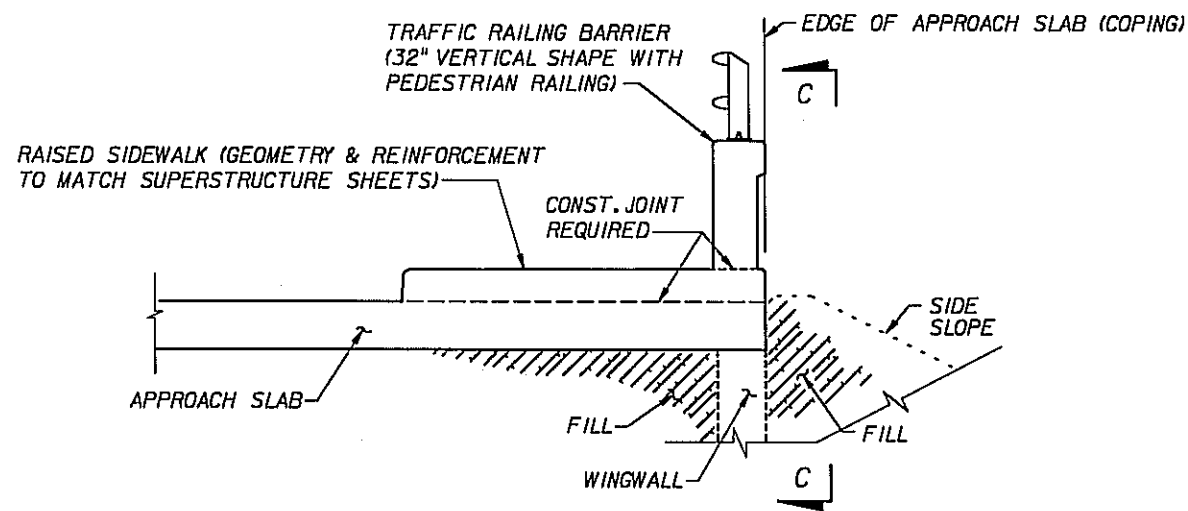
SECTION B-B  
APPROACH SLAB WITH RAISED SIDEWALK



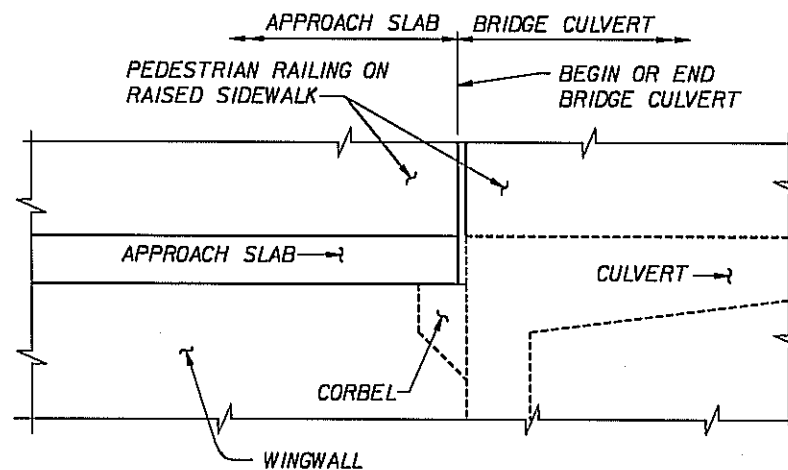
LONGITUDINAL CONSTRUCTION  
JOINT DETAIL

ESTIMATED QUANTITIES**		
LOCATION	REINFORCING STEEL (LBS.)	CLASS II CONCRETE (C.Y.)
BEGIN BRIDGE	7989	41.2
END BRIDGE	7989	41.2

\*\* QUANTITIES SHOWN ARE FOR APPROACH SLABS ONLY. QUANTITIES DO NOT INCLUDE SIDEWALKS, TRAFFIC RAILING BARRIERS OR PEDESTRIAN RAILINGS. FOR SIDEWALK, TRAFFIC RAILING BARRIER AND PEDESTRIAN RAILING QUANTITIES SEE BID ITEM LIST.



SECTION THRU APPROACH SLAB  
AND WINGWALL



VIEW C-C AT BEGIN OR END BRIDGE

===== APPROACH SLAB WITH WINGWALL DETAILS =====

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

**KCA**  
Kisinger Campo & Associates Corp.  
2203 N. Lois Avenue, Suite 1200  
Tampa, Florida 33607  
TELEPHONE (813) 871-5331  
FAX (813) 871-5135  
Florida Certificate of Authorization No. 02317

APPROVED BY:  
**THOMAS J. SHAW, P.E.**  
REGISTERED PROFESSIONAL ENGINEER  
FLORIDA CERTIFICATE NO. 50767

PUBLIC WORKS DEPARTMENT  
LEE COUNTY of  
SOUTHWEST TRANSPORTATION  
FLORIDA  
1500 MONROE STREET FORT MYERS, FLORIDA 33904  
12351 473-8500 www.lee-county.com/puillworks/ast/1114.htm

**APPROACH SLABS (2 OF 2)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
B-20

MARK	LENGTH	NO	TYP	STY	B	C	D	E	F	H	J	K	N	Ø													
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG
LOCATION SPREAD FOOTING													NO. REQUIRED = 2														
5	F01	8-6		428	10			4-11	3-7																		
5	F02	19-8		3	10			16-1	3-7																		
5	F03	19-11		3	1			19-11																			
5	F04	6-2		77	10			2-7	3-7																		
5	F05	77-5		6	2			1-9	75-8																		1
5	F06	60-0		5	1			60-0																			
4	F07	6-9		2	11			4-10 1/2	0-11	0-11																	
4	F08	10-7		70	11			8-9	0-11	0-11																	
4	F09	21-9		6	11			19-11	0-11	0-11																	
4	F10	77-1		11	2			1-5	75-8																		1
4	F11	6-4		13	11			4-6	0-11	0-11																	
5	F12	16-11		6	10			13-9	3-7																		
5	F13	3-0		11	1			3-0																			
LOCATION BRIDGE CULVERT													NO. REQUIRED = 1														
6	S01	22-0		446	10			12-5	9-7																		
6	S02	14-2		224	10			12-2	2-0																		
5	S03	76-4		116	2			2-6	73-10																		1
6	S04	33-9		223	13			17-8 1/2	8-0	8-0																9	9
6	S05	33-8		112	1			33-8																			
4	S06	6-9		446	25			2-1	0-9	2-1	3-0																
6	S07	1-6		48	1			1-6																			
5	S08	5-0		48	10			1-9	3-3																		
6	S09	3-0		55	1			3-0																			
LOCATION WINGWALLS													NO. REQUIRED = 2														
6	W01	11-5		90	1			11-5																			
6	W02	1-6		15	1			1-6																			
6	W03	14-8		24	1			14-8																			
LOCATION APPROACH SLABS													NO. REQUIRED = 2														
5	A1	14-6		75	1			14-6																			
8	A2	14-6		100	1			14-6																			
5	B	75-10		37	2			2-2	73-8																		1
6	D	2-6		15	1			2-6																			

BRIDGE NO. 124081

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 FLORIDA  
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**REINFORCING BAR LIST (1 OF 2)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-21

MARK	LENGTH	NO	TYP	STY	B	C	D	E	F	H	J	K	N	Ø													
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG
LOCATION RAISED SIDEWALK ON BRIDGE CULVERT (LEFT) NO. REQUIRED = 1																											
4	S10	2-8		23	11			0-8		1-0		1-0															
4	S11	2-8		23	32			0-8		1-0		1-0															
4	S12	6-6		23	1			6-6																			
4	S14	33-8		8	1			33-8																			
LOCATION RAISED SIDEWALK ON BRIDGE CULVERT (RIGHT) NO. REQUIRED = 1																											
4	S12	6-6		23	1			6-6																			
4	S13	1-11		46	10			0-11		1-0																	
4	S14	33-8		8	1			33-8																			
5	T1	8-9		35	11			0-5		4-2		4-2															
5	X1	5-2		34	11			0-5		4-2		0-6 1/2															
LOCATION RAISED SIDEWALK ON APPROACH SLAB (LEFT) NO. REQUIRED = 2																											
4	S10	2-8		11	11			0-8		1-0		1-0															
4	S11	2-8		11	32			0-8		1-0		1-0															
4	S12	6-6		11	1			6-6																			
4	S14	14-6		8	1			14-6																			
LOCATION RAISED SIDEWALK ON APPROACH SLAB (RIGHT) NO. REQUIRED = 2																											
4	S12	6-6		11	1			6-6																			
4	S13	1-11		22	10			0-11		1-0																	
4	S14	14-6		8	1			14-6																			
5	T2	8-3		16	11			0-5		3-11		3-11															
5	X2	4-11		15	11			0-5		3-11		0-6 1/2															


END OF LIST

BRIDGE NO. 124081

NO.	DATE	BY	REVISIONS - DESCRIPTION

**KCS**  
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**REINFORCING BAR LIST (2 OF 2)**  
**ORTIZ AVENUE (CR 865)**  
**BRIDGE OVER BILLY'S CREEK**

SHEET  
 B-22